Conduct disorders in children and young people

Conduct disorders and antisocial behaviour in children and young people: recognition, intervention and management

National Clinical Guideline Number X

National Collaborating Centre for Mental Health
& Social Care Institute for Excellence
Commissioned by the

National Institute for Health and Clinical Excellence

published by
The British Psychological Society and The Royal College of Psychiatrists

TABLE OF CONTENTS

1 Preface 10

1.1 National clinical guidelines 10
1.1.1 What are clinical guidelines? 10
1.1.2 Uses and limitation of clinical guidelines 11
1.1.3 Why develop national guidelines? 11
1.1.4 From national clinical guidelines to local protocols 12
1.1.5 Auditing the implementation of clinical guidelines 12

1.2 The national conduct disorders in children and young people GUIDELINE 12
1.2.1 Who has developed this guideline? 12
1.2.2 For whom is this guideline intended? 13
1.2.3 Specific aims of this guideline 13
1.2.4 The structure of this guideline 14

2 Conduct disorders and antisocial behaviour in children and young people 15

2.1 Introduction 15
2.1.1 Medicalising a social problem? 15

2.2 The disorder 16
2.2.1 Changes in clinical features with age 17
2.2.2 Girls 17
2.2.3 Pattern of behaviour and setting 18
2.2.4 Impact 18

2.3 Classification 18
2.3.1 Diagnosis 18
2.3.2 Differential diagnosis 21
2.3.3 Multiaxial assessment 22

2.4 Epidemiology 23
2.4.1 Gender differences in prevalence 23
2.4.2 Developmental subtypes 23

2.5 Aetology 24
2.5.1 Individual-level characteristics 24
2.5.2 Risks within the family 26
2.5.3 Risks outside the family 28
2.5.4 From risk predictor to causation 28

2.6 Course and prognosis 29
2.6.1 Factors predicting poor outcome 29
2.6.2 Adult outcome 29
2.6.3 Pathways 30

2.7 Treatment 31
2.7.1 Parenting skills 31
2.7.2 Improving family functioning 32
2.7.3 Anger management and child interpersonal skills 33
2.7.4 Overcoming difficulties at school 33

2.7.5 Ameliorating peer group influences 33
2.7.6 Medication 34
2.8 General issues when planning treatment 34
2.9 Prevention 34
2.10 Economic cost 35
2.11 Conclusion 37
3 Methods used to develop this guideline 39
3.1 Overview 39
3.2 The scope 39
3.3 The Guideline Development Group 40
3.3.1 Guideline Development Group meetings 40
3.3.2 Topic groups 40
3.3.3 Service users and carers 41
3.3.4 National and international experts 41
3.4 Review questions 41
3.5 Systematic clinical literature review 43
3.5.1 Methodology 43
3.5.2 The review process 43
3.5.3 Data extraction 47
3.5.4 Synthesising the evidence from comparative effectiveness studies 48
3.5.5 Synthesising the evidence from test accuracy studies 51
3.5.6 Synthesising the evidence from studies about the experience of care 53
3.5.7 Grading the quality of evidence 53
3.5.8 Presenting evidence to the Guideline Development Group 56
3.5.9 Extrapolation 58
3.6 Health economics methods 59
3.6.1 Search strategy for economic evidence 59
3.6.2 Inclusion criteria for economic studies 61
3.6.3 Applicability and quality criteria for economic studies 62
3.6.4 Presentation of economic evidence 63
3.6.5 Results of the systematic search of economic literature 63
3.7 The incorporation and adaptation of existing NICE guideline recommendations 63
3.8 From evidence to recommendations 65
3.9 Stakeholder contributions 66
3.10 Validation of the guideline 67
4 Access to and delivery of services, and the experience of care 68
4.1 Introduction 68
4.2 Evidence review 69
4.2.1 Introduction 69
4.2.2 Review protocol 70

4.2.3 Studies considered ... 73
4.2.4 Evidence from the review of access to services and the experience of care ... 90
4.2.5 The User Voice focus group ... 96
4.2.6 Evidence summary ... 101
4.3 Review of existing guidance ... 102
4.4 From Evidence to Recommendations ... 118
4.5 Recommendations ... 119
4.5.1 Clinical practice recommendations ... 119
4.5.2 Research recommendation ... 128
5 Selective prevention interventions ... 129
5.1 Introduction ... 129
5.2 Clinical evidence review ... 133
5.2.1 Categorisation of interventions ... 133
5.2.2 Prevention and treatment interventions ... 133
5.2.3 Clinical review protocol ... 134
5.2.4 Studies considered ... 136
5.2.5 Clinical evidence for selective prevention interventions ... 141
5.2.6 Clinical evidence summary ... 156
5.3 Health economic evidence ... 156
5.3.1 Economic evidence on selective prevention interventions for children and young people at risk of conduct disorder ... 156
5.4 From evidence to recommendations ... 156
5.5 Recommendations ... 157
5.5.1 Clinical practice recommendations ... 157
5.5.2 Research recommendations ... 158
6 Case identification and assessment ... 159
6.1 Introduction ... 159
6.2 Evidence review ... 159
6.2.1 Introduction ... 159
6.2.2 Methodological approach ... 161
6.2.3 Review protocol ... 162
6.2.4 Case identification instruments included in the review ... 164
6.2.5 Studies considered ... 169
6.2.6 Clinical evidence ... 170
6.2.7 Clinical evidence summary ... 175
6.2.8 Assessment of conduct disorders ... 178
6.3 From evidence to recommendations ... 183
6.4 Recommendations ... 184
6.4.1 Clinical practice recommendations ... 184
7 Psychological/psychosocial treatment (including Indicated prevention) interventions ... 189

7.1 Introduction ... 189

7.2 Clinical evidence review ... 189

7.2.1 Categorisation of interventions ... 189
7.2.2 Indicated prevention and treatment interventions ... 194
7.2.3 Clinical review protocol ... 195
7.2.4 Studies considered ... 197
7.2.5 Clinical evidence for the review of an intervention versus any control ... 205
7.2.6 Clinical evidence for the review of head-to-head comparisons of interventions 227
7.2.7 Moderators of intervention effectiveness ... 229
7.2.8 Clinical evidence summary ... 234

7.3 Health economic evidence ... 235

7.3.1 Child-focused interventions ... 235
7.3.2 Parent-focused interventions ... 244
7.3.3 Family-focused programmes ... 251
7.3.4 Multi-component programmes ... 252
7.3.5 Multi-modal interventions ... 253

7.4 From evidence to recommendations ... 261

7.5 Recommendations ... 262

7.5.1 Clinical practice recommendations ... 262
7.5.2 Research recommendations ... 265

8 Pharmacological and physical treatment interventions for conduct disorders ... 266

8.1 Introduction ... 266

8.2 Clinical evidence review ... 267

8.2.1 Interventions ... 267
8.2.2 Clinical review protocol ... 268
8.2.3 Studies considered ... 269
8.2.4 Clinical evidence for the review of a pharmacological intervention versus placebo ... 272
8.2.5 Clinical evidence summary ... 281

8.3 Health economic evidence ... 282

8.3.1 Systematic literature review ... 282

8.4 From evidence to recommendations ... 282

8.5 Recommendations ... 285

8.5.1 Clinical practice recommendations ... 285
8.5.2 Research recommendations ... 287

9 Summary of recommendations ... 288

10 Appendices ... 289

11 References ... 290

GUIDELINE DEVELOPMENT GROUP MEMBERS

Professor Stephen Scott (Chair)
Professor of Child Health and Behaviour, Institute of Psychiatry, King's College London
Consultant Child and Adolescent Psychiatrist & Head, National Conduct Problems
Clinic and National
Adoption and Fostering Clinic, Maudsley Hospital, London
Director, Multidimensional Treatment Foster Care Project in England
Director, National Academy for Parenting Research

Professor Stephen Pilling (Facilitator)
Director, The National Collaborating Centre for Mental Health
Director, Centre for Outcomes Research and Effectiveness, University College London.

Ms Beth Anderson
Senior Research Analyst, Social Care Institute for Excellence, London

Dr Benedict Anigbogu
Health Economist, NCCMH

Ms Sara Barratt
Consultant Systematic Psychotherapist; Team Leader, Fostering, adoption and kinship care team, Tavistock Centre, London

Ms Ruth Braidwood
Research Assistant (from May 2012), NCCMH

Mrs Maria Brewster
Service user and carer representative

Dr Barbara Compitus
General Practitioner, Bristol

Dr Moira Doolan
Consultant Systemic Psychotherapist
Lead for interventions: HCA and Safe Studies National Academy for Parenting Research, Institute of Psychiatry, Kings College London

Prof Peter Fonagy
Chief Executive, Anna Freud Centre, Freud Memorial
Professor of Psychoanalysis, Univeristy College London

Ms Laura Gibbon
Project Manager (until December 2011), NCCMH

Ms Naomi Glover
Research Assistant (until July 2011), NCCMH

Prof Nick Gould
Acting Head of Department, Department of Social and Policy Sciences
Professor of Social Work, University of Bath

Ms Bronwyn Harrison
Research Assistant (until April 2012), NCCMH

Ms Flora Kaminski
Research Assistant (until July 2011), NCCMH

Dr Daphne Keen
Consultant Developmental Paediatrician, St George's Hospital, London
Honarary Senior Lecturer, St George's, Univeristy of London

Dr Paul McArdle
Consultant and Senior Lecturer Child and Adolescent Psychiatry, Newcastle

Dr Paul Mitchell
Clinical Lead, Hindley YOI Mental Health Team, Manchester

Ms Maryla Moulin
Project Manager (from January 2012), NCCMH

Dr Rosa Nieto
Lead Systematic Reviewer (until September 2011), NCCMH

Mr Andrew Richards
Director of the Doctoral Professional Training Course in Educational Psychology, University of Exeter

Ms Melinda Smith
Research Assistant (until April 2012), NCCMH

Ms Sarah Stockton
Senior Information Scientist, NCCMH

Dr Clare Taylor
Senior Editor, NCCMH

Dr Jenny Taylor
Consultant Clinical Psychologist; Supervisor of the Hackney site of the Department of Health's Multi-Systemic Therapy National Research Trial

Dr Amina Yesufu-Udechuku
Lead Systematic Reviewer (until June 2011), NCCMH

Dr Craig Whitttington
Associate Director, NCCMH
Lead Systematic Reviewer (from October 2011), NCCMH

Mrs Philippa Williams
Service user and carer representative

Mr Tony Wooton
Retired Head Teacher Millthorpe School, York

1 PREFACE

This guideline has been developed to advise on the recognition, identification and management of conduct disorder (including oppositional defiance disorder) in children and young people. The guideline recommendations have been developed by a multidisciplinary team of healthcare professionals, people with conduct disorders, their carers and guideline methodologists after careful consideration of the best available evidence. It is intended that the guideline will be useful to clinicians and service commissioners in providing and planning high-quality care for people with conduct disorders and antisocial behaviour while also emphasising the importance of the experience of care for people with conduct disorders and their carers (see Appendix 1 for more details on the scope of the guideline).

Although the evidence base is rapidly expanding, there are a number of major gaps and future revisions of this guideline will incorporate new scientific evidence as it develops. The guideline makes a number of research recommendations specifically to address gaps in the evidence base. In the meantime, it is hoped that the guideline will assist clinicians, and people with conduct disorders and their carers by identifying the merits of particular treatment approaches where the evidence from research and clinical experience exists.

1.1 NATIONAL CLINICAL GUIDELINES

1.1.1 What are clinical guidelines?

Clinical guidelines are ‘systematically developed statements that assist clinicians and service users in making decisions about appropriate treatment for specific conditions’ (Mann, 1996). They are derived from the best available research evidence, using predetermined and systematic methods to identify and evaluate the evidence relating to the specific condition in question. Where evidence is lacking, the guidelines incorporate statements and recommendations based upon the consensus statements developed by the Guideline Development Group (GDG).

Clinical guidelines are intended to improve the process and outcomes of healthcare in a number of different ways. They can:

- provide up-to-date evidence-based recommendations for the management of conditions and disorders by healthcare professionals
- be used as the basis to set standards to assess the practice of healthcare professionals
- form the basis for education and training of healthcare professionals
- assist service users and their carers in making informed decisions about their treatment and care
- improve communication between healthcare professionals, service users and their carers
- help identify priority areas for further research.

1.1.2 Uses and limitation of clinical guidelines

Guidelines are not a substitute for professional knowledge and clinical judgement. They can be limited in their usefulness and applicability by a number of different factors: the availability of high-quality research evidence, the quality of the methodology used in the development of the guideline, the generalisability of research findings and the uniqueness of individuals.

Although the quality of research in this field is variable, the methodology used here reflects current international understanding on the appropriate practice for guideline development (Appraisal of Guidelines for Research and Evaluation Instrument [AGREE]; www.agreetrust.org) (AGREE Collaboration, 2003), ensuring the collection and selection of the best research evidence available and the systematic generation of treatment recommendations applicable to the majority of people with conduct disorders. However, there will always be some people for whom and situations for which clinical guideline recommendations are not readily applicable. This guideline does not, therefore, override the individual responsibility of healthcare professionals to make appropriate decisions in the circumstances of the individual, in consultation with the person with conduct disorders or their carer.

In addition to the clinical evidence, cost-effectiveness information, where available, is taken into account in the generation of statements and recommendations of the clinical guidelines. While national guidelines are concerned with clinical and cost effectiveness, issues of affordability and implementation costs are to be determined by the National Health Service (NHS).

In using guidelines, it is important to remember that the absence of empirical evidence for the effectiveness of a particular intervention is not the same as evidence for ineffectiveness. In addition, and of particular relevance in mental health, evidence-based treatments are often delivered within the context of an overall treatment programme including a range of activities, the purpose of which may be to help engage the person and provide an appropriate context for the delivery of specific interventions. It is important to maintain and enhance the service context in which these interventions are delivered, otherwise the specific benefits of effective interventions will be lost. Indeed, the importance of organising care in order to support and encourage a good therapeutic relationship is at times as important as the specific treatments offered.

1.1.3 Why develop national guidelines?

The National Institute for Health and Clinical Excellence (NICE) was established as a Special Health Authority for England and Wales in 1999, with a remit to provide a single source of authoritative and reliable guidance for service users, professionals and the public. NICE guidance aims to improve standards of care, diminish unacceptable variations in the provision and quality of care across the NHS, and ensure that the health service is person-centred. All guidance is developed in a transparent and collaborative manner, using the best available evidence and involving all relevant stakeholders.

NICE generates guidance in a number of different ways, three of which are relevant here. First, national guidance is produced by the Technology Appraisal Committee to give robust advice about a particular treatment, intervention, procedure or other health technology. Second, NICE commissions public health intervention guidance focused on types of activity (interventions) that help to reduce people's risk of developing a disease or condition, or help to promote or maintain a healthy lifestyle. Third, NICE commissions the production of national clinical guidelines focused upon the overall treatment and management of a specific condition. To enable this latter development, NICE has established four National Collaborating Centres in conjunction with a range of professional organisations involved in healthcare.

1.1.4 From national clinical guidelines to local protocols

Once a national guideline has been published and disseminated, local healthcare groups will be expected to produce a plan and identify resources for implementation, along with appropriate timetables. Subsequently, a multidisciplinary group involving commissioners of healthcare, primary care and specialist mental health professionals, service users and carers should undertake the translation of the implementation plan into local protocols, taking into account both the recommendations set out in this guideline and the priorities set in the National Service Framework for Mental Health (Department of Health, 1999) and related documentation. The nature and pace of the local plan will reflect local healthcare needs and the nature of existing services; full implementation may take a considerable time, especially where substantial training needs are identified.

1.1.5 Auditing the implementation of clinical guidelines

This guideline identifies key areas of clinical practice and service delivery for local and national audit. Although the generation of audit standards is an important and necessary step in the implementation of this guidance, a more broadly-based implementation strategy will be developed. Nevertheless, it should be noted that the Care Quality Commission will monitor the extent to which commissioners and providers of health and social care have implemented these guidelines.

1.2 THE NATIONAL CONDUCT DISORDERS IN CHILDREN AND YOUNG PEOPLE GUIDELINE

1.2.1 Who has developed this guideline?

This guideline has been commissioned by NICE and developed within the National Collaborating Centre for Mental Health (NCCMH). The NCCMH is a collaboration of the professional organisations involved in the field of mental health, national service-user and carer organisations, a number of academic institutions and NICE. The NCCMH is funded by NICE and is led by a partnership between the Royal College of Psychiatrists and the British Psychological Society's Centre for Outcomes Research and Effectiveness, based at University College London.

The GDG was convened by the NCCMH and supported by funding from NICE. The GDG included carers of children and young people with conduct disorders, and professionals from psychiatry, clinical psychology, psychotherapy, paediatrics, general practice, nursing, education, social work, and the private and voluntary sectors.

Staff from the NCCMH provided leadership and support throughout the process of guideline development, undertaking systematic searches, information retrieval, appraisal and systematic review of the evidence. Members of the GDG received training in the process of guideline development from NCCMH staff, and the service users and carers received training and support from the NICE Patient and Public Involvement Programme. The NICE Guidelines Technical Adviser provided advice and assistance regarding aspects of the guideline development process.

All GDG members made formal declarations of interest at the outset, which were updated at every GDG meeting. The GDG met a total of twelve times throughout the process of guideline development. It met as a whole, but key topics were led by a national expert in the relevant topic. The GDG was supported by the NCCMH technical team, with additional expert advice from special advisers where needed. The group oversaw the production and synthesis of research evidence before presentation. All statements and recommendations in this guideline have been generated and agreed by the whole GDG.

1.2.2 For whom is this guideline intended?

This guideline will be relevant for children and young people with conduct disorder and antisocial behaviour and covers the care provided by primary, community, secondary, tertiary and other healthcare professionals who have direct contact with, and make decisions concerning the care of, children and young people with conduct disorders and antisocial behaviour.

The guideline will also be relevant to the work, but will not cover the practice, of those in:

- occupational health services
- social services
- the independent sector.

1.2.3 Specific aims of this guideline

The guideline makes recommendations for recognition, intervention and management of conduct disorders. It aims to:

- improve access and engagement with treatment and services for people with conduct disorders and antisocial behaviour (including oppositional defiance disorder) in children and young people
- evaluate the role of specific psychological, psychosocial, educational and pharmacological interventions in the treatment of conduct disorders
- evaluate the role of psychological, psychosocial and physical (such as diet) interventions in combination with pharmacological interventions in the treatment of conduct disorders

    - integrate the above to provide best-practice advice on the care of individuals throughout the course of their conduct disorder
- promote the implementation of best clinical practice through the development of recommendations tailored to the requirements of the NHS in England and Wales.

1.2.4 The structure of this guideline

The guideline is divided into chapters, each covering a set of related topics. The first three chapters provide a summary of the clinical practice and research recommendations, and a general introduction to guidelines and to the methods used to develop them. Chapter 4 to Chapter 8 provide the evidence that underpins the recommendations about the treatment and management of conduct disorders.

Each evidence chapter begins with a general introduction to the topic that sets the recommendations in context. Depending on the nature of the evidence, narrative reviews or meta-analyses were conducted, and the structure of the chapters varies accordingly. Where appropriate, details about current practice, the evidence base and any research limitations are provided. Where meta-analyses were conducted, information is given about both the interventions included and the studies considered for review. Clinical summaries are then used to summarise the evidence presented. Finally, recommendations related to each topic are presented at the end of each chapter. On the CD-ROM, full details about the included studies can be found in Appendix 16; where meta-analyses were conducted, the data are presented using forest plots in Appendix 17; Full GRADE evidence profiles are presented in Appendix 18; Evidence tables for economic studies are presented in Appendix 20 (see Text Box 1 for details).

Text Box 1: Appendices on CD-ROM

Clinical study characteristics tables - Prevention and treatment - Case identification	 Appendix 16a Appendix 16b
Clinical evidence forest plots	Appendix 17
GRADE evidence profiles	Appendix 18
Evidence tables for economic studies	Appendix 20

In the event that amendments or minor updates need to be made to the guideline, please check the NCCMH website (nccmh.org.uk), where these will be listed and a corrected PDF file available to download.

2 CONDUCT DISORDERS AND ANTISOCIAL BEHAVIOUR IN CHILDREN AND YOUNG PEOPLE

2.1 INTRODUCTION

This guideline is concerned with the management of conduct disorder and oppositional defiant disorder as defined in the International Classification of Diseases, 10th Revision (ICD-10) (World Health Organisation, 1992) and in the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition Text Revision (DSM-IV-TR) (American Psychiatric Association, 2000) in primary, community and secondary care. Conduct disorder is an overarching term used in psychiatric classification that refers to a persistent pattern of antisocial behaviour in which the individual repeatedly breaks social rules and carries out aggressive acts that upset other people. Oppositional d .efiant disorder is a milder variant mostly seen in younger children. The term 'conduct disorders' (or 'a conduct disorder') is used in this guideline to encompass both disorders. Because the term is not well known among the public, or even among healthcare professionals, the guideline title includes the term 'antisocial behaviour' to make it clear to as wide a range of people as possible what the guideline addresses.

Conduct disorders are the commonest mental health disorders of childhood and adolescence globally, and the commonest reason for referral to child and adolescent mental health services in Western countries. A high proportion of children and adolescents with conduct disorders grow up to be antisocial adults with impoverished and destructive lifestyles; a significant minority will develop antisocial personality disorder (psychopathy). Disorders in adolescence are becoming more frequent in Western countries and place a large personal and economic burden on individuals and society, involving not just healthcare services and social care agencies but all sectors of society including the family, schools, police and criminal justice agencies. It is therefore appropriate that this guideline has been developed by NICE jointly with the Social Care Institute of Excellence (SCIE).

2.1.1 Medicalising a social problem?

Infringement of the rights of other people is a requirement for the diagnosis of a conduct disorder. Since manifestations of conduct disorders and antisocial behaviour include a failure to obey social rules despite relatively intact mental and social capacities, many have seen the disorders as principally socially determined. It could therefore be argued that the responsibility for their cause and elimination lies with people who can influence the socialisation process, such as parents, schoolteachers, social service departments and politicians, rather than by healthcare professionals. Additionally, since the disorders are so prevalent, it would be logistically impossible for child and adolescent mental health services (CAMHS) to see all children and young people, adding a further reason not to medicalise the problem. At worst, the involvement of medical and health personnel carries the risk of their becoming agents of social control through the misapplication of diagnostic labels.

However, advances in the last three decades have shown that in addition to social causes, there are substantial genetic and biological contributions to conduct disorders and therefore supports a medical approach to their care and management. Work mainly from the field of and child and adolescent psychology and mental health has clarified many of the mechanisms contributing to the development and persistence of antisocial behaviour, and has led the field to develop notably effective treatments, which are mostly psychosocial. This knowledge needs to be disseminated widely so that more children can benefit; at present fewer than a quarter of affected children and young people receive any specific help (Vostanis et al., 2003), and much of this is likely to be ineffective (Scott, 2007). There is therefore a need for mental health professionals to work closely alongside other professionals and agencies and contribute to the planning and delivery of humane and effective services. Failure to achieve this will mean that great numbers of children and young people will have their lives avoidably blighted.

2.2 THE DISORDER

This guideline is concerned with the management of conduct disorder in the community and in prison as defined in ICD-10 (World Health Organisation, 1992) and DSM-IV-TR (American Psychiatric Association, 2000) (see Section 2.3 for details about the classification of both conduct disorder and oppositional defiant disorder).

Aggressive and defiant behaviour is an important part of normal child and adolescent development, which ensures physical and social survival. Indeed, some parents may express concern if a child is too acquiescent and unassertive. The level of aggressive and defiant behaviour varies considerably among children, and it is probably most usefully seen as a continuously distributed trait. Empirical studies do not suggest a level at which symptoms become qualitatively different, nor is there a single cut-off point at which they become impairing for the child or a clear problem for others. There is no ‘hump’ towards the end of the distribution curve of severity to suggest a categorically distinct group who might on these grounds warrant a diagnosis of conduct disorder.

Picking a particular level of antisocial behaviour to call conduct disorder or oppositional defiant disorder is therefore necessarily arbitrary (Moffitt et al., 2008). For all children, the expression of any particular behaviour also varies with age; physical hitting, for example, is at its peak at around 2 years of age and declines to a low level over the ensuing years. Therefore any judgement about the significance of the level of antisocial behaviour has to be made in the context of the child’s age. Before deciding that the behaviour is atypical or a significant problem, a number of other clinical features have to be considered:

- *level*: severity and frequency of antisocial acts, compared with children of the same age and gender (see Sections 2.2.1 and 2.2.2)
- *pattern*: the variety of antisocial acts, and the setting in which they are carried out (see Section 2.2.3)

- *persistence*: duration over time (see Section 2.2.3)
- *impact*: distress and social impairment of the child; disruption and damage to others (see Section 2.2.4).

2.2.1 Changes in clinical features with age

Younger children aged 3 to 7 years usually present with general defiance of adults' wishes, disobedience of instructions, angry outbursts with temper tantrums, physical aggression to other people especially siblings and peers, destruction of property, arguing, blaming others for things that have gone wrong, and a tendency to annoy and provoke others.

In *middle childhood*, from 8 to 11 years, the above features are often present but as the child grows older, stronger, and spends more time out of the home, other behaviours are seen. They include: swearing, lying about what they have been doing, stealing others' belongings outside the home, persistent breaking of rules, physical fights, bullying other children, being cruel to animals, and setting fires.

In *adolescence*, from 12 to 17 years, more antisocial behaviours are often added: being cruel to and hurting other people, assault, robbery using force, vandalism, breaking and entering houses, stealing from cars, driving and taking away cars without permission, running away from home, truanting from school, and misusing alcohol and drugs.

Not all children who start with the type of behaviours listed in early childhood progress on to the later, more severe forms. Only about half continue from those in early childhood to those in middle childhood; likewise only about a further half of those with the behaviours in middle childhood progress to show the behaviours listed for adolescence (Rowe et al., 2002). However, the early onset group are important as they are far more likely to display the most severe symptoms in adolescence, and to persist in their antisocial tendencies into adulthood. The most antisocial 5% of children aged 7 are 500 to 1000% more likely to display indices of serious life failure at 25, for example drug dependency, criminality, unwanted teenage pregnancy, leaving school with no qualifications, unemployment and so on (Fergusson et al., 2005). Follow-back studies show that most children and young people with conduct disorder had prior oppositional defiant disorder and most (if not all) adults with antisocial personality disorder had prior conduct disorder. Likewise about 90% of severe, recurrent adolescent offenders showed marked antisocial behaviour in early childhood (Piquero et al., 2010). In contrast, there is a large group who only start to be antisocial in adolescence, but whose behaviours are less extreme and who tend to become less severe by the time they are adults (Moffitt, 2006).

2.2.2 Girls

Severe antisocial behaviour is less common in girls than in boys; they are less likely to be physically aggressive and engage in criminal behaviour, but more likely to show spitefulness and emotional bullying (such as excluding children from groups, spreading rumours so others are rejected by their peers) and engage in frequent unprotected sex which can lead to sexually transmitted disease and pregnancy, drug abuse, and running away from home. Whether there should be specific criteria for diagnosing conduct disorder in girls is debated (Moffitt et al., 2008).

2.2.3 Pattern of behaviour and setting

The severity of conduct disorder is not determined by the presence of any one of the symptoms or any particular constellation, but is due to their overall volume, determined by the frequency and intensity of antisocial behaviours, the variety of types, the number of settings in which they occur (for example, home, school in public), and their persistence. For general populations of children, the correlation between parent and teacher ratings of conduct problems on the same measures is low (only 0.2 to 0.3), which means that there are many children who are perceived to be mildly or moderately antisocial at home but well behaved at school, and vice versa. However, for more severe antisocial behaviour, there are usually manifestations both at home and at school.

2.2.4 Impact

At home, the child or young person with a conduct disorder is often exposed to high levels of criticism and hostility, and sometimes made a scapegoat for a catalogue of family misfortunes. Frequent punishments and physical abuse are not uncommon. The whole family atmosphere is often soured and siblings also affected. Maternal depression is often present, and families who are unable to cope may, as a last resort, give up the child to be cared for by the local authority. At school, teachers may take a range of measures to attempt to control the child or young person, bring order to the classroom and protect the other pupils, including sending the child or young person out of the class, which sometimes culminates in permanent exclusion from the school. This may lead to reduced opportunity to learn subjects on the curriculum and poor examination results. The child or young person typically has few, if any, friends, and any friends become annoyed by their aggressive behaviour. This often leads to exclusion from many group activities, games and trips, thus restricting the child or young person's quality of life and experiences. On leaving school, the lack of social skills, low level of qualifications and, possibly, a police record make it harder to gain employment.

2.3 CLASSIFICATION

2.3.1 Diagnosis

The ICD-10 classification has a category for conduct disorders (F91). The Clinical Descriptions and Diagnostic Guidelines WHO (1992) state:

> *Examples of the behaviours on which the diagnosis is based include the following: excessive levels of fighting or bullying; cruelty to animals or other people; severe destructiveness to property; fire setting; stealing; repeated lying; truancy from school and running away from home; unusually frequent and severe temper tantrums; defiant provocative behaviour; and persistent severe disobedience. Any one of these categories, if marked, is sufficient for the diagnosis, but isolated dissocial acts are not.*

An enduring pattern of behaviour should be present, but no time frame is given and there is no impairment or impact criterion stated.

The ICD-10 Diagnostic Criteria for Research (World Health Organisation, 1993) differ, requiring symptoms to have been present for at least 6 months, and the introductory rubric indicates that impact upon others (in terms of violation of their basic rights), but not impairment of the child, can contribute to the diagnosis. The research criteria take a menu-driven approach whereby a certain number of symptoms have to be present. Fifteen behaviours are listed to be considered for a diagnosis of conduct disorder, which usually but by no means exclusively apply to older children and teenagers. The behaviours can be grouped into four classes:

Aggression to people and animals

1. often lies or breaks promises to obtain goods or favours or to avoid obligations
2. frequently initiates physical fights (this does not include fights with siblings)
3. has used a weapon that can cause serious physical harm to others (for example, bat, brick, broken bottle, knife, gun)
4. often stays out after dark despite parental prohibition (beginning before 13 years of age)
5. exhibits physical cruelty to other people (for example, ties up, cuts or burns a victim)
6. exhibits physical cruelty to animals.

Destruction of property

7. deliberately destroys the property of others (other than by fire-setting)
8. deliberately sets fires with a risk or intention of causing serious damage).

Deceitfulness or theft

9. steals objects of non-trivial value without confronting the victim, either within the home or outside (for example, shoplifting, burglary, forgery).

Serious violations of rules

10. is frequently truant from school, beginning before 13 years of age
11. has run away from parental or parental surrogate home at least twice or has run away once for more than a single night (this does not include leaving to avoid physical or sexual abuse)
12. commits a crime involving confrontation with the victim (including purse-snatching, extortion, mugging)
13. forces another person into sexual activity
14. frequently bullies others (for example, deliberate infliction of pain or hurt, including persistent intimidation, tormenting, or molestation)
15. breaks into someone else's house, building or car.

To make a diagnosis, at least three behaviours from 1 to 15 in the list above have to be present, one for at least 6 months. There is no impairment criterion. There are three subtypes: *conduct disorder confined to the family context* (F91.0), *unsocialised conduct disorder* (F91.1, where the young person has no friends and is rejected by peers), and *socialised* *conduct disorder* (F91.2, where peer relationships are normal). It is recommended that age of onset be specified, with *childhood onset type* manifesting before age 10, and *adolescent onset type* after age 10. Severity should be categorised as *mild, moderate,* or *severe* according to number of symptoms *or* impact on others, for example, causing severe physical injury, vandalism or theft.

For younger children, usually up to 9 or 10 years old (although can in theory be used for any age up to 18), there is a list of eight symptoms for the subtype known as oppositional defiant disorder (F91.3):

1. has unusually frequent or severe temper tantrums for his or her developmental level
2. often argues with adults
3. often actively refuses adults' requests or defies rules
4. often, apparently deliberately, does things that annoy other people
5. often blames others for his or her own mistakes or misbehaviour
6. is often 'touchy or easily annoyed by others
7. is often angry or resentful
8. is often spiteful or resentful.

To make a diagnosis of the oppositional defiant type of conduct disorder, four symptoms from *either* this list *or* the conduct disorder 15-item list have to be present, but no more than two from the latter. Unlike for the conduct disorder variant, there is an impairment criterion for the oppositional defiant type: the symptoms must be maladaptive and inconsistent with the child or young person's developmental level.

Where there are sufficient symptoms of a comorbid disorder to meet diagnostic criteria, ICD-10 discourages the application of a second diagnosis, and instead offers a single, combined category for the commonest combinations. There are two major kinds: mixed disorders of conduct and emotions, of which depressive conduct disorder (F92.0) is the best researched; and hyperkinetic conduct disorder (F90.1). There is modest evidence to suggest these combined conditions may differ somewhat from their constituent elements.

DSM-IV-TR follows the ICD-10 research criteria very closely and does not have separate clinical guidelines. The same 15 behaviours are given for the diagnosis of conduct disorder 312.8, with almost identical wording. As for ICD-10, three symptoms need to be present for diagnosis. Severity and childhood or adolescent onset are specified in the same way. However, unlike ICD-10, there is no division into socialised or unsocialised, or family context only types, and there *is* a requirement for the behaviour to cause 'clinically significant impairment in social, academic, or social functioning'. Comorbidity in DSM-IV-TR is handled by giving as many separate diagnoses as necessary, rather than by having single, combined categories.

In DSM-IV-TR, oppositional defiant disorder is classified as a separate disorder, and not as a subtype of conduct disorder. Diagnosis requires four from a list of eight behaviours, which are the same as ICD-10, but unlike ICD-10, all four have to be from the oppositional list, and none may come from the conduct disorder list. In older children it is debated whether oppositional defiant disorder is fundamentally different from conduct disorder in its essential phenomena or any associated characteristics, and the value of designating it as a separate disorder is arguable. In this guideline, the term ‘conduct disorders’ will henceforth be used as it is in ICD-10, to refer to all variants including oppositional defiant disorder. The term ‘conduct problems’ will be used for less severe antisocial behaviour.

‘Juvenile delinquency’ is a legal term referring to an act by a young person who has been convicted of an offence which would be deemed a crime if committed by an adult. Most, but not all, recurrent juvenile offenders have conduct disorder.

2.3.2 Differential diagnosis

Making a diagnosis of conduct disorder is usually straightforward but comorbid conditions are often missed. Differential diagnosis may include:

1. *Hyperkinetic syndrome and attention deficit hyperactivity disorder*. These are the names given by ICD-10 and DSM-IV-TR respectively for similar conditions, except that the former is more severe. For convenience the term ‘hyperactivity’ will be used here. It is characterised by impulsivity, inattention and motor overactivity. Any of these three sets of symptoms can be misconstrued as antisocial, particularly impulsivity, which is also present in conduct disorders. However, none of the symptoms of conduct disorders are a part of hyperactivity so excluding conduct disorders should not be difficult. A frequently made error, however, is to miss comorbid hyperactivity when conduct disorder is definitely present. Standardised questionnaires are very helpful here, such as the Strengths and Difficulties Questionnaire (SDQ), which is brief, and just as effective at detecting hyperactivity as much longer alternatives (Goodman & Scott, 1999).

2. *Adjustment reaction to an external stressor.* This can be diagnosed when onset occurs soon after exposure to an identifiable psychosocial stressor such as divorce, bereavement, trauma, abuse or adoption. The onset should be within 1 month for ICD-10, and 3 months for DSM-IV-TR, and symptoms should not persist for more than six months after the cessation of the stress or its sequelae.

3. *Mood disorders.* Depression can present with irritability and oppositional symptoms but unlike typical conduct disorder mood is usually clearly low and there are vegetative features (difficulties with basic bodily processes, such as eating, sleeping and feeling pleasure); also more severe conduct problems are absent. Early bipolar disorder can be harder to distinguish, as there is often considerable defiance and irritability combined with disregard for rules, and behaviour that violates the rights of others. Low self-esteem is the norm in conduct disorders, as is a lack of friends or constructive pastimes. Therefore it is easy to overlook more pronounced depressive symptoms. Systematic surveys reveal that around a third of children with a conduct disorder have depressive or other emotional symptoms severe enough to warrant a diagnosis.

4. *Autistic spectrum disorders.* These are often accompanied by marked tantrums or destructiveness, which may be the reason for seeking a referral. Enquiring about other symptoms of autistic spectrum disorders should reveal their presence.

5. *Dissocial and antisocial personality disorder.* In ICD-10 it is suggested that a person should be 17 years or older before dissocial personality disorder can be considered. Since at age 18 most diagnoses specific to childhood and adolescence no longer apply, in practice there is seldom a difficulty in terms of formal diagnosis. In DSM-IV-TR, conduct disorder can be diagnosed in people over 18 so there is potential overlap. A difference in emphasis is the severity and pervasiveness of the symptoms of those with personality disorder, whereby all the individual's relationships are affected by the behaviour pattern, and the individual's beliefs about his antisocial behaviour are characterised by callousness and lack of remorse.

   In contrast to a formal diagnosis of dissocial or antisocial personality disorder, however, there has been an explosion of interest in the last decade in what have been termed psychopathic traits in childhood. The characteristics of the adult psychopath include grandiosity, callousness, deceitfulness, shallow affect and lack of remorse. Can the 'fledgling psychopath' be identified in childhood? Certainly there are now instruments that reliably identify callous-unemotional traits such as lack of guilt, absence of empathy, and shallow, constricted emotions in children (Farrington, 2005). Further research has shown that callous-unemotional traits in childhood are associated with a failure to inhibit aggression in response to signs of distress in others, arising from a deficit in processing victims' distress cues, and reduced ability to recognise fear and sadness (Blair et al., 2005). In longitudinal studies such children go on to be more aggressive and antisocial than others without such traits (Moran et al., 2009), and they are harder to treat, responding less well to interventions (Hawes & Dadds, 2005); (Haas et al., 2011)

6. *Subcultural deviance.* Some young people are antisocial and commit crimes but are not particularly aggressive or defiant. They are well adjusted within a deviant peer culture that approves of recreational drug use, shoplifting, and so on. In some areas a third or more teenage males fit this description and would meet ICD-10 diagnostic guidelines for socialised conduct disorder. Some clinicians are unhappy to label such a large proportion of the population with a psychiatric disorder. Using DSM-IV-TR criteria would preclude the diagnosis for most young people like this due to the requirement for significant impairment.

2.3.3 Multiaxial assessment

ICD-10 recommends that multiaxial assessment be carried out for children and young people, while DSM-IV-TR suggests it for all ages. In both systems Axis 1 is used for psychiatric disorders that have been discussed above. The last three axes in both systems cover general medical conditions, psychosocial problems, and level of social functioning; these topics will be alluded to in Section 2.5. In the middle are two axes in ICD-10, which cover specific (Axis 2) and general (Axis 3) learning disabilities; and one in DSM-IV-TR (Axis 2), which covers personality disorders *and* general learning disabilities.

Both specific and general learning disabilities are essential to assess in children and young people with a conduct disorder. A third of children with a conduct disorder have a reading level two standard deviations below that predicted by the person's IQ (Trzesniewski et al., 2006). While this may in part be due to lack of adequate schooling, there is good evidence that the cognitive deficits often precede the behavioural problems. General learning disability is often missed in children and young people with a conduct disorder unless IQ testing is carried out. The rate of conduct disorder increases several-fold in those with an IQ below 70.

This chapter describes the general pattern of behaviour that comprises conduct disorder and alternative diagnoses. When considering an individual child or young person, the assessment, formulation and management plan will of course not just consider the presence or absence of behaviours, but will cover many other issues, including the particular circumstances and influences that led to the presentation, the family's strengths and resources, and the meanings ascribed to the situation.

2.4 EPIDEMIOLOGY

In the large 1999 and 2004 British surveys carried out by the Office of National Statistics, 5% of children and young people aged 5 to 15 years met ICD-10 criteria for conduct disorders with a strict impairment requirement (Green et al., 2005). A modest rise in diagnosable conduct disorder over the second half of the 20th century has also been observed when comparing assessments of three successive birth cohorts in Britain (Collishaw et al., 2004). In terms of class, there is a marked social class gradient with conduct disorders more prevalent in social classes D and E compared to social class A (Green et al., 2005). With respect to ethnicity, young people's self-reports of antisocial behaviours and also crime victim survey reports of perpetrators' ethnicity show an excess of offenders of black African ancestry, whereas children and young people of British Asian ancestry show lower rates compared with their white counterparts (Goodman et al., 2010).

2.4.1 Gender differences in prevalence

The gender ratio is approximately 2.5 males for each female overall, with males further exceeding females in the frequency and severity of behaviours. On balance, research suggests that the causes of conduct problems are the same for both genders, but males have more conduct disorders because they experience more of its individual-level risk factors (for example, hyperactivity, neurodevelopmental delays). However, in recent years there has been increasing concern among clinicians about treating antisocial behaviour among girls (Pullatz & Bierman, 2004).

2.4.2 Developmental subtypes

There has been considerable attention paid to the distinction between conduct problems that are first seen in early childhood versus those that start in adolescence and these two subtypes are encoded in the DSM-IV-TR. Early onset is a strong predictor of persistence through childhood, and early onset delinquency is more likely to persist into adult life. Those with early onset differ from those with later onset in that they have a lower IQ, more attentional and impulsivity problems, poorer scores on neuropsychological tests, greater peer difficulties, and they are more likely to come from adverse family backgrounds (Moffitt, 2006). Those with later onset become delinquent predominantly as a result of social influences such as association with other delinquent young people and usually do not show neuropsychological abnormalities. Findings from the follow-ups of large cohorts show poorer adult outcomes for the early-onset group in domains of violence, mental health, substance misuse, work and family life (Moffitt, 2006). However, the adolescent-onset group, who were originally named ‘adolescence limited’ were not without adult difficulties, hence the name change. As adults they still engaged in self-reported offending, and they also had problems with alcohol and drugs. Thus the age-of-onset subtype distinction has strong predictive validity, but adolescent-onset antisocial behaviours may have more long-lasting consequences than previously supposed.

2.5 AETOLOGY

2.5.1 Individual-level characteristics

Genes

Fewer than 10% of the families in any community account for more than 50% of that community’s criminal offences, which reflects the coincidence of genetic and environmental risks. There is now solid evidence from twin and adoption studies that conduct problems assessed both dimensionally and categorically are substantially heritable (Moffitt, 2005). However, knowing that conduct problems are under some genetic influence is less useful clinically than knowing that this genetic influence appears to be reduced, or enhanced, depending on interaction with circumstances in the child or young person’s environment. Several genetically sensitive studies have allowed interactions between family genetic liability and rearing environment to be examined. Both twin and adoption studies have reported an interaction between antisocial behaviour in the biological parent and adverse conditions in the adoptive home that predicted the adopted child’s antisocial outcome, so that the genetic risk was modified by the rearing environment. For example, one twin study (Jaffee et al., 2003) found the experience of maltreatment was associated with an increase of 24% in the probability of diagnosable conduct disorder among children at high genetic risk, but an increase of only 2% among children at low genetic risk. Such gene–environment interactions are being increasingly discovered (Dodge & Rutter, 2011). It is important to emphasise that because conduct disorders are partially genetically caused does not mean that environmental or psychosocial interventions will not work. The opposite is true: awareness of a familial liability toward psychopathology increases the urgency to intervene to improve a child or young person’s social environment.

The search for specific genetic polymorphisms is a fairly new scientific initiative. The candidate gene that is most studied in relation to conduct problems is the monoamine oxidase type A (MAOA) promoter polymorphism. The gene encodes the MAOA enzyme, which metabolises neurotransmitters linked to aggressive behaviour. Positive and negative replication studies have appeared, and a meta-analysis of these studies showed the association between MAOA genotype and conduct problems is modest but statistically significant (Kim-Cohen et al., 2006). Little replication has yet been accomplished using genome-wide association studies (Dick et al., 2011).

Perinatal complications and temperament

Recent large-scale general population studies have found associations between life-course persistent type conduct problems and perinatal complications, minor physical anomalies, and low birth weight (Brennan et al., 2003). Most studies support a biosocial model in which obstetric complications might confer vulnerability to other co-ocurring risks such as hostile or inconsistent parenting. Smoking in pregnancy is a statistical risk predictor of offspring conduct problems (Brennan et al., 2003), but a causal link between smoking and conduct problems has not been established. Several prospective studies have shown associations between irritable temperament and conduct problems (Keenan & Shaw, 2003).

Neurotransmitters

In general, the findings with children have not been consistent. For example, in the Pittsburgh Youth cohort, boys with long-standing conduct problems showed downward changes in urinary adrenaline level following a stressful challenge task, whereas prosocial boys showed upward responses. However other studies have failed to find an association between conduct disorder and measures of noradrenaline in children (Hill, 2002). It should be borne in mind that neurotransmitters in the brain are only indirectly measured, most measures of neurotransmitter levels are crude indicators of activity, and little is known about neurotransmitters in the juvenile brain.

Cognitive deficits

Children with conduct problems have been shown consistently to have increased rates of deficits in language-based verbal skills (Lynam & Henry, 2001). The association holds after controlling for potential confounds such as race, socioeconomic status, academic attainment and test motivation. Children who cannot reason or assert themselves verbally may attempt to gain control of social exchanges using aggression (Dodge, 2006); there are likely, also, to be indirect effects in which low verbal IQ contributes to academic difficulties, which in turn mean that the child or young person's experience of school becomes unrewarding, rather than a source of self-esteem and support.

Children and young people with conduct problems have been shown consistently to have poor tested executive functions (Ishikawa & Raine, 2003); (Hobson et al., 2011). Executive functions comprise those abilities implicated in successfully achieving goals through appropriate and effective actions. Specific skills include learning and applying contingency rules, abstract reasoning, problem solving, self-monitoring, sustained attention and concentration, relating previous actions to future goals, and inhibiting inappropriate responses. These mental functions are largely, although not exclusively, associated with the frontal lobes.

Autonomic reactivity

A low resting pulse rate or slow heart rate has been found consistently to be associated with antisocial behaviour, and a meta-analysis of 40 studies suggested it is the best replicated biological correlate of antisocial behaviour (Ortiz & Raine, 2004). Other psychophysiological indicators show that antisocial and psychopathic boys are also slowest to show a skin-conductance response to aversive stimuli (Fung et al., 2005). The explanation for the link between slow autonomic activity and antisocial behaviour remains unclear.

Social cognition

Dodge (Dodge, 2006) developed the leading information-processing model for the genesis of aggressive behaviours within social interactions. Children and young people who are prone to aggression focus on threatening aspects of others' actions, interpret hostile intent in the neutral actions of others, and are more likely to select and to favour a aggressive solution to social challenges. Several studies have demonstrated that aggressive children make such errors of social cognition (Dodge, 2006).

2.5.2 Risks within the family

Family poverty

There is an association between severe poverty and conduct problems in early childhood. Early theories proposed direct effects of poverty related to strains arising from the gap between aspiration and reality, and from lacking opportunity to acquiring social status and prestige. Subsequent research has indicated that the association between low income and childhood conduct problems is indirect, mediated via family processes such as marital discord and parenting quality, which is discussed below.

Discipline and parenting

Patterns of parenting associated with conduct problems were delineated by Patterson in his seminal work *Coercive Family Process*. Parents of antisocial children were found to be more inconsistent in their use of rules, to issue more, and unclear, commands, to be more likely to respond to their children on the basis of mood rather than the characteristics of the child's behaviour, to be less likely to monitor their children's whereabouts, and to be unresponsive to their children's prosocial behaviour. Patterson proposed a specific mechanism for the promotion of oppositional and aggressive behaviours in children. A parent responds to mild oppositional behaviour by a child with a prohibition to which the child responds by escalating their behaviour, and mutual escalation continues until the parent retreats, thus negatively reinforcing the child's behaviour. The parent's inconsistent behaviour increases the likelihood of the child showing further oppositional or aggressive behaviour. In addition to specific tests of Patterson's reinforcement model there is ample evidence that conduct problems are associated with hostile, critical, punitive and coercive parenting.

In considering the role of coercive processes in the origins or maintenance of conduct problems, possible alternative explanations need to be considered: (a) that the associations reflect familial genetic liability toward children's psychopathology and parents' coercive discipline; (b) that they represent the effects of children's behaviours on parents; and (c) that coercive parenting may be a correlate of other features of the parent–child relationship or family functioning that influence children's behaviours. There is considerable evidence that children's difficult behaviours do indeed evoke parental negativity. The fact that children's behaviours can evoke negative parenting does not however mean that negative parenting has no impact on children's behaviour. The E-Risk longitudinal twin study of British families (Trzesniewski et al., 2006) examined the effects of fathers' parenting on young children's aggression. As expected, a prosocial father's *absence* predicted more aggression by his children. But in contrast, an antisocial father's *presence* predicted more aggression by his children, and his harmful effect was exacerbated the more time each week he spent taking care of the children.

The strong contribution of harsh, inconsistent parenting with lack of warmth to the causation of conduct problems provides an opportunity for intervention. As evidence presented in this guideline will show, parenting programmes that reverse less optimal patterns of parenting and promote positive encouragement of children with the setting clear boundaries that are calmly enforced lead to improvement of conduct problems.

Child attachment

Parent-child relationships provide the setting for the development of later social functioning, and disruption of the child's opportunity to make attachment relationships, for example through institutional care, is associated with subsequent difficulties in relating. Thus, conduct problems might be expected to arise from infant attachment difficulties. One study found that ambivalent and controlling attachment predicted externalising behaviours after controlling for baseline externalising problems; disorganised child attachment patterns seem to be especially associated with conduct problems. Although it seems obvious that poor parent-child relations in general predict conduct problems, it has yet to be established whether attachment difficulties as measured by observational paradigms have an independent causal role in the development of behaviour problems; attachment classifications could be markers for other relevant family risks. However, in adolescence there is evidence that attachment representations independently predict conduct symptoms over and above parenting quality (Scott et al., 2011).

Exposure to adult marital conflict and domestic violence

It is likely that family processes other than parenting skills and quality of parent–child attachment relationships have a role. Many studies have shown that children exposed to domestic violence between adults are subsequently more likely to themselves become aggressive. (Cummings & Davies, 2002) proposed that marital conflict influences children's behaviour because of its effect on their regulation of emotion. For example a child may respond to frightening emotions arising from marital conflict by down-regulating their emotions through denial of the situation. This in turn may lead to inaccurate appraisal of other social situations and ineffective problem solving. Repeated exposure to family conflict is thought to lower children's thresholds for psychological dysregulation, resulting in greater behavioural reactivity to stress. Children's aggression may also be increased by marital discord because children are likely to imitate aggressive behaviour modelled by their parents. Through parental aggression, children may learn that aggression is a normative part of family relationships, that it is an effective way of controlling others, and that aggression is sanctioned, not punished.

Maltreatment

Physical punishment is widely used, and parents of children with conduct problems frequently resort to it out of desperation. Overall, associations between physical abuse and conduct problems are well established. In the Christchurch longitudinal study, child sexual abuse predicted conduct problems, after controlling for other childhood adversities (Fergusson et al., 1996). However, sometimes some parents resort to severe and repeated beatings that are clearly abusive. This typically terrifies the child and causes great pain and overwhelms the ability of the child to stay calm. It leads the children to be less able to regulate their anger and teaches them a violent way of responding to stress. Unsurprisingly, elevated rates of conduct disorder result (Jaffee et al., 2003).

2.5.3 Risks outside the family

Risks in the local community

It has long been assumed that areas with high crime rates have the effect of encouraging children to develop conduct problems; however, it has been difficult to establish any direct link between neighbourhood characteristics and child behaviour, for a number of reasons. For example, neighbourhood characteristics were conceptualised in overly simple structural-demographic terms such as percentage of non-white residents or percentage of single-parent households. Moreover, research designs could not rule out the alternative possibility that families whose members are antisocial tend to selectively move into 'bad' neighbourhoods. A new generation of neighbourhood research is addressing these challenges, and suggests that the neighbourhood factors that are important include social processes such as 'collective efficacy' and 'social control', do influence young children's conduct problems, probably by supporting parents in their efforts to rear children.

Peer influences

Children and young people with conduct problems have poorer peer relationships than their non-disordered peers in that they tend to associate with others with similar antisocial behaviours, they have discordant interactions with other children, and experience rejection by non-deviant peers. Three processes have been identified: (1) that antisocial behaviours lead to children and young people having peer problems, (2) that deviant peer relationships lead to antisocial behaviours, and (3) that some common factor leads to both (Coie, 2004).

2.5.4 From risk predictor to causation

Associations have been documented between conduct problems and a wide range of risk factors. A variable is called a 'risk factor' if it has a documented predictive relation with antisocial outcomes, whether or not the association is causal. The causal status of most of these risk factors is unknown; we know what statistically predicts conduct-problem outcomes, but not how or why. Establishing a causal role for a risk factor is by no means straightforward, particularly as it is unethical to experimentally expose healthy children to risk factors to observe whether those factors can generate new conduct problems. There is no one solution to the problem, although the use of genetically sensitive designs and the study of within-individual change in natural experiments and treatment studies have considerable methodological advantages for suggesting causal influences on conduct problems.

2.6 COURSE AND PROGNOSIS

2.6.1 Factors predicting poor outcome

Of those with early onset conduct disorder (before age 8) about half have serious problems that persist into adulthood. Of those with adolescent onset, the great majority (over 85%) desist in their antisocial behaviour by their early twenties.
Many of the factors that predict poor outcome are associated with early onset (see Table 1).

Table 1: Factors predicting poor outcome

Factor	Outcome
Onset	Early onset of severe problems, before age 8
Phenomenology	Antisocial acts which are severe, frequent, and varied
Comorbidity	Hyperactivity and attention problems
Intelligence	Lower IQ
Family History	Parental criminality; parental alcoholism
Parenting	Harsh, inconsistent parenting, with high criticism, low warmth, low involvement and low supervision.
Wider environment	Low income family in poor neighbourhood with ineffective schools.

To detect protective factors, children who do well despite adverse risk factors have been studied.

These so-called 'resilient' children, however, have been shown to have lower levels of risk factors, for example a boy with antisocial behaviour and low IQ living in a rough neighbourhood but living with supportive, concerned parents. Protective factors are mostly the opposite end of the spectrum of the same risk factor, thus good parenting, high IQ are protective. Nonetheless there are factors which are associated with resilience independent of known adverse influences. These include a good relationship with at least one adult, who does not necessarily have to be the parent; a sense of pride and self-esteem; and skills or competencies.

2.6.2 Adult outcome

Studies of groups of children with early-onset conduct disorder indicate a wide range of problems not only confined to antisocial acts, as shown in Table 2. What is clear is that not only are there substantially increased rates of antisocial acts, but that the general psychosocial functioning of adults who had conduct disorder is strikingly poor. For most of the characteristics shown in Table 2, the increase compared to controls is three to tenfold (Fergusson et al., 2005). Thus conduct disorder has widespread ramifications most of the important domains of life, affecting work and relationships. The strength of the effects emphasises the extensive benefits that can accrue from successful treatment, and the importance of making this available to affected children and young people.

Table 2: Adult outcome

Antisocial behaviour	More violent and non-violent crimes, for example, mugging, grievous bodily harm; theft, car crimes, fraud.
Psychiatric problems	Increased rates of antisocial personality, alcohol and drug abuse, anxiety, depression and somatic complaints, episodes of deliberate self-harm and completed suicide, time in psychiatric hospitals
Education and training	Poorer examination results, more truancy and early school leaving, fewer vocational qualifications
Work	More unemployment, jobs held for shorter time, jobs low status and income, increased claiming of benefits and welfare
Social network	Few if any significant friends, low involvement with relatives, neighbours, clubs and organisations
Intimate relationships	Increased rate of short lived, violent cohabiting relationships; partners often also antisocial
Children	Increased rates of child abuse, conduct problems in offspring, children taken into care
Health	More medical problems, earlier death

2.6.3 Pathways

The path from childhood conduct disorder to poor adult outcome is neither inevitable nor linear.

Different sets of influences impinge as the individual grows up and shape the life course. Many of these can accentuate problems. Thus a toddler with an irritable temperament and short attention span may not learn good social skills if he is raised in a family lacking them, and where he can only get his way by behaving antisocially and grasping for what he needs. At school he may fall in with a deviant crowd of peers, where violence and other antisocial acts are talked up and give him a sense of esteem. His generally poor academic ability and difficult behaviour in class may lead him to truant increasingly, which in turn makes him fall further behind. He may then leave school with no qualifications and fail to find a job, and resort to drugs. To fund his drug habit he may resort to crime, and once convicted, find it even harder to get a job. From this example, it can be seen that adverse experiences do not only arise passively and independently of the young person′s behaviour; rather, the behaviour predisposes them to end up in risky and damaging environments. Consequently, the number of adverse life events experienced is greatly increased (Champion et al., 1995). The path from early hyperactivity into later conduct disorder is also not inevitable. In the presence of a warm supportive family atmosphere it is far less likely than if the parents are highly critical and hostile.

Other influences can however steer the individual away from and antisocial path. For example, the fascinating follow-up of delinquent boys to age 70 (Laub & Sampson, 2003) showed that the following led to desistence: being separated from a deviant peer group; marrying to a non-deviant partner; moving away from a poor neighbourhood; military service which imparted skills.

2.7 TREATMENT

The evidence for the effectiveness of treatments is the subject of the analyses in ensuing chapters. Singly or in combination, they address parenting skills, family functioning, child interpersonal skills, difficulties at school, peer group influences, and medication for coexistent hyperactivity.

2.7.1 Parenting skills

Parent training aims to improve parenting skills (Scott, 2008). As following chapters show, there are scores of randomised controlled trials suggesting that it is effective for children up to about 10 years old. Parenting interventions based on social learning theory address the parenting practices identified in research as contributing to conduct problems. Typically, they include 5 elements:

(i) Promoting play and a positive relationship. In order to cut into the cycle of defiant behaviour and recriminations, it is important to instil some positive experiences for both child and parent and begin to mend the relationship. Helping parents learn the techniques of how to play in a constructive and non-hostile way with their children helps them recognise their needs and respond sensitively. The children in turn begin to like and respect their parents more, and become more secure in the relationship.

(ii) Praise and rewards for sociable behaviour. Parents are helped to reformulate difficult behaviour in terms of the positive behaviour they wish to see, so that they encourage wanted behaviour rather than criticise unwanted behaviour. For example, instead of shouting at the child not to run, they would praise him whenever he walks quietly; then he will do it more often. Through hundreds of such prosaic daily interactions, child behaviour can be substantially modified. When some parents find it hard to praise, and fail to recognise positive behaviour when it happens, the result is that the desired behaviour becomes less frequent.

(iii) Clear rules and clear commands. Rules need to be explicit and constant; commands need to be firm and brief. Thus shouting at a child to stop being naughty doesn't tell him what he *should* do, whereas for example telling him to play quietly gives a clear instruction which makes compliance easier.

(iv) Consistent and calm consequences for unwanted behaviour. Disobedience and aggression need to be responded to firmly and calmly, by for example putting the child in a room

for a few minutes. This method of 'time out from positive reinforcement' sounds simple but requires considerable skill to administer effectively. More minor annoying behaviours such as whining and shouting often respond to being ignored, but again parents often find this hard to achieve in practice.

(v) Reorganising the child's day to prevent trouble. There are often trouble spots in the day which will respond to fairly simple measures. For example, putting siblings in different rooms to prevent fights on getting home from school; Banning TV in the morning until the child is dressed; and so on.

Treatment can be given individually to the parent and child which enables live feedback in light of the parent's progress and the child's response. Alternatively, group treatments with parents alone have been shown to be equally effective. Trials show that parent management training is effective in reducing child antisocial behaviour the short term for half to two-thirds of families, with little loss of effect at 1 to 3 year follow up. However, we now need research on clinical proposals of what to do with those who do not respond (Scott & Dadds, 2009).

2.7.2 Improving family functioning

Functional family therapy, multisystemic therapy, and multidimensional treatment foster care aim to change a range of difficulties which impede effective functioning of teenagers with conduct disorder. These programmes use a combination of social learning theory, cognitive and systemic family therapy interventions. Functional Family Therapy addresses family processes, including high levels of negativity and blame and characteristically seeks to improve communication between parent and young person, reduce interparental inconsistency, tighten up on supervision and monitoring, and negotiate rules and the sanctions to be applied for breaking them. Most other varieties of family therapy have not been subjected to controlled trials for young people with conduct disorder or delinquency so cannot be evaluated for their efficacy. FFT is an assertive outreach model and sessions typically take place in the family home. There is a manual for the therapeutic approach and adherence is checked weekly by the supervisor.

In multisystemic therapy the young person's and family's needs are assessed in their own context at home and in related systems such as school and peers. Following the assessment, proven methods of intervention are used to address difficulties and promote strengths. As for FFT, treatment is delivered in the situation where the young lives. Secondly, the therapist has a low caseload (four to six families) and the team is available 24 hours a day. Thirdly, the therapist is responsible for ensuring appointments are kept and for making change happen - families cannot be blamed for failing to attend or 'not being ready' to change. Fourthly, regular written feedback on progress towards goals from multiple sources is gathered by the therapist and acted upon. Fifthly, there is a manual for the therapeutic approach and adherence is checked weekly by the supervisor.

Multidimensional treatment foster care is another intervention which has been shown to improve the quality of encouragement and supervision that teenagers with conduct disorder receive. This is an intensive 'wrap around' intervention. The young person temporarily lives with foster carers who are specially trained, and in addition receives help from individual therapists at school and in the community. The child’s parents are also helped to learn more effective parenting skills.

2.7.3 Anger management and child interpersonal skills

Most of the programmes to improve child interpersonal skills derive from cognitive behaviour therapy. Programmes have in common training the young person to:

- slow down impulsive responses to challenging situations by stopping and thinking
- recognise their own level of physiological arousal, and their own emotional state
- recognise and define problems
- develop several alternative responses
- choose the best alternative based on anticipation of consequences
- reinforce himself for use of this approach.

Over the longer term they aim to increase positive social behaviour by teaching the young person to:

- learn skills to make and sustain friendships
- develop social interaction skills such as turn-taking and sharing
- express viewpoints in appropriate ways and listen to others.

2.7.4 Overcoming difficulties at school

These can be divided into learning problems and disruptive behaviour. There are proven programmes to deal with specific learning problems such as specific reading difficulties, such as Reading Recovery. However, few of the programmes have been specifically evaluated for their ability to improve outcome in children with conduct disorder, although trials are in progress.

There are several schemes for improving classroom behaviour, which vary from those which stress improved communication such as “Circle time”, and those which work on behavioural principles or are part of a multimodal package. Some of these schemes specifically target children with conduct problems.

2.7.5 Ameliorating peer group influences

A few interventions have aimed to reduce the bad influence of deviant peers. However, a number attempted this through group work with other conduct disordered youths, but outcome studies showed a *worsening* of antisocial behaviour. Current treatments therefore either see youths individually and try to steer them away from deviant peers, or work in small groups (say 3-5 youths) where the therapist can control the content of sessions. Some interventions place youths with conduct disorder in groups with well-functioning youths.

2.7.6 Medication

Where there is comorbid hyperactivity in addition to conduct disorder, several studies attest to a large reduction in both overt and covert antisocial behaviour, both at home and at school (NICE, 2009b). Medication for pure conduct disorders is less well-established and is reviewed in this guideline.

2.8 GENERAL ISSUES WHEN PLANNING TREATMENT

Engagement of the family is particularly important for this group of children and families as dropout from treatment is high, at around 30-40%. Practical measures such as assisting with transport, providing childcare, holding sessions in the evening or at other times to suit the family will all help. Many of the parents of children with conduct disorder may themselves have difficulty with authority and officialdom and be very sensitive to criticism. Therefore the approach is more likely to succeed if it is respectful of their point of view, does not offer overly prescriptive solutions, and does not directly criticise parenting style. Practical homework tasks increase changes, as do problem-solving telephone calls from the therapist between sessions.

Parenting interventions may need to go beyond skill development to address more distal factors which prevent change. For example, drug or alcohol abuse in either parent, maternal depression, and a violent relationship with the partner are all common. Assistance in claiming welfare and benefits and help with financial planning may reduce stress from debts.

A multimodal approach is likely to get larger changes. Therefore involving the school in treatment by visiting and offering strategies for managing the child in class is usually helpful, as is advocating for extra tuition where necessary. If the school seem unable to cope despite extra resources, consideration could be given to moving the child to a unit that specialises in the management of behavioural difficulties, where skilled staff may be able to improve child functioning so a later return to mainstream may be possible. Avoiding antisocial peers and building self-esteem may be helped by getting the child to attend after school clubs and holiday activities.

Where parents are not coping or a damaging abusive relationship is detected, it may be necessary to liaise with the social services department to arrange respite for the parents or a period of foster care. It is important during this time to work with the family to increase their skills so the child can return to the family. Where there is permanent breakdown, long-term fostering or adoption may be recommended.

2.9 PREVENTION

Conduct disorder should offer good opportunities for prevention since it can be detected early reasonably well, early intervention is more effective than later, and there are a number of effective interventions.

This guideline does not address universal prevention. In the USA a number of comprehensive interventions have been tested. One of the best known is Families and

Schools Together (FAST Track; (Conduct Problems Prevention Research Group, 2011). Here the most antisocial 10% of 5-6 year olds in schools in disadvantaged areas were selected, as judged by teacher and parent reports. They were then offered intervention which was given for a whole year in the first instance and comprised:

- weekly parent training in groups with videotapes
- an interpersonal skills training programme for the whole class
- academic tutoring twice a week
- home visits from the parent trainer
- a pairing programme with sociable peers from the class.

Almost 1000 children were randomised to receive this condition or controls, and the project has cost over $100 million, with the treatment continuing to be given over ten years on a tailored basis. However, outcomes have modest. By adulthood, there was no overall improvement of antisocial behaviour, although the most severe cases improved modestly (Conduct Problems Prevention Research Group, 2011). In the UK, there has been a drive to disseminate parenting programmes widely (Scott, 2010a). A range of selective preventions are reviewed in this guideline.

2.10 ECONOMIC COST

The economic consequence of conduct disorder is characteristically huge with considerable resource inputs from several government and private sectors. Though the condition can be considered primarily to be a mental health problem (American Psychiatric Association, 2000), the healthcare service provisions for conduct disorder and the resulting healthcare costs are rather small when compared to costs incurred by other sectors like criminal justice system (Scott et al., 2001). This is as a result of associated crime committed by the individuals with resultant significant social costs and harm to individuals and their victims, families and carers, and society at large (Welsh et al., 2008). Overall, evidence on the costs estimates due to conduct disorder varies widely and tends to be huge when societal perspective is taken.

Cost of conduct disorder like other health problems often includes both direct service cost and indirect costs like productivity loss as a result of health problem. The extent of direct costs is closely related to the quantity of service utilized by the individual. In comparison with other common types of psychiatric disorders in children and adolescents, individuals with problem of conduct disorder are more likely to be heavy users of social services than those with emotional disorder or hyperkinetic disorder, and they are also more likely to utilize primary healthcare and specialist education services than those with emotional disorders (Shivram et al., 2009). Similarly, in an earlier work on service utilisation by this population (Vostanis et al., 2003), children with conduct disorder, with or without co-morbidity, were observed to be heavy users of health, education and social services compared to those with other form of psychiatric disorders.

Depending on the settings where service is delivered and the prevailing health condition of the individual (for example, conduct disorder, conduct problem, oppositional defiant disorder or juvenile offender), considerable variation in the total costs of the services incurred by people with conduct disorder problems exists. In a UK study by Scott and colleagues (Scott et al., 2001), cumulative costs of services to individual diagnosed of conduct disorder at age of 10 years over a period of about 18 years was £70,000 (1998 prices). Compared with other categories of the problem, costs accumulated by conduct disorder individual are about 10 times more than those with no problem and thrice that of individual with conduct problem. Similarly, in a US study comparing the costs of children with conduct disorder, oppositional defiant disorder, elevated levels of problem behaviour and those without any of these disorders (Foster & Jones, 2005), mean annual cost of services for conduct disorder group was estimated as $12,547 (2000 prices) which was about twice of those with oppositional defiant disorder and thrice of those without problem.

Few of the cost studies included costs from all the relevant sectors like health, education, social services, criminal justice, family and carer, and voluntary sectors and some studies reported a separate cost estimates for services provided to juvenile offenders who are already in contact with criminal justice system. On average, the annual cost of services incurred by people with conduct disorders and associated problems is in the range of £6,000 (2002/03 prices) to $180,000 (2008 prices) (Romeo et al., 2006); (Welsh et al., 2008). Criminal justice service costs consist of the most significant component of the cost in most of the studies accounting for a wide range between 19% to 64% of the total costs (Foster & Jones, 2005, Scott et al., 2001). Beside criminal justice system costs, costs to family and carer where reported consist of the second most significant costs due to conduct disorder. In a UK study, the annual cost per child with antisocial behaviour problem without criminal justice costs was estimated to be about £5,960 (2002/03 prices) with cost to family accounting for about 79% of the total cost and, health service, education and voluntary services accounting for about 8%, 1% and 3% respectively. Social services cost was estimated to be less than 1% of the total cost (Romeo et al., 2006). Similarly, study by Knapp and colleagues (Knapp et al., 1999) estimating the annual mean cost of services for 10 children age 4 to 10 years as £15,270 (1996/97 prices) has costs to families accounting for about 31% of the mean costs and16% as health service costs.

Evidence on the annual mean cost of services for individuals who have conduct disorder in addition with other co-existing health problems is few. Knapp and colleagues (Knapp et al., 2002) reported annual mean service costs per patient with conduct disorder and major depressive disorder to be £1,085 which is about 2.4 times more than those with major depressive disorder only. Service domains included in the estimate were health and criminal justice system and therefore can be taken to be highly underestimating the actual mean service costs for such individuals. Another UK study (Barrett et al., 2006) looking at the cost of services provided to younger offenders (age 13 to 18 years) either in a community settings or in custody over a 6 month period reported an average annual cost of services excluding costs to families to be about £40,000 (2001/02 prices). Services provided in a secured accommodation were found to be around three times higher than those provided in the community.

Of huge policy implication is the cost of crime in estimation of cost of conduct disorder. Because of the strong link between conduct disorder and probable criminal activities, the huge cost of crime is often estimated to quantify the extent of economic consequences of treating conduct disorder. A report by the SCMH (Sainsbury Centre for Mental Health, 2009) estimated that about 80% of all criminal activity is attributable to people who had conduct problems in childhood and adolescence. Methods of crime cost estimation and cost components differ greatly among studies. However, crime costs are generally estimated to include three basic cost categories: costs in anticipation of crime (for example, government crime prevention costs), costs as a consequence of crime (for example, victims support services) and costs in response to crime (for example, police costs), reports the Centre for Criminal Justice (2008). Often estimated are costs as a consequence of crime and costs in response to crime such as tangible and intangible costs (Cohen, 1998, McCollister et al., 2010). Given the variation in the methods used in crime costs estimation and cost components included in the estimate, reported cost of crime also associated with wide variations. In the USA, reported lifetime costs of attributable to a typical offender are in the range of $2.1million to $3.7million in 2007 dollars (Cohen & Piquero, 2009), when discounted back to birth. In England and Wales, the lifetime costs of crime per prolific offender are put at around £1.5 million (Sainsbury Centre for Mental Health, 2009). The total cost of crime against individuals and household in 2003/04 pounds was estimated to be around £36.2billion (Dubourg et al., 2005). And for youths aged between 10 to 21 years, the estimated cost of crime in 2009 for Great Britain was reported to be in excess of £1.2 billion or about £23 million a week (Prince's Trust, 2010)

Considering the overall lifetime costs of conduct problems, an estimate by Sainsbury Centre for Mental Health (Sainsbury Centre for Mental Health, 2009) put the crime-related costs to consist of about 71% of total lifetime costs of people with conduct disorder and 29% for other non-crime related costs. For people with mild or moderate conduct problem, significant percentage of their lifetime costs is also related to crime (61%). Notwithstanding the extensive literatures on crime costs, there are yet difficulties in accurately estimating the overall crime costs attributable to conduct disorders children and young people and subsequent adverse outcomes in adulthood. Such difficult is often around uncertainties in accurately quantifying the value of intangible costs such as fear of crime, pain, suffering or grief suffered by victims of crime (Loomes, 2007) (Semmens, 2007) (Shapland & Hall, 2007)) and other indirect costs like productivity loss. Aside the immediate physical health needs of crime victims, mental health needs of crime victims can impose a huge costs not only on criminal justice system but also on the health system when about 20% to 25% of people visiting mental health care professionals are as a result of being victims to crimes at a costs between $5.8 and $6.8 billion (Cohen & Miller, 1998). As result, the current estimates of economic cost of conduct disorder can be assumed to be conservative and the actual cost is more likely to exceed the values reported in the literatures if all attributed costs are considered.

2.11 CONCLUSION

Much is known about the risk factors leading to conduct disorders and effective treatments exist. The challenge is to make these available on a wider scale, and to develop approaches to selective prevention which are effective and can be put into practice at a community level.

3 METHODS USED TO DEVELOP THIS GUIDELINE

3.1 OVERVIEW

The development of this guideline drew upon methods outlined by NICE; further information is available in *The Guidelines Manual* (NICE, 2009d). A team of health and social care professionals, lay representatives and technical experts known as the Guideline Development Group (GDG), with support from the NCCMH staff, undertook the development of a person-centred, evidence-based guideline. There are six basic steps in the process of developing a guideline:

1. Define the scope, which sets the parameters of the guideline and provides a focus and steer for the development work.
2. Define review questions considered important for practitioners and service users.
3. Develop criteria for evidence searching and search for evidence.
4. Design validated protocols for systematic review and apply to evidence recovered by search.
5. Synthesise and (meta-) analyse data retrieved, guided by the review questions, and produce GRADE evidence profiles and summaries.
6. Answer review questions with evidence-based recommendations for clinical practice.

The clinical practice recommendations made by the GDG are therefore derived from the most up-to-date and robust evidence for the clinical and cost effectiveness of the treatments and services used in the recognition, intervention and management of conduct disorders and antisocial behaviour. In addition, to ensure a service user and carer focus, the concerns of service users and carers regarding health and social care have been highlighted and addressed by recommendations agreed by the whole GDG.

3.2 THE SCOPE

Guideline topics are selected by the Department of Health and the Welsh Assembly Government, which identify the main areas to be covered by the guideline in a specific remit; see *The Guidelines Manual* (NICE, 2009d) for further information. The NCCMH developed a scope for the guideline based on the remit. The purpose of the scope is to:

- provide an overview of what the guideline will include and exclude
- identify the key aspects of care that must be included
- set the boundaries of the development work and provide a clear framework to enable work to stay within the priorities agreed by NICE and the National Collaborating Centre, and the remit from the Department of Health/Welsh Assembly Government
- inform the development of the review questions and search strategy

- inform professionals and the public about expected content of the guideline
- keep the guideline to a reasonable size to ensure that its development can be carried out within the allocated period.

An initial draft of the scope was sent to registered stakeholders who had agreed to attend a scoping workshop. The workshop was used to:

- obtain feedback on the selected key clinical issues
- identify which population subgroups should be specified (if any)
- seek views on the composition of the GDG
- encourage applications for GDG membership.

The draft scope was subject to consultation with registered stakeholders over a 4-week period. During the consultation period, the scope was posted on the NICE website (www.nice.org.uk). Comments were invited from stakeholder organisations. The NCCMH and NICE reviewed the scope in light of comments received, and the revised scope was signed off by NICE.

3.3 THE GUIDELINE DEVELOPMENT GROUP

The GDG consisted of: professionals in psychiatry, clinical psychology, nursing, social care, and general practice; academic experts in psychiatry and psychology; and carers of children and young people with a conduct disorder. The guideline development process was supported by staff from the NCCMH, who undertook the clinical and health economics literature searches, reviewed and presented the evidence to the GDG, managed the process, and contributed to drafting the guideline.

3.3.1 Guideline Development Group meetings

12 GDG meetings were held between 13 April 2011 and 31 October 2012. During each day-long GDG meeting, in a plenary session, review questions and clinical and economic evidence were reviewed and assessed, and recommendations formulated. At each meeting, all GDG members declared any potential conflicts of interest, and service user and carer concerns were routinely discussed as part of a standing agenda.

3.3.2 Topic groups

The GDG divided its workload along clinically relevant lines to simplify the guideline development process, and GDG members formed smaller topic groups to undertake guideline work in that area of clinical practice. Topic Group 1 covered questions relating to prevention. Topic Group 2 covered interventions and Topic Group 3 covered health economics. These groups were designed to efficiently manage the large volume of evidence appraisal prior to presenting it to the GDG as a whole. Each topic group was chaired by a GDG member with expert knowledge of the topic area (one of the healthcare professionals). Topic groups refined the review questions and the clinical definitions of treatment interventions, reviewed and prepared the evidence with the systematic reviewer before presenting it to the GDG as a whole, and helped the GDG to identify further expertise in the topic. Topic group leaders reported the status of the group's work as part of the standing agenda. They also introduced and led the GDG discussion of the evidence review for that topic and assisted the GDG Chair in drafting the section of the guideline relevant to the work of each topic group.

3.3.3 Service users and carers

Individuals with direct experience of services gave an integral service-user focus to the GDG and the guideline. The GDG included two carers, who contributed as full GDG members to writing the review questions, helping to ensure that the evidence addressed their views and preferences, highlighting sensitive issues and terminology relevant to the guideline, and bringing service-user research to the attention of the GDG. In drafting the guideline, they contributed to writing the guideline's introduction and identified recommendations from the service user and carer perspective.

3.3.4 National and international experts

National and international experts in the area under review were identified through the literature search and through the experience of the GDG members. These experts were contacted to identify unpublished or soon-to-be published studies, to ensure that up-to-date evidence was included in the development of the guideline. They informed the group about completed trials at the pre-publication stage, systematic reviews in the process of being published, studies relating to the cost effectiveness of treatment and trial data if the GDG could be provided with full access to the complete trial report. Appendix 4 lists researchers who were contacted.

3.4 REVIEW QUESTIONS

Review (clinical) questions were used to guide the identification and interrogation of the evidence base relevant to the topic of the guideline. Before the first GDG meeting, draft review questions were prepared by NCCMH staff based on the scope and an overview of existing guidelines, and discussed with the guideline Chair. The draft review questions were then discussed by the GDG at the first few meetings and amended as necessary. Where appropriate, the questions were refined once the evidence had been searched and, where necessary, sub-questions were generated. Questions submitted by stakeholders were also discussed by the GDG and the rationale for not including any questions was recorded in the minutes. The final list of review questions can be found in Appendix 5.

For questions about interventions, the PICO (Population, Intervention, Comparison and Outcome) framework was used (see Table 3).

Table 3: Features of a well-formulated question on effectiveness intervention – the PICO guide

Population	Which population of service users are we interested in? How can they be best described? Are there subgroups that need to be considered?
Intervention	Which intervention, treatment or approach should be used?
Comparison	What is/are the main alternative/s to compare with the intervention?
Outcome	What is really important for the service user? Which outcomes should be considered: intermediate or short-term measures; mortality; morbidity and treatment complications; rates of relapse; late morbidity and readmission; return to work, physical and social functioning and other measures such as quality of life; general health status?

Questions relating to case identification do not involve an intervention designed to treat a particular condition, therefore the PICO framework was not used. Rather, the questions were designed to pick up key issues specifically relevant to clinical utility, for example their accuracy, reliability, safety and acceptability to the service user.

In some situations, the prognosis of a particular condition is of fundamental importance, over and above its general significance in relation to specific interventions. Areas where this is particularly likely to occur relate to assessment of risk, for example in terms of behaviour modification or screening and early intervention. In addition, review questions related to issues of service delivery are occasionally specified in the remit from the Department of Health/Welsh Assembly Government. In these cases, appropriate review questions were developed to be clear and concise.

To help facilitate the literature review, a note was made of the best study design type to answer each question. There are four main types of review question of relevance to NICE guidelines. These are listed in Table 4. For each type of question, the best primary study design varies, where 'best' is interpreted as 'least likely to give misleading answers to the question'.

However, in all cases, a well-conducted systematic review (of the appropriate type of study) is likely to always yield a better answer than a single study.

Deciding on the best design type to answer a specific review question does not mean that studies of different design types addressing the same question were discarded.

Table 4: Best study design to answer each type of question

Type of question	Best primary study design
Effectiveness or other impact of an intervention	Randomised controlled trial (RCT); other studies that may be considered in the absence of RCTs are the following: internally/externally controlled before and after trial, interrupted time-series
Accuracy of information (for example, risk factor, test, prediction rule)	Comparing the information against a valid gold standard in a randomised trial or inception cohort study
Rates (of disease, service user experience, rare side effects)	Prospecitve cohort, registry, cross-sectional study

3.5 SYSTEMATIC CLINICAL LITERATURE REVIEW

The aim of the clinical literature review was to systematically identify and synthesise relevant evidence from the literature in order to answer the specific review questions developed by the GDG. Thus, clinical practice recommendations are evidence-based, where possible, and, if evidence is not available, informal consensus methods are used (see Section 3.5.7) and the need for future research is specified.

3.5.1 Methodology

A stepwise, hierarchical approach was taken to locating and presenting evidence to the GDG. The NCCMH developed this process based on methods set out by NICE (*The Guidelines Manual* [NICE, 2009]), and after considering recommendations from a range of other sources. These included:

- British Medical Journal (BMJ) Clinical Evidence
- Clinical Policy and Practice Program of the New South Wales Department of Health (Australia)
- The Cochrane Collaboration
- Grading of Recommendations: Assessment, Development and Evaluation (GRADE) Working Group
- New Zealand Guidelines Group
- NHS Centre for Reviews and Dissemination
- Oxford Centre for Evidence-Based Medicine
- Oxford Systematic Review Development Programme
- Scottish Intercollegiate Guidelines Network (SIGN)
- United States Agency for Healthcare Research and Quality (AHRQ).

3.5.2 The review process

Scoping searches

A broad preliminary search of the literature was undertaken in November 2010 to obtain an overview of the issues likely to be covered by the scope, and to help define key areas.

Searches were restricted to clinical guidelines, health technology assessment reports and key systematic reviews, and conducted in the following databases and websites:

- BMJ Clinical Evidence
- Canadian Medical Association (CMA) Infobase [Canadian guidelines]
- Clinical Policy and Practice Program of the New South Wales Department of Health [Australia]
- Clinical Practice Guidelines [Australian Guidelines]
- Cochrane Central Register of Controlled Trials (CENTRAL) [COCHRANE]
- Cochrane Database of Abstracts of Reviews of Effects (DARE) [COCHRANE]
- Cochrane Database of Systematic Reviews (CDSR) [COCHRANE]
- Excerpta Medica Database (EMBASE)
- Guidelines International Network (G-I-N)
- Health Evidence Bulletin Wales
- Health Management Information Consortium [HMIC]
- Health Technology Assessment (HTA) database (technology assessments) [COCHRANE]
- Medical Literature Analysis and Retrieval System Online MEDLINE/MEDLINE in Process
- National Health and Medical Research Council (NHMRC)
- New Zealand Guidelines Group
- NHS Centre for Reviews and Dissemination (CRD)
- Organizing Medical Networked Information (OMNI) Medical Search
- SIGN
- Turning Research Into Practice (TRIP)
- United States AHRQ
- Websites of NICE - including NHS Evidence - and the National Institute for Health Research (NIHR) HTA Programme for guidelines and HTAs in development.

Existing NICE guidelines were updated where necessary. Other relevant guidelines were assessed for quality using the AGREE instrument (AGREE Collaboration, 2003). The evidence base underlying high-quality existing guidelines was utilised and updated as appropriate. Further information about this process can be found in The Guidelines Manual (NICE, 2009).

Systematic literature searches

After the scope was finalised, a systematic search strategy was developed to locate all the relevant evidence. The balance between sensitivity (the power to identify all studies on a particular topic) and specificity (the ability to exclude irrelevant studies from the results) was carefully considered, and a decision made to utilise a broad approach to searching to maximise retrieval of evidence to all parts of the guideline. Searches were restricted to systematic reviews, randomised controlled trials and observational studies, and conducted in the following databases:

- Australian Education Index (AEI)
- Applied Social Services Index and Abstracts (ASSIA)
- British Education Index (BEI)
- Campbell Collaboration
- Cumulative Index to Nursing and Allied Health Literature (CINAHL)
- Cochrane Database of Systematic Reviews (CDSR) [COCHRANE]
- Central [Centralised database of RCTs and other controlled studies – COCHRANE]
- Database of Abstracts and Reviews of Effectiveness (DARE) [COCHRANE]
- Excerpta Medica Database (EMBASE)
- Education Resources in Curriculum (ERIC)
- Health Management Information Consortium (HMIC)
- Health Technology Assessment (HTA) database (technology assessments) [COCHRANE]
- International Bibliography of Social Sciences (IBSS)
- Medical Literature Analysis and Retrieval System Online (MEDLINE/PreMEDLINE)
- National Criminal Justice Reference Service (NCJRS)
- PsycBOOKS
- PsycEXTRA
- Psychological Information Database (PsycINFO)
- Social Science Abstracts (SSA)
- Social Science Citation Index (SSCI)
- Sociological Abstracts

In addition, web-based searches for additional evidence were performed in Social Care Online.

The search strategies were initially developed for Medline before being translated for use in other databases/interfaces. Strategies were built up through a number of trial searches, and discussion of the results of the searches with the review team and GDG, to ensure that all possible relevant search terms were covered. In order to assure comprehensive coverage, search terms for the main population were kept purposely broad to help counter dissimilarities in database indexing practices, and imprecise reporting of study populations by authors in the titles and abstracts of records. For standard mainstream bibliographic databases (EMBASE, MEDLINE, PreMEDLINE and PsycINFO) search terms for main population were combined with the intervention(s), together with a research based filter for the study design of interest. For smaller, topic-specific databases (e.g. education and sociological databases), a search, modified to be more precise, was conducted for the main population, and study design of interest, only.

The search terms for each search are set out in full in Appendix 7.

EndNote

Citations from each search were downloaded into the reference management software and duplicates removed. Records were then screened against the eligibility criteria of the reviews before being quality appraised (see below). The unfiltered search results were saved and retained for future potential re-analysis to help keep the process both replicable and transparent.

Search filters

To aid retrieval of relevant and sound studies, filters were used to limit a number of searches to systematic reviews, randomised controlled trials, and observational studies. The search filters for systematic reviews and randomised controlled trials are adaptations of filters designed by by the CRD, the Health Information Research Unit of McMaster University, Ontario, and the University of Alberta. The observational study filter is an in-house development. Each filter comprises index terms relating to the study type(s) and associated textwords for the methodological description of the design(s).

Date and language restrictions

Systematic database searches were initially conducted in June 2011 up to the most recent searchable date. Search updates were generated on a 6-monthly basis, with the final re-runs carried out in July 2012 ahead of the guideline consultation. After this point, studies were only included if they were judged by the GDG to be exceptional (for example, if the evidence was likely to change a recommendation).

Although no language restrictions were applied at the searching stage, foreign language papers were not requested or reviewed, unless they were of particular importance to a review question.

Date restrictions were not applied, except for searches of systematic reviews which were limited to research published from 1995. This restriction was put in place as older reviews were thought to be less useful.

Other search methods

Other search methods involved: (a) scanning the reference lists of all eligible publications (systematic reviews, stakeholder evidence and included studies) for more published reports and citations of unpublished research; (b) sending lists of studies meeting the inclusion criteria to subject experts (identified through searches and the GDG) and asking them to check the lists for completeness, and to provide information of any published or unpublished research for consideration; (c) checking the tables of contents of key journals for studies that might have been missed by the database and reference list searches; (d) tracking key papers in the Science Citation Index (prospectively) over time for further useful references.

Full details of the search strategies and filters used for the systematic review of clinical evidence are provided in Appendix 7.

Study selection and quality assessment

All primary-level studies included after the first scan of citations were acquired in full and re-evaluated for eligibility at the time they were being entered into the study information database. More specific eligibility criteria were developed for each review question and are described in the relevant clinical evidence chapters. Eligible systematic reviews and primary-level studies were critically appraised for methodological quality (see Appendix 9 for methodology checklists). The eligibility of each study was confirmed by at least one member of the appropriate topic group.

For some review questions, it was necessary to prioritise the evidence with respect to the UK context (that is, external validity). To make this process explicit, the topic groups took into account the following factors when assessing the evidence:

- participant factors (for example, gender, age and ethnicity)
- provider factors (for example, model fidelity, the conditions under which the intervention was performed and the availability of experienced staff to undertake the procedure)
- cultural factors (for example, differences in standard care and differences in the welfare system).

It was the responsibility of each topic group to decide which prioritisation factors were relevant to each review question in light of the UK context and then decide how they should modify their recommendations.

Unpublished evidence

The GDG used a number of criteria when deciding whether or not to accept unpublished data. First, the evidence must have been accompanied by a trial report containing sufficient detail to properly assess the quality of the data. Second, the evidence must have been submitted with the understanding that data from the study and a summary of the study’s characteristics would be published in the full guideline. Therefore, the GDG did not accept evidence submitted as commercial in confidence. However, the GDG recognised that unpublished evidence submitted by investigators might later be retracted by those investigators if the inclusion of such data would jeopardise publication of their research.

3.5.3 Data extraction

Study characteristics and outcome data were extracted from all eligible studies that met the minimum quality criteria, using Review Manager 5.1 (Cochrane Collaboration, 2011) and an Excel-based form (see Appendix 8).

In most circumstances, for a given outcome (continuous and dichotomous), where more than 50% of the number randomised to any group were missing or incomplete, the study results were excluded from the analysis (except for the outcome ‘leaving the study early’, in which case, the denominator was the number randomised). Where there was limited data for a particular review, the 50% rule was not applied. In these circumstances the evidence was downgraded due to the risk of bias.

Where possible, we used outcome data from an intention-to-treat analysis (ITT) (that is, a 'once-randomised-always-analyse' basis). For dichotomous efficacy outcomes we re-calculated the effect size if ITT had not been used. When making the calculations if there was good evidence that those participants who ceased to engage in the study were likely to have an unfavourable outcome, early withdrawals were included in both the numerator and denominator. Adverse effects were entered into Review Manager as reported by the study authors because it is usually not possible to determine whether early withdrawals had an unfavourable outcome.

Consultation with another reviewer or members of the GDG was used to overcome difficulties with coding. Data from studies included in existing systematic reviews were extracted independently by one reviewer and cross-checked with the existing data set. Double data extraction of new data was only undertaken for studies reporting very large effect sizes. Masked assessment (that is, blind to the journal from which the article comes, the authors, the institution and the magnitude of the effect) was not used since it is unclear that doing so reduces bias (Berlin, 2001, Jadad et al., 1996).

3.5.4 Synthesising the evidence from comparative effectiveness studies

Outcome measures

Many studies include a wide range of outcome measures from different sources (researchers, parents, teachers, clinicians and self) to explore the clinical and social benefits of interventions for conduct disorders. In addition to being of research interest, this wider approach to outcomes mirrors the breadth of contexts within which conduct disordered behaviour is presented, although this heterogeneity brings challenges in determining the relative reliability of measures made by different categories of informant.

For the purposes of the meta-analyses, the GDG established a list of outcomes that it rated as critical, and focused on these when making recommendations. For the child this included agency contact (for example, residential care, criminal justice system), antisocial behaviour (at home, at school, in the community), drug/alcohol use, educational attainment (that is, the highest level of education completed), offending behaviour, and school exclusion due to antisocial behaviour.

For each outcome category, combined analysis was undertaken for parent-, teacher-, researcher/clinician-, and observer-reported outcomes. Only outcome measures that were judged to be established and valid were used in the analysis; less recognised measures, for instance those developed for a particular study, were therefore not used.

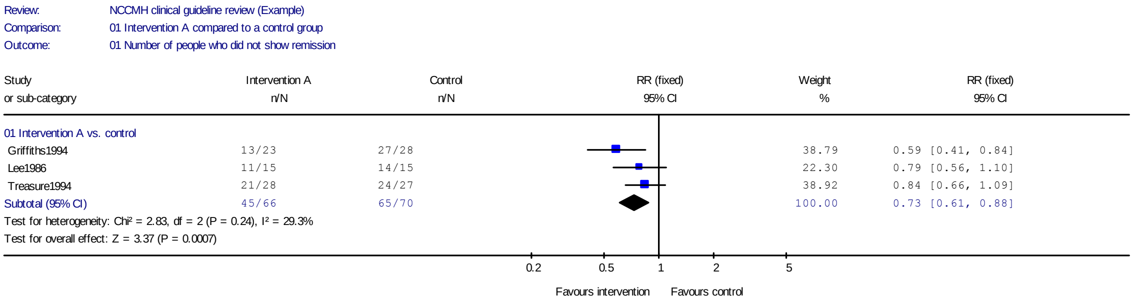
Meta-analysis

Where possible, meta-analysis was used to synthesise evidence from comparative effectiveness studies using Comprehensive Meta-Analysis (CMA) software, Version 2.2.048 (Borenstein et al., 2005) and Stata, Version 9.2 (StataCorp, 2007). If necessary, re-analyses of the data or sub-analyses were used to answer review questions not addressed in the original studies or reviews.

Dichotomous outcomes were analysed as relative risks (RR) with the associated 95% CI (see Figure 1 for an example of a forest plot displaying dichotomous data). A relative risk (also called a risk ratio) is the ratio of the treatment event rate to the control event rate. An RR of 1 indicates no difference between treatment and control. In Figure 1, the overall RR of 0.73 indicates that the event rate (that is, non-remission rate) associated with intervention A is about three-quarters of that with the control intervention or, in other words, the relative risk reduction is 27%.

The CI shows a range of values within which we are 95% confident that the true effect will lie. If the effect size has a CI that does not cross the 'line of no effect', then the effect is commonly interpreted as being statistically significant.

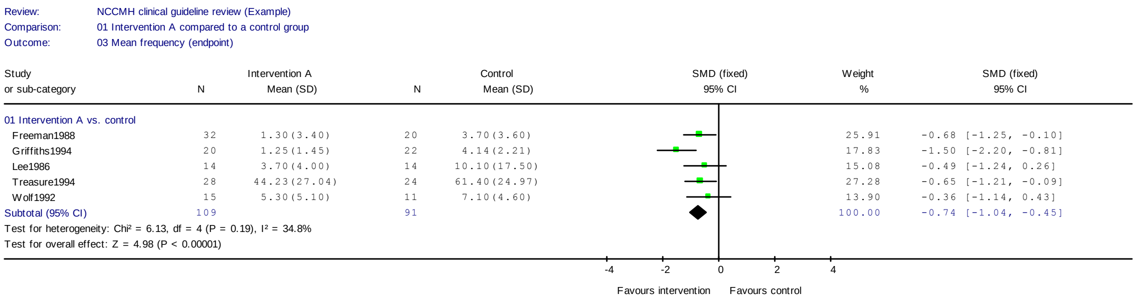
Figure 1: Example of a forest plot displaying dichotomous data



Continuous outcomes were analysed using the standardised mean difference (SMD) when different measures were used in different studies to estimate the same underlying effect (see

Figure 2 for an example of a forest plot displaying continuous data). If reported by study authors, intention-to-treat data, using a valid method for imputation of missing data, were preferred over data only from people who completed the study.

Figure 2: Example of a forest plot displaying continuous data



Because the outcomes of interest have often been measured using different scales within a single study, and the GDG were interested in the effect of an intervention when rated by different people (for example, observer and parent), the following procedures were employed. First, relevant data were categorised by rater (that is, observer, researcher/clinician, teacher, parent, self). Second, within each rater category, data from multiple outcomes were pooled using CMA (one effect size per study for post-treatment results, and where available, another effect size for the longest follow-up). These data were transferred to Stata, which was used to synthesise results across studies.

Heterogeneity

To check for consistency of effects among studies, both the I^2 statistic and the chi-squared test of heterogeneity, as well as a visual inspection of the forest plots were used. The I^2 statistic describes the proportion of total variation in study estimates that is due to heterogeneity (Higgins & Thompson, 2002). The I^2 statistic was interpreted in the follow way based on the Cochrane Handbook for Systematic Reviews of Interventions (Higgins & Green, 2011):

0% to 40%: might not be important
30% to 60%: may represent moderate heterogeneity
50% to 90%: may represent substantial heterogeneity
75% to 100%: considerable heterogeneity.

Two factors were used to make a judgement about importance of the observed value of I^2: (1) the magnitude and direction of effects, and (2) the strength of evidence for heterogeneity (for example, *p* value from the chi-squared test, or a confidence interval for I^2).

Where important heterogeneity was detected, random effects univariate meta-regression models were used to examine whether any reported factors explained any of the variance. We then created a multivariate meta-regression model including all factors that were shown in the univariate models to explain at least some of the variance.

To examine how much of the heterogeneity was accounted for by the factor(s) included in each model, we used the adjusted R^2 produced by the revised metareg command in Stata. Sensitivity analyses were also used to explore the effect of removing studies with high risk of bias, and studies of attenuated interventions (that is, those interventions judged by the GDG to be very brief or because they were self-administered versions of an intervention usually administered by a therapist/researcher).

Publication bias

We assessed the possibility of publication bias using the Stata metabias command. Where there was evidence of significant asymmetry in the funnel plot (as judged by the Begg and Mazumdar adjusted rank correlation test) (Begg & Mazumdar, 1994), we used the Stata metatrim command to perform the Duval and Tweedie nonparametric "trim and fill" method (Duval & Tweedie, 2000). This method was used to examine the impact of the missing studies by adjusting the meta-analysis to take into account the theoretically missing studies. We only report these data were possible publication bias was detected.

3.5.5 Synthesising the evidence from test accuracy studies

Meta-analysis

Review Manager 5 was used to summarise test accuracy data from each study using forest plots and summary ROC plots. Where more than two studies reported appropriate data, a bivariate test accuracy meta-analysis was conducted using Meta-DiSc (Zamora et al., 2006b) in order to obtain pooled estimates of sensitivity, specificity, and positive and negative likelihood ratios.

Sensitivity and specificity

The sensitivity of an instrument refers to the proportion of those with the condition who test positive. An instrument that detects a low percentage of cases will not be very helpful in determining the numbers of service users who should receive a known effective treatment, as many individuals who should receive the treatment will not do so. This would lead to an under-estimation of the prevalence of the disorder, contribute to inadequate care and make for poor planning and costing of the need for treatment. As the sensitivity of an instrument increases, the number of false negatives it detects will decrease.

The specificity of an instrument refers to the proportion of those who do not have the condition and test negative. This is important so that healthy people are not offered treatments they do not need. As the specificity of an instrument increases, the number of false positives will decrease.

To illustrate this: from a population in which the point prevalence rate of anxiety is 10% (that is, 10% of the population has anxiety at any one time), 1000 people are given a test which has 90% sensitivity and 85% specificity. It is known that 100 people in this population have anxiety, but the test detects only 90 (true positives), leaving 10 undetected (false negatives). It is also known that 900 people do not have anxiety, and the test correctly identifies 765 of these (true negatives), but classifies 135 incorrectly as having anxiety (false positives). The positive predictive value of the test (the number correctly identified as having anxiety as a proportion of positive tests) is 40% (90/90+135), and the negative predictive value (the number correctly identified as not having anxiety as a proportion of negative tests) is 98% (765/765 +10). Therefore, in this example, a positive test result is correct in only 40% of cases, while a negative result can be relied upon in 98% of cases.

The example above illustrates some of the main differences between positive predictive values and negative predictive values in comparison with sensitivity and specificity. For both positive and negative predictive values, prevalence explicitly forms part of their calculation (Altman & Bland, 1994a). When the prevalence of a disorder is low in a population this is generally associated with a higher negative predictive value and a lower positive predictive value. Therefore although these statistics are concerned with issues probably more directly applicable to clinical practice (for example, the probability that a person with a positive test result actually has anxiety) they are largely dependent on the characteristics of the population sampled and cannot be universally applied (Altman & Bland, 1994a).

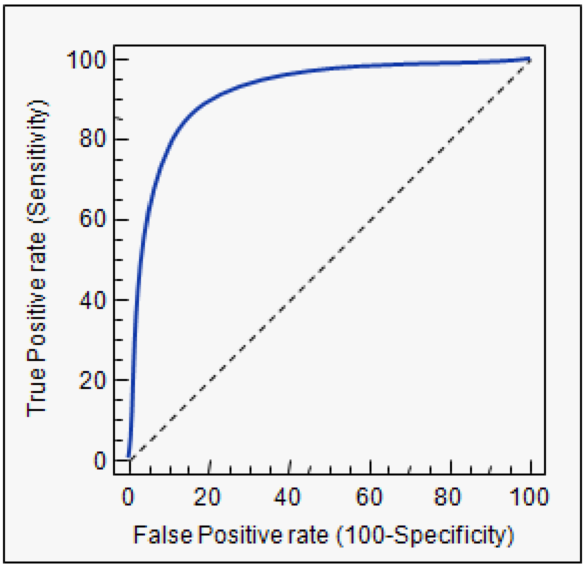
On the other hand, sensitivity and specificity do not necessarily depend on prevalence of anxiety (Altman & Bland, 1994b). For example, sensitivity is concerned with the performance of an identification instrument conditional on a person having anxiety. Therefore the higher false positives often associated with samples of low prevalence will not affect such estimates. The advantage of this approach is that sensitivity and specificity can be applied across populations (Altman & Bland, 1994b). However, the main disadvantage is that clinicians tend to find such estimates more difficult to interpret.

When describing the sensitivity and specificity of the different instruments, the GDG defined values above 0.9 as 'excellent', 0.8 to 0.9 as 'good', 0.5 to 0.7 as 'moderate', 0.3 to 0.4 as 'low', and less than 0.3 as 'poor'.

Receiver operator characteristic curves

The qualities of a particular tool are summarised in a receiver operator characteristic (ROC) curve, which plots sensitivity (expressed as a per cent) against (100-specificity) (see Figure 3).

Figure 3: Receiver operator characteristic (ROC) curve



A test with perfect discrimination would have an ROC curve that passed through the top left hand corner; that is, it would have 100% specificity and pick up all true positives with no false positives. While this is never achieved in practice, the area under the curve (AUC) measures how close the tool gets to the theoretical ideal. A perfect test would have an AUC of 1, and a test with AUC above 0.5 is better than chance. As discussed above, because these measures are based on sensitivity and 100-specificity, theoretically these estimates are not affected by prevalence.

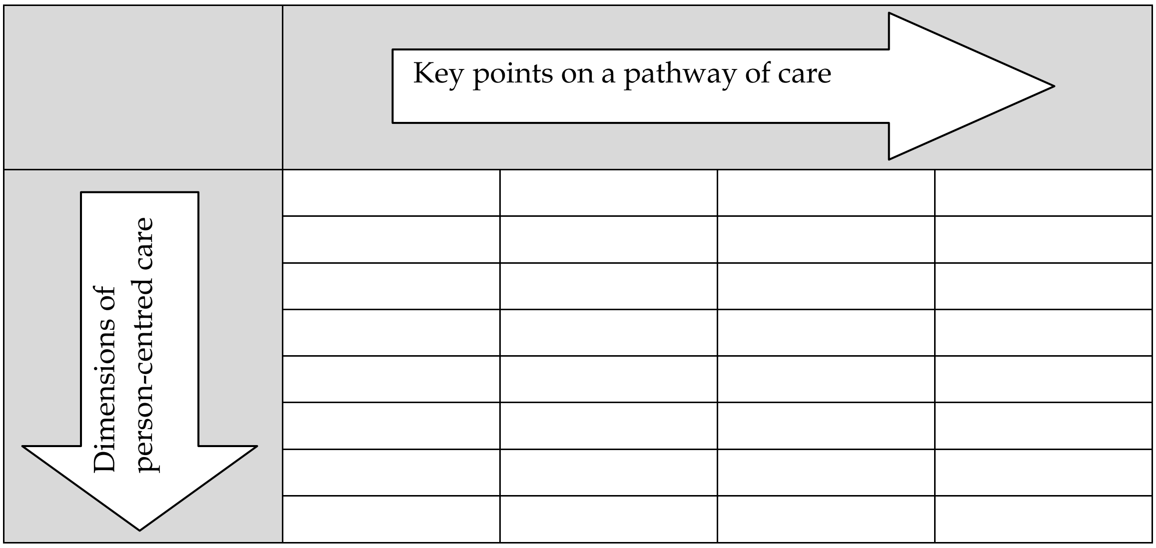
Negative and positive likelihood ratios

Negative (LR-) and positive (LR+) likelihood ratios are thought not to be dependent on prevalence. LR+ is calculated by sensitivity/(1-specificity) and LR- is (1-sensitivity)/ specificity. A value of LR+ >5 and LR- <0.3 suggests the test is relatively accurate (Fischer *et al.*, 2003).

3.5.6 Synthesising the evidence from studies about the experience of care

Themes from evidence about the experience of care were collated using the matrix of service user experience developed for the service user guidance and quality standard (NCCMH, 2012). The matrix was formed by creating a table with the eight dimensions of patient-centred care developed by the Picker Institute Europe[1] (see Appendix 15 for more information), down the vertical axis, and the key points on a pathway of care (as specified by the GDG) across the horizontal axis (see Table 5). With regard to terminology, the service user experience guidance used the term 'person-centred' rather than 'patient-centred', therefore the former is used in the matrix.

Table 5: Matrix of service user experience



The Picker Institute's dimensions of patient-centred care were chosen because they are well established, comprehensive, and based on research. In addition, a variation of these dimensions has been adopted by the US Institute of Medicine (Institute of Medicine, 2001).

3.5.7 Grading the quality of evidence

For questions about interventions, the GRADE approach[2] was used to grade the quality of evidence for each outcome. The technical team produced GRADE evidence profiles (see below) using GRADEprofiler (GRADEpro) software (Version 3.6), following advice set out in the GRADE handbook (Schünemann et al., 2009).

---

[1] http://www.pickereurope.org/patientcentred

[2] For further information about GRADE, see www.gradeworkinggroup.org

Evidence profiles

A GRADE evidence profile was used to summarise both the quality of the evidence and the results of the evidence synthesis for each 'critical' and 'important' outcome (see Table 6 for an example of an evidence profile). The GRADE approach is based on a sequential assessment of the quality of evidence, followed by judgment about the balance between desirable and undesirable effects, and subsequent decision about the strength of a recommendation.

Within the GRADE approach to grading the quality of evidence, the following is used as a starting point:

- randomised trials without important limitations provide high quality evidence
- observational studies without special strengths or important limitations provide low quality evidence.

For each outcome, quality may be reduced depending on five factors: limitations, inconsistency, indirectness, imprecision and publication bias. For the purposes of the guideline, each factor was evaluated using criteria provided in Table 7.

For observational studies without any reasons for down-grading, the quality may be up-graded if there is a large effect, all plausible confounding would reduce the demonstrated effect (or increase the effect if no effect was observed), or there is evidence of a dose-response gradient (details would be provided under the 'other' column).

Each evidence profile also included a summary of the findings: number of participants included in each group, an estimate of the magnitude of the effect, and the overall quality of the evidence for each outcome. Under the GRADE approach, the overall quality for each outcome is categorised into one of four groups, with the following meaning:

- **High quality:** Further research is very unlikely to change our confidence in the estimate of effect.
- **Moderate quality:** Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
- **Low quality:** Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
- **Very low quality:** We are very uncertain about the estimate.

Table 6: Example of a GRADE evidence profile

Quality assessment							**No of patients**		**Effect**		**Quality**	**Importance**
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other consider-ations**	**Interven tion**	**Control group**	**Relative (95% CI)**	**Absolute**		
Outcome 1 (measured with: any valid method; Better indicated by lower values)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[1]	none	47	43	-	SMD 0.20 lower (0.61 lower to 0.21 higher)	⊕⊕⊕O MODERATE	CRITICAL
Outcome 2 (measured with: any valid rating scale; Better indicated by lower values)												
4	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	serious[1]	none	109	112	-	SMD 0.42 lower (0.69 to 0.16 lower)	⊕⊕OO LOW	CRITICAL
Outcome 3 (measured with: any valid rating scale; Better indicated by lower values)												
12	randomised trials	no serious risk of bias	serious[3]	no serious indirectness	no serious imprecision	none	320	400	RR 0.80 (0.70 to 0.91)		⊕⊕⊕O MODERATE	CRITICAL
Outcome 4 (measured with: any valid rating scale; Better indicated by lower values)												
11	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	280	189	-	SMD 0.34 lower (0.67 to 0.01 lower)	⊕⊕⊕⊕ HIGH	CRITICAL

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.
[2] Risk of bias across domains was generally high or unclear.
[3] There is evidence of moderate heterogeneity of study effect sizes.

Table 7: Factors that decrease quality of evidence

Factor	Description	Criteria
Limitations	Methodological quality/ risk of bias.	In the studies that reported a particular outcome, serious risks across most studies. The evaluation of risk of bias was made for each study using NICE methodology checklists (see section 3.5.1)
Inconsistency	Unexplained heterogeneity of results.	Moderate or greater heterogeneity (see section 3.5.2 for further information about how this was evaluated)
Indirectness	How closely the outcome measures, interventions and participants match those of interest.	If the comparison was indirect, or if the question being addressed by the GDG was substantially different from the available evidence regarding the population, intervention, comparator, or an outcome.
Imprecision	Results are imprecise when studies include relatively few patients and few events and thus have wide confidence intervals around the estimate of the effect.	If either of the following two situations were met: the optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) was not achieved the 95% confidence interval around the pooled or best estimate of effect included both 1) no effect and 2) appreciable benefit or appreciable harm
Publication bias	Systematic underestimate or an overestimate of the underlying beneficial or harmful effect due to the selective publication of studies.	If there was evidence of selective publication. This may be detected during the search for evidence, or through statistical analysis of the available evidence.

3.5.8 Presenting evidence to the Guideline Development Group

Study characteristics tables and, where appropriate, forest plots generated with Stata Version 9.2 (StataCorp, 2007) and GRADE Summary of Findings tables (see below) were presented to the GDG.

Where meta-analysis was not appropriate and/or possible, the reported results from each primary-level study were included in the study characteristics table. The range of effect estimates were included in the GRADE profile, and where appropriate, described narratively.

Summary of Findings tables

Summary of Findings tables generated from GRADEpro were used to summarise the evidence for each outcome and the quality of that evidence (Table 8). The tables provide illustrative comparative risks, especially useful when the baseline risk varies for different groups within the population.

Table 8: Example of a GRADE Summary of Findings table

Patient or population:
Settings:
Intervention:
Comparison:

Outcomes	**Illustrative comparative risks* (95% CI)**		**Relative effect (95% CI)**	**No of Participants (studies)**	**Quality of the evidence (GRADE)**	**Comments**
	Assumed risk	**Corresponding risk**				
	Any control group	**Intervention group**				
Outcome 1 any valid rating scale		The mean outcome in the intervention group was **0.20 standard deviations lower** (0.61 lower to 0.21 higher)		90 (2 studies)	⊕⊕⊕⊝ moderate[1]	
Outcome 2 any valid rating scale		The mean outcome in the intervention group was **0.42 standard deviations lower** (0.69 to 0.16 lower)		221 (4 studies)	⊕⊕⊝⊝ low[1,2]	
Outcome 3 any valid rating scale	Study population		**RR 0.80** (0.70 to 0.91)	720 (12 studies)	⊕⊕⊕⊝ moderate[4]	
	62 per 100	**50 per 1000** (44 to 57)				
	Moderate[3]					
	70 per 100	**56 per 100** (49 to 64)				
Outcome 4 any valid rating scale		The mean outcome in the intervention group was **0.34 standard deviations lower** (0.67 to 0.01 lower)		469 (11 studies)	⊕⊕⊕⊕ high	

*The basis for the assumed risk (e.g. the median control group risk across studies) is provided in footnotes. The corresponding risk (and its 95% confidence interval) is based on the assumed risk in the comparison group and the relative effect of the intervention (and its 95% CI).

Note. CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

[2] Risk of bias across domains was generally high or unclear.

[3] Median control group risk from the studies included in a meta-analysis.

[4] There is evidence of moderate heterogeneity of study effect sizes.

3.5.9 Extrapolation

When answering review questions, it may be necessary to consider extrapolating from another data set where direct evidence from a primary data set[3] is not available. In this situation, the following principles were used to determine when to extrapolate:

- a primary data is absent, of low quality or is judged to be not relevant to the review question under consideration
- a review question is deemed by the GDG to be important, such that in the absence of direct evidence, other data sources should be considered
- a non-primary data source(s) is in the view of the GDG available which may inform the review question.

When the decision to extrapolate was made, the following principles were used to inform the choice of the non-primary data set:

- the populations (usually in relation to the specified diagnosis or problem which characterises the population) under consideration share some common characteristic but differ in other ways, such as age, gender or in the nature of the disorder (for example, a common behavioural problem; acute versus chronic presentations of the same disorder)
- the interventions under consideration in the view of the GDG have one or more of the following characteristics:
    - share a common mode of action (e.g., the pharmacodynamics of drug; a common psychological model of change - operant conditioning)
    - be feasible to deliver in both populations (e.g., in terms of the required skills or the demands of the health care system)
    - share common side effects/harms in both populations.
- the context or comparator involved in the evaluation of the different data sets shares some common elements which support extrapolation
- the outcomes involved in the evaluation of the different data sets shares some common elements which support extrapolation (for example, improved mood or a reduction in challenging behaviour).

When the choice of the non-primary data set was made, the following principles were used to guide the application of extrapolation:

- the GDG should first consider the need for extrapolation through a review of the relevant primary data set and be guided in these decisions by the principles for the use of extrapolation
- in all areas of extrapolation data sets should be assessed against the principles for determining the choice of data sets. In general the criteria in the four principles set out above for determining the choice should be met
- in deciding on the use of extrapolation, the GDG will have to determine if the extrapolation can be held to be reasonable, including ensuring that:

---

[3] A primary data set is defined as a data set which contains evidence on the population and intervention under review

  - the reasoning behind the decision can be justified by the clinical need for a recommendation to be made
  - the absence of other more direct evidence, and by the relevance of the potential data set to the review question can be established
  - the reasoning and the method adopted is clearly set out in the relevant section of the guideline.

3.6 HEALTH ECONOMICS METHODS

The aim of the health economics was to contribute to the guideline's development by providing evidence on the cost effectiveness of interventions for conduct disorders in children and young people covered in the guideline. This was achieved by:

- systematic literature review of existing economic evidence
- economic modelling, where economic evidence was lacking or was considered inadequate to inform decisions.

Systematic reviews of economic literature were conducted in all areas covered in the guideline. Economic modelling was undertaken in areas with likely major resource implications, where the current extent of uncertainty over cost effectiveness was significant and economic analysis was expected to reduce this uncertainty, in accordance with *The Guidelines Manual* (NICE, 2009d). Prioritisation of areas for economic modelling was a joint decision between the Health Economist and the GDG. The rationale for prioritising review questions for economic modelling was set out in an economic plan agreed between NICE, the GDG, the Health Economist and the other members of the technical team. The following economic questions were selected as key issues that were addressed by economic modelling:

1. What is the cost-effectiveness of child-focused interventions for children and young people with conduct disorder
2. What is the cost-effectiveness of parent-focused interventions for children and young people with conduct disorder
3. What is the cost-effectiveness of multi-modal interventions for children and young people with conduct disorder

In addition, literature on the health-related quality of life of children and young people with a conduct disorder was systematically searched to identify studies reporting appropriate utility scores that could be utilised in a cost-utility analysis.

The rest of this section describes the methods adopted in the systematic literature review of economic studies. Methods employed in economic modelling are described in the respective sections of the guideline.

3.6.1 Search strategy for economic evidence

Scoping searches

A broad preliminary search of the literature was undertaken in November 2010 to obtain an overview of the issues likely to be covered by the scope, and help define key areas. Searches were restricted to economic studies and health technology assessment reports, and conducted in the following databases:

- EMBASE
- MEDLINE / MEDLINE In-Process
- HTA database (technology assessments)
- NHS Economic Evaluation Database (NHS EED).

Any relevant economic evidence arising from the clinical scoping searches was also made available to the health economist during the same period.

Systematic literature searches

After the scope was finalised, a systematic search strategy was developed to locate all the relevant evidence. The balance between sensitivity (the power to identify all studies on a particular topic) and specificity (the ability to exclude irrelevant studies from the results) was carefully considered, and a decision made to utilise a broad approach to searching to maximise retrieval of evidence to all parts of the guideline. Searches were restricted to economic studies and health technology assessment reports, and conducted in the following databases:

- EconLit (the American Economic Association's electronic bibliography)
- EMBASE
- HTA database (technology assessments)
- MEDLINE / MEDLINE In-Process
- NHS EED
- PsycINFO.

Any relevant economic evidence arising from the clinical searches was also made available to the health economist during the same period.

The search strategies were initially developed for Medline before being translated for use in other databases/interfaces. Strategies were built up through a number of trial searches, and discussions of the results of the searches with the review team and GDG to ensure that all possible relevant search terms were covered. In order to ensure comprehensive coverage, search terms for the main population were kept purposely broad to help counter dissimilarities in database indexing practices, and imprecise reporting of study populations by authors in the titles and abstracts of records. For standard mainstream bibliographic databases (EMBASE, MEDLINE, PreMEDLINE and PsycINFO), search terms for the main population were combined with the intervention(s), together with a study design filter for health economic research. For smaller, topic-specific databases (e.g. EconLIT, HTA, NHS EED), a broad search was conducted for the main population, only. The search terms are set out in full in Appendix 10.

EndNote

Citations from each search were downloaded into EndNote (a software product for managing references and formatting bibliographies) and duplicates removed. Records were then screened against the inclusion criteria of the reviews before being quality appraised. The unfiltered search results were saved and retained for future potential re-analysis to help keep the process both replicable and transparent.

Search filters

The search filter for health economics is an adaptation of a pre-tested strategy designed by Centre for Reviews and Dissemination (2007). The search filter is designed to retrieve records of economic evidence (including full and partial economic evaluations) from the vast amount of literature indexed to major medical databases such as Medline. The filter, which comprises a combination of controlled vocabulary and free-text retrieval methods, maximises sensitivity (or recall) to ensure that as many potentially relevant records as possible are retrieved from a search. Full details of the filter is provided in Appendix 10.

Date and language restrictions

Systematic database searches were initially conducted in June 2011 up to the most recent searchable date. Search updates were generated on a 6-monthly basis, with the final re-runs carried out in July 2012 ahead of the guideline consultation. After this point, studies were included only if they were judged by the GDG to be exceptional (for example, the evidence was likely to change a recommendation).

Although no language restrictions were applied at the searching stage, foreign language papers were not requested or reviewed, unless they were of particular importance to an area under review. All the searches were restricted to research published from 1995 onwards in order to obtain data relevant to current healthcare settings and costs.

Other search methods

Other search methods involved scanning the reference lists of all eligible publications (systematic reviews, stakeholder evidence and included studies from the economic and clinical reviews) to identify further studies for consideration.

Full details of the search strategies and filter used for the systematic review of health economic evidence are provided in Appendix 10.

3.6.2 Inclusion criteria for economic studies

The following inclusion criteria were applied to select studies identified by the economic searches for further consideration:

- Only studies from Organisation for Economic Co-operation and Development countries were included, as the aim of the review was to identify economic information transferable to the UK context.

- Selection criteria based on types of clinical conditions and service users as well as interventions assessed were identical to the clinical literature review.

- Studies were included provided that sufficient details regarding methods and results were available to enable the methodological quality of the study to be assessed, and provided that the study's data and results were extractable. Poster presentations of abstracts were excluded.

- Full economic evaluations that compared two or more relevant options and considered costs and consequences as well as costing analyses that compared only costs between two or more interventions were included in the review.

- Economic studies were included if they used clinical effectiveness data from an RCT, a prospective cohort study, or a systematic review and meta-analysis of clinical studies. Studies that had a mirror-image or other retrospective design were excluded from the review.

- Studies were included only if the examined interventions were clearly described. This involved the dosage and route of administration and the duration of treatment in the case of pharmacological therapies; and the types of health professionals involved as well as the frequency and duration of treatment in the case of psychological interventions. Evaluations in which medications were treated as a class were excluded from further consideration.

- Studies that adopted a very narrow perspective, ignoring major categories of costs to the NHS, were excluded; for example studies that estimated exclusively drug acquisition costs or hospitalisation costs were considered non-informative to the guideline development process.

3.6.3 Applicability and quality criteria for economic studies

All economic papers eligible for inclusion were appraised for their applicability and quality using the methodology checklist for economic evaluations recommended by NICE (NICE, 2009), which is shown in Appendix 11 of this guideline. The methodology checklist for economic evaluations was also applied to the economic models developed specifically for this guideline. All studies that fully or partially met the applicability and quality criteria described in the methodology checklist were considered during the guideline development process, along with the results of the economic modelling conducted specifically for this guideline. The completed methodology checklists for all economic evaluations considered in the guideline are provided in Appendix 19.

3.6.4 Presentation of economic evidence

The economic evidence considered in the guideline is provided in the respective evidence chapters, following presentation of the relevant clinical evidence. The references to included studies and the respective evidence tables with the study characteristics and results are provided in Appendix 20. Methods and results of economic modelling undertaken alongside the guideline development process are presented in the relevant evidence chapters. Characteristics and results of all economic studies considered during the guideline development process (including modelling studies conducted for this guideline) are summarised in economic evidence profiles accompanying respective GRADE clinical evidence profiles in Appendix 18.

3.6.5 Results of the systematic search of economic literature

The titles of all studies identified by the systematic search of the literature were screened for their relevance to the topic (that is, economic issues and information on health-related quality of life in children and young people with a conduct disorder). References that were clearly not relevant were excluded first. The abstracts of all potentially relevant studies (381 references) were then assessed against the inclusion criteria for economic evaluations by the health economist. Full texts of the studies potentially meeting the inclusion criteria (including those for which eligibility was not clear from the abstract) were obtained. Studies that did not meet the inclusion criteria, were duplicates, were secondary publications of one study, or had been updated in more recent publications were subsequently excluded. Economic evaluations eligible for inclusion (24 references) were then appraised for their applicability and quality using the methodology checklist for economic evaluations. Finally, 15 economic studies that fully or partially met the applicability and quality criteria were considered at formulation of the guideline recommendations.

3.7 THE INCORPORATION AND ADAPTATION OF EXISTING NICE GUIDELINE RECOMMENDATIONS

There are a number of reasons why it might be desirable to reuse recommendations published in NICE guidelines, including to:

- Increase the efficiency of guideline development and reduce duplication of activity between guidelines.
- Answer review questions where little evidence exists for the topic under development, but recommendations for a similar topic do exist. For example, recommendations from an adult guideline are reused for children.
- Facilitate the understanding of or use of other recommendations in a guideline where cross-referral to another guideline might impair the use or comprehension of the guideline under development. For example, if a reader is being constantly referred to another guideline it interrupts the flow of recommendations and undermines the usefulness of the guideline

- Avoid possible confusion or contradiction that arises where a pre-existing guideline has addressed a similar question and made different recommendations covering the same or very similar areas of activity.

In this context, there are two methods of reusing recommendations, that is, *incorporation* and *adaption*. Incorporation refers to the placement of one recommendation in a guideline different from that it was originally developed for, where no material changes to wording or structure are made. Recommendations used in this way are referenced appropriately. Adaptation refers to the process by which a recommendation is changed in order to facilitate its placement within a new guideline.

Incorporation

In the current guideline, the following criteria were used to determine when a recommendation could be incorporated:

- the recommendation addresses an issue within the scope of the current guideline
- the review question addressed in the current guideline is judged by the GDG to be sufficiently similar to that associated with the recommendation in the original guideline
- the recommendation can 'standalone' and does not need other recommendations from the original guideline to be relevant or understood within the current guideline
- it is possible in the current guideline to link to or clearly integrate the relevant evidence from the original guideline into the current guideline.

Adaptation

When adaption is used, the meaning and intent of the original recommendation is preserved but the wording and structure of the recommendation may change. Preservation of the original meaning (that is, that the recommendation faithfully represents the assessment and interpretation of the evidence contained in the original guideline evidence reviews) and intent (that is, the intended outcome(s) specified in the original recommendation will be achieved) is an essential element of the process of adaptation.

The precise nature of adaptation may vary but examples include; when terminology in the NHS has changed, the population has changed (for example, young people to adults) or when two recommendations are combined in order to facilitate integration into a new guideline. This is analogous to the practice when creating NICE Pathways whereby some alterations are made to recommendations to make them 'fit' into a pathway structure.

The following criteria were used to determine when a recommendation could be adapted:

- the original recommendation addresses an issue within the scope of the current guideline

- the review question addressed in the current guideline is judged by the GDG to be sufficiently similar to that associated with the recommendation in the original guideline
- the recommendation can 'standalone' and does not need other recommendations from the original guideline to be relevant
- it is possible in the current guideline to link to or clearly integrate the relevant evidence from the original guideline into the new guideline
- there is no new evidence relevant to the original recommendation that suggests it should be updated
- any new evidence relevant to the recommendation only provides additional contextual evidence, such as background information about how an intervention is provided in the health care setting(s) that are the focus of the guideline. This may inform the re-drafting or re-structuring of the recommendation but does not alter its meaning or intent (if meaning or intent were altered, a new recommendation should be developed).

In deciding whether to incorporate or adapt existing guideline recommendations, the GDG first considered whether the direct evidence obtained from the current guideline dataset was of sufficient quality to allow development of recommendations. It was only where such evidence was not available or insufficient to draw robust conclusions, and drawing on the principles of extrapolation (see Section 3.5.9), that the GDG would move to the 'incorporate and adapt' method.

Drafting of adapted recommendations

The drafting of adapted recommendations conformed to standard NICE procedures for the drafting of guideline recommendations, preserved the original meaning and intent, and aimed to minimise the degree or re-writing and re-structuring.

In evidence chapters where incorporation and adaption have been used, tables are provided that set out the original recommendation, the new recommendation, and the reasons for adaption.

3.8 FROM EVIDENCE TO RECOMMENDATIONS

Once the clinical and health economic evidence was summarised, the GDG drafted the recommendations. In making recommendations, the GDG took into account the trade-off between the benefits and harms of the intervention/instrument, as well as other important factors, such as economic considerations, values of the development group and society, the requirements to prevent discrimination and to promote equality[4], and the group's awareness of practical issues (Eccles et al., 1998, NICE, 2009d).

Finally, to show clearly how the GDG moved from the evidence to the recommendations, each chapter has a section called 'from evidence to

---

[4] See NICE's equality scheme: www.nice.org.uk/aboutnice/howwework/NICEEqualityScheme.jsp

recommendations'. Underpinning this section is the concept of the 'strength' of a recommendation (Schunemann et al., 2003). This takes into account the quality of the evidence but is conceptually different. Some recommendations are 'strong' in that the GDG believes that the vast majority of healthcare professionals and service users would choose a particular intervention if they considered the evidence in the same way that the GDG has. This is generally the case if the benefits clearly outweigh the harms for most people and the intervention is likely to be cost effective. However, there is often a closer balance between benefits and harms, and some service users would not choose an intervention whereas others would. This may happen, for example, if some service users are particularly averse to some side effect and others are not. In these circumstances the recommendation is generally weaker, although it may be possible to make stronger recommendations about specific groups of service users. The strength of each recommendation is reflected in the wording of the recommendation, rather than by using ratings, labels or symbols.

Where the GDG identified areas in which there are uncertainties or where robust evidence was lacking, they developed research recommendations. Those that were identified as 'high-priority' were developed further in the NICE version of the guideline, and presented in Appendix 12.

3.9 STAKEHOLDER CONTRIBUTIONS

Professionals, service users, and companies have contributed to and commented on the guideline at key stages in its development. Stakeholders for this guideline include:

- service user and carer stakeholders: national service user and carer organisations that represent the interests of people whose care will be covered by the guideline
- local service user and carer organisations: but only if there is no relevant national organisation
- professional stakeholders' national organisations: that represent the healthcare professionals who provide the services described in the guideline
- commercial stakeholders: companies that manufacture drugs or devices used in treatment of the condition covered by the guideline and whose interests may be significantly affected by the guideline
- providers and commissioners of health services in England and Wales
- statutory organisations: including the Department of Health, the Welsh Assembly
- Government, NHS Quality Improvement Scotland, the Healthcare Commission and the National Patient Safety Agency
- research organisations: that have carried out nationally recognised research in the area.

NICE clinical guidelines are produced for the NHS in England and Wales, so a 'national' organisation is defined as one that represents England and/or Wales, or has a commercial interest in England and/or Wales.

Stakeholders have been involved in the guideline's development at the following points:

- commenting on the initial scope of the guideline and attending a scoping workshop held by NICE
- contributing possible review questions and lists of evidence to the GDG
- commenting on the draft of the guideline

3.10 VALIDATION OF THE GUIDELINE

Registered stakeholders had an opportunity to comment on the draft guideline, which was posted on the NICE website during the consultation period. Following the consultation, all comments from stakeholders and others were responded to, and the guideline updated as appropriate. NICE also reviewed the guideline and checked that stakeholders' comments had been addressed.

Following the consultation period, the GDG finalised the recommendations and the NCCMH produced the final documents. These were then submitted and the guideline was formally approved by NICE and issued as guidance to the NHS in England and Wales.

4 ACCESS TO AND DELIVERY OF SERVICES, AND THE EXPERIENCE OF CARE

4.1 INTRODUCTION

As described in Chapter 2, conduct disorders are the most common mental health disorders of childhood and adolescence, and a high proportion of those with a conduct disorder grow up to be antisocial adults with impoverished and destructive lifestyles, impinging negatively on the lives of their families and wider society in many different ways. However, many children and young people with a conduct disorder do not access services, and appropriate interventions are not always available. Whilst resources limitations play a part in limited access, a whole range of other factors, including personal, familial and society attitudes to the nature of the problem, also impact on access to and the nature of care provided. This chapter aims to provide a review of the experience of care of children and young people with, or at risk of, a conduct disorder and their parents and carers by exploring their experience of access to services and the nature of the care provided.

While health and social care services aim to ensure that people receive treatments that are effective and safe, this is only one part of a service user's experience of the healthcare. High-quality care should be provided in a way that ensures service users have the best possible experience of care (NICE, 2011b). By reviewing service users' experience of care, important information can be obtained about problems with the way that services are delivered and used to assess the impact of efforts to improve the quality of care provided. The way services are accessed, the way that people's problems are assessed, how referrals between different components of health systems are managed, aftercare arrangements, and the process of discharge all play an important part in the service users' overall experience of the care they receive. Misunderstandings and fears about mental health problems and mental health services, and lack of knowledge of the resources available, for example by general practitioners (GPs) or service users, can act as barriers to people receiving effective treatments. The ability of services to understand and respond to such concerns can improve people's experience of services and help make sure that they make best use of available treatments.

Section 4.2 of this chapter contains a review of studies exploring service user experience relating to the barriers to accessing services for children and young people at risk of, or diagnosed with, a conduct disorder, and what might be done to improve the experience of the disorder and the experience of care. This includes exploring the experience of assessment and diagnosis, the relationship between individual service users and professionals, and the way that services and systems are organised and delivered. The second part of Section 4.2 summarises findings from a focus group of young people with conduct problems and experience of the criminal justice system, which was commissioned to inform this guideline. The aim of the focus group was to ascertain children and young people's views on access to and delivery of care and experience of interventions (including parent training programmes and school-based interventions).

Section 4.3 of this chapter is concerned with the application of the evidence reviewed in Section 4.2 in support of the incorporation and adaptation of recommendations developed in other guidelines, namely those on the experience of care in *Service User Experience in Adult Mental Health* (NICE, 2011a) and on improving access to services and developing care pathways in *Common Mental Health Disorders* (NICE, 2011a).

4.2 EVIDENCE REVIEW

4.2.1 Introduction

Despite being the most common of childhood mental health disorders, children and young people with a conduct disorder are under-represented in those in receipt of care from CAMHS and related services (Vostanis et al., 2003). A number of factors have been considered important in improving access to and uptake of services, some of which, such as improved methods for case identification and assessment, are dealt with in Chapter 6. However, improved case identification and assessment will be of more limited value if children and young people and their parents or carers do not seek help. This review specifically addresses this issue and looks at the barriers that prevent children and young people with a conduct disorder from accessing both effective assessment and treatment interventions. It also considers studies that have sought to overcome these barriers and improve access.

Improved access to care will only bring real benefit if children and young people with a conduct disorder and their parents or carers properly engage with services and receive effective interventions (Kazdin, 1996). As set out in the introduction to this chapter, the experience of the setting, the flexibility and adaptation of interventions to individual needs and a consideration of the family, educational and cultural environment can all play a part in ensuring a positive experience of care and improved retention in treatment with consequential improved outcomes. Both positive and negative experiences of care, and studies aimed at improving the experience for children and young people with a conduct disorder and their parents or carers are also reviewed.

The scope of these reviews was not limited to children and young people with a conduct disorder because initial scoping searches had suggested that the literature was very limited in this area. Therefore a number of reviews combined studies from across the range of childhood mental disorders. As a consequence considerable caution is required when interpreting the results of these reviews.

In addition, the reviews were supplemented in two other ways. First, a consultation on emerging themes from the reviews was undertaken with a focus group (User Voice – see section 4.2.5). Second, the evidence obtained from the reviews was used to inform the process of incorporation and adaptation of existing guideline recommendations where there was insufficient evidence to support the development of recommendations in areas the GDG considered to be important (see Section 4.3; see Chapter 3 for a description of the methods used). In these areas the reviews and the focus group consultation were used to both inform the need for recommendations and to provide important contextual information to guide the process of incorporation and adaptation.

4.2.2 Review protocol

A summary of the review protocol, including the review questions, information about the databases searched, and the eligibility criteria used for this section of the guideline, can be found in Table 9 (a complete list of review questions can be found in Appendix 5; further information about the search strategy can be found in Appendix 7; the full review protocols can be found in Appendix 15).

Table 9: Review protocol for the review of access to and delivery of services and the experience of care

Component	Description
Review questions[1]	Access to and delivery of services: What are the barriers to access that prevent children and young people at risk of, or diagnosed with, conduct disorders from accessing services? (RQ-B1) Do methods designed to remove barriers to services increase the proportion and diversity of children and young people accessing treatment? (RQ-B2) What are the essential elements that assist in the transition into adulthood services for young people with conduct disorders? (RQ-G2) What are the effective ways of monitoring progress in conduct disorders? (RQ-G3) What components of an intervention, or the way in which it is implemented, and by whom are associated with successful outcomes? (RQ-G4) Experience of care: For children and young people with conduct disorders, what can be done to improve the experience of the disorder, and the experience of care? (RQ-F1)
Objectives	Access to and delivery of services: To identify barriers relating to the individual child/ parents/ family/ carers, the practitioner, the healthcare/ social care and other service systems that prevent an individual from accessing services To evaluate any methods and models designed to improve access for children and young people, and/or their parents/ family/ carers requiring services. Experience of care: To identify the experiences of having the disorder, access to services, and treatment on children and young people To identify the experiences of support that parents and carers of children and young people with conduct disorders receive.
Population	Children and young people (aged 18 years and younger) with a diagnosed or suspected conduct disorder, including looked after children and those in contact with the criminal justice system. Children and young people identified as being at significant risk of developing conduct disorders. Consideration will be given to the specific needs of: children and young people with conduct disorders and coexisting conditions (such as ADHD, depression, anxiety disorders and attachment insecurity) children and young people from particular black or minority ethnic groups girls with a diagnosis of, or at risk of developing conduct disorders looked after children and young people children and young people in contact with the criminal justice system.

Intervention(s)	Access to and delivery of services (RQ-B2): Service developments or changes which are specifically designed to promote access Specific models of service delivery (for example, community-based outreach clinics, clinics or services in non-health settings) Methods designed to remove barriers to access (including stigma (both cultural and self and stigmatisation), misinformation or cultural beliefs about the nature of mental disorder).
Comparison	Access to and delivery of services (RQ –B2): Treatment as usual.
Critical outcomes	Access to and delivery of services: Proportion of people from the target group who access services Uptake of services Data on the diversity of the group who access or are retained in services/ interventions.
Electronic databases	Mainstream databases: Embase, MEDLINE, PreMEDLINE, PsycINFO Topic specific databases and grey literature databases (see search strategy in Appendix 7)
Date searched	Systematic reviews: 1995 to June 2012; Other evidence: Inception to June 2012
Study design	Systematic Reviews and qualitative reviews Qualitative and quantitative studies (for example, surveys and observational studies)
Review strategy	The following evidence will be narratively synthesised using a matrix of service user experience (see Appendix 15) and used to support the incorporation and adaption of recommendations developed in other guidelines: Systematic reviews of qualitative research A qualitative analysis of transcripts of people with or at risk of conduct disorders from resources found online (primarily Healthtalkonline and/or Youthhealthtalk) Experience surveys. In addition, a focus group will be used to explore the experience of young people who have had involvement with the criminal justice system (see Appendix 14 for further information about the method used).

Note. ADHD = Attention deficit hyperactivity disorder.

[1] The reference in parentheses after each review question can be used to cross-reference these with the full review protocol presented in Appendix 15.

4.2.3 Studies considered[5]

Eighteen studies providing relevant evidence met the eligibility criteria for this review. Of these, four were unpublished and 14 were published in peer-reviewed journals between 2005 and 2010. A further two studies were excluded from the analysis. Further information about both included and excluded studies can be found in Appendix 16.

Of the 18 included studies, there were two reviews of the experience of care: CEFAI2010 (Cefai & Cooper, 2010) and DAVIES (Davies & Wright, 2008) (see Table 10), and eleven primary level studies of the experience of care: ADAMSHICK2010 (Adamshick, 2010), ASHKAR2008 (Ashkar & Kenny, 2008), BARBER2006 (Barber et al., 2006), BROOKMAN-FRAZEE2009 (Brookman-Frazee et al., 2009), CHILDREN1ST2007 (Aldgate et al., 2007), DEMOS2010 (Hannon et al., 2010), JRF2005 (Millie et al., 2005), JRF2007 (Frankham et al., 2007), SODERLUND1995 (Soderlund et al., 1995), TIGHE2012 (Tighe et al., 2012) and WILLIAMS2007 (Williams et al., 2007) (see Table 11). For the review of access to and delivery of services, there were three published reviews evaluating targeted interventions for children and young people: LANDSVERK2009 (Landsverk et al., 2009), LOCHMAN2000 (Lochman, 2000) and SHEPARD2009 (Shepard & Dickstein, 2009) (see Table **12**), and two reviews addressing factors affecting service availability and access: FLANZER2005 (Flanzer, 2005) and OLIVER2008 (Oliver et al., 2008) (see Table **13**).

---

[5] Here and elsewhere in the guideline, each study considered for review is referred to by a study ID in capital letters (primary author and date of study publication, except where a study is in press or only submitted for publication, then a date is not used).

Table 10: Study information table for reviews of the experience of care

Study ID	**DAVIES2008**	**CEFAI2010**
Method used to synthesise evidence	Narrative	Narrative
Design of included studies	Qualitative studies	Qualitative: semi-structured interviews, unstructured interviews, participation observation and focus groups
Dates searched	Not stated; included studies were published between 1996 and 2006	Not specified. Search conducted was for 'local [Maltese] studies on the voice of students with SEBD [social, emotional and behavioural difficulties]'; included studies were published between 1997 and 2009
No. of included studies	14	8
Model/ method evaluated	N/A	N/A
Comparison	N/A	N/A
Outcomes	Thematic analysis sought to identify children's views of mental health services, with particular focus on views of looked-after children.	Thematic analysis sought to identify 'school-related themes...in relation to the students' difficulties, disaffection and disengagement'.
Participant characteristics	Children using NHS mental health services (UK)	Students with social, emotional and behavioural difficulties in Maltese schools (although lack of explicit detail on diagnostic criteria provided) Study participants range from age 11 to 16+ years

Table 11: Study information table for primary research of the experience of care

Study ID	**ADAMSHICK2010**	**ASHKAR2008**	**BARBER2006**
Sampling strategy	Sample drawn from an alternative school (in a medium-sized city in the north-eastern United States) for young people in grades 7 to 12 displaying behaviour problems. A purposive sampling method was used with the following inclusion criteria for participants: girls aged between 13 and 17 years referred to the school because of physically aggressive behaviour.	Sample drawn from a population of incarcerated male offenders in a New South Wales maximum-security detention facility. Staff proposed list of possible participants to clinical staff who excluded those with: untreated psychosis substance withdrawal (exluding nicotine and cannabis) recent history of self-harming or suicidal behaviour.	Cross-sectional sample taken from English CAMHS outpatients department. Eligibility criteria: English-speaking Child or young person aged 4+ years accompanied by parent or carer 'Attending a routine, non-emergency appointment' (UK)
Design/ Method	Unstructured, in-depth qualitative interview design; data analysed using an interpretive phenomenological approach (van Manen, 1990)	Semi-structured, qualitative interview design; data analysed using phenomenological descriptive methodology (Colaizzi, 1978)	Mixed-method survey design: qualitative and quantitative self-report data gathered: Parent or carer-completed Experience of Service Questionnaire (ESQ, CHI, 2002) Child or young person over 9 completed either the ESQ (if aged 9-10 or 16+) or the ESQ and the Strengths & Difficulties Questionnaire (SDQ)
Model/ method evaluated	N/A	N/A	N/A
Comparison	N/A	N/A	N/A
Outcomes	Lived experience of girl-to-girl aggression	Self-reported experience of incarceration	Self-reported satisfaction with CAMHS: Child or young person's satisfaction Parent or carer's satisfaction Relationship between satisfaction and self-reported conduct problems
Participant characteristics	Interviews were completed with six girls (mean age 15 years; range 13 to 17 years)	Interviews were completed with 16 male detainees (mean age 17.95 years; range 16 to 19 years)	73 parents or carers and 45 children or young people responded Median age of children and young

	1 African American origin; 2 American Caucasian origin; 1 African/Native American origin; 2 American Caucasian/ative American origin All referred to the school because of physically aggressive behaviour Length of time for participant enrolment at the school varied from1 month to 3 years	8 Australian/Caucasian origin; 4 Indigenous Australian origin; 2 Middle Eastern origin; 1 Pacific Islander origin; 1 Asian origin. All convicted of serious offences; 'nearly all had committed offences during their school years' 12 met 'criteria for moderate or severe conduct disorder'	people = 13 (range 14 to 20) To preserve respondent confidentiality and anonymity, no diagnostic detail was sought.

Table 11: Study information table for primary research of the experience of care *(continued)*

Study ID	**BROOKMAN-FRAZEE2009**	**CHILDREN1ST2007**	**DEMOS2010**
Sampling strategy	Sample drawn from population of therapists attending staff meetings across 'six community-based outpatient mental health clinics primarily or exclusively serving publicly-funded children and adolescents in San Diego County'.	Study of three community-based projects set up to help children 'try to "turn the curve" and find a more positive pathway forward'. This is an evaluation study of the work of the projects and not a research study – the study does not evaluate the progress of all children who have attended the Directions Projects but takes a sequential sample from the three sites during 2005 and an intensive sample. Total sample = 'between 2003 and July 2007, the three Directions Projects have recorded working with a total of 1010 children and adults.'	Not specified in detail. Interviews were conducted with 'a number of policy and academic experts' on the topic and 'projects and services' for case studies were identified 'based on... scoping work and discussions with experts' The policy seminar was attended by 'a number of policy experts and practitioners in the field, including representatives from local government, academia, and community and voluntary sector organisations that represent the views of looked-after children, care leavers and foster carers'
Design/ Method	Quantitative survey design: The Therapeutic Strategies Survey (TSS, a modified version of the Therapy Process Observational Coding	Quantitative: The Strengths and Difficulties Questionnaire (SDQ) The Parenting Daily Hassles Scale	Literature review: 'Literature reviews of domestic and international evidence' about looked-after children

	System for Child Psychotherapy) TPOCS; McLeod, 2005) was administered 'as part of a larger study (The 'Practice and Research: Advancing Collaboration' study of care provided, and outcomes for children with disruptive behavioural problems).	Qualitative: Site visits (periodically throughout the four years of the evaluation) Parents' evaluation of the Webster-Stratton programme (view on Dinosaur School Programme for their child; views on the Parents/Carers Support Programme) Children's evaluation of the Webster-Stratton programme Focus groups with parents in each of the projects Small intensive sample of 17 children and their parents	In-depth qualitative work: Qualitative interviews with 'policy and academic experts' Focus groups with looked-after children, care leavers and foster carers Quantitative work: Design of two costed 'exemplar care journeys which represented the two extremes of experiences within the system'
Model/ method evaluated	N/A	Aim of the projects were: To provide individual and group work for children aged 7 to 12 years who had challenging antisocial behaviour. To support, assist and advise parents who had difficulty in providing appropriate parental care and control. To provide support in the classroom and school setting to address the needs of children in difficulty and at risk of exclusion. Two discrete but inter-related aspects to the evaluation: Exploring process aspects of the projects, such as the environment of the projects, staffing and management and other issues influencing the projects' development, in order to assess the contribution these factors have made to the effectiveness of the interventions. Evaluating the impact of the projects' interventions, especially the	The study focuses on children looked after away from home (including in foster care and residential care homes).

		effectiveness of the Webster-Stratton group work programme chosen by one of the projects as their core group work programme to help children and parents change their behaviour.	
Comparison	N/A	N/A	Quantitative work involved comparing estimated costs of possible care pathways for: Child A (looked after but not adopted from 3 to 18 years old, 'one period in care; two stable placements') which was designed to be 'an aspirational care journey' which is also realistic ('representing the current experience of between 5 per cent and 10 per cent of looked after children') and also one which is likely to result in 'good' outcomes Child B (looked after but not adopted from 11-16.5 years old; 'three periods in care and ten placements'. which included: 'a flawed and poor quality care journey' which is also realistic ('representing the current experience of around 10 per cent of looked after children') and also one likely to result in 'poor' outcomes The study also makes some comparison between England, Scotland and Northern Ireland 'but do[es] not seek to address those nations as separate systems'
Outcomes	Self-reported rating of perceived value of different care strategies Respondents rated both strategies directed to children and those directed to caregivers (separate	Intervention: Children's behaviour and emotional problems at home and at school Parents' skills to manage the behaviour of their children	Looked after children's, care-leavers', carers', practitioners' and experts' views on: the 'purpose and impact' of care; 'what works for children in care', 'areas in need of reform' and recommendations

	strategy lists)	Parents' stress Programme attendance Engagement in programme Community's views of effectiveness of programme Structure and process: Appropriate and welcoming setting Approach that works in partnership with parents Referral, assessment and review process Rigorous delivery of projects Flexibility of projects Skilled project staff group Multi-agency relationships in the community Advisory group which has helped the development of the project Management infrastructure	for the future Some data provided on outcomes for looked-after children in respect of, for example: engagement in criminal activity; drug/alcohol misuse; health and mental health from the literature review.
Participant characteristics	88 therapists; mean therapist age = 36 years old (range: 23-64 years) Therapists caseloads comprising 'children ages 4-13 with disruptive behaviour problems' 53% respondents provided 'Marriage & Family Therapy; 21% Social Work; 17% Psychology; 8% Psychiatry; 1% Other'	Children and young people with challenging behaviour and their parents/carers N=1010 children and adults 77% boys; 23% girls The projects set out to work with children likely to be in primary school, aged 7-12 years However children have been accepted younger than the age of seven as part of a deliberate policy of earlier intervention before the children's difficulties become too entrenched. Parents/carers – more women than men attended. 60% of parents in their 30s.	In-depth qualitative work Expert interviews (n=16 interviewees) including representatives from Social Care Institute for Excellence, Institute of Education, British Association for Adoption & Fostering, Catch 22, National Care Advisory Service, Fostering Network, Action for Children, Care Matters Partnership, Centrepoint, Social Policy Research Unit, Merton Council Children, Schools and Families Dept., Health and Social Care Northern Ireland. 4 focus groups with foster carers (n=26 carers in total) Semi-structured interviews with looked-after children and care leavers (n=37 in total, of which 23 were care leavers, 14 were looked-after children; age range 7-

			21; interviews conducted across five local authority areas).

Table 11: Study information table for primary research of the experience of care *(continued)*

Study ID	JRF2005	JRF2007	SODERLAND1995
Sampling strategy	For survey: 'Seventeen questions on ASB [antisocial behaviour]' were asked as part of monthly Office for National Statistics omnibus survey which 'offers a true probability sample of the population aged 16 or over' For interviews: Original selection criteria for the three case study identified that: 'a) they should be located in different regions; b) each should have features – such as relatively high crime levels and levels of deprivation – commonly associated with ASB problems; c) each should have distinctive and contrasting ASB strategies' Conducting in-depth work revealed that '...the three neighbourhoods' ASB strategies were more similar than we had originally judged' thereby not fulfilling the full criterion (c). Authors note that 'there were, nevertheless, some differences in the emphasis and tactics deployed'	Sample drawn from two institutions: a pupil referral unit (Sparks) and an organisation in the voluntary sector that works with children/young people who have been excluded from school (St John's). • 'Hard to reach' children, young people and parents Special consideration: poverty, multiple disadvantage, black and dual-heritage children/young people.	Sample drawn from five special education cooperatives in DuPage County (Illinois, Chicago). Children and youth with serious emotional and behavioural disorders, currently in a restrictive living or school environment, and with service needs requiring the coordination of two or more agencies; and their families, were chosen for inclusion in the study
Design/ Method	Survey In-depth qualitative research comprising (in each case study area): 3-4 focus groups with residents 'Semi-structured interviews with representatives of local community associations, who were also local	Case study methods; interviews and observation • Six case studies of children/young people and their families • Extended observation at both	Mixed-method survey design: quantitative and qualitative self-report data gathered. Parents completed The Survey of Parents' System of Care Experiences (Epstein, Quinn, & Cumbald, 1993)

	residents.' 'Semi-structured interviews with officers from key agencies, including ASB coordinators, police officers, wardens, housing officers, Youth Offending Team representatives, community safety officers and Sure Start workers' Desk research: 'reviews of relevant policy and strategy documents'	sites Interviews with all key personnel and 19 parents of current or ex-pupils of Sparks and St John's.	
Model/ method evaluated	Models and strategies/initiatives for managing antisocial behaviour.	Practice is a 'product of inter-individual relationships' not a precursor to them – that is, practice is developed in response to individual needs and concerns that are identified over time, and takes into account previous history and experiences Parents – encounters with schools are almost always part of a bigger picture that involves other economic, social and emotional challenges that the parents face. Supporting parents is the key to making progress with their children	N/A
Comparison	N/A	N/A	N/A
Outcomes	Public and service providers' perceptions and experiences of antisocial behaviour, and views on its causes and possible solutions.	Relationships between staff and parents Relationships between staff and children/young people	• Perceptions of existing services • Service needs • Barriers to services • Priorities for delivering comprehensive services
Participant characteristics	Survey (n=1678) Focus groups (n=85, across 10 groups) Interviews (n=73) Case study area characteristics 'Southcity':	Children and young people who have been permanently excluded from school, and their families Adults who work with these children/young people and their families	• 121 out of 347 parents responded (35% response rate)

	London borough; high deprivation; high crime Southcity taking 'tough enforcement strategies' 'By June 2004, over 80 ASBOs had been issued...By April 2004, 60% of its ASBOs related to drug use or dealers, of which only 3% were for borough residents' (citing two Borough Anti-Social Behaviour Scrutiny Panel reports) 'ethnically mixed (26% BME)' Initiatives in Southcity include: 'Neighbourhood Management Pathfinder' work in which agencies collaborate with local residents to tackle problem behaviour including that 'associated with drug use, chaotic lifestyles and gangs' A 'Safer Neighbourhoods Team', a Metropolitan Police initiative aimed at '[providing] a more visible police presence' A 'Youth Inclusion Support Panel' which works with the YOT to provide targeted interventions for 'individual 'troublemakers' in the area' 'Environmental work' for example, street cleaning and 'Noise Patrols' 'Westerncity' Outer suburban city in South Wales; high deprivation; high unemployment; predominantly White communities although 'a few BME asylum seekers living in the		

	area' Severe antisocial behaviour problems among children and young people Westerncity taking a "'softly-softly' approach to ASB enforcement' Initiatives in Westerncity include: 'Communities that Care' (based on a model developed in the US) which involves local service providers and residents identifying ' 'risk' and 'protective' factors for antisocial behaviour and community-based activities that can address them. 'Communities First' funding which aims to increase 'community engagement and regeneration' 'CDRTP anti-social behaviour structure', a model which identifies ASBOs 'as the last resort' in a 'graduated' model of intervention A 'community house' which all local residents can use, 'two early intervention programmes', one at pre-school and one at primary school. 'Midcity': Outer suburban city in East Midlands; high deprivation; high unemployment; 15% BME Youth antisocial behaviour problems including joyriding and drug use Midcity's approach to antisocial behaviour 'becoming more enforcement focused' Initiatives in Westerncity include: 'Area Team and Community Safety		

	Panel' work aims 'improve the health, well-being and education' of residents and 'feeds into the city-wide 'Respect' campaign' 'Respect' aims to reduce antisocial behaviour and at the time of writing, was focused on 'prostitution and street begging' 'Local housing office ASB 'Task Force' teams' are situated in each of the four local housing areas and comprise officers from the local authority and police force.		

Table 11: Study information table for primary research of the experience of care *(continued)*

Study ID	TIGHE2012	WILLIAMS2007
Sampling strategy	Sample of families drawn from the multisystemic therapy (MST) arm of an RCT conducted in the United Kingdom for reducing offending behaviour. All families who participated in the MST arm were invited to take part in the qualitative study. Of the 28 families, 21 (75%) agreed to participate.	Sample drawn from population of teachers at 'two elementary schools in the urban core of a moderate-sized Midwestern city' (USA)
Design/ Method	Semi-structured interviews were conducted for the parent and young person.	Qualitative: focus groups; phenomenological approach to analysis
Model/ method evaluated	MST.	N/A
Comparison	Comprehensive and targeted usual services delivered by youth offending teams (YOT).	N/A
Outcomes	Expectations of MST Experience of working with therapist What was helpful and unhelpful about treatment	Self-reported teacher experience of identifying and responding to children's mental health problems

	Whether life had changed since MST, and what facilitated or hindered change	
Participant characteristics	21 families (21 parent, 16 young people) The young people were mainly boys (n=17, 81%); mean age of 15.3 years; nine (43%) were Black, eight were White (38%), three (14%) of mixed ethnicity; and one (5%) was Asian The young people had been convicted for a range of violent and nonviolent offenses, mostly had poor school attendance, and lived in families with high rates of socioeconomic disadvantage Sixteen (76%) lived in single parent households, 15 of these with their mother The majority of parents had minimal or no educational qualifications, and more than half (n=12, 57%) were unemployed	19 teachers from two schools (10 from one, 9 from the other); mean age 39.65 years (range: 30-60 years) 18 female, 1 male 13 African American, 6 Caucasian Teacher mean class size of 23 pupils (range: 10-32 pupils)

Table 12: Study information table for reviews of access to services which evaluate targeted interventions for children and young people

Study ID	**LANDSVERK2009**	**LOCHMAN2000**	**SHEPARD2009**
Method used to synthesise evidence	Narrative	Narrative	Narrative
Design of included studies	'empirical studies carried out across several states plus one nationally representative survey'	Controlled experimental designs and non-experimental time series designs	RCTs, case studies
Dates searched	Not stated	Not stated	Not stated
No. of included studies	Not stated	25	Not stated
Model/ method evaluated	Interventions addressing: PTSD and abuse-related trauma; disruptive behaviour disorders; depression; substance abuse; and, children's needs via intensive home- and community-based support.	Parent training programmes that: are aimed at parents only; have separate parent-focused and child-focused elements (citing 'Coping Power' specifically); and, take a 'family focus' as well as providing parent training).	Participants of evidence-based parent management training (PMT) programmes for children aged 3-8 'referred for oppositionality and early onset conduct problems'. Participant nationality and/or place of residence not specified
Comparison	Not stated	Not stated	Treatment vs. Control; Prevention vs. Control
Outcomes	Not specified in detail: broadly, study summarises the impact of interventions on 'behavioural and social-emotional problems warranting mental health care' in children with specific reference made to PTSD and abuse-related trauma, disruptive behaviour disorders, depression and substance abuse.	Levels of problem behaviours demonstrated by at-risk children as evidenced, for example, by assessment of aggressive behaviour, time spent in correctional facilities and referral rates to special classes at school. Ratings of positive and negative parenting behaviour including, for example, assessment of parental response to child's negative behaviour, parent-child communication, parental 'warmth' to child	Children's observed and reported problem behaviours Observed parent-child interactions Self-reported parent involvement

		and self-reported parent satisfaction with parenting. Improvements in 'family functioning'.	
Participant characteristics (focus of review)	Children in foster care in the USA, with a particular focus on those in receipt of interventions for behavioural or socio-emotional problems	Participants (parents and families) in preventative interventions programmes targeting 'high risk' children, that is, those at risk of developing 'a later negative outcome' for example, substance misuse. Participant nationality and/or place of residence not specified	Participants of evidence-based parent management training (PMT) programmes for children aged 3-8 'referred for oppositionality and early onset conduct problems'.

Table 13**: Study information table for reviews of factors affecting service availability and access**

Study ID	**FLANZER2005**	**OLIVER2008**
Method used to synthesise evidence	Narrative	Systematic review followed by three-stage narrative synthesis: effectiveness synthesis; views synthesis; and, cross-study synthesis
Design of included studies	Not stated explicitly. Reference made to qualitative and quantitative: surveys, empirical studies	Qualitative and quantitative: interventions studies (trials and systematic reviews) and non-intervention studies of young people's views
Dates searched	Not stated	~1990-1999
No. of included studies	Not stated	33
Outcomes	'Effectiveness of delivering treatment services; the organization, management and financing of services; and adoption of best practices (technology transfer)'	'Barriers to, and facilitators of, good mental health amongst young people'
Participant characteristics	USA-based adolescent drug users, with a particular focus on those who are adjudicated	Children and young people (11-21 years) Included outcome evaluations and systematic reviews could be from anywhere in the world while only UK-specific process evaluations and non-intervention studies were included.

4.2.4 Evidence from the review of access to services and the experience of care

Evidence extracted from the reviews and primary studies of access to and delivery of services and the experience of care (see Appendix 16) were combined using a matrix of service user experience (see Appendix 13).

The matrix of service user experience is structured so that for each key point on the pathway of care (access to services, assessment and diagnosis, treatment including prevention, and educational settings), evidence is summarised using eight dimensions of person-centred care. These dimensions are subdivided into two groups: (1) the relationship between individual service users and professionals (involvement in decisions and respect for preferences; clear, comprehensible information and support for self-care; emotional support, empathy and respect), and (2) the way that services and systems work (fast access to reliable health advice; effective treatment delivered by trusted professionals; attention to physical and environmental needs; involvement of, and support for, family and carers; continuity of care and smooth transitions).

Where evidence was found that was relevant to each dimension, this is presented in narrative form below.

Access to services

Involvement in decisions and respect for preferences
A UK study identifying children's views of CAMHS found that it was important to consult with looked-after children in service provision discussions (DAVIES2008).

Clear, comprehensible information and support for self-care
Parents and carers from a US study of families with a child with serious emotional and behavioural disorders reported that they would like more information about community services, and available transitional or vocational services. This may be achieved through providing a centrally located office (for example, at school) that distributes comprehensive information on all community services; or, by distributing information via intensive case management or community-based agencies. In terms of transitional services, school personnel could work closely with parents to develop a comprehensive plan for each child, addressing both child and family needs (SODERLUND1995).

A review of parents participating in parent management training (PMT) asserted the importance of addressing unmet need in contexts of limited capacity. This may require services to deliver interventions innovatively, for example, using 'self-administered programming' and taking advantage of media technology (SHEPARD2009).

Fast access to reliable health advice

Children and young people and parents or carers attending UK CAMHS reported that accessibility could be improved (BARBER2006).

Incarcerated male adolescents from an Australian sample reported the limited availability of services tackling criminogenic need, and educational and vocational services. However, those who were able to access these services reported positive experiences of them (ASHKAR2008).

Inconveniently located services are seen, in one study, as the most prominent barrier to services. Meetings conducted at a location designated by the parent, or at home, or a school-linked services approach, could be helpful (SODERLUND1995). Another barrier to access of services, identified by parents involved in PMT, is that need exceeds capacity (SHEPARD2009).

A review of preventative interventions targeting 'high risk' children reported that there may also be multi-level barriers (community, organisational, individual) to implementing such interventions, including: lack of agency or professional 'ownership' of the programme, lack of training and support for staff, and parents' 'disinterest, resistance and lack of involvement' (LOCHMAN2000).

For US-based adolescent drug users, one study reported the accessibility of treatment and 'the organizational and economic context of service delivery' were critical to treatment effectiveness (FLANZER2005). The lack of available support for adolescent drug users was costly both in terms of the financial impact on other services, and on outcomes for the individual (FLANZER2005).

Continuity of care and smooth transitions

A UK study exploring the views of policy and academic experts, looked-after children and foster carers, reported that for children and young people in care, unnecessary delays at entry to care may result in an increased risk of mental health problems (DEMOS2010). Similar points are raised in a study of children in foster care in the USA, where it is noted that staff working with looked- after children need to understand the range of mental health services and support available in the locality and how to access and make referrals to them (LANDSVERK2009).

Assessment and diagnosis

Continuity of care and smooth transitions

Services could consider standardising mental health assessment for children and young people entering care (LANDSVERK2009).

Treatment (including prevention)

Involvement in decisions and respect for preferences

It is important to consult with looked after children and young people in their individual discussions regarding treatment (DAVIES2008).

A study of community-based projects for children and young people with challenging behaviour and their parents or carers in Scotland, which included the Webster-Stratton parent training programme, reported a sense of cultural dissonance in the programme for some families (CHILDREN1ST2007). The study also reported that there were feelings that the Webster-Stratton programmes take a simplistic and idealistic approach and may not be related to the complexity or the severity of what parents and carers are experiencing, for example, not addressing 'bad behaviour' outside the home and so on. Parents and carers therefore expressed a desire for the programmes to be modified to their needs and circumstances, and not run by the book (CHILDREN1ST2007). Another review also reported the needs of parent/family intervention programmes to be culturally appropriate (LOCHMAN2000).

Clear, comprehensible information and support for self-care
Children and young people like to know what is going to happen to them when they are referred to services, for example, through provision of an information leaflet (CHILDREN1ST2007).

Emotional support, empathy and respect
A narrative review of UK CAMHS reports that building relationships (which includes the sense of something being done, respect for confidentiality and staff interactions) may be just as important to children and young people as the intervention type, techniques and theories used (DAVIES2008). The review also reported that children and young people experience ambivalence towards talking and have a preference for non-verbal communication for engagement in the therapy process (DAVIES2008).

Children and young people and their parents or carers attending CAMHS appreciate: having relationships with staff; support, help and advice given; being listened to and given time; and being able to talk and express feelings. However, they reported that attention to initial concerns and worries could be improved (BARBER2006).

One review reported that effective interventions address children and young people's concerns about family conflict, bereavement and/or peer group rejection (OLIVER2008). Another found that an authoritarian management style to treatment is not appreciated by prison detainees (ASHKAR2008).

A qualitative study of the experience of care for multisystemic therapy (MST) found that parents strongly valued the sense of having someone there for them to 'share what you're going through' feeling that 'MST becomes a support and a friend', besides the skills and practical help offered (TIGHE2012).

The way that services and systems work

For looked after children in the USA, it has been suggested that intensive, longer-term, evidence-based interventions could benefit children and 'prevent further movement away from family and community' (LANDSVERK2009).

Interventions targeting the broader issues that have an impact on mental health, for example, housing, finance, and so on, may help to improve access to services, and may be particularly useful for reaching marginalised children and young people (OLIVER2008).

Effective treatment delivered by trusted health professionals

It has been suggested that services might look to capitalise on incarcerated young people's readiness for positive change by developing rehabilitative programming (offence-specific treatment, psychological treatment, counselling, education, vocational training, social skills training, anger management, and problem solving) during incarceration (ASHKAR2008).

Another study found that children and young people and their parents or carers attending CAMHS appreciated crisis care. However, the specifics of treatment could be improved. Children and young people with conduct problems were less likely to be satisfied with services, suggesting it is important to work with this group more in the future so that their needs are better understood and expectations met (BARBER2006).

A US-based quantitative study reported how therapists value a wide range of treatment strategies when working with children and young people with disruptive behavioural problems and their parents or carers. It was suggested that understanding the service users' attitudes towards treatment techniques and content may improve how interventions are implemented. It was found that interventions most valued for children are those that focus on the parent/child/family relationship and problem solving/social skills. Interventions most valued for older young people are those that focus on problem solving/social skills and improved communication. For the parents or carers, interventions that were most valued are those that identify strengths and modelling or psychoeducation (the latter for parents or carers of older young people) (BROOKMAN-FRAZEE2009).

Child welfare services staff need to understand 'the importance of early intervention and treatment', reports one US-based study (LANDSVERK2009).

Staff morale and expertise is found critical to drug treatment programme success; professionals need expertise in both navigating the criminal justice system and in providing treatment/therapy to young people (FLANZER2009). It is also reported that the accessibility of treatment, and 'the organizational and economic context of...service delivery' are critical to treatment effectiveness (FLANZER2009).

In the MST study, families reported trusting the therapist, feeling ‘heard and understood’, and indicated that the non-blaming approach, in which the therapist was ‘working together with me as opposed to against me’ was crucial to their engagement (TIGHE2012).

Attention to physical and environmental needs
Practical arrangements and physical surroundings are an important therapeutic feature for children and young people (DAVIES2008). For children and young people and parents/carers attending CAMHS, it was reported that facilities could be improved (BARBER2006).

Two reviews also reported that parents may be more likely to engage with family-focused interventions that fit in with their schedules, for example, those which are delivered in community settings and have meals, childcare and/or transport provided (LOCHMAN2000; SHEPHARD2009).

Families undergoing MST appreciated the flexibility of the MST model around their schedule, and being located in the family home (TIGHE2012).

Involvement of, and support for, family and carers
Services that did not address family needs were recognised as a barrier. A US-based suggests that educational programmes for learning effective methods for managing children’s behaviour, and recreational/respite programmes providing help in finding recreational activities for children and tips for finding personal time for parents, may be beneficial to families (SODERLUND1995).

It is also reported that parents or carers enjoy being with other adults who share similar difficulties, allowing their sense of isolation to decrease. Incorporating regular support groups and the opportunity to address their lack of confidence or self-esteem in treatment has been welcomed in the Scottish evaluation of community-based projects (CHILDREN1ST2007). Another study reported parents may be more likely to engage with family-focused interventions that enable them to share experiences and bond with other parents (LOCHMAN2000).

It is reported that continuous positive reinforcement may be needed to engage and retain parent or carers in treatment (CHILDREN1ST2007). A study of UK children who have been permanently excluded from school and their families and adults who work with them, reports that treatment is more difficult with children whose parents or carers cannot engage (JRF2007). A non-judgemental and individualised approach where parents/carers are given the chance to work out their own strategies is appreciated (JRF2007).

In MST, high value is placed on the therapists’ ability to connect with different family members, showing empathy, understanding, and genuine care (TIGHE2012).

Continuity of care and smooth transitions
Children and young people and parents or carers attending UK CAMHS appreciate the flexibility of the service. However, waiting times for a first appointment could be improved (BARBER2006).

Another study suggests liaison with schools of the young people is important to the success of the programmes, so that teachers can reinforce new learning and behaviour (CHILDREN1ST2007).

For children and young people in care, placement stability can help mitigate emotional difficulties and challenging behaviour. Training carers to deal with emotional problems and mental health support can minimise the likelihood of placement breakdown. Adequate attention also needs to be given to support for children and young people when they are on the verge of leaving care and living independently (DEMOS2010).

In terms of a community-level approach to antisocial behaviour, it has been suggested in a UK qualitative study that there needs to be better coordination between projects and better integration of antisocial behaviour work within neighbourhood renewal strategies (JRF2005). It may be beneficial to incorporate parent programme delivery into existing community structures to encourage attendance from those unlikely to attend programmes in traditional mental health settings (SHEPARD2009). Case management approaches also, for example, can help deliver integrated, coordinated, coherent care by 'establishing linkages across programs and systems' (FLANZER2009). In addition, families undergoing MST found the ecological systems approach to understanding and resolving difficulties very helpful because the focus was not solely on the young person, but of links with extended family and other professionals. Families also identified that 'extratherapeutic factors' such as the influence of other professionals and agencies (for example, school and Youth Offending Service), and the role the criminal justice system played as a deterrent to future offending (TIGHE2012).

It was also noted in the study of MST families that some had struggled after the intervention had ended, and they said they would have preferred a more tapered approach to ending (a 'weaning process') (TIGHE2012).

Educational settings

Involvement in decisions and respect for preferences
One review reported that effective school-based mental health interventions 'addressed student concerns about teachers' (OLIVER2008).

Emotional support, empathy and respect
A qualitative study of children and young people with social, emotional and behavioural difficulties in Maltese schools reported that students experienced animosity from teachers, and that teachers needed to see pupil engagement as a

collaborative process, rather than something threatening. It was important to cater to holistic needs and engage students in alternative ways of learning (CEFAI2010). Another study found that separating the child from the behaviour, and conveying this to parents and carers, was important (JRF2007).

The way that services and systems work
One study reported that teachers believed behaviour management takes precedence over identifying mental health problems. Teachers perceived parents to be significant barriers to mental health services for children in that they often did not act on teachers' referrals or recommendations, as the parents believed the teachers should be the ones to resolve their child's problems. Other barriers to identification and access included: lack of resources in the school, large class sizes, no zero-tolerance policy for certain behaviours, a lack of parenting classes, and too much bureaucracy (WILLIAMS2007).

It is also reported that some parents or carers resent the attitude that teachers take, that parents or carers should be expected to help sort out a problem without understanding all the other problems they are facing (JRF2007).

Effective treatment delivered by trusted health professionals
Interventions for girls with aggression need to be designed along the lines of preventing escalation of aggression (aggression in girls tends to begin as nonphysical and leads to physical). Interventions that help girls use aggressive behaviours in positive ways can be useful. Girls' friendships are very much tied up in their aggression, so mentoring programmes that emphasise this affinity for attachment could be helpful (ADAMSHICK2010).

Attention to physical and environmental needs
The study conducted in Malta reported that there may be challenges for children and young people with social, emotional and behavioural difficulties to adapt to a rigid school environment; and such students may need support and encouragement to have a voice at school (CEFAI2010).

Involvement of, and support for, family and carers
It is important for local authorities to consult parents or carers and children and young people in relation to their preferred choices for educational provision after a permanent exclusion from school (JRF2007).

4.2.5 The User Voice focus group

The GDG commissioned the views of children and young people with a conduct disorder to inform the development of the guideline via an organisation called User Voice[6]. User Voice is focused on the needs of young offenders, which is led by ex-offenders and aims to enable practitioners and policy makers to listen directly to

---

[6] www.uservoice.org

service users, allowing previously unheard voices to have an impact on policy and the delivery of services for young offenders. They have considerable experience in collaborating with local and national bodies in supporting the development of policy and practice documents in the area of youth offending.

The purpose and method for the consultation with User Voice was discussed with the GDG and an initial meeting was held with senior staff from the organisation to determine the most effective means of consultation. After this initial meeting and further discussion with the GDG it was agreed that a focus group would be facilitated by User Voice, on behalf of the GDG to explore the experience of young people who have had involvement with youth justice services to inform the development of the guideline. (The full method and report of the findings is described in Appendix 14).

A focus group of seven young people aged between 15 and 18 years old was convened; the group (five males and two females) had significant experience of the criminal justice system and related agencies including youth offending services, health and social services, and youth services. The individuals had all had previous involvement in User Voice work, and personal histories consistent with a diagnosis of conduct disorder.

The focus group explored three topics that were determined by the GDG:

- Access to care - including the location of services
- Interventions - including parent training programmes and family-based support, and
- Delivery and coordination of care – including the involvement of schools, confidentiality and the influence of peers.

Summary of the young people's views

Access to care
When the young people were encouraged to think about who or where they would turn to when they needed help, most cited family and friends. They also identified the internet as a safe and trusted source of information to help them when they, or people they knew, had problems. For some, this was most often their first port of call when seeking help, using a search engine such as Google. Some of the young people indicated they would not trust public service websites, however, such as the Youth Offending Service website, as they *'are all connected to the government which is different'*.

A few young people did identify professionals they would approach if they needed help. One young person said,

> *'I would go to my YOT [Youth Offending Team] worker. Yes most people don't get along with their YOT worker but me and my YOT worker has got a good relationship.'*

Mistrust of professionals, based on previously negative experiences of public services, was, however, commonly cited as a barrier to young people seeking out or engaging with professional help. One young person said,

> *'It just takes one bad experience with like a person, like someone who is professional, like one bad experience with the police, to think that I am never talking to the police again.'*

Often this mistrust was linked to confidentiality, an issue that generated a lot of discussion in the group. The young people reported that professionals shared information about them, without informing them, even after being told that it would be kept confidential. One young person described their experience of confidentiality being breached by a counsellor they had seen at a CAMHS service, which led to their withdrawal from the service,

> *'Cos I said something to my counsellor, and she has told, and like the next week my youth offending worker has told me, and I am thinking what the hell you are not supposed to, and I did actually say to the woman I don't want my youth worker to know. And she actually betrayed me which was like...and told her, and I would not go back there again after that.'*

Two young people did acknowledge the need for multi-agency working, but emphasised the importance of transparency if information was to be shared between professionals. Not knowing what information would be shared with which professional or agency, and in which circumstances, led to the young people being reluctant to talk to professionals about their problems.

When the location of services was discussed, in relation to access, this appeared a less significant consideration for the young people compared to issues of professional mistrust. However, some suggested that a community centre or a café may provide a more informal and hence acceptable setting for talking to a professional, rather than their own home.

Interventions

When discussing the services the young people had experienced in the past, the importance of establishing a relationship of trust with the service-provider emerged as the most significant consideration. This included developing a sense that the professional concerned genuinely cared for them, for example, through maintaining informal contact beyond the remit of their professional role; the interpersonal style of the professional; as well as consistency in the professional involvement, such as an identified professional or worker who remained constant in their lives over time. On talking about social workers, one young person said,

> *'They don't give a shit because I had about like eight social workers from last year. They come and go.'*

Another young person said how important a relationship with their support officer from prison has been, which continued after they left prison. The fact that she still makes time to support me, when *'she doesn't have to... makes me feel happy to know that there is someone who is not my family and is a professional that does care'*. The young person then said how this relationship had helped them think about their actions, as *'I don't want to let her down because she has faith in me'*.

The interpersonal style of the professional, cited as important by many of the young people, included the worker's capacity to demonstrate an understanding of the young person's world and to enable the young person to feel at ease. This included the workers having *'been there themselves'* and thus able to relate to the situation, as well as their style of clothing. Suits were identified as *'uniforms that symbolised authority, control, and professional detachment, in a negative way, for the young people'*.

When the young people were asked about parenting programmes and family based support services, some expressed concerns about their parents feeling judged or undermined by parenting programmes. One young person said,

> *'... this person here could not come to my house and tell my mum what to do. She would just – she would look at him and tell him to walk out the door.'*

Others, however, felt this approach could work,

> *'I think that can work though cos it just comes down to your parents and obviously the young person has to be open minded. You have to see eye to eye. On this thing here you have to not forget that it is your child, you have to forget that in a way that you are not telling them off. You need to see some sort of eye to eye level like we are not going look and shout – we are not going to interrupt I am going see where you are coming from, see why you are upset, why they are giving me trouble. If that is the case and obviously the young person is going to have to listen to them.'*

The young people made some suggestions of how parenting and family-based interventions could be more helpful:

- The worker acting as a mediator between child and parent
- Offering one-to-one work with the young person in the first instance, to engage the parent in the process by noticing successful change
- Videoing the individual meeting with the young person and showing this to the parent.

When discussing education and school-based interventions, many young people said they had considerable problems at school, and a sense of disappointment that their potential had not been recognised or supported by teaching staff. The young people frequently referred to feeling that they had been labelled as difficult or problematic from an early age, and that this label had stuck throughout their time in the education system.

Some young people were able to describe positive experiences of teachers and school-based behaviour intervention programmes, and it was discussed what had been different about teachers which the young people had found helpful. One young man identified how 'behaviour officers' had helped,

> *'... they used to joke around with us, understand...There would always be kids in our school that would get into trouble just to go and talk to them about something'*

One young person spoke of how a teacher who let the class listen to music had 'no problems' as 'like she used to let us listen to music, we do like half an hour of work and half an hour on the computer'. Most of the young people in the focus group agreed that being allowed to listen to music with their headphones on had improved, or would be likely to improve, their concentration within the classroom.

The young people also described how teachers who had been helpful had been effective in creating a more relaxed atmosphere within the classroom. Those teachers who were inflexible and uncompromising were seen as being less helpful, especially when they excluded young people from the class when it was in their view 'unjustified'.

Delivery and organisation of care

The young people were asked to think about what had been most useful about the services they had received in the past and what could be changed to make them more likely to use services if they needed help in the future. Themes that emerged were, again, professional mistrust and confidentiality concerns; negative experiences of assessments; the significance of help being offered at times of crisis and change; the importance of feeling listened to and understood by those trying to help them (for example, through mentoring); and having choices about who they see and when (for example, self-referrals being seen as more helpful than professional/agency referrals).

Professional assessments had been found *'unhelpful and intrusive'* by some young people. In particular, young people did not like that these were carried out by a number of professionals who they had not yet formed a trusting relationship with, and where the young person could see no obvious benefit to engaging in the assessment process. The young people's views were based on previous negative experiences of assessments, feeling that what they had told professionals had been misunderstood or misinterpreted – for example, one young person described how professionals had asked about not eating breakfast, and *'bam – they tried to take me off my mum'*.

The importance of professionals explaining what was what was happening and what the problems might be, rather than trying to 'catch people out', was identified, particularly when child safeguarding was the case. Feeling listened to and understood by professionals also frequently emerged as a theme during the focus group discussion, by professionals taking the time and interest to establish the reasons for the young person's difficulties or problematic behaviour.

The young people also spoke of the importance of being given choices about the support offered to them, including choices of which worker they would be referred to, when they saw them, and in identifying personal goals of the intervention. The young people again noted the significance of engaging with workers who had some understanding of their situation, such as mentors who may have previously experienced similar problems in the past.

Some of the young people described how they had been most receptive to help at times of significant change and crisis in their lives; one young person said the *'most helpful thing for me was going to prison...'* and another added, *'Prison, it changed me. It changed my way of thinking...'*. Another person said it was *'falling out with my mum, because I ended up living nowhere ... And I realised that I was going to end up being put into care if I didn't go back. So that's what I did'*.

4.2.6 Evidence summary

The evidence identified a limited evidence base that drew on the experience of children and young people with a broader range of problems than just conduct disorder. This limited evidence supported the decision to conduct the focus group, and to incorporate and adapt recommendations from other guidelines (see Section 4.3). Despite these significant limitations, there was considerable overlap of themes concerning access to, and the organisation of, care that emerged from the broadly based evidence review and the more narrowly focused work with User Voice. This provides some increased confidence when summarising and interpreting the findings.

One theme to emerge from both the evidence review and the focus group was that young people were aware of the negative impact on their lives, and that of their families, due to the lack of access to services. Factors that may be associated with improved access and uptake of services included eliciting young people's preferences and facilitating their involvement in decisions about the treatment available to them, including the location of services. Lack of awareness of the options for help by staff with whom young people were in contact was also cited as a barrier to effective care. Greater flexibility in the venues in which services were provided was also identified as being potentially helpful. Young people and their families also wanted to be provided with clear, comprehensive information about services and cited the internet and other media as important sources of information.

Assessments were often seen as too cursory, with a preference expressed for thorough, standardised assessment preferably provided by or led by a single professional with whom it was possible to build a trusting relationship. The importance of tailoring services to individual families' needs, including exploring safe ways that the young person can communicate their needs and wishes to their parents, was also identified as a key factor. Respect for confidentiality and greater clarity about the sharing of information was also a recurring theme.

For the provision of treatment and the organisation and delivery of services, the importance of tailoring services to individual needs and respecting, not blaming or stigmatising parents also emerged. A lack of respect was seen as a key reason for children and young people and their parents or carers withdrawing from treatment. Flexibility in the means of delivery of interventions and a recognition of the practical difficulties families face in accessing treatment was also seen as a way of improving access to treatment and promoting continuing engagement. Finally, the review suggested that young peoples' relationships with their teachers is critical to managing their behaviour at school or college. Creative ways to engage young people in the school environment, such as flexibility in lessons, emerged as a theme.

4.3 REVIEW OF EXISTING GUIDANCE

Given the limited evidence identified on the experience of access to, and delivery and organisation of, care, the GDG made the decision to use the evidence in Section 4.2 to inform and provide a context for a review of existing NICE guidelines with the aim of incorporating or adapting recommendations from them. The GDG followed the methods outlined in Chapter 3 and reviewed NICE mental health guidelines and identified the following as containing recommendations that were of most relevance to the concerns raised in Section 4.2:

- *Service User Experience in Adult Mental Health* (NICE, 2011b)
- *Common Mental Health Disorders* (NICE, 2011a).

Service User Experience in Adult Mental Health

After a careful review of the evidence considered in Section 4.2, the GDG judged that although the *Service User Experience in Adult Mental Health* guidance was for adult service users, a number of areas applied to the experience of care of children and young people with a conduct disorder, including: relationships and communication; providing information; avoiding stigma and promoting social inclusion; decisions, capacity and safeguarding; and involving families and carers. Some recommendations required only limited adaptation. Several other recommendations required more extensive adaptation to be relevant to the current context. The GDG adapted the recommendations based on the methodological principles outlined in Chapter 3; in all cases the adaptation retained the original meaning and intent of the recommendations.

Table 14 contains the original recommendations from *Service User Experience in Adult Mental Health* in column 1 and the adapted recommendations in column 2. Where recommendations required adaptation, the rationale is provided in column 3. Where the only adaptation was to change 'service users' to 'children and young people with a conduct disorder' or 'families and carers' to 'parents and carers' this is noted in the third column as 'no significant adaptation required'. In column 2 the numbers refer to the recommendations in the NICE guideline.

These recommendations reflect the expert opinion of the GDG in combination with the evidence presented in Section 4.2, including the need to give clear, comprehensible information to children and young people with a conduct disorder, and their parents and carers, the importance of health and social care professionals being transparent with children and young people, and building a relationship with them based on trust and respect, and an increased respect for parents and carers and greater care in the management of confidentiality.

Common Mental Health Disorders

It was apparent to the GDG based on their own experience of the evaluation and provision of services, from the evidence reviewed in Section 4.2 and from the consultation with User Voice that not only were there problems with accessing care but that there were considerable problems throughout the care pathway. Fortunately a number of potential solutions to these problems also emerged from the review and consultation in Section4.2. These included: the provision of greater information, better coordination and strengthening of the assessment process, flexibility in the venues were services are provided, practical support in maintaining engagement with services, increased knowledge on the part of staff concerned with the delivery of service, and improved continuity of service provision. After considering these factors, the GDG made the decision to incorporate or adapt certain recommendations from existing guidance. The GDG followed the methods outlined in Chapter 3 and reviewed the *Common Mental Health Disorders* (NICE, 2011a) guidance which, as with the other guidelines reviewed in this section had been initially developed for adult service users. The GDG carefully scrutinised the relevant sections of the *Common Mental Health Disorders* guideline for recommendations, which in the expert opinion of the GDG, addressed the concerns identified in the evidence reviews in Section4.2. A number of areas concerned with improving access and the delivery and organisation of care for children and young people with a conduct disorder were identified which required limited adaptation to address the issues identified above. A number of recommendations were also identified as being particularly important for improving access to, and the delivery and organisation of, care, but required some more extensive adaptation to be relevant to the current context. The GDG then adapted the recommendations based on the methodological principles outlined in Chapter 3, in all cases the adaptation retained the original meaning and intent of the recommendations.

Table 15 contains the original recommendations from *Common Mental Health Disorders* in column 1 and the adapted recommendations in column 2. Where recommendations required adaptation, the rationale is provided in column 3. Where the only adaptation was to change 'people with common mental health disorders' to 'children and young people with a conduct disorder' or 'families and carers' to 'parents and carers' this is noted in the third column as 'no significant adaptation required'. In column 2 the numbers refer to the recommendations in the NICE guideline.

Table 14: Recommendations from *Service User Experience in Adult Mental Health* for inclusion

Original recommendation from Service User Experience in Adult Mental Health	Recommendation following adaptation for this guideline	Reasons for adaptation
1.1.10 Health and social care professionals should ensure that they: • understand and can apply the principles of the Mental Capacity Act (2005) appropriately • are aware that mental capacity needs to be assessed for each decision separately • can assess mental capacity using the test in the Mental Capacity Act (2005) • understand how the Mental Health Act (1983; amended 1995 and 2007) and the Mental Capacity Act (2005) relate to each other in practice.	1.1.3 Health and social care professionals should ensure that they: • can assess capacity and competence, including 'Gillick competence', in children and young people of all ages, and understand how to apply the legislation in the care and treatment of children and young people, including the Children Act (1989), the Mental Health Act (1983; amended 1995 and 2007) and the Mental Capacity Act (2005).	This recommendation was adapted in order to support the right to confidentiality of young people, as identified in Section4.2.
1.4.7 Health and social care providers should ensure that service users: • can routinely receive care and treatment from a single multidisciplinary community team • are not passed from one team to another unnecessarily • do not undergo multiple assessments unnecessarily.	1.1.4 Health and social care providers should ensure that children and young people with a conduct disorder: • can routinely receive care and treatment from a single team or professional • are not passed from one team to another unnecessarily • do not undergo unnecessary multiple assessments unnecessarily.	This recommendation was adapted to be suitable for the service context of children and young people with a conduct disorder and to address the issue of the need for continuity of professional care to help build a trusting relationship.
1.1.13 Consider service users for assessment according to local safeguarding procedures for vulnerable adults if there are concerns regarding exploitation or self-care, or if they have been in contact with the criminal justice system.	1.1.6 Consider children and young people with a conduct disorder for assessment according to local safeguarding procedures if there are concerns regarding exploitation or self-care, or if they have been in contact with the criminal justice system.	No significant adaptation required.
1.1.14 Discuss with the person using mental health services if and how they want their family or carers to be involved in their care. Such discussions should take place at intervals to take account of any changes in circumstances, and should not happen only once. As	1.1.8 Health and social care professionals working with children and young people with a conduct disorder should be trained and skilled in: • negotiating and working with parents and carers, and	The original recommendation was split in two and adapted to take account of issues such as consent and capacity in children and young people, and their developmental level. The second

Original recommendation from Service User Experience in Adult Mental Health	Recommendation following adaptation for this guideline	Reasons for adaptation
the involvement of families and carers can be quite complex, staff should receive training in the skills needed to negotiate and work with families and carers, and also in managing issues relating to information sharing and confidentiality.	• managing issues relating to information sharing and confidentiality as these apply to children and young people. When a young person is 'Gillick competent' seek their consent before speaking to their parent or carers. 1.1.10 Discuss with young people how they want their parents or carers to be involved in their care. Such discussions should take place at intervals to take account of any changes in circumstances, including developmental level, and should not happen only once.	recommendation addresses and emphasises the important issue of parental involvement which was identified by both the review of the evidence (for example, that parents are sometimes 'blamed' for their child's behaviour) and the GDG (for example, risk of harm to the child) as an important issue.
1.1.4 When working with people using mental health services: • make sure that discussions take place in settings in which confidentiality, privacy and dignity are respected • be clear with service users about limits of confidentiality (that is, which health and social care professionals have access to information about their diagnosis and its treatment and in what circumstances this may be shared with others).	1.1.8 When working with children and young people with a conduct disorder and their parents or carers: • make sure that discussions take place in settings in which confidentiality, privacy and dignity are respected • be clear with the child or young person and their parents or carers about limits of confidentiality (that is, which health and social care professionals have access to information about their diagnosis and its treatment and in what circumstances this may be shared with others).	No significant adaptation required.
1.1.3 When working with people using mental health services and their family or carers: • ensure that you are easily identifiable (for example, by wearing appropriate identification) and approachable • address service users using the name and title they prefer	1.1.13 When communicating with children and young people with a conduct disorder and their parents or carers: • take into account the child or young person's developmental level, emotional maturity and cognitive capacity, including any learning disabilities, sight or hearing problems or delays in language development	In Section 4.2 lack of clarity about the purpose and aims of any assessment or intervention was a recurrent theme. The GDG also considered it important to tailor such communication to the development needs of the child or young person. The provision of interpreters has been

Original recommendation from Service User Experience in Adult Mental Health	Recommendation following adaptation for this guideline	Reasons for adaptation
• clearly explain any clinical language and check that the service user understands what is being said • take into account communication needs, including those of people with learning disabilities, sight or hearing problems or language difficulties, and provide independent interpreters (that is, someone who does not have a relationship with the service user) or communication aids (such as using pictures, symbols, large print, Braille, different languages or sign language) if required.	• use plain language where possible and clearly explain any clinical language • check that the child or young person and their parents or carers understand what is being said • use communication aids (such as pictures, symbols, large print, Braille, different languages or sign language) if needed.	covered by a separate recommendation (1.1.17).
1.1.6 Ensure that you are: • familiar with local and national sources (organisations and websites) of information and/or support for people using mental health services • able to discuss and advise how to access these resources • able to discuss and actively support service users to engage with these resources.	1.1.14 When working with a child or young person with conduct disorder or their parents or carers ensure that you are: • familiar with local and national sources (organisations and websites) of information and/or support for children and young people with a conduct disorder and their parents or carers • able to discuss and advise how to access these resources • able to discuss and actively support children and young people and their parents or carers to engage with these resources.	No significant adaptation required.
1.4.1 When communicating with service users use diverse media, including letters, phone calls, emails or text messages, according to the service user's preference.	1.1.15 When communicating with a child or young person with a conduct disorder, use diverse media, including letters, phone calls, emails or text messages, according to their preference.	No significant adaptation required.
1.1.7 When working with people using mental health services: • take into account that stigma and discrimination are often associated with using	1.1.16 When working with children and young people with a conduct disorder and their parents or carers: • take into account that stigma and	No significant adaptation required.

Original recommendation from Service User Experience in Adult Mental Health	Recommendation following adaptation for this guideline	Reasons for adaptation
mental health services • be respectful of and sensitive to service users' gender, sexual orientation, socioeconomic status, age, background (including cultural, ethnic and religious background) and any disability • be aware of possible variations in the presentation of mental health problems in service users of different genders, ages, cultural, ethnic, religious or other diverse backgrounds.	discrimination are often associated with using mental health services • be respectful of and sensitive to children and young peoples' gender, sexual orientation, socioeconomic status, age, background (including cultural, ethnic and religious background) and any disability • be aware of possible variations in the presentation of mental health problems in children and young people of different genders, ages, cultural, ethnic, religious or other diverse backgrounds.	
1.1.8 Health and social care professionals working with people using mental health services should have competence in: • assessment skills and using explanatory models of illness for people from different cultural, ethnic, religious or other diverse backgrounds • explaining the possible causes of different mental health problems, and care, treatment and support options • addressing cultural, ethnic, religious or other differences in treatment expectations and adherence • addressing cultural, ethnic, religious or other beliefs about biological, social and familial influences on the possible causes of mental health problems • conflict management and conflict resolution.	1.1.18 Health and social care professionals working with children and young people with a conduct disorder and their parents or carers should have competence in: • assessment skills and using explanatory models of conduct disorder for people from different cultural, ethnic, religious or other diverse backgrounds • explaining the possible causes of different mental health problems, and care, treatment and support options • addressing cultural, ethnic, religious or other differences in treatment expectations and adherence • addressing cultural, ethnic, religious or other beliefs about biological, social and familial influences on the possible causes of mental health problems.	This recommendation was adapted because of the evidence of inadequate explanations of the nature of the problems faced by children and young people identified in section 4.2. The final bullet point was removed because the GDG judged that issues related to conflict management and resolution were covered in considerable detail in the recommendations for interventions in Chapters 5 and 7.
1.7.1 Anticipate that withdrawal and ending of treatments or services, and transition from one service to another, may evoke strong emotions and reactions in	1.1.19 Anticipate that withdrawal and ending of treatments or services, and transition from one service to another, may evoke strong emotions and	This recommendation was adapted to emphasise that transfer from CAMHS to adult mental health services which the

Original recommendation from Service User Experience in Adult Mental Health	Recommendation following adaptation for this guideline	Reasons for adaptation
people using mental health services. Ensure that: • such changes, especially discharge, are discussed and planned carefully beforehand with the service user and are structured and phased • the care plan supports effective collaboration with social care and other care providers during endings and transitions, and includes details of how to access services in times of crisis • when referring a service user for an assessment in other services (including for psychological treatment), they are supported during the referral period and arrangements for support are agreed beforehand with them.	reactions in children and young people with a conduct disorder and their parents or carers. Ensure that: • such changes, especially discharge and transfer from child and adolescent mental health services (CAMHS) to adult services, are discussed and planned carefully beforehand with all involved, and are structured and phased • children and young people and their parents or carers are given comprehensive information about the way adult services work and the nature of any potential interventions provided • the care plan supports effective collaboration with social care and other care providers during endings and transitions, and includes details of how to access services in times of crisis. 1.1.20 When referring a child or young person for an assessment in other services (including for psychological interventions), they are supported during the referral period and arrangements for support are agreed beforehand with them.	GDG identified as a particular problem for children and young people with a conduct disorder, and that they, and their parents or carers, should be given information about adult services and any potential interventions. The original recommendation was split into two separate recommendations in order to emphasise the importance of adequate preparation for transition to adult services.

Table 15: Recommendations from Common Mental Health Disorders for inclusion

1.1.1.1 Primary and secondary care clinicians, managers and commissioners should collaborate to develop local care pathways (see also section 1.5) that promote access to services for people with common mental health disorders by: • supporting the integrated delivery of services across primary and secondary care • having clear and explicit criteria for entry to the service • focusing on entry and not exclusion criteria • having multiple means (including self-referral) to access the service • providing multiple points of access that facilitate links with the wider healthcare system and community in which the service is located.	1.6.1 Health and social care professionals, managers and commissioners should collaborate with colleagues in educational settings to develop local care pathways (see also recommendations 4.5.1.28–4.5.1.37) that promote access to services for children and young people with a conduct disorder and their parents and carers by: • supporting the integrated delivery of services across all care settings • having clear and explicit criteria for entry to the service • focusing on entry and not exclusion criteria • having multiple means (including self-referral) of access to the service • providing multiple points of access that facilitate links with the wider care system, including educational and social care services and the community in which the service is located[7].	This recommendation was adapted on the advice of the GDG to take account of the range of services and settings with which the child or young person may come into contact.
1.1.1.2 Provide information about the services and interventions that constitute the local care pathway, including the: • range and nature of the interventions provided • settings in which services are delivered • processes by which a person moves through the pathway • means by which progress and outcomes are	1.6.2 Provide information about the services and interventions that constitute the local care pathway, including the: • range and nature of the interventions provided • settings in which services are delivered • processes by which a child or young person moves through the pathway • means by which progress and outcomes are	No significant adaptation required.

---

[7] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

assessed - delivery of care in related health and social care services.	assessed - delivery of care in related health and social care services[8] .	
1.1.1.3 When providing information about local care pathways to people with common mental health disorders and their families and carers, all healthcare professionals should: - take into account the person's knowledge and understanding of mental health disorders and their treatment - ensure that such information is appropriate to the communities using the pathway.	1.6.3 When providing information about local care pathways for children and young people with a conduct disorder and their parents and carers: - take into account the person's knowledge and understanding of conduct disorders and their care and treatment - ensure that such information is appropriate to the communities using the pathway[9].	No significant adaptation required.
1.1.1.4 Provide all information about services in a range of languages and formats (visual, verbal and aural) and ensure that it is available from a range of settings throughout the whole community to which the service is responsible.	1.6.4 Provide all information about services in a range of languages and formats (visual, verbal and aural) and ensure that it is available in a range of settings throughout the community to which the service is responsible.[10]	No adaptation required – incorporated.
1.1.1.5 Primary and secondary care clinicians, managers and commissioners should collaborate to develop local care pathways (see also section 1.5) that promote access to services for people with common mental health disorders from a range of socially excluded groups including: - black and minority ethnic groups - older people - those in prison or in contact with the criminal justice system - ex-service personnel.	1.6.5 Health and social care professionals, managers and commissioners should collaborate with colleagues in educational settings to develop local care pathways (see also recommendations 4.5.1.28–4.5.1.37) that promote access to services for children and young people with a conduct disorder and their parents and carers from a range of excluded groups, including: - girls - black and minority ethnic groups - people with a coexisting condition (such as ADHD or autism).[11]	This recommendation was adapted on the advice of the GDG to reflect the fact that certain groups (girls, black and minority ethnic groups and children and young people with a coexisting condition) do not present to services as often as other people with a conduct disorder.
1.1.1.6 Support access to services and increase the	1.6.6 Support access to services and increase the	This recommendation was adapted on

---

[8] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).
[9] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).
[10] Incorporated from 'Common mental health disorders' (NICE clinical guideline 123).
[11] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

uptake of interventions by: • ensuring systems are in place to provide for the overall coordination and continuity of care of people with common mental health disorders • designating a healthcare professional to oversee the whole period of care (usually a GP in primary care settings).	uptake of interventions by: • ensuring systems are in place to provide for the overall coordination and continuity of care of children and young people with a conduct disorder, and their parents and carers • designating a professional to oversee the whole period of care (for example, a staff member in a CAMHS or social care setting).	the basis of expert GDG opinion to make it relevant to the particular services that children and young people receive.
1.1.1.7 Support access to services and increase the uptake of interventions by providing services for people with common mental health disorders in a variety of settings. Use an assessment of local needs as a basis for the structure and distribution of services, which should typically include delivery of: • assessment and interventions outside normal working hours • interventions in the person's home or other residential settings • specialist assessment and interventions in non-traditional community-based settings (for example, community centres and social centres) and where appropriate, in conjunction with staff from those settings • both generalist and specialist assessment and intervention services in primary care settings.	1.6.7 Support access to services and increase the uptake of interventions by providing services for children and young people with a conduct disorder, and their parents and carers, in a variety of settings. Use an assessment of local needs as a basis for the structure and distribution of services, which should typically include delivery of: • assessment and interventions outside normal working hours • interventions in the person's home or other residential settings • specialist assessment and interventions in non-traditional community-based settings (for example, community centres, schools and colleges, and social centres) and where appropriate, in conjunction with staff from those settings • both generalist and specialist assessment and intervention services in primary care settings.	This recommendation was adapted on the basis of expert GDG opinion to make it relevant to children and young people's settings, for example the emphasis on schools and colleges.
1.1.1.8 Primary and secondary care clinicians, managers and commissioners should consider a range of support services to facilitate access and uptake of services. These may include providing: • crèche facilities • assistance with travel	Health and social care professionals, managers and commissioners should collaborate with colleagues in educational settings to look at a range of services to support access to and uptake of services. These could include: • crèche facilities	No significant adaptation required.

• advocacy services.	• assistance with travel • advocacy services [12].	
1.5.1.1 Local care pathways should be developed to promote implementation of key principles of good care. Pathways should be: • negotiable, workable and understandable for people with common mental health disorders, their families and carers, and professionals • accessible and acceptable to all people in need of the services served by the pathway • responsive to the needs of people with common mental health disorders and their families and carers • integrated so that there are no barriers to movement between different levels of the pathway • outcomes focused (including measures of quality, service-user experience and harm).	1.6.9 Local care pathways should be developed to promote implementation of key principles of good care. Pathways should be: • negotiable, workable and understandable for children and young people with a conduct disorder and their parents and carers as well as professionals • accessible and acceptable to all people in need of the services served by the pathway • responsive to the needs of children and young people with a conduct disorder and their parents and carers • integrated so that there are no barriers to movement between different levels of the pathway • focused on outcomes (including measures of quality, service user experience and harm)[13].	No significant adaptation required.
1.5.1.2 Responsibility for the development, management and evaluation of local care pathways should lie with a designated leadership team, which should include primary and secondary care clinicians, managers and commissioners. The leadership team should have particular responsibility for: • developing clear policy and protocols for the operation of the pathway • providing training and support on the operation of the pathway • auditing and reviewing the performance of the	1.6.10 Responsibility for the development, management and evaluation of local care pathways should lie with a designated leadership team, which should include professionals, managers and commissioners. The leadership team should work in collaboration with colleagues in social care and educational settings and take particular responsibility for: • developing clear policy and protocols for the operation of the pathway • providing training and support on the	This recommendation was adapted on the basis of expert GDG opinion to make it relevant to the structures in children and young people's services and to increase understanding by those working in the field.

---

[12] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

[13] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

pathway.	operation of the pathway - auditing and reviewing the performance of the pathway.[14]	
1.5.1.3 Primary and secondary care clinicians, managers and commissioners should work together to design local care pathways that promote a stepped-care model of service delivery that: - provides the least intrusive, most effective intervention first - has clear and explicit criteria for the thresholds determining access to and movement between the different levels of the pathway - does not use single criteria such as symptom severity to determine movement between steps - monitors progress and outcomes to ensure the most effective interventions are delivered and the person moves to a higher step if needed.	1.6.11 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that promote a model of service delivery that: - has clear and explicit criteria for the thresholds determining access to and movement between the different levels of the pathway - does not use single criteria such as symptom severity or functional impairment to determine movement within the pathway - monitors progress and outcomes to ensure the most effective interventions are delivered[15].	This recommendation was adapted to make it relevant to children and young people's services. In particular it addresses the lack of clarity in identifying and providing clear information on the access to and the nature of the treatment options available in Section 4.2
1.5.1.4 Primary and secondary care clinicians, managers and commissioners should work together to design local care pathways that promote a range of evidence-based interventions at each step in the pathway and support people with common mental health disorders in their choice of interventions.	1.6.12 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that promote a range of evidence-based interventions in the pathway and support children and young people with a conduct disorder and their parents and carers in their choice of interventions [16].	This recommendation was adapted on the basis of expert GDG opinion to make it relevant to children and young people's services.
1.5.1.5 All staff should ensure effective engagement with families and carers, where appropriate, to: - inform and improve the care of the person with a	1.6.13 All staff should ensure effective engagement with parents and carers, if appropriate, to: - inform and improve the care of the child or	No significant adaptation required.

---

[14] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).
[15] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).
[16] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

common mental health disorder • meet the identified needs of the families and carers.	young person with a conduct disorder • meet the needs of parents and carers [17].	
1.5.1.6 Primary and secondary care clinicians, managers and commissioners should work together to design local care pathways that promote the active engagement of all populations served by the pathway. Pathways should: offer prompt assessments and interventions that are appropriately adapted to the cultural, gender, age and communication needs of people with common mental health disorders keep to a minimum the number of assessments needed to access interventions.	1.6.14 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that promote the active engagement of all populations served by the pathway. Pathways should: • offer prompt assessments and interventions that are appropriately adapted to the cultural, gender, age and communication needs of children and young people with a conduct disorder and their parents and carers • keep to a minimum the number of assessments needed to access interventions [18].	This recommendation was adapted on the basis of expert GDG opinion to make it relevant to children and young people's services and settings. In particular it addresses the concerns identified in section 4.2 to provide clear and structured assessments.
1.5.1.7 Primary and secondary care clinicians, managers and commissioners should work together to design local care pathways that respond promptly and effectively to the changing needs of all populations served by the pathways. Pathways should have in place: • clear and agreed goals for the services offered to a person with a common mental health disorder • robust and effective means for measuring and evaluating the outcomes associated with the agreed goals • clear and agreed mechanisms for responding promptly to identified changes to the person's needs.	1.6.15 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that respond promptly and effectively to the changing needs of all populations served by the pathways. Pathways should have in place: • clear and agreed goals for the services offered to children and young people with a conduct disorder and their parents and carers • robust and effective means for measuring and evaluating the outcomes associated with the agreed goals • clear and agreed mechanisms for responding promptly to changes in individual needs[19].	This recommendation was adapted on the basis of expert GDG opinion to make it relevant to children and young people's services and settings. It addresses concerns about lack of clarity and purpose to interventions and the need for clarity when explaining the nature and purpose of the interventions.

---

[17] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).
[18] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).
[19] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

1.5.1.8 Primary and secondary care clinicians, managers and commissioners should work together to design local care pathways that provide an integrated programme of care across both primary and secondary care services. Pathways should: • minimise the need for transition between different services or providers • allow services to be built around the pathway and not the pathway around the services • establish clear links (including access and entry points) to other care pathways (including those for physical healthcare needs) • have designated staff who are responsible for the coordination of people's engagement with the pathway.	1.6.16 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that provide an integrated programme of care across all care settings. Pathways should: • minimise the need for transition between different services or providers • allow services to be built around the pathway and not the pathway around the services • establish clear links (including access and entry points) to other care pathways (including those for physical healthcare needs) • have designated staff who are responsible for the coordination of people's engagement with the pathway[20].	This recommendation was adapted on the basis of expert GDG opinion and the evidence review in Section 4.2 to make it relevant to children and young people's services and settings, in particular to address the need for continuity and trusting relationships.
1.5.1.9 Primary and secondary care clinicians, managers and commissioners should work together to ensure effective communication about the functioning of the local care pathway. There should be protocols for: • sharing and communicating information with people with common mental health disorders, and where appropriate families and carers, about their care • sharing and communicating information about the care of service users with other professionals (including GPs) • communicating information between the services provided within the pathway • communicating information to services outside the pathway.	1.6.17 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to ensure effective communication about the functioning of the local care pathway. There should be protocols for: • sharing information with children and young people with a conduct disorder, and their parents and carers, about their care • sharing and communicating information about the care of children and young people with other professionals (including GPs) • communicating information between the services provided within the pathway • communicating information to services outside the pathway[21].	This recommendation was adapted on the basis of expert GDG opinion and the evidence reviews in Section 4.2 to make it relevant to children and young people's services and settings. In particular it addresses the issue of confidentiality and the sharing of information.

---

[20] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

[21] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

1.5.1.10 Primary and secondary care clinicians, managers and commissioners should work together to design local care pathways that have robust systems for outcome measurement in place, which should be used to inform all involved in a pathway about its effectiveness. This should include providing: • individual routine outcome measurement systems • effective electronic systems for the routine reporting and aggregation of outcome measures • effective systems for the audit and review of the overall clinical and cost-effectiveness of the pathway.	1.6.18 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that have robust systems for outcome measurement in place, which should be used to inform all involved in a pathway about its effectiveness. This should include providing: • individual routine outcome measurement systems • effective electronic systems for the routine reporting and aggregation of outcome measures • effective systems for the audit and review of the overall clinical and cost effectiveness of the pathway.[22]	This recommendation was adapted on the basis of expert GDG opinion to make it relevant to children and young people's services and settings. This was viewed by the GDG as important in order to set the same standards for evaluation and monitoring as apply to other childhood mental disorders.

---

[22] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

4.4 FROM EVIDENCE TO RECOMMENDATIONS

Relative value placed on the outcomes considered

For the review questions concerning barriers to services, the proportion of people from the target group who access services, uptake of services, and data on the diversity of the group who access or are retained in services/ interventions were considered to be most important. Satisfaction, preference, anxiety about treatment, experience of care, and number leaving the study early were also considered important. For all other questions, themes that emerged from the qualitative evidence and focus group were considered most important.

Trade-off between clinical benefits and harms

Little quantitative data were found that could be used to address the review questions, therefore, the themes from the qualitative reviews and focus group became the primary source of evidence.

Despite the limitations of the evidence review conducted in Section 4.2, several themes emerged concerning access to care and the delivery and organisation of services for children and young people with a conduct disorder. Eliciting children and young people's preferences and facilitating their involvement in decisions about the treatment available to them, including the location of services was one such theme. Children and young people and their parents or carers also wanted to be provided with clear, comprehensive information about services and cited the internet and other media as important sources of information. The importance of tailoring services to individual families' needs, including exploring safe ways in which the child or young person could communicate their needs and wishes to their parents, and respect for confidentiality and greater clarity about the sharing of information, were also recurring themes.

For the provision of treatment and the organisation and delivery of services, the importance of respecting (and not blaming or stigmatising) parents also emerged. A lack of respect was seen as a key reason for children and young people and their parents or carers withdrawing from treatment. Flexibility in the means of delivery of interventions and a recognition of the practical difficulties families face in accessing treatment was also seen as a way of improving access to treatment and promoting continuing engagement. Finally, the review suggested that young peoples' relationships with their teachers is critical to managing their behaviour at school or college. Creative ways to engage young people in the school environment, such as flexibility in lessons, was reiterated.

Due to the paucity of the evidence, the GDG reviewed existing NICE mental health guidelines and found that many of the themes emerging from the evidence review and the focus group were articulated in *Service User Experience in Adult Mental Health* and *Common Mental Health,* which required adaptation to be relevant to the current context (see Table 14 and Table 15).

In addition to the adapted recommendations, the GDG, based on the evidence review, the focus group and their expert opinion, and using the consensus methods outlined in Chapter 3, developed a further five recommendations. First, in order to address the negative perception and stigmatisation of children and young people with a conduct disorder identified by the evidence review and the focus group, the GDG wished to remind health and social care professionals that many children and young people with a conduct disorder may have had substandard or punitive experiences of care from both family members or statutory services and therefore may be mistrustful or dismissive of offers of help. Hope and optimism should be fostered, and a positive, caring and trusting relationship established to ensure the engagement with services of all involved. Second, and linked to the evidence from the review and the focus group regarding confidentiality and information sharing, the GDG saw the value in advising health and social care professionals to make sure that the right to confidentiality is respected but that children and young people, and their parents of carers, understood why information about their care might need to be shared. Third, and related to issues of stigma and discrimination, the GDG wished to advise that interpreters should be provided if needed, and that a list of local education providers offering English language teaching should be supplied to those who have difficulties speaking and understanding English. Fourth, mindful of the feelings of blame that parents of children with a conduct disorder can experience, the GDG wished to drawn health and social care professionals' attention to this, and advise them to address any concerns that parents may have and explain the reasons for offering them such interventions as parent training programmes, and how the programmes might help them. Finally, related to the needs of parents and carers, the GDG was concerned that they should be offered an assessment of their needs, including personal, social, emotional and practical support.

4.5 RECOMMENDATIONS

4.5.1 Clinical practice recommendations

Working safely and effectively with children and young people

4.5.1.1 Health and social care professionals should ensure that they:

- can assess capacity and competence, including 'Gillick competence', in children and young people of all ages **and**
- understand how to apply the legislation in the care and treatment of children and young people, including the Children Act (1989), the Mental Health Act (1983; amended 1995 and 2007) and the Mental Capacity Act (2005)[23].

---

[23] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).

4.5.1.2 Health and social care providers should ensure that children and young people with a conduct disorder:

- are routinely offered care and treatment from a single team or professional
- are not passed from one team to another unnecessarily
- do not undergo multiple assessments unnecessarily[24] .

4.5.1.3 Evaluate the need for assessment according to local safeguarding procedures if there are concerns about exploitation or self-care, or if the child or young person has had contact with the criminal justice system[25].

Establishing relationships with children and young people and their parents or carers

4.5.1.4 Be aware that many children and young people with a conduct disorder may have had poor or punitive experiences of care from family members or statutory services and may be mistrustful or dismissive of offers of help as a result. Offer help, treatment and care in an atmosphere of hope and optimism. Develop a positive, caring and trusting relationship with the child or young person and their parents or carers as a first step in ensuring their engagement with services and maintain continuity of individual therapeutic relationships wherever possible.

4.5.1.5 Health and social care professionals working with children and young people with a conduct disorder should be trained and skilled in:

- negotiating and working with parents and carers **and**
- managing issues relating to information sharing and confidentiality as these apply to children and young people.

4.5.1.6 If a young person is 'Gillick competent' seek their consent before speaking to their parent or carers[26].

4.5.1.7 When working with children and young people with a conduct disorder and their parents or carers:

- make sure that discussions take place in settings in which confidentiality, privacy and dignity are respected
- be clear with the child or young person and their parents or carers about limits of confidentiality (that is, which health and social care professionals have access to information about their diagnosis and its treatment and in what circumstances this may be shared with others)[27].

---

[24] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).
[25] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).
[26] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).
[27] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).

4.5.1.8 When coordinating care and involving children and young people with a conduct disorder and their parents and carers in treatment decisions, ensure that:

- everyone involved understands the purpose of any meetings and why information might need to be shared
- the right to confidentiality is respected throughout the process.

Working with parents and carers

4.5.1.9 Discuss with young people how they want their parents or carers to be involved in their care. Repeat the discussion at intervals to take account of any changes in circumstances, including developmental level[28].

4.5.1.10 Be aware that parents and carers of children and young people with a conduct disorder might feel blamed for their child's problems or stigmatised by their contact with services. When offering or providing interventions such as parent training programmes, directly address any concerns they have and set out the reasons for and purpose of the intervention.

4.5.1.11 Offer parents and carers an assessment of their own needs including:

- personal, social and emotional support
- support in their caring role, including emergency plans
- advice on practical matters such as childcare, housing and finances, and help to obtain support.

Communication and information

4.5.1.12 When communicating with children and young people with a conduct disorder and their parents or carers:

- take into account the child or young person's developmental level, emotional maturity and cognitive capacity, including any learning disabilities, sight or hearing problems and delays in language development
- use plain language if possible and clearly explain any clinical language
- check that the child or young person and their parents or carers understand what is being said
- use communication aids (such as pictures, symbols, large print, Braille, different languages or sign language) if needed[29].

---

[28] Adapted from 'Service user experience in adult mental health' (NICE clinical guideline 136).

[29] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).

4.5.1.13 When working with a child or young person with conduct disorder or their parents or carers ensure that you are:

- familiar with local and national sources (organisations and websites) of information and/or support for children and young people with a conduct disorder and their parents or carers
- able to discuss and advise how to access these resources
- able to discuss and actively support children and young people and their parents or carers to engage with these resources [30].

4.5.1.14 When communicating with a child or young person with a conduct disorder, use diverse media, including letters, phone calls, emails or text messages, according to their preference[31].

Culture, ethnicity and social inclusion

4.5.1.15 When working with children and young people with a conduct disorder and their parents or carers:

- take into account that stigma and discrimination are often associated with using mental health services
- be respectful of and sensitive to children and young people's gender, sexual orientation, socioeconomic status, age, background (including cultural, ethnic and religious background) and any disability
- be aware of possible variations in the presentation of mental health problems in children and young people of different genders, ages, cultural, ethnic, religious or other diverse backgrounds[32].

4.5.1.16 When working with children and young people with a conduct disorder and their parents or carers provide interpreters if needed and offer a list of local education providers who can provide English language teaching for children and young people and their parents or carers who have difficulties speaking and understanding English.

4.5.1.17 Health and social care professionals working with children and young people with a conduct disorder and their parents or carers should have competence in:

- assessment skills and using explanatory models of conduct disorder for people from different cultural, ethnic, religious or other diverse backgrounds
- explaining the possible causes of different mental health problems, and care, treatment and support options
- addressing cultural, ethnic, religious or other differences in treatment expectations and adherence

---

[30] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).

[31] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).

[32] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).

- addressing cultural, ethnic, religious or other beliefs about biological, social and familial influences on the possible causes of mental health problems[33].

Transfer and discharge

4.5.1.18 Anticipate that withdrawal and ending of treatments or services, and transition from one service to another, may evoke strong emotions and reactions in children and young people with a conduct disorder and their parents or carers. Ensure that:

- such changes, especially discharge and transfer from child and adolescent mental health services (CAMHS) to adult services, are discussed and planned carefully beforehand with all involved, and are structured and phased
- children and young people and their parents or carers are given comprehensive information about the way adult services work and the nature of any potential interventions provided
- the care plan supports effective collaboration with social care and other care providers during endings and transitions, and includes details of how to access services in times of crisis[34].

4.5.1.19 When referring a child or young person for an assessment in other services (including for psychological interventions), ensure they are supported during the referral period and arrangements for support are agreed beforehand with them[35].

Improving access to services

4.5.1.20 Health and social care professionals, managers and commissioners should collaborate with colleagues in educational settings to develop local care pathways (see also recommendations 4.5.1.28–4.5.1.37) that promote access to services for children and young people with a conduct disorder and their parents and carers by:

- supporting the integrated delivery of services across all care settings
- having clear and explicit criteria for entry to the service
- focusing on entry and not exclusion criteria
- having multiple means (including self-referral) of access to the service
- providing multiple points of access that facilitate links with the wider care system, including educational and social care services and the community in which the service is located[36].

---

[33] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).
[34] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).
[35] Adapted from Service user experience in adult mental health (NICE clinical guideline 136).
[36] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

4.5.1.21 Provide information about the services and interventions that constitute the local care pathway, including the:

- range and nature of the interventions provided
- settings in which services are delivered
- processes by which a child or young person moves through the pathway
- means by which progress and outcomes are assessed
- delivery of care in related health and social care services[37] .

4.5.1.22 When providing information about local care pathways for children and young people with a conduct disorder and their parents and carers:

- take into account the person's knowledge and understanding of conduct disorders and their care and treatment
- ensure that such information is appropriate to the communities using the pathway[38].

4.5.1.23 Provide all information about services in a range of languages and formats (visual, verbal and aural) and ensure that it is available in a range of settings throughout the community to which the service is responsible.[39]

4.5.1.24 Health and social care professionals, managers and commissioners should collaborate with colleagues in educational settings to develop local care pathways (see also recommendations 4.5.1.28–4.5.1.37) that promote access to services for children and young people with a conduct disorder and their parents and carers from a range of excluded groups, including:

- girls
- black and minority ethnic groups
- people with a coexisting condition (such as ADHD or autism).[40]

4.5.1.25 Support access to services and increase the uptake of interventions by:

- ensuring systems are in place to provide for the overall coordination and continuity of care of children and young people with a conduct disorder and their parents and carers
- designating a professional to oversee the whole period of care (for example, a staff member in a CAMHS or social care setting)[41].

---

[37] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

[38] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

[39] Incorporated from 'Common mental health disorders' (NICE clinical guideline 123).

[40] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

[41] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

4.5.1.26 Support access to services and increase the uptake of interventions by providing services for children and young people with a conduct disorder and their parents and carers, in a variety of settings. Use an assessment of local needs as a basis for the structure and distribution of services, which should typically include delivery of:

- assessment and interventions outside normal working hours
- interventions in the person's home or other residential settings
- specialist assessment and interventions in accessible community-based settings (for example, community centres, schools and colleges and social centres) and if appropriate, in conjunction with staff from those settings
- both generalist and specialist assessment and intervention services in primary care settings [42].

4.5.1.27 Health and social care professionals, managers and commissioners should collaborate with colleagues in educational settings to look at a range of services to support access to and uptake of services. These could include:

- crèche facilities
- assistance with travel
- advocacy services [43].

Developing local care pathways

4.5.1.28 Local care pathways should be developed to promote implementation of key principles of good care. Pathways should be:

- negotiable, workable and understandable for children and young people with a conduct disorder and their parents and carers as well as professionals
- accessible and acceptable to all people in need of the services served by the pathway
- responsive to the needs of children and young people with a conduct disorder and their parents and carers
- integrated so that there are no barriers to movement between different levels of the pathway
- focused on outcomes (including measures of quality, service user experience and harm)[44].

---

[42] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).
[43] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).
[44] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

4.5.1.29 Responsibility for the development, management and evaluation of local care pathways should lie with a designated leadership team, which should include health and social care professionals, managers and commissioners. The leadership team should work in collaboration with colleagues in educational settings and take particular responsibility for:

- developing clear policy and protocols for the operation of the pathway
- providing training and support on the operation of the pathway
- auditing and reviewing the performance of the pathway.[45]

4.5.1.30 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that promote a model of service delivery that:

- has clear and explicit criteria for the thresholds determining access to and movement between the different levels of the pathway
- does not use single criteria such as symptom severity or functional impairment to determine movement within the pathway
- monitors progress and outcomes to ensure the most effective interventions are delivered[46].

4.5.1.31 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that promote a range of evidence-based interventions in the pathway and support children and young people with a conduct disorder and their parents and carers in their choice of interventions [47].

4.5.1.32 All staff should ensure effective engagement with parents and carers, if appropriate, to:

- inform and improve the care of the child or young person with a conduct disorder
- meet the needs of parents and carers [48].

4.5.1.33 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that promote the active engagement of all populations served by the pathway. Pathways should:

- offer prompt assessments and interventions that are appropriately adapted to the cultural, gender, age and communication needs of children and young people with a conduct disorder and their parents and carers

---

[45] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

[46] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

[47] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

[48] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

- keep to a minimum the number of assessments needed to access interventions [49].

4.5.1.34 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that respond promptly and effectively to the changing needs of all populations served by the pathways. Pathways should have in place:

- clear and agreed goals for the services offered to children and young people with a conduct disorder and their parents and carers
- robust and effective means for measuring and evaluating the outcomes associated with the agreed goals
- clear and agreed mechanisms for responding promptly to changes in individual needs[50].

4.5.1.35 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that provide an integrated programme of care across all care settings. Pathways should:

- minimise the need for transition between different services or providers
- allow services to be built around the pathway and not the pathway around the services
- establish clear links (including access and entry points) to other care pathways (including those for physical healthcare needs)
- have designated staff who are responsible for the coordination of people's engagement with the pathway[51].

4.5.1.36 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to ensure effective communication about the functioning of the local care pathway. There should be protocols for:

- sharing information with children and young people with a conduct disorder, and their parents and carers, about their care
- sharing and communicating information about the care of children and young people with other professionals (including GPs)
- communicating information between the services provided within the pathway
- communicating information to services outside the pathway[52].

---

[49] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).
[50] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).
[51] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).
[52] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

4.5.1.37 Health and social care professionals, managers and commissioners should work with colleagues in educational settings to design local care pathways that have robust systems for outcome measurement in place, which should be used to inform all involved in a pathway about its effectiveness. This should include providing:

- individual routine outcome measurement systems
- effective electronic systems for the routine reporting and aggregation of outcome measures
- effective systems for the audit and review of the overall clinical and cost effectiveness of the pathway.[53]

4.5.2 Research recommendation

4.5.2.1 What strategies improve the uptake and engagement of children and young people and their parents or carers with interventions for conduct disorders?

---

[53] Adapted from 'Common mental health disorders' (NICE clinical guideline 123).

5 SELECTIVE PREVENTION INTERVENTIONS

5.1 INTRODUCTION

It is challenging to classify prevention interventions. The field has grown rapidly, and often neither the goals of prevention nor the population to which the program is addressed define an exclusive and/or exhaustive category. A number of authors have suggested classification schemes. Adelman and Taylor (1994) suggest a four-step continuum of when intervention is offered in relation to problem development: (1) public health promotion, (2) early age-targeted intervention, (3) early-onset correction, and finally (4) treatment for chronic problems. Prevention interventions at the first level are aimed at children with risk factors but no overt symptomatology. These are generally termed *primary prevention strategies*. At the second and third levels, the child's problems are likely to be at a subclinical level. These are *secondary preventive interventions*. At the fourth level, the aim is to reduce the duration of, and the secondary complications from, established disorders. These have frequently been labelled *tertiary prevention interventions*. The 1994 Institute of Medicine (IOM) report makes clear that the treatment of chronic problems, even if to some measure preventive, should not be considered under the heading of "prevention".

The current framework for prevention is based on the work of Gordon (1983), and promoted by the 1994 Institute of Medicine (IOM) report (Mrazek & Haggerty, 1994). The report outlines three types of strategies of prevention, which target different groups. The first strategies are *universal*, the second *selected* and the third *indicated.*

Universal strategies of prevention are aimed at the general population. The term "universal" is to be preferred to the traditional concept of primary prevention because it specifies that the population to which the intervention is applied is not preselected. Most universal preventive strategies do identify high-risk populations but, unlike selected intervention programs, they do not target a specific group that has characteristics that define its members as being at high risk within the population for developing the disorder. Thus, the program is delivered universally. It is the population, and not the individual within the population, that may carry the risk, which is generally relatively low in these interventions.

Selected prevention intervention strategies are generally considered to be secondary preventions, although it might be more appropriate to put many of these under the heading of primary prevention. Selected prevention interventions are aimed at individuals who are at high risk for developing the disorder or are showing very early signs or symptoms. Interventions tend to focus on reducing risk and strengthening resilience. Risk is obviously higher in these selected groups and is often the result of a combination of risk factors rather than the intensity of any single factor. Factors such as poverty, unemployment, inadequate transportation, substandard housing, parental mental health problems, and marital conflict, which may affect a particular child, could be addressed by selected prevention programs.

Indicated interventions in part mirror the category of tertiary prevention. These interventions are aimed at specific groups in which prodromal symptoms of a disorder are already evident but the full disorder has not yet developed. It is often difficult to distinguish between selected and indicated prevention interventions in terms of the therapeutic activity that might be involved. Parent training, for example, can be part of both selected and indicated interventions for prevention of conduct problems. Some intervention programs are complex packages made up of universal, selective and indicated prevention interventions (Conduct Problems Prevention Research Group, 1992).

Two distinctly different approaches have been made to the prevention of conduct problems in childhood. The universal approach has been directed at a whole population, typically of a school, to promote development of social and emotional competence. Other universal programs have addressed the behaviour of teachers and the school atmosphere. During the past 10 years there have been a number of good syntheses of universal interventions, primarily those based in school specifically concerned with addressing antisocial and aggressive behaviour (Durlak et al., 2011, Losel & Beelmann, 2003, Wilson et al., 2003).

The second approach has been to identify young children at risk on the basis of what is known about the developmental pathway of conduct problems (see Chapter 2). Prevention trials have employed both child-focused and parent training components.

Why should conduct disorder be a target of early preventive intervention? First, it is a serious problem for the individual and wider society. As we have seen, it is the most common reason for referral of boys to mental health services. It is also strongly developmentally linked to delinquency and adult criminality. Also, as we will see, the cost to the criminal justice system is extremely high. Secondly, conduct disorder has been difficult to treat, particularly among chronically dysfunctional adolescents who are least likely to "grow out"' of their problems (Scott, 2007a). Thirdly, although the cause of antisocial behaviour is still a topic of debate, regarding, for example, the relative importance of individual and environmental factors, preventive interventions could be theory-driven, directed against either individual characteristics or characteristics of the social environment. Fourthly, there is evidence from community-based universal or selective prevention programs that early interventions aimed at enriching the preschool period and preventing school failures among high-risk populations have had an unexpected impact on delinquency and other related behaviours (Farrington, 1994, Offord & Bennett, 1994). In short, with an understanding of the antecedents of serious antisocial behaviour, early preventive interventions may be effective in modifying trajectories and thus interrupting the course towards chronic antisocial behaviour.

The goal of early identification of conduct disorder has become increasingly realistic. As we have seen, over the past 20 years a new discipline that integrates epidemiological findings with public health treatment initiatives has emerged, which Kellam and Van Horn (1997) have termed *developmental epidemiologically based prevention research*. This approach has been strongly influenced by the integration of public health concepts and methods with concepts and methods from other mental health and developmental science disciplines. The basic framework is provided by developmental epidemiology, which suggests paths including individual biological and psychological characteristics, characteristics of the environment, and characteristics of the interaction between individual and environment. This leads to experimental preventive trials that are targeted at specific risk antecedents. The proximal risk antecedents that are targeted tend to be conduct problems, aggression, and poor achievement, with a view to influencing distal outcomes such as antisocial behaviour and delinquency.

The most important risk factors that predict conduct disorder and delinquency include impulsiveness, low IQ, low school achievement, poor parental supervision, punitive or erratic parental discipline, cold parental attitude, child physical abuse, parental conflict, disrupted families, antisocial parents, large family size, low family income, antisocial peers, high delinquency rate schools, and high-crime neighbourhoods (Murray et al., 2010). However, for many of these factors it is unknown whether they have causal effects or are merely markers of other risk mechanisms (Murray & Farrington, 2010). Genetic studies have reported that unique environmental and genetic factors are responsible for similar proportions of the variability in antisocial behaviour; shared environmental factors, although markedly less significant, nevertheless play a more prominent role in explaining conduct disorder than most other mental disorders of childhood (Maes et al., 2007).

Epidemiological studies have shown that excessive disobedience in relation to adults is a key precursor to the development of full-blown conduct disorder. In a clinical sample of boys assessed between the ages of 7 and 17, there was some year-to-year stability, but there were also fluctuations between no diagnosis (37%), oppositional defiant disorder (36%) and conduct disorder (27%) (Rowe et al., 2010). Thus, while oppositional defiant disorder is an important risk factor for conduct disorder, not all children with oppositional defiant disorder develop conduct disorder (Burke et al., 2005). Certain factors, such as low socioeconomic status (Greene et al., 2002) and higher parental hostility (Kolko et al., 2008) increase the likelihood of oppositional defiant disorder turning into conduct disorder. Conduct disorder is more stable than oppositional defiant disorder, with persistence over several years following diagnosis estimated to be around 50–60% (Rowe et al., 2010) and even as high as 88% (Lahey et al., 1995).

Aggression is another early sign of risk for conduct disorder (Loeber et al., 2000). Recent evidence suggests that the relationship between autonomic nervous system functioning and aggression/conduct problems may differ between the genders. Beauchaine, Hong, & Marsh (2008) found that boys with aggression and conduct problems showed reduced autonomic functioning compared with controls, while girls with similar behavioural profiles exhibited greater electrodermal responding than controls, with no differences in cardiovascular reactivity to incentives. There is a strong linear increase from early childhood to the late teenage years in the prevalence of nonaggressive antisocial behaviour (Maughan et al., 2004), with the occurrence of status violations rising especially sharply in adolescence (Maughan et al., 2004, Moffit et al., 2001). A number of longitudinal studies have revealed declining ratings of physical aggression from childhood to adolescence (Campbell et al., 2006, Cote et al., 2002, Lahey et al., 2000). Physical aggression during childhood is a predictor of adjustment problems, particularly in girls (Fontaine et al., 2008).

Current practice

Professionals working in children's mental health in the United Kingdom have become increasingly interested in focusing on prevention in their effort to treat emotional and behavioural problems, including conduct disorder and related problems, in children and adolescents. A major initiative, the Sure Start initiative, began in 1998 to address a wide range of childhood emotional problems by targeting at-risk children and their families. According to the current prevailing view, this programme has had only limited success, and this is generally attributed to the fact that insufficient measures have been taken to target the families in greatest need (Belsky et al., 2006). Where targeting has occurred the benefits have been significant, but overall the results have been equivocal (Melhuish et al., 2007).

There has been interest in developing and implementing programmes on the model of those developed by David Olds (see below). Such programs, targeting vulnerable parents and children, are currently being carried out and evaluated in pilot form (Barnes et al., 2008). Programmes in this area have often lacked a clear focus. In the United Kingdom, although there is considerable interest in and willingness to define treatment goals more tightly, it is probably fair to say that at present such services lack an overall structure, and are not uniformly directed towards any standard early intervention goal.

In 2010, Frank Field produced an influential report entitled 'The Foundation Years: Preventing Poor Children Becoming Poor Adults' (Field, 2010). The review concluded that the UK needed to address the issue of child poverty in a fundamental way following early evidence concerning the influence of the first five years of life. The dual recommendation of the review highlighted the importance of life chances indicators, which the country could use as a measure of success in ensuring optimal outcomes for its children, and establishing 0–5 as the foundation years of later development where interventions may be most cost-effectively made. Although the recommendations were broadly in line with the policies supported in Sure Start, the changes suggested were more specifically targeted and recommended implementation with much sharper definition. Graham Allen's review (Allen, 2011) covered a similar domain focused on early interventions. These covered selected and targeted early interventions, primarily but not exclusively for conduct problems, with a strong emphasis on evidence-based packages. The report was particularly valuable in including a section on the economic benefits of early intervention, based in part on data from the Nurse-Family Partnership (see below). The report identified the 19 programs that met the highest criteria for rigorous evaluation, although only those that had conduct disorder as a clearly defined endpoint are relevant to these guidelines. The most recent report by Martin Knapp and his colleagues (Knapp et al., 2011) provided coverage of a similar dataset purely from an economic standpoint. Although conduct problems are only a small part of this review, they provided some of the strongest evidence for a high yield in terms of cost offset.

5.2 CLINICAL EVIDENCE REVIEW

5.2.1 Categorisation of interventions

For the purposes of the guideline, interventions were categorised as child-focused (delivered to child only), parent-focused (delivered to parent only), foster carer-focused (delivered to foster carer only), Parent–child-based (separate interventions delivered to parent and child), Parent–teacher-based (separate interventions delivered to parent and teacher), family-focused (delivered to the family), multi-modal (integrated approach involving the family and community), multi-component (separate interventions delivered to parents, child, and family or school), classroom-based – delivered by a teacher (programmes delivered in classrooms by teachers[54]), and classroom-based – delivered by non-teachers (programmes delivered in classrooms by someone other than a teacher). Further information about each category can be found in Chapter 6.

5.2.2 Prevention and treatment interventions

A distinction can be made between preventative and treatment interventions, and within preventative interventions, a further distinction can be made between universal, selective and indicated interventions (Munoz et al., 1996). Separate review questions were initially developed for selective, indicated and treatment interventions (universal interventions were excluded from the scope; further information about each category can be found in the full review protocols presented in Appendix 15).

After the evidence had been synthesised, it became evident that there was considerable overlap between trials of indicated prevention and treatment interventions, both in terms of a) the sample of participants recruited, as shown by recruitment methods and baseline symptom scores, and b) by the interventions offered. Although selective prevention interventions show some similarity with indicated and treatment interventions, the sample is by definition very different, as recruitment of children and young people is based on individual risk factors (for example, low school achievement), family risk factors (for example, antisocial

---

[54] The intervention could be delivered to a group of teachers, who were trained to use the methods learnt in the classroom.

parents), or socioeconomic risk factors (for example, low family income) as opposed to essentially clinical characteristics. Therefore, selective prevention interventions are reviewed here, while indicated prevention and treatment interventions are reviewed in Chapter 6).

5.2.3 Clinical review protocol

A summary of the review protocol, including the review questions, information about the databases searched, and the eligibility criteria used for this section of the guideline, can be found in Table 16 (a complete list of review questions can be found in Appendix 5; further information about the search strategy can be found in Appendix 7; the full review protocols can be found in Appendix 15).

Table 16: Clinical review protocol for the review of prevention interventions

Component	**Description**
Review question	What selective prevention interventions for at risk individuals (including children/young people or their parents/families/carers) reduce the likelihood of children and young people developing a conduct disorder?
Objectives	To conduct a systematic review of the effectiveness of interventions which aim to prevent 'at risk' children and young people from developing a conduct disorder.
Population	Children and young people and their parents/families/carers, including looked after children, who are considered to be 'at risk' of developing a conduct disorder (conduct disorder and oppositional defiance disorder; characterised by repetitive and persistent patterns of antisocial, aggressive or defiant behaviour that amounts to significant and persistent violations of age-appropriate social expectations). 'At risk' was defined as having an individual, family or socioeconomic risk factor or scoring above the cut-off on a screening instrument based on risk factor research.
Intervention(s)	• **Child-focused** (for example, social skills training) • **Parent-focused** (for example, Incredible Years Parent Training; Triple P) • **Foster carer-focused** (for example, Keeping Foster Parents Trained and Supported) • **Parent–child-based** (for example, Incredible Years Parent Training + Incredible Years Dina Dinosaur Child Training) • **Parent–teacher-based** (for example, the Early Impact Intervention for parents and for teachers) • **Family-focused** (for example, functional family therapy) • **Multi-modal** (for example, multisystemic therapy) • **Multi-component** (for example, Incredible Years - Teacher Classroom Management Program + Incredible Years Parent Training + Incredible Years Dina Dinosaur Child Training) • **Classroom-based** (for example, Promoting Alternative Thinking Strategies curriculum [PATHS]).
Comparison	Treatment as usual, no treatment, waitlist control, attention control.
Critical outcomes	• Antisocial behaviour (at home, at school, in the community)
Electronic databases	Mainstream databases: Embase, MEDLINE, PreMEDLINE, PsycINFO Topic specific databases and grey literature databases (see search strategy in Appendix 7)
Date searched	Inception to June 2012
Study design	RCT
Note. RCT = randomised controlled trial.	

5.2.4 Studies considered[55]

Fifty-seven RCTs (N = 28,411) met the eligibility criteria for this review: BANKS1996 (Banks et al., 1996), BOTVIN2006 (Botvin, 2006), BRODY2008 (Brody, 2008), BRODY2012 (Brody et al., 2012), BROTMAN2003 (Brotman, 2003), BROTMAN2005 (Brotman, 2005), BRUNK1987 (Brunk, 1987), BUTZ2001 (Butz, 2001), CHENG2008 (Cheng, 2008), COWAN2009 (Cowan, 2009), DEROSIER2007 (DeRosier & Gilliom, 2007), DIONNE2009 (Dionne et al., 2009), DOMITROVICH2007 (Domitrovich, 2007), DURANT1996 (DuRant, 1996), FARRELL2001 (Farrell, 2001), FARRELL2003 (Farrell, 2003), FLANNERY2003 (Flannery, 2003), FLAY2004 (Flay et al., 2004), FORGATCH1999 (Forgatch, 1999), FRANZ2011 (Franz, 2011), GOTTFREDSON2006 (Gottfredson, 2006), GROSS2003 (Gross, 2003), GROSSMAN1998 (Grossman & Tierney, 1998), HOWARD2008 (Howard, 2008), HUESMANN1996 (Huesmann, 1996), IRVINE1999 (Irvine, 1999), IZARD2008A (Izard & King, 2008), IZARD2008B (Izard & King, 2008), JOHNSON1982 (Johnson, 1982), KABLE2007 (Kable et al., 2007), KELLY2010 (Kelly, 2010), KITZMAN1997 (Kitzman, 1997), KLIEWER2011 (Kliewer & Kliewer, 2011), KNOX2011 (Knox & Knox, 2011), KRATOCHWILL2004 (Kratochwill, 2004), LANG2009 (Lang, 2009), LI2011 (Li et al., 2011), LOWELL2011 (Lowell et al., 2011), MAGUIN1994 (Maguin, 1994), MARTINEZ2005 (Martinez, 2005), MCDONALD2006 (McDonald & McDonald, 2006), MCFARLANE2005 (McFarlane, 2005), MOORE1998 (Moore & Gogerty, 1998), MOSS2011 (Moss et al., 2011), OLDS1986 (Olds et al., 1986), OLDS2002 (Olds et al., 2002), RAO1998 (Rao, 1998), SANDERS2004 (Sanders, 2004), SCOTT2005 (Scott, 2005), SHAW2006 (Shaw, 2006), STANGER2011 (Stanger et al., 2011), SUKHODOLSKY2005 (Sukhodolsky et al., 2005), TOLAN2004 (Tolan et al., 2004), WESBTER-S2008 (Webster-Stratton, 2008), WOLCHIK1993 (Wolchik et al., 1993), WOLCHIK2000 (Wolchik et al., 2000), and YOUMANS2001 (Youmans, 2001). Of these, four were unpublished doctoral theses and the remainder were published in peer-reviewed journals between 1982 and 2012. In addition, 74 studies were excluded from the review. Further information about both included and excluded studies can be found in Appendix 16.

Of the 57 eligible trials, 29 (N = 8,523) included sufficient data to be included in the primary meta-analysis (selective prevention intervention compared with a control group), and categorised as child-focused (delivered to child only), parent-focused (delivered to parent only), parent–child-based (separate interventions delivered to parent and child), parent–teacher-based (separate interventions delivered to parent and teacher), family-focused (delivered to the family), multi-component (separate interventions delivered to parents, child, and family or school), classroom-based – delivered by a teacher (programmes delivered in classrooms by teachers[56], focusing on improving behaviour problems), and classroom-based – delivered by non-teachers (programmes delivered in classrooms by someone other than a teacher,

---

[55] Here and elsewhere in the guideline, each study considered for review is referred to by a study ID in capital letters (primary author and date of study publication, except where a study is in press or only submitted for publication, then a date is not used).

[56] The intervention could be delivered to a group of teachers, who were trained to use the methods learnt in the classroom.

focusing on improving behaviour problems). Table 17, Table 18, Table 19 and Table 20 provide an overview of the trials included in each category. For the trials not included in at least one of the meta-analyses, a brief narrative synthesis is provided to assess whether these support or refute the meta-analyses.

Table 17: Study information table for trials included in the meta-analysis of selective prevention interventions (child-focused and parent-focused) versus any control.

	Child-focused versus any control	Parent-focused versus any control
Total no. of trials (N)	4 RCTs (544)	15 RCTs (4251)
Study ID	GOTTFREDSON2006 HOWARD2008 LANG2009 YOUMANS2001	BUTZ2001 COWAN2009 FORGATCH1999 GOTTFREDSON2006 IRVINE1999 KITZMAN1997 LOWELL2011 MAGUIN1994 MCFARLANE2005 MOSS2011 OLDS1986 OLDS2002 RAO1998 SHAW2006 WOLCHIK2000
Country	USA (k=4)	Canada (k=1) USA (k=14)
Year of publication	2001 to 2009 (k=4)	1986 to 2011 (k=15)
Age of children/ young people	11+ (k=2) <11 (k=2)	11+ (k=2) <11 (k=11) Both (k=2)
Gender of children/ young people (% Female)	0-25% (k=1) 26-50% (k=1) 51-75% (k=0) 76-100% (k=1) N/R (k=1)	0-25% (k=2) 26-50% (k=5) 51-75% (k=1) 76-100% (k=0) N/R (k=7)
Ethnicity of children/ young people (% White)	0-25% (k=3) 26-50% (k=0) 51-75% (k=0) 76-100% (k=0) N/R (k=1)	0-25% (k=2) 26-50% (k=1) 51-75% (k=0) 76-100% (k=3) N/R (k=9)
Timepoint (weeks)	PT: 13-25 (k=4)	PT: 8-204 (k=15) FU: 25-991 (k=10)
Comparisons	CF versus AC (k=2) CF versus TAU (k=1) CF versus WL (k=1)	PF versus AC+TAU (k=1) PF versus AC (k=4) PF versus NT (k=5) PF versus TAU (k=4) PF versus WL (k=1)
Note. AC = Attention control; CF = Child-focused; FU = Follow-up; k = Number of trials; N = Total number of participants; N/R = Not Reported; NT = No treatment; PF = Parent-focused; PT = Post-treatment; RCT = Randomised Controlled Trial; TAU = Treatment as usual; WL = Waitlist control.		

Table 18: Study information table for trials included in the meta-analysis of selective prevention interventions (parent–child-based and parent–teacher-based) versus any control.

	Parent–child-based versus any control	**Parent–teacher-based versus any control**
Total no. of trials (N)	6 RCTs (1020)	1 RCT (137)
Study ID	BROTMAN2003 BROTMAN2005 CHENG2008 MOORE1998 TOLAN2004 WOLCHIK2000	GROSS2003
Country	USA (k=6)	USA (k=1)
Year of publication	1998 to 2008 (k=6)	2003
Age of children/ young people	11+ (k=0) <11 (k=4) Both (k=2)	11+ (k=0) <11 (k=1) Both (k=0)
Gender of children/ young people (% Female)	0-25% (k=0) 26-50% (k=4) 51-75% (k=2) 76-100% (k=0) N/R (k=0)	N/R (k=1)
Ethnicity of children/ young people (% White)	0-25% (k=3) 26-50% (k=0) 51-75% (k=0) 76-100% (k=1) N/R (k=2)	N/R (k=1)
Timepoint (weeks)	PT: 26-624 (k=6) FU: 104-624 (k=4)	PT: 12 (k=1) FU: 64 (k=1)
Comparisons	P-CB versus AC (k=1) P-CB versus NT (k=3) P-CB versus TAU (k=2)	P-TB versus WL (k=1)

Note. AC = Attention control; FU = Follow-up; k = Number of trials; N = Total number of participants; N/R = Not Reported; NT = No treatment; P-CB = Parent–child-based; P-TB = Parent–teacher-based; PT = Post-treatment; RCT = Randomised Controlled Trial; TAU = Treatment as usual; WL = Waitlist control.

Table 19: Study information table for trials included in the meta-analysis of selective prevention interventions (family-focused and multi-component) versus any control.

	Family-focused interventions versus any control	**Multi-component versus any control**
Total no. of trials (N)	1 RCT (362)	2 RCTs (805)
Study ID	GOTTFREDSON2006	FLAY2004 JOHNSON1982
Country	USA (k=1)	USA (k=2)
Year of publication	2006 (k=1)	1982 to 2004
Age of children/ young people	11+ (k=0) <11 (k=1) Both (k=0)	11+ (k=0) <11 (k=2) Both (k=0)
Gender of children/ young people (% Female)	N/R (k=1)	0-25% (k=0) 26-50% (k=1) 51-75% (k=0) 76-100% (k=0) N/R (k=1)
Ethnicity of children/ young people (% White)	N/R (k=1)	N/R (k=2)
Timepoint (weeks)	PT: 14 (k=1)	PT: 104-204 (k=2) FU: 365 (k=2)
Comparisons	FF versus AC (k=1)	MC versus AC (k=1) MC versus WL (k=1)

Note. AC = Attention control; FF = Family-focused; FU = Follow-up; k = Number of trials; MC = Multi-component; N = Total number of participants; N/R = Not Reported; PT = Post-treatment; RCT = Randomised Controlled Trial; WL = Waitlist control.

Table 20: Study information table for trials included in the meta-analysis of selective prevention interventions (classroom-based) versus any control.

	Classroom-based (delivered by teacher) versus any control	Classroom-based (delivered by non-teacher) versus any control
Total no. of trials (N)	4 RCTs (689)	1 RCT (789)
Study ID	DOMITROVICH2007 GROSS2003 IZARD2008A SCOTT2005	FLAY2004
Country	USA (k=4)	USA (k=1)
Year of publication	2003 to 2008 (k=4)	2004
Age of children/ young people	11+ (k=0) <11 (k=4) Both (k=0)	11+ (k=0) <11 (k=1) Both (k=0)
Gender of children/ young people (% Female)	0-25% (k=0) 26-50% (k=1) 51-75% (k=1) 76-100% (k=1)	N/R (k=1)
Ethnicity of children/ young people (% White)	0-25% (k=2) 26-50% (k=1) 51-75% (k=0) 76-100% (k=0) N/R (k=1)	N/R (k=1)
Timepoint (weeks)	PT: 12-43 (k=4) FU: 64 (k=1)	PT: 204 (k=1)
Comparisons	CB-T versus TAU (k=2) CB-T versus WL (k=2)	CB-O versus AC (k=1)

Note. AC = Attention control; CB-O = Classroom-based (delivered by non-teacher); CB-T = Classroom-based (delivered by teacher); FU = Follow-up; k = Number of trials; N = Total number of participants; N/R = Not Reported; PT = Post-treatment; RCT = Randomised Controlled Trial; TAU = Treatment as usual; WL = Waitlist control.

5.2.5 Clinical evidence for selective prevention interventions

The critical outcomes of antisocial behaviour, offending behaviour and drug and/or alcohol use were sub-categorised according to the person who rated the outcome: (a) observer-rated, (b) researcher/clinician-rated, (c) peer-rated, (d) teacher-rated, and (e) parent-rated. Because few trials reported offending behaviour as a continuous outcome, data for this outcome were combined in the meta-analyses of antisocial behaviour measured by a rating scale. No other critical outcomes were reported in adequate numbers to be included in the meta-analysis. In the included trials, the interventions were compared with a variety of control groups that were categorised as: (a) treatment as usual, (b) attention control, (c) waitlist control, and (d) no treatment. In the evidence statements below, the control group is named only where all studies used the same control, otherwise it should be assumed that studies included in each analysis used different controls. Further information about the control group used in each trial can be found in the forest plots presented in Appendix 16.

Summary of findings tables are used below to summarise the evidence. The full GRADE evidence profiles can be found in Appendix 18.

Child-focused interventions

Moderate quality evidence from one trial with 30 participants and one trial with 47 participants showed that child-focused interventions when compared with an attention control or TAU reduced antisocial behaviour when rated by researchers/clinicians or teachers at post-treatment (Table 21). However, the evidence from parent-rated (two trials with 282 participants) and self-rated (one trial with 227 participants) antisocial behaviour was inconclusive. Of the three trials, two were conducted with children aged under 11 years old and one with children and young people over 11 years old. At follow-up, no trials reported useable data.

With regard to trials not included in the meta-analyses, one reported statistically significant effects favouring the intervention (KABLE2007), two found treatment effects on some antisocial behaviour outcomes (FARRELL2001; FARRELL2003), and two found no effects on the outcomes of interest (KELLY2010; KLIEWER2011).

Table 21: Summary of findings table for child-focused interventions compared with a control group (post-treatment).

Patient or population: children and young people at risk of a conduct disorder [Post-treatment]
Intervention: child-focused
Comparison: any control group

Outcomes	Illustrative comparative risks (95% CI)		No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	Corresponding risk		
	Any control group	Child-focused		
Researcher/clinician- rated antisocial behaviour any valid rating scale	0	The mean researcher/ clinician-rated antisocial behaviour in the intervention groups was **0.82 standard deviations lower** (1.54 to 0.09 lower)	30 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **1.93 standard deviations lower** (2.61 to 1.24 lower)	47 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Parent-rated antisocial behaviour any valid rating scale	0	The mean parent-rated antisocial behaviour in the intervention groups was **0.08 standard deviations lower** (0.31 lower to 0.16 higher)	282 (2 studies)	⊕⊕⊕⊖ **moderate**[1]
Self-rated antisocial behaviour any valid rating scale	0	The mean self-rated antisocial behaviour in the intervention groups was **0.06 standard deviations lower** (0.32 lower to 0.20 higher)	227 (1 study)	⊕⊕⊕⊖ **moderate**[1]

CI = Confidence interval.
1 Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Parent-focused interventions

High quality evidence from 14 trials with 2,774 participants suggested that parent-focused interventions when compared with a control group did not improve antisocial behaviour when rated by parents at post-treatment (Table 22). The majority of trials were conducted with children under 11 years old. Moderate quality evidence from one trial (195 participants) reporting researcher/clinician rated offending behaviour, and one trial (40 participants) reporting teacher-rated antisocial behaviour, and two trials (259 participants) reporting self-rated antisocial behaviour was inconclusive. At follow-up, high quality evidence from 8 trials with 1,648 participants suggested no benefit with regard to parent-rated antisocial behaviour (Table 23). High quality evidence from two trials (807 participants) reporting researcher-rated antisocial/offending behaviour, and moderate quality evidence from 1 trial (130 participants) reporting teacher-rated antisocial behaviour was inconclusive. In addition, three trials reported dichotomous outcomes at follow-up

(Table 24). Moderate quality evidence from one trial (613 participants) reporting researcher-rated offending behaviour, and one trial (117 participants) reporting parent-rated antisocial behaviour was inconclusive (both compared the intervention with treatment as usual). Finally, moderate quality evidence from one trial with 231 participants found a large effect in terms of self-rated offending behaviour at 19 year follow-up.

With regard to trials not included in the meta-analyses, two reported effects favouring the intervention (FRANZ2011; MARTINEZ2005), one reported mixed findings (WOLCHIK1993), and one reported no promising effects (DIONNE2009).

Table 22: Summary of findings table for parent-focused interventions compared with a control group (post-treatment).

Patient or population: children and young people at risk of a conduct disorder [Post-treatment]
Intervention: parent-focused
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Parent-focused**		
Researcher/clinician- rated offending behaviour Frequency of arrest	0	The mean researcher/ clinician-rated offending behaviour in the intervention groups was **0.08 standard deviations higher** (0.22 lower to 0.37 higher)	195 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Teacher-rated antisocial behaviour any valid rating scale	0	The mean teacher-rated antisocial behaviour in the intervention groups was **0.05 standard deviations lower** (0.66 lower to 0.56 higher)	40 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Parent-rated antisocial behaviour any valid rating scale	0	The mean parent-rated antisocial behaviour in the intervention groups was **0.09 standard deviations lower** (0.16 to 0.01 lower)	2774 (14 studies)	⊕⊕⊕⊕ **high**
Self-rated antisocial behaviour any valid rating scale	0	The mean self-rated antisocial behaviour in the intervention groups was **0.17 standard deviations higher** (0.61 lower to 0.95 higher)	259 (2 studies)	⊕⊕⊖⊖ **low**[1,2]

CI = Confidence interval.
[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.
[2] There is evidence of substantial heterogeneity of study effect sizes.

Table 23: Summary of findings table for parent-focused interventions compared with a control group (follow-up).

Patient or population: children and young people at risk of a conduct disorder [Follow-up]
Intervention: parent-focused
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Parent-focused**		
Researcher/clinician-rated antisocial/offending behaviour any valid rating scale/any measure of offending behaviour Follow-up: 663 weeks	0	The mean researcher/ clinician-rated antisocial/ offending behaviour in the intervention groups was **0.12 standard deviations lower** (0.27 lower to 0.02 higher)	807 (2 studies)	⊕⊕⊕⊕ **high**
Teacher-rated antisocial behaviour any valid rating scale Follow-up: 416 weeks	0	The mean teacher-rated antisocial behaviour in the intervention groups was **0.25 standard deviations lower** (0.61 lower to 0.12 higher)	130 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Parent-rated antisocial behaviour any valid rating scale Follow-up: 25-312 weeks	0	The mean parent-rated antisocial behaviour in the intervention groups was **0.02 standard deviations lower** (0.12 lower to 0.09 higher)	1,648 (8 studies)	⊕⊕⊕⊕ **high**

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met

Table 24: Summary of findings table for parent-focused interventions compared with a control group (follow-up).

Patient or population: children and young people at risk of a conduct disorder (dichotomous outcomes) [Follow-up]
Intervention: parent-focused
Comparison: any control group

Outcomes	Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
Researcher/clinician-rated offending behaviour Follow-up: 663 weeks	RR 1.02 (0.39 to 2.64)	613 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Parent-rated antisocial behaviour any valid rating scale Follow-up: 52 weeks	RR 0.60 (0.3 to 1.2)	117 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Self-rated offending behaviour conviction, lifetime Follow-up: 991 weeks	RR 0.43 (0.23 to 0.80)	231 (1 study)	⊕⊕⊕⊝ **moderate**[1]

CI = Confidence interval; RR = Risk ratio.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Parent–child-based interventions

Moderate quality evidence from three trials with 242 participants that reported parent-rated antisocial behaviour at post-treatment was inconclusive (Table 25). Similarly, one trial (99 participants) that reported observer-rated antisocial behaviour and one trial (370 participants) that reported researcher/clinician-rated antisocial behaviour were both inconclusive (both used a NT control group). All but one trial were conducted with children under 11 years old. At follow-up, moderate quality evidence from two trials (442 participants) reporting researcher/clinician-rated antisocial behaviour, and two trials (258 participants) reporting parent-rated antisocial behaviour was inconclusive (Table 26). One trial with 99 participants reported moderate quality evidence favouring the intervention when antisocial behaviour was rated by observers.

Table 25: Summary of findings table for parent–child-based interventions compared with a control group (post-treatment).

Patient or population: children and young people at risk of a conduct disorder [Post-treatment]
Intervention: parent–child-based
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Parent–child-based**		
Observer-rated antisocial behaviour any valid rating scale	0	The mean observer-rated antisocial behaviour in the intervention groups was **0.1 standard deviations lower** (0.49 lower to 0.29 higher)	99 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Researcher/clinician-rated antisocial behaviour any valid rating scale	0	The mean researcher/clinician-rated antisocial behaviour in the intervention groups was **0.14 standard deviations higher** (0.07 lower to 34 higher)	370 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Parent-rated antisocial behaviour any valid rating scale	0	The mean parent-rated antisocial behaviour in the intervention groups was **0.12 standard deviations lower** (0.45 lower to 0.22 higher)	242 (3 studies)	⊕⊕⊕⊖ **moderate**[1]

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Table 26: Summary of findings table for parent–child-based interventions compared with a control group (follow-up).

Patient or population: children and young people at risk of a conduct disorder [Follow-up]
Intervention: parent–child-based
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	Corresponding risk		
	Any control group	**Parent–child-based**		
Observer-rated antisocial behaviour any valid rating scale Follow-up: 104 weeks	0	The mean observer-rated antisocial behaviour in the intervention groups was **0.41 standard deviations lower** (0.8 to 0.01 lower)	99 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Researcher/clinician-rated antisocial behaviour any valid rating scale Follow-up: 624 weeks	0	The mean researcher/clinician-rated antisocial behaviour in the intervention groups was **0.09 standard deviations lower** (0.73 lower to 0.54 higher)	442 (2 studies)	⊕⊕⊕⊝ **moderate**[2]
Parent-rated antisocial behaviour any valid rating scale Follow-up: 104-312 weeks	0	The mean parent-rated antisocial behaviour in the intervention groups was **0.08 standard deviations lower** (0.32 lower to 0.16 higher)	258 (2 studies)	⊕⊕⊕⊝ **moderate**[1]

CI = Confidence interval.
[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.
[2] CI includes both 1) no effect and 2) appreciable benefit or appreciable harm.

Parent–teacher-based interventions

Moderate quality evidence from one trial with 137 participants (<11 years old) favoured the intervention when compared with waitlist control when antisocial behaviour was rated by observers and teachers at post-treatment (Table 27). However, in the same trial, the evidence from parent-rated antisocial behaviour was inconclusive. At follow-up, the same trial reported moderate quality evidence of observer, teacher and parent-rated antisocial behaviour that was inconclusive (Table 28).

Table 27: Summary of findings table for parent–teacher-based interventions compared with a control group (post-treatment).

Patient or population: children and young people at risk of a conduct disorder [Post-treatment]
Intervention: parent–teacher-based
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Parent–teacher-based**		
Observer-rated antisocial behaviour any valid rating scale	0	The mean observer-rated antisocial behaviour in the intervention groups was **0.50 standard deviations lower** (1.01 lower to 0 higher)	137 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Teacher-rated antisocial behaviour any valid rating scale	0	The mean teacher-rated antisocial behaviour in the intervention groups was **1.04 standard deviations lower** (1.56 to 0.52 lower)	137 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Parent-rated antisocial behaviour any valid rating scale	0	The mean parent-rated antisocial behaviour in the intervention groups was **0.06 standard deviations lower** (0.56 lower to 0.44 higher)	137 (1 study)	⊕⊕⊕⊖ **moderate**[1]

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Table 28: Summary of findings table for parent–teacher-based interventions compared with a control group (follow-up).

Patient or population: children and young people at risk of a conduct disorder [Follow-up]
Intervention: parent–teacher-based
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Parent–teacher-based**		
Observer-rated antisocial behaviour any valid rating scale	0	The mean observer-rated antisocial behaviour in the intervention groups was **0.32 standard deviations lower** (0.82 lower to 0.17 higher)	137 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Teacher-rated antisocial behaviour any valid rating scale Follow-up: 624 weeks	0	The mean teacher-rated antisocial behaviour in the intervention groups was **0.39 standard deviations lower** (0.89 lower to 0.11 higher)	137 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Parent-rated antisocial behaviour any valid rating scale Follow-up: 104-312 weeks	0	The mean parent-rated antisocial behaviour in the intervention groups was **0.08 standard deviations lower** (0.41 lower to 0.58 higher)	137 (2 studies)	⊕⊕⊕⊝ **moderate**[1]

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Family-focused interventions

Moderate quality evidence from one trial with 252 participants (<11 years old), which compared a family-focused intervention with an attention control, reported parent and self-rated antisocial behaviour at post-treatment that was inconclusive (Table 29). No data were reported at follow-up.

With regard to trials not included in the meta-analyses, one demonstrated large effects for treatment group, notably a 36% decrease in the frequency of conduct problems (BRODY2012).

Table 29: Summary of findings table for family-focused interventions compared with a control group (post-treatment).

Patient or population: children and young people at risk of a conduct disorder [Post-treatment]
Intervention: family-focused
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Family-focused**		
Parent-rated antisocial behaviour any valid rating scale	0	The mean parent-rated antisocial behaviour in the intervention groups was **0.05 standard deviations lower** (0.3 lower to 0.19 higher)	252 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Self-rated antisocial behaviour any valid rating scale	0	The mean self-rated antisocial behaviour in the intervention groups was **0.11 standard deviations lower** (0.37 lower to 0.14 higher)	238 (1 study)	⊕⊕⊕⊝ **moderate**[1]

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Multi-component interventions

One trial (JOHNSON1982) with 128 participants (<11 years old) reported data separately for male and female participants, and so was entered into the meta-analysis as two trials. Evidence from this trial was of moderate quality and suggested that the intervention when compared with waitlist control improved parent-rated antisocial behaviour (Table 30). In addition, one trial with 373 participants reported moderate quality evidence of self-rated antisocial behaviour that was inconclusive (the intervention was compared with an attention control). At follow-up, JOHNSON1982 reported teacher-rated antisocial behaviour (Table 31). The evidence was of moderate quality and suggested the intervention improved antisocial behaviour when compared with a waitlist control.

Table 30: Summary of findings table for multi-component interventions compared with a control group (post-treatment).

Patient or population: children and young people at risk of a conduct disorder [Post-treatment]
Intervention: multi-component
Comparison: any control group

Outcomes	Illustrative comparative risks (95% CI)		No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	Corresponding risk		
	Any control group	Multi-component		
Parent-rated antisocial behaviour any valid rating scale	0	The mean parent-rated antisocial behaviour in the intervention groups was **0.37 standard deviations lower** (0.72 to 0.02 lower)	128 (2 studies)	⊕⊕⊕⊖ **moderate**[1]
Self-rated antisocial behaviour any valid rating scale	0	The mean self-rated antisocial behaviour in the intervention groups was **0.02 standard deviations lower** (0.27 lower to 0.24 higher)	373 (1 study)	⊕⊕⊕⊖ **moderate**[1]

CI = Confidence interval.
[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Table 31: Summary of findings table for multi-component interventions compared with a control group (follow-up).

Patient or population: children and young people at risk of conduct disorders [Follow-up]
Intervention: multi-component
Comparison: any control group

Outcomes	Illustrative comparative risks (95% CI)		No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	Corresponding risk		
	Any control group	Multi-component		
Teacher-rated antisocial behaviour any valid rating scale Follow-up: 104 weeks	0	The mean teacher-rated antisocial behaviour in the intervention groups was **0.48 standard deviations lower** (0.83 to 0.13 lower)	128 (2 studies)	⊕⊕⊕⊖ **moderate**[1]

CI = Confidence interval.
[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Classroom-based interventions

Classroom-based interventions were sub-categorised by whether teachers or non-teachers delivered/received the intervention. For those interventions delivered/received by teachers, high quality evidence from four trials with 507 participants showed that the intervention when compared with any control, reduced teacher-rated antisocial behaviour (Table 32). However, moderate quality evidence from one trial (111 participants) that reported observer-rated antisocial behaviour, and two trials (273 participants) that reported parent-rated antisocial behaviour was consistent, but inconclusive (all comparisons were against waitlist control). All trials were conducted with children under 11 years old. At follow-up, one trial with 111 participants that compared the intervention with waitlist control reported moderate quality evidence from observer, teacher, and parent-rated antisocial behaviour that was inconclusive (Table 33).

Moderate quality evidence from one large trial with 392 participants (<11 years old), suggested that a classroom-based intervention delivered by non-teachers was not effective when compared with an attention control at post-treatment (Table 34). No follow-up data were reported.

With regard to trials not included in the meta-analyses, two reported that the intervention produced statistically significant improvements in antisocial behaviour compared with a control group (FLANNERY2003; WEBSTER-STRATTON2008).

Table 32: Summary of findings table for classroom-based interventions (delivered by teacher) compared with a control group (post-treatment).

Patient or population: children and young people at risk of a conduct disorder [Post-treatment]
Intervention: classroom-based (by teacher)
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Classroom-based (by teacher)**		
Observer-rated antisocial behaviour any valid rating scale	0	The mean observer-rated antisocial behaviour in the intervention groups was **0.43 standard deviations lower** (0.96 lower to 0.09 higher)	111 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Teacher-rated antisocial behaviour any valid rating scale	0	The mean teacher-rated antisocial behaviour in the intervention groups was **0.43 standard deviations lower** (0.96 to 0.09 lower)	507 (4 studies)	⊕⊕⊕⊕ **high**
Parent-rated antisocial behaviour any valid rating scale	0	The mean parent-rated antisocial behaviour in the intervention groups was **0.13 standard deviations lower** (0.39 lower to 0.13 higher)	273 (2 studies)	⊕⊕⊕⊝ **moderate**[1]

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Table 33: Summary of findings table for classroom-based interventions (delivered by teacher) compared with a control group (follow-up).

Patient or population: children and young people at risk of a conduct disorder [Follow-up]
Intervention: classroom-based (by teacher)
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Classroom-based (by teacher)**		
Observer-rated antisocial behaviour any valid rating scale Follow-up: 64 weeks	0	The mean observer-rated antisocial behaviour in the intervention groups was **0.07 standard deviations lower** (0.59 lower to 0.45 higher)	111 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Teacher-rated antisocial behaviour any valid rating scale Follow-up: 64 weeks	0	The mean teacher-rated antisocial behaviour in the intervention groups was **0.40 standard deviations lower** (0.92 lower to 0.13 higher)	111 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Parent-rated antisocial behaviour any valid rating scale Follow-up: 64 weeks	0	The mean parent-rated antisocial behaviour in the intervention groups was **0.24 standard deviations lower** (0.76 lower to 0.28 higher)	111 (1 study)	⊕⊕⊕⊝ **moderate**[1]

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Table 34: Summary of findings table for classroom-based interventions (delivered by non-teacher) compared with a control group (post-treatment).

Patient or population: children and young people at risk of a conduct disorder [Post-treatment] **Intervention:** classroom-based (by non-teacher) **Comparison:** any control group				
Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Classroom-based - by non-teacher**		
Self-rated antisocial behaviour any valid rating scale	0	The mean self-rated antisocial behaviour in the intervention groups was **0.04 standard deviations higher** (0.22 lower to 0.29 higher)	392 (1 study)	⊕⊕⊕⊝ **moderate**[1]
CI = Confidence interval. [1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.				

5.2.6 Clinical evidence summary

Overall, there is limited moderate to high quality evidence that for younger children (< 11 years old) at risk of a conduct disorder, classroom-based interventions delivered by teachers may be effective with regard to reducing antisocial behaviour. In addition, moderate quality evidence suggests that a parent-focused intervention involving prenatal and infancy home visitation by nurses (known in the UK as Family Nurse Partnership) may reduce the risk of serious offending behaviour over the long-term. There is insufficient evidence to determine if any other intervention is effective.

5.3 HEALTH ECONOMIC EVIDENCE

5.3.1 Economic evidence on selective prevention interventions for children and young people at risk of conduct disorder

Systematic literature review

No studies assessing the cost effectiveness of selective prevention programmes for children and young people t risk of conduct disorder were identified by the systematic search of the economic literature undertaken for this guideline. Details on the methods used for the systematic search of the economic literature are described in Chapter 3.

5.4 FROM EVIDENCE TO RECOMMENDATIONS

Relative value placed on the outcomes considered

The GDG considered that antisocial behaviour (at home, at school, in the community) was the most important outcome. Diagnosis of conduct disorder and a defined reduction in conduct problems were also considered important, although no trials reported these outcomes in a way that could be included in the meta-analysis.

Trade-off between clinical benefits and harms

In children 'at risk'[57] of a conduct disorder, there was some evidence that the benefits of classroom-based selective prevention interventions outweigh the possible risk of harm (for example, problems associated with stigmatisation). Although the size of the evidence base is limited, the GDG felt that the potential for benefit across a large proportion of the population justified making a recommendation.

The evidence for parent-focused interventions is largely inconclusive with regard to antisocial behaviour outcomes, although nurse home visitation (known as Family Nurse Partnership in the UK) has shown long-term benefits in self-reported offending behaviour. It should be noted that no selective prevention trials included in the meta-analysis were conducted in the UK, and although a trial[58] examining the Family Nurse Partnership is underway, it is a universal prevention programme with no directly relevant outcomes. It should also be noted that the aim of this review was to examine the effect of interventions on antisocial behaviour, and therefore, it is possible that some interventions have benefits that we have not captured here.

Trade-off between net health benefits and resource use

The systematic review did not identify any evidence that examined the cost-effectiveness of classroom-based selective prevention interventions.

Quality of the evidence

Evidence for classroom-based interventions was graded moderate to high quality, although at most only four trials reported a critical outcome that could be pooled using meta-analysis.

5.5 RECOMMENDATIONS

5.5.1 Clinical practice recommendations

5.5.1.1 Offer classroom-based emotional learning and problem solving programmes to children aged typically between 3 and 7 years who are assessed to be at risk of developing oppositional defiant disorder or conduct disorder as a result of the following factors:

- low socio-economic status
- low school achievement

---

[57] In this context, 'at risk' was defined as having an individual, family or socioeconomic risk factor or scoring above the cut-off on a screening instrument based on risk factor research.

[58] http://www.controlled-trials.com/ISRCTN23019866

- child abuse or abused mother
- divorced parents
- parental mental health or drug problems
- parental contact with the criminal justice system.

5.5.1.2 Classroom-based emotional learning and problem solving programmes should be provided in a positive atmosphere that promotes emotional learning and consists of interventions intended to:

- increase children's awareness of their own and others' emotions
- teach self-control of arousal and behaviour
- promote a positive self-concept and good peer relations
- develop children's problem solving skills.

Typically the programmes should consist of up to 30 classroom-based sessions over the course of a year.

5.5.2 Research recommendations

5.5.2.1 Are school-based interventions clinically and cost effective at reducing antisocial behaviour in children and young people at risk of developing a conduct disorder?

6 CASE IDENTIFICATION AND ASSESSMENT

6.1 INTRODUCTION

The prevalence of conduct disorder ranges from 4% to 13% and oppositional defiant disorder ranges from 3% to 16% (American Psychiatric Association, 1994). More than half of the referrals to mental health clinics are children with conduct problems (Kazdin et al., 1990, Schuhmann et al., 1996). In the UK, reports indicate that around 10% of children and young people have emotional, behaviour disorder or social impairment (Goodman et al., 2002, Meltzer et al., 2000) and that only about 20% of these children are in contact with child and adolescent mental health services (CAMHS) (Garralda et al., 2000, Leaf et al., 1996, Meltzer et al., 2000).

The early identification of children and young people with a conduct disorder is crucial because increasing evidence suggests that untreated disruptive behaviour persists and is associated with significant consequences for the child or young person and other family members and impaired functioning later in life (Campbell & Ewing, 1990). In addition there is considerable impact on the child or young person’s education, which incurs wider costs to society (Koot, 1995).

Preventing children who show early signs of behavioural problems from developing a conduct disorder should be a priority. With the resources in place, primary care professionals may be able to identify conduct disorders earlier (Sharp et al., 2005), which in turn, will ease the access to CAMHS, making the service more effective (Heywood et al., 2003).

Accurate identification alone will not ensure that effective interventions are offered; this requires a thorough assessment of need and one that takes into account the complex family environments in which many young people with a conduct disorder live and the comorbid disorders that can often complicate both assessment and treatment.

6.2 EVIDENCE REVIEW

6.2.1 Introduction

The use of questionnaires and scales in the assessment of psychopathological symptoms in children and young people is important for three reasons. First, they can help to identify children at high risk of developing behavioural and emotional disorders; second, they can be used as part of a clinical assessment to screen for type and severity of psychiatric disorder; and third, they can also be employed as a measure to monitor the effects of treatment (Achenbach, 1998).

Although there are limitations in the use of rating scales, such as bias due to halo effects and subjective perceptions, there are also several advantages. The most important is their low cost and ease of administration for clinicians and teachers because rating scales require less time to complete than assessment methods involving structured interviews or classroom behavioural observation (Querido & Eyberg, 2003).

The early identification of children and young people with, or at risk of developing, a conduct disorder is crucial in order to be able to refer the child to appropriate care and treatment. The diagnosis of a disorder is important for the referral of children to the appropriate services to receive further assessment or access to appropriate treatment. It is also important to consider the context in which behavioural problems occurred and how they interact with family, educational and social environments.

A non-specialist screening tool may also be useful in the identification of children and young people with a conduct disorder. Professionals in different settings such as primary care, social care, residential, educational and criminal justice settings might not be familiar with conduct disorders and this may affect the access to appropriate care and effective treatment.

Any assessment should be focused on the child and young person's needs. For example, when dealing with lees complex problems, a brief assessment might be sufficient to support a referral to interventions such as parent training programmes. However, the presence of associated features or suspicion of comorbid conditions in more complex cases would almost certainly require a full comprehensive assessment.

The assessment of disruptive behaviour is context dependent and varies across settings (Achenbach et al., 1987), therefore, to achieve a comprehensive understanding of the child or young person's problem, the involvement of multiple informants can be important. The combination of parents' and teachers' report can be helpful because teachers observe the behaviour of children in situations different from their parents and are less personally involved. Ratings from multiple informants are also particularly important for children and young people with several care placements and/or carers, such as those who have been looked after by local authorities (Callaghan et al., 2004, Goodman et al., 2004) or who are cared for in residential settings (Muris & Maas, 2004).

Early in the guideline development process, the GDG agreed that the review should prioritise those review questions concerning the evaluation of case identification instruments; questions relating to assessment would be addressed through informal consensus (using the method set out in Chapter 3) because both expert opinion and early scoping reviews had confirmed that there was no or very limited evidence of the effectiveness of different assessment methods.

Definition of case identification instruments

For the purposes of the guideline, case identification instruments were defined as validated psychometric measures that are used to identify children and young people with a suspected conduct disorder. The inclusion criteria applied to the instruments are described below.

6.2.2 Methodological approach

When evaluating case identification instruments, the following criteria were used to decide whether an instrument was eligible for inclusion in the review:

Primary aim of the instrument: The identification of children and young people with a suspected conduct disorder.

Clinical utility: The criterion required the primary use of the case identification instrument to be feasible and implementable in a routine clinical care. The instrument should contribute to the identification of further assessment needs and therefore be potentially useful for care planning and for referral to treatment.

Tool characteristics and administrative properties: The case identification tool should have validated cut-offs in the patient population of interest. Furthermore, and dependent on the practitioner skill set and the setting, instruments were evaluated for the time needed to administer and score them as well as the nature of the training (if any) required for administration or scoring. A case identification instrument should be brief (no more than 5 minutes), easy to administer and score (preferably no more than 5 minutes) and be able to be interpreted without extensive and specialist training. Non-experts from a variety of care settings (for example, primary care, general medical services, educational, residential or criminal justice settings) should be able to complete the instrument with relative ease. Lastly, the availability of the tool, its cost and copyright issues were also considered.

Population: The population being assessed reflects the scope of this guideline. The instrument should have been validated in a population younger than age 18 years and preferably be applicable to children and young people in the UK, for example by being validated in a UK population, or a population that is similar to UK demographics. It will also be assessed whether the instrument can be completed by different informants including parents, teachers and the children and young people themselves.

Psychometric data: The instrument should have established reliability and validity (although these data will not be reviewed at this stage). It should have been validated against a gold standard diagnostic instrument such as DSM-IV or ICD-10 in the diagnosis of conduct disorder or oppositional defiant disorder (American Psychiatric Association, 1994, World Health Organization, 1992) and report sensitivity and specificity. Reported data for sensitivity, specificity in addition to area under the curve, positive predictive value, and negative predictive value were considered. See Chapter 3 for a description of these diagnostic test accuracy terms.

6.2.3 Review protocol

A summary of the review protocol, including the review questions, information about the databases searched, and the eligibility criteria used for this section of the guideline, is presented in Table 35. (A complete list of review questions can be found in Appendix 5; further information about the search strategy can be found in Appendix 7; the full review protocols can be found in Appendix 15).

Table 35: Review protocol for the review of case identification instruments and assessment of conduct disorder

Component	Description
Review questions	What are the most effective methods/instruments for case identification of conduct disorders in children and young people? In children and young people with possible conduct disorders, what are the key components of, and the most effective structure for, a diagnostic assessment? To answer this question, consideration should be given to: the nature and content of the interview and observation, which should both include an early developmental history where possible formal diagnostic methods/ psychological instruments for the assessment of core features of conduct disorders the assessment of risk the assessment of need the setting(s) in which the assessment takes place the role of the any informants gathering of independent and accurate information from informants. When making a diagnosis of conduct disorders in children and young people, what amendments (if any) need to be made to take into account coexisting conditions (such as ADHD, depression, anxiety disorders and attachment insecurity)? What amendments, if any, need to be made to take into account particular cultural or minority ethnic groups or gender?
Objectives	To identify and evaluate the most effective instruments for case identification of conduct disorders in children and young people
Population	Children and young people (aged 18 years and younger) with a suspected conduct disorder, including looked after children and those in contact with the criminal justice system
Intervention(s)	Any assessment types except general screening that meet eligibility criteria
Comparison	Gold standard: DSM-IV or ICD-10 diagnosis of conduct disorder Other assessment instruments or strategies
Critical outcomes	Sensitivity, specificity, Positive Predictive Value (PPV), Negative Predictive Value (NPV), Area under the Curve (AUC).
Electronic databases	Mainstream databases: Embase, Medline, PreMedline, PsycINFO Topic specific databases and grey literature databases (see search strategy in Appendix 7)
Date searched	Inception to June 2012
Study design	RCTs, cross-sectional studies
Review strategy	To conduct pooled test accuracy meta-analyses on the sensitivity and specificity of case identification instruments where possible.

Note. ADHD = Attention Deficit Hyperactivity Disorder; DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (American Psychiatric Association, 1994); ICD-10 = Tenth Revision of the International Classification of Diseases and Related Health Problems (World Health Organization, 1992).

6.2.4 Case identification instruments included in the review

The instruments that met the inclusion criteria and are included in the review are the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997), the Eyberg Child Behavior Inventory (ECBI) (Eyberg & Pincus, 1999) and the Sutter-Eyberg Student Behavior Inventory (SESBI-R) (Eyberg & Pincus, 1999). See Table 36 for a summary of characteristics of these instruments.

Strengths and Difficulties Questionnaire

The SDQ is a screening instrument for child and young people with mental health problems, which covers emotional, behavioural and social functioning in children and young people.

The instrument allows for a multi-informant assessment with the development of different versions. An informant version is administered to both parents and teachers of children and young people between the ages of 4 and 16 years (Goodman et al., 1998), and a self-reported version is completed by children and young people between the ages of 11 and 16 years. The authors have also recently included a version for children of 3 to 4 years to be completed by parents and preschool professionals.

The scale consists of 25 items arranged in five subscales, which assess five behavioural traits. Four of them relate to problem difficulties (conduct problems, emotional problems, hyperactivity, inattention and peer problems) and one to strengths (pro-social behaviour) (Goodman, 1997). The items are almost identical in the different versions except for grammatical changes from third to first person depending on who is to complete the form. The conduct problem scale includes five items: ' I get very angry and often lose my temper'; 'I usually do as I am told', 'I fight a lot', 'I can make other people do what I want', 'I am often accused of lying or cheating', ' I take things that are not mine from home, school or elsewhere'. Each item is scored on a three-point response scale ('not true', 'somewhat true' and 'certainly true') and scored zero, one and two respectively.

Administering this instrument only takes 5 minutes and scoring is straightforward. A total difficulty score ranges from zero to 40 and is computed by combining the four difficulties subscales (which each range from 0-10) and omitting the pro-social subscale. When the total score is above the 90th percentile, this has been found to increase the probability of an independently assessed psychiatric diagnostic by an odds ratio of 15.7 (Goodman, 2001). The cut off score is 3/4 for each subscale whereby scores of 0 to 2 are considered 'normal', 3 as 'borderline' and 4 and 10 as 'abnormal' (Goodman, 1997).

The SDQ also includes an impact supplement that assesses the overall severity and chronicity of the problem, burden to others, child distress and interference in everyday life. The impact score is based on five items rated on a 4-point scale ('no', 'minor', 'definite' or 'severe') (for example, 'do you think the young person has difficulties in one or more of the following areas: emotions, concentration, behaviour or being able to get on with other people', 'do the difficulties upset or distress your child') (Goodman, 1999). These five questions ask about different domains such as home, life, friendship, classroom learning, and leisure activities (Ford et al., 2003), which are the areas that the World Health Organization recommends assessing in the multi-axial classification of child and adolescent psychiatric disorders (World Health Organization, 1992).

The authors also developed a computerised diagnostic algorithm to calculate the probability of psychiatric disorders. It is based on the impact scores and the parent and teacher SDQ symptom scales together. The algorithm generates three levels of prediction (unlikely, possible or probable) of the existence of a psychiatric disorder generating different diagnoses (for example, conduct problems and emotional problems).

The SDQ also includes a follow-up version for repeated administration, which can serve as an outcome measure for the assessment of treatment effects. The follow-up versions generate scores for comparison with baseline outcomes, which the authors refer to as 'added values'. The mean value is the difference between the expected and observed outcome at follow-up (formula= 2.3 + 0.8 (x baseline total difficulties score) + 0.2 (x 1 baseline impact score) - 0.3 x baseline emotional problems subscale score – follow-up total difficulties score). The scores are normally distributed (with a mean of 0 and standard deviation of five SDQ points); therefore, higher than 0 scores mean better than predicted adjustment whereas scores lower than 0 indicate worse than predicted adjustment (Ford et al., 2003).

A substantive body of research exists on the psychometric properties of this tool. Several studies show a sound internal consistency on the original five factor structure (with a mean Cronbach alpha of 0.73) (Goodman, 1999, Goodman, 2001); and a satisfactory test-retest stability based on a survey of 10,000 UK children and young people (4- to 6-month retest stability of 0.72) (Goodman, 1999). Correlations among parent, teacher and self-report SDQ scores are moderate (Goodman, 1997, Goodman, 2001, Goodman et al., 1998).

Eyberg Child Behavior Inventory

The ECBI is a rating scale used to assess disruptive behaviour for children between the ages of 2 and 16. It is an informant scale aimed at the children's parents. The scale consists of 36 disruptive behaviour items (for example, refusing to obey until threatened with punishment, stealing, fighting, short attention span, over activity, restlessness). It measures two dimensions: (1) the frequency of the behaviour with responses measuring how often the behaviour occurs, with scores of 1 (never), 2 and 3 (seldom), 4 (sometimes), 5 and 6 (often), and 7 (always); and (2) the intensity of behaviour which is measured by a 'yes' or 'no' answer (rated as 1 if the answer is positive). The intensity score ranges from 36 to 252 and the problem score from 0 to 36.

This scale was designed as uni-dimensional but some studies have demonstrated the multidimensional properties of this scale with the inclusion of three subscales: conduct problems, oppositional defiant disorder and ADHD (Burns & Patterson, 1991). The conduct problems subscale has 8 items with a score between 8 and 56, the oppositional defiant disorder subscale consists of 10 items with scores ranging between 10 and 70, and the inattentive behaviour subscale has 4 items with a score between 4 and 28 (Eyberg & Robinson, 1983).

Children are considered likely to have a disruptive behaviour if they score above the 90th percentile or with the established cut-offs of 127 for the intensity score and 11 for the problem score (Burns & Patterson, 2000). A recent study reported cut-offs of 132 for intensity and 15 for the problem score – the need for more research is also suggested by the authors (Colvin et al., 1999).

The ECBI has good psychometric properties (Axberg et al., 2008, Burns & Patterson, 1991, Burns & Patterson, 2000, Eyberg, 1992, McMahon & Estes, 1997). Scores are stable over time for both children (Robinson et al., 1980) and young people (Eyberg & Robinson, 1983). Regarding the structure of the scale, although the existence of three subscales has been supported by some authors (Burns & Patterson, 1991), the latest study examining re-standardisation of the scale did not find a structure in factor analysis (Colvin et al., 1999) (Eyberg & Pincus, 1999) as stated by the original authors (Eyberg & Robinson, 1983, Robinson et al., 1980).

This scale has been developed in the US and standardised with US normative data, it is not freely available with the copyright belonging to Psychological Assessment Resources and permission to use it is required. The authors recommend that those scoring the instrument have at least a 4-year degree in psychology, counselling or a related field, including coursework in the administration of psychological tests.

Sutter-Eyberg Student Behavior Inventory

The SESBI-R is a teacher-rated scale of disruptive school behaviour for children between the ages of two and 16. This instrument was designed to identify children who are in need of treatment for behavioural problems. The SESBI-R is a revision of the original SESBI and was constructed as a complement to the ECBI. The scale consists of 38 items, eleven of which are identical to the ECBI, 12 items were slightly modified to match the educational environment and 15 additional new items were selected from a list of problem behaviours often reported by teachers of children who have been referred for treatment for behavioural problems (Querido & Eyberg, 2003). For example, items such as 'teases or provokes other children' were replaced with 'teases or provokes other students' to match classroom language.

The SESBI-R consists of disruptive behaviour items and some examples of these are 'refuses to obey until threatened with punishment', 'steals', 'physically fights' and 'has difficulty staying on task is overactive and restless'. The instrument comprises two scales: the intensity scale, which assesses the frequency of occurrence of a variety of child behaviour problems, and the problem scale, which assesses the degree to which the child's behaviour is a problem to the teacher (Eyberg & Pincus, 1999). The intensity score is rated using a 7-point Likert type scale ranging from 1 (never) to 7 (always).

The SESBI has demonstrated satisfactory psychometric properties. The intensity and problem scales have shown high internal consistency coefficients (between 0.96 and 0.98) (Burns & Owen, 1990, Funderburk & Eyberg, 1989), high test-retest correlations (0.87-0.90 and 0.89-0.93 respectively) (Funderburk & Eyberg, 1989, Funderburk et al., 1989, Rayfield et al., 1998, Schaughency et al., 1989) and also high inter-rates reliability (Dumas, 1992, Funderburk & Eyberg, 1989).

Table 36: Summary of characteristics of the three case identification instruments included in the review

Instrument	Screen for	Age group	Scale Info: number items, subscales, scores, cut offs, completed by whom and format	Time administer & Time score (training) & by whom	Availability	Other information
Strengths and Difficulties Questionnaire (SDQ)	Conduct-oppositional disorders	4 to 16 years	**Scale:** 25 items **Subscales:** emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, pro-social behaviour (5 items each subscale) **Score:** whole scale: 0-40 as pro-social behaviour subscale not included, subscales: 0-10. **Cut off:** 0-3 normal, 4 borderline, 5-10 abnormal **Completed by:** parent & teachers (4-16yrs), self-report (11-16yrs) **Format:** pen and paper	**Administer:** 5 minutes (no training needed) **Score:** 5 minutes (no training needed)	**Freely available** in authors webpage www.sdqinfo.org	Translated over 70 languages
Eyberg Child Behavior Inventory (ECBI)	Disruptive behaviour	2 to 16 years	**Scale:** 36 items **Subscales:** CD subscale (8 items), ODD subscale (10 items) **Score:** Intensity scale: 36-252, Problem scale: 0-36, CD subscale : 8-56, ODD subscale: 10-70 **Cut off:** Intensity scale: > 131, Problem scale: >15. Subscales: 90th percentile **Completed by:** parent **Format:** pen and paper	**Administer:** 5 minutes (administered by parents, teachers or professionals) **Score:** 5 minutes (training required)	**Not freely available** Copyright: Psychological Assessment Resources, permission required to use	Available in English and Spanish
Sutter-Eyberg Student Behavior Inventory-Revised (SESBI-R)	Disruptive behaviour	2 to 16 years	**Scale:** 38 items **Subscales:** CD subscale (8 items), ODD subscale (10 items) **Score:** Intensity scale: >131, problem scale > 15: , CD subscale: 8-56, ODD subscale: 10-70 **Cut off:** 90th percentile **Completed by:** teacher **Format:** pen and paper			

Note. CD = conduct disorder, ODD = oppositional defiant disorder.

6.2.5 Studies considered[59]

The literature search was conducted to identify studies that considered the case identification, diagnosis and assessment of conduct disorders. The outcome of this search for RCTs, observational studies and systematic reviews resulted in 22,434 papers (22,328 came from database searches and 106 were hand searched). Scanning the titles and abstracts of these papers resulted in 20,794 studies being excluded from the review, as they did not meet eligibility criteria. Of these, a number of studies were not relevant to this guideline (20,794) as they either were outside the scope or were duplicates. This resulted in a total of 1,628 potential studies that reported instruments used in the assessment of conduct disorder in children or young people.

Upon further inspection of these 1,628 potential studies, 1,534 assessed instruments that were not specific to case identification or were longer than 5 minutes to administer. This resulted in 93 articles (see Appendix 16 for a list of instruments that were not included in the review and the reasons why and a list of excluded studies and reasons why). Of those, 11 were excluded because the instrument did not specifically screen for conduct disorders, 53 did not report sensitivity or specificity data, and 29 reported instruments that had been translated into other languages other than English. (Note that it was decided to exclude these studies in the first instance as the translation of the scale might have compromised the validity of the scale. Further information about the included studies can be found in Appendix 16.)

Of the seven studies (N = 11,257) included in the review, five assessed the sensitivity and specificity of the SDQ and two assessed the ECBI. For the SDQ, two of the studies included the same sample drawn from a survey of mental health in British children between the ages of 5 and 15 years that was carried out in 1999 by the Office for National Statistics (so those 7984 are not added to the total N): GOODMAN2000a (Goodman et al., 2000a) and GOODMAN2001 (Goodman, 2001). Another study included a sample drawn from a survey of mental health of British looked after children which was carried out by the same organisation in 2001-2002, GOODMAN2004 (Goodman et al., 2004), while the other two studies included a sample taken from new referrals to mental health clinics: GOODMAN2000B (Goodman et al., 2000b) and MATHAI2004 (Mathai et al., 2004). Regarding the assessment of discriminate validity of the ECBI, two studies were included, and both had samples from archival data; one from studies of stress, affect and parenting in families with young children, WEIS2005 (Weis et al., 2005) and the other from mothers of preschool-age children: RICH2001 (Rich & Eyberg, 2001).

---

[59] Here and elsewhere in the guideline, each study considered for review is referred to by a study ID in capital letters (primary author and date of study publication, except where a study is in press or only submitted for publication, then a date is not used).

6.2.6 Clinical evidence

Review Manager 5 (The Cochrane Collaboration, 2011) was used to summarise the test accuracy data reported in each study using forest plots and summary ROC plots. Where more than two studies reported appropriate data, a bivariate test accuracy meta-analysis was conducted in order to obtain pooled estimates of sensitivity, specificity and likelihood ratios. These were calculated with the statistical package Meta-DiSc (Zamora et al., 2006a) (see Chapter 3 for further details on test accuracy terms).

Case identification of conduct disorder and oppositional defiant disorder

The SDQ, ECBI and SESBI-R were the only instruments that met the inclusion criteria for suitable screening instruments as they were designed to identify children with possible conduct disorder and could be completed within 5 minutes. However, only sensitivity and specificity data were reported in the literature for two of those instruments (SDQ and ECBI). The SDQ assesses conduct behaviour and ECBI assesses identified behavioural disorders including conduct disorder and oppositional defiant disorder. Although the ECBI was created as a one-dimensional scale, some authors have also demonstrated the multidimensional structure and identified conduct disorder and oppositional defiant disorder subscales (Burns & Patterson, 1991).

Strengths and Difficulties Questionnaire

Five studies that reported sensitivity and specificity data were identified in the searched studies. Two of them included children from new referrals to CAMHS (GOODMAN2000, MATHAI2004) and three of them were large samples of British children drawn from national mental health surveys (GOODMAN2004, GOODMAN2001, GOODMAN2000A).

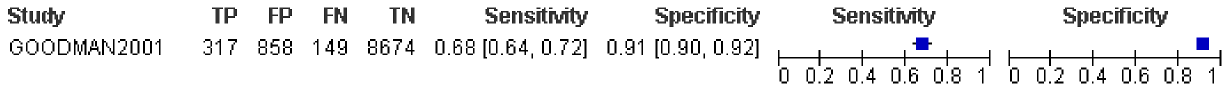
The SDQ includes three different versions that can be completed by parents or carers, teachers and the children themselves. The analysis showed that the sensitivity and specificity for the SDQ was ‘excellent’ to ‘poor’ depending on who the informant was and how many of them completed the scales.

The best values in terms of sensitivity were found in studies were the SDQ was completed by multi-informants. That is, when the three versions were completed and an overall score was calculated with algorithms developed by the authors, the values were considered ‘excellent’ to ‘good’ ranging from 0.93 to 0.76. The next best values were when two informants (parent or carer and teacher) assessed the child’s behaviour. Those values were considered ‘good’ to ‘moderate’ and ranged from 0.82 to 0.55 (see Figure 4). However, when the SDQ was completed by just one informant (either parent/carer or teacher), the values were considered ‘moderate’ and ranged from 0.68 to 0.55 except for the self-report form, which was rated as ‘poor’ with values between 0.16 and 0.29 (see Figure 4).

Specificity was reported in only a few studies and ranged from 'excellent' for single informants (0.96 - 0.91) to 'low' when completed by multi-informants (0.47).

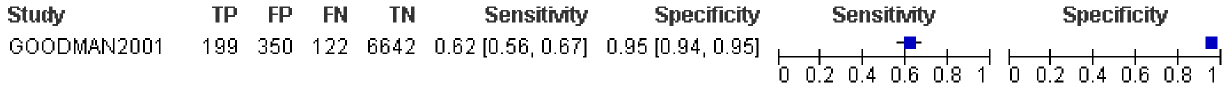
Figure 4: Forest plot of sensitivity and specificity for the SDQ

Forest plot SDQ 1 informant: parent form (children 4-17yrs).



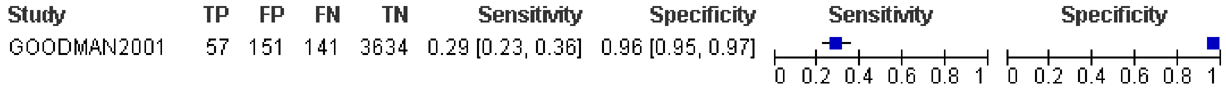
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOODMAN2001	317	858	149	8674	0.68 [0.64, 0.72]	0.91 [0.90, 0.92]

Forest plot SDQ 1 informant: teacher form (children 4-17yrs).



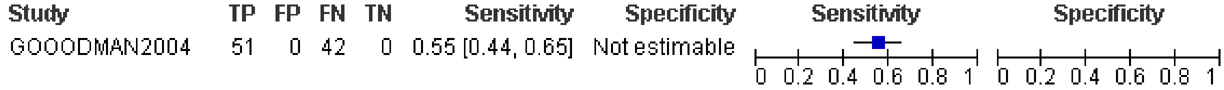
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOODMAN2001	199	350	122	6642	0.62 [0.56, 0.67]	0.95 [0.94, 0.95]

Forest plot of SDQ 1 informant: self-reported form (children 4-17yrs)



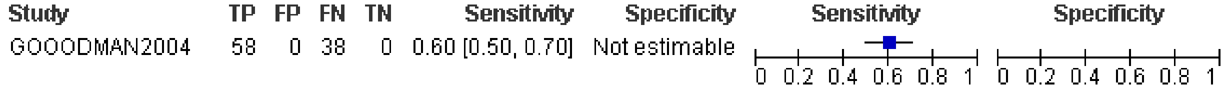
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOODMAN2001	57	151	141	3634	0.29 [0.23, 0.36]	0.96 [0.95, 0.97]

Forest plot of SDQ 1 informant: carer form (looked after children 5-10yrs).



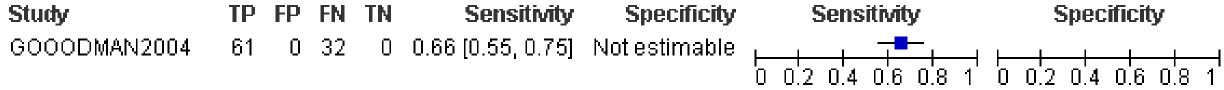
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOOODMAN2004	51	0	42	0	0.55 [0.44, 0.65]	Not estimable

Forest plot of SDQ 1 informant: carer form (looked after children 11-17yrs).



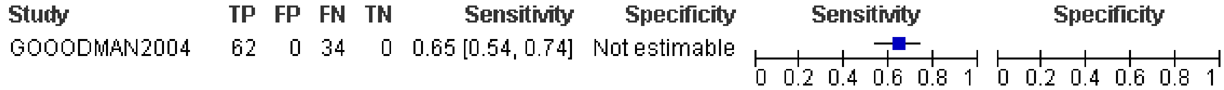
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOOODMAN2004	58	0	38	0	0.60 [0.50, 0.70]	Not estimable

Forest plot of SDQ 1 informant: teacher form (looked after children 5-10yrs).



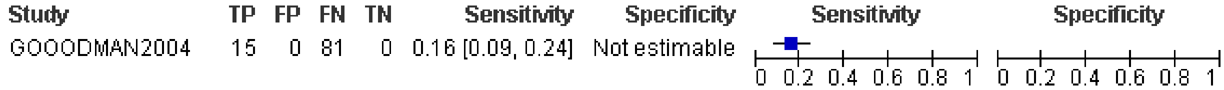
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOOODMAN2004	61	0	32	0	0.66 [0.55, 0.75]	Not estimable

Forest plot of SDQ 1 informant: teacher form (looked after children 11-17yrs).



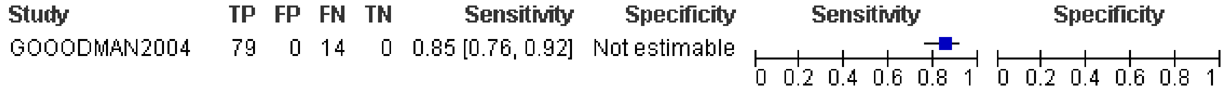
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOOODMAN2004	62	0	34	0	0.65 [0.54, 0.74]	Not estimable

Forest plot of SDQ 1 informant: self-reported form (looked after children 11-17yrs).



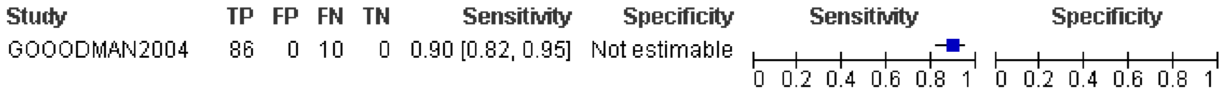
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOOODMAN2004	15	0	81	0	0.16 [0.09, 0.24]	Not estimable

Forest plot of SDQ 2 informants: carer and teacher forms together (looked after children 5-10yrs).



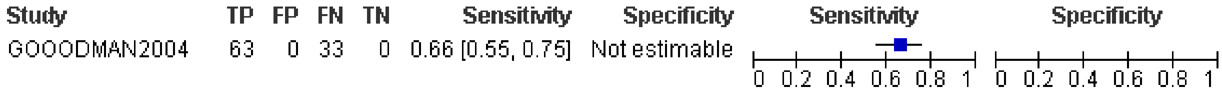
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOOODMAN2004	79	0	14	0	0.85 [0.76, 0.92]	Not estimable

Forest plot of SDQ 2 informants: carer and teacher forms together (looked after children 11-17yrs).



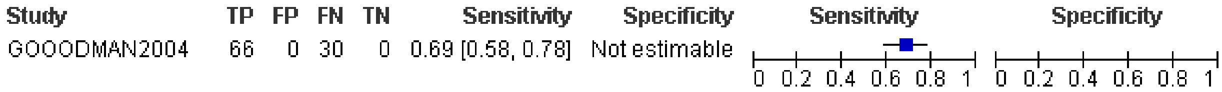
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOOODMAN2004	86	0	10	0	0.90 [0.82, 0.95]	Not estimable

Forest plot of SDQ 2 informants: carer and self-report forms together (looked after chilren 11-17yrs).



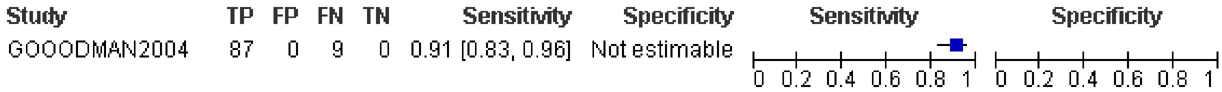
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOOODMAN2004	63	0	33	0	0.66 [0.55, 0.75]	Not estimable

Forest plot of SDQ 2 informants: teacher and self-reported forms together (looked after children 11-17yrs)



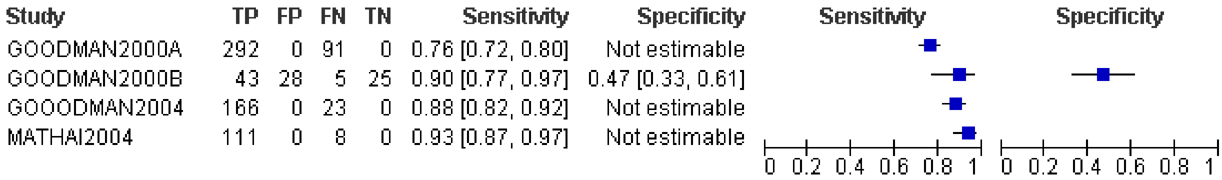
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOOODMAN2004	66	0	30	0	0.69 [0.58, 0.78]	Not estimable

Forest plot of SDQ 3 informants: carer,teacher and self-report forms (looked after children 11-17yrs).



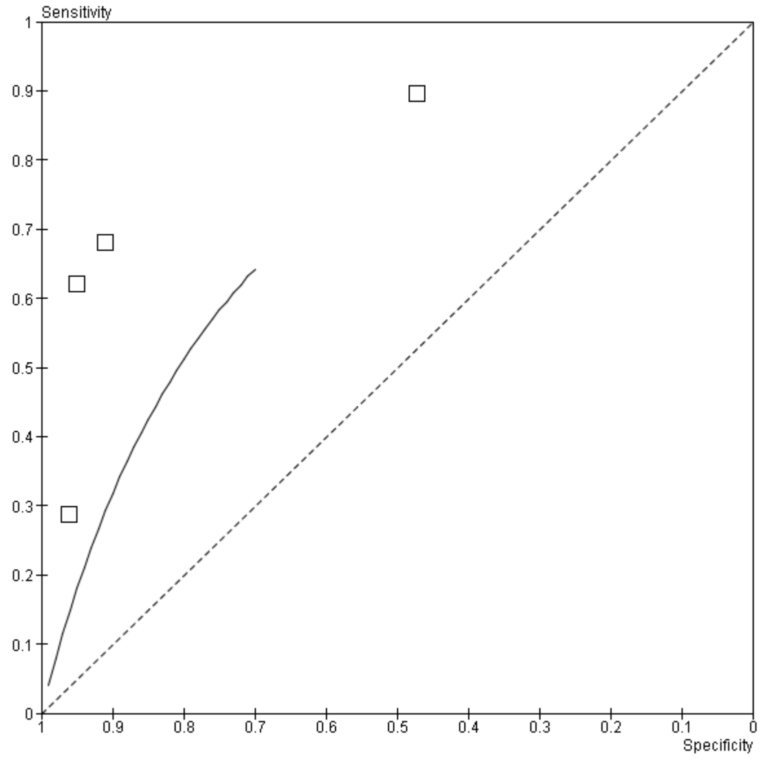
Study	TP	FP	FN	TN	Sensitivity	Specificity
GOOODMAN2004	87	0	9	0	0.91 [0.83, 0.96]	Not estimable

Forest plot of SDQ 3 informants: multi-informant (parent, teacher and self-reported forms together) calculated with algorithms (children 4-17yrs).



Study	TP	FP	FN	TN	Sensitivity	Specificity
GOODMAN2000A	292	0	91	0	0.76 [0.72, 0.80]	Not estimable
GOODMAN2000B	43	28	5	25	0.90 [0.77, 0.97]	0.47 [0.33, 0.61]
GOOODMAN2004	166	0	23	0	0.88 [0.82, 0.92]	Not estimable
MATHAI2004	111	0	8	0	0.93 [0.87, 0.97]	Not estimable

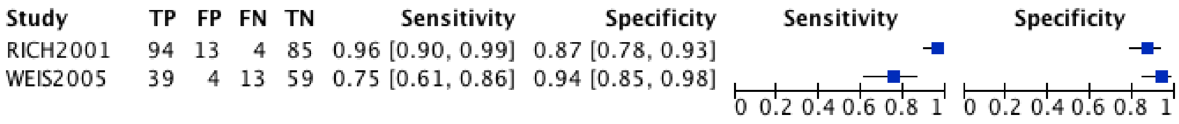
Figure 5: Summary ROC Plot for SDQ (note only studies with both sensitivity and specificity values reported are charted here)



Eyberg Child Behavior Inventory

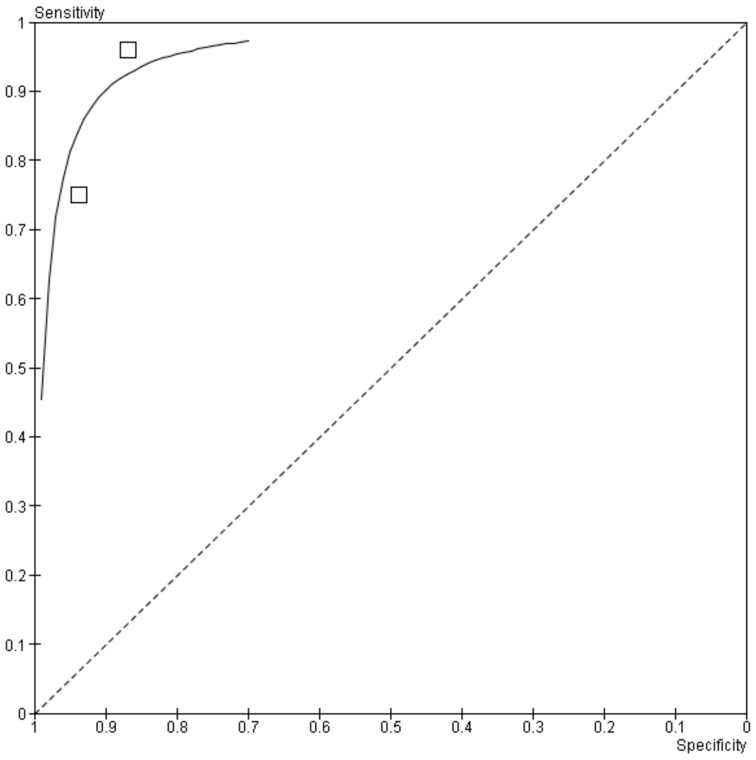
Two studies were identified that assessed discriminant validity of the ECBI (RICH2001, WEIS2005). Both studies included samples of mothers of children younger than 7 years old. The analysis showed excellent to good sensitivity for both sensitivity and specificity values in the two studies (sensitivity: range 0.75 -0.96; specificity: range 0.87-0.94) (see Figure 6 and Figure 7).

Figure 6: Forest plot of sensitivity and specificity for the ECBI



Study	TP	FP	FN	TN	Sensitivity	Specificity
RICH2001	94	13	4	85	0.96 [0.90, 0.99]	0.87 [0.78, 0.93]
WEIS2005	39	4	13	59	0.75 [0.61, 0.86]	0.94 [0.85, 0.98]

Figure 7: Summary of ROC Plot for ECBI



The pooled analysis for both sensitivity and specificity was rated as ‘excellent’ with values of 0.93 (95% CI, 0.24-0.91) for sensitivity and 0.91 (95% CI, 0.86-0.94) for specificity (see Figure 8 and Figure 9 for forest plots and Figure 10 for ROC panes).

Figure 8: Pooled data for sensitivity of the ECBI

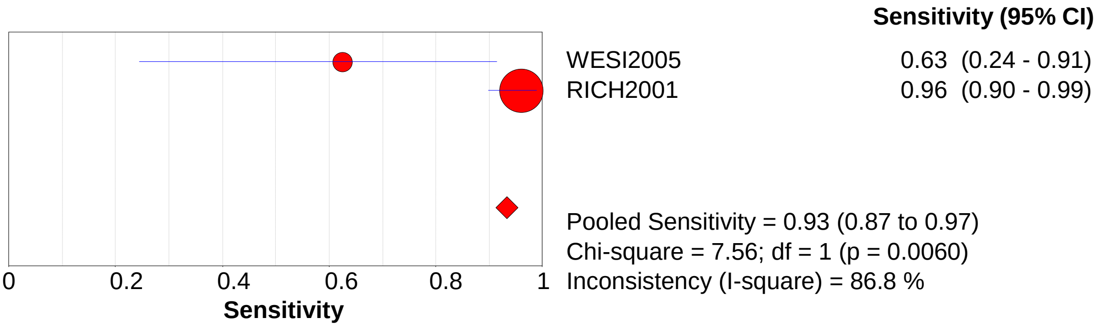


Figure 9: Pooled data for specificity of the ECBI

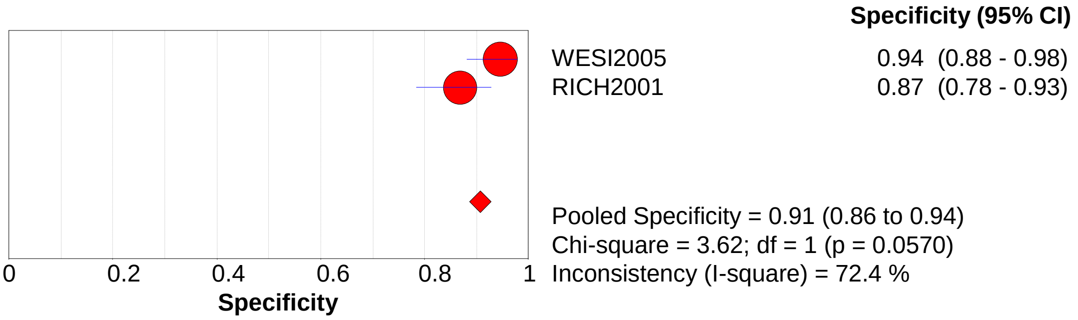
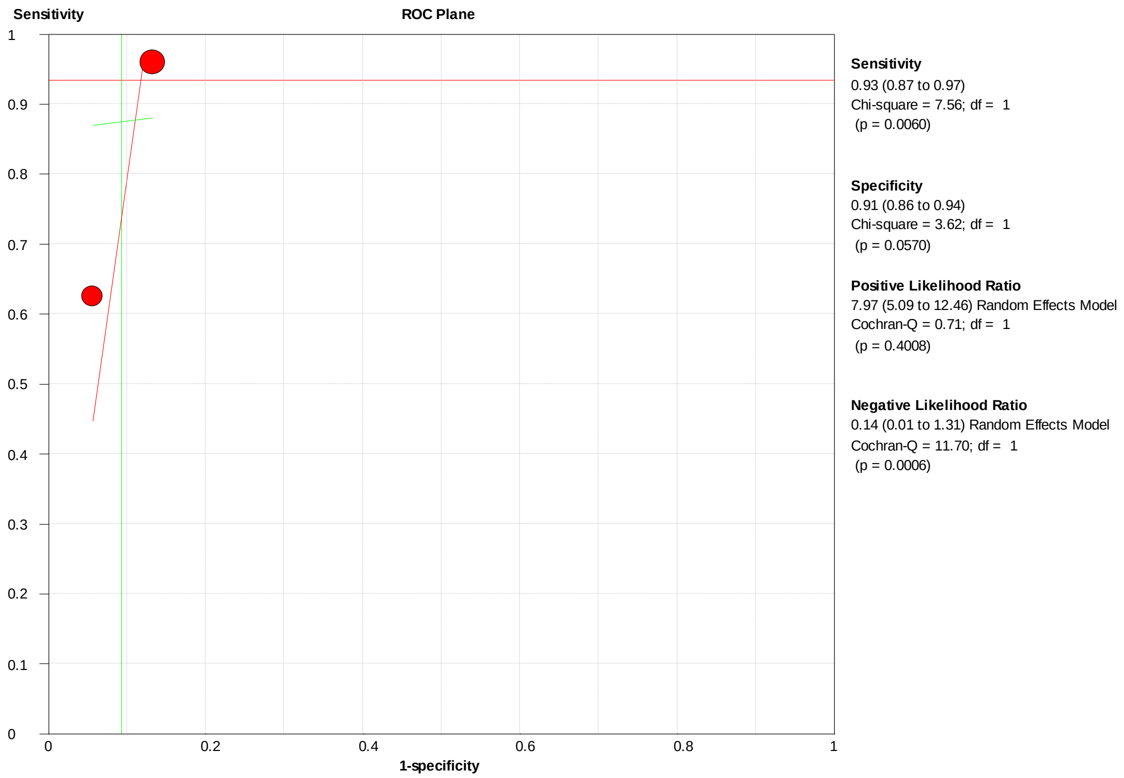


Figure 10: ROC pane for ECBI



6.2.7 Clinical evidence summary

The initial review identified three instruments (the SDQ, ECBI and SESBI-R) that met the inclusion criteria as they screened for conduct disorders and took no longer than 5 minutes to complete. A total of seven studies were included in the review, five of them evaluated the test accuracy of the SDQ while two assessed the ECBI. No studies were identified that reviewed sensitivity and specificity of the SESBI-R.

A summary of both scales' sensitivity and specificity data is presented inTable 37.

Table 37: Evidence summary table for all case identification instruments included in the review[60]

Instrument	Target condition	Number of informants/ scale version	Cut-off	Participant age	Included studies	Sens: Spec
SDQ	Conduct Problems	3 Multi-informants (parent, teacher & self-reported)	3-4 (CD subscale)/ 90th percentile	4-17 years	4	0.76 to 0.93: 0.47
	Conduct Problems	3 Multi-informants (parent, teacher & self-reported)	3-4 (CD subscale)/ 90th percentile	11-17 years[1]	1	0.91: NE
	Conduct Problems	2 informants: (parent/carer & teacher)	3-4 (CD subscale)/ 90th percentile	5-10 years[1]	1	0.85: NE
	Conduct Problems	2 informants: (parent/carer & teacher)	3-4 (CD subscale)/ 90th percentile	11-17 years[1]	1	0.90: NE
	Conduct Problems	2 informants: (parent/carer & self-report)	3-4 (CD subscale)/ 90th percentile	11-17 years[1]	1	0.66: NE
	Conduct Problems	2 informants: (teacher & self-report)	3-4 (CD subscale)/ 90th percentile	11-17 years[1]	1	0.69: NE
	Conduct Problems	1 informant: (parent/carer)	3-4 (CD subscale)/ 90th percentile	4-17 years	1	0.68: 0.91
	Conduct Problems	1 informant: (teacher)	3-4 (CD subscale)/ 90th percentile	4-17 years	1	0.62: 0.95
	Conduct Problems	1 informant (self-reported)	3-4 (CD subscale)/ 90th percentile	4-17 years	1	0.29: NE
	Conduct Problems	1 informant (carer)	3-4 (CD subscale)/ 90th percentile	5-10 years[1]	1	0.55: NE
	Conduct Problems	1 informant (carer)	3-4 (CD subscale)/ 90th percentile	11-17 years[1]	1	0.60: NE
	Conduct Problems	1 informant (teacher)	3-4 (CD subscale)/ 90th percentile	5-10 years[1]	1	0.66: NE
	Conduct Problems	1 informant (teacher)	3-4 (CD subscale)/ 90th	11-17 years[1]	1	0.65: NE

---

[60] When data for an instrument is available from more than one study, a range of test data across the included studies is provided. See forest plots for individual data by study.

			percentile			
	Conduct Problems	1 informant (self-report)	3-4 (CD subscale)/ 90th percentile	11-17 years[1]	1	0.16: NE
ECBI	CD and ODD	1 informant: (parent)	90th percentile	2-6 years	2	0.75-0.96: 0.87-0.94

Note. NE = Note estimable.
[1] Looked after children.

Strengths and Difficulties Questionnaire

The SDQ is a brief tool with the ability to identify children and young people with a conduct disorder. This is the case for both parent and teacher forms (to a lesser extent if only one form was completed), however the self-report version does not appear to be a reliable method on its own and the detection values are not much improved when this form is combined with either the parent or teacher version. The best combination of forms that identifies the highest number of children and young people with a conduct disorder is when both the parent and the teacher forms are used in the assessment of the child.

It is important to note that although the evidence for the high sensitivity of the SDQ has been extracted from five studies, each of those studies assessed the discriminant validity of different forms and for different age groups. It is also important to mention that two of the five studies have the same sample. Because of this, it was not possible to carry out pooled analyses because the existing data could not be compared In addition, some studies only reported sensitivity with no specificity, and ROC curves could not be generated for all studies. Therefore, the evidence comes from a small number of studies and should be treated with some caution.

The SDQ is a measure that allows for multi-informant reports and includes a supplement that assesses the impact of the disorder. In terms of scoring, it provides algorithms that calculate the probabilities of having the condition based on multi-informant reports and provides with 'added values' formulas to enable the scale to be used as a routinely outcome measure. The SDQ is freely available from the author's website (www.sdqinfo.org). The scale has been thoroughly validated and provides UK normative data.

Eyberg Child Behavior Inventory

The ECBI is a brief measure that assesses disruptive behaviour in children. This review identified two studies that assessed its discriminant validity (RICH2001, WEIS2005) and both included samples of children aged younger than 7 years.

The analysis showed excellent to good sensitivity for both sensitivity and specificity values in both studies, and the analysis performed to pool the data was rated as excellent. However, it should be noted that the samples in both studies were relatively small and the prevalence of conduct disorders in each sample was also very low.

The ECBI is a parent-only scale and although there is a companion teacher scale available, no data have been identified in the review. The scale is not freely available and can only be used with permission from the developers. The measure has been validated in a US population only.

6.2.8 Assessment of conduct disorders

The structure and content of the assessment process

In the review of the literature, the GDG was unable to identify any formal evaluations of the structure and content of the overall clinical assessment process for children and young people with a suspected conduct disorder other than the data on the various case identification and assessment instruments described above. In light of this, the GDG drew on their expert knowledge and experience regarding the structure and content of a clinical assessment for children and young people and their parents and carers, and used informal consensus methods as set out in Chapter 3. When considering the assessment process, the GDG assumed that any child or young person referred for such an assessment would already have been identified as possibly having a conduct disorder or there were concerns that they did.

Assessment of conduct disorders

Given the variety of presentations of conduct disorders covered by this guideline, the need to be able to assess parental functioning and the family environment, and the high prevalence of comorbid conditions, the GDG was of the view that any assessment process should be undertaken by professionals who are trained and competent and have specific knowledge of conduct disorders and its assessment. The GDG were aware that many children with a conduct disorder may simply be regarded as being 'naughty or unpleasant'; in response to this, the GDG felt it was necessary to set out the criteria for a possible diagnosis and to alert those who are in contact with children and young people of these criteria and to have a proper index of suspicion. Equally importantly, the presence of comorbid conditions such as ADHD should not preclude a consideration of a diagnosis of conduct disorder.

The GDG was also of the view that the comprehensive assessment of children and young people and their parents or carers requires a broad range of skills and knowledge. The GDG considered it important that any professional undertaking an assessment should have access to support from a range of professionals with the requisite skills to contribute to a comprehensive assessment (for example, the ability to undertake a full cognitive assessment). Given the variety of presentations of conduct disorder across different settings and situations, such as home, school and in peer groups, the GDG took the view that a family member or other carer with knowledge of the child or young person's personal history and a teacher or another person with knowledge of their school performance should be involved in the assessment. Although parental involvement was identified as key, it was also agreed by the GDG that the child or young person should be offered an interview on his or her own at some point in the assessment. This would provide an opportunity to explore issues such as potential abuse that may not always be possible in the presence of a parent or carer. The GDG was also aware of the different context in which assessments may take place, for example, the home, school or residential settings, and felt it was important that the structure and process of the assessment should be adapted to be compatible with the setting in which it was undertaken.

In considering the structure and content of an assessment for children and young people with a conduct disorder, the GDG was mindful of the mistrust that they might exhibit and potential difficulties in building a positive relationship with professionals, as described in Chapter 4. Clear explanations of the purpose of the assessment, prompt feedback and clarity about the communication of the outcome, along with a consistent person responsible for the assessment, would, in the view of the GDG, help to address these concerns and improve engagement with the assessment process. Being aware of a child's capacity to consent to be involved in the assessment process is also a crucial consideration.

The GDG took the view that the assessment of the family, and particularly parent functioning, was an important part of any comprehensive assessment. The key elements of such an assessment encompass positive and negative aspects of parenting including the use of coercion, the relationship with the wider family, the presence of domestic violence, the parent-child relationship, the physical and mental health of the parents and other family members and the involvement of any family members with the criminal justice system.

The GDG acknowledged that formal assessment tools might play a useful role in a comprehensive assessment of conduct disorder. The GDG agreed that the use of a measure such as the Strengths and Difficulties Questionnaire (Goodman, 1997), to help provide an overview of a child's difficulties, and the Child Behavior Checklist (Achenbach, 1991) to provide a more detailed quantitative assessment of a child or young person's behavioural problems, could be helpful when carrying out an assessment.

Assessment of coexisting conditions

The GDG recognised that comorbid conditions are very common in children and young people with a conduct disorder and can make the assessment of such disorders difficult. A number of commonly coexisting disorders such as a learning disability or difficulty, neurodevelopmental disorders, in particular, ADHD and autism, mental disorders such as depression and bipolar disorder, drug and alcohol misuse, neurological disorders such as epilepsy, along with a range of communication disorders such as selective autism, should be considered as part of a comprehensive assessment. The GDG drew on their expert knowledge in a number of key areas. First, those comorbidities which in their opinion presented the most significant challenges in arriving at a diagnosis of conduct disorder in that their presence may 'mask' the presence of conduct disorder and which may also have a significant bearing on the choice or likely success of the possible interventions available for the treatment of conduct disorder. The identified areas were cognitive ability, reading ability, ADHD, autism and comorbid mental health problems. Secondly, the GDG drew on its expert knowledge of well-validated measures of the areas identified above that are in use or are available for use in routine practice and therefore could readily be adopted (and in a number of services already are) for use as part of a comprehensive assessment. Based on this criteria the GDG identified the following assessment tools: the Connors Scale for ADHD (Conners et al., 1997), the Wechsler Abbreviated Scale of Intelligence (WASI) (Psychological Corporation, 1999) for the assessment of cognitive function, , The Strengths and Difficulties Questionnaire for the identification of comorbid mental disorders (Goodman, 1997), and the Wechsler Objective Reading Dimensions (WORD) (Rust et al., 1993)) for the assessment of reading difficulties. The GDG were unable to identify a single measure for the assessment of autism that, in their opinion, could be readily adopted into a comprehensive assessment for conduct disorder and therefore referred to the NICE Guideline on Assessment and Diagnosis of Childhood Autism (NICE, 2011a).

Risk assessment and management

Children and young people with a conduct disorder are often vulnerable and at risk because of their behaviour and the behaviour of others in their family or the surrounding environment; drug and alcohol misuse may further increase that risk. The GDG considered risk assessment and management to be an important area and in developing their recommendations drew on the advice developed for risk assessment in other relevant NICE guidelines (for example, NICE, 2009a). The GDG judged that any risk assessment of children and young people with conduct disorder should consider the risk of self-harm, in particular, the risk of suicide in young people who are also depressed. Risk of harm to others also needs to be considered including harm to family members including siblings. Children and young people with a conduct disorder are perhaps most at risk of harm including physical and sexual abuse from others and the GDG was of the view that inquiry about this should form part of any comprehensive assessment.

Assessing the needs of families and carers

The GDG recognised the challenges faced by a family with a child or young person with a conduct disorder and that consideration should be given to the assessment of parents' and carers' needs.

Feedback following assessment

The GDG considered how the outcome of a comprehensive assessment should be fed back to children and young people and their parents or carers. The view of the GDG was that there was a need for a comprehensive care plan, which should include specification of:

- the nature and extent of the conduct problems
- the nature and extent of any coexisting mental or physical disorders
- the level of personal, social, occupational, housing and educational needs
- the problems faced and their impact on families'/ carers' needs

- the strengths and the needs of the young person and their family/carer
- which individuals and which agencies may be involved in providing care
- how and to whom any information from the assessment will be communicated.

The GDG took the view that these should be fed back in a manner that could be understood by a young person or in the presence of a family member or carer for a child.

The GDG also considered how the assessment might influence the choice and nature of the intervention offered to the child, young person and the family or carer, and reviewed the *Common Mental Health Disorders* (NICE, 2011b) guideline. The GDG followed the methods outlined in Chapter 3 and adapted three recommendations relating to identifying the correct treatment options. Table 38 contains the original recommendations from *Common Mental Health Disorders* in column 1 and the adapted recommendations in column 2. Where recommendations required adaptation, the rationale is provided in column 3. Where the only adaptation was to change 'people with common mental health disorders' to 'children and young people with a conduct disorder' or 'families and carers' to 'parents and carers' this is noted in the third column as 'no significant adaptation required'. In column 2 the numbers refer to the recommendations in the NICE guideline.

Common Mental Health Disorders is an adult guideline, however, the GDG took the view that as far as possible, the child or young person should be active participants in any decisions about the choice of intervention and their preferences should be taken into account.

1 **Table 38: Recommendations from Common Mental Health Disorders for inclusion**

Original recommendation from Common Mental Health Disorders	Recommendation following adaptation for this guideline	Reasons for adaptation
1.4.1.1 When discussing treatment options with a person with a common mental health disorder, consider: • their past experience of the disorder • their experience of, and response to, previous treatment • the trajectory of symptoms • the diagnosis or problem specification, severity and duration of the problem • the extent of any associated functional impairment arising from the disorder itself or any chronic physical health problem • the presence of any social or personal factors that may have a role in the development or maintenance of the disorder • the presence of any comorbid disorders.	1.3.1 When discussing treatment or care interventions with a child or young person with a conduct disorder and, if appropriate, their parents or carers, with a conduct disorder take account of : • their past and current experience of the disorder • their experience of, and response to, previous interventions and services • the nature, severity and duration of the problem(s) • the impact of the disorder on educational performance • any chronic physical health problem • the presence of any social or family factors that may have a role in the development or maintenance of the identified problem(s) • the presence of any coexisting conditions.	This recommendation was adapted to make it relevant to the specific needs of children and young people with a conduct disorder, such as the impact of the disorder on educational attainment. The impact of education was a recurrent theme identified in Chapter 4.
1.4.1.2 When discussing treatment options with a person with a common mental health disorder, provide information about: • the nature, content and duration of any proposed intervention • the acceptability and tolerability of any proposed intervention • possible interactions with any current interventions • the implications for the continuing provision of any current interventions.	1.3.2 When discussing treatment or care interventions with a child or young person with a conduct disorder and, if appropriate, their parents or carers, provide information about: • the nature, content and duration of any proposed intervention • the acceptability and tolerability of any proposed intervention • the possible impact on interventions for any other behavioural or mental health problem • the implications for the continuing provision of any current interventions.	No significant adaptation required, except to clarify 'current interventions' in the original recommendation.
1.4.1.3 When making a referral for the treatment of a common	1.3.3 When making a referral for treatment or care interventions	No significant adaptation required.

Original recommendation from Common Mental Health Disorders	Recommendation following adaptation for this guideline	Reasons for adaptation
mental health disorder, take account of patient preference when choosing from a range of evidence-based treatments.	for a conduct disorder, take account of the preferences of the child or young person and, if appropriate, their parents or carers when choosing from a range of evidence-based interventions	

6.3 FROM EVIDENCE TO RECOMMENDATIONS

In drawing up recommendations on case identification and assessment, the GDG drew on the evidence review of case identification instruments in Sections 6.2.4-6.2.7 and the structured GDG discussion of the assessment process summarised in Section 6.2.8

Relative value placed on the outcomes considered

In considering case identification instruments, the primary outcome was the increased detection of conduct disorders. A secondary concern was the possible generation of false positives with potentially negative consequences for a child and their family.

Trade-off between clinical benefits and harms

Data were only available for two instruments as case identification instruments, the SDQ and the ECBI. In observer-administered forms, both had reasonable sensitivity and specificity, but the dataset for the SDQ was considerably larger and was based on UK samples. In addition, although the two instruments took the same time for administration, the SDQ provided important information about other aspects of a child or young person's mental health and is suitable for a wider age range. The SDQ can also be used as a routine outcome measure. For these reasons, the GDG decided to recommend the SDQ as a case identification instrument.

No formal evaluation of systems for the assessment of children and young people with conduct disorder was identified. The GDG was therefore required to use its expert knowledge and experience in drawing up recommendations for the structure and content of the assessment process. The content of these discussions is described in Section 6.2.8. Given the limited formal evidence, for the process and content of the assessment as opposed to that for individual components of the assessment, the GDG was cautious in developing recommendations but was concerned to emphasise a number elements which it felt were essential to include in a comprehensive assessment for the child or young person with a conduct disorder. These included:

- responding to the concerns of parents, carers and professionals about the child or young person's behaviour

- being aware of comorbid disorders and their impact on both functioning and the assessment process itself
- ensuring competence in assessment skills
- actively involving the child or young person (with the opportunity to be interviewed alone) and the parents or carers
- fully assessing the child or young person's needs
- assessing parenting quality and the family environment
- using formal assessment scales to support the assessment process
- assessing of risk
- developing a care plan that takes account of child or young person's and the parents' or carers' preferences and pays attention to the impact of previous interventions.

In developing the recommendations the GDG sought to develop a structure for the assessment, which: (a) took account of the different needs of children and young people and their parents or carers; (b) would facilitate the identification of effective interventions for the problems identified ((c) used well-vaildated instruments which were available for, or were already in routine use and (d) would best integrate with existing systems for the care and treatment of children and young people with a conduct disorder.

Quality of the evidence

The methodological quality of the evidence included in the review of case identification instruments was generally adequate. However, some important aspects of covered by the checklist (for example, whether the reference standard results were blinded) were rated as unclear. In addition, only two studies of the ECBI provided appropriate data, and there were no studies of the SESBI-R.

6.4 RECOMMENDATIONS

6.4.1 Clinical practice recommendations

Working safely and effectively with children and young people

6.4.1.1 When providing assessment or treatment interventions for children and young people with a conduct disorder, ensure that the nature and content of the intervention is suitable for the child or young person's developmental level.

Case identification and initial assessment of children and young people with a possible conduct disorder

6.4.1.2 Adjust delivery of case identification tools and assessment methods to:

- the needs of children and young people who are suspected of having a conduct disorder **and**
- the setting in which they are delivered (for example, health and social care, educational settings or the criminal justice system).

6.4.1.3 Consider an initial assessment for a suspected conduct disorder if a child or young person's parents or carers, health or social care professionals, school or college, or peer group raise concerns about persistent antisocial behaviour.

6.4.1.4 Do not regard a history of a neurodevelopmental condition (for example, attention deficit hyperactivity disorder [ADHD]) as a barrier to assessment.

6.4.1.5 For the initial assessment of a child or young person with a suspected conduct disorder, consider using the Strengths and Difficulties Questionnaire[61] (completed by both a parent and a teacher) and also assess for the presence of:

- a coexisting mental disorder (for example, depression, post-traumatic stress disorder)
- a neurodevelopmental condition (in particular ADHD and autism)
- a learning disability or difficulty.

6.4.1.6 If no significant complicating factors (as set out in recommendation 6.4.1.5) are present consider direct referral for an intervention.

6.4.1.7 If significant complicating factors are present (as set out in recommendation 6.4.1.5), refer the child or young person to a specialist CAMHS for a comprehensive assessment.

Comprehensive assessment

6.4.1.8 A comprehensive assessment of a child or young person with a suspected conduct disorder should be undertaken by a health or social care professional who is competent to undertake the assessment and should:

- offer the opportunity for the child or young person to meet the professional on their own
- involve a parent, carer or other third party known to the child or young person who can provide information about current and past behaviour
- if necessary involve more than one health or social care professional to ensure a comprehensive assessment is undertaken.

6.4.1.9 Before starting a comprehensive assessment, explain to the child or young person how the outcome of the assessment will be communicated to them. Involve a parent, carer or advocate to help explain the outcome.

6.4.1.10 The standard components of a comprehensive assessment of conduct disorders should include asking about and assessing the following:

- core conduct disorders symptoms including:
  - patterns of negativistic, hostile, or defiant behaviour in children aged under 11 years

---

[61] Goodman R (1997) The Strengths and Difficulties Questionnaire: a research note. Journal of Child Psychology and Psychiatry, and Allied Disciplines;38 (Suppl. 5):581–6

  - aggression to people and animals, destruction of property, deceitfulness or theft and serious violations of rules in children aged over 11 years
- current functioning at home, at school or college and with peers
- parenting quality
- history of any past or current mental disorders and/or physical health problems.

6.4.1.11 As part of a comprehensive assessment, take into account and address possible coexisting conditions such as:

- learning difficulties or disabilities
- neurodevelopmental conditions such as ADHD and autism
- neurological disorders including epilepsy and motor impairments
- other mental disorders (for example, depression, post-traumatic stress disorder and bipolar disorder)
- drug and alcohol misuse
- communication disorders (for example, speech and language problems, selective mutism).

6.4.1.12 Consider using formal assessment instruments to aid the diagnosis of coexisting conditions such as:

- the Child Behavior Checklist (CBCL) [62] for all children and young people
- the Strengths and Difficulties Questionnaire (SDQ) [63] for all children or young people
- the Connors Scale[64] for a child or young person with suspected ADHD
- a validated measure of autistic behaviour for a child or young person with a suspected autism spectrum disorder (see Autism diagnosis in children and young people [NICE clinical guideline 128])
- the Wechsler Abbreviated Scale of Intelligence (WASI)[65] for a child or young person with a suspected learning disability
- the Wechsler Objective Reading Dimensions (WORD)[66] for a child or young person with a suspected reading difficulty.

---

[62] Achenbach TM (1991). Manual for the Child Behavior Checklist and 1991 Profile. Burlington, VT: University of Vermont, Department of Psychiatry, 1991.

[63] Goodman R (1997). The Strengths and Difficulties Questionnaire: a research note. Journal of Child Psychology and Psychiatry, and Allied Disciplines 1997;38 (Suppl. 5):581--6.

[64] Conners CK, Wells KC, Parker JDA, et al .(1997) A new self-report scale for assessment of adolescent psychopathology: factor structure, reliability, validity and diagnostic sensitivity. Journal of Abnormal Child Psychology 1997;25:487--497.

[65] Psychological Corporation (1999). Wechsler Abbreviated Scale of Intelligence manual. San Antonio, TX: Psychological Corporation, 1999.

[66] Rust J, Golombok S, Trickey, G (1993). WORD, Wechsler Objective Reading Dimensions Manual. London: Psychological Corporation, 1993.

6.4.1.13 As part of a comprehensive assessment, assess the risks faced by the child or young person and if needed develop a risk management plan for self-neglect, exploitation by others, self-harm or harm to others.

6.4.1.14 As part of a comprehensive assessment, assess for the presence or risk of physical, sexual and emotional abuse in line with local protocols for the assessment and management of these problems.

6.4.1.15 Conduct a comprehensive assessment of the child or young person's parents or carers, which should cover:

- positive and negative aspects of parenting, in particular any use of coercive discipline
- the parent–child relationship
- positive and negative adult relationships within the child or young person's family, including domestic violence
- parental wellbeing, including mental health and/or substance misuse problems and criminal behaviour.

6.4.1.16 Develop a care plan with the child or young person, and their parents of carers, which includes a profile of their needs, risks to self or others, and any further assessments that may be needed, including the extent and nature of:

- the conduct disorder and any associated behavioural problems
- any coexisting mental or physical health problems
- speech, language and communication difficulties
- personal and social functioning to indicate any needs (personal, social, occupational, housing or educational)
- family or carer needs
- the child or young person's strengths, and those of the parents or carers.

Identifying effective treatment and care options

6.4.1.17 When discussing treatment or care interventions with a child or young person with a conduct disorder and, if appropriate, their parents or carers, take account of:

- their past and current experience of the disorder
- their experience of, and response to, previous interventions and services
- the nature, severity and duration of the problem(s)
- the impact of the disorder on educational performance
- any chronic physical health problem
- the presence of any social or family factors that may have a role in the development or maintenance of the identified problem(s)
- the presence of any coexisting conditions[67].

---

[67] Adapted from 'Common mental health disorders' (NICE Clinical Guideline 123).

6.4.1.18 When discussing treatment or care interventions with a child or young person with a conduct disorder and, if appropriate, their parents or carers, provide information about:

- the nature, content and duration of any proposed intervention
- the acceptability and tolerability of any proposed intervention
- the possible impact on interventions for any other behavioural or mental health problem
- the implications for the continuing provision of any current interventions[68].

6.4.1.19 When making a referral for treatment or care interventions for a conduct disorder, take account of the preferences of the child or young person and, if appropriate, their parents or carers when choosing from a range of evidence-based interventions[69].

---

[68] Adapted from 'Common mental health disorders' (NICE Clinical Guideline 123).

[69] Adapted from 'Common mental health disorders' (NICE Clinical Guideline 123).

7 PSYCHOLOGICAL/PSYCHOSOCIAL TREATMENT (INCLUDING INDICATED PREVENTION) INTERVENTIONS

7.1 INTRODUCTION

Multifactorial causal factors have been identified in relation to conduct disorder (for example, social deprivation issues, family interactions, individual developmental factors and peer relationships), and a wide potential spectrum of challenges are associated with a diagnosis of conduct disorder (for example, problems at home, in school and in the community). For these reasons, psychological interventions for conduct disorders have been developed across a wide spectrum from those focused on the psychological wellbeing of the individual child to those which incorporate familial and social domains. The interventions currently available have also been developed from a range of theoretical frameworks, from those based on social learning theory, to more individually conceptualised cognitive behavioural therapy (CBT) approaches, systemic approaches and psychodynamic approaches. This chapter reviews evidence of the clinical effectiveness (and where possible, the cost effectiveness) for the range of interventions which can be described broadly as coming within the 'psychosocial' sphere. For the purposes of the review, the interventions have been grouped around their key focus of delivery, in terms of whether they are child-focused, parent-focused, foster carer focused, family-focused, parent-child focused, multi-modal, multi-component, or classroom-based. It should be noted any system of categorisation has elements of arbitrariness and is subject to boundary disputes.

7.2 CLINICAL EVIDENCE REVIEW

7.2.1 Categorisation of interventions

Child-focused interventions

Most carefully-evaluated methods of intervention for conduct disordered children are based on behavioural or cognitive behavioural principles. There are also treatments utilising humanistic or psychodynamic methods, including those based on attachment theory, but on the whole these have not been evaluated rigorously and are less supported by the existing evidence. The evidence basis is more extensive for cognitive behavioural approaches, a broad term referring to a variety of methods that help a young person to learn to identify the connections between their thoughts, feelings and behaviour, so that they can learn to change one by changing another (for example, learning to change their automatic thoughts about another person's hostile intentions in order to change their own standard behavioural response of being aggressive, or changing their behaviour for example by starting to do an activity that gives them a sense of achievement in order to change their mood). CBT typically involves three stages: psychoeducation to help the young person understand more about their own thoughts, behaviour and mood and the links between these, identification with the young person of areas to try to work on, and then a program of learning and practicing those new patterns and seeing what effect they have. CBT for children or young people might be delivered individually or in the context of group sessions. Duration of treatment will vary with the severity of the problems but could involve up to 25 or 30 weekly sessions. Programmes that intervene with individual children and young people include those that seek to improve social skills, often referred to as social skills training, helping them to utilise social behaviours that instigate and maintain positive responses from others. Other approaches focus on the control of negative mood, such as anger coping or management training, where techniques are learned to self-monitor changes of emotion, identify triggers of feelings of anger or aggression, and techniques developed to diffuse them. Problem-solving skills training helps the individual to understand links between their own behaviour and its consequences and generate responses that are more likely to produce prosocial outcomes. In all these methods structured tasks may be introduced, based on real-life situations that are meaningful to the young person, and various treatment components are utilised such as in vivo practice, role play and homework.

Parent-focused interventions

The main goals of parenting interventions are to enable parents to improve their child's behaviour and to improve their relationship with their child. In the majority of programs, this is undertaken through helping parents learn behaviour-management principles grounded in social-learning theory. There are many different types of parent-focused interventions (often described as parent-training or education programmes). Many are conducted primarily with the parents and involve no direct intervention with the child. However, in some individual programmes, both parent and child will be present in sessions and the therapist will coach the parent directly, in play with their child, to help them strengthen the relationship with their child and learn . There are two main types of programme, behavioural and relationship, but most parenting programmes combine elements of both (Gould & Richardson, 2006). Behavioural programmes focus on helping parents learn skills needed to address the causes of problem behaviours. Relationship programmes aim to help parents understand both their own and their child's emotions and behaviour and to improve their communication with the child.

Parent-focused interventions tend to be intensive and short term, usually 1.5–2 hours every week for 8–12 weeks. They can be held in a variety of settings including the hospital, clinic, community or home, and they can be conducted in groups, typically of 6–12 participants, or individually. Ideally, programmes are provided in a congenial setting, accessible by parents and with crèche facilities for children and siblings. Programmes can be run by a range of helping professionals including psychologists, therapists, nurses, counsellors, social workers or community workers, and in some parents who have been through programmes can themselves can be involved. Some parent-training/education programmes can also be self-administered in the home, using printed training materials or audiovisual training tools such as videos.

Some parent-training programmes contain specific additional elements to help address factors interfering with effective parenting, such as marital problems, depression and lack of adult social skills, as well as their children's behaviour problems. Programmes may also combine parent training with other interventions such as child programmes based on social learning theory.

Parent-focused interventions (which include the child in at least some sessions)

Parent-child interaction therapy was developed originally by Hanf and is based on a two-staged intervention model (Querido & Eyberg, 2005). The overall objective is to help parents learn the skills necessary to establish a nurturing and secure relationship with the child whose behaviour is disruptive, while shifting the balance of the child’s behaviour from the negative to prosocial. The first phase focuses on building the parent-child bond through play, through which child social skills and parenting skills are supported, and the second phase is similar to CBT in helping the parent to set realistic expectations, improve consistency and fairness, and reducing reinforcement of negative behaviour. This mode of therapy draws at the theoretical level on Baumrind’s developmental studies which identified associations between parenting styles, as well as attachment and social learning theories (Foote et al., 1998).

Family-focused interventions

Family therapy is a generic term for a range of approaches to engaging with the whole family, together with the child or young person, to address problematic behaviours including communication patterns, discipline or supervision. The assumption underpinning most forms of family therapy where conduct disorders are being addressed is that family interactions can maintain or worsen conduct problems; consequently the family needs to be included as a critical agent of change. Various approaches to family therapy have been developed; those most prominent in the treatment of conduct disorders are described below.

Strategic Family Therapy takes as its therapeutic focus the internal organisation of the family, its cohesion and role structure. Conduct problems are viewed as resulting from malfunctioning of family systems, as a response to which the family seeks to regain or maintain equilibrium and any threats whether external or internal are met by attempts to attain self-stabilisation. Family therapists adopting a strategic approach attempt to influence family interactions or shared family assumptions and to reorganise or re-establish family hierarchies and patterns of emotional engagement that are adaptive and productive.

Functional family therapy (FFT) is a manualised form of systemic family therapy for adolescent conduct disorders, which is designed to intervene in ways that closely match the family relationships and culture. Conduct problems are as conceptualised as communications that may serve some function in the family environment and which are maintained by family interactions. FFT is a phase and developmental model. In the initial phases, the focus is on engaging and motivating family members who are characteristically caught up in negative interaction cycles of negativity and blame. Family sessions typically take place in the family home and the emphasis is on breaking down barriers that could prevent the family members engaging in treatment. In the behaviour change phase, the focus is on facilitating competent family problem-solving; and using a range of parenting and CBT interventions to reduce child conduct problems and improve the parent child relationship. In the generalisation phase, families learn to apply new skills in a range of situations and to deal with setbacks and are assisted to engage more fully with community resources (Alexander & Robbins, 2010). Whole family sessions are conducted according to family need, often 2 or 3 times a week initially, but reducing in intensity over the course of treatment, which spans between eight and thirty sessions over three to six months. Thus, FFT attempts to influence and alter family interactions and beliefs, improve communication patterns to support more appropriate functioning and help the child and parent develop specific skills.

Multi-modal interventions

Ecological or 'milieu' interventions are interventions that aim to impact on the entire ecosystem or 'milieu' in which the child or young person operates – the focus is on changing the environment around the young person, in order to change the young person's behaviour. Multisystemic therapy (MST) was specifically developed for working with conduct disordered adolescents (Henggeler et al., 1998) and takes antisocial behaviour to be caused and sustained by multiple factors, any of which may be intervened with during multisystemic therapy, using a range of evidence based intervention methods. In keeping with parent-based approaches, the primary caregiver is seen as the primary agent of change, but rather than focussing primarily on the parent-child relationship as is done in parent-training, the aimed at younger children, the primary caregiver is instead encouraged to take part in developing and delivering interventions across home, school, the local community etc. The aim of MST is to enable the 'systems' around the young person to effectively manage the young person in a way that reduces their antisocial behaviour. The particular foci of treatment vary between families, in keeping with the varied causes of conduct disorder between young people, so that in one family there may be a strong focus on helping the parent to manage peer relationships and school issues, whereas in another the focus may be on reducing conflict in the parental couple relationship to reduce the modelling of aggression in the home (Littell et al., 2005). A package of intervention is negotiated with the family and other key stakeholders that is complex, multifaceted and time limited but, crucially, is highly individualised to meet the needs of the young person and the family. Crucially, MST interventions are designed to be delivered in a way that engages hard-to-reach families, and so include a number of key differences from standard practice such as delivery via one multi-skilled therapist, rather than several different agencies, delivery of interventions entirely in the community rather than a clinic at locations and times that suit the family (including evenings and weekends), and provision of a 24/7 duty cover system to ensure that families receive support from the MST team when crises are actually occurring. Finally, there is a significant focus from the outset on sustainability and generalisation of skills, so that the therapist will always be looking at how to develop the ability of the immediate network (that is the primary caregiver, their social supports, and the school) to create change, rather than expediting change by creating it themselves. For example, if it seems appropriate that a young person is encouraged to become involved in some new prosocial evening activities, an MST therapist would not simply arrange these and escort the young person to them, but would rather help the primary caregiver to think about whether such activities might make a difference to the young person's behaviour, and if they would, to learn how to find out about local activities, and to make a plan for how to get the young person there.

An alternative way of providing an ecological intervention is to temporarily move a young person out of their existing family system and into a network that is better equipped and supported to address their needs, in order to start to create change for them, and at the same time work with their original family system, with a view to rehabilitation home. These are the key elements of Multidimensional Treatment Foster Care (MTFC), which could be considered as a fostering equivalent to MST, as it also targets multiple settings and determinants of antisocial behaviour. Based on social learning theory and the work of the Oregon Social Learning Centre, MTFC uses the foster home as the primary site of intervention. The 'treatment team' is comprised of the foster carers and a multidisciplinary clinical team working together under the leadership of an experienced clinician. Treatment plans for the young person are highly individualised and designed and co-ordinated across the treatment team, including within the foster care home. MTFC works across family, school and peer settings but with specially trained and selected foster carers as key agents of change (Liabo & Richardson, 2007). The clinical team provides a range of CBT interventions that are specific to the child's problems. . The young person also becomes involved in a range of activities that are selected to maximise exposure to positive influences. Foster carers have access to resources and support services on a 24hour basis, which are provided by the clinical team. One key difference between MTFC and MST (apart from the difference in setting) is that in MTFC a number of clinical staff will be involved in delivering interventions related to a particular child, whereas in MST usually only one therapist would work directly with a family (although the whole team would be involved in treatment planning).

Classroom-based interventions

The school is one of the targets that may be the subject of interventions in multi-modal approaches such as MST and MTFC, but some approaches to addressing conduct disorders take the school as the primary focus of intervention. The rationales for classroom-based approaches include the preponderance of time children spend in school, the variability of levels of conduct disturbance in schools that are matched on other relevant variables, the finding that children with conduct problems improve or deteriorate in their behaviour in the direction of the school milieu to which they move, and the finding that the level of behavioural disturbance in a school correlates with organisational characteristics (Fonagy et al., 2002). School-based interventions targeted at children and young people with conduct disorders include interventions aimed at different system levels, from the behaviour of the teacher, to classroom-based contingency programmes, to so-called 'ecosystemic' approaches which seek to influence the culture of a whole school. Interventions tend to be broadly based on social learning theory, for example interventions aimed at teacher behaviour generally seek to encourage them to be more responsive to attending to and rewarding the prosocial behaviour of disruptive children, and refraining from responses that reward antisocial behaviour. Contingency management programmes have also been developed that seek to engage the class, using token economy methods or social learning approaches to decrease disruptive behaviour and reduce aggression. Ecosystemic approaches include school-wide methods such as that developed by Olweus (1994) to reduce bullying in schools. A number of other programmes designed to improve conflict resolution and reduce aggressive behaviour are relevant to the management of conduct disordered children, although evaluations of such programmes tend not to include clinical diagnosis of CD or ODD as a variable.

Finally, child-focussed psychosocial interventions such as those described at the beginning of this section may be offered to individual children in the school setting rather than the clinic setting, and may range from counselling to cognitive behavioural interventions.

Multi-component interventions

For the purposes of the guideline, multi-component interventions were defined as those that used any combination of the interventions described above. In practice, trials often tested the combination of child-focused, parent-focused and classroom-based interventions. Multi-component interventions are distinct from multi-modal interventions, as there is no attempt to change the environment around the child.

7.2.2 Indicated prevention and treatment interventions

As discussed in Chapter 5, a distinction can be made between prevention and treatment interventions, and within preventative interventions, a further distinction can be made between universal, selective and indicated interventions. Separate review questions were initially developed for selective, indicated, and treatment interventions (universal interventions were excluded from the scope; further information about each category can be found in the full review protocols presented in Appendix 15).

After the evidence had been synthesised, it became evident that there was considerable overlap between trials of indicated prevention and treatment interventions, both in terms of a) the sample of participants recruited, as shown by recruitment methods and baseline symptom scores, and b) by the interventions offered. Although selective prevention interventions show some similarity with treatment interventions, the sample is by definition very different, as recruitment of children and young people is based on individual risk factors (for example, low school achievement), family risk factors (for example, antisocial parents), or socioeconomic risk factors (for example, low family income).

Because of the overlap between indicated prevention and treatment intervention trials, a decision was made to combine these in the review presented in this chapter. The GDG suggested that doing this makes sense clinically, but also allows statistical methods to be used to examine whether there is any difference in intervention effectiveness.

7.2.3 Clinical review protocol

A summary of the review protocol, including the review questions, information about the databases searched, and the eligibility criteria used for this section of the guideline, can be found in Table 39 (a complete list of review questions can be found in Appendix 5; further information about the search strategy can be found in Appendix 7; the full review protocols can be found in Appendix 15).

Table 39: Clinical review protocol for the review of indicated prevention and psychological/psychosocial treatment interventions

Component	Description
Review questions	• What indicated prevention interventions for at risk individuals (including children/young people or their parents/families/carers) reduce the likelihood of children and young people developing a conduct disorder? • For children and young people with conduct disorders, what are the benefits and potential harms associated with individual and group psychosocial interventions? • For children and young people with conduct disorders, what are the benefits and potential harms associated with parenting and family interventions? • For children and young people with conduct disorders, what are the benefits and potential harms associated with multimodal interventions? • For children and young people with conduct disorders, what are the benefits and potential harms associated with school behaviour management? • For children and young people with conduct disorders, should interventions found to be safe and effective be modified in any way in light of coexisting conditions (such as ADHD, depression, anxiety disorders, attachment insecurity) or demographics (such as age, particular black and minority ethnic groups, or gender)?
Objectives	• To evaluate the clinical effectiveness and safety of indicated prevention and treatment interventions for conduct disorders • To evaluate if any modifications should be made to interventions to take into account co-existing conditions or demographic variation.
Population	Children and young people (aged 18 years and younger), including looked after children and those in contact with the criminal justice system, diagnosed with a conduct disorder (CD), including oppositional defiant disorder (ODD), or with persistent offending behaviour, or high risk with minimal but detectable signs or symptoms foreshadowing a diagnosis (CD and ODD are characterised by repetitive and persistent patterns of antisocial, aggressive or defiant behaviour that amounts to significant and persistent violations of age-appropriate social expectations).
Intervention(s)	• **Child-focused** (for example, social skills training) • **Parent-focused** (for example, Incredible Years Parent Training; Triple P) • **Foster Carer focused** (for example, Keeping Foster Parents Trained and Supported) • **Parent–child-based** (for example, Incredible Years Parent Training + IY Dina Dinosaur Child Training) • **Parent–teacher-based** (for example, the Early Impact Intervention for parents and for teachers) • **Family-focused** (for example, Functional Family Therapy) • **Multi-modal** (for example, Multisystemic Therapy) • **Multi-component** (for example, Incredible Years - Teacher Classroom Management Program + Incredible Years Parent Training + IY Dina Dinosaur Child Training) • **Classroom-based** (for example, Incredible Years - Teacher Classroom Management Program).
Comparison	Treatment as usual, no treatment, waitlist control, active control, other

	active interventions.
Critical outcomes	• Child Outcomes: • Agency contact (for example, residential care, criminal justice system) • Antisocial behaviour (at home, at school, in the community) • Drug/alcohol use • Educational attainment (that is, the highest level of education completed) • Offending behaviour • School exclusion due to antisocial behaviour.
Electronic databases	Mainstream databases: Embase, Medline, PreMedline, PsycINFO Topic specific databases and grey literature databases (see search strategy in Appendix 7)
Date searched	Inception to June 2012
Study design	RCT
Note. RCT = Randomised Controlled Trial.	

7.2.4 Studies considered[70]

204 RCTs (N = 27,292) met the eligibility criteria for this review: AUGUST2001 (August et al., 2001), AUGUST2003 (August, 2003), AUGUST2006 (August et al., 2006), ADAMS2001 (Adams, 2001), ALEXANDER1973 (Alexander, 1973), ARBUTHNOT1986 (Arbuthnot & Gordon, 1986), AUGIMERI2007 (Augimeri, 2007), AZRIN2001 (Azrin, 2001), BAKER-HENNINGHAM2009 (Baker-Henningham, 2009b), BAKER-HENNINGHAM2012 (Baker-Henningham et al., 2012), BANK1991 (Bank, 1991), BARRETT2000 (Barrett, 2000), BAUER2000 (Bauer et al., 2000), BEHAN2001 (Behan et al., 2001), BERNAL1980 (Bernal, 1980), BODENMANN2008 (Bodenmann, 2008), BORDUIN1995 (Borduin et al., 1995), BORDUIN2001 (Borduin, 2001), BRADLEY2003 (Bradley, 2003), BRAET2009 (Braet et al., 2009), BRASWELL1997 (Braswell et al., 1997), BUSHMAN2010 (Bushman, 2010), BUTLER2011 (Butler et al., 2011), BYWATER2011(Bywater et al., 2011), CARNES-HOLT2010 (Carnes-Holt, 2010), CAVELL2000 (Cavell, 2000), CEBALLOS2010 (Ceballos, 2010), CHAMBERLAIN1998 (Chamberlain & Reid, 1998), CHAMBERLAIN2007 (Chamberlain et al., 2007), CHAMBERLAIN2008 (Chamberlain, 2008), CHAO2006 (Chao et al., 2006), CHENEY2009 (Cheney, 2009), CHOI2010 (Choi, 2010), CLARK1994 (Clark, 1994), COATSWORTH2001 (Coatsworth, 2001), CONNELL1997 (Connell, 1997), CPPRG1999 (CPPRG, 1999) , CUMMINGS2008 (Cummings, 2008), CUNNINGHAM1995 (Cunningham, 1995), DADDS1992 (Dadds & McHugh, 1992), DEFFENBACHER1996 (Deffenbacher et al., 1996), DEMBO1997 (Dembo et al., 1997), DEMBO2001 (Dembo et al., 2001), DESBIENS2003 (Desbiens & Royer, 2003), DIRKS-LINHORST2003 (Dirks-Linhorst, 2003), DISHION1995 (Dishion, 1995), DISHION2008 (Dishion, 2008), DODGEN1995

---

[70] Here and elsewhere in the guideline, each study considered for review is referred to by a study ID in capital letters (primary author and date of study publication, except where a study is in press or only submitted for publication, then a date is not used).

(Dodgen, 1995), DOZIER2006 (Dozier et al., 2006), DRUGLI2006 (Drugli et al., 2006), DUPPER1993 (Dupper, 1993), ELIAS2003 (Elias, 2003), ELROD1992 (Elrod, 1992), EMSHOFF1983 (Emshoff, 1983), FARMER2010 (Farmer, 2010), FEINDLER1984 (Feindler, 1984), FEINFIELD2004 (Feinfield, 2004), FISHER2007 (Fisher, 2007), FOREHAND2010 (Forehand, 2010), FOREHAND2011 (Forehand, 2011), FOWLES2009 (Fowles, 2009), FRASER2004 (Fraser, 2004), FRIEDEN2006 (Freiden, 2006), GALLART2005 (Gallart, 2005), GARDNER2006 (Gardner, 2006), GARDNER2007 (Gardner, 2007), GARRISON1983 (Garrison, 1983), GARZA2004 (Garza, 2004), GLISSON2010 (Glisson, 2010), GREENE2004 (Greene et al., 2004), HANISCH2010 (Hanisch, 2010), HARWOOD2007 (Harwood, 1941), HENGGELER1992 (Henggeler et al., 1992), HENGGELER1997 (Henggeler, 1997), HENGGELER1999 (Henggeler, 1999), HENGGELER2006 (Henggeler, 2006), HERRMAN2003 (Herrmann & Herrmann, 2003), HILYER1982 (Hilyer & et, 1982), HUTCHINGS2002 (Hutchings et al., 2002), HUTCHINGS2007 (Hutchings, 2007), IRELAND2003 (Ireland, 2003), ISON2001 (Ison & Ison, 2001), JOURILES2001 (Jouriles et al., 2001), JOURILES2009 (Jouriles et al., 2009), KACIR1999 (Kacir & Gordon, 1999), KANNAPPAN2008 (Kannappan, 2008), KAZDIN1987 (Kazdin et al., 1987), KAZDIN1989 (Kazdin, 1989), KAZDIN1992 (Kazdin et al., 1992), KENDALL1990 (Kendall, 1990), KETTLEWELL1983 (Kettlewell & Kausch, 1983), KING1990 (King & Kirschenbaum, 1990), KLING2010 (Kling, 2010), KOLKO2009 (Kolko, 2009), KOLKO2010 (Kolko, 2010), KRATOCHWILL2003 (Kratochwill, 2003), LANE1999 (Lane, 1999), LANGBERG2006 (Langberg, 2006), LARKIN1999 (Larkin, 1999), LARMAR2006 (Larmar, 2006), LARSSON2009 (Larsson, 2009), LAU2011 (Lau, 2011), LAVIGNE2008 (Lavigne, 2008), LESCHIED2002 (Leschied & Cunningham, 2002), LETOURNEAU2009 (Letourneau, 2009), LEUNG2003 (Leung, 2003), LEWIS1983 (Lewis, 1983), LINARES2006 (Linares & Linares, 2006), LIPMAN2006 (Lipman, 2006), LOCHMAN1984 (Lochman et al., 1984), LOCHMAN2002 (Lochman, 2002), LOCHMAN2004 (Lochman & Wells, 2004), LOPATA2003 (Lopata, 2003), MACDONALD2005 (Macdonald et al., 2005), MACSRG2002 (MACSRG, 2002), MAGEN1994 (Magen, 1994), MARKIE-DADDS2006 (Markie-Dadds, 2006b), MARKIE-DADDS2006A (Markie-Dadds, 2006a), MARTIN2003 (Martin & Sanders, 2003), MARTSCH2005 (Martsch, 2000), MCARDLE2002 (McArdle, 2002), MCCABE2009 (McCabe, 2009), MCCABE2009B (McCabe, 2009a), MCCART2006 (McCart, 2006), MCCONAUGHY1999 (McConaughy, 1999), MCGILLOWAY2012 (McGilloway et al., 2012), MCMAHON1981 (McMahon et al., 1981), MCPHERSON1983 (McPherson et al., 1983), MICHELSON1983 (Michelson et al., 1983), MORAWSKA2011 (Morawska et al., 2011), NESTLER2011 (Nestler, 2011), NICHOLSON1999 (Nicholson, 1999), NICKEL2005 (Nickel et al., 2005), NICKEL2006 (Nickel, 2006a), NICKEL2006A (Nickel, 2006b), NINNESS1985 (Ninness, 1985), NIXON2003 (Nixon, 2003), OGDEN2004 (Ogden et al., 2004), OGDEN2008 (Ogden, 2008), OMIZO1988 (Omizo et al., 1988), PANTIN2009 (Pantin, 2009), PATTERSON2002 (Patterson, 2002), PEPLER1995 (Pepler et al., 1995), PETIT1998 (Petit, 1998), PETRA2001 (Petra, 2001), PIETRUCHA1998 (Pietrucha, 1998), PITTS2001 (Pitts, 2001), REID2007 (Reid, 2007), ROHDE2004 (Rohde, 2004), ROWLAND2005 (Rowland, 2005), SALMON2009 (Salmon et al., 2009), SANDERS1985 (Sanders & Christensen, 1985), SANDERS2000 (Sanders et al., 2000b), SANDERS2000A (Sanders et al., 2000a), SANDERS2000B (Sanders & McFarland, 2000), SANTISTEBAN2003 (Santisteban, 2003), SAYGER1988 (Sayger, 1988), SCHUHMANN1998 (Schuhmann, 1998), SCHUMANN2004 (Schumann, 2004), SCOTT2010_PALS (Scott et al., 2010), SCOTT2010_SPOKES (Scott, 2010), SEDA1992 (Seda, 1992), SEXTON2010 (Sexton et al., 2010), SHECHTMAN2000 (Shechtman, 2000), SHECHTMAN2006A (Shechtman & Birani-Nasaraladin, 2006), SHECHTMAN2006B (Shechtman, 2006), SHECHTMAN2009 (Shechtman, 2009), SHIN2009 (Shin & Shin, 2009), SIMONSEN2011 (Simonsen et al., 2011), SMITH2011 (Simonsen et al., 2011), SNYDER1999 (Snyder, 1999), STALLMAN2007 (Stallman, 2007), STOLK2008_MP (Stolk & Mesman, 2008), STOLK2008_PP (Stolk & Mesman, 2008), STRAYHORN1989 (Strayhorn, 1989), STRAYHORN1989 (Strayhorn, 1989), SUKHODOLSKY2000 (Sukhodolsky, 2000), SUNDELL2008 (Sundell, 2008), SWIFT2009 (Swift, 2009), SZAPOCZNIK1989 (Szapocznik et al., 1989), TAYLOR1998 (Taylor, 1998), TIMMER2010 (Timmer, 2010), TIMMONS-M2006 (Timmons-Mitchell et al., 2006), TREMBLAY1992 (McCord & Tremblay, 1992), TURNER2006 (Turner et al., 2006), TURNER2007 (Turner, 2007), VANDEWIEL2007 (Van De Wiel, 2007), VANMANEN2004 (van Manen, 2004), VERDUYN1990 (Verduyn, 1990), WALKER1998 (Walker et al., 1998), WALTON2010 (Walton et al., 2010), WANDERS2008 (Wanders et al., 2008), WEBSTER-S1984 (Webster-Stratton, 1984), WEBSTER-S1988 (Webster-Stratton et al., 1988), WEBSTER-S1990 (Webster-Stratton, 1990), WEBSTER-S1992 (Webster-Stratton, 1992), WEBSTER-S1994 (Webster-Stratton, 1994), WEBSTER-S1997 (Webster-Stratton, 2004a), WEBSTER-S1998 (Webster-Stratton, 1998b), WEBSTER-S2001 (Webster-Stratton, 2001) , WEBSTER-S2004 (Webster-Stratton, 2004b), WESTERMARK2011 (Westermark et al., 2011), WIGGINS2009 (Wiggins, 2009), WILMSHURST2002 (Wilmshurst, 2002). Of these, 16 were unpublished doctoral theses and 186 were published in peer-reviewed journals between 1973 and 2011.

In addition, 311 studies were excluded from the review. Further information about both included and excluded studies can be found in Appendix 16.

Of the 204 eligible trials, 136 (N = 18,806) included sufficient data to be included in the primary meta-analysis of an intervention compared with a control group (for the critical outcomes analysis). For the trials not included in the meta-analyses, a brief narrative synthesis is given to assess whether these support or refute the meta-analyses. For the purposes of the guideline, interventions were categorised as child-focused (delivered to child only), parent-focused (delivered to parent only), foster carer focused (delivered to foster carer only), Parent–child-based (separate interventions delivered to parent and child), Parent–teacher-based (separate interventions delivered to parent and teacher), family-focused (delivered to the family), multi-modal (integrated approach involving the family and community), multi-component (separate interventions delivered to parents, child, and family or school), classroom-based – delivered by a teacher (programmes delivered in classrooms by teachers, focusing on improving behaviour problems), and classroom-based – delivered by non-teachers (programmes delivered in classrooms by someone other than a teacher, focusing on improving behaviour problems). Table 40, Table 41 and Table 42 provide an overview of the trials included in each category.

Table 40: Study information table for trials included in the meta-analysis of indicated prevention and treatment interventions (child-focused, parent-focused and foster carer-focused) versus any control

	Child-focused versus any control	Parent-focused versus any control	Foster carer-focused versus any control
Total no. of trials (N)	27 RCTs (1666)	54 RCTs (4150)	3 RCTs (879)
Study ID	ARBUTHNOT1986 DODGEN1995 FEINDLER1984 FOWLES2009 FREIDEN2006 GARZA2004 ISON2001 KENDALL1990 KETTLEWELL1983 LANGBERG2006 LOCHMAN1984 LOCHMAN2004 MCARDLE2002 MICHELSON1983 NESTLER2011 OMIZO1988 PEPLER1995 SHECHTMAN2000 SHECHTMAN2006A SHECHTMAN2006B SHECHTMAN2009 SNYDER1999 SUKHODOLSKY2000 SZAPOCZNIK1989 VANMANEN2004 WEBSTER-S1997 WEBSTER-S2004	BEHAN2001 BODENMANN2008 BRADLEY2003 BRAET2009 CARNES-HOLT2010 CEBALLOS2010 CHAO2006 CONNELL1997 CUNNINGHAM1995 DRUGLI2006 FOREHAND2011 GALLART2005 GARDNER2006 HUTCHINGS2002 HUTCHINGS2007 JOURILES2001 JOURILES2009 KACIR1999 KLING2010 LARSSON2009 LAU2011 LEUNG2003 LINARES2006 MAGEN1994 MARKIE-D2006A MARKIE-DADDS2006 MARTIN2003 MCCABE2009 MCGILLOWAY2012 MORAWSKA2011 NICHOLSON1999 NIXON2003 OGDEN2008 PATTERSON2002 PITTS2001 SANDERS2000 SANDERS2000A SCHUHMANN1998 SCOTT2010:PALS SCOTT2010:SPOKES STALLMAN2007 STOLK2008 SWIFT2009 TAYLOR1998 TURNER2006 TURNER2007 WEBSTER-S1984	BYWATER2011 CHAMBERLAIN2008 CLARK1994

		WEBSTER-S1988 WEBSTER-S1990 WEBSTER-S1992 WEBSTER-S1997 WEBSTER-S2004 WIGGINS2009	
Country	Argentina (k = 1) Canada (k = 1) Germany (k = 1) Israel (k = 4) Netherlands (k = 1) UK (k = 1) US (k = 18)	Australia (k = 14) Belgium (k = 1) Canada (k = 2) China (k = 1) Ireland (k = 2) Netherlands (k = 2) Norway (k = 3) Sweden (k = 1) Switzerland (k = 1) UK (k = 6) US (k = 21)	UK (k = 1) US (k = 2)
Year of publication	1983 to 2011 (k = 27)	1984 to 2012 (k = 54)	1994 to 2011 (k = 3)
Age of children/ young people	11+ (k = 10) <11 (k = 5) Both (k = 12)	11+ (k = 2) <11 (k = 52)	<11 (k = 1) Both (k = 2)
Gender of children/ young people (% Female)	0 to 25% (k = 17) 26 to 50% (k = 7) 51 to 75% (k = 0) 76 to 100% (k = 0) N/R (k = 3)	0 to 25% (k = 11) 26 to 50% (k = 36) 51 to 75% (k = 2) 76 to 100% (k = 1) N/R (k = 4)	0 to 25% (k = 0) 26 to 50% (k = 2) 51 to 75% (k = 1) 76 to 100% (k = 0)
Ethnicity of children/ young people (% White)	0 to 25% (k = 9) 26 to 50% (k = 4) 51 to 75% (k = 1) 76 to 100% (k = 3) N/R (k = 10)	0 to 25% (k = 3) 26 to 50% (k = 1) 51 to 75% (k = 0) 76 to 100% (k = 6) N/R (k = 44)	0 to 25% (k = 1) 26 to 50% (k = 0) 51 to 75% (k = 1) 76 to 100% (k = 0) N/R (k = 1)
Timepoint (weeks)	PT: 4 to 117 (k = 27) FU: 12 to 117 (k = 8)	PT: 2 to 73 (k = 54) FU: 12 to 87 (k = 12)	PT: 12 to 78 (k = 3) FU: 182 (k = 1)
Intervention type	IP (k = 9) TX (k = 18)	IP (k = 13) TX (k = 41)	IP (k = 0) TX (k = 3)
Comparisons	CF versus AC (k = 7) CF versus NT (k = 10) CF versus TAU (k = 4) CF versus WL (k = 6)	PF versus NT (k = 9) PF versus TAU (k = 11) PF versus WL (k = 34)	FCF versus AC (k = 0) FCF versus NT (k = 1) FCF versus TAU (k = 1) FCF versus WL (k = 1)

Note. AC = Attention control; CF = Child to focused; FCF = Foster carer focused; FU = Follow-up; IP = Indicated prevention intervention; k = Number of trials; N = Total number of participants; N/R = Not Reported; NT = Not treatment; PF = Parent-focused; PT = Post-treatment; RCT = Randomised Controlled Trial; TAU = Treatment as usual; TX = Treatment.

Table 41: Study information table for trials included in the meta-analysis of indicated prevention and treatment interventions (parent–child-based, parent–teacher-based and family-focused) versus any control

	Parent–child-based versus any control	**Parent–teacher-based versus any control**	**Family-focused versus any control**
Total no. of trials (N)	12 RCTs (1138)	7 RCTs (1667)	8 RCTs (1685)
Study ID	DRUGLI2006 FRASER2004 KANNAPPAN2008 KAZDIN1987 LARSSON2009 LOCHMAN2002 LOCHMAN2004 MCCART2006 MCPHERSON1983 STRAYHORN1989 TREMBLAY1992 WEBSTER-S1997	HANISCH2010 KING1990 KRATOCHWILL2003 LARMAR2006 WEBSTER-S1998 WEBSTER-S2001 WEBSTER-S2004	ALEXANDER1973 COATSWORTH2001 DEMBO2001 NICKEL2006A SANTISTEBAN2003 SAYGER1988 SEXTON2008 SZAPOCZNIK1989
Country	Canada (k = 1) India (k = 1) Norway (k = 2) US (k = 8)	Australia (k = 1) Germany (k = 1) US (k = 5)	Germany (k = 1) US (k = 7)
Year of publication	1983 to 2009 (k = 12)	1990 to 2010	1973 to 2006
Age of children/ young people	11+ (k = 3) <11 (k = 6) Both (k = 3)	11+ (k = 0) <11 (k = 7)	11+ (k = 5) <11 (k = 2) Both (k = 1)
Gender of children/ young people (% Female)	0 to 25% (k = 6) 26 to 50% (k = 3) 51 to 75% (k = 1) 76 to 100% (k = 1) N/R (k = 1)	0 to 25% (k = 1) 26 to 50% (k = 6) 51 to 75% (k = 0) 76 to 100% (k = 0)	0 to 25% (k = 5) 26 to 50% (k = 1) 51 to 75% (k = 1) 76 to 100% (k = 1)
Ethnicity of children/ young people (% White)	0 to 25% (k = 1) 26 to 50% (k = 1) 51 to 75% (k = 1) 76 to 100% (k = 3) N/R (k = 6)	26 to 50% (k = 1) N/R (k = 6)	0 to 25% (k = 3) 26 to 50% (k = 1) 51 to 75% (k = 1) 76 to 100% (k = 0) N/R (k = 3)
Timepoint (weeks)	PT: 10 to 117 (k = 11) FU: 30 to 624 (k = 6)	PT: 0 to 39 (k = 7) FU: 26 to 82 (k = 3)	PT: 5 to 52 (k = 8) FU: 52 (k = 1)
Intervention type	IP (k = 5) TX (k = 7)	IP (k = 5) TX (k = 2)	IP (k = 0) TX (k = 8)
Comparisons	P-CB versus AC (k = 1) P-CB versus NT (k = 5) P-CB versus TAU (k = 3) P-CB versus WL (k = 3)	P-TB versus NT (k = 3) P-TB versus TAU (k = 1) P-CB versus WL (k = 1)	FF versus AC (k = 2) FF versus NT/TAU (k = 1) FF versus PLB (k = 1) FF versus TAU (k = 3) FF versus WL (k = 1)

Note. AC = Attention control; FF = Family-focused; FU = Follow-up; IP = Indicated prevention; k = Number of trials; N = Total number of participants; N/R = Not Reported; NT = Not treatment; P-CB = Parent–child-based; PLB = Placebo; P-TB = Parent–teacher-based; PT = Post-treatment; RCT = Randomised Controlled Trial; TAU = Treatment as usual; TX = Treatment.

Table 42: Study information table for trials included in the meta-analysis of indicated prevention and treatment interventions (multi-modal and multi-component interventions) versus any control

	Multi-modal versus any control	Multi-component versus any control
Total no. of trials (N)	14 RCTs (1874)	16 RCTs (5211)
Study ID	BORDUIN1995 BORDUIN2001 BUTLER2011 DIRKS-LINHORST2003 HENGGELER1992 HENGGELER1997 HENGGELER1999 HENGGELER2006 LESCHIED2002 LETOURNEAU2009 OGDEN2004 ROWLAND2005 SUNDELL2008 TIMMONS-M2006	AUGUST2001 AUGUST2003 AUGUST2006 BARRETT2000 BRASWELL1997 CAVELL2000 CPPRG1999 FEINFIELD2004 HENGGELER2006 KING1990 KOLKO2010 LIPMAN2006 LOCHMAN2002 MACSRG2002 REID2007 WEBSTER-S2004
Country	Canada (k = 1) Norway (k = 1) Sweden (k = 1) UK (k = 1) US (k = 10)	Australia (k = 1) Canada (k = 1) US (k = 14)
Year of publication	1992 to 2011 (k = 14)	1990 to 2010 (k = 16)
Age of children/ young people	11+ (k = 14) <11 (k = 0) Both (k = 0)	11+ (k = 1) <11 (k = 13) Both (k = 2)
Gender of children/ young people	0-25% (k = 7) 26-50% (k = 6) 51-75% (k = 0) 76-100% (k = 0) N/R (k = 1)	0-25% (k = 7) 26-50% (k = 8) 51-75% (k = 1) 76-100% (k = 0)
Ethnicity of children/ young people	0-25% (k = 3) 26-50% (k = 5) 51-75% (k = 2) 76-100% (k = 0) N/R (k = 4)	0-25% (k = 3) 26-50% (k = 4) 51-75% (k = 0) 76-100% (k = 2) N/R (k = 7)
Timepoint (weeks)	PT: 17-156 (k = 14) FU: 48-467 (k = 7)	PT: 10-104 (k = 16) FU: 52-156 (k = 3)
Intervention type	IP (k = 0) TX (k = 14)	IP (k = 9) TX (k = 7)
Comparisons	MM versus TAU (k = 14)	MC versus AC (k = 2) MC versus NT (k = 7) MC versus TAU (k = 5) MC versus WL (k = 2)

Note. AC = Attention control; FF = Family-focused; FU = Follow-up; IP = Indicated prevention; k = Number of trials; MC = Multi-component; MM = Multi-modal; N = Total number of participants; N/R = Not Reported; NT = Not treatment; PT = Post-treatment; RCT = Randomised Controlled Trial; SBM = School behaviour management; TAU = Treatment as usual;

TX = Treatment.

Table 43: Study information table for trials included in the meta-analysis of indicated prevention and treatment interventions (classroom-based interventions) versus any control

	Classroom-based (delivered by teacher) versus any control	Classroom-based (delivered by non-teacher) versus any control
Total no. of trials (N)	5 RCTs (2753)	5 RCTs (576)
Study ID	BAKER-H2009 BAKER-H2012 MACSRG2002 REID2007 WEBSTER-S2004	CHENEY2009 DESBIENS2003 SHECHTMAN2009 SIMONSON2011 WALKER1998
Country	Jamaica (k = 2) US (k = 3)	Canada (k = 1) Israel (k = 1) US (k = 3)
Year of publication	2002 to 2012 (k = 5)	1998 to 2011 (k = 5)
Age of children/ young people	<11 (k = 4) Both (k = 1)	<11 (k = 3) Both (k = 2)
Gender of children/ young people	0-25% (k = 1) 26-50% (k = 4) 51-75% (k = 0) 76-100% (k = 0)	0-25% (k = 3) 26-50% (k = 2) 51-75% (k = 0) 76-100% (k = 0)
Ethnicity of children/ young people	0-25% (k = 2) 26-50% (k = 1) 51-75% (k = 0) 76-100% (k = 1) N/R (k = 1)	0-25% (k = 2) 26-50% (k = 1) 51-75% (k = 0) 76-100% (k = 0) N/R (k = 2)
Timepoint (weeks)	PT: 22-104 (k = 5)	PT: 6-78 (k = 5)
Intervention type	IP (k = 4) TX (k = 1)	IP (k = 4) TX (k = 1)
Comparisons	CB-T versus AC (k = 2) CB-T versus NT (k = 1) CB-T versus TAU (k = 1) CB-T versus WL (k = 1)	CB-O versus AC (k = 0) CB-O versus NT (k = 3) CB-O versus TAU (k = 1) CB-O versus WL (k = 1)

Note. AC = Attention control; CB-O = Classroom-based (delivered by non-teacher); CB-T = Classroom-based (delivered by teacher); FF = Family-focused; FU = Follow-up; IP = Indicated prevention; k = Number of trials; N = Total number of participants; N/R = Not Reported; NT = Not treatment; PT = Post-treatment; RCT = Randomised Controlled Trial; TAU = Treatment as usual; TX = Treatment.

7.2.5 Clinical evidence for the review of an intervention versus any control

The critical outcomes of antisocial behaviour, offending behaviour and drug and/or alcohol use were sub-categorised according to the person who rated the outcome: a) observer rated, b) researcher/clinician rated, c) peer rated, d) teacher rated, and e) parent rated. Because few trials reported offending behaviour as a continuous outcome, data from this outcome were combined in the meta-analyses with antisocial behaviour measured by rating scale. Because few trials reported composite outcomes, these were combined in the meta-analyses with researcher/clinician rated outcomes. No other critical outcomes were reported in adequate numbers to be included in meta-analyses. In the included trials, the interventions were compared with a variety of control groups that were categorised as: a) treatment as usual (TAU), b) attention control (AC), c) waitlist control (WL), and d) no treatment (NT). Further information about the control group used in each trial can be found in the forest plots presented in Appendix 17.

Summary of Findings tables are used below to summarise the evidence. The full GRADE evidence profiles can be found in Appendix 18.

Child-focused interventions

Moderate quality evidence from up to 25 trials with 1,335 participants showed that child-focused interventions reduced antisocial behaviour when rated by researchers/clinicians, teachers and parents at post-treatment (Table 44). The direction of effect was consistent for observer and peer rated antisocial behaviour, although not conclusive. Effect sizes were small across all raters and there was moderate to substantial heterogeneity between trials reporting teacher and parent rated outcomes. At follow-up, 6-7 trials with 246-300 participants, presented low quality evidence in favour of child-focused interventions when rated by teachers and by parents (Table 45).

To explore the heterogeneity between study effect sizes (for parent rated outcomes), a series of meta-regressions were conducted (see section 7.2.7).

With regard to trials not included in the meta-analyses, eight reported the intervention to be effective on the outcomes of interest (CHOI2010; DEFFENBACHER1996; DUPPER1993; GARRISON1983; HILYER1982; LOPATA2003; SHECHTMAN2006A; SHIN2009). A further six trials found no treatment group effects (LEWIS1983; MCCABE2009B; PETIT1998; PIETRUCHA1998; ROHDE2004; SEDA1992).

Table 44: Summary of Findings table for child-focused interventions compared with a control group (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (post-treatment).
Intervention: child-focused
Comparison: any control group

Outcomes	Illustrative comparative risks (95% CI)		No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	Corresponding risk		
	Any control group	Child-focused		
Observer rated antisocial behaviour any valid method	0	The mean observer rated antisocial behaviour in the intervention groups was **0.20 standard deviations lower** (0.61 lower to 0.21 higher)	90 (2 studies)	⊕⊕⊕⊖ **moderate**[1]
Researcher/clinician rated antisocial/offending behaviour any valid rating scale/any measure of offending behaviour	0	The mean researcher/clinician rated antisocial/offending behaviour in the intervention groups was **0.42 standard deviations lower** (0.69 to 0.16 lower)	221 (4 studies)	⊕⊕⊕⊖ **moderate**[1]
Peer rated antisocial behaviour any valid rating scale	0	The mean peer rated antisocial behaviour in the intervention groups was **0.25 standard deviations lower** (0.72 lower to 0.23 higher)	79 (2 studies)	⊕⊕⊕⊖ **moderate**[1]
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.37 standard deviations lower** (0.55 to 0.19 lower)	1335 (25 studies)	⊕⊕⊕⊖ **moderate**[2]
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.34 standard deviations lower** (0.67 to 0.01 lower)	469 (11 studies)	⊕⊕⊕⊖ **moderate**[3]

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

[2] There is evidence of moderate heterogeneity of study effect sizes.

[3] There is evidence of substantial heterogeneity of study effect sizes.

Table 45: Summary of Findings table for child-focused interventions compared with a control group (follow-up)

Patient or population: children and young people with, or at risk of, conduct disorders (follow-up)
Intervention: child-focused
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Child-focused**		
Teacher rated antisocial behaviour any valid rating scale Follow-up: 12-52 weeks	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.45 standard deviations lower** (0.88 to 0.03 lower)	246 (6 studies)	⊕⊕⊖⊖ **low**[1,2]
Parent rated antisocial behaviour any valid rating scale Follow-up: 52-117 weeks	0	The mean parent rated antisocial behaviour in the intervention groups was **0.26 standard deviations lower** (0.66 lower to 0.14 higher)	300 (7 studies)	⊕⊕⊖⊖ **low**[1,2]

CI = Confidence interval.
[1] There is evidence of substantial heterogeneity of study effect sizes.
[2] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Parent-focused interventions

Moderate quality evidence from up to 63 trials with 3,550 participants showed that parent-focused interventions reduced antisocial behaviour when rated by observers, researchers/clinicians and parents at post-treatment (Table 46). Effect sizes were small to medium and there was moderate heterogeneity between studies reporting observer and parent rated outcomes. For teacher rated outcomes, there was high quality evidence from 10 trials with 671 participants suggesting no benefit. At follow-up, high quality evidence from 12 trials with 762 participants demonstrated a favourable effect in terms of parent rated outcomes (Table 47). However, moderate quality evidence from 1-3 trials with 154-245 participants did not find benefit when antisocial behaviour was rated by observers, researchers/clinicians and teachers.

To examine the effect of excluding attenuated parent-focused interventions (that is, those that were self-directed or of very few sessions), a sensitivity analysis was conducted excluding 24 trials (Table 48, Table 49). The evidence was not qualitatively different from the analysis of all trials.

To explore the heterogeneity between study effect sizes (for observer and parent rated outcomes), a series of meta-regressions were conducted (see section 7.2.7).

With regard to trials not included in the meta-analyses, two demonstrated effects on antisocial behaviour outcomes favouring the intervention group (GARDNER2007; PETRA2001), while one found mixed findings on official crime outcomes (BANK1991), and two found no intervention effects (LAVIGNE2008; STRAYHORN1989).

Table 46: Summary of Findings table for parent-focused interventions compared with a control group (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (post-treatment)
Intervention: any parent-focused
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	Corresponding risk		
	Any control group	**Any parent-focused**		
Observer rated antisocial behaviour any valid method	0	The mean observer rated antisocial behaviour in the intervention groups was **0.40 standard deviations lower** (0.58 to 0.21 lower)	1026 (19 studies)	⊕⊕⊕⊝ **moderate**[1]
Researcher/clinician rated antisocial behaviour any valid rating scale	0	The mean researcher/clinician rated antisocial behaviour in the intervention groups was **0.69 standard deviations lower** (1.22 to 0.16 lower)	56 (1 study)	⊕⊕⊕⊝ **moderate**[2]
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.04 standard deviations lower** (0.22 lower to 0.13 higher)	671 (10 studies)	⊕⊕⊕⊕ **high**
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.54 standard deviations lower** (0.65 to 0.44 lower)	3550 (63 studies)	⊕⊕⊕⊝ **moderate**[1]

CI = Confidence interval.

[1] There is evidence of moderate heterogeneity of study effect sizes.

[2] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Table 47: Summary of Findings table for parent-focused interventions compared with a control group (follow-up)

Patient or population: children and young people with, or at risk of, conduct disorders (follow-up)
Intervention: any parent-focused
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Any parent-focused**		
Observer rated antisocial behaviour any valid method Follow-up: 38-52 weeks	0	The mean observer rated antisocial behaviour in the intervention groups was **0.18 standard deviations higher** (0.07 lower to 0.43 higher)	245 (3 studies)	⊕⊕⊕⊖ **moderate**[1]
Researcher/clinician rated antisocial behaviour any valid rating scale Follow-up: 52 weeks	0	The mean researcher/clinician rated antisocial behaviour in the intervention groups was **0.28 standard deviations higher** (0.04 lower to 0.59 higher)	154 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Teacher rated antisocial behaviour any valid rating scale Follow-up: 25-52 weeks	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.16 standard deviations higher** (0.09 lower to 0.42 higher)	240 (2 studies)	⊕⊕⊕⊖ **moderate**[1]
Parent rated antisocial behaviour any valid rating scale Follow-up: 13-87 weeks	0	The mean parent rated antisocial behaviour in the intervention groups was **0.28 standard deviations lower** (0.48 to 0.08 lower)	762 (12 studies)	⊕⊕⊕⊕ **high**

CI = Confidence interval.
[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Table 48: Summary of Findings table for standard parent-focused interventions (excluding attenuated interventions) compared with a control group (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (post-treatment)
Intervention: standard parent-focused (excluding attenuated interventions)
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Standard parent-focused (excluding attenuated interventions)**		
Observer rated antisocial behaviour any valid method	0	The mean observer rated antisocial behaviour in the intervention groups was **0.40 standard deviations lower** (0.6 to 0.2 lower)	714 (10 studies)	⊕⊕⊕⊕ **high**
Researcher/clinician rated antisocial behaviour any valid rating scale	0	The mean researcher/clinician rated antisocial behaviour in the intervention groups was **0.69 standard deviations lower** (1.22 to 0.16 lower)	56 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.03 standard deviations higher** (0.16 lower to 0.21 higher)	520 (7 studies)	⊕⊕⊕⊕ **high**
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.50 standard deviations lower** (0.63 to 0.38 lower)	2413 (39 studies)	⊕⊕⊕⊝ **moderate**[2]

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

[2] There is evidence of moderate heterogeneity of study effect sizes.

Table 49: Summary of Findings table for standard parent-focused interventions (excluding attenuated interventions) compared with a control group (follow-up)

Patient or population: children and young people with, or at risk of, conduct disorders (follow-up) **Intervention:** standard parent-focused (excluding attenuated interventions) **Comparison:** any control group				
Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Standard parent-focused (excluding attenuated interventions)**		
Observer rated antisocial behaviour any valid method Follow-up: 38-52 weeks	0	The mean observer rated antisocial behaviour in the intervention groups was **0.18 standard deviations higher** (0.07 lower to 0.43 higher)	245 (3 studies)	⊕⊕⊕⊝ **moderate**[1]
Researcher/clinician rated antisocial behaviour any valid rating scale Follow-up: 52 weeks	0	The mean researcher/clinician rated antisocial behaviour in the intervention groups was **0.28 standard deviations higher** (0.04 lower to 0.59 higher)	154 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Teacher rated antisocial behaviour any valid rating scale Follow-up: 25-52 weeks	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.16 standard deviations higher** (0.09 lower to 0.42 higher)	240 (2 studies)	⊕⊕⊕⊝ **moderate**[1]
Parent rated antisocial behaviour any valid rating scale Follow-up: 13-87 weeks	0	The mean parent rated antisocial behaviour in the intervention groups was **0.26 standard deviations lower** (0.47 to 0.05 lower)	724 (11 studies)	⊕⊕⊕⊕ **high**
CI = Confidence interval. [1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.				

Foster carer focused interventions

High quality evidence from three trials with 855 participants showed that foster carer focused interventions reduced antisocial behaviour when rated by parents at post-treatment (Table 50). No data were available for other raters or at follow-up.

With regard to trials not included in the meta-analyses, two reported results favouring the intervention (FARMER2010; SMITH2011), and two others reported no significant effects favouring intervention for the outcomes of interest (DOZIER2006; MACDONALD2005).

Table 50: Summary of Findings table for foster carer focused interventions compared with a control group (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (post-treatment)
Intervention: foster carer focused
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Foster carer focused**		
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.19 standard deviations lower** (0.39 lower to 0.02 higher)	855 (3 studies)	⊕⊕⊕⊕ **high**
CI = Confidence interval.				

Table 51: Summary of Findings table for Parent–child-based interventions compared with a control group (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (post-treatment)
Intervention: Parent–child-based
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Parent–child-based**		
Observer rated antisocial behaviour any valid method	0	The mean observer rated antisocial behaviour in the intervention groups was **0.20 standard deviations lower** (0.78 lower to 0.38 higher)	44 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.44 standard deviations lower** (0.86 to 0.01 lower)	588 (7 studies)	⊕⊕⊖⊖ **low**[2,3]
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.52 standard deviations lower** (0.96 to 0.08 lower)	524 (8 studies)	⊕⊕⊖⊖ **low**[2,3]

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

[2] Risk of bias across domains was generally high or unclear.

[3] There is evidence of moderate heterogeneity of study effect sizes.

Parent–child-based interventions

Low to moderate quality evidence from up to eight trials with up to 588 participants showed that Parent–child-based interventions reduced antisocial behaviour when rated by observers, teachers and parents at post-treatment (Table 51). Effect sizes were small to medium, although there was substantial heterogeneity between studies reporting teacher and parent rated outcomes. At follow-up, 2-3 trials with 84-169 participants demonstrated large effects in favour of the intervention (Table 52).

With regard to trials not included in the meta-analyses, one showed significant intervention effects on all antisocial behaviour measures (SHECHTMAN2006a), and another found only one of four relevant outcomes was significantly different between groups (VANDEWIEL2007). A final study found no statistically significant differences between the intervention and control groups (ELROD1992).

Table 52: Summary of Findings table for Parent–child-based interventions compared with a control group (follow-up)

Patient or population: children and young people with, or at risk of, conduct disorders (follow-up)
Intervention: Parent–child-based
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Parent–child-based**		
Teacher rated antisocial behaviour any valid rating scale Follow-up: 76-156 weeks	0	The mean teacher rated antisocial behaviour in the intervention groups was **1.29 standard deviations lower** (1.79 to 0.78 lower)	84 (2 studies)	⊕⊕⊝⊝ **low**[1,2]
Parent rated antisocial behaviour any valid rating scale Follow-up: 76-156 weeks	0	The mean parent rated antisocial behaviour in the intervention groups was **1.40 standard deviations lower** (2.35 to 0.45 lower)	169 (3 studies)	⊕⊕⊝⊝ **low**[1,2]

CI = Confidence interval.
[1] Risk of bias across domains was generally high or unclear.
[2] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Parent–teacher-based interventions

Moderate to high quality evidence from up to six trials with 939 participants showed that Parent–teacher-based interventions did not reduce antisocial behaviour when rated by observers, researchers/clinicians, teachers and parents at post-treatment (Table 53). At follow-up, two trials with 291 participants favoured the intervention (Table 54).

Table 53: Summary of Findings table for Parent–teacher-based interventions compared with a control group (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (post-treatment)
Intervention: Parent–teacher-based
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Parent–teacher-based**		
Observer rated antisocial behaviour any valid method	0	The mean observer rated antisocial behaviour in the intervention groups was **0.12 standard deviations lower** (0.29 lower to 0.05 higher)	745 (3 studies)	⊕⊕⊕⊕ **high**
Researcher/clinician rated antisocial behaviour any valid rating scale	0	The mean researcher/clinician rated antisocial behaviour in the intervention groups was **0.26 standard deviations lower** (0.81 lower to 0.3 higher)	50 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.07 standard deviations higher** (0.13 lower to 0.28 higher)	939 (6 studies)	⊕⊕⊕⊝ **moderate**[2]
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.05 standard deviations lower** (0.22 lower to 0.11 higher)	879 (6 studies)	⊕⊕⊕⊝ **moderate**[2]

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

[2] Risk of bias across domains was generally high or unclear.

Table 54: Summary of Findings table for Parent–teacher-based interventions compared with a control group (follow-up)

Patient or population: children and young people with, or at risk of, conduct disorders (follow-up)
Intervention: Parent–teacher-based
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Parent–teacher-based**		
Observer rated antisocial behaviour any valid method Follow-up: 82 weeks	0	The mean observer rated antisocial behaviour in the intervention groups was **0.3 standard deviations lower** (0.62 lower to 0.01 higher)	183 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Parent rated antisocial behaviour any valid rating scale Follow-up: 26-82 weeks	0	The mean parent rated antisocial behaviour in the intervention groups was **0.24 standard deviations lower** (0.48 lower to 0.01 higher)	291 (2 studies)	⊕⊕⊖⊖ **low**[1,2]

CI = Confidence interval.
1 Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.
2 Risk of bias across domains was generally high or unclear.

Family-focused interventions

Low to moderate quality evidence from four trials with 209 participants showed that family-focused interventions reduced antisocial behaviour when rated by parents at post-treatment (Table 55). In addition, one small trial with 29 participants presented moderate quality evidence of a large effect favouring the intervention when rated by teachers. However, another larger trial with 303 participants found no evidence of a reduction in offending behaviour (recorded by researchers/clinicians). Two trials also reported dichotomous outcomes at post-treatment. Of these, one trial with 40 participants reported moderate quality evidence suggesting reduced risk of offending behaviour. The other trial with 40 participants found no evidence (moderate quality) of benefit with regard to drug and/or alcohol use (Table 56). At follow-up, one small trial with 37 participants found no evidence in favour of family-focused interventions with regard to parent rated antisocial behaviour (Table 57). In addition, one large trial with 761 participants produced inconclusive moderate quality evidence with regard to researcher/clinician rated offending behaviour (Table 58).

With regard to trials not included in the meta-analyses, two reported statistically significant treatment effects (NICKEL2005; NICKEL2006), one found some antisocial behaviour outcomes significant (DEMBO1997), and one found no treatment specific effects (EMSHOFF1983).

Table 55: Summary of Findings table for family-focused interventions compared with a control group (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (post-treatment)
Intervention: family-focused
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Family-focused**		
Researcher/clinician rated offending behaviour Frequency of arrests/ charges	0	The mean researcher/clinician rated offending behaviour in the intervention groups was **0.01 standard deviations lower** (0.24 lower to 0.21 higher)	303 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.95 standard deviations lower** (1.7 to 0.2 lower)	29 (1 study)	⊕⊕⊝⊝ **low**[1,2]
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.26 standard deviations lower** (0.55 lower to 0.02 higher)	209 (4 studies)	⊕⊕⊝⊝ **low**[1,2]

CI = Confidence interval.
[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.
[2] Risk of bias across domains was generally high or unclear.

Table 56: Summary of Findings table for family-focused interventions compared with a control group (dichotomous outcomes) (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (dichotomous outcomes) (post-treatment)
Intervention: family-focused
Comparison: any control group

Outcomes	Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
Researcher/clinician rated drug and/or alcohol use Drug Screen - %+ve Cannibis	**RR 1** (0.16 to 6.42)	40 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Researcher/clinician rated offending behaviour Recidivism	**RR 0.47** (0.27 to 0.83)	86 (1 study)	⊕⊕⊕⊝ **moderate**[1]

CI = Confidence interval; RR = Risk ratio.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Table 57: Summary of Findings table for family-focused interventions compared with a control group (follow-up)

Patient or population: children and young people with, or at risk of, conduct disorders (follow-up)
Intervention: family-focused
Comparison: any control group

Outcomes	Illustrative comparative risks (95% CI)		No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	Corresponding risk		
	Any control group	Family-focused		
Parent rated antisocial behaviour any valid rating scale Follow-up: 78 weeks	0	The mean parent rated antisocial behaviour in the intervention groups was **0.43 standard deviations higher** (0.22 lower to 1.09 higher)	37 (1 study)	⊕⊕⊝⊝ **low**[1,2]

CI = Confidence interval.

[1] Risk of bias across domains was generally high or unclear.

[2] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Table 58: Summary of Findings table for family-focused interventions compared with a control group (dichotomous outcomes) (follow-up)

Patient or population: children and young people with, or at risk of, conduct disorders (dichotomous outcomes) (follow-up)
Intervention: family-focused
Comparison: any control group

Outcomes	Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
Researcher/clinician rated offending behaviour Recidivism Follow-up: 52 weeks	**RR 1.00** (0.76 to 1.31)	761 (1 study)	⊕⊕⊕⊝ **moderate**[1]

CI = Confidence interval; RR = Risk ratio.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Multi-modal interventions

High quality evidence from 7-8 trials with 617-786 participants showed that multi-modal interventions reduced antisocial/offending behaviour when rated by researchers/clinicians and parents at post-treatment (Table 59). Effect sizes were small, and there was moderate to substantial heterogeneity between studies. In addition, two trials with 187 participants reported low quality evidence that was inconclusive with regard to drug and/or alcohol use. Also at post-treatment, three trials with 657 participants reported offending behaviour as a dichotomous outcome (researcher/clinician recorded) and provided moderate quality evidence in favour of the intervention, although this was not conclusive (Table 60). At follow-up, low quality evidence from five trials with 872 participants showed that multi-modal interventions reduced antisocial/offending behaviour, and two trials with 136 participants reduced drug and/or alcohol use (Table 61). For both outcomes, there was substantial heterogeneity between trials, and the evidence was not conclusive due to wide confidence intervals. Dichotomous outcomes (of moderate quality) were also reported at follow-up, which supported the finding of benefit with regard to antisocial/offending behaviour (six trials with 943 participants), but not drug and/or alcohol use (one trial with 80 participants) (Table 62).

With regard to trials not included in the meta-analyses, two trials of Multidimensional Treatment Foster Care (MTFC), reported intervention effects on all antisocial behaviour outcome measures (CHAMBERLAIN1998; CHAMBERLAIN2007). One trial of a programme called 'SNAP (StopNowand Plan) under 12 outreach project' found results favouring the intervention for some antisocial behaviour measures, but not others (AUGIMERI2007). Three trials did not find treatment group specific effects on antisocial behaviour (EMSHOFF1983 [Adolescent Diversion Project]; FISHER2007 [MTFC for pre-schoolers]; GLISSON2010 [Multisystemic Therapy]; WESTERMARK2011 [MTFC]).

Table 59: Summary of Findings table for multi-modal interventions compared with a control group (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (post-treatment)
Intervention: multi-modal
Comparison: any control group

Outcomes	Illustrative comparative risks (95% CI)		No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	Corresponding risk		
	Any control group	**Multi-modal**		
Researcher/clinician rated antisocial/offending behaviour any valid rating scale/any measure of offending behaviour	0	The mean researcher/clinician rated antisocial/offending behaviour in the intervention groups was **0.47 standard deviations lower** (0.74 to 0.21 lower)	617 (7 studies)	⊕⊕⊕⊕ **high**
Researcher/clinician rated drug and/or alcohol use Urine Screen-Cocaine/Marijuana; Drug screen %+ve-C	0	The mean researcher/clinician rated drug and/or alcohol use in the intervention groups was **0.62 standard deviations lower** (2.07 lower to 0.83 higher)	187 (2 studies)	⊕⊕⊖⊖ **low**[1,2]
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.25 standard deviations lower** (0.52 lower to 0.02 higher)	786 (8 studies)	⊕⊕⊖⊖ **low**[1,3]

CI = Confidence interval.

[1] There is evidence of substantial heterogeneity of study effect sizes.

[2] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

[3] CI includes both 1) no effect and 2) appreciable benefit or appreciable harm.

Table 60: Summary of Findings table for multi-modal interventions compared with a control group (dichotomous outcomes) (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (dichotomous outcomes) (post-treatment) **Intervention:** multi-modal **Comparison:** any control group			
Outcomes	**Relative effect (95% CI)**	**No of Participants (studies)**	**Quality of the evidence (GRADE)**
Researcher/clinician rated offending behaviour Any measure of offending behaviour	**RR 0.77** (0.53 to 1.11)	657 (3 studies)	⊕⊕⊕⊖ **moderate**
CI = Confidence interval; RR = Risk ratio.			

Table 61: Summary of Findings table for multi-modal interventions compared with a control group (follow-up)

Patient or population: children and young people with, or at risk of, conduct disorders (follow-up) **Intervention:** multi-modal **Comparison:** any control group				
Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Multi-modal**		
Researcher/clinician rated antisocial/offending behaviour any valid rating scale/any measure of offending behaviour Follow-up: 52-208 weeks	0	The mean researcher/clinician rated antisocial/offending behaviour in the intervention groups was **0.41 standard deviations lower** (0.93 lower to 0.1 higher)	872 (5 studies)	⊕⊕⊖⊖ **low**[1,2]
Researcher/clinician rated drug and/or alcohol use Urine Screen-Cocaine/Marijuana; Drug screen %+ve-C Follow-up: 52-226 weeks	0	The mean researcher/clinician rated drug and/or alcohol use in the intervention groups was **0.58 standard deviations lower** (1.91 lower to 0.75 higher)	136 (2 studies)	⊕⊕⊖⊖ **low**[1,3]
CI = Confidence interval. [1] There is evidence of substantial heterogeneity of study effect sizes. [2] CI includes both 1) no effect and 2) appreciable benefit or appreciable harm. [3] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.				

Table 62: Summary of Findings table for multi-modal interventions compared with a control group (dichotomous outcomes at follow-up)

Patient or population: children and young people at risk of conduct disorders (dichotomous outcomes) (follow-up)
Intervention: multi-modal
Comparison: any control group

Outcomes	Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
Researcher/clinician rated antisocial/offending behaviour any valid rating scale/any measure of offending behaviour Follow-up: 48-1143 weeks	**RR 0.72** (0.52 to 1.02)	943 (6 studies)	See comment
Researcher/clinician rated drug and/or alcohol use Drug screen %+ve-C Follow-up: 226 weeks	**RR 1.61** (0.94 to 2.76)	80 (1 study)	⊕⊕⊕⊝ **moderate**[1]

CI = Confidence interval; RR = Risk ratio.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

Multi-component interventions

Moderate to high quality evidence from up to 10 trials with 1,939 participants showed little evidence that multi-component interventions reduced antisocial behaviour when rated by observers, researchers/clinicians, peers and teachers at post-treatment (Table 63). In addition, 12 trials with 2,222 participants presented moderate quality evidence of a small effect in favour of the intervention when antisocial behaviour was rated by parents. At follow-up, there was much less evidence (ranging from very low to high quality) that was inconclusive (Table 64).

Table 63: Summary of Findings table for multi-component interventions compared with a control group (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (post-treatment)
Intervention: multi-component
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Multi-component**		
Observer rated antisocial behaviour any valid method	0	The mean observer rated antisocial behaviour in the intervention groups was **0.07 standard deviations higher** (0.07 lower to 0.2 higher)	879 (3 studies)	⊕⊕⊕⊕ **high**
Researcher/clinician rated antisocial/offending behaviour any valid rating scale/any measure of offending behaviour	0	The mean researcher/clinician rated antisocial/offending behaviour in the intervention groups was **0.06 standard deviations lower** (0.37 lower to 0.24 higher)	467 (3 studies)	⊕⊕⊕⊖ **moderate**[1]
Peer rated antisocial behaviour	0	The mean peer rated antisocial behaviour in the intervention groups was **0.10 standard deviations higher** (0.05 lower to 0.26 higher)	632 (1 study)	⊕⊕⊕⊕ **high**
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.08 standard deviations lower** (0.2 lower to 0.03 higher)	1939 (10 studies)	⊕⊕⊕⊕ **high**
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.23 standard deviations lower** (0.37 to 0.09 lower)	2222 (12 studies)	⊕⊕⊕⊖ **moderate**[1]

CI = Confidence interval.

[1] There is evidence of moderate heterogeneity of study effect sizes.

Table 64: Summary of Findings table for multi-component interventions compared with a control group (follow-up)

Patient or population: children and young people with, or at risk of, conduct disorders (follow-up)
Intervention: multi-component
Comparison: any control group

Outcomes	Illustrative comparative risks (95% CI)		No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	**Corresponding risk**		
	Any control group	**Multi-component**		
Researcher/clinician rated offending behaviour Frequency of arrest Follow-up: 52 weeks	0	The mean researcher/clinician rated offending behaviour in the intervention groups was **0.36 standard deviations lower** (0.79 lower to 0.08 higher)	61 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Peer rated antisocial behaviour any valid method Follow-up: 156 weeks	0	The mean peer rated antisocial behaviour in the intervention groups was **0.15 standard deviations lower** (0.32 lower to 0.03 higher)	495 (1 study)	⊕⊕⊕⊕ **high**
Teacher rated antisocial behaviour any valid rating scale Follow-up: 122-156 weeks	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.16 standard deviations lower** (0.31 to 0.01 lower)	669 (2 studies)	⊕⊕⊕⊖ **moderate**[2]
Parent rated antisocial behaviour any valid rating scale Follow-up: 122-156 weeks	0	The mean parent rated antisocial behaviour in the intervention groups was **0.01 standard deviations higher** (0.5 lower to 0.53 higher)	644 (2 studies)	⊕⊖⊖⊖ **very low**[2,3,4]

CI = Confidence interval.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

[2] Risk of bias across domains was generally high or unclear.

[3] There is evidence of substantial heterogeneity of study effect sizes.

[4] CI includes both 1) no effect and 2) appreciable benefit or appreciable harm.

Classroom-based interventions

Classroom-based interventions were sub-categorised by whether teachers or non-teachers delivered/received the intervention. For those interventions delivered/received by teachers, high quality evidence from three trials with 499 participants showed a small effect in favour of the intervention when antisocial behaviour was rated by teachers at post-treatment (Table 65). However, the evidence was inconclusive when antisocial behaviour was rated by observers, researchers/clinicians, and parents. No trials reported follow-up data. The pattern of results was similar for classroom-based interventions delivered by non-teachers (Table 66). That is, five trials with 367 participants showed low quality evidence of benefit when antisocial behaviour was rated by teachers, but the evidence was inconclusive for other raters, and no follow-up data were reported.

With regard to trials not included in the meta-analyses, one reported that all students in the intervention group decreased their acting-out behaviours, whereas only half of the control group did (NINNESS1985).

Table 65: Summary of Findings table for classroom-based interventions (delivered by a teacher) compared with a control group (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (post-treatment) **Intervention:** classroom-based (by teacher) **Comparison:** any control group				
Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Classroom-based (by teacher)**		
Observer rated antisocial behaviour any valid method	0	The mean observer rated antisocial behaviour in the intervention groups was **0.09 standard deviations lower** (0.58 lower to 0.4 higher)	359 (2 studies)	⊕⊕⊖⊖ **low**[1,2]
Researcher/clinician rated antisocial behaviour any valid rating scale	0	The mean researcher/clinician rated antisocial behaviour in the intervention groups was **0.13 standard deviations lower** (0.79 lower to 0.53 higher)	275 (2 studies)	⊕⊕⊖⊖ **low**[1,2]
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.43 standard deviations lower** (0.63 to 0.24 lower)	499 (3 studies)	⊕⊕⊕⊕ **high**
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.19 standard deviations lower** (0.4 lower to 0.02 higher)	383 (2 studies)	⊕⊕⊕⊖ **moderate**[2]
CI = Confidence interval. [1] There is evidence of moderate heterogeneity of study effect sizes. [2] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.				

Table 66: Summary of Findings table for classroom-based interventions (delivered by a non-teacher) compared with a control group (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders (post-treatment)
Intervention: classroom-based (by non-teacher)
Comparison: any control group

Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	**Corresponding risk**		
	Any control group	**Classroom-based (by non-teacher)**		
Observer rated antisocial behaviour any valid method	0	The mean observer rated antisocial behaviour in the intervention groups was **0.39 standard deviations lower** (1.02 lower to 0.23 higher)	42 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Researcher/clinician rated antisocial behaviour any valid rating scale	0	The mean researcher/clinician rated antisocial behaviour in the intervention groups was **0.17 standard deviations lower** (0.79 lower to 0.45 higher)	42 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Peer rated antisocial behaviour any valid rating scale	0	The mean peer rated antisocial behaviour in the intervention groups was **0.15 standard deviations lower** (0.75 lower to 0.46 higher)	31 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.45 standard deviations lower** (0.88 to 0.02 lower)	367 (5 studies)	⊕⊕⊝⊝ **low**[1,2]

CI = Confidence interval.
[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.
[2] There is evidence of substantial heterogeneity of study effect sizes.

7.2.6 Clinical evidence for the review of head-to-head comparisons of interventions

Because there were relatively few trials that directly compared one category of an intervention with another category, the decision was made to focus the review on the area where most data existed. That is, comparisons of parent-focused interventions with Parent–child-based interventions.

Parent-focused versus Parent–child-based interventions

Very low to low quality evidence from 3-4 trials with 198-248 participants favoured Parent–child-based interventions when antisocial behaviour was rated by teachers and parents at post-treatment, although this was not conclusive (Table 67). There was also inconclusive low quality evidence from one trial with 48 participants that reported observer rated antisocial behaviour. In addition, one trial with 51 participants reported low quality evidence that favoured Parent–child-based interventions when antisocial behaviour was rated by researchers/clinicians. At follow-up, low to moderate quality evidence from the two trials that reported observer rated (48 participants) and researcher/clinician rated (51 participants) antisocial behaviour were clearly in favour of Parent–child-based interventions (Table 68). Similarly to post-treatment, very low to low quality evidence from trials reporting teacher rated and parent rated outcomes was inconclusive.

Table 67: Summary of Findings table for parent-focused interventions compared with Parent–child-based interventions (post-treatment)

Patient or population: children and young people with, or at risk of, conduct disorders [PT]
Intervention: parent-focused
Comparison: Parent–child-based

Outcomes	Illustrative comparative risks (95% CI)		No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	Corresponding risk		
	Parent–child-based	Parent-focused		
Observer rated antisocial behaviour any valid method	0	The mean observer rated antisocial behaviour in the intervention groups was **0.15 standard deviations lower** (0.71 lower to 0.41 higher)	48 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Researcher/clinician rated antisocial behaviour any valid rating scale	0	The mean researcher/clinician rated antisocial behaviour in the intervention groups was **0.68 standard deviations higher** (0.12 to 1.24 higher)	51 (1 study)	⊕⊕⊖⊖ **low**[1,2]
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.25 standard deviations higher** (0.14 lower to 0.64 higher)	198 (3 studies)	⊕⊕⊖⊖ **low**[1,2]
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.19 standard deviations higher** (0.54 lower to 0.91 higher)	248 (4 studies)	⊕⊖⊖⊖ **very low**[1,2,3]

CI = Confidence interval.
[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.
[2] Risk of bias across domains was generally high or unclear.
[3] There is evidence of substantial heterogeneity of study effect sizes.

Table 68: Summary of Findings table for parent-focused interventions compared with Parent–child-based interventions (follow-up)

Patient or population: children and young people with, or at risk of, conduct disorders [FU]
Intervention: parent-focused
Comparison: Parent–child-based

Outcomes	Illustrative comparative risks (95% CI)		No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	Corresponding risk		
	Parent–child-based	Parent-focused		
Observer rated antisocial behaviour any valid method	0	The mean observer rated antisocial behaviour in the intervention groups was **0.65 standard deviations higher** (0.07 to 1.22 higher)	48 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Researcher/clinician rated antisocial behaviour any valid rating scale	0	The mean researcher/clinician rated antisocial behaviour in the intervention groups was **0.92 standard deviations higher** (0.34 to 1.49 higher)	51 (1 study)	⊕⊕⊝⊝ **low**[1,2]
Teacher rated antisocial behaviour any valid rating scale	0	The mean teacher rated antisocial behaviour in the intervention groups was **0.08 standard deviations lower** (0.36 lower to 0.20 higher)	190 (3 studies)	⊕⊕⊝⊝ **low**[1,2]
Parent rated antisocial behaviour any valid rating scale	0	The mean parent rated antisocial behaviour in the intervention groups was **0.34 standard deviations higher** (0.10 lower to 0.77 higher)	248 (4 studies)	⊕⊝⊝⊝ **very low**[1,2,3]

CI = Confidence interval.
[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.
[2] Risk of bias across domains was generally high or unclear.
[3] There is evidence of substantial heterogeneity of study effect sizes.

7.2.7 Moderators of intervention effectiveness

Where sufficient data were available, meta-regression was used to explore unexplained between-study variation in effect size. There were two categories of interventions were this was possible: child-focused interventions (teacher rated outcomes only) and parent-focused interventions (observer and parent rated outcomes). In the latter case, there was also sufficient data to conduct a sensitivity analysis excluding attenuated parent-focused interventions (for parent rated outcomes only).

For the meta-analysis of child-focused interventions, there were 25 comparisons included in the analysis of teacher rated antisocial behaviour at post-treatment. A visual inspection of the forest plot indicated that most comparisons favour the intervention, with some large effects and some small or negative effects; with moderate between-study heterogeneity ($I^2 = 58\%$, p = 0.001). As can be seen in Table 69, the univariate meta-regression results suggest that three factors (year, treatment setting, control group category) explain between 6 and 22% of the between trial variability in effect sizes. Entering these three factors into a multivariate model explained slightly more variance (23%) than any one factor alone, and that when controlling for year and control group category, treatment setting remained an important covariate. However, it should be noted that the overall model was not statistically significant. Nevertheless, the direction of the regression coefficient shows that interventions delivered in schools produced a larger effect, on average, than clinic-based interventions. It should also be noted that, on average, there was little difference in effect size between indicated prevention and treatment interventions, and this factor explained none of the variation between trials.

Table 69: Meta-regression results for child-focused interventions versus any control for the outcome of antisocial behaviour, rated by teachers (post-treatment)

Covariate	Categories of covariate	β	95% CI	P value	Adjusted R^2
Univariate analysis					
Characteristics of the study methods					
Country	US (k = 14) versus other Western (k = 11)	0.14	-0.25 to 0.53	0.465	0
Year	1983 to 2011 (k = 25)	-0.02	-0.04 to 0.005	0.122	8%
Time point	4 to 35 weeks (k = 25)	0.01	-0.02 to 0.04	0.615	0
Intervention type	IP (k = 9) versus TX (k = 16)	0.04	-0.37 to 0.45	0.845	0
Intervention theory base	Behaviour only (k = 6) versus Cogntive and Behavioural (k = 18)	-0.31	-0.77 to 0.15	0.183	0
Treatment setting	Clinic (k = 5) versus School (k = 16)	-0.59	-1.14 to -0.05	0.033	22%
Control group category	AC/TAU (k = 11) versus NT/WL (k = 14)	-0.26	-0.65 to 0.13	0.188	6%
Multivariate					
Year		-0.01	-0.04 to 0.01	0.265	23%[2]
Treatment setting (clinic versus school)[1]		-0.36	-1.04 to 0.32	0.282	
Control group category (AC/TAU versus NT/WL)		-0.22	-0.73 to 0.30	0.387	

Note. AC = Attention control; β = Regression coefficient; CI = Confidence interval; IP = Indicated prevention; NT = Not treatment; TAU = Treatment as usual; TX = Treatment intervention; WL = Waitlist.

[1] Negative **β** favours school.

[2] Joint test for all covariates, F (3,17) = 2.37, p = .11.

For the meta-analysis of all (standard and attenuated) parent-focused interventions, there were 19 comparisons included in the analysis of observer rated antisocial behaviour at post-treatment. A visual inspection of the forest plot indicated that most comparisons favour the intervention, with some large effects and some small or negative effects; with moderate heterogeneity ($I^2 = 44\%$, p = .02). As can be seen in

Table 70, two factors (intervention supervision, intervention format) explain 11% and 20% of the variance, respectively. The multivariate model explained 42% of the variance, and suggested that, on average, trials without supervision of the intervention, and interventions delivered in groups produced larger effect sizes.

Table 70: Meta-regression results for parent-focused interventions versus any control for the outcome of antisocial behaviour, rated by observers (post-treatment)

Covariate	Categories of covariate	β	95% CI	P value	Adjusted R^2
Univariate					
Characteristics of the study methods					
Country	US (k = 11) versus other Western (k = 8)	-0.22	-0.63 to 0.19	0.273	0
Year	1984 to 2012 (k = 19)	0.02	-0.01 to 0.04	0.236	0
Intervervention supervison	No (k = 8) versus Yes (k = 11)	0.32	-0.08 to 0.73	0.113	11%
Intervention format	Individual (k = 12) versus Group (k = 7)	-0.29	-0.70 to 0.13	0.162	20%
Attenuation of PF	Standard (k = 12) versus attenuated (k = 7)	-0.19	-0.63 to 0.26	0.390	0%
Multivariate					
Intervention supervison (No versus Yes)[1]		0.38	0.0003 to 0.76	0.050	42%[3]
Intervention format (Individual versus Group)[2]		-0.36	-0.75 to 0.02	0.062	

Note. β = Regression coefficient; CI = Confidence interval.
[1] Postive β favours no supervision.
[2] Negative β favours group interventions.
[3] Joint test for all covariates, F (2,16) = 3.55, p = .05.

In addition, there were 63 comparisons included in the analysis of parent rated antisocial behaviour at post-treatment. A visual inspection of the forest plot indicated that most comparisons favour the intervention, with some large effects and some small or negative effects; with moderate heterogeneity ($I^2 = 54\%$, p < .001). As can be seen in Table 71, five factors (time point, intervention theory base, control group category, attenuation of the intervention, and method of analysis) explain between 1% and 17% of the variance. The multivariate model explained 28% of the variance, and suggested that when controlling for time point and control group, interventions based on cognitive and behavioural principles produced, on average, larger effect sizes than those based on behaviour only. It should also be noted that, on average, there was little difference in effect size between indicated prevention and treatment interventions, and this factor explained none of the variation between trials.

For standard (non-attenuated) parent-focused interventions, there were 39 comparisons included in the meta-analysis of parent rated antisocial behaviour at post-treatment, with moderate heterogeneity ($I^2 = 52\%$, p < .001). A visual inspection of the forest plot indicated that most comparisons favour the intervention, with some large effects and some small or negative effects. As can be seen in Table 72, the univariate meta-regression results suggest that three factors explained between 2% and 30% of the variance. Including these factors in a multivariate model explained 29% of the variance, and showed that when controlling for age and intervention fidelity, trials of standard Triple P/Incredible Years produced, on average, a very small increase in effectiveness over other standard programmes. It should also be noted that, on average, there was little difference in effect size between indicated prevention and treatment interventions, and this factor explained none of the variation between trials.

Table 71: Meta-regression results for parent-focused interventions versus any control for the outcome of antisocial behaviour, rated by parents (post-treatment)

Covariate	Categories of covariate	β	95% CI	P value	Adjusted R^2
Univariate					
Characteristics of the sample (children and young people)					
Mean Age	2 to 14 (k = 63)	0.04	-0.02 to 0.09	0.181	0
Characteristics of the study methods					
Country	US (k = 26) versus other Western (k = 36)	0.02	-0.21 to 0.26	0.841	0
Year	1984 to 2012 (k = 63)	0.01	-0.01 to 0.02	0.518	0
Time point	2 to 73 weeks (k = 63)	0.008	-0.0002 to 0.01	0.058	13%
Intervention type	IP (k = 14) versus TX (k = 49)	-0.14	-0.41 to 0.14	0.332	0
Intervention theory base	Behavioural only (k = 17) versus C&B (k = 42)	-0.23	-0.47 to 0.01	0.059	17%
Intervention supervision	No (k = 31) versus yes (k = 32)	0.06	-0.16 to 0.29	0.574	0
Intervention fidelity	No (k = 17) versus Yes (k = 46)	-0.01	-0.28 to 0.26	0.923	0
Intervention format	Individual (k = 21) versus Group (k = 26)	0.06	-0.22 to 0.35	0.652	0
Control group category	AC/TAU (k = 9) versus NT/WL (k = 54)	-0.30	-0.59 to -0.02	0.035	15%
Attenuation of PF	Standard (k = 44) versus attenuated (k = 19)	0.20	-0.06 to 0.45	0.123	1%
Method of analysis[1]	Available case (k = 42) versus imputation (k = 13)	0.25	-0.02 to 0.52	0.068	9%
Multivariate					
Time point Intervention theory base (behavioural only versus C&B)[2] Control group category (AC/TAU versus NT/WL)		0.003 -0.19 -0.21	-0.01 to 0.01 -0.42 to 0.07 -0.54 to 0.11	0.561 0.153 0.198	28%[3]

Note. AC = Attention control; AlC = Allocation concealment; β = Regression coefficient; C&B = Cognitive and behavioural; CI = Confidence interval; IP = Indicated prevention; NT = Not treatment; TAU = Treatment as usual; TX = Treatment intervention; WL = Waitlist.

[1] Excluded from multivariate analysis because only 55 trials could be coded (a sensitivity analysis was performed using only these trials and the results of the multivariate meta-regression were not qualiatively different from full set of trials).

[2] Negative **β** favours cognitive and behavioural based interventions.

[3] Joint test for all covariates, F (3, 55) = 2.70, p = .05.

Table 72: Meta-regression results for standard (non-attenuated) parent-focused interventions versus any control for the outcome of antisocial behaviour, rated by parents (post-treatment)

Covariate	Categories of covariate	β	95% CI	P value	Adjusted R^2
Univariate					
Characteristics of the sample (children and young people)					
Mean Age	3 to 10 (k = 39)	0.11	0.03 to 0.19	0.011	30%
Characteristics of the study methods					
Country	US (k = 19) versus other Western (k = 19)	0.009	-0.26 to 0.28	0.944	0
Year	1984 to 2012 (k = 39)	0.002	-0.02 to 0.02	0.829	0
Time point	6 to 73 weeks (k = 39)	0.002	-0.01 to 0.01	0.602	0
Intervention type	IP (k = 8) versus TX (k = 31)	-0.18	-0.50 to 0.15	0.276	0
Intervention theory base	Behavioural only (k = 10) versus C&B (k = 26)	-0.18	-0.46 to 0.11	0.227	0
Intervention supervision	No (k = 14) versus yes (k = 25)	-0.08	-0.36 to 0.19	0.545	0
Intervention fidelity	No (k = 9) versus Yes (k = 30)	-0.23	-0.54 to 0.08	0.141	2%
Intervention format	Individual (k = 11) versus Group (k = 28)	0.02	-0.27 to 0.32	0.864	0
Control group category	AC/TAU (k = 7) versus NT/WL (k = 32)	-0.15	-0.47 to 0.17	0.359	0
Standard TP/IY versus other standard	TP/IY (k = 18) versus other (k = 21)	0.18	-0.07 to 0.44	0.150	5%
Parent only versus parent with child	Parent only (k = 31) versus Parent with child (k = 8)	-0.15	-0.46 to 0.17	0.360	0
Method of analysis	Available case (k = 25) versus imputation (k = 10)	0.16	-0.14 to 0.45	0.289	0
Multivariate					
Age Intervention fidelity (no versus yes)[1] Standard TP/IY versus other standard[2]		0.10 -0.19 0.12	0.02 to 0.19 -0.48 to 0.11 -0.12 to 0.36	0.021 0.204 0.309	29%[3]

Note. AC = Attention control; AlC = Allocation concealment; β = Regression coefficient; C&B = Cognitive and behavioural; CI = Confidence interval; IP = Indicated prevention; IY = Incredible Years; NT = Not treatment; TAU = Treatment as usual; TP = Triple P; TX = Treatment intervention; WL = Waitlist.

[1] Negative β favours interventions with higher fidelity.

[2] Positive β favours standard TP/IY interventions.

[3] Joint test for all covariates, F (3, 35) = 3.43, p = 0.03.

7.2.8 Clinical evidence summary

Overall, the clinical evidence suggests that for younger children (<11 years old) with a conduct disorder (or at high risk based on symptoms), parent-focused interventions are effective. The meta-regression analyses provide limited evidence suggesting that group parent-focused interventions, those based on cognitive and behavioural principles, and those with better fidelity may be especially effective. There was no evidence suggesting that indication prevention and treatment interventions differ in effectiveness. For children in foster care, there is some evidence that foster carer focused interventions are also effective. Interventions given separately to both the parents and the child are not clearly more effective than parent-focused interventions alone. Finally, it is not clear whether interventions given separately to the parents and to teachers, or classroom-based interventions, or multi-component interventions are effective.

For older children (approximately 7 to 14 years old) with a conduct disorder (or at high risk based on symptoms), child-focused interventions appear to be effective. The meta-regression provides limited evidence that child-focused interventions delivered in school settings may be more effective than those delivered in the clinical setting. There was no evidence suggesting that indication prevention and treatment interventions differ in effectiveness. For young people (11+ years old) with a conduct disorder (or at high risk based on symptoms), multi-modal treatment interventions are effective. No indicated prevention trials were included in the meta-analysis.

7.3 HEALTH ECONOMIC EVIDENCE

7.3.1 Child-focused interventions

Systematic literature review

No studies assessing the cost effectiveness of child-focused programmes for children and young people with conduct disorder were identified by the systematic search of the economic literature undertaken for this guideline. Details on the methods used for the systematic search of the economic literature are described in Chapter 3.

Economic modelling

Introduction – objective of economic modelling

The systematic review of clinical evidence (summarised in section 7.2.8) demonstrated that child-focused programmes in addition to usual care are more clinically effective than usual care in improving the behaviour of children and young people. Given the resource implications of conduct disorder, which could potentially be significant, the GDG considered a cost-effectiveness analysis of child-focused programmes to be of high priority. In the absence of any existing economic evidence on child-focused programmes, a de novo cost analysis model was developed to assess whether the intervention cost would be off-set by potential cost savings resulting from improvement in the behaviour of children and young people with conduct disorder. The model population consisted of children and young people between the age of 7 and 14 years with conduct disorder. The perspective adopted was that of the NHS and PSS in the main analysis, as recommended by NICE (2009c). A secondary analysis was also conducted adopting a wider perspective because the GDG considered other costs such as education and crime to be significant. These costs are expected to be reduced greatly following successful treatment of a person with conduct disorder.

Available evidence on health utilities for conduct disorder was poor. Literature searches identified only one study on health utilities for conduct disorder (Petrou et al., 2010). The study was based on small study population of 17 children with any conduct disorder problem who also had other psychiatric problems, including developmental disabilities. The health utility values for the three health states considered in the model were not provided in that study, and the preference weights for the health utility measures were based on an adult population rather than children. In addition to these limitations, the GDG was concerned about the relevance of health utilities in conduct disorder because the benefits resulting from improving children's behaviour could be far greater than the health-related quality of life (HRQoL). As a result of the poor quality data available, quality adjusted life years (QALYs) were not estimated.

Economic modelling methods

Interventions assessed

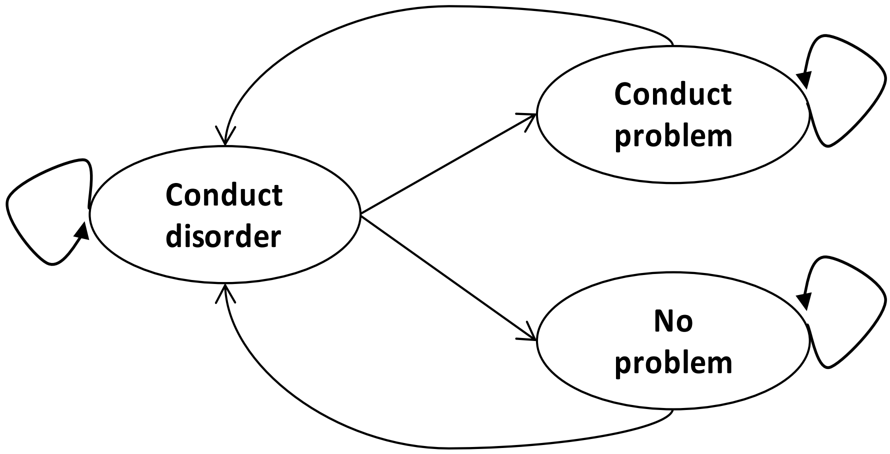
Child-focused intervention was estimated by GDG to consist of 10 to 18 weekly sessions lasting for 2 hours and based on a cognitive-behavioural problem-solving model. The programme is delivered to 7 to 14 year old mostly in a school setting and in groups of six by a therapist of NHS Band 7c equivalent. The programme is often delivered in addition to usual management services for this population. More details about the child-focused programme are given in section 7.2.1. The comparator in this analysis was usual care because it is the most frequently used comparator in the studies included in the review of clinical evidence.

Model structure

The starting population consisted of a cohort of children aged 7 to 14 years with a clinical diagnosis of conduct disorder. The structure (see Figure 11) depicts the initial outcome of conduct disorder after treatment for (a) conduct disorder, (b) conduct problem or (c) no problem, depending on the extent of improvement in the primary outcome of antisocial behaviour and then the following possible progression through a Markov process where the absorbing state is conduct disorder. In the absence of sufficient data, the following assumptions were made to propagate the outcomes and costs over time:

- Children with an improved behaviour state (conduct problem or no problem) were assumed to relapse to conduct disorder only and no relapse from conduct problem to no problem.
- Relapse rate was assumed to be 50% (GDG consensus).
- For the conduct disorder, children who were not offered the intervention were assumed to remain in the same state over time.

Figure 11: Model structure for conduct problems



The model builds on the three possible health states of children and young people who have antisocial behavioural problem; namely, conduct disorder, conduct problem and no problem. The GDG was of the opinion that such categorisation could be based on the Child-Behaviour Checklist (CBCL) total T-score, a commonly reported antisocial behaviour primary outcome that is reflective of the impact of treatment on behaviour and the severity of the condition. To establish the categories of conduct problems from a continuous outcome measure, the CBCL T-score cut-off points used in TA102 (NICE, 2006) were discussed and adopted for use by the GDG with definition of each state as follows:

- No problem: Cut-off point of less than 60
- Conduct problem: Cut off-point of 60 but less than 65
- Conduct disorder: Cut off-point of 65.

The mean baseline CBCL total T-score of 68.23 (SD 9.26) was derived by pooling the mean and variance of baseline CBCL total T-scores reported in the studies that were included in the review of clinical evidence.

Clinical input parameters

From the meta-analysis of the clinical evidence, the effect size reported as a standard mean deviation (SMD) was estimated to be 0.37 (95% CI; 0.19, 0.55) at post-treatment. This estimate was based on the teacher-rated antisocial behaviour outcome, demonstrating an overall low to moderate effect relative to care as usual.

Taking the CBLC score as the representative scale for the measurement of the antisocial behaviour treatment outcome, the magnitude of change in the CBCL score was estimated by re-expressing SMDs in the CBCL total T-score. This approach is one of the methods of interpreting the SMD as indicated in the *Cochrane Handbook for Systematic Reviews of Intervention* (Higgins & Green, 2011*)* and is described below.

The magnitude of change in score is equal to the standard deviation of a representative scale at baseline multiplied by the SMD. The variance of the absolute change in score is also estimated from the standard deviation of the representative score and 95% CI of the SMD. For example, if the SMD is 0.37 (95% CI, 0.19 to 0.55) and the SD of the CBCL score at baseline is 9.26, then the magnitude of change in score is 0.37*9.26 (0.19*9.26, 0.55*9.26) = 3.34 (95% CI, 1.76 to 5.09).

The impact of child-focused programmes on behaviour is then deduced from the extent of reduction in the mean CBCL score using the absolute change in CBCL score derived from the formula above. Using the final CBCL score (post-intervention) and the cut-off points for conduct disorder, conduct problem and no problem on the CBCL score, it is possible to estimate the percentage of children with conduct disorder, conduct problem and no problem post-intervention. For the control group, the treatment effect of the comparator was assumed to be zero given that the estimated effect size represents the relative effect between the intervention and comparator. As a result, the starting population of conduct disorder in the control group remained in the same state at the end of the programme.

Time horizon

Evidence on the natural history of conduct disorder as well as the sustained treatment effect of child-focused intervention is limited. None of the longitudinal studies have sufficient data to allow for modelling long-term transitions between the states of conduct disorder, conduct problems and no problems (Cohen et al., 1993, Fergusson et al., 1995). Because of the lack of good quality data on the natural history, the model adopted an 8-year time horizon to represent children who received an intervention at 7 years of age and then followed-up to 14 years. This time period covers the age range for which the intervention is expected to be offered.

Cost data

Estimation of intervention cost

The cost of child-focused intervention is based on the content of a child-focused programme that consisted of an average of 14 weekly 2-hour sessions delivered to a group of six children by a therapist of NHS Band 7 equivalent under the supervision of a senior therapist of NHS Band 8c. This was estimated to be £901.39 (see Table 73). Since both arms of the model included usual care, the cost of usual care was not estimated because it was common in both arms.

Table 73: Cost of child-focused interventions

Resource use	Description	Unit cost	Total cost	Source
Staff cost	One therapist (Band 7 equivalent), one weekly 2-hour session for 14 weeks. Travel time: assumed 30 minutes each way. Total of 42 hours	£83/hour	£3,486.00	Resource use: Expert opinion. Unit cost: Curtis (2010)
Supervision cost	One supervisor (Band 8c equivalent), assumed 7 hour's supervision for 14 weeks. Travel time: assumed 30 minutes each way for seven visits. Total of 14 hours	£135/hour	£1,890.00	Resource use: Expert opinion. Unit cost: Curtis (2011)
Travel cost	14 visits by a therapist and 7 by a supervisor. Total of 21 visits	£1.54/visit	£32.34	Resource use: Expert opinion. Unit cost: Curtis (2010)
Total	For six children		£5,408.34	
Total	Cost per child		£901.39	

Estimation of cost of states relating to conduct disorder

The cost of states relating to conduct disorder considered in this analysis includes NHS and PSS costs, education costs and crime costs for each health state considered in the model. NHS and PSS costs consisted of primary care services, psychiatric services, and hospital and social services costs, while education costs comprised mainly special education costs. The estimate of these service costs was based on those reported in Bonin and colleagues (2011) using conduct problems cost ratios as in Scott and colleagues (2001). Bonin and colleagues (2011) reported a comprehensive review of the mean annual cost of health, social and education services provision to children with conduct disorder in the UK setting. The average annual costs associated with health states relating to conduct disorder are shown in Table 74 below.

The costs of crime in conduct disorder are found to usually be incurred by people aged 10 years and older. The crime cost estimates are based on those from the Home Office report by Dubourg and colleagues (2005). The total estimate of the cost of crime against individuals and households by young and adult offenders was put at £36.2 billion (2003/04 prices). This includes the cost of violent crime against individuals, the costs of the criminal justice system and the cost of the impact of violent crime on victims (including emotional and physical impact, healthcare costs of treating injuries and the longer-term health impact of violence).

To estimate the average cost of crime per person with conduct disorder, conduct problem or no problem in the UK from the above figure, the following approach was used:

- Estimation of the total population with conduct disorder, conduct problems and no problems in the UK was achieved by weighting the total population of people aged 10 to 17 years (ONS, 2011) with the relative proportion of children with conduct disorder, conduct problem and no problem (Fergusson et al., 1995).
- Estimation of the total cost of crime attributable to conduct disorder, conduct problem and no problem was achieved by weighting the total cost of crime attributable to those aged 10 to 17 years (this was estimated by multiplying the total crime cost of £36.2 billion by the percentage of offenders in a given year who were between 10 and 17 years old, as reported in the 2003 Home Office's Crime and Justice Survey [Budd et al., 2005] with the percentage of crime specifically attributable to conduct disorder, conduct problem and no problem [Sainsbury Centre for Mental Health, 2009].
- Finally, estimation of the average cost of crime per person with conduct disorder, conduct problem or no problem was achieved by dividing the total cost of crime attributable to individuals with conduct disorder, conduct problem and no problem by the total population of children aged 10 to 17 years with conduct disorder, conduct problem and no problem, respectively.

All prices were expressed in 2011 UK pounds and the summary of the cost data is presented in Table 74 below.

Table 74: Mean annual cost of conduct problems

Domains	No problem	Conduct problem	Conduct disorder
NHS and Social services	£144	£459	£1,312
Education	£100	£319	£911
Crime	£1,093	£3,470	£11,686

Discounting

Discounting was applied at an annual rate of 3.5%, as recommended by NICE (NICE, 2009d); prices were expressed in 2011 UK pounds and uplifted, when necessary, using the Hospital and Community Health Service Pay and Price Index (Curtis, 2011).

Data analysis and presentation of the results

The difference in the mean costs over the time horizon of analysis between the treated and untreated groups was estimated to determine the extent of cost savings due to improvement in the behaviour state of the target population. The results are presented in two parts: the main analysis, where NHS and PSS costs were considered only; and secondary analysis, where wider costs to other sectors were considered. Sensitivity analysis was conducted for the secondary analysis to test the impact of potential uncertainty around the rate of relapse, cost of intervention and cost of crime by varying the base case value by 50%. In addition to deterministic analysis, distribution around the cost data and treatment effect were generated using gamma distribution for cost parameters and normal distribution for effect sizes from which 10,000 iterations were randomly drawn to estimate the mean net savings.

Economic modelling results

Results of analysis

Child-focused programme plus usual care compared with usual care only resulted in a reduction in the proportion of children with conduct disorder from 100% before treatment to 49% after treatment, because a proportion of children improved to a better behaviour state of either conduct problem or no problem (18% and 33%, respectively) (see Table 75). In the cost analysis, this improvement in behaviour state resulted in a net savings of £132 for the NHS and PSS (Table 76) and an overall net saving of up to £1,900 per child over an 8-year period when a wider perspective is considered (Table 77). For the three sectors considered, 26% of the savings fall under education while 37% fall equally under health and social services and the criminal justice system.

Table 75: Estimated proportion of children with conduct disorder treated with child-focused intervention at post-treatment

Domains	Treatment
Conduct disorder	0.49
Conduct problems	0.18
No problems	0.33

Table 76: Main Analysis (expected mean cost per child)

Cost component	Usual Care	CF + usual care	Incremental cost/saving[71]
NHS and PSS	£9,340	£8,307	£1,033
Intervention cost	-	£901	(£901)
Net savings (deterministic)			**£132**

Table 77: Secondary analysis (expected mean cost per child)

Cost component	Usual care	CF + usual care	Incremental cost/saving[66]
NHS and PSS	£9,340	£8,307	£1,033
Education	£6,486	£5,769	£717
Crime	£49,253	£48,204	£1,049
Total savings			**£2,799**
Intervention cost	-	£901	(£901)
Net savings (deterministic)			**£1,898**
Net savings (probabilistic)			**£1,881**

Table 78: Sensitivity analysis on child-focused programme

Variable	Value	Net savings
Relapse rate	25%	£7,607
Relapse rate	75%	£386
Intervention cost	50% higher	£1,450
Intervention cost	50% lower	£2,350
Cost crime	50% lower	£1,374

From the results of the sensitivity analysis shown in

Table **78**, the model results were robust across variations in most of the input parameters tested (that is, savings) were incurred in all the various values of parameter inputs tested. From the probability sensitivity analysis generated from the parameter distributions, the results were shown to be essentially the same as with deterministic estimates.

Discussion – limitations of the analysis

Discussion

---

[71] Net cost is shown in parentheses while net savings are shown without parentheses.

The analysis is based on evidence from meta-analysis and also on various assumptions on relapse rates and persistence of the condition in those that were not offered treatment. It is focused on estimating the savings to be achieved by reducing the chance of conduct disorder persisting over time. Taking a narrow perspective of NHS and PSS only, child-focused programme plus usual care is shown to result in a net saving of £132 over an 8-year period. This net saving is increased to £1,898 when a wider perspective is considered. Overall, the results suggest that child-focused programme plus usual care is potentially a cost-effective programme compared with usual care.

The model considered the potential impact of relapse after treatment. Given that there is limited data available to model the relapse rate for those with improved states after treatment of conduct problems, a 50% relapse rate was assumed. For those who had conduct problems after treatment, it was assumed that they could relapse to conduct disorder; similarly, those who had no problem after treatment were also assumed to relapse to conduct disorder, that is, all children relapsing were assumed to move to the worst state. This is still conservative because there is the possibility that children with no problem can relapse to conduct problem and not conduct disorder. However, there is no data to determine such differential relapse from no problem to conduct problem or to conduct disorder. Recovery was not considered in the analysis due to lack of data on differential recovery from conduct disorder to conduct problem, or from conduct problem to no problem, or from conduct disorder to no problem.

The model estimate of the cost of crime was based on the Home Office's crime-cost report of £36.2 billion (Dubourg et al., 2005), with the mean annual cost of crime for people with a severe form of conduct disorder estimated to be £11,686 with an average cost of £5,416 per young offender across all three categories of the conduct disorder state. However, there is possibility that this cost could be higher than estimated. A recent report on the cost of young offenders to the criminal justice system put the cost at £29,000 for those falling under 10% of potentially severe cases, and an average cost of £8,000 across all three possible levels of severity of conduct disorder (NAO, 2011). Elsewhere, the cost has been consistently reported to be higher (Sainsbury Centre for Mental Health, 2009). As a result, it is possible that the model could have underestimated the potential savings that may accrue from delivering of a child-focused programme to child and young people with conduct disorder.

Limitation of analysis

The major limitation of this model, as has been indicated elsewhere in the TA102 (NICE, 2006), is the arbitrary cut-off points of CBCL scores and the assumption of normal distribution of children and young people's CBCL scores around this scale. It is considered that there could be potential loss of information as a result of the cut-off points. However, this was essential in order to estimate the percentage of children in different health states and subsequently attach costs associated with different health states relating to conduct disorder.

Overall conclusions from economic evidence

Child-focused interventions delivered in addition to usual care to children and young people with a conduct disorder was found to be cost-effective compared with usual care only.

7.3.2 Parent-focused interventions

Systematic literature review

The systematic literature review of economic evidence on parent-focused programmes for parents of children and young people with conduct disorder identified seven existing studies that met the inclusion criteria (see Chapter 3 for details of the inclusion criteria). Six of these seven studies were conducted in the UK (Bonin et al., 2011; Dretzke et al., 2005; McCabe et al., 2005; Muntz et al., 2004) and only one study was conducted in the US (Foster et al., 2006). Of these seven studies on parenting programmes, four adopted a short time horizon of 6 months to 1 year (Dretzke et al., 2005; Edwards et al., 2007; McCabe et al., 2005; Sharac et al., 2011) while others adopted a longer time horizon of about 4 to 25 years (Bonin et al, 201, Foster et al., 2006, Muntz et al., 2004).

Edwards and colleagues (2007) compared a 6-month Webster-Stratton Incredible Years group parenting programme against a waitlist control for children aged 36 to 59 months in the UK who were 'at risk' of developing a conduct disorder. The 'at risk' group here were defined as those children with an Eyberg Child Behaviour Inventory (ECBI) score above a clinical cut-off point. Using a public perspective (NHS, Education and Social Services) and costs in 2003/04 prices, they estimated the mean total cost in the intervention group at 6 months to be £2,880.97, while that of the control group was £523.09. The incremental cost-effectiveness ratio (ICER) was £71 (95% CI: £42 to £140) per each point improvement in ECBI Intensity score (ECBI-I). The programme had an 83.9% probability of being cost effective at the willingness-to-pay threshold of £100. In addition, the cost to bring the child with the highest intensity score to below the clinical cut-off point was estimated to be £5,486.

Foster and colleagues (2006) reported a long-term cost-effectiveness analysis comparing the Fast Track intervention with a matched control that followed-up children in kindergarten who screened positive for conduct problems for up to 10 years. The Fast Track programme targeted multiple critical determinants of development such as parenting, peer relations, and social-cognitive and cognitive skills. During the programme, all families were offered parent training with home visiting, academic tutoring and social skills training. Only the cost of intervention was considered in the analysis. The mean cost of the intervention was estimated to be $58,283 per child and $0 for the control group in 2004 US dollars. The ICER was estimated for each of the three primary outcomes: $3,481,433 for extra number of conduct disorders averted, $423,480 for extra number of index crimes avoided and $736,010 for extra number of acts of interpersonal violence avoided. In uncertainty analysis, the Fast Track programme was not cost effective at a willingness-to-pay threshold of $50,000. However, the authors reported that if the high-risk group (defined based on high index of crime and poverty in a given community) were considered, the programme had a 69% probability of being cost effective for conduct disorder outcome measures, a 57% probability for index crime outcome measures and 0% for interpersonal violence outcome measures.

Sharac and colleagues (2011) evaluated the cost-effectiveness analysis of home-based, manualised parenting programmes delivered to adoptive parents of children aged between 3 and 8 years, who had been placed for non-relative adoption in the previous 3 to 18 months. The adopted children were identified to be at risk of conduct disorder given their high scores on the Strengths and Difficulties Questionnaire (SDQ). The programmes were compared with routine care, and primary outcome measures were parent satisfaction and the SDQ. Time horizon for the analysis was 6 months, and costs considered were the programme costs and service costs (healthcare service costs, social services and education costs). One of the home-based parenting programmes followed a cognitive approach, and the other educational, and both lasted for 10 weeks with each weekly session of 1 hour's duration. The mean (standard deviation) costs in 2006/07 over the 6-month period of intervention and follow-up were estimated to be £5,043 (£3,309) for the intervention group and £3,378 (£5,285) for the routine care group. In cost and effect synthesis, routine care was found to be a dominant strategy when the SDQ outcome was considered.

Dretzke and colleagues (2005) assessed the cost-effectiveness of three types of parenting training/education programme (group community-based, group clinic-based and individual home-based) targeted at parents or carers of children or adolescents up to 18 years old where at least 50% have behavioural disorder. Comparing the three types of the programme with no treatment control, the treatment effect obtained through meta-analysis as weighted mean difference (WMD) of CBCL score was estimated to be -4.36 (95% CI, -7.90 to -0.81) which was assumed to be the same across the various types of parenting programmes. The cost of the intervention was considered and no potential cost saving to the NHS or other sectors was reflected in the analysis. On average, the individual-based programme cost was about £3,000 more than the group programmes. No evidence on impact of the programme on the quality of life was identified but based on the assumption of some level of improvement in the quality of life (QoL), ICER level were estimated to vary from £12,600/QALY to £76,800/QALY at 5% improvement in QoL and £6,300/QALY to £38,400/QALY at 10% improvement in QoL.

An additional study (McCabe et al, 2005) for the Technology Appraisal (TA102) on parenting programmes assessed the incremental cost of each type of parenting programme compared with no treatment over a 1-year time horizon using an effect size derived from a meta-analysis with the primary outcome measured by the CBCL scores. The estimated weighted mean difference (WMD) of CBCL was -5.96 (95% CI, -3.4 to -8.52) which was again assumed to be the same across the different types of parenting programme. The intervention costs ranged from £500 for the group clinic-based programme to £3,000 for the individual clinic-based programme. Potential cost savings to the public sector were evaluated as the total cost savings due to reduction in the proportion of individuals with conduct disorder following treatment. The analysis showed that the mean net cost of a parenting programme in improving a child's behaviour from conduct disorder to an improved state (conduct problem or no problem) was £90 for a group community-based programme, £1,380 for an individual home-based programme, £2,400 for an individual clinic-based programme and £70 per family for group clinic-based programmes. However, the net cost savings were not sufficient to completely offset the intervention cost within the first year of programme.

Muntz and colleagues (2004) assessed the cost-effectiveness of intensive practiced-based parenting programme compared with standard treatment for children aged 2 to 10 years with problem of conduct disorder. Using the CBCL score as the primary outcome measure, the intervention group showed a reduction in the baseline score of about 12.8 compared with 4.2 in the control group after 4 years. The costs considered in the analysis were intervention costs and service costs (health, education and social services), which amounted to £1,005 per child in the intervention group and £4,400 per child in the control group. The intensive practice-based parenting programme was assessed to be a dominant strategy.

Out of all of the existing evidence on economic analysis of parenting programmes, a recent study by Bonin and colleagues (2011) demonstrated the potential longer-term impact of parenting programme over 20 years. They assessed generic parenting programme versus no treatment delivered to a 5-year-old with conduct disorder. Costs considered include the intervention costs and potential downstream costs savings to the NHS, social services, education sector, voluntary sector and criminal justice. The model made some assumptions around the natural course of conduct disorder in a 5-year-old child based on the risk of persistence of the problem from age 3 to 8 years and from childhood to 18 years. Using an effect size from a published systematic review study, the proportion of individuals with conduct disorder at 1-year post-treatment was derived to be 34%, and 50% of these individuals were assumed to remain problem free for the next 1 year, after which the subsequent outcome is dependent on the natural course of conduct disorder. The result of the model showed that the potential cost savings to public sector over 20 years is about 2.8 to 6.1 times the intervention costs. Explanation of this substantial cost savings could be as a result of crime costs included in the analysis.

Overall, the results of these analyses indicate that parenting programme is potentially cost-effective both at short-term and long-term.

Economic modelling

Introduction – objective of economic modelling

Existing economic evidence on the parenting programme suggested that it is a cost-effective option compared with no treatment. However, the GDG considered a cost-effectiveness analysis assessing the non-attenuated form of parent-focused programme to be necessary. This was seen as important because the existing evidence is based on clinical evidence that has not made any distinction between different intensities of programme delivery.

The objective of the analysis was to assess whether the intervention cost was off-set by the potential savings incurred due to improvement in the behaviour of children whose parents were offered a parent-focused programme. The population for the analysis consisted of parents of children and young people between the age of 3 and 11 years who were diagnosed as having conduct disorder. The perspective adopted was that of NHS and PSS in the main analysis as recommended by NICE (2009c). A secondary analysis was also conducted adopting a wider perspective because the GDG considered other costs such as education and crime to be significant and are expected to be reduced greatly following successful treatment of a person with conduct disorder.

Estimation of QALYs was not undertaken in the analysis due to limitations on available health utilities data which have been discussed in the introductory part of section 7.3.1 above.

Economic modelling methods

Interventions assessed

The model compared the non-attenuated form of parenting programme delivered to parents of children between the ages of 3 to 11 years old with no treatment. The GDG considered Incredible Years (Webster-Stratton, 1998a) to be a comprehensive form of the non-attenuated type of parenting programme.

Model structure

The starting population consists of a cohort children aged 3 years with a conduct disorder whose parents were offered either parent-focused programme or no treatment. The model structure and model states are the same as in the child-focused programme (see section 7.3.1 and Figure 11). The assumptions and baseline CBCL T-scores also remained the same as in child-focused programme.

Clinical input parameters

From the meta-analysis of clinical evidence, the effect size reported as standardised mean difference (SMD) was estimated to be 0.50 (95% CI; 0.38, 0.63) at post-treatment. This estimate was based on parent-rated antisocial behaviour outcome, demonstrating an overall moderate effect relative to no treatment. As there was no identified differential effect between group and individual therapy from the meta-analysis, no separate analysis between group versus individual programme was conducted; group therapy consumes fewer resources (because therapists' time is spread over more families) and therefore is more cost-effective than individual therapy. Thus, the economic analysis assessed the group programme.

Time horizon

Evidence on the natural history of conduct disorder as well as sustained treatment effect of parent-focused programme is rather weak. None of the longitudinal studies have sufficient data to allow for modelling long-term transitions between the states of conduct disorder, conduct problems and no problems (Cohen et al., 1993, Fergusson et al., 1995). Because of lack of good quality data on the natural history, the model adopted a 9-year time horizon where children were offered intervention when they were 3 years old and then followed-up to 11 years. This time period covers the age range of children and young people to whom the intervention is expected to be offered to, that is, 3 to 11 years old.

Cost data

Intervention cost

A comprehensive estimate of cost of the Incredible Years programme in groups of 12 families delivered by two therapists has been reported recently in Curtis (2011) as £1,209 per family. The comparator in this analysis is no treatment.

Estimation of costs of states relating to conduct disorder

The method used for estimating the costs associated with conduct disorder, conduct problem and no problem states is the same as in the child-focused programme (see section 7.3.17.3.1 . However, because the population in parent-focused programmes starts from lower age of 3 years, there was no associated cost of crime due to their condition until the age of 10 years. See Table 74 for a summary of the costs of conduct disorder, conduct problem and no problem states.

Discounting

Discounting was applied at an annual rate of 3.5%, as recommended by NICE (NICE, 2009a); prices were expressed in 2011 IK pounds and uplifted, when necessary, using the Hospital and Community Health Service Pay and Price Index (Curtis, 2011).

Data analysis and presentation of the results

The difference in the mean costs over the time horizon of analysis between the treated and untreated groups was estimated to determine the extent of cost savings due to improvement in the behaviour state of the target population. The results are presented in two parts: the main analysis, where NHS and PSS costs were considered only, and secondary analysis, where wider costs to other sectors were considered. Sensitivity analysis was conducted for the secondary analysis to test the impact of potential uncertainty around the rate of relapse, cost of intervention and cost of crime by varying the base case value by 50%. In addition to deterministic analysis, distribution around the cost data and treatment effect were generated using gamma distribution for cost parameters and normal distribution for effect sizes from which 10,000 iterations were randomly drawn to estimate the mean net savings.

Economic modelling results

Results of analysis

Parent-focused programme compared with no treatment resulted in a reduction in the proportion of children and young with conduct disorder from 100% before treatment to 43% after treatment, because a proportion of children improved to a better behaviour state of either conduct problem or no problem (26% and 31%, respectively) (see Table 79). In the cost analysis, this improvement in behaviour state resulted in a net cost of £71 for the NHS and PSS (Table 80) and an overall net saving of up to £770 per child over a 9-year period when a wider perspective is considered (Table 81). For the three sectors considered, 57% of the total savings (£1,979) fall under NHS and PSS while 40% and 3% fall under education and criminal justice system, respectively. The small proportion of savings falling under criminal justice is consistent with population of children considered in the model (3 to 11 years) where crime cost is expected to be incurred by those who are 10 years old and above.

Table 79: Estimated proportion of children in each state after parent-focused intervention

Domains	Treatment
Conduct disorder	0.43
Conduct problems	0.26
No problems	0.31

Table 80: Main analysis (expected mean cost per child)

Cost component	Usual care	CF + usual care	Incremental cost/saving[72]
NHS & PSS Intervention cost	£10,337 -	£9,199 £1,209	£1,138 (£1,209)
Net savings (deterministic)			**(£71)**

---

[72] Net cost is shown in parentheses while net savings are shown without parentheses.

Table 81: Secondary analysis (expected mean cost per child)

Cost component	No treatment	Parent-focused	Incremental cost/savings[67]
NHS & PSS	£10,337	£9,199	£1,138
Education	£7,179	£6,388	£791
Crime	£18,059	£18,009	£50
Total savings			**£1,979**
Intervention cost	-	£1,209	(£1,209)
Net savings (deterministic)			**£770**
Net savings (probabilistic)			**£767**

Table 82: Sensitivity analysis on parent-focused programme

Variable	Value	Net savings
Relapse rate	25%	£3,206
Relapse rate	75%	£108
Intervention cost	50% higher	£165
Intervention cost	50% lower	£1,374
Cost crime	50% lower	£745

From the results of the sensitivity analysis shown in Table 82, the model results were robust across variations in most of the input parameters tested; that is, savings were incurred in all the various values of parameter inputs tested. From the probability sensitivity analysis generated from the parameter distributions, the results were shown to be essentially the same as with deterministic estimates.

Discussion – limitations of analysis

Discussion

The analysis was based on evidence from meta-analysis and also on various assumptions on relapse rates and persistence of the condition in those that were not offered treatment. It was focused on estimating the savings to be achieved by reducing the chance of conduct disorder persisting over time. Taking the narrow perspective of NHS and PSS only in the main analysis, the parent-focused programme was shown to result in a net cost of £71 over a 9 year period. However, when a wider perspective is considered, there is an overall net savings £770. In general, the result suggests that the parent-focused programme is potentially a cost-effective programme compared with no treatment.

The model considered the potential impact of relapse after treatment. Given that there is limited data available to model the relapse rate for those with improved states after treatment of conduct problems, an assumption of a 50% relapse rate was made. For individuals with conduct problem after treatment, it was assumed that they could relapse to conduct disorder and that those with no problem after treatment could also relapse to conduct disorder; that is, all relapse could change to the worst state. This is yet conservative as there is possibility that no problem can relapse to conduct problem and not conduct disorder. However, there is no data to determine such differential relapse from no problem to conduct problem or no problem to conduct disorder. Recovery was not considered in the analysis due to lack of data on differential recovery from conduct disorder to conduct problem or from conduct problem to no problem or from conduct disorder to no problem.

In comparison with the net savings of £4,660 to the public sector from the parenting programme by Bonin and colleagues (2011), the net savings in this analysis are considerably lower. This could be due to the longer time horizon of 20 years, the inclusion of crime from the age of 5 years and the assumption of a 0% relapse rate in Bonin and colleagues (2011). However, the results are similar in that the programme is associated with potentially significant savings to the public sector, even at relapse rate of 50% or more.

Limitation of analysis

The limitations of this model are similar to that of the child-focused model. The first limitation is the arbitrary cut-off points of the CBCL scores and, second, the assumption of a normal distribution of children and young people's CBCL scores around this scale. There is the possibility of a loss of information as a result of the cut-off points. However, this was essential in order to estimate the percentage of children in different health states and subsequently attach costs associated with different health states relating to conduct disorder.

Overall conclusions from economic evidence

Standard (non-attenuated) parent-focused interventions for parents with children and young people with a conduct disorder are cost-effective compared with no treatment.

7.3.3 Family-focused programmes

Systematic literature review

The systematic literature review of economic evidence on family-focused programmes for children and young people with conduct disorder identified two existing studies that met the inclusion criteria (see Chapter 3 for details of the inclusion criteria). All of these studies were conducted in the US (Barnoski, 2004; Dembo et al., 2000).

The study by Barnoski (2004) assessed the cost saving analysis for functional family therapy (FFT) and aggression replacement training (ART) versus a waitlist control (WLC) for young people aged 13 to 17 years with a moderate to high risk of juvenile re-offending. Programme costs and criminal justice costs were considered. The study assessed whether the reduction in rate of crime as a result of the intervention will result in any savings over an 18-month period. FFT yielded a 38% reduction in rate of recidivism compared with WLC; while ART resulted in 24% reduction in rate of recidivism when compared with WLC. The overall cost avoided was $22,448 and $8,684 for FFT and ART, respectively, compared with WLC. In terms of benefit–cost ratio estimation, FFT and ART were assessed and resulted in about $11 and $12 savings per $1 spent on FFT and ART, respectively.

Similarly, Dembo and colleagues (2000) assessed the net cost savings of family empowerment intervention (FEI) compared with extended services intervention (ESI) for juvenile offenders, aged 11 to 18 years. With the primary outcome as the number of new arrests over a 12 month period, FEI resulted in 43% fewer arrests compared with ESI. Intervention and crime costs were considered in the analysis. The net cost savings due to crime cost avoided over a 2-year time horizon was estimated to be $1,302 per youth offender for FEI compared with ESI.

Overall, economic evidence on family therapy indicates that such programmes are potentially cost-effective. However, both studies were conducted in the US and, other than FEI, the assessed interventions may not be commonly available in the NHS.

No further economic modelling was developed for family-focused intervention because it was not considered as an area of high priority by the GDG.

7.3.4 Multi-component programmes

Systematic literature review

Existing economic evidence on individual and group psychosocial interventions for children and young people with conduct disorders was scarce. A systematic review of economic literature identified three studies (Caldwell et al., 2006; Robertson et al., 2001) that met the inclusion criteria as described in Chapter 3. The three studies were conducted in the US and were partial economic evaluation studies looking at the programme costs and associated downstream costs savings.

Foster and colleagues (2007) assessed the cost-effectiveness of six multi-components of a parent-child-teacher training programme (child training [CT], parent training [PT], CT plus PT, PT plus teacher training [TT], CT plus TT and CT plus PT plus TT) against no treatment comparator delivered to children aged 3 to 8 years who had had a conduct problem for more than 6 months. Taking the payers' perspective, costs included were programme costs alone, and the behaviour problem outcome measures were the Preschool Behaviour Questionnaire (PBQ) and Dyadic Parent-Child Interaction Coding System-Revised (DPICS-R). The result of the estimate was reported as cost per child treated. The base-case ICER was not given, but it was reported that for PBQ outcome and at a willingness-to-pay (WTP) level of $3,000 and above, PT plus TT is more cost-effective with the probability of being cost-effective ranging from about 60% to 80%. However, for DPICS-R outcome, the most cost-effective option was reported to be PT plus CT plus TT with the probability of being cost-effective at $3,000 and above ranging from about 50% to 65%. The evaluation adopted a short-term horizon that was not specified.

Caldwell and colleagues (2006) assessed the cost analysis of an intensive juvenile corrective service program versus usual juvenile corrective service delivered to unmanageable juvenile delinquent boys in Mendota Juvenile Treatment Centre, Madison, WI. The experimental group received a decompression treatment model using ART and cognitive behavioural treatment delivered by a psychiatric nurse. With the primary outcome as the rate of recidivism, the program was found to significantly reduce the number of offences committed by the target population over a 4.5-year time horizon. The perspective of the cost estimate was that of the criminal justice system. The mean total costs (programme costs and downstream costs) in 2001 US dollars were estimated to be $173,012 per participant in the experimental group and $216,388 per participant in the control group, with a resultant net saving of $43,376. Incremental analysis of cost and effect was not conducted; however, the author evaluated the potential cost saving per $1 invested in the programme to be about $7.18 over the course of the 4.5-year period.

In the study by Robertson and colleagues (2001), juvenile offenders aged 11 to 17 years who were referred to youth courts for delinquent activities were either offered intensive supervision monitoring or cognitive-behavioural treatment as a new intervention. These experiment groups were compared with regular probation control in terms of the programme costs and downstream costs resulting from recidivism. The primary outcome was the rate of recidivism. The method of cost analysis was a regression method using the rate of recidivism resulting from each intervention group as an explanatory variable. Cognitive behavioural treatment was found to result in a net reduction in local justice expenditure of about $1,435 per offender while intensive supervision monitoring did not result in any significant difference in criminal justice system expenditures when compared with regular probation services. The estimated cost saved per $1 invested in cognitive behavioural treatment was $1.96.

Other than the programme of Foster and colleagues (2007), none of the above experimental programmes are generally available. Due to the variation in the cost-effectiveness between the parent, child and teacher programme in Foster and colleagues (2007) coupled with the different outcome measure, the outcome of different combination of the programme is uncertain. Also, given the non-availability of the other programmes assessed by Caldwell and colleagues (2006) and Roberston and colleagues (2001) outside the US, there could be considerable uncertainty and limitations in implementing such programmes in the UK.

No further economic modelling was developed for multi-component intervention because it was not considered to be an area of high priority by the GDG.

7.3.5 Multi-modal interventions

Systematic literature review

From the systematic review of economic evidence on multi-modal interventions for children and young people with conduct disorders, 3 studies (Klietz et al., 2010; Olsson, 2010a; Olsson, 2010b) which met the inclusion criteria, given in Chapter 3, were identified. None of these studies was conducted in the UK.

A cost analysis study of a multi-modal intervention by Klietz and colleagues (2010) in the US evaluated the potential cost savings of multi-systemic therapy (MST) compared with individual therapy delivered to juvenile offender aged between 11.8 years to 15.2 years. The outcome measure informing the extent of crime costs averted is rate of recidivism while the cost included were that on intervention costs and potential downstream costs associated with criminal activities of the juvenile offenders. MST was shown to be more effective by reducing rate of recidivism by 50% as against individual therapy reduction rate of about 19%. Notwithstanding the high cost of MST ($8,827 more than individual therapy) per participant, MST was found to demonstrate a potential savings of about $9.51 to $23.59 per $1 spent on it. This was as a result of huge potential cost savings arising from crime avoidance.

In Sweden, two separate studies (Olsson, 2010a; Olsson, 2010b) using the effectiveness data from a single trial reporting outcomes at two different time points (7 months and 2 years respectively) evaluated the cost-minimisation analysis of the MST programme delivered to individuals of age 12 to 17 years with clinical diagnosis of conduct disorder. The comparator for these analyses was treatment as usual. The costs considered were that of treatment costs, placement and non-placement costs. In addition to these costs, productivity loss was included in the later study. Crime cost was not included. The primary outcome was antisocial behaviour. The result showed that there is no significant difference in the effects of intervention and its comparator; and that the intervention group has a positive incremental cost at both time points, which at 7 months was $5,038 and at 2 years; 44,500SEK. As result, MST was considered not to be cost-effective in the Swedish setting. This results contrast with that of Klietz and colleagues (2010) conducted in the US.

The US and Swedish studies on the MST programme reported different conclusions. While both studies are based on good quality trials, there could be many reasons for this disparity, one being the difference in the comparator used in the trials and the population selected. In the US study, the control arm was individual therapy which was described as being representative of usual community outpatient treatment for juvenile offenders with potential variations in the therapists' strategies. However, in the Swedish study, the comparator was treatment as usual. The usual care here was described as social service care delivered by the Social Welfare Administration, the precise content of which was dependent on the social worker and families concerned. Also, in the US study, the population consisted of juvenile offenders but in the Swedish study, the population was youth with clinical diagnosis of conduct disorder and not necessarily offenders. As such, the resulting impact of care could be expected to be different.

Economic modelling

Introduction – objective of economic modelling

From the systematic review of clinical evidence on multi-modal intervention, multi-systemic therapy (MST) was found to be more clinically effective compared with treatment as usual. On the basis on significant difference in the economic results from studies conducted in the US and Sweden, and the potential huge resources involved in delivery the programme, the GDG considered that a further cost-effectiveness analysis in a UK setting was necessary.

The objective of the analysis was to assess whether the intervention cost would be off-set by the potential savings accrued by improving the behaviour of adolescents with conduct disorder. The population for the analysis consists of adolescents between the age of 10 and 17 years who were diagnosed to have conduct disorder, many of whom may already be in contact with the criminal justice system. The perspective adopted was that of NHS and PSS in the main analysis as recommended by NICE (2009c). A secondary analysis was also conducted adopting a wider perspective because the GDG considered other costs such as education and crime to be significant and are expected to be reduced greatly following successful treatment of a person with conduct disorder.

Estimation of QALYs was not undertaken in the analysis due to poor quality of available data on health utilities as discussed in section 7.3.1 above.

Economic modelling methods

Interventions assessed

The type of multimodal intervention assessed in this analysis is multi-systemic therapy (MST). It is compared with care as usual of which Youth Offending is identified by the GDG as a comparable usual service for this group. Multi-systemic therapy (MST) was specifically developed for working with conduct disordered adolescents (Henggeler et al., 1998). Further details on MST are given in section 7.2.1.

Model structure

The starting population consists of a cohort of adolescent's age 10 years with a diagnosis of conduct disorder. The model structure and model states are the same as in the child-focused programme (see section 7.3.1). The assumptions and baseline CBCL T-scores also remained the same as in child-focused programme.

Clinical input parameters

From the meta-analysis of clinical evidence, the effect size reported as standardised mean difference (SMD) was estimated to be 0.47 (95% CI; 0.21, 0.74) at post-treatment. This estimate was based on parent-rated antisocial behaviour outcome, demonstrating an overall moderate effect relative to treatment as usual. The full details on methods used to estimate the magnitude of change in base line CBCL scores are the same as in child-focused section (section 7.3.1)

Time horizon

The model adopted an 8 year time horizon to represent a young person receiving an intervention at age 10 years and then follow-up to 17 years. This age range of 10 to 17 years represents those to whom the intervention is targeted at. As there is no strong evidence of a sustained treatment effect, an annual relapse rate of 50% was assumed over the remaining years after treatment.

Cost data

Estimation of intervention cost

The cost of MST and treatment as usual were estimated using information on resource use from Butler et al (2011) and expert opinion of the GDG. A Youth Offending Team (YOT) was taken to be representative of the treatment as usual offered to this population. The details of the resource use and cost of MST and treatment as usual are given in Table 83 and Table 84 respectively. In the MST resource use estimate, the intervention was estimated to last for an average of 20 weeks during which nine families were seen by a team of three therapists and one supervisor with each session lasting for 90 minutes (based on the expert opinion of the GDG members). Besides the family visits, there is also telephone support available to each family 24 hours and 7 days a week. Given the specialised nature of MST, the therapists are offered training, with booster training at intervals. The estimated cost per family was £7,312. This is close to an estimate of £7,000 reported in the costing report for Antisocial Personality Disorder based on discussions with experts and on costs provided by the Department of Health (NICE, 2009a).

Table 83: Cost of MST programme

Resource use	Description	Unit cost	Total cost	Source
Staff costs	Three therapists (NHS Band 7 equivalent), with each therapist visiting three families every week for a 1.5 hour session for a total of 20 weeks (total 270 hours); 30 mins travel time each way per visit (180 hours); 1 hour of telephone support each week per family (180 hours). 630 hours in total for nine families	£83/hr	£52,290	Resource use: Expert opinion. Unit cost: Curtis (2011)
Supervision costs	1-hour weekly joint supervision of three therapists by a supervisor (NHS Band 8c equivalent) for 20 weeks (20 hours) and 45 minutes travel time each way per week (30 hours). 50 hours in total for nine families	£135/hr	£6,750	Resource use: Expert opinion. Unit cost: Curtis (2011)
Travel costs	180 visits by three therapists for nine families. 20 visits by a supervisor for joint therapist's supervision. 200 visits in total for nine families	£1.54/visit	£308	Resource use: Expert opinion. Unit cost: Curtis (2010)
Consultation costs	Weekly consultation via telephone with an MST expert. 20 consultations in total per nine families	£100/consultation	£2,000	Unit cost: Expert Opinion
Audit costs	Twice yearly implementation review by experts at £1000 per review. For a 20-week period, there is 0.769 potential review for nine families	£1000/review	£769	Unit cost: Expert Opinion
Training costs	One off initial training: £6,000 per therapist. Assuming that the impact of the training lasts for 5 years, in 20-week periods, there will be 0.231 equivalent therapists' training cost for nine families	£6,000	£1,386	Unit cost: Expert Opinion
Booster training sessions	Four booster therapist training sessions per year at £500 for each therapist. There will be 4.62 therapists' booster training over a 20-week period for nine families	£500	£2,310	Unit cost: Expert Opinion
Total cost for nine families			£65,813	
Cost per family			£7,312	

Table 84: Cost of treatment as usual (YOT)

Resource use	Description	Unit cost (£)	Total cost (£)	Source
Staff costs	One facilitator (social worker equivalent) with 21 professional appointments lasting for 90 minutes. Total of 31.5 hours	74 (client-related work including qualification cost)	£2,331	Resource use: Expert Opinion Unit costs: Curtis, 2011
Cost per family			£2,331	

Estimation of costs of states relating to conduct disorder

The methods used in estimating the costs associated with conduct disorder, conduct problem and no problem states are the same as in child-focused programme (see section 7.3.17.3.1for summary of cost of conduct disorder, conduct problem and no problem states).

Discounting

Discounting was applied at an annual rate of 3.5% as recommended by NICE (NICE, 2009a); prices were expressed in 2011 UK Pounds, uplifted, when necessary, using the Hospital and Community Health Service Pay and Price Index (Curtis, 2011).

Data analysis and presentation of the results

The difference in the mean costs over the time horizon of analysis between the treated and untreated groups was estimated, to determine the extent of cost savings due to improvement in the behaviour state of the target population. The results are presented in two parts: the main analysis, where NHS and PSS costs were considered only, and secondary analysis where wider costs to other sectors were considered. Sensitivity analysis was conducted for the secondary analysis to test the impact of potential uncertainty around the rate of relapse, cost of intervention and cost of crime by varying the base case value by 50%. In addition to deterministic analysis, distribution around the cost data and treatment effect were generated using gamma distribution for cost parameters and normal distribution for effect sizes from which 10,000 iterations were randomly drawn to estimate the mean net savings.

Economic modelling results

Results of analysis

The multi-modal programme compared with usual care resulted in a reduction in the proportion of adolescents with conduct disorder from 100% before treatment to 47% after treatment, because a proportion of children improved to a better behaviour state of either conduct problem or no problem (13% and 40%, respectively) (see Table 85). In the cost analysis, this improvement in behaviour state resulted in a mean net cost of £3,867 for the NHS and PSS in the main analysis (Table 86) and an overall mean net savings of up to £7,125 over an 8 year period when a wider perspective is considered (Table 87). Out of £12,106 of the total savings, 9% fall under Health and social services, 6% under education and 85% under criminal justice system.

Table 85: Estimated proportion of adolescents in each state after MST

Domains	Treatment
Conduct disorder	0.47
Conduct problems	0.13
No problems	0.40

Table 86: Main Analysis (expected mean cost per child)

Cost component	Usual Care (YOT)	CF + usual care	Incremental cost/saving[73]
NHS and PSS	£9,340	£8,226	£1,114
Intervention cost	£2,331	£7,312	(£4,981)
Net savings (deterministic)			(£3,867)

Table 87: Secondary analysis (expected mean cost per child)

Cost component	Usual care (YOT)	MST	Incremental cost/saving
NHS and PSS	£9,340	£8,226	£1,114
Education	£6,486	£5,712	£774
Crime	£83,138	£72,920	£10,218
Total savings			£12,218
Intervention cost	£2,331	£7,312	(£4,981)
Net savings (deterministic)			£7,125
Net savings (probabilistic)			£7,124

Table 88: Sensitivity analysis on MST

Variable	Value	Net savings
Relapse rate	25%	£16,079
Relapse rate	75%	£3,294
Intervention cost	50% higher	£3,469
Intervention cost	50% lower	£10,781
Cost crime	50% lower	£2,016

---

[73] Net cost is shown in parentheses while net savings are shown without parentheses.

From the result of sensitivity analysis in Table 88, the model was robust across variations in some of the input parameters; that is, savings were incurred under all estimates. However, variation in relapse rates, higher cost of intervention and lower cost of crime did change the results significantly. From the probability sensitivity analysis generated from the parameter distributions, the results were shown to be essentially the same as with the deterministic estimates.

Discussion – limitations of the analysis

Discussion

The analysis is based on evidence from meta-analysis, and also on various assumptions on relapse rates and persistence of the condition in young people who were not offered treatment. It is focused on estimating the savings to be achieved by reducing the chance of conduct disorder persisting over time. Taking a narrow perspective of NHS and PSS only in the main analysis, multi-modal intervention is shown to result in a net cost of £3,867 over an 8-year period. However, when a wider perspective is considered, there is an overall net savings of £7,125. The fact that an intervention is not cost-saving does not necessarily mean that it is not cost-effective. Because other costs to the public sector are the main costs incurred by this population, as shown in Scott and colleagues (2001), and are highly important, the GDG considered the total NHS and PSS costs, overall cost-savings and clinical outcomes, and concluded that the interventions were cost-effective.

The model considered the potential impact of relapse after treatment. Given that there was limited data available to model the relapse rate for those with improved states after treatment of conduct problems, the assumption of a 50% relapse rate was made. For those who have conduct problems after treatment, it was assumed that they could relapse to conduct disorder; those with no problem after treatment were also assumed to relapse to conduct disorder – that is, all individuals who relapsed changed to the worst state. This is still conservative because there is the possibility that no problem could relapse to conduct problem and not to conduct disorder. However, there is no data to determine such differential relapse from no problem to conduct problem, or no problem to conduct disorder. Recovery was not considered in the analysis due to a lack of data on differential recovery from conduct disorder to conduct problem, or from conduct problem to no problem, or from conduct disorder to no problem.

As discussed in the child-focused programme (see section 7.3.1), there is a possibility that the overall estimate of the net savings evaluated in this analysis may be under-estimating the potential benefits of MST, given that the crime cost used in the analysis is less than that reported in the Ministry of Justice technical paper on the cost of young offenders (NAO, 2011). In comparison with the net savings of £4,660 estimated by Bonin and colleagues (2011) over a 20-year period from a parenting programme offered to children at the age of 5 years, savings from MST (£7,125) over a shorter period of 8 years are significantly more. Such significant savings may be expected because the target population is mainly adolescents with a severe form of conduct disorder, who are likely to be in contact with the criminal justice system.

Limitations of the analysis

The limitations of this model are similar to those of the child-focused model (see section 7.3.1). The first limitation is the arbitrary cut-off points of the CBCL scores and, second, the assumption of a normal distribution of children and young people's CBCL scores around this scale. There is potentially a loss of information as a result of the cut-off points. However, this was essential in order to estimate the percentage of children in different health states and subsequently attach costs associated with different health states relating to conduct disorder.

Overall conclusions from economic evidence

Multi-modal interventions (MST) for young people with a conduct disorder are cost-effective compared with usual care.

7.4 FROM EVIDENCE TO RECOMMENDATIONS

Relative value placed on the outcomes considered:

Due to a large number of child outcomes, the GDG decided to focus on only those considered critical:

- Agency contact (for example, residential care, criminal justice system)
- Antisocial behaviour (at home, at school, in the community)
- Drug/alcohol use
- Educational attainment (that is, the highest level of education completed)
- Offending behaviour
- School exclusion due to antisocial behaviour.

Trade-off between clinical benefits and harms:

In younger children (<11 years old) with a conduct disorder (or at high risk based on symptoms), there is reasonable evidence that the benefits of parent-focused interventions outweigh the minimal risk of harm. There is also some evidence that first-line treatment should utilise group-based manualised interventions.

In older children (7-14 years old) with a conduct disorder (or at high risk based on symptoms), there is reasonable evidence that the benefits of child-focused interventions outweigh the minimal risk of harm. There is also some evidence that child-focused interventions should generally be delivered in the school setting.

In young people (11+ years old) with a conduct disorder (or at high risk based on symptoms), there is reasonable evidence that the benefits of multi-modal interventions outweigh the minimal risk of harm.

Trade-off between net health benefits and resource use:

Parent-focused interventions, child-focused interventions and multi-modal interventions are all cost-effective, and therefore, the GDG felt there was sufficient evidence to conclude that net health benefits outweighed resource use.

Quality of the evidence

For parent-focused interventions, the evidence ranged from moderate to high quality. Reasons for downgrading concerned either a lack of evidence or heterogeneity. In the latter case, some of the between study variance could be explained by method of delivery (group versus individual) and the underlying principles used to develop the intervention. Importantly, the evidence across outcome raters was consistent (except when rated by teachers).

For child-focused interventions, the evidence ranged from low to moderate quality. Reasons for downgrading concerned either a lack of evidence or heterogeneity. In the latter case, some of the between study variance could be explained by the setting (where the intervention was delivered) and type of control group. Despite low quality evidence for some outcomes (particularly at follow-up), the evidence across outcome raters was consistent.

For multi-modal interventions, the evidence ranged from low to high quality. Reasons for downgrading concerned issues to do with imprecision of the effect. There was insufficient evidence to explore the reasons for this, but evidence across outcome raters was consistent.

7.5 RECOMMENDATIONS

7.5.1 Clinical practice recommendations

Working safely and effectively with children and young people

7.5.1.1 Health and social care professionals working with children and young people who present with behaviour suggestive of a conduct disorder, or who have conduct disorder, should be trained and competent and able to work with different levels of learning ability, cognitive capacity, emotional maturity and development.al levels.

Staff supervision

7.5.1.2 Health and social care services should ensure that staff supervision is built into the routine working of the service, is properly resourced within local systems and is monitored. Supervision should:

- make use of direct observation (for example, recordings of sessions) and routine outcome measures
- support adherence to the specific intervention
- focus on outcomes
- be regular and apply to the whole caseload.

Treatment and indicated prevention

Parent training programmes

7.5.1.3 Offer a group parent training programme to the parents of children and young people aged between 3 and 11 years with oppositional defiant disorder or conduct disorder.

7.5.1.4 Group parent training programmes should involve both parents if this is possible and in the best interests of the child or young person, and should:

- typically have between 10 and 12 parents in a group
- be based on a social learning model, using modelling, rehearsal and feedback to improve parenting skills
- typically consist of 10 to 16 meetings of 90 to 120 minutes' duration
- have demonstrated efficacy in well-conducted clinical trials.

7.5.1.5 Offer an individual parent training programme to the parents of children and young people aged between 3 and 11 years with oppositional defiant disorder or conduct disorder who are not able to participate in a group parent training programme.

7.5.1.6 Individual parent training programmes should involve both parents if possible and should:

- be based on a social learning model using modelling, rehearsal and feedback to improve parenting skills
- typically consist of up to 8 to 10 meetings of 60 to 90 minutes' duration.

Foster carer/guardian training programmes

7.5.1.7 Offer a group foster carer/guardian training programme to foster carers and guardians of children and young people aged between 3 and 11 years with oppositional defiant disorder or conduct disorder.

7.5.1.8 Group foster carer/guardian training programmes should involve both of the foster carers or guardians if possible and should:

- modify the intervention to take account of the care setting in which the child is living
- typically have between 8 and 12 parents in a group
- be based on a social learning model using modelling, rehearsal and feedback to improve parenting skills
- typically consist of between 12 and 16 meetings of 90 to 120 minutes' duration.

7.5.1.9 Offer an individual foster carer/guardian training programme to the foster carers and guardians of children and young people aged between 3 and 11 years with oppositional defiant disorder or conduct disorder who are not able to participate in a group programme.

7.5.1.10 Individual foster carer/guardian training programmes should involve both of the foster carers if possible and should:

- modify the intervention to take account of the care setting in which the child is living
- be based on a social learning model using modelling, rehearsal and feedback to improve parenting skills
- consist of up to 10 meetings of 60 minutes' duration

Parent and child training programmes for children with complex needs

7.5.1.11 Offer individual parent and child training programmes to children and young people aged between 3 and 11 years with oppositional defiant disorder or conduct disorder and their parents, foster carers or guardians if the problems are severe and complex.

7.5.1.12 Individual parent and child training programmes should involve both parents, foster carers or guardians if possible and should:

- be based on a social learning model using modelling, rehearsal and feedback to improve parenting skills
- consist of up to 10 meetings of 60 minutes' duration.

Child-focused programmes

7.5.1.13 Offer group social and cognitive problem solving programmes to children and young people aged between 7 and 14 years with oppositional defiant disorder or conduct disorder

7.5.1.14 Group social and cognitive problem solving programmes should be adapted to the children or young people's developmental level and should:

- be based on a cognitive–behavioural problem solving model
- use modelling, rehearsal and feedback to improve skills
- typically consist of 10 to 18 weekly meetings of 2 hours' duration.

Multimodal interventions

7.5.1.15 Offer multimodal interventions (for example, multisystemic therapy) to children and young people aged between 11 and 17 years with a conduct disorder.

7.5.1.16 Multimodal interventions (for example, multisystemic therapy) should involve the child or young person and their parents and carers and should:

- have an explicit and supportive family focus
- be based on a social learning model with interventions provided at individual, family, school, criminal justice and community levels

- be provided by specially trained case managers
- typically consist of 3 to 4 meetings per week over a 3 to 5-month period.

7.5.2 Research recommendations

7.5.2.1 Are parent training programmes clinically and cost effective at reducing antisocial behaviour in children aged over 12 years old with a conduct disorder?

7.5.2.2 Are there any interventions that are clinically and cost effective at maintaining the benefits or preventing relapse in children and young people who have been successfully treated for a conduct disorder?

7.5.2.3 Are interventions that combine treatment for parental mental health and treatment for children and young people with conduct disorders clinically and cost effective at reducing antisocial behaviour in children and young people with conduct disorders?

8 PHARMACOLOGICAL AND PHYSICAL TREATMENT INTERVENTIONS FOR CONDUCT DISORDERS

8.1 INTRODUCTION

Pharmacological and physical treatments generally have a less prominent role in the treatment of mental disorders in children and young people than in adults with mental disorders. For certain disorders such as ADHD, medication (principally methylphenidate) has a central role in the treatment of the disorder (NICE, 2009b) and in other disorders in childhood and adolescence such as schizophrenia (NICE, 2013) and depression (NICE, 2005) medication can also play an important part in treatment. For a range of other child and adolescent disorders, including conduct disorders, medication has had less evidence to support its use and has not had a prominent role; psychosocial interventions have been the best supported treatment. Currently in the UK, only risperidone is licensed for the short-term symptomatic treatment (up to 6 weeks) of persistent aggression in conduct disorder in children from the age of 5 years.

However, sometimes medication used on its own and in combination with psychological interventions for the treatment of conduct disorder, but this is more common in the United States than in the United Kingdom (Turgay, 2004). A range of psychotropic medications has been used including stimulants, lithium and antipsychotics, in particular, risperidone. When prescribed medication tends to be used it is in more severe forms of conduct disorder and targeted at specific symptoms such as hyperactivity, impulsivity and aggression, in particular explosive aggression that is destructive and dangerous. Use is more common in older children and in inpatient and residential settings and will often only be offered after other interventions have been of no or limited benefit. The mechanisms of action of medication in conduct disorder, with the exception of those coexistent symptoms of hyperactivity, are not well understood. But as conduct disorder is a condition in which biological phenomena such as genetic predisposition and atypical brain maturation or physyiologically-based emotional dysregulation can make a significant contribution, medication may act to correct or ameliorate some of these factors.

Comorbidities such as ADHD and depression are common in children and young people with a conduct disorder and medication may be used to treat the comorbid condition. This is probably the most common indication for the use of medication in children and young people with conduct disorders.

Again, in contrast to other childhood disorders such as autism and ADHD, other physical treatments such as restricted diets, dietary supplements and physical activity have not been much used in the treatment of conduct disorders as there has been little or no evidence to support their use.

In developing the reviews below the GDG was also mindful of the potential harms associated with the use of medication: for example, the development of prolactinaemia and marked weight gain with the use of risperidone and the wide range of side effects associated with lithium and antipsychotic drugs.

This chapter considers the evidence that has emerged for the specific treatment of conduct disorder (with and without a coexisting disorder). The treatment and management of coexisting conditions is considered in other guidance. In addition, studies of children and young people with subaverage IQ (defined for the purpose of the guideline as a mean IQ of less than 60) were not included in this review.

8.2 CLINICAL EVIDENCE REVIEW

8.2.1 Interventions

The following interventions were considered in the review of pharmacological and physical interventions.

Pharmacological interventions

Individual drugs were grouped for the purposes of the guideline into the following categories:

- antidepressant drugs (for example, citalopram, fluoxetine)
- antihypertensive drugs (for example, clonidine)
- antimanic and anticonvulsant drugs (for example, carbamazepine, divalproex, lithium)
- antipsychotics (for example, risperidone, aripiprazole, haloperidol, thioridazine)
- CNS stimulant drugs (for example, methylphenidate, dexamphetamine)
- selective norepinephrine reuptake inhibitor (NRI) drugs (for example, atomoxetine)
- other drugs (naltrexone, guanfacine).

Physical interventions

Individual physical interventions were grouped for the purposes of the guideline into the following categories:

- diet
- holding therapy
- physical activity
- food additives
- dietary supplements (for example, fish oils).

8.2.2 Clinical review protocol

A summary of the review protocol, including the review questions, information about the databases searched, and the eligibility criteria used for this section of the guideline, can be found in Table 89 (a complete list of review questions can be found in Appendix 5; further information about the search strategy can be found in Appendix 7; the full review protocols can be found in Appendix 15).

Table 89: Clinical review protocol for the review of pharmacological and physical interventions

Component	Description
Review questions	• For children and young people with conduct disorders, what are the benefits and potential harms associated with pharmacological interventions? • For children and young people with conduct disorders, what are the benefits and potential harms associated with physical interventions (for example, diet)? • For children and young people with conduct disorders, should interventions found to be safe and effective be modified in any way in light of coexisting conditions (such as ADHD, depression, anxiety disorders, attachment insecurity) or demographics (such as age, particular black and minority ethnic groups, or gender)?
Objectives	• To evaluate the clinical effectiveness and safety of pharmacological and physical interventions for conduct disorders • To evaluate if any modifications should be made to interventions to take into account co-existing conditions or demographic variation
Population	Children and young people (aged 18 years and younger), including looked after children and those in contact with the criminal justice system, diagnosed with a conduct disorder, including Oppositional Defiant Disorder (ODD) or persistent offending/symptoms of conduct problems (conduct disorder and ODD are characterised by repetitive and persistent patterns of antisocial, aggressive or defiant behaviour that amounts to significant and persistent violations of age-appropriate social expectations). Studies of children and young people with subaverage IQ (defined for the purpose of the guideline as a mean IQ of less than 60) were excluded.
Intervention(s)	• Pharmacological interventions (for example, antipsychotic drugs) • Physical interventions (for example, diet)
Comparison	Treatment as usual, placebo, other active interventions
Critical outcomes	• Child Outcomes: • Antisocial behaviour (at home, at school, in the community)[1] • Offending behaviour • School exclusion due to antisocial behaviour

	• Educational attainment (that is, the highest level of education completed) • Agency contact (for example, residential care, criminal justice system) • Sexual behaviour • Drug/alcohol use
Electronic databases	Mainstream databases: Embase, Medline, PreMedline, PsycINFO Topic specific databases and grey literature databases (see search strategy in Appendix 7)
Date searched	Inception to June 2012
Study design	RCT
Note. RCT = randomised controlled trial.	

8.2.3 Studies considered[74]

28 RCTs (N = 2,789) met the eligibility criteria for this review: AMAN2002 (Aman et al., 2002), BANGS2008 (Bangs et al., 2008), BARZMAN2006, BIEDERMAN1993 (Barzman et al., 2006), BLADER2009 (Blader et al., 2009), BUITELAAR2001 (Buitelaar et al., 2001), CAMPBELL1982 (Campbell et al., 1982) , CAMPBELL1995 (Campbell et al., 1995), CONNERS1963 (Conners & Eisenberg, 1963), CONNERS1971 (Conners et al., 1971), CONNOR2008 (Connor et al., 2008), CONNOR2010 (Connor et al., 2010), CUEVA1996 (Cueva et al., 1996), DELLAGNELLO2009 (Dell'Agnello et al., 2009), DITTMANN2011 (Dittmann et al., 2011), DONOVAN2000 (Donovan et al., 2000), FINDLING2000 (Findling et al., 2000), HAZELL2003 (Hazell & Stuart, 2003), HAZELL2006 (Hazell et al., 2006), KAPLAN2004 (Kaplan et al., 2004), KLEIN1997 (Klein et al., 1997), MALONE2000 (Malone et al., 2000), NEWCORN2005 (Newcorn et al., 2005), REYES2006 (Reyes et al., 2006), RIFKIN1997 (Rifkin et al., 1997), RIGGS2007 (Riggs et al., 2007), SNYDER2002 (Snyder, 2002), SPENCER2006 (Spencer et al., 2004) and STEINER2003 (Steiner et al., 2003). Of these, all were published in peer-reviewed journals between 1963 and 2011. In addition, 127 studies were excluded from the review. Further information about both included and excluded studies can be found in Appendix 16.

Of the 28 eligible trials, 18 (N = 1,666) included sufficient data to be included in the set of meta-analyses comparing a pharmacological intervention with placebo. No trials were found that examined the efficacy of physical interventions. For the purposes of the guideline, pharmacological interventions were categorised as antihypertensive drugs, antipsychotic drugs, antimanic and anticonvulsant drugs, CNS stimulant drugs and selective norepinephrine reuptake inhibitor (NRI) drugs. Table 90 and Table 91 provide an overview of the trials included in each category.

---

[74] Here and elsewhere in the guideline, each study considered for review is referred to by a study ID in capital letters (primary author and date of study publication, except where a study is in press or only submitted for publication, then a date is not used).

Table 90: Study information table for trials included in the meta-analysis of pharmacological interventions (antihypertensive, antimanic and anticonvulsant drugs) versus placebo.

	Antihypertensive drugs	Antimanic and anticonvulsant drugs
Total no. of trials (N)	1 RCT (67)	6 RCTs (196)
Study ID	HAZELL2003	BLADER2009 CAMPBELL1995 CUEVA1996 DONOVAN2000 MALONE2000 RIFKIN1997
Country	Australia (k = 1)	US (k = 6)
Year of publication	2003	1996 to 2009 (k = 5)
Mean age of children/ young people	9.9 years	8.5 to 15.2 years
Gender of children/ young people (% Female)	0-25% (k = 1)	0-25% (k = 5) 26-50% (k = 0) 51-75% (k = 1) 76-100% (k = 0)
Ethnicity of children/ young people (% White)	0-25% (k = 0) 26-50% (k = 0) 51-75% (k = 0) 76-100% (k = 0) N/R (k = 1)	0-25% (k = 4) 26-50% (k = 0) 51-75% (k = 1) 76-100% (k = 0) N/R (k = 1)
Conduct disorder diagnosis	CD/ODD (k = 1)	CD/ODD (k = 6)
Coexisting ADHD	100% (k = 1)	0 (k = 4) 1-25% (k = 1) 26-50% (k = 0) 51-75% (k = 0) 76-100% (k = 1)
Timepoint (weeks)	PT: 6 (k = 1)	PT: 2 to 8 (k = 6)
Comparisons	Clonidine (0.1 to 0.2 mg/d) versus placebo (k = 1)	Carbamazepine (683 mg/d) versus placebo (k = 1) Divalproex (567 to 1500 mg/d) versus placebo (k = 2) Lithium (1248 to 1425 mg/d) versus placebo (k = 3)

Table 91: Study information table for trials included in the meta-analysis of pharmacological interventions (antimanic drugs, CNS stimulant drugs, NRI drugs) versus placebo.

	Antipsychotic drugs	**CNS stimulant drugs**	**Selective norepinephrine reuptake inhibitor drugs**
Total no. of trials (N)	5 RCTs (621)	2 RCTs (203)	4 RCTs (578)
Study ID	AMAN2002 BUITELAAR2001 FINDLING2000 REYES2006 SNYDER2002	KLEIN1997 SPENCER2006	BANGS2008 DELLAGNELLO2009 KAPLAN2004 NEWCORN2005
Country	Canada (k = 1) Germany (k = 1) Netherlands (k = 1) US (k = 3)	US (k = 2)	Australia/Multiple European (k = 1) Italy (k = 1) US (k = 2)
Year of publication	2000-2009	1997 to 2006	2004-2009
Mean age of children/ young people	8.4 to 13.9 years	10.2 to 10.6 years	9.5 to 11.2 years
Gender of children/ young people (% Female)	0-25% (k = 5)	0-25% (k = 1) 26-50% (k = 1) 51-75% (k = 0) 76-100% (k = 0)	0-25% (k = 4) 26-50% (k = 0) 51-75% (k = 0) 76-100% (k = 0)
Ethnicity of children/ young people (% White)	0-25% (k = 0) 26-50% (k = 0) 51-75% (k = 1) 76-100% (k = 1) N/R (k = 3)	0-25% (k = 0) 26-50% (k = 0) 51-75% (k = 2) 76-100% (k = 0) N/R (k = 0)	0-25% (k = 0) 26-50% (k = 0) 51-75% (k = 1) 76-100% (k = 0) N/R (k = 3)
Conduct disorder diagnosis	CD (k = 1) CD/ODD (k = 4)	CD (k = 1) ODD (k = 1)	ODD (k = 4)
Coexisting ADHD	0 (k = 1) 1-25% (k = 0) 26-50% (k = 0) 51-75% (k = 3) 76-100% (k = 1)	0% (k = 0) 1-25% (k = 0) 26-50% (k = 0) 51-75% (k = 1) 76-100% (k = 1)	0% (k = 0) 1-25% (k = 0) 26-50% (k = 0) 51-75% (k = 0) 76-100% (k = 4)
Timepoint (weeks)	PT: 6 to 26 (k = 5)	PT: 4 to 5 (k = 2)	PT: 8 to 9 (k = 4)
Comparisons	Risperidone (0.5 to 2.9 mg/d) versus placebo (k = 5)	Methylphenidate (1mg/kg/d) versus placebo (k = 1) Mixed amphetamine salts (30 mg/d) versus placebo (k = 1)	Atomoxetine (0.5 to 1.6 mg/kg/d) versus placebo (k = 4)

Note. CD = Conduct disorder; CNS = Central nervous system; k = Number of trials; N = Total number of participants; N/R = Not Reported; NRI = Selective norepinephrine reuptake inhibitor; ODD = Oppositional defiant disorder; PT = Post-treatment; RCT = Randomised Controlled Trial.

8.2.4 Clinical evidence for the review of a pharmacological intervention versus placebo

The critical outcome of antisocial behaviour was sub-categorised according to the person who rated the outcome: a) observer rated, b) researcher/clinician rated, c) peer rated, d) teacher rated, and e) parent rated. No other critical outcomes were reported in adequate numbers to be included in meta-analyses.

Because within each category there was a paucity of evidence from the included RCTs relating to adverse effects of each drug, information has been quoted from the BNF for Children 2011-2012 (Paediatric Formulary Committee, 2011). In most cases, these data have not been collected from children and young people with conduct disorder. In addition, where available, evidence from observational studies, as well as RCTs, included in three recent systematic reviews (Maayan & Correll, 2011, Scotto Rosato et al., 2012, Zuddas et al., 2011) was used to quantify the absolute risk using the number needed to harm (NNH). Maayan and Correll (2011) reviewed evidence for weight gain and metabolic risks associated with the use of antipsychotic drugs in children and young people (from 43 studies, including 6 focusing on conduct disorders). Scotto Rosato and colleagues (2012) reviewed evidence for adverse events associated with the use of antipsychotic, stimulant and mood stabiliser drugs in children and young people (from 29 studies, including 24 focusing on conduct disorders/ disruptive behaviour disorders). Zuddas and colleagues (2011) reviewed evidence for adverse events associated with the use of antipsychotic drugs in children and young people with non-psychotic disorders (from 32 studies, including 7 focusing on conduct disorders).

Summary of findings tables are used below to summarise the evidence. The full GRADE evidence profiles and associated forest plots can be found in Appendix 16 and Appendix 17, respectively.

Antihypertensive drugs (clonidine)

Moderate quality evidence from one trial with 67 participants showed that antihypertensive drugs when compared with placebo reduced antisocial behaviour when rated by teachers at post-treatment, measured using a continuous outcome (Table 92). In the same trial, when the outcome was rated by parents, the intervention was shown to be effective (moderate quality evidence) when measured using both continuous and dichotomous outcomes, although only the latter was statistically significant. In this trial, 100% of the participants had coexisting ADHD.

With regard to adverse effects of clonidine, the BNF for Children gives a number of cautions, including “must be withdrawn gradually to avoid hypertensive crisis; mild to moderate bradyarrhythmia; constipation; polyneuropathy; Raynaud’s syndrome or other occlusive peripheral vascular disease; history of depression”. In addition, the following side-effects are listed, “constipation, nausea, dry mouth, vomiting, postural hypotension, dizziness, sleep disturbances, headache, malaise, drowsiness, depression, sexual dysfunction”. Less common side-effects are also listed (see BNF for Children for more information).

Table 92: Summary of findings table for antihypertensive drugs compared with placebo (post-treatment).

Patient or population: patients with children and young people with conduct disorders [PT] **Intervention:** antihypertensive drugs **Comparison:** placebo					
Outcomes	**Illustrative comparative risks* (95% CI)**		**Relative effect (95% CI)**	**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	Corresponding risk			
	Placebo	**Antihypertensive drugs**			
Teacher rated antisocial behaviour [continuous outcome] any valid rating scale	0	The mean teacher rated antisocial behaviour [continuous outcome] in the intervention groups was **0.68 standard deviations lower** (1.17 to 0.19 lower)	–	67 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Parent rated antisocial behaviour [continuous outcome] any valid rating scale	0	The mean parent rated antisocial behaviour [continuous outcome] in the intervention groups was **0.31 standard deviations lower** (0.80 lower to 0.18 higher)	–	67 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Parent rated antisocial behaviour [dichotomous outcome] Conners Parent Rating Scale (CPRS) - Conduct problems - no. achieving 38% reduction from baseline	–		**RR 0.55** (0.36 to 0.82)	66 (1 study)	⊕⊕⊕⊝ **moderate**[1]
CI = Confidence interval; RR = Risk ratio. [1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.					

Antimanic (carbamazepine) and anticonvulsant drugs (divalproex sodium/lithium)

These drugs have different modes of action, therefore were analysed separately.

For carbamazepine, moderate quality evidence from one trial with 22 participants was inconclusive with regard to whether the drug when compared with placebo reduced antisocial behaviour when rated by researchers/ clinicians at post-treatment, measured using either a continuous or dichotomous outcome (Table 93).

For divalproex, moderate quality evidence from one trial with 27 participants (parent rated outcome) was inconclusive with regard to whether the drug when compared with placebo reduced antisocial behaviour at post-treatment using a continuous outcome measure (Table 93). However, moderate quality from one trial with 20 participants (researcher/clinician rated outcome) and one trial with 27 participants (parent-rated outcome) demonstrated improved response/remission at post-treatment using dichotomous outcomes. In the two trials, one included 20% of participants with ADHD and the other included 100% with ADHD.

For lithium, moderate quality evidence from one trial with 40 participants (researcher/clinician rated outcome) was inconclusive with regard to whether the drug when compared with placebo reduced antisocial behaviour at post-treatment using a continuous outcome measure (Table 93). However, moderate quality evidence from three trials with 116 participants (researcher/clinician rated outcome) showed that lithium improved treatment response at post-treatment using a dichotomous outcome measure.

With regard to adverse effects of carbamazepine, the BNF for Children gives a number of cautions, including advice that “children or their carers should be told how to recognise signs of blood, liver, or skin disorders, and advised to seek immediate medical attention if symptoms such as fever, rash, mouth ulcers, bruising, or bleeding develop.” In addition, the following side-effects are listed, “dry mouth, nausea, vomiting, oedema, ataxia, dizziness, drowsiness, fatigue, headache, hyponatraemia (leading in rare cases to water intoxication), blood disorders (including eosinophilia, leucopenia, thrombocytopenia, haemolytic anaemia, and aplastic anaemia), dermatitis, urticarial”. Less common side-effects are also listed (see BNF for Children for more information). Scotto Rosata and colleagues (2012) reported that carbamazepine compared with placebo had a NNH of 5 for weight gain.

With regard to adverse effects of divalproex sodium, which consists of a compound of sodium valproate and valproic acid, the BNF for Children gives a number of cautions for sodium valproate, including “…monitor liver function before therapy and during first 6 months especially in children most at risk …” In addition, the following side-effects are listed, “nausea, gastric irritation, diarrhoea; weight gain; hyperammonaemia, thrombocytopenia; transient hair loss (regrowth may be curly)”. Less common side-effects are also listed (see BNF for Children for more information). Scotto Rosata and colleagues (2012) reported that valproate compared with placebo had a NNH of 8 for weight gain.

With regard to adverse effects of lithium carbonate, the BNF for Children gives a number of cautions, including "…measure renal function and thyroid function every 6 months on stabilised regimens and advise children and carers to seek attention if symptoms of hypothyroidism develop (females are at greater risk) e.g. lethargy, feeling cold…". In addition, the following side-effects are listed, "gastro-intestinal disturbances, fine tremor, renal impairment (particularly impaired urinary concentration and polyuria), polydipsia, leucocytosis; also weight gain and oedema (may respond to dose reduction); hyperparathyroidism and hypercalcaemia reported; signs of intoxication are blurred vision, increasing gastro-intestinal disturbances (anorexia, vomiting, diarrhoea), muscle weakness, increased CNS disturbances (mild drowsiness and sluggishness increasing to giddiness with ataxia, coarse tremor, lack of coordination, dysarthria), and require withdrawal of treatment; with severe overdosage (serum-lithium concentration above 2 mmol/litre) hyperreflexia and hyperextension of limbs, convulsions, toxic psychoses, syncope, renal failure, circulatory failure, coma, and occasionally, death; goitre, raised antidiuretic hormone concentration, hypothyroidism, hypokalaemia, ECG changes, and kidney changes may also occur". Scotto Rosata and colleagues (2012) reported that lithium compared with placebo had a NNH of 3 for weight gain, and a NNH of 10 for sedation.

Table 93: Summary of findings table for antimanic and anticonvulsant drugs compared with placebo (post-treatment).

Patient or population: patients with children and young people with conduct disorders [PT]
Intervention: antimanic drugs
Comparison: placebo

Outcomes	**Illustrative comparative risks (95% CI)**		**Relative effect (95% CI)**	**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	Corresponding risk			
	Placebo	**Antimanic/ anticonvulsant drugs**			
Researcher/clinician rated antisocial behaviour [continuous outcome]/ Carbamazepine any valid rating scale	0	The mean researcher/clinician rated antisocial behaviour [continuous outcome]/carbamazepine in the intervention groups was **0.01 standard deviations lower** (0.81 lower to 0.79 higher)	–	22 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Parent rated antisocial behaviour [continuous outcome]/Divalproex any valid rating scale	0	The mean parent rated antisocial behaviour [continuous outcome]/divalproex in the intervention groups was **0.26 standard deviations lower** (1.00 lower to 0.48 higher)	–	27 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Researcher/clinician rated antisocial behaviour [continuous outcome]/ Lithium any valid rating scale	0	The mean researcher/clinician rated antisocial behaviour [continuous outcome] in the intervention groups was **0.56 standard deviations lower** (1.19 lower to 0.07 higher)	–	40 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Researcher/clinician rated antisocial behaviour [dichotomous outcome]/ Carbamazepine Response	–		**RR 0.40** (0.10 to 1.64)	22 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Researcher/clinician rated antisocial behaviour [dichotomous outcome]/ Divalproex Response	–		**RR 0.24** (0.08 to 0.71)	20 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Parent rated antisocial behaviour [dichotomous outcome]/ Divalproex	–		**RR 0.51** (0.27 to 0.97)	27 (1 study)	⊕⊕⊕⊝ **moderate**[1]

Remission (Retrospective-Modified Overt Aggression Scale - total score <10)				
Researcher/clinician rated antisocial behaviour [dichotomous outcome]/ Lithium Response	–	**RR 0.60** (0.36 to 1.00)	116 (3 studies)	⊕⊕⊕⊖ **moderate**[1]
CI = Confidence interval; RR = Risk ratio. [1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.				

Antipsychotic drugs (risperidone)

Moderate quality evidence from three trials with 387 participants showed that antipsychotic drugs when compared with placebo reduced antisocial behaviour when rated by parents at post-treatment using a continuous outcome measure (Table 94). Two trials with 280 participants also reported moderate quality evidence favouring the intervention when rated by researchers/clinicians using a dichotomous outcome. However, this was not clearly supported by researcher/clinician or teacher rated continuous outcomes (moderate quality evidence from two trials with 56 participants and one trial with 38 participants, respectively). Out of the five trials, four included participants with coexisting ADHD (the proportion with ADHD ranged from 59 to 76%).

With regard to adverse effects of risperidone, the BNF for Children gives a number of cautions, including “hyperprolactinaemia, prolactin-dependent tumours; dehydration; family history of sudden cardiac death (perform ECG); avoid in acute porphyria”. In addition, the following side-effects are listed, “gastro-intestinal disturbances (including diarrhoea, constipation, nausea and vomiting, dyspepsia, abdominal pain), dry mouth; dyspnoea; drowsiness, asthenia, tremor, sleep disturbances, agitation, anxiety, headache; urinary incontinence; hyperprolactinaemia (less commonly galactorrhoea, menstrual disturbances, gynaecomastia); arthralgia, myalgia; abnormal vision; epistaxis; rash”. Other less common side-effects are also listed (see BNF for Children for more information). Evidence from systematic reviews suggests that risperidone compared with placebo had a NNH of about 8 for weight gain, a NNH of about 9 for prolactinemia, a NNH of about 10 for sedation, somnolence or drowsiness, and a NNH of about 12 for tremor/ extrapyramidal symptoms. A NNH for neurological side effects could not be estimated. Furthermore, Zuddas and colleagues (2011) suggest that in children, the potential weight gain induced by second-generation antipsychotic drugs “…is comparable to that seen in adults, with the exception of a greater potential risk for risperidone...”

Table 94: Summary of findings table for antipsychotic drugs compared with placebo (post-treatment).

Patient or population: patients with children and young people with conduct disorders [PT]
Intervention: antipsychotic drugs
Comparison: placebo

Outcomes	**Illustrative comparative risks (95% CI)**		**Relative effect (95% CI)**	**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	Corresponding risk			
	Placebo	**Antipsychotic drugs**			
Researcher/clinician rated antisocial behaviour [continuous outcome] any valid rating scale	0	The mean researcher/clinician rated antisocial behaviour [continuous outcome] in the intervention groups was **0.31 standard deviations lower** (1.15 lower to 0.52 higher)	—	56 (2 studies)	⊕⊕⊕⊝ **moderate**[1]
Teacher rated antisocial behaviour [continuous outcome] any valid rating scale	0	The mean teacher rated antisocial behaviour [continuous outcome] in the intervention groups was **0.13 standard deviations higher** (0.50 lower to 0.76 higher)	—	38 (1 study)	⊕⊕⊕⊝ **moderate**[1]
Parent rated antisocial behaviour [continuous outcome] any valid rating scale	0	The mean parent rated antisocial behaviour [continuous outcome] in the intervention groups was **0.49 standard deviations lower** (0.69 to 0.30 lower)	—	387 (3 studies)	⊕⊕⊕⊝ **moderate**[1]
Researcher/clinician rated antisocial behaviour [dichotomous outcome] Clinical Global Impression - Improvement - Much/very much improved/ Symptom recurrence	—		**RR 0.57** (0.44 to 0.73)	280 (2 studies)	⊕⊕⊕⊝ **moderate**[1]

CI = Confidence interval; RR = Risk ratio.

[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

CNS stimulant drugs (methylphenidate/ mixed amphetamine salts)

Moderate quality evidence from one trial with 47 participants (observer rated outcome), two trials with 135 participants (teacher rated outcome) and one trial with 74 participants (parent rated outcome) showed that CNS stimulants when compared with placebo reduced antisocial behaviour at post-treatment using a continuous outcome measure (Table 95). In these trials, 69 to 79% of the participants had coexisting ADHD (it should be noted that methylphenidate and dexamfetamine are indicated for use in children with ADHD, BNF for Children, 2011-2012).

With regard to adverse effects of methylphenidate, the BNF for Children gives a number of cautions, including “monitor for psychiatric disorders; anxiety or agitation; tics or a family history of Tourette syndrome; drug or alcohol dependence; epilepsy (discontinue if increased seizure frequency); avoid abrupt withdrawal”. In addition, the following side-effects are listed, “abdominal pain, nausea, vomiting, diarrhoea, dyspepsia, dry mouth, anorexia, reduced weight gain; tachycardia, palpitation, arrhythmias, changes in blood pressure; tics (very rarely Tourette syndrome), insomnia, nervousness, asthenia, depression, irritability, aggression, headache, drowsiness, dizziness, movement disorders; fever, arthralgia; rash, pruritus, alopecia; growth restriction”. Less common side-effects are also listed (see BNF for Children for more information).

With regard to adverse effects of mixed amphetamine salts (listed in the BNF for Children as dexamphetamine sulphate), the BNF for Children gives a number of cautions, including “anorexia; mild hypertension (contra-indicated if moderate or severe); psychosis or bipolar disorder; monitor for aggressive behaviour or hostility during initial treatment; history of epilepsy (discontinue if convulsions occur); tics and Tourette syndrome (use with caution) – discontinue if tics occur; susceptibility to angle-closure glaucoma; avoid abrupt withdrawal; data on safety and efficacy of long-term use not complete; acute porphyria”. In addition, the following side-effects are listed, “nausea, diarrhoea, dry mouth, abdominal cramps, anorexia (increased appetite also reported), weight loss, taste disturbance, ischaemic colitis, palpitation, tachycardia, chest pain, hypertension, hypotension, cardiomyopathy, myocardial infarction, cardiovascular collapse, cerebral vasculitis, stroke, headache, restlessness, depression, hyperreflexia, hyperactivity, impaired concentration, ataxia, anxiety, aggression, dizziness, confusion, sleep disturbances, dysphoria, euphoria, irritability, nervousness, malaise, obsessive-compulsive behaviour, paranoia, psychosis, panic attack, tremor, convulsions, neuroleptic malignant syndrome, anhedonia, growth restriction in children, hyperpyrexia, renal impairment, sexual dysfunction, acidosis, rhabdomyolysis, mydriasis, visual disturbances, alopecia, rash, sweating, urticaria; central stimulants have provoked choreoathetoid movements and dyskinesia, tics and Tourette syndrome in predisposed individuals (see also Cautions)”. Less common side-effects are also listed (see BNF for Children for more information).

Table 95: Summary of findings table for CNS stimulant drugs compared with placebo (post-treatment).

Patient or population: patients with children and young people with conduct disorders [PT] **Intervention:** CNS stimulants **Comparison:** placebo				
Outcomes	**Illustrative comparative risks (95% CI)**		**No of Participants (studies)**	**Quality of the evidence (GRADE)**
	Assumed risk	Corresponding risk		
	Placebo	**CNS stimulants**		
Observer rated antisocial behaviour [continuous outcome] any valid rating scale	0	The mean observer rated antisocial behaviour [continuous outcome] in the intervention groups was **0.88 standard deviations lower** (1.47 to 0.29 lower)	47 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Teacher rated antisocial behaviour [continuous outcome] any valid rating scale	0	The mean teacher rated antisocial behaviour [continuous outcome] in the intervention groups was **0.93 standard deviations lower** (1.51 to 0.35 lower)	135 (2 studies)	⊕⊕⊕⊖ **moderate**[1]
Parent rated antisocial behaviour [continuous outcome] any valid rating scale	0	The mean parent rated antisocial behaviour [continuous outcome] in the intervention groups was **0.47 standard deviations lower** (0.94 lower to 0.00 higher)	74 (1 study)	⊕⊕⊕⊖ **moderate**[1]
CI = Confidence interval. [1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.				

Selective norepinephrine reuptake inhibitor (NRI) drugs (atomoxetine)

Moderate quality evidence from one trial with 137 participants (teacher rated outcome) and high quality evidence from four trials with 497 participants (parent rated outcome) showed that atomoxetine when compared with placebo reduced antisocial behaviour at post-treatment when measured using a continuous outcome (Table 95). In one trial with 221 participants (researcher/clinician rated outcome), moderate quality evidence was inconclusive. In all trials, 100% of the participants had coexisting ADHD (it should be noted that atomoxetine is indicated for use in children with ADHD, BNF for Children, 2011-2012).

With regard to adverse effects of atomoxetine, the BNF for Children gives a number of cautions, including "cardiovascular disease including hypertension and tachycardia; structural cardiac abnormalities; QT-interval prolongation (avoid concomitant use of drugs that prolong QT interval); psychosis or mania; history of seizures; aggressive behaviour, hostility, or emotional lability; susceptibility to angle-closure glaucoma". In addition, the following side-effects are listed, "anorexia, dry mouth, nausea, vomiting, abdominal pain, constipation, dyspepsia, flatulence; palpitation, tachycardia, increased blood pressure, postural hypotension, hot flushes; sleep disturbance, dizziness, headache, fatigue, lethargy, depression, psychotic or manic symptoms, aggression, hostility, emotional lability, drowsiness, anxiety, irritability, tremor, rigors; urinary retention, prostatitis, sexual dysfunction, menstrual disturbances; mydriasis, conjunctivitis; dermatitis, pruritus, rash, sweating". Less common side-effects are also listed (see BNF for Children for more information).

Table 96: Summary of findings table for selective norepinephrine (noradrenaline) reuptake inhibitor drug compared with placebo (post-treatment).

Patient or population: patients with children and young people with conduct disorders [PT]
Intervention: Atomoxetine
Comparison: placebo

Outcomes	Illustrative comparative risks (95% CI)		No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk	Corresponding risk		
	Placebo	**NRI drugs (atomoxetine)**		
Researcher/clinician rated antisocial behaviour [continuous outcome] any valid rating scale	0	The mean researcher/clinician rated antisocial behaviour [continuous outcome] in the intervention groups was **0.16 standard deviations lower** (0.45 lower to 0.13 higher)	221 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Teacher rated antisocial behaviour [continuous outcome] any valid rating scale	0	The mean teacher rated antisocial behaviour [continuous outcome] in the intervention groups was **1.12 standard deviations lower** (1.53 to 0.71 lower)	137 (1 study)	⊕⊕⊕⊖ **moderate**[1]
Parent rated antisocial behaviour [continuous outcome] any valid rating scale	0	The mean parent rated antisocial behaviour [continuous outcome] in the intervention groups was **0.40 standard deviations lower** (0.60 to 0.20 lower)	497 (4 studies)	⊕⊕⊕⊕ **high**

CI = Confidence interval.
[1] Optimal information size (for dichotomous outcomes, OIS = 300 events; for continuous outcomes, OIS = 400 participants) not met.

8.2.5 Clinical evidence summary

Within each intervention category there are relatively few trials that provide appropriate data that could be included in the review, but what data there are for the benefit of treatment was graded as moderate quality. The most evidence exists for drugs commonly used to treat psychosis (risperidone) and ADHD (methylphenidate, mixed amphetamine salts and atomoxetine). In both cases, most of the trials include participants with coexisting ADHD. The strongest evidence of benefit also exists for these drugs with medium to large effects on teacher and parent rated outcomes. However, all drugs reviewed carry important cautions for use and risk of adverse events. In particular, risperidone, lithium, valproate and carbamazepine are all associated with an increased risk of weight gain.

Risperidone is the only drug licensed for use in the UK with a specific indication concerning conduct disorder. Specifically, it is indicated for short-term treatment (up to 6 weeks) of persistent aggression in conduct disorder (under specialist supervision) (BNF for Children, 2011-2012)[75]. It is not recommended in children less than 5 years of age. Although licensed, there is a recognised need for further research concerning both the efficacy and tolerability of risperidone, and the Pediatric European Risperidone Studies (PERS) project is currently underway to address this need[76].

Methylphenidate, dexamfetamine and atomoxetine are indicated for use in children with ADHD (BNF for Children, 2011-2012).

We found no RCT evidence to support the use of other antipsychotic drugs that are sometimes prescribed for conduct disorders, such as aripiprazole. Finally, no RCT evidence for non-pharmacological physical interventions was identified in this review.

8.3 HEALTH ECONOMIC EVIDENCE

8.3.1 Systematic literature review

No studies assessing the cost effectiveness of pharmacological intervention for children and young people with conduct disorder were identified by the systematic search of the economic literature undertaken for this guideline. Details on the methods used for the systematic search of the economic literature are described in Chapter 3.

No further economic modelling was developed for pharmacological intervention because it was not considered as an area of high priority by the GDG.

8.4 FROM EVIDENCE TO RECOMMENDATIONS

Relative value placed on the outcomes considered

The GDG focused their consideration of the evidence on the outcomes that they considered critical to understanding their impact on conduct disorder, which included antisocial behaviour (at home, at school and in the community), offending behaviour, school exclusion due to antisocial behaviour, educational attainment (that

---

[75] http://www.bnf.org

[76] http://www.pers-project.com/

is, the highest level of education completed) and agency contact (for example, residential care, criminal justice system).

Trade-off between clinical benefits and harms

After a careful review of the evidence, the GDG took the view that the evidence of benefit does not outweigh the known and potential harms associated with drug treatment for the routine management of behavioural problems in children and young people with a conduct disorder. However, drawing both on the evidence reviewed in this chapter and their expert knowledge and experience, the GDG judged that in young people with conduct disorder who have significant problems with explosive anger and emotional dysregulation, the benefits of antipsychotic medication (risperidone) may outweigh the risk of harm. Treatment should normally be limited to the short-term management of severely aggressive behaviour.

For children and young people with oppositional defiant disorder or conduct disorder and coexisting ADHD, the GDG judged that treatment with methylphenidate or atomoxetine outweighs the potential risk of harm.

Quality of the evidence

- The available evidence for the benefit of drug treatment is generally of moderate quality. However, within each intervention category, there is a paucity of evidence (for example, at most, data from only four studies with 497 participants were combined in a single meta-analysis). Because of the paucity of data, evidence about side effects was taken from the BNF for Children, most of which was collected from young people with diagnoses other than conduct disorder. It was not possible to grade the quality of this evidence.

Other considerations

The GDG had concerns about the potential misuse of the medication reviewed in this chapter and took the view that a child and adolescent psychiatrist with experience of pharmacological treatment for behavioural disorders should initiate any pharmacological treatment for conduct disorder. This should not normally be commenced until psychosocial interventions have been given a thorough trial and should only be done after a careful assessment for the presence of any comorbid disorders. The psychiatrist should discuss medication options with the young person and family, including a discussion of side-effects and measures to minimise these.

Given the potential seriousness of the side effects associated with the sue of the psychotropic medication in children and young people the psychiatrist should ensure that a proper assessment of a young person’s physical health, including baseline and follow-up measurements of height, weight, and blood pressure, liver function, fasting blood sugar, lipids and other measurements such as renal and liver function as indicated by the particular side effect profile of the drug prescribed.

The GDG drew on the *Schizophrenia* guideline (NICE, 2009c) regarding the use of antipsychotic medication and adapted one recommendation, using the methods set out in Chapter 3. The original recommendation is listed in Table 97 in column 1 and the adapted recommendation is in column 2. The rationale for adaptation is provided in column 3. In column 2 the numbers refer to the recommendations in the NICE guideline.

Table 97: Recommendations from *Schizophrenia* for inclusion

Original recommendation from *Schizophrenia*	**Recommendation following adaptation for this guideline**	**Reasons for adaptation**
1.2.4.3 Treatment with antipsychotic medication should be considered an explicit individual therapeutic trial. Include the following: • Record the indications and expected benefits and risks of oral antipsychotic medication, and the expected time for a change in symptoms and appearance of side effects. • At the start of treatment give a dose at the lower end of the licensed range and slowly titrate upwards within the dose range given in the British National Formulary (BNF) or SPC. • Justify and record reasons for dosages outside the range given in the BNF or SPC. • Monitor and record the following regularly and systematically throughout treatment, but especially during titration: • − efficacy, including changes in symptoms and behaviour • − side effects of treatment, taking into account overlap between certain side effects and clinical features of schizophrenia, for example the overlap between akathisia and agitation or anxiety • − adherence • − physical health.	1.5.7 Treatment with risperidone should be considered an explicit individual therapeutic trial. Include the following: • Record the indications and expected benefits and risks, and the expected time for a change in symptoms and appearance of side effects. • At the start of treatment give a dose at the lower end of the licensed range and slowly titrate upwards within the dose range given in the British National Formulary for Children (BNFC) or the SPC. • Justify and record reasons for dosages above the range given in the BNFC or SPC. • Monitor and record the following systematically throughout treatment, but especially during titration: -efficacy, including changes in symptoms and behaviour -the emergence of movement disorders -weight and height weekly for the first 6 weeks -fasting blood glucose, HbA1c, blood lipid and prolactin levels -adherence -physical health. • Record the rationale for continuing or stopping the medication, and the effects of such changes.[77]	This recommendation was adapted to make it relevant for the short-term management of severely aggressive behaviour in young people with conduct disorder; only risperidone is licensed for use in children and young people with a conduct disorder therefore only this drug is recommended. The original recommendation has therefore been adapted to take account of this, including reference to the BNFC, rather than the adult BNF. The GDG also judged that it was prudent to provide further specificity around dosing and monitoring in young people, including weight and height, fasting blood glucose, HbA1c, blood lipid and prolactin levels.

---

[77] Adapted from 'Schizophrenia' (NICE clinical guideline 82).

Original recommendation from *Schizophrenia*	Recommendation following adaptation for this guideline	Reasons for adaptation
• Record the rationale for continuing, changing or stopping medication, and the effects of such changes. • Carry out a trial of the medication at optimum dosage for 4–6 weeks.		

8.5 RECOMMENDATIONS

8.5.1 Clinical practice recommendations

8.5.1.1 Do not offer pharmacological interventions for the routine management of behavioural problems in children and young people with oppositional defiant disorder or conduct disorder.

8.5.1.2 Offer methylphenidate[78] or atomoxetine[79] for the management of ADHD in children and young people with oppositional defiant disorder or conduct disorder. For advice on the general treatment and management of ADHD see Attention deficit hyperactivity disorder (NICE clinical guideline 72).

8.5.1.3 Consider risperidone[80,81] for the short-term management of severely aggressive behaviour in young people with a conduct disorder who have problems with explosive anger and severe emotional dysregulation.

8.5.1.4 Risperidone[80,81] should only be initiated by an appropriately qualified health care professional with expertise in conduct disorders and should be based on a comprehensive assessment and diagnosis. The effects of the medication should be reviewed after 3–4 weeks and risperidone[80,81] discontinued if there is no indication of a clinically important response at 6 weeks.

8.5.1.5 Provide children and young people and their parents or carers with age-appropriate information and discuss the likely benefits and possible side effects of risperidone[80,81] including:

- metabolic (including weight gain and diabetes)
- extrapyramidal (including akathisia, dyskinesia and dystonia)
- cardiovascular (including prolonging the QT interval)

---

[78] At the time of publication (February 2013) methylphenidate did not have a UK marketing authorisation for use in children aged under 6 years. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. The child's parent or carer should provide informed consent, which should be documented. See the General Medical Council's Good practice in prescribing medicines – guidance for doctors for further information.

[79] At the time of publication (February 2013) atomoxetine did not have a UK marketing authorisation for use in children aged under 6 years. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. The child's parent or carer should provide informed consent, which should be documented. See the General Medical Council's Good practice in prescribing medicines – guidance for doctors for further information.

[80] At the time of publication (February 2013) risperidone did not have a UK marketing authorisation for use in children aged under 5 years. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. The child's parent or carer should provide informed consent, which should be documented. See the General Medical Council's Good practice in prescribing medicines – guidance for doctors for further information.

[81] At the time of publication (February 2013) some risperidones did not have a UK marketing authorisation for this indication. The prescriber should consult the summary of product characteristics for the individual risperidone.

- hormonal (including increasing plasma prolactin)
- other (including unpleasant subjective experiences).

8.5.1.6 Before starting risperidone[82,83], appropriately qualified health care professional with expertise in conduct disorders should undertake and record the following baseline investigations:

- weight and height (both plotted on a growth chart)
- waist and hip measurements
- pulse and blood pressure
- fasting blood glucose, glycosylated haemoglobin (HbA_{1c}), blood lipid profile and prolactin
- assessment of any movement disorders
- assessment of nutritional status, diet and level of physical activity.

8.5.1.7 Treatment with risperidone[84,85] should be carefully evaluated, and include the following:

- Record the indications and expected benefits and risks, and the expected time for a change in symptoms and appearance of side effects.
- At the start of treatment give a dose at the lower end of the licensed range and slowly titrate upwards within the dose range given in the British National Formulary for Children (BNFC) or the SPC.
- Justify and record reasons for dosages above the range given in the BNFC or SPC.
- Monitor and record systematically throughout treatment, but especially during titration:
  - efficacy, including changes in symptoms and behaviour
  - the emergence of movement disorders
  - weight and height (weekly)
  - fasting blood glucose, HbA_{1c}, blood lipid and prolactin levels
  - adherence to medication
  - physical health.
- Record the rationale for continuing or stopping treatment and the effects of these decisions[86].

---

[82] At the time of publication (February 2013) risperidone did not have a UK marketing authorisation for use in children aged under 5 years. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. The child's parent or carer should provide informed consent, which should be documented. See the General Medical Council's Good practice in prescribing medicines – guidance for doctors for further information.

[83] At the time of publication (February 2013) some risperidones did not have a UK marketing authorisation for this indication. The prescriber should consult the summary of product characteristics for the individual risperidone.

[84] At the time of publication (February 2013) risperidone did not have a UK marketing authorisation for use in children aged under 5 years. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. The child's parent or carer should provide informed consent, which should be documented. See the General Medical Council's Good practice in prescribing medicines – guidance for doctors for further information.

[85] At the time of publication (February 2013) some risperidones did not have a UK marketing authorisation for this indication. The prescriber should consult the summary of product characteristics for the individual risperidone.

[86] Adapted from 'Schizophrenia' (NICE clinical guideline 82).

8.5.2 Research recommendations

8.5.2.1 For children and young people with a conduct disorder and coexisting depression, are selective serotonin reuptake inhibitor (SSRI) antidepressant drugs when used in combination with a psychosocial intervention for conduct disorders effective and cost-effective at reducing antisocial behaviour?

9 SUMMARY OF RECOMMENDATIONS

To be inserted pre-publication.

10 APPENDICES

Please see the attachment in the submission email.

11 REFERENCES

Achenbach TM. Manual for the Child Behavior Checklist and 1991 Profile. Burlington, VT7 University of Vermont, Department of Psychiatry.1991.

Achenbach TM. Diagnosis, assessment, taxonomy, and case formulations. In: Ollendick TH, Hersen M, eds. Handbook of Child Psychopathology. 3rd edn. New York, NY: Plenum Press; 1998. p. 63-87.

Achenbach TM, McConaughy SH, Howell CT. Child/adolescent behavioral and emotional problems: implications of cross-informant correlations for situational specificity. Psychological bulletin. 1987 Mar;101120(Suppl. 2):213-32.

Adams JF. Impact of Parent Training on Family Functioning. Child & Family Behavior Therapy. 2001;2319163(Suppl. 1):29-42.

Adamshick PZ. The lived experience of girl-to-girl aggression in marginalized girls. Qualitative Health Research. 2010;2019148(Suppl. 4):541-55.

Adelman HS, Taylor L. On understanding intervention in psychology and education. Westport, CT: Praeger; 1994.

AGREE Collaboration. Development and validation of an international appraisal instrument for assessing the quality of clinical practice guidelines: the AGREE project. . Quality and Safety in Health Care. 2003;1219275(Suppl. 1):18-23.

Aldgate J, Rose W, McIntosh M. Changing directions for children with challenging behaviour and their families: evaluation of Children 1st Directions Projects. Glasgow: Children 1st. 200719152.

Alexander JF. Short-term behavioral intervention with delinquent families: Impact on family process and recidivism. Journal of Abnormal Psychology. 1973;813747(Suppl. 3):219-25.

Alexander JF, Robbins MS. Functional Family Therapy: A Phase-Based and Multi-Component Approach to Change. Clinical Handbook of Assessing and Treating Conduct Problems in Youth: Springer; 2010. p. 245-71.

Allen G. Early intervention: The next steps. London: HM Government; 2011.

Altman DG, Bland JM. Diagnostic tests 2: Predictive values. BMJ (Clinical research ed). 1994a;30919311(Suppl. 6947):102.

Altman DG, Bland JM. Diagnostic tests. 1: Sensitivity and specificity. BMJ (Clinical research ed). 1994b;30819312(Suppl. 6943):1552.

Aman MG, De Smedt G, Derivan A, Lyons B, Findling RL, Risperidone Disruptive Behavior Study Group. Double-blind, placebo-controlled study of risperidone for the treatment of disruptive behaviors in children with subaverage intelligence. American Journal of Psychiatry. 2002;1593808(Suppl. 8):1337-46.

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th edn. Washington, DC: APA; 1994.

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders: Text Revision (DSM-IV-TR). Washington, D.C.: American Psychiatric Association; 2000.

Arbuthnot J, Gordon DA. Behavioral and cognitive effects of a moral reasoning development intervention for high-risk behavior-disordered adolescents. Journal of Consulting & Clinical Psychology. 1986;543898(Suppl. 2):208-16.

Ashkar PJ, Kenny DT. Views from the inside: young offenders' subjective experiences of incarceration. International Journal of Offender Therapy and Comparative Criminology. 2008 Oct;5219149(Suppl. 5):584-97.

Augimeri LK. The SNAPTM Under 12 Outreach Project: Effects of a community based program for children with conduct problems. Journal of Child and Family Studies. 2007;.163977(Suppl. 6).

August GJ, Bloomquist ML, Lee SS, Realmuto GM, Hektner JM, August GJ, et al. Can evidence-based prevention programs be sustained in community practice settings? The Early Risers' Advanced-Stage Effectiveness Trial. Prevention Science. 2006;73981(Suppl. 2):151-65.

August GJ, Realmuto GM, Hektner JM, Bloomquist ML. An integrated components preventive intervention for aggressive elementary school children: the early risers program. Journal of consulting and clinical psychology. 2001 Aug;6914140(Suppl. 4):614-26.

August GJL. Dissemination of an evidence-based prevention innovation for aggressive children living in culturally diverse, urban neighborhoods: the Early Risers effectiveness study. Prevention science : the official journal of the Society for Prevention Research. 2003;43987(Suppl. 4):271-86.

Axberg U, Hanse JJ, Broberg AG. Parents’ description of conduct problems in their children: a test of the Eyberg Child Behavior Inventory (ECBI) in a Swedish sample aged 3–10. Scandinavian Journal of Psychology. 2008;49136:497-505.

Azrin NH. A controlled evaluation and description of individual-cognitive problem solving and family-behavior therapies in dually-diagnosed conduct-disordered and substance-dependent youth. Journal of Child & Adolescent Substance Abuse. 2001 pp;.114009(Suppl. 1).

Baker-Henningham HS, S., Jones K, Walker S. Reducing child conduct problems and promoting social skills in a middle-income country: cluster randomised controlled trial. The British journal of psychiatry : the journal of mental science. 201219164:1-8.

Baker-Henningham HW. Preventing behaviour problems through a universal intervention in Jamaican basic schools: a pilot study. West Indian Med J. 2009b;581558(Suppl. 5):460-4.

Bangs ME, Hazell P, Danckaerts M, Hoare P, Coghill DR, Wehmeier PM, et al. Atomoxetine for the treatment of attention-deficit/hyperactivity disorder and oppositional defiant disorder. Pediatrics. 2008;1214090(Suppl. 2):e314-e20.

Bank LM. A comparative evaluation of parent-training interventions for families of chronic delinquents. Journal of Abnormal Child Psychology. 1991;194091(Suppl. 1):15-33.

Banks R, Hogue A, Timberlake T, Liddle H. An Afrocentric approach to group social skills training with inner-city African American adolescents. Journal of Negro Education. 1996;651567(Suppl. 4):414–23.

Barber AJ, Tischler VA, Healy E. Consumer satisfaction and child behaviour problems in child and adolescent mental health services. Journal of Child Health Care. 2006;1019150(Suppl. 1):9-21.

Barnes J, Ball M, Meadows P, McLeish J, Belsky J, FNP Implementation Research Team. Nurse-Family Partnership Programme: First Year Pilot Sites Implementation in England Pregnancy and the Post-partum Period. In: Families. DoCSa, editor. London2008.

Barnoski R. Outcome Evaluation of Washington State’s Research-based Programs for Juvenile Offenders. In: Policy WSIfP, editor. Washington, WA2004.

Barrett B, Byford S, Chitsabesan P, Kenning C, Barrett B, Byford S, et al. Mental health provision for young offenders: service use and cost. British Journal of Psychiatry. 2006;1884174:541-6.

Barrett PMT. Reciprocal Skills Training in the treatment of externalising behaviour disorders in childhood: A preliminary investigation. Behaviour Change. 2000;174178(Suppl. 4):221-34.

Barzman DH, DelBello MP, Adler CM, Stanford KE, Strakowski SM. The efficacy and tolerability of quetiapine versus divalproex for the treatment of impulsivity and reactive aggression in adolescents with co-occurring bipolar disorder and disruptive behavior disorder(s). Journal of Child and Adolescent Psychopharmacology. 2006;164196(Suppl. 6):665-70.

Bauer SR, Sapp M, Johnson D. Group counseling strategies for rural at-risk high school students. The High School Journal. 2000;.8314239(Suppl. 2).

Beauchaine TP, Hong J, Marsh P. Sex differences in autonomic correlates of conduct problems and aggression. Journal of the American Academy of Child and Adolescent Psychiatry. 2008 Jul;4719367(Suppl. 7):788-96.

Begg CB, Mazumdar M. Operating characteristics of a rank correlation test for publication bias. Biometrics. 1994 Dec;5019335(Suppl. 4):1088-101.

Behan J, Fitzpatrick C, Sharry J, Carr A, Waldron B. Evaluation of the Parenting Plus Programme. [References]. Irish Journal of Psychology. 2001 pp;.224290(Suppl. 3-4).

Belsky J, Melhuish E, Barnes J, Leyland AH, Romaniuk H. Effects of Sure Start local programmes on children and families: early findings from a quasi-experimental, cross sectional study. BMJ. 2006 Jun 24;33219374(Suppl. 7556):1476.

Berlin JA. Does blinding of readers affect the results of meta-analyses? Lancet. 2001;35019297:185-6.

Bernal MEK. Outcome evaluation of behavioral parent training and client-centered parent counseling for children with conduct problems. Journal of Applied Behavior Analysis. 1980;134381(Suppl. 4):677-91.

Blader JC, Schooler NR, Jensen PS, Pliszka SR, Kafantaris V. Adjunctive divalproex versus placebo for children with ADHD and aggression refractory to stimulant monotherapy. American Journal of Psychiatry. 2009;1664472(Suppl. 12):1392-401.

Blair RJR, Mitchell D, Blair K. The Psychopath. London: Blackwell; 2005.

Bodenmann GC. The efficacy of the Triple P-Positive Parenting Program in improving parenting and child behavior: A comparison with two other treatment conditions. Behaviour Research and Therapy. 2008;464510(Suppl. 4):411-27.

Bonin EM, Stevens M, Beecham J, Byford S, Parsonage M. Costs and longer-term savings of parenting programmes for the prevention of persistent conduct disorder: a modelling study. BMC public health. 2011;1119285:803.

Borduin CM. Multisystemic treatment of juvenile sexual offenders: A progress report. Journal of Psychology & Human Sexuality. 2001 pp;.134561(Suppl. 3-4).

Borduin CM, Mann BJ, Cone LT, Henggeler SW, Fucci BR, Blaske DM, et al. Multisystemic treatment of serious juvenile offenders: long-term prevention of criminality and violence. Journal of Consulting & Clinical Psychology. 1995;634563(Suppl. 4):569-78.

Borenstein M, Hedges L, Higgins J, Rothstein H. Comprehensive Metaanalysis [Computer programme]. Version 2. Englewood, NJ: Biostat; 2005.

Botvin GJG. Preventing youth violence and delinquency through a universal school-based prevention approach. Prevention Science. 2006;7139(Suppl. 4):403-8.

Bradley SJJ. Brief psychoeducational parenting program: an evaluation and 1-year follow-up. Journal of the American Academy of Child and Adolescent Psychiatry. 2003;424627(Suppl. 10):1171-8.

Braet C, Meerschaert T, Merlevede E, Bosmans G, Van Leeuwen K, De Mey WEMA, et al. Prevention of antisocial behaviour: Evaluation of an early intervention programme. European Journal of Developmental Psychology. 2009;.64632(Suppl. 2).

Braswell L, August GJ, Bloomquist ML, Realmuto GM, Skare SS, Crosby RD. School-based secondary prevention for children with disruptive behavior: initial outcomes. Journal of Abnormal Child Psychology. 1997;2514430(Suppl. 3):197-208.

Brennan PA, Grekin ER, Mednick SA. Prenatal and perinatal influences on conduct disorder and serious delinquency. In: Lahey B, Moffitt TE, Caspi A, eds. Causes of conduct disorder and juvenile delinquency. New York: Guilford Press; 2003. p. 319-44.

Brody GH, Chen Y, Kogan SM, Yu T, Molgaard VK, DeClemente RJ, et al. Family-centered program deters substance use, conduct problems, and depressive symptoms in black adolescents. Pediatrics. 2012;12919200:108-15.

Brody GHK. Long-Term Effects of the Strong African American Families Program on Youths' Conduct Problems. Journal of Adolescent Health. 2008;434704(Suppl. 5):474-81.

Brookman-Frazee L, Garland AF, Taylor R, Zoffness R. Therapists' attitudes towards psychotherapeutic strategies in community-based psychotherapy with children with disruptive behavior problems. Administration and policy in mental health. 2009 Jan;3619151(Suppl. 1):1-12.

Brotman LMG. Prevention for preschoolers at high risk for conduct problems: Immediate outcomes on parenting practices and child social competence. 2005;341717(Suppl. 4):724-34.

Brotman LMK. Preventive intervention for urban, low-income preschoolers at familial risk for conduct problems: A randomized pilot study. 2003;321718(Suppl. 2):246-57.

Brunk MA. Comparison of multisystemic therapy and parent training in the brief treatment of child abuse and neglect. Journal of consulting and clinical psychology. 1987;.554755(Suppl. 2).

Budd T, Sharp C, Mayhew P. Offending in England and Wales: First results from the 2003 Crime and Justice Survey Home Office In: Home Office Research HORS, editor.2005.

Buitelaar JK, Van der Gaag RJ, Cohen-Kettenis P, Melman CT. A randomized controlled trial of risperidone in the treatment of aggression in hospitalized adolescents with subaverage cognitive abilities. Journal of Clinical Psychiatry. 2001;624788(Suppl. 4):239-48.

Burke JD, Loeber R, Lahey BB, Rathouz PJ. Developmental transitions among affective and behavioral disorders in adolescent boys. J Child Psychol Psychiatry. 2005;4619362(Suppl. 11):1200-10.

Burns GL, Owen SM. Disruptive behaviors in the classroom: initial standardization data on a new teacher rating scale. Journal of Abnormal Child Psychology. 1990;18135:515-25.

Burns GL, Patterson DR. Factor structure of the Eyberg Child Behavior Inventory: Unidimensional or multidimensional measure of disruptive behavior? Journal of Clinical Child Psychology. 1991;20114:439-44.

Burns GL, Patterson DR. Factor structure of the Eyberg Child Behavior Inventory: A parent rating scale of oppositional defiant behavior toward adults, inattentive behavior, and conduct problem behavior. Journal of Clinical Child Psychology. 2000;29113(Suppl. 4):569-77.

Bushman BB. Does teaching problem-solving skills matter? An evaluation of problem-solving skills training for the treatment of social behavioral problems in children. Dissertation Abstracts International: Section B: The Sciences and Engineering. 2010;.68195(Suppl. 9-B):37-41.

Butler S, Baruch G, Hickey N, Fonagy P. A randomized controlled trial of multisystemic therapy and a statutory therapeutic intervention for young offenders. Journal of the American Academy of Child and Adolescent Psychiatry. 2011 Dec;5019165(Suppl. 12):1220-35 e2.

Butz AMP. Effectiveness of a home intervention for perceived child behavioral problems and parenting stress in children with in utero drug exposure. Archives of Pediatrics and Adolescent Medicine. 2001;1554854(Suppl. 9):1029-37.

Bywater T, Hutchings J, Linck P, Whitaker C, Daley D, Yeo ST, et al. Incredible Years parent training support for foster carers in Wales: a multi-centre feasibility study. Child: Care, Health & Development. 2011;374867(Suppl. 2):233-43.

Caldwell MF, Vitacco M, Rybroek GJ. Are violent delinquents worth treating? A cost-benefit analysis. Journal of Research in Crime and Delinquency. 2006;4319277(Suppl. 2):148-68.

Callaghan J, Young B, Pace F, Vostanis P. Evaluation of a new mental health service for looked after children. Clinical Child Psychology and Psychiatry. 2004;9105(Suppl. 1):130-48.

Campbell M, Adams PB, Small AM, Kafantaris V, Silva RR, Shell J, et al. Lithium in hospitalized aggressive children with conduct disorder: a double-blind and placebo-controlled study.[Erratum appears in J Am Acad Child Adolesc Psychiatry 1995 May;34(5):694]. Journal of the American Academy of Child & Adolescent Psychiatry. 1995;344908(Suppl. 4):445-53.

Campbell M, Small AM, Green WH. Lithium and haloperidol in hospitalized aggressive children. Psychopharmacology Bulletin. 1982;184920(Suppl. 3):126-30.

Campbell SB, Ewing LJ. Follow-up of hard-to-manage preschoolers: adjustment at age 9 and predictors of continuing symptoms. Journal of Child Psychology and Psychiatry. 1990;31137(Suppl. 6):871-89.

Campbell SB, Spieker S, Burchinal M, Poe MD. Trajectories of aggression from toddlerhood to age 9 predict academic and social functioning through age 12. Child Psychol Psychiatry. 2006;4719370(Suppl. 8):791-800.

Carnes-Holt K. Child-parent relationship therapy (cprt) with adoptive families: Effects on child behavior, parent-child relationship stress, and parental empathy. Dissertation Abstracts International: Section B: The Sciences and Engineering. 2010;.71207(Suppl. 8-B).

Cavell TA. Secondary prevention as context for assessing change processes in aggressive children. Journal of School Psychology. 2000;.385034(Suppl. 3).

Ceballos PL. Empowering Latino families: Effects of a culturally responsive intervention for low-income immigrant Latino parents on children's behaviors and parental stress. Psychology in the Schools. 2010;.475038(Suppl. 8).

Cefai C, Cooper P. Students without voices: the unheard accounts of secondary school students with social, emotional and behaviour difficulties,. European Journal of Special Needs Education. 2010;2519146(Suppl. 2):183-98.

Centre for Reviews and Dissemination. York: NHS Economic Evaluation Database Handbook. Centre for Reviews and Dissemination, University of York. Available at: http://www.york.ac.uk/inst/crd/pdf/nhseed-handbook2007.pdf; 2007.

Chamberlain P, Leve LD, Degarmo DS. Multidimensional treatment foster care for girls in the juvenile justice system: 2-year follow-up of a randomized clinical trial. Journal of consulting and clinical psychology. 2007;755071:187-93.

Chamberlain P, Reid JB. Comparison of two community alternatives to incarceration for chronic juvenile offenders. Journal of Consulting & Clinical Psychology. 1998;665076(Suppl. 4):624-33.

Chamberlain PP. Prevention of behavior problems for children in foster care: Outcomes and mediation effects. Prevention Science. 2008;95080(Suppl. 1):17-27.

Champion L, Goodall G, Rutter M. Behavioural problems in childhood and stressors in early adult life: A 20 year follow-up of London school children. Psychological Medicine. 1995;2519239:231-46.

Chao P-C, Bryan T, Burstein K, Ergul CEMA, Chao P-Ccae. Family-centered intervention for young children at-risk for language and behavior problems. Early Childhood Education Journal. 2006;.345104(Suppl. 2).

Cheney DA. A 2-year outcome study of the check, connect, and expect intervention for students at risk for severe behavior problems. Journal of Emotional and Behavioral Disorders. 2009;.175138(Suppl. 4).

Cheng TLH. Effectiveness of a mentor-implemented, violence prevention intervention for assault-injured youths presenting to the emergency department: Results of a randomized trial. Pediatrics. 2008;1225142(Suppl. 5):938-46.

Choi ANL. Group music intervention reduces aggression and improves self-esteem in children with highly aggressive behavior: A pilot controlled trial. Evidence-based Complementary and Alternative Medicine. 2010;75181(Suppl. 2):213-7.

Clark HB. Improving adjustment outcomes for foster children with emotional and behavioral disorders: Early findings from a controlled study on individualized services. Journal of Emotional and Behavioral Disorders. 1994;.25235(Suppl. 4).

Coatsworth JDS. Brief Strategic Family Therapy versus community control: engagement, retention, and an exploration of the moderating role of adolescent symptom severity. Family Process. 2001;401841(Suppl. 3):313-32.

Cochrane Collaboration. Review Manager (RevMan) [Computer programme]. Version 5.1. Copenhagen: The Nordic Cochrane Centre, The Cochrane Collaboration.; 2011.

Cohen M, Miller T. The cost of mental health care for victims of crime. Journal of Interpersonal Violence. 1998;1319260:93-110.

Cohen MA. The Monetary Value of Saving a High-Risk Youth. Journal of Quantitative Criminology. 1998;1419252(Suppl. 1):5-33.

Cohen MA, Piquero AP. New Evidence on the Monetary Value of Saving a High Risk Youth. Journal of Quantitative Criminology. 2009;2519254:25-49.

Cohen P, Cohen J, Brook J. An Epidemiological Study of Disorders in Late Childhood and Adolescent-11. Persistence of Disorders. . Journal of Child Psychology and Psychiatry and Allied Disciplines. 1993;3419287(Suppl. 6):869-77.

Coie JD. The impact of negative social experiences on the development of antisocial behavior. . Kupersmidt, Janis B [Ed]; Dodge, Kenneth A [Ed]. 200414789(Suppl. 2004):243-67.

Collishaw S, Maughan B, Goodman R, Pickles A. Time trends in adolescent mental health. Journal of child psychology and psychiatry, and allied disciplines. 2004;4519222(Suppl. 8):1350-62.

Colvin A, Eyberg SM, Adams C. Standardization of the Eyberg Child Behavior Inventory with chronically ill children. Gainesville, FL: University of Florida, Child Study Laboratory; 1999; Available from: http://www.pcit.org.

Conduct Problems Prevention Research Group. A developmental and clinical model for the prevention of conduct disorders: The FAST Track Program. Development and Psychopathology. 1992;43:509-27.

Conduct Problems Prevention Research Group. The Effects of the Fast Track Preventive Intervention on the Development of Conduct Disorder Across Childhood. Child Development. 2011;.823636(Suppl. 1):331-45.

Connell SS. Self-directed behavioral family intervention for parents of oppositional children in rural and remote areas. Behavior Modification. 1997;215335(Suppl. 4):379-408.

Conners CK, Eisenberg L. The effects of methylphendiate on symptomatology and learning in disturbed children. American Journal of Psychiatry. 1963;1205340:458-64.

Conners CK, Kramer R, Rothschild GH, Schwartz L, Stone A. Treatment of young delinquent boys with diphenylhydantoin sodium and methyphenidate. A controlled comparison. Archives of General Psychiatry. 1971;245341(Suppl. 2):156-60.

Conners CK, Wells KC, Parker JD, Sitarenios G, Diamond JM, Powell JW. A new self-report scale for assessment of adolescent psychopathology: factor structure, reliability, validity, and diagnostic sensitivity. J Abnorm Child Psychol. 1997 Dec;2519331(Suppl. 6):487-97.

Connor DF, Findling RL, Kollins SH, Sallee F, L¢pez FA, Lyne A, et al. Effects of guanfacine extended release on oppositional symptoms in children aged 6-12 years with attention-deficit hyperactivity disorder and oppositional symptoms: a randomized, double-blind, placebo-controlled trial. CNS Drugs. 2010;245350:755-68.

Connor DF, McLaughlin TJ, Jeffers-Terry M. Randomized controlled pilot study of quetiapine in the treatment of adolescent conduct disorder. Journal of Child and Adolescent Psychopharmacology. 2008;185357(Suppl. 2):140-56.

Cote S, Tremblay RE, Nagin D, Zoccolillo M, Vitaro F. The development of impulsivity, fearfulness, and helpfulness during childhood: patterns of consistency and change in the trajectories of boys and girls. J Child Psychol Psychiatry. 2002 Jul;4319371(Suppl. 5):609-18.

Cowan PA. Promoting fathers' engagement with children: Preventive interventions for low-income families. [References]. Journal of Marriage and Family. 2009;.71273(Suppl. 3).

CPPRG. Initial impact of the Fast Track prevention trial for conduct problems: II. Classroom effects. Conduct Problems Prevention Research Group. Journal of consulting and clinical psychology. 1999;671460(Suppl. 5):648-57.

Cueva JE, Overall JE, Small AM, Armenteros JL, Perry R, Campbell M. Carbamazepine in aggressive children with conduct disorder: a double-blind and placebo-controlled study. Journal of the American Academy of Child and Adolescent Psychiatry. 1996;355479(Suppl. 4):480-90.

Cummings EM, Davies PT. Effects of marital conflict on children: recent advances and emerging themes in process-oriented research. Journal of child psychology and psychiatry, and allied disciplines. 2002 Jan;4319237(Suppl. 1):31-63.

Cummings JGW. SUPPORTIVE EXPRESSIVE THERAPY - PARENT CHILD VERSION: AN EXPLORATORY STUDY. Psychotherapy. 2008;455486(Suppl. 2):148-64.

Cunningham CEB. Large group community-based parenting programs for families of preschoolers at risk for disruptive behaviour disorders: Utilization, cost effectiveness, and outcome. Journal of Child Psychology and Psychiatry and Allied Disciplines. 1995;365492(Suppl. 7):1141-59.

Curtis L. Unit Costs of Health and Social Care 2011. Canterbury: University of Kent; 2011.

Dadds MR, McHugh TA. Social support and treatment outcome in behavioral family therapy for child conduct problems. Journal of Consulting & Clinical Psychology. 1992;605520(Suppl. 2):252-9.

Davies J, Wright J. Children’s voices: a review of the literature pertinent to looked-after children’s views of mental health services. . Child and Adolescent Mental Health. 2008;1319147(Suppl. 1):26-31.

Deffenbacher JL, Lynch RS, Oetting ER, Kemper CC. Anger reduction in early adolescents. Journal of Counseling Psychology. 1996;435657:149-57.

Dell'Agnello G, Maschietto D, Bravaccio C, Calamoneri F, Masi G, Curatolo P, et al. Atomoxetine hydrochloride in the treatment of children and adolescents with attention-deficit/hyperactivity disorder and comorbid oppositional defiant disorder: A placebo-controlled Italian study. European Neuropsychopharmacology. 2009;195676(Suppl. 11):822-34.

Dembo R, Ramirez-Garnica G, Rollie M, Schmeidler J, Livingston S, Hartsfield A. Youth recidivism twelve months after a Family Empowerment Intervention: Final report. Journal of Offender Rehabilitation. 2000 pp;.315688(Suppl. 3-4).

Dembo R, Ramirez-Garnica G, Schmeidler J, Pacheco K. THE IMPACT OF A FAMILY EMPOWERMENT INTERVENTION ON TARGET YOUTH RECIDIVISM: A ONE YEAR FOLLOW-UP. Tampa, FL: University of South Florida, Criminology Department. 199719177.

Dembo R, Schmeidler J, Seeberger W, Shemwell M, Rollie M, Pacheco K, et al. Long-term impact of a Family Empowerment Intervention on juvenile offender psychosocial functioning. Journal of Offender Rehabilitation. 2001 pp;.335690(Suppl. 1).

Department of Health. National Service Framework for Mental Health: Modern Standards and Service Models. In: Health Do, editor. London: Available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4009598; 1999.

DeRosier ME, Gilliom M. Effectiveness of a parent training program for improving children's social behavior. . Journal of Child and Family Studies. 2007;.165713(Suppl. 5).

Desbiens N, Royer E. Peer groups and behaviour problems: a study of school-based intervention for children with EBD. Emotional & Behavioural Difficulties. 2003;819178(Suppl. 2):120-39.

Dick DM, Aliev F, Krueger RF, Edwards A, Agrawal A, Lynskey M, et al. Genome-wide association study of conduct disorder symptomatology. Molecular Psychiatry. 2011;1619231(Suppl. 8):800-8.

Dionne R, Davis B, Sheeber L, Madrigal LEMA, Davis Bboo. Initial evaluation of a cultural approach to implementation of evidence-based parenting interventions in American Indian communities. Journal of Community Psychology. 2009;.375776(Suppl. 7).

Dirks-Linhorst PA. An evaluation of a family court diversion program for delinquent youth with chronic mental health needs. 20033049(Suppl. 9-A).

Dishion TJA. Preventing escalation in problem behaviors with high-risk young adolescents: Immediate and 1-year outcomes. Journal of consulting and clinical psychology. 1995;635780(Suppl. 4):538-48.

Dishion TJS. The family check-up with high-risk indigent families: Preventing problem behavior by increasing parents' positive behavior support in early childhood. Child Development. 2008;7915078(Suppl. 5):1395-414.

Dittmann RW, Schacht A, Helsberg K, Schneider-Fresenius C, Lehmann M, Lehmkuhl MD, et al. Atomoxetine versus placebo in children and adolescents with attention-deficit/hyperactivity disorder and comorbid oppositional defiant disorder: A double-blind, randomized, multicenter trial in Germany. Journal of Child and Adolescent Psychopharmacology. 2011;215785(Suppl. 2):97-110.

Dodge K, Rutter M. Gene-environment interactions in developmental psychopathology. New York: Guildford Press; 2011.

Dodge KA. Translational science in action: hostile attributional style and the development of aggressive behavior problems. Development and Psychopathology. 2006;1819233(Suppl. 3):791-814.

Dodgen DW. Skills training for incarcerated juvenile delinquents. Dissertation Abstracts International: Section B: The Sciences and Engineering. 1995;.565791(Suppl. 11-B).

Domitrovich CEC. Improving young children's social and emotional competence: A randomized trial of the preschool "PATHS" curriculum. The Journal of Primary Prevention. 2007;281959(Suppl. 2):67-91.

Donovan SJ, Stewart JW, Nunes EV, Quitkin FM, Parides M, Daniel W, et al. Divalproex treatment for youth with explosive temper and mood lability: A double-blind, placebo-controlled crossover design. American Journal of Psychiatry. 2000;1575825(Suppl. 5):818-20.

Dozier M, Peloso E, Lindhiem O, Gordon, Dozier Mmue. Developing Evidence-Based Interventions for Foster Children: An Example of a Randomized Clinical Trial with Infants and Toddlers. Journal of Social Issues. 2006;.625850(Suppl. 4).

Dretzke J, Frew E, Davenport C, Barlow J, Stewart-Brown S, Sandercock J, et al. The effectiveness and cost-effectiveness of parent training/education programmes for the treatment of conduct disorder, including oppositional defiant disorder, in children. [Review] [124 refs]. Health Technology Assessment. 2005;95858(Suppl. 50):iii-iix.

Drugli MB, Larsson B, Drugli MB, Larsson B. Children aged 4-8 years treated with parent training and child therapy because of conduct problems: generalisation effects to day-care and school settings. European Child & Adolescent Psychiatry. 2006;155869(Suppl. 7):392-9.

Dubourg R, Hamed J, Thorns J. The economic and social costs of crime against individuals and households 2003/04 2005.

Dumas JE. Conduct disorder. In: Turner SM, Calhoun KS, Adams HE, eds. Handbook of Clinical Behavior Therapy. 2nd edn. New York, NY: Wiley; 1992. p. 285-316.

Dupper DR. School-based social-cognitive skills training for middle school students with school behavior problems. Children and Youth Services Review. 1993 pp;.155913(Suppl. 2).

DuRant RHT. Comparison of two violence prevention curricula for middle school adolescents. Journal of Adolescent Health. 1996;195916(Suppl. 2):111-7.

Durlak JA, Weissberg RP, Dymnicki AB, Taylor RD, Schellinger KB. The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions. Child Dev. 2011 Jan-Feb;825(Suppl. 1):405-32.

Duval S, Tweedie R. A nonparametric “trim and fill” method of accounting for publication bias in meta-analysis. Journal of the American Statistical Association. 2000;9519336:89-98.

Eccles M, Freemantle N, Mason J. North of England evidence based guideline development project: methods of developing guidelines for efficient drug use in primary care. . British Medical Journal. 1998;31619304:1232-5.

Edwards RTC, O´Ce´illeachair A, Bywater T, Hughes DA, Hutchings J. Parenting programme for parents of children at risk of developing conduct disorder: Cost effectiveness analysis. British Medical Journal. 2007;3345956(Suppl. 7595):682-5.

Elias LCM. Treating boys with low school achievement and behavior problems: comparison of two kinds of intervention. Psychological Reports. 2003;926010(Suppl. 1):105-16.

Elrod HP. Second wave evaluation of a multi-faceted intervention for juvenile court probationers. International Journal of Offender Therapy and Comparative Criminology. 1992 Fal;.366030(Suppl. 3).

Emshoff JG. The diversion of delinquent youth: Family focused intervention. Children and Youth Services Review. 1983 pp;.56052(Suppl. 4).

Eyberg S. Parent and teacher behavior inventories for the assessment of conduct problem behaviors in children. In: VandeCreek L, Knapp S, Jackson TL, eds. Innovations in Clinical Practice: A Source Book. Sarasota, FL: Professional Resource Exchange; 1992. p. 377-82.

Eyberg SM, Pincus D. Eyberg Child Behavior Inventory and Sutter-Eyberg Student Behavior Inventory: Professional Manual. Odessa, FL: Psychological Assessment Resources; 1999.

Eyberg SM, Robinson EA. Conduct problem behavior: Standardization of a behavioral rating. Journal of Clinical Child Psychology. 1983;12109(Suppl. 3):347-54.

Farmer EMZ. Enhancing "usual practice" treatment foster care: Findings from a randomized trial on improving youths' outcomes. Psychiatric Services. 2010;616200(Suppl. 6):555-61.

Farrell AD. Evaluation of the responding in peaceful and positive ways (RIPP) seventh grade violence prevention curriculum. [References]. Journal of Child and Family Studies. 2003;.12396(Suppl. 1).

Farrell ADM. Evaluation of Responding in Peaceful and Positive Ways (RIPP): a school-based prevention program for reducing violence among urban adolescents. Journal of Clinical Child Psychology. 2001;306210(Suppl. 4):451-63.

Farrington DP. Editorial. Criminal Behaviour and Mental Health. 1994;419354:83-6.

Farrington DP. The Importance of Child and Adolescent Psychopathy. . Journal of Abnormal Child Psychology. 2005;332058(Suppl. 4):489-97.

Feindler EL. Group anger control training for junior high school delinquents. Cognitive Therapy and Research. 1984;.86253(Suppl. 3).

Feinfield KAB. Empirical Support for a Treatment Program for Families of Young Children With Externalizing Problems. Journal of Clinical Child and Adolescent Psychology. 2004;336256(Suppl. 1):182-95.

Fergusson D, Horwood L, Ridder E. Show me a child at seven: Consequences of conduct problems in childhood for psychosocial functioning in adulthood Journal of Child Psychology and Psychiatry. 2005;4619210:837-49.

Fergusson DM, Horwood LJ, Lynskey MT. The stability of disruptive childhood behaviors. Journal of Abnormal Child Psychology. 1995;2319280(Suppl. 3):379-96.

Fergusson DM, Horwood LJ, Lynskey MT. Childhood sexual abuse and psychiatric disorder in young adulthood: II. Psychiatric outcomes of childhood sexual abuse. Journal of the American Academy of Child and Adolescent Psychiatry. 1996 Oct;3519238(Suppl. 10):1365-74.

Field F. The foundation years: Preventing poor children becoming poor adults. London: HM Government.; 2010.

Findling RL, McNara NK, Branicky LA, Schluchter MD, Lemon E, Blumer J. A double-blind pilot study of risperidone in the treatment of conduct disorder. Journal of the American Academy of Child and Adolescent Psychiatry. 2000;396337(Suppl. 4):509-16.

Fisher PAK. Intervention effects on foster preschoolers' attachment-related behaviors from a randomized trial. Prev Sci. 2007;82091(Suppl. 2):161-70.

Flannery DJV. Initial behavior outcomes for the peacebuilders universal school-based violence prevention program. Developmental Psychology. 2003;3915403(Suppl. 2):292-308.

Flanzer J. The status of health services research on adjudicated drug-abusing juveniles: selected findings and remaining questions. Substance Use & Misuse. 2005;4019161(Suppl. 7):887-911.

Flay BR, Graumlich S, Segawa E, Burns JL, Holliday MY. Effects of 2 prevention programs on high-risk behaviors among African American youth - A randomized trial. Archives of Pediatrics & Adolescent Medicine. 2004;1586382(Suppl. 4):377-84.

Fonagy P, Target M, Cottrell D, Phillips J, Kurtz Z. What Works for Whom? A Critical Review of Treatments for Children and Adolescents. New York: Guilford; 2002.

Fontaine N, Carbonneau R, Barker ED, Vitaro F, Hebert M, Cote SM, et al. Girls' hyperactivity and physical aggression during childhood and adjustment problems in early adulthood: a 15-year longitudinal study. Arch Gen Psychiatry. 2008 Mar;6519373(Suppl. 3):320-8.

Foote R, Eyberg S, Schuhmann E. Parent-child interaction approaches to the treatment of child behavior problems. Advances in Clinical Child Psychology, Volume 20. 1998;2019136:125-51.

Ford T, Goodman R, Meltzer H. Service use over 18 months among a nationally representative sample of British children with psychiatric disorder. Clinical Child Psychology and Psychiatry. 2003;8138(Suppl. 1):37-51.

Forehand RL. An examination of a group curriculum for parents of young children with disruptive behavior. Behavior Modification. 2011;.356418(Suppl. 3).

Forehand RLM. An Examination of parenting the strong-willed child as bibliotherapy for parents. Behavior Modification. 2010;346419(Suppl. 1):57-76.

Forgatch MSD. Parenting through change: An effective prevention program for single mothers. 1999;672101(Suppl. 5):711-24.

Foster EM, Jones D, Conduct Problems Prevention Research Group. Can a costly intervention be cost-effective? An analysis of violence prevention. Archives of General Psychiatry. 2006;6319292(Suppl. 11):1284-91.

Foster EM, Jones DE. The high costs of aggression: public expenditures resulting from conduct disorder. American Journal of Public Health. 2005;9519246(Suppl. 10):1767-72.

Foster EMO. Is stacking intervention components cost-effective? An analysis of the incredible years program. 2007;462108(Suppl. 11):1414-24.

Fowles TR. Preventing recidivism with cell-phones: Telehealth aftercare for juvenile offenders. 20092109(Suppl. 12-B).

Frankham J, Edwards-Kerry D, Humphrey N, Roberts L. School exclusions: learning partnerships outside mainstream education. . York: Joseph Rowntree Foundation. 200719155.

Franz MW. PALME: A preventive parental training program for single mothers with preschool aged children. Journal of Public Health. 2011;1915471(Suppl. 4):305-19.

Fraser MW. Conduct Problems and Peer Rejection in Childhood: A Randomized Trial of the Making Choices and Strong Families Programs. Research on Social Work Practice. 2004;.146492(Suppl. 5).

Freiden J. Game: A clinical intervention to reduce adolescent violence in schools. 20062118(Suppl. 12-A).

Funderburk BW, Eyberg S. Psychometric characteristics of the Sutter-Eyberg Student Behavior Inventory: a school behavior rating scale for use with preschool children. Behavioral Assessment. 1989;11132:297-313.

Funderburk BW, Eyberg S, Behar L. Psychometric properties of the Sutter-Eyberg Student Behavior Inventory with High-SES Preschoolers. Annual meeting of the American Psychological Association; August 1989 1989; New Orleans, LA.

Fung MT, Raine A, Loeber R, Lynam DR, Steinhauer SR, Venables PH, et al. Reduced electrodermal activity in psychopathy-prone adolescents. Journal of Abnormal Psychology. 2005;11419235(Suppl. 2):187-96.

Gallart SCM. The effectiveness of Group Triple P and the impact of the four telephone contacts. Behaviour Change. 2005;226624(Suppl. 2):71-80.

Gardner FB. Randomised controlled trial of a parenting intervention in the voluntary sector for reducing child conduct problems: Outcomes and mechanisms of change. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2006;476652(Suppl. 11):1123-32.

Gardner FS. Randomized Prevention Trial for Early Conduct Problems: Effects on Proactive Parenting and Links to Toddler Disruptive Behavior. Journal of Family Psychology. 2007;216655(Suppl. 3):398-406.

Garralda ME, Yates P, Higginson I. Child and adolescent mental health service use: HoNOSCA as an outcome measure. The British Journal of Psychiatry. 2000;177116:52-8.

Garrison SRS. Modification of anger in children by affective imagery training. 1983;112155(Suppl. 1):115-29.

Garza Y. Effects of culturally responsive child-centered play therapy compared to curriculum-based small group counseling with elementary-age hispanic children experiencing externalizing and internalizing behavior problems: A preliminary study. Dissertation Abstracts International Section A: Humanities and Social Sciences. 2004;.6515535(Suppl. 12-A).

Glisson CS. Randomized trial of MST and ARC in a two-level evidence-based treatment implementation strategy. Journal of consulting and clinical psychology. 2010;786841(Suppl. 4):537-50.

Goodman A, Patel V, Leon DA. Why do British Indian children have an apparent mental health advantage? Journal of child psychology and psychiatry, and allied disciplines. 2010;5119223(Suppl. 10):1171-83.

Goodman R. The Strengths and Difficulties Questionnaire: a research note. Journal of child psychology and psychiatry, and allied disciplines. 1997 Jul;3820(Suppl. 5):581-6.

Goodman R. The extended version of the Strengths and Difficulties Questionnaire as a guide to child psychiatric caseness and consequent burden. Journal of child psychology and psychiatry, and allied disciplines. 1999 Jul;40107(Suppl. 5):791-9.

Goodman R. Psychometric properties of the strengths and difficulties questionnaire. Journal of the American Academy of Child and Adolescent Psychiatry. 2001 Nov;4010(Suppl. 11):1337-45.

Goodman R, Ford T, Corbin T, Meltzer H. Using the Strengths and Difficulties Questionnaire (SDQ) multi-informant algorithm to screen looked-after children for psychiatric disorders. European Child & Adolescent Psychiatry. 2004;13 Suppl 268:II25-31.

Goodman R, Ford T, Meltzer H. Mental health problems of children in the community: 18 month follow up. BMJ. 2002 Jun 22;324126(Suppl. 7352):1496-7.

Goodman R, Ford T, Simmons H, Gatward R, Meltzer H. Using the Strengths and Difficulties Questionnaire (SDQ) to screen for child psychiatric disorders in a community sample. The British Journal of Psychiatry : The Journal of Mental Science. 2000a Dec;1772:534-9.

Goodman R, Meltzer H, Bailey V. The strengths and difficulties questionnaire: A pilot study on the validity of the self-report version. European Child & Adolescent Psychiatry. 1998;7108:125-30.

Goodman R, Renfrew D, Mullick M. Predicting type of psychiatric disorder from Strengths and Difficulties Questionnaire (SDQ) scores in child mental health clinics in London and Dhaka. European Child & Adolescent Psychiatry. 2000b Jun;967(Suppl. 2):129-34.

Goodman R, Scott S. Comparing the Strengths and Difficulties Questionnaire and the Child Behaviour Checklist: Is small beautiful? Journal of Abnormal Child Psychology. 1999;2719212(Suppl. 1):17-24.

Gordon RS, Jr. An operational classification of disease prevention. Public Health Rep. 1983 Mar-Apr;9819352(Suppl. 2):107-9.

Gottfredson DK. The Strengthening Washington D.C. Families Project: A randomized effectiveness trial of family-based prevention. Prevention Science. 2006;76967(Suppl. 1):57-74.

Gould N, Richardson J. Parent-training/education programmes in the management of children with conduct disorders: developing an integrated evidence-based perspective for health and social care. Journal of Children's Services. 2006;119140(Suppl. 4):47-60.

Green H, McGinnity A, Meltzer H, Ford T, Goodman R. Mental health of children and young people in Great Britain. In: Health Do, editor.: Office for National Statistics; 2005.

Greene RW, Ablon JS, Goring JC, Raezer-Blakely L, Markey J, Monuteaux MC, et al. Effectiveness of collaborative problem solving in affectively dysregulated children with oppositional-defiant disorder: initial findings. Journal of Consulting & Clinical Psychology. 2004;727045(Suppl. 6):1157-64.

Greene RW, Biederman J, Zerwas S, Monuteaux MC, Goring JC, Faraone SV. Psychiatric comorbidity, family dysfunction, and social impairment in referred youth with oppositional defiant disorder. Am J Psychiatry. 2002 Jul;15919361(Suppl. 7):1214-24.

Gross DF. Parent training of toddlers in day care in low-income urban communities. Journal of consulting and clinical psychology. 2003;717099(Suppl. 2):261-78.

Grossman JB, Tierney J. Does mentoring work? An impact study of the Big Brothers Big Sisters program. Evaluation Review. 1998;.22508(Suppl. 3).

Haas SM, Waschbusch DA, Pelham WE, Jr., King S, Andrade BF, Carrey NJ. Treatment response in CP/ADHD children with callous/unemotional traits. Journal of Abnormal Child Psychology. 2011 May;3919219(Suppl. 4):541-52.

Hanisch CF-BI. Detecting effects of the indicated prevention Programme for Externalizing Problem behaviour (PEP) on child symptoms, parenting, and parental quality of life in a randomized controlled trial. Behavioural and Cognitive Psychotherapy. 2010;3815836(Suppl. 1):95-112.

Hannon C, Wood C, Bazalgette L. "To deliver the best for looked after children, the state must be a confident parent . . .". In loco parentis London: Demos. 201019153.

Harwood MD. Early identification and intervention for disruptive behavior in primary care: A randomized controlled trial. Dissertation Abstracts International: Section B: The Sciences and Engineering. 1941;.677359(Suppl. 7-B).

Hawes DJ, Dadds MR. The treatment of conduct problems in children with callous-unemotional traits. Journal of consulting and clinical psychology. 2005 Aug;7319218(Suppl. 4):737-41.

Hazell P, Zhang S, Wolanczyk T, Barton J, Johnson M, Zuddas A, et al. Comorbid oppositional defiant disorder and the risk of relapse during 9 months of atomoxetine treatment for attention-deficit/hyperactivity disorder. European Child and Adolescent Psychiatry. 2006;157431(Suppl. 2):105-10.

Hazell PL, Stuart JE. A randomized controlled trial of clonidine added to psychostimulant medication for hyperactive and aggressive children. Journal of the American Academy of Child and Adolescent Psychiatry. 2003;427429(Suppl. 8):886-94.

Henggeler S, Schoenwald S, Borduin C, Rowland M, Cunningham P. Multisystemic Treatment of Antisocial Behavior in Children and Adolescents: Treatment Manuals for Practitioners. New York: Guilford Press; 1998.

Henggeler SW, Melton GB, Smith LA. Family preservation using multisystemic therapy: an effective alternative to incarcerating serious juvenile offenders. Journal of Consulting & Clinical Psychology. 1992;607510(Suppl. 6):953-61.

Henggeler SWB. Multisystemic therapy with violent and chronic juvenile offenders and their families: The role of treatment fidelity in successful dissemination. Journal of consulting and clinical psychology. 1997;657515(Suppl. 5):821-33.

Henggeler SWH. Juvenile drug court: Enhancing outcomes by integrating evidence-based treatments. Journal of consulting and clinical psychology. 2006;747518(Suppl. 1):42-54.

Henggeler SWP. Multisystemic treatment of substance-abusing and dependent delinquents: outcomes, treatment fidelity, and transportability. Mental Health Services Research. 1999;17520(Suppl. 3):171-84.

Herrmann DS, Herrmann DSd. Anger & aggression management in young adolescents: An experimental validation of the SCARE program. Education & Treatment of Children. 2003;.267545(Suppl. 3).

Heywood S, Stancombe J, Street E, Mittler H, Dunn C, Kroll L. A brief consultation and advisory approach for use in child and adolescent mental health services: a pilot study. Clinical Child Psychology and Psychiatry. 2003;8139(Suppl. 4):503-12.

Higgins JP, Thompson SG. Quantifying heterogeneity in a meta-analysis. Statistics in Medicine. 2002 Jun 15;2119301(Suppl. 11):1539-58.

Higgins JPT, Green S. Cochrane Handbook for Systematic Reviews of Interventions: The Cochrane Collaboration. Available from www.cochrane-handbook.org; 2011.

Hill J. Biological, psychological and social processes in the conduct disorders. Journal of child psychology and psychiatry, and allied disciplines. 2002;4319232(Suppl. 1):133-64.

Hilyer JC, et a. Physical fitness training and counseling as treatment for youthful offenders. Journal of Counseling Psychology. 1982;297586:292-303.

Hobson C, Scott S, Rubia K. Cool and hot executive function deficits are associated with ODD/CD symptoms independently of ADHD in adolescents with early onset conduct problems. Journal of Child Psychology and Psychiatry. 2011;5219268:1035-43.

Howard GP. Effect of group counseling on at-risk African-American female students. Dissertation Abstracts International Section A: Humanities and Social Sciences. 2008;.697728(Suppl. 10-A).

Huesmann LRM. Evaluating a cognitive/ecological program for the prevention of aggression among urban children. American Journal of Preventive Medicine. 1996;127770(Suppl. 5 SUPPL.):120-8.

Hutchings J, Appleton P, Smith M, Lane E, Nash S. Evaluation of two treatments for children with severe behaviour problems: Child behaviour and maternal mental health outcomes. Behavioural and Cognitive Psychotherapy. 2002;3019180:279-95.

Hutchings JG. Parenting intervention in Sure Start services for children at risk of developing conduct disorder: Pragmatic randomised controlled trial. British Medical Journal. 2007;3347819(Suppl. 7595):678-82.

Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington DC: National Academy Press; 2001.

Ireland JLS. The impact of parent training on marital functioning: A comparison of two group versions of the triple P-positive parenting program for parents of children with early-onset conduct problems. Behavioural and Cognitive Psychotherapy. 2003;317871(Suppl. 2):127-42.

Irvine ABB. The effectiveness of a parenting skills program for parents of middle school students in small communities. Journal of consulting and clinical psychology. 1999;677878(Suppl. 6):811-25.

Ishikawa S, Raine A. Prefrontal deficits and antisocial behaviour: A causal model. In: Lahey B, Moffitt TE, Caspi A, eds. Causes of conduct disorder and delinquency. New York: Guilford Press; 2003. p. 277-304.

Ison MSEMA, Ison MSmlcea. Training in social skills: An alternative technique for handling disruptive child behavior. [References]. Psychological Reports. 2001;.887882(Suppl. 3).

Izard CE, King K. Accelerating the development of emotion competence in Head Start children: Effects on adaptive and maladaptive behavior. [References]. Development and Psychopathology. 2008 Win;.207896(Suppl. 1).

Jadad AR, Moore RA, Carroll D, Jenkinson C, Reynolds DJM, Gavaghan DJ, et al. Assessing the quality of reports of randomised clinical trials: is blinding necessary? Controlled Clinical Trials. 1996;1719296:1-12.

Jaffee S, Moffitt T, Caspi A, Taylor A. Life with (or without) father: The benefits of living with two biological parents depend on the father's antisocial behavior. Child Development. 2003;7419226(Suppl. 109-126).

Johnson DLB. The Houston Parent--Child Development Center and the primary prevention of behavior problems in young children. American Journal of Community Psychology. 1982;108019(Suppl. 3):305-16.

Jouriles EN, McDonald R, Rosenfield D, Stephens N, Corbitt-Shindler D, Miller PC, et al. Reducing conduct problems among children exposed to intimate partner violence: a randomized clinical trial examining effects of Project Support. Journal of Consulting & Clinical Psychology. 2009;7716249(Suppl. 4):705-17.

Jouriles EN, McDonald R, Spiller L, Norwood WD, Swank PR, Stephens N, et al. Reducing conduct problems among children of battered women. Journal of Consulting & Clinical Psychology. 2001;6916250(Suppl. 5):774-85.

Justice CfC. Mainstreaming Methodology for Estimating Costs of Crime: Costing Principles & Methodology.: University of York. ; 2008.

Kable JA, Coles CD, Taddeo E. Socio-cognitive habilitation using the math interactive learning experience program for alcohol-affected children. Alcoholism, clinical and experimental research. 2007 Aug;3116264(Suppl. 8):1425-34.

Kacir CD, Gordon DA. Parenting adolescents wisely: the effectiveness of an interactive videodisk parent training program in Appalachia. Child & Family Behavior Therapy. 1999;2119181(Suppl. 4):1-22.

Kannappan R. Efficacy of yoga: Cognitive and human relationship training for correcting maladjustment behaviour in deviant school boys. [References]. Journal of the Indian Academy of Applied Psychology. 2008;.34639(Suppl. Spec Issue).

Kaplan S, Heiligenstein J, West S, Busner J, Harder D, Dittmann R, et al. Efficacy and safety of atomoxetine in childhood attention-deficit/ hyperactivity disorder with comorbid oppositional defiant disorder. Journal of Attention Disorders. 2004;88185(Suppl. 2):45-52.

Kazdin AE. Dropping out of child therapy. Issues for research and implications for practice. Clinical Child Psychology and Psychiatry. 1996;119319:133-56.

Kazdin AE, Esveldt-Dawson K, French N. Effects of parent management training and problem-solving skills training combined in the treatment of antisocial child behavior. 19872443(Suppl. 3).

Kazdin AE, Siegel TC, Bass D. Drawing upon clinical practice to inform research on child and adolescent psychotherapy: a survey of practitioners. Professional Psychology: Research & Practice. 1990;21131:189-98.

Kazdin AE, Siegel TC, Bass D. Cognitive problem-solving skills training and parent management training in the treatment of antisocial behavior in children. Journal of Consulting & Clinical Psychology. 1992;608264(Suppl. 5):733-47.

Kazdin AEB. Cognitive-behavioral therapy and relationship therapy in the treatment of children referred for antisocial behavior. Journal of consulting and clinical psychology. 1989;578267(Suppl. 4):522-35.

Keenan K, Shaw DS. Starting at the beginning: Exploring the etiology of antisocial behaviour in the first years of life. . In: Lahey B, Moffitt TE, Caspi A, eds. Causes of conduct disorder and delinquency. New York: Guilford Press; 2003. p. 153-81.

Kellam SG, Van Horn YV. Life course development, community epidemiology, and preventive trials: a scientific structure for prevention research. Am J Community Psychol. 1997 Apr;2519356(Suppl. 2):177-88.

Kelly PJ. A prospective randomized controlled trial of an interpersonal violence prevention program with a Mexican American community. [References]. Fam Community Health. 2010;332453(Suppl. 3):207-15.

Kendall PCR. Cognitive-behavioral treatment of conduct-disordered children. Cognitive Therapy and Research. 1990;148331(Suppl. 3):279-97.

Kettlewell PW, Kausch DF. The generalization of the effects of a cognitive-behavioral treatment program for aggressive children. Journal of Abnormal Child Psychology. 1983;118358(Suppl. 1):101-14.

Kim-Cohen J, Caspi A, Taylor A, Williams B, Newcombe R, Craig IW, et al. MAOA, maltreatment, and gene-environment interaction predicting children's mental health: new evidence and a meta-analysis. Molecular Psychiatry. 2006 Oct;1119230(Suppl. 10):903-13.

King CA, Kirschenbaum DS. An experimental evaluation of a school-based program for children at risk: Wisconsin early intervention. Journal of Community Psychology. 1990;1816390:167-77.

Kitzman HO. Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries, and repeated childbearing: A randomized controlled trial. Journal of the American Medical Association. 1997;27816406(Suppl. 8):644-52.

Klein RG, Abikoff H, Klass E, Ganeles D, Seese LM, Pollack S. Clinical efficacy of methylphenidate in conduct disorder with and without attention deficit hyperactivity disorder. Archives of General Psychiatry. 1997;548494(Suppl. 12):1073-80.

Klietz SJ, Borduin CM, Schaeffer CM. Cost-Benefit Analysis of Multisystemic Therapy With Serious and Violent Juvenile Offenders. Journal of Family Psychology. 2010;no. 58500(Suppl. pp. 657-666).

Kliewer W, Kliewer Wwve. A school-based expressive writing intervention for at-risk urban adolescents' aggressive behavior and emotional lability. [References]. Journal of Clinical Child and Adolescent Psychology. 2011;.4016416(Suppl. 5).

Kling AF. A Randomized Controlled Effectiveness Trial of Parent Management Training With Varying Degrees of Therapist Support. none. 2010;412494(Suppl. 4):530-42.

Knapp M, McCrone P, Fombonne E, Beecham J, Wostear G. The Maudsley long-term follow-up of child and adolescent depression: 3. Impact of comorbid conduct disorder on service use and costs in adulthood. The British journal of psychiatry : the journal of mental science. 2002;18019249:19-23.

Knapp M, McDaid D, Parsonage M. Mental health promotion and mental illness prevention: The economic case: Personal Social Services Research Unit, London School of Economics and Political Science. . In: Health TDo, editor. London2011.

Knapp M, Scott S, Davies J. The cost of antisocial behaviour in younger children. Clinical Child Psychology and Psychiatry. 1999;419248(Suppl. 4):457-73.

Knox L, Knox Lkue. Preventing children's aggression in immigrant Latino families: A mixed methods evaluation of the families and schools together program. [References]. American Journal of Community Psychology. 2011;.4816427(Suppl. 1-2).

Kolko DJ, Dorn LD, Bukstein O, Burke JD. Clinically referred ODD children with or without CD and healthy controls: Comparisons across contextual domains. Journal of Child and Family Studies. 2008;1719363:714-34.

Kolko DJC. Improving access to care and clinical outcome for pediatric behavioral problems: A randomized trial of a nurse-administered intervention in primary care. Journal of Developmental and Behavioral Pediatrics. 2010;318575(Suppl. 5):393-404.

Kolko DJD. Community vs. clinic-based modular treatment of children with early-onset ODD or CD: A clinical trial with 3-year follow-up. Journal of Abnormal Child Psychology. 2009;378576(Suppl. 5):591-609.

Koot HM. Longitudinal studies of general population and community samples. In: Verhulst FC, Koot HM, eds. The Epidemiology of Child and Adolescent Psychopathology. Oxford: Oxford University Press; 1995.

Kratochwill TR. Conjoint Consultation Using Self-Administered Manual and Videotape Parent-Teacher Training: Effects on Children's Behavioral Difficulties. School Psychology Quarterly. 2003 Fal;.188640(Suppl. 3).

Kratochwill TR. Families and Schools Together: An experimental analysis of a parent-mediated multi-family group program for American Indian children. [References]. Journal of School Psychology. 2004;.428641(Suppl. 5).

Lahey BB, Loeber R, Hart EL, Frick PJ, Applegate B, Zhang Q, et al. Four-year longitudinal study of conduct disorder in boys: patterns and predictors of persistence. J Abnorm Psychol. 1995 Feb;10419364(Suppl. 1):83-93.

Lahey BB, Schwab-Stone M, Goodman SH, Waldman ID, Canino G, Rathouz PJ, et al. Age and gender differences in oppositional behavior and conduct problems: a cross-sectional household study of middle childhood and adolescence. J Abnorm Psychol. 2000 Aug;10919372(Suppl. 3):488-503.

Landsverk JA, Burns BJ, Stambaugh LF, Rolls Reutz JA. Psychosocial interventions for children and adolescents in foster care: review of research literature. . Child Welfare. 2009;8819158(Suppl. 1):49-69.

Lane KL. Young students at risk for antisocial behavior: The utility of academic and social skills interventions. Journal of Emotional and Behavioral Disorders. 1999 Win;.78786(Suppl. 4).

Lang JMW. Computeen: A randomized trial of a preventive computer and psychosocial skills curriculum for at-risk adolescents. Journal of Primary Prevention. 2009;308789(Suppl. 5):587-603.

Langberg JM. A pilot evaluation of small group Challenging Horizons Program (CHP): A randomized trial. [References]. Journal of Applied School Psychology. 2006 pp;.23722(Suppl. 1).

Larkin RT. Evaluating cognitive-behavioral group counseling to improve elementary school students' self-esteem, self-control, and classroom behavior. Behavioral Interventions. 1999;148820(Suppl. 3):147-61.

Larmar SD. Successes and challenges in preventing conduct problems in Australian preschool-aged children through the Early Impact (EI) Program. Behaviour Change. 2006;238821(Suppl. 2):121-37.

Larsson BF. Treatment of oppositional defiant and conduct problems in young Norwegian children: Results of a randomized controlled trial. 2009;182563(Suppl. 1):42-52.

Lau ASF. Parent training with high-risk immigrant chinese families: A pilot group randomized trial yielding practice-based evidence. 2011;422566(Suppl. 3):413-26.

Laub J, Sampson R. Shared beginnings, divergent lives: Delinquent boys to age 70. Cambridge, MA, US: Harvard University Press; 2003.

Lavigne JVL. Treating oppositional defiant disorder in primary care: a comparison of three models. 2008;332571(Suppl. 5):449-61.

Leaf PJ, Alegria M, Cohen P, Goodman SH, Horwitz SM, Hoven CW, et al. Mental health service use in the community and schools: results from the four-community MECA Study. Methods for the Epidemiology of Child and Adolescent Mental Disorders Study. Journal of the American Academy of Child and Adolescent Psychiatry. 1996 Jul;35117(Suppl. 7):889-97.

Leschied AW, Cunningham A. Seeking effective interventions for young offenders: interim results of a four-year randomized study of multisystemic therapy in Ontario, Canada. London, Ontario: Centre for Children. 200219192.

Letourneau EJH. Multisystemic Therapy for Juvenile Sexual Offenders: 1-Year Results From a Randomized Effectiveness Trial. Journal of Family Psychology. 2009;238984(Suppl. 1):89-102.

Leung CS. An outcome evaluation of the implementation of the Triple P-Positive Parenting Program in Hong Kong. Family Process. 2003;428990(Suppl. 4):531-44.

Lewis RV. Scared straight--California style: evaluation of the San Quentin SQUIRES program. Criminal Justice & Behavior. 1983;1016556:209-26.

Li K-K, Washburn I, DuBois D, Li K-Kblceh, Flay BR. Effects of the Positive Action programme on problem behaviours in elementary school students: A matched-pair randomised control trial in Chicago. Psychology & Health. 2011;.269038(Suppl. 2).

Liabo K, Richardson J. Conduct Disorder and Offending Behaviour in Young People: Findings from Research. London: Jessica Kingsley Publishers; 2007.

Linares LO, Linares LO. A promising parenting intervention in foster care. . Journal of consulting and clinical psychology. 2006;.74764(Suppl. 1).

Lipman ELB. Testing effectiveness of a community-based aggression management program for children 7 to 11 years old and their families. Journal of the American Academy of Child and Adolescent Psychiatry. 2006;459132(Suppl. 9):1085-93.

Littell JH, Popa M, Forsythe B. Multisystemic Therapy for social, emotional, and behavioral problems in youth aged 10-17. Cochrane Database of Systematic Reviews. 200519138(Suppl. 3).

Lochman JE. Parent and family skills training in targeted prevention programs for at-risk youth. The Journal of Primary Prevention. 2000 Win;.2116881(Suppl. 2).

Lochman JE, Burch PR, Curry JF, Lampron LB. Treatment and generalization effects of cognitive-behavioral and goal-setting interventions with aggressive boys. Journal of Consulting & Clinical Psychology. 1984;529169(Suppl. 5):915-6.

Lochman JE, Wells KC. The Coping Power Program for preadolescent aggressive boys and their parents: outcome effects at the 1-year follow-up. Journal of consulting and clinical psychology. 2004;no. 49176(Suppl. pp. 571-578).

Lochman JEW. The coping power program at the middle-school transition: Universal and indicated prevention effects. Psychology of Addictive Behaviors. 2002;169178(Suppl. SUPPL. 14):S40-S54.

Loeber R, Burke JD, Lahey BB, Winters A, Zera M. Oppositional defiant and conduct disorder: a review of the past 10 years, part I. Journal of the American Academy of Child and Adolescent Psychiatry. 2000 Dec;3919366(Suppl. 12):1468-84.

Loomes G. Valuing reductions in the risks of being a victim of crime: The 'willingness to pay' approach to valuing the 'intangible' consequences of crime. International Review of Victimology. 2007;1419257(Suppl. 2):253-64.

Lopata C. Progressive muscle relaxation as aggression reduction for students classified as emotionally disturbed. Dissertation Abstracts International Section A: Humanities and Social Sciences. 2003;.59780(Suppl. 2-A).

Losel F, Beelmann A. Effects of child skill training in preventing antisocial behavior: A systematic review of randomized evaluations. Annals of the American Academy of Political and Social Science. 2003;5879239:84-109.

Lowell DI, Carter AS, Godoy L, Paulicin B, Briggs-Gowan MJ, Lowell DI, et al. A randomized controlled trial of Child FIRST: a comprehensive home-based intervention translating research into early childhood practice. Child Development. 2011;829262(Suppl. 1):193-208.

Lynam DR, Henry W. The role of neuropsychological deficits in conduct disorders. . In: Hill J, Maughan B, eds. Conduct Disorders in Childhood and Adolescence. Cambridge, UK: Cambridge University Press; 2001.

Maayan L, Correll CU. Weight gain and metabolic risks associated with antipsychotic medications in children and adolescents. Journal of Child and Adolescent Psychopharmacology. 2011 Dec;2119381(Suppl. 6):517-35.

Macdonald G, Turner WEMA, Macdonald GGMcggu. An experiment in helping foster-carers manage challenging behaviour. British Journal of Social Work. 2005;.359333(Suppl. 8).

MACSRG MACSRG. A cognitive-ecological approach to preventing aggression in urban settings: initial outcomes for high-risk children. Journal of Consulting & Clinical Psychology. 2002;7015754(Suppl. 1):179-94.

Maes HH, Silberg JL, Neale MC, Eaves LJ. Genetic and cultural transmission of antisocial behavior: an extended twin parent model. . Twin Res Hum Genet. 2007;1019359(Suppl. 1):136-50.

Magen RH. Parents in groups: Problem solving versus behavioral skills training. Research on Social Work Practice. 1994;.49362(Suppl. 2).

Maguin E. The path to alcohol problems through conduct problems: A family-based approach to early intervention with risk. Journal of Research on Adolescence. 1994 pp;.49365(Suppl. 2).

Malone RP, Delaney MA, Luebbert JF, Carter J, Campbell M. A double-blind placebo-controlled study of lithium in hospitalized aggressive children and adolescents with conduct disorder. Archives of General Psychiatry. 2000;579415(Suppl. 7):649-54.

Mann T. Clinical Guidelines: Using Clinical Guidelines to Improve Patient Care Within the NHS. London: NHS Executive; 1996.

Markie-Dadds CS. A controlled evaluation of an enhanced self-directed behavioural family intervention for parents of children with conduct problems in rural and remote areas. Behaviour Change. 2006a;239481(Suppl. 1):55-72.

Markie-Dadds CS. Self-directed Triple P (Positive Parenting Program) for mothers with children at-risk of developing conduct problems. Behavioural and Cognitive Psychotherapy. 2006b;349480(Suppl. 3):259-75.

Martin AJ, Sanders MR. Balancing work and family: A controlled evaluation of the Triple P-Positive Parenting Program as a work-site intervention. Child and Adolescent Mental Health. 2003;.89502(Suppl. 4).

Martinez, Jr. Effects of culturally adapted Parent Management Training on Latino youth behavioral health outcomes. 2005;732693(Suppl. 5):841-51.

Martsch MD. A comparison of two cognitive-behavioral group treatments for adolescent aggression: High-process versus low-process. Dissertation Abstracts International Section A: Humanities and Social Sciences. 2000;.619522(Suppl. 1-A).

Mathai J, Anderson P, Bourne A. Comparing psychiatric diagnoses generated by the Strengths and Difficulties Questionnaire with diagnoses made by clinicians. The Australian and New Zealand Journal of Psychiatry. 2004 Aug;3869(Suppl. 8):639-43.

Maughan B, Rowe R, Messer J, Goodman R, Meltzer H. Conduct disorder and oppositional defiant disorder in a national sample: developmental epidemiology. J Child Psychol Psychiatry. 2004 Mar;4519368(Suppl. 3):609-21.

McArdle PM. School-based indicated prevention: A randomised trial of group therapy. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2002;439606(Suppl. 6):705-12.

McCabe C, Sutcliffe P, Kaltenthaler E. Parent-Training Programmes in the Management of Conduct Disorder: A report from the NICE Decision Support Unit and the ScHARR Technology Assessment Group: NICE; 2005.

McCabe KM. The effects of yoga on symptoms associated with conduct disorder with callous unemotional traits as a moderator. Dissertation Abstracts International: Section B: The Sciences and Engineering. 2009a;.71823(Suppl. 1-B).

McCabe KY. Parent-child interaction therapy for Mexican Americans: A randomized clinical trial. Journal of Clinical Child and Adolescent Psychology. 2009;389615(Suppl. 5):753-9.

McCart MR. Reducing violence/victimization among assaulted urban youth. Dissertation Abstracts International: Section B: The Sciences and Engineering. 2006;.67825(Suppl. 9-B).

McCollister KE, French MT, Fang H. The cost of crime to society: new crime-specific estimates for policy and program evaluation. Drug and Alcohol Dependence. 2010;10819253(Suppl. 1-2):98-109.

McConaughy SH. The achieving, Behaving, Caring project for preventing ED: Two-year outcomes. Journal of Emotional and Behavioral Disorders. 1999 Win;.79636(Suppl. 4).

McCord J, Tremblay RE. Preventing Antisocial Behavior: Interventions from Birth through Adolescence. New York, NY, US: Guilford Press

1992.

McDonald L, McDonald Lmwe. After-school multifamily groups: A randomized controlled trial involving low-income, urban, Latino children. Children & Schools. 2006;.289665(Suppl. 1).

McFarlane JMG. Behaviors of children following a randomized controlled treatment program for their abused mothers. Issues in Comprehensive Pediatric Nursing. 2005;289679(Suppl. 4):195-211.

McGilloway S, Ni Mhaille G, Bywater T, Furlong M, Leckey Y, Kelly P, et al. A parenting intervention for childhood behavioral problems: a randomized controlled trial in disadvantaged community-based settings. Journal of consulting and clinical psychology. 2012 Feb;8019193(Suppl. 1):116-27.

McMahon RJ, Estes AM. Conduct problems. In: Mash EJ, Terdal LG, eds. Assessment of Childhood Disorders. 3rd edn. New York, NY: Guilford; 1997. p. 130-93.

McMahon RJ, Forehand R, Griest DL. Effects of knowledge of social learning principles on enhancing treatment outcome and generalization in a parent training program. Journal of consulting and clinical psychology. 1981 Aug;4919194(Suppl. 4):526-32.

McPherson SJ, McDonald LE, Ryer CW. Intensive counseling with families of juvenile offenders. Juvenile and Family Court Journal. 19839728:27-32.

Melhuish E, Belsky J, Anning A, Ball M, Barnes J, Romaniuk H, et al. Variation in community intervention programmes and consequences for children and families: the example of Sure Start Local Programmes. J Child Psychol Psychiatry. 2007 Jun;4819375(Suppl. 6):543-51.

Meltzer H, Gatward R, Goodman R, Ford T. The mental health of children and adolescents in Great Britain: summary report. London: The Stationery Office; 2000.

Michelson L, Mannarino AP, Marchione KE, Stern M, Figueroa J, Beck S. A comparative outcome study of behavioral social-skills training, interpersonal-problem-solving and non-directive control treatments with child psychiatric outpatients. Behaviour Research and Therapy. 1983;2119195(Suppl. 5):545-56.

Millie A, Jacobson J, McDonals E, Hough M. Anti-social behaviour strategies. Finding a balance. . Bristol: The Policy Press. 200519154.

Moffit TE, Caspi A, Rutter M, Silva P. Sex differences in antisocial behvaviour. Cambridge: Cambridge University Press.; 2001.

Moffitt T. Life-course-persistent versus adolescence-limited antisocial behaviour. In: Cicchetti D, Cohen DJ, eds. Developmental psychopathology, Vol 3: Risk, disorder, and adaptation Hoboken, NJ, US: John Wiley; 2006. p. 570-98.

Moffitt TE. Genetic and environmental influences on antisocial behaviors: evidence from behavioral-genetic research. Advances in genetics. 2005;5519225:41-104.

Moffitt TE, Arseneault L, Jaffee SR, Kim-Cohen J, Koenen KC, Odgers CL, et al. Research review: DSM-V conduct disorder: research needs for an evidence base. Journal of child psychology and psychiatry, and allied disciplines. 2008;4919208(Suppl. 1):3-33.

Moore EAG, Gogerty PL. A twelve-year follow-up study of maltreated and at-risk children who received early therapeutic child care. Child Maltreatment. 1998;39968:3-16.

Moran P, Rowe R, Flach C, Briskman J, Ford T, Maughan B, et al. Predictive value of callous-unemotional traits in a large community sample. Journal of the American Academy of Child and Adolescent Psychiatry. 2009 Nov;4819217(Suppl. 11):1079-84.

Morawska A, Haslam D, Milne D, Sanders M, Morawska Aapuea. Evaluation of a brief parenting discussion group for parents of young children. Journal of Developmental and Behavioral Pediatrics. 2011;.329990(Suppl. 2).

Moss E, Dubois-Comtois K, Cyr C, Tarabulsy G, Moss Emeuc. Efficacy of a home-visiting intervention aimed at improving maternal sensitivity, child attachment, and behavioral outcomes for maltreated children: A randomized control trial. [References]. Development and Psychopathology. 2011;.2317298(Suppl. 1).

Mrazek P, Haggerty RJ, eds. Reducing risks for mental disorders. Frontiers for preventive intervention research. Washington, DC: National Academy Press.; 1994.

Munoz RF, Mrazek PJ, Haggerty RJ. Institute of Medicine report on prevention of mental disorders. Summary and commentary. The American psychologist. 1996;5119325(Suppl. 11):1116-22.

Muntz RH, Hutchings J, Edwards R, Hounsome B, O'Ce'illeachair A. Economic evaluation of treatments for children with severe behavioural problems. Journal of Mental Health Policy and Economics. 2004;710089(Suppl. 4):177-89.

Muris P, Maas A. Strengths and difficulties as correlates of attachment style in institutionalized and non-institutionalized children with below-average intellectual abilities. Child Psychiatry and Human Development. 2004 Summer;3491(Suppl. 4):317-28.

Murray J, Farrington DP. Risk factors for conduct disorder and delinquency: key findings from longitudinal studies. Canadian journal of psychiatry Revue canadienne de psychiatrie. 2010 Oct;5519357(Suppl. 10):633-42.

Murray J, Irving B, Farrington DP, Colman I, Bloxsom CA. Very early predictors of conduct problems and crime: results from a national cohort study. J Child Psychol Psychiatry. 2010;519358(Suppl. 11):1198-207.

NAO. The cost of a cohort of young offenders to the criminal justice system. Technical paper. . In: Justice Mo, editor.: The National Audit Office; 2011.

NCCMH. Service User Experience in Adult Mental Health: Improving the Experience of Care for People Using Adult NHS Mental Health Services. Leicester & London: The British Psychological Society and The Royal College of Psychiatrists; 2012.

Nestler JG. A pilot study of social competence group training for adolescents with borderline intellectual functioning and emotional and behavioural problems (SCT-ABI). Journal of Intellectual Disability Research. 2011;5510239(Suppl. 2):231-41.

Newcorn JH, Spencer TJ, Biederman MD, Milton DR, Michelson D. Atomoxetine treatment in children and adolescents with attention-deficit/ hyperactivity disorder and comorbid oppositional defiant disorder. Journal of the American Academy of Child and Adolescent Psychiatry. 2005;4410253(Suppl. 3):240-8.

NICE. Depression in Children and Young People: Identification and Management in Primary, Community and Secondary Care: NICE clinical guideline 28. Available from: http://www.nice.org.uk/guidance/CG28; 2005.

NICE. Conduct Disorder in Children - Parent-Training/Education Programmes (TA102): NICE technology appraisal TA102. Available from: http://www.nice.org.uk/nicemedia/live/11584/33426/33426.pdf; 2006.

NICE. Antisocial Personality Disorder: Costing Report-Implementing NICE guidance: Available from: http://www.nice.org.uk/nicemedia/pdf/CG077CostReport.pdf; 2009a.

NICE. Antisocial Personality Disorder: Treatment, Management and Prevention: NICE clinical guideline 77. Available from: http://www.nice.org.uk/guidance/CG77; 2009b.

NICE. Attention Deficit Hyperactivity Disorder: Diagnosis and Management of ADHD in Children, Young People and Adults: NICE clinical guideline 72. Available from: http://www.nice.org.uk/guidance/CG72; 2009c.

NICE. Schizophrenia: The NICE Guideline on Core Interventions in the Treatment and Management of Schizophrenia in Adults in Primary and Secondary Care: NICE clinical guideline 82. Available from: http://publications.nice.org.uk/schizophrenia-cg82; 2009d.

NICE. The Guidelines Manual. London: National Institute for Health and Clinical Excellence; 2009e.

NICE. Autism: recognition, referral and diagnosis of children and young people on the autism spectrum: NICE clinical guideline 128. Available from: http://www.nice.org.uk/nicemedia/live/13572/56428/56428.pdf; 2011a.

NICE. Common Mental Health Disorders: The NICE Guidance on Identification and Pathways to Care: NICE clinical guideline 123. Available from: http://publications.nice.org.uk/common-mental-health-disorders-cg123; 2011b.

NICE. Service User Experience in Adult Mental Health: NICE clinical guideline136. Available from: http://publications.nice.org.uk/service-user-experience-in-adult-mental-health-improving-the-experience-of-care-for-people-using-cg136; 2011c.

NICE. Psychosis and Schizophrenia in Children and Young People: Recognition and Management: NICE clinical guideline, forthcoming 2013.; 2013.

Nicholson JM. Randomized controlled trial of behavioral family intervention for the treatment of child behavior problems in stepfamilies. Journal of Divorce & Remarriage. 1999 pp;.3010281(Suppl. 3-4).

Nickel MK, Krawczyk J, Nickel C, Forthuber P, Kettler C, Leiberich P, et al. Anger, interpersonal relationships, and health-related quality of life in bullying boys who are treated with outpatient family therapy: A randomized, prospective, controlled trial with 1 year of follow-up. Pediatrics. 2005;11610290(Suppl. 2):E247-E54.

Nickel MKM. Influence of family therapy on bullying behaviour, cortisol secretion, anger, and quality of life in bullying male adolescents: A randomized, prospective, controlled study. Canadian Journal of Psychiatry. 2006a;5110292(Suppl. 6):355-62.

Nickel ML. Bullying girls - Changes after brief strategic family therapy: A randomized, prospective, controlled trial with one-year follow-up. Psychotherapy and Psychosomatics. 2006b;7510294(Suppl. 1):47-55.

Ninness HC. The effect of contingency management strategies on the Bender Gestalt diagnostic indicators of emotionally disturbed children. Child Study Journal. 1985 pp;.1517407(Suppl. 1).

Nixon RDV. Parent-child interaction therapy: A comparison of standard and abbreviated treatments for oppositional defiant preschoolers. 2003;712847(Suppl. 2):251-60.

Offord D, Bennett KJ. Conduct disorder: Long-term outcomes and intervention effectiveness. Journal of the American Academy of Child and Adolescent Psychiatry. 1994;3319355:1069-78.

Ogden T, Halliday-Boykins C, Ogden Ttpun, Halliday-Boykins CA. Multisystemic treatment of antisocial adolescents in Norway: Replication of clinical outcomes outside of the US. Child and Adolescent Mental Health. 2004;.910428(Suppl. 2).

Ogden TH. Treatment Effectiveness of Parent Management Training in Norway: A Randomized Controlled Trial of Children With Conduct Problems. 2008;762874(Suppl. 4):607-21.

Olds DL, Henderson CR, Tatelbaum R, Chamberlin R. Improving the delivery of prenatal care and outcomes of pregnancy: a randomized trial of nurse home visitation. Pediatrics. 1986;7710459:16-28.

Olds DLR, Robinson J, O'Brien R, Luckey DW, Pettitt LM, Henderson Jr CR, et al. Home visiting by paraprofessionals and by nurses: A randomized, controlled trial. Pediatrics. 2002;11010469(Suppl. 3):486-96.

Oliver S, Harden A, Rees R, Shepherd J, Brunton G, Oakley A. Young people and mental health: novel methods for systematic review of research on barriers and facilitators. Health Education Research. 2008 Oct;2319162(Suppl. 5):770-90.

Olsson TME. Intervening in youth problem behaviour in Sweden: A pragmatic cost analysis of MST from a randomized trial with conduct disordered youth. International Journal of Social Welfare. 2010a;1919288(Suppl. 2):194-205.

Olsson TME. MST with conduct disordered youth in Sweden: Costs and benefits after 2 years. . Research on Social Work Practice. 2010b;2019289(Suppl. 6):561-71.

Olweus D. Annotation: Bullying at school: Basic facts and effects of a school based intervention program. Journal of Child Psychology and Psychiatry. 1994;3519294:1171-90.

Omizo MM, Hershberger JM, Omizo SA. Teaching children to cope with anger. Elementary School Guidance and Counseling. 1988;2210507:241-6.

ONS. Population Estimates for UK, England and Wales, Scotland and Northern Ireland, Population Estimates Time series 1971 to Current Year Office for National Statistics. Available from: http://www.ons.gov.uk/ons/rel/popestimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/population-estimates-timeseries-1971-to-current-year/index.html; 2011.

Ortiz J, Raine A. Heart rate level and antisocial behavior in children and adolescents: a meta-analysis. Journal of the American Academy of Child and Adolescent Psychiatry. 2004;4319234(Suppl. 2):154-62.

Paediatric Formulary Committee. BNF for Children 2011-2012 (British National Formulary for Children): Pharmaceutical Press; 2011.

Pantin HP. A randomized controlled trial of familias unidas for hispanic adolescents with behavior problems. Psychosomatic Medicine. 2009;7117551(Suppl. 9):987-95.

Patterson JB. Improving mental health through parenting programmes: Block randomised controlled trial. 2002;872941(Suppl. 6):472-7.

Pepler JP, King G, Craig W, Byrd B, Bream L. The development and evaluation of a multisystem social skills group training program for aggressive children. Child & Youth Care Forum,. 1995;2419196(Suppl. 5):297-313.

Petit JA. The effects of an anger management program on aggressive adolescents: A cognitive-behavioral approach. Dissertation Abstracts International Section A: Humanities and Social Sciences. 1998;.59984(Suppl. 8-A).

Petra JR. The effects of a choice theory and reality therapy parenting program on children's behavior. Dissertation Abstracts International: Section B: The Sciences and Engineering. 2001;.61985(Suppl. 9-B).

Petrou S, Johnson S, Wolke D, Hollis C, Kochhar P, Marlow N. Economic costs and preference-based health-related quality of life outcomes associated with childhood psychiatric disorders. The British journal of psychiatry : the journal of mental science. 2010;19719286(Suppl. 5):395-404.

Pietrucha CA. A social-cognitive intervention program: toward the reduction of children's aggressive behavior through modification of social goals (peer acceptance). 199810888.

Piquero A, Farrington D, Nagin D, Moffitt T. Trajectories of Offending and Their Relation to Life Failure in Late Middle Age: Findings from the Cambridge Study in Delinquent Development. Journal of Research in Crime and Delinquency. 2010;4719211:151-73.

Pitts RP. The effectiveness and acceptability of the modified effective Black parenting program with children exhibiting severe conduct problems. Dissertation Abstracts International: Section B: The Sciences and Engineering. 2001;.621004(Suppl. 4-B).

Prince’s Trust. The Cost of Exclusion: Counting the cost of youth disadvantage in the UK. . London 2010.

Psychological Corporation. Wechsler Abbreviated Scale of Intelligence manual. San Antonio, TX: Psychological Corporation; 1999.

Pullatz M, Bierman KL. Aggression, antisocial behaviour, and violence among girls: A developmental perspective. : Guilford Publications; 2004.

Querido J, Eyberg S. Parent-child interaction therapy: maintaining treatment gains of pre-schoolers with disruptive behaviour disorders. Psychosocial Treatments for Child and Adolescent Disorders: Empirically Based Strategies for Clinical Practice. 2nd edn. Washington, DC: American Psychological Association; 2005.

Querido JG, Eyberg SM. Psychometric properties of the Sutter-Eyberg Student Behavior Inventory-Revised with preschool children. Behavior Therapy. 2003;34141:1-15.

Rao SA. The short-term impact of the family check-up: A brief motivational intervention for at-risk families. Dissertation Abstracts International: Section B: The Sciences and Engineering. 1998;.591028(Suppl. 7-B).

Rayfield A, Eyberg SM, Foote R. Teacher rating of conduct problem behavior: The Sutter-Eyberg Student Behavior Inventory Revised. Educational and Psychological Measurement. 1998;58142:88-98.

Reid MJW. Enhancing a classroom social competence and problem-solving curriculum by offering parent training to families of moderate- to high-risk elementary school children. Journal of Clinical Child and Adolescent Psychology. 2007;3611233(Suppl. 4):605-20.

Reyes M, Buitelaar J, Toren P, Augustyns I, Eerdekens M. A randomized, double-blind, placebo-controlled study of risperidone maintenance treatment in children and adolescents with disruptive behavior disorders. American Journal of Psychiatry. 2006;16311275(Suppl. 3):402-10.

Rich BA, Eyberg SM. Accuracy of assessment: the discriminative and predictive power of the Eyberg Child Behavior Inventory. Ambulatory Child Health. 2001;778(Suppl. 3-4):249-57.

Rifkin A, Karajgi B, Dicker R, Perl E, Boppana V, Hasan N, et al. Lithium treatment of conduct disorders in adolescents. American Journal of Psychiatry. 1997;15411323(Suppl. 4):554-5.

Riggs PD, Mikulich-Gilbertson SK, Davies RD, Lochman M, Klein C, Stover SK. A randomized controlled trial of fluoxetine and cognitive behavioral therapy in adolescents with major depression, behavior problems, and substance use disorders. Archives of Pediatrics and Adolescent Medicine. 2007;16111330(Suppl. 11):1026-34.

Robertson AA, Grimes PW, Rogers KE. A short-run cost-benefit analysis of community-based interventions for juvenile offenders. Crime and Delinquency; 47 (2) Apr 2001. 200111373:84.

Robinson EA, Eyberg SM, Ross AW. The standardization of an inventory of child conduct problem behaviors. Journal of Clinical Child Psychology. 1980;9112:22-8.

Rohde PC. An efficacy/effectiveness study of cognitive-behavioral treatment for adolescents with comorbid major depression and conduct disorder. Journal of the American Academy of Child and Adolescent Psychiatry. 2004;4311406(Suppl. 6):660-8.

Romeo R, Knapp M, Scott S. Economic cost of severe antisocial behaviour in children--and who pays it. The British journal of psychiatry : the journal of mental science. 2006 Jun;18819247:547-53.

Rowe R, Costello EJ, Angold A, Copeland WE, Maughan B. Developmental pathways in oppositional defiant disorder and conduct disorder. J Abnorm Psychol. 2010 Nov;11919360(Suppl. 4):726-38.

Rowe R, Maughan B, Pickles A, Costello EJ, Angold A. The relationship between DSM-IV oppositional defiant disorder and conduct disorder: findings from the Great Smoky Mountains Study. Journal of child psychology and psychiatry, and allied disciplines. 2002;4319209(Suppl. 3):365-73.

Rowland MD. A Randomized Trial of Multisystemic Therapy With Hawaii's Felix Class Youths. Journal of Emotional and Behavioral Disorders. 2005 Spr;.1311514(Suppl. 1).

Rust J, Golombok S, Trickey G, Psychological Corporation. WORD, Wechsler Objective Reading Dimensions manual. London: Psychological Corporation; 1993.

Sainsbury Centre for Mental Health. The chance of a lifetime: Preventing early conduct problems and reducing crime 2009.

Salmon K, Dadds MR, Allen J, Hawes DJ, Salmon K, Dadds MR, et al. Can emotional language skills be taught during parent training for conduct problem children? Child Psychiatry & Human Development. 2009;4011623(Suppl. 4):485-98.

Sanders MR, Christensen AP. A comparison of the effects of child management and planned activities training in five parenting environments. Journal of Abnormal Child Psychology. 1985;1311641(Suppl. 1):101-17.

Sanders MRM, Markie-Dadds C, Tully LA, Bor W. The Triple P-positive parenting program: A comparison of enhanced, standard, and self-directed behavioral family intervention for parents of children with early onset conduct problems. Journal of consulting and clinical psychology. 2000a;6811649(Suppl. 4):624-40.

Sanders MRM, McFarland M. Treatment of depressed mothers with disruptive children: A controlled evaluation of cognitive behavioral family intervention. Behavior Therapy. 2000;3111648(Suppl. 1):89-112.

Sanders MRM, Montgomery DT, Brechman-Toussaint ML. The mass media and the prevention of child behavior problems: The evaluation of a television series to promote positive outcomes for parents and their children. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2000b;4111650(Suppl. 7):939-48.

Sanders MRP. Does parental attributional retraining and anger management enhance the effects of the Triple P-Positive Parenting Program with parents at risk of child maltreatment? Behavior Therapy. 2004;3511651(Suppl. 3):513-35.

Santisteban DAP. Efficacy of brief strategic family therapy in modifying hispanic adolescent behavior problems and substance use. Journal of Family Psychology. 2003;1711665(Suppl. 1):121-33.

Sayger TV. Social learning family therapy with aggressive children: Treatment outcome and maintenance. Journal of Family Psychology. 1988;.111719(Suppl. 3).

Schaughency EA, Hurley LK, Yano KE, Seeley JR, Talarico B. Psychometric properties of the Sutter-Eyberg Student Behavior Inventory with clinic referred children. Annual meeting of the American Psychological Association; August 1989 1989; New Orleans, LA.

Schuhmann EM, Durning PE, Eyberg SM, Boggs SR. Screening for conduct problem behavior in pediatric settings using the Eyberg Child Behavior Inventory. Ambulatory Child Health. 1996;2103(Suppl. 1):35-41.

Schuhmann EMF. Efficacy of parent-child interaction therapy: interim report of a randomized trial with short-term maintenance. Journal of Clinical Child Psychology. 1998;2711856(Suppl. 1):34-45.

Schumann BR. Effects of child-centered play therapy and curriculum-based small-group guidance on the behaviors of children referred for aggression in an elementary school setting (Texas). . Dissertation Abstracts International Section A: Humanities and Social Sciences. 2004;.6519197.

Schünemann H, Brożek J, Oxman A. GRADE Handbook for Grading Quality of Evidence and Strength of Recommendation. 3.2 2 [updated March 2009] edn: The GRADE Working Group. Available from http://www.cc-ims.net/gradepro.; 2009.

Schunemann HJ, Best D, Vist G, Oxman AD, Grade Working Group. Letters, numbers, symbols and words: how to communicate grades of evidence and recommendations. CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne. 2003;16919305(Suppl. 7):677-80.

Scott DD. Investigating the behavioral outcomes of an early literacy intervention for at-risk preschool children. Dissertation Abstracts International: Section B: The Sciences and Engineering. 2005;.661137(Suppl. 5-B).

Scott S. Conduct Disorders in Children. BMJ (British Medical Journal). 2007a;no. 759511907(Suppl. pp. 646).

Scott S. Conduct disorders in children: Parent training for childhood conduct disorders: Parent programmes are effective but training and provision are inadequate BMJ. 2007b;33419261:646-74.

Scott S. Parent training programs. In: Rutter M, Bishop D, Pine D, Scott S, Stevenson J, Taylor E, et al., eds. Child and Adolescent Psychiatry Oxford: Blackwell; 2008.

Scott S. National dissemination of effective parenting programmes to improve child outcomes. The British journal of psychiatry : the journal of mental science. 2010a;19619242(Suppl. 1):1-3.

Scott S, Briskman J, Woolgar M, Humayun S, O'Connor TG. Attachment in adolescence: overlap with parenting and unique prediction of behavioural adjustment. Journal of child psychology and psychiatry, and allied disciplines. 2011;5219236(Suppl. 10):1052-62.

Scott S, Dadds MR. Practitioner review: When parent training doesn't work: theory-driven clinical strategies. Journal of child psychology and psychiatry, and allied disciplines. 2009;5019241(Suppl. 12):1441-50.

Scott S, Knapp M, Henderson J, Maughan B. Financial cost of social exclusion: follow up study of antisocial children into adulthood. BMJ (Clinical research ed). 2001;32319243(Suppl. 7306):191.

Scott S, O'Connor TG, Futh A, Matias C, Price J, Doolan M, et al. Impact of a parenting program in a high-risk, multi-ethnic community: the PALS trial. Journal of Child Psychology & Psychiatry & Allied Disciplines. 2010;5111909(Suppl. 12):1331-41.

Scott SS. Randomised controlled trial of parent groups for child antisocial behaviour targeting multiple risk factors: The SPOKES project. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2010b;5111912(Suppl. 1):48-57.

Scotto Rosato N, Correll CU, Pappadopulos E, Chait A, Crystal S, Jensen PS. Treatment of Maladaptive Aggressive in Youth Steering Committee. Treatment of maladaptive aggression in youth: CERT guidelines II. Treatments and ongoing management. Pediatrics. 2012;2919382(Suppl. 6):1577-86.

Seda G, Jr. Stress inoculation versus social skills training for the treatment of aggression in emotionally disturbed children. 199216655.

Semmens N. Towards an understanding of 'fear' as an intangible cost of crime. International Review of Victimology. 2007;1419258(Suppl. 2):219-35.

Sexton T, Turner CW, Sexton T, Turner CW. The effectiveness of functional family therapy for youth with behavioral problems in a community practice setting. Journal of Family Psychology. 2010;2411973(Suppl. 3):339-48.

Shapland J, Hall M. What do we know about the effects of crime on victims? . International Review of Victimology. 2007;1419259(Suppl. 2):175-217.

Sharac J, McCrone P, Rushton A, Monck E. Enhancing Adoptive Parenting: A Cost-Effectiveness Analysis. Child and Adolescent Mental Health. 2011;1612015(Suppl. 2):110-5.

Sharp C, Croudace TJ, Goodyer IM. The Strength and Difficulties Questionnaire: Predictive validity of parent and teacher ratings for help-seeking behaviour over one year. Educational and Child Psychology. 2005;2276(Suppl. 3):28-44.

Shaw DSS. Randomized trial of a family-centered approach to the prevention of early conduct problems: 2-Year effects of the family check-up in early childhood. Journal of consulting and clinical psychology. 2006;7412034(Suppl. 1):1-9.

Shechtman Z. An innovative intervention for treatment of child and adolescent aggression: An outcome study. Psychology in the Schools. 2000;.3712050(Suppl. 2).

Shechtman Z. The contribution of bibliotherapy to the counseling of aggressive boys. Psychotherapy Research. 2006;1612051(Suppl. 5):645-51.

Shechtman Z, Birani-Nasaraladin D. Treating Mothers of Aggressive Children: A Research Study. International Journal of Group Psychotherapy. 2006;5619198:93-112.

Shechtman ZI. School-based integrated and segregated interventions to reduce aggression. Aggressive behavior. 2009;3512056(Suppl. 4):342-56.

Shepard SA, Dickstein S. Preventative intervention for early childhood behavioural problems: an ecological perspective. . Child & Adolescent Psychiatry Clinics of North America. 2009;1819160(Suppl. 3):687-706.

Shin S-KEMA, Shin SKs. Effects of a solution-focused program on the reduction of aggressiveness and the improvement of social readjustment for Korean youth probationers. Journal of Social Service Research. 2009;.3512104(Suppl. 3).

Shivram R, Bankart J, Meltzer H, Ford T, Vostanis P, Goodman R. Service utilization by children with conduct disorders: findings from the 2004 Great Britain child mental health survey. European Child & Adolescent Psychiatry. 2009;1819245(Suppl. 9):555-63.

Simonsen B, Myers D, Briere DE, III, Simonsen Bbsue. Comparing a behavioral check-in/check-out (CICO) intervention to standard practice in an Urban Middle School setting using an experimental group design. [References]. Journal of Positive Behavior Interventions. 2011;.131167(Suppl. 1).

Snyder KVK. Anger management for adolescents: Efficacy of brief group therapy. Journal of the American Academy of Child and Adolescent Psychiatry. 1999;3812298(Suppl. 11):1409-16.

Snyder RT. Effects of Risperidone on Conduct and Disruptive Behavior Disorders in Children with Subaverage IQs. Journal of the American Academy of Child and Adolescent Psychiatry. 2002;4112300(Suppl. 9):1026-36.

Soderlund J, Epstein MH, Quinn KP. Parental perspectives on comprehensive services for children and youth with emotional and behavioral disorders. Behavioral Disorders. 1995;2019156:157-70.

Spencer TJ, Biederman J, Abikoff H, Pliszka SR, Boellner S, Lopez FA, et al. Safety and efficacy of mixed amphetamine salts extended release in children with oppositional defiant disorder (ODD). 157thAnnual Meeting of the American Psychiatric Association; 2004 May 1 6; New York, NY. 200412353.

Stallman HM. Reducing risk factors for adolescent behavioural and emotional problems: A pilot randomised controlled trial of a self-administered parenting intervention. AeJAMH (Australian e-Journal for the Advancement of Mental Health). 2007;.612396(Suppl. 2).

Stanger C, Ryan SR, Fu H, Budney AJ. Parent training plus contingency management for substance abusing families: a Complier Average Causal Effects (CACE) analysis. Drug and Alcohol Dependence. 2011 Nov 1;11819201(Suppl. 2-3):119-26.

StataCorp. Stata Statistical Software [Computer programme]. Version 9.2. College Station, TX: StataCorp; 2007.

Steiner H, Petersen ML, Saxena K, Ford S, Matthews Z. Divalproex sodium for the treatment of conduct disorder: a randomized controlled clinical trial. The Journal of clinical psychiatry. 2003;6412444(Suppl. 10):1183-91.

Stolk MN, Mesman Jmfln. Early parenting intervention: Family risk and first-time parenting related to intervention effectiveness. [References]. 20083293(Suppl. 1).

Strayhorn JMW. Reduction of attention deficit and internalizing symptoms in preschoolers through parent-child interaction training. 1989;283297(Suppl. 6):888-96.

Sukhodolsky DG. Cognitive-behavioral, anger-control intervention for elementary school children: A treatment outcome study. Journal of Child & Adolescent Group Therapy. 2000;.1012570(Suppl. 3).

Sukhodolsky DG, Golub A, Stone EC, Orban L. Dismantling anger control training for children: A randomized pilot study of social problem-solving versus social skills training components. Behavior Therapy. 2005;3612571:15-23.

Sundell KH. The Transportability of Multisystemic Therapy to Sweden: Short-Term Results From a Randomized Trial of Conduct-Disordered Youths. Journal of Family Psychology. 2008;2212588(Suppl. 4):550-60.

Swift MCR. Rural children referred for conduct problems: Evaluation of a collaborative program. Australian Journal of Primary Health. 2009;1512653(Suppl. 4):335-40.

Szapocznik J, Rio A, Murray E, Cohen R, Scopetta M, Rivas-Vazquez A, et al. Structural family versus psychodynamic child therapy for problematic Hispanic boys. Journal of consulting and clinical psychology. 1989 Oct;5719199(Suppl. 5):571-8.

Taylor TKS. A comparison of eclectic treatment with Webster-Stratton's Parents and Children Series in a children's mental health center: A randomized controlled trial. Behavior Therapy. 1998;2918538(Suppl. 2):221-40.

The Cochrane Collaboration. Review Manager (RevMan) [Computer programme]. Version 5.1. Copenhagen: The Nordic Cochrane Centre; 2011.

Tighe A, Pistrang N, Casdagli L, Baruch G, Butler S. Multisystemic therapy for young offenders: families' experiences of therapeutic processes and outcomes. Journal of family psychology : JFP : journal of the Division of Family Psychology of the American Psychological Association. 2012 Apr;2619145(Suppl. 2):187-97.

Timmer SG. Efficacy of adjunct in-home coaching to improve outcomes in parent-child interaction therapy. Research on Social Work Practice. 2010;.2012840(Suppl. 1).

Timmons-Mitchell J, Bender MB, Kishna MA, Mitchell CC. An Independent Effectiveness Trial of Multisystemic Therapy with Juvenile Justice Youth. Journal of Clinical Child and Adolescent Psychology. 2006;no. 212845(Suppl. pp. 227-236).

Tolan P, Gorman-Smith D, Henry D. Supporting families in a high-risk setting: Proximal effects of the SAFEChildren preventive intervention. Journal of consulting and clinical psychology. 2004;7212862(Suppl. 5):855-69.

Trzesniewski K, Moffitt T, Caspi A, Taylor A, Maughan B. Revisiting the Association Between Reading Achievement and Antisocial Behaviour: New Evidence of an Environmental Explanation From a Twin Study. Child Development. 2006;7719220:72-88.

Turgay A. Aggression and disruptive behavior disorders in children and adolescents. Expert Review of Neurotherapeutics. 2004 Jul;419329(Suppl. 4):623-32.

Turner KM, Sanders MR, Turner KMT, Sanders MR. Help when it's needed first: a controlled evaluation of brief, preventive behavioral family intervention in a primary care setting. 2006;373395(Suppl. 2):131-42.

Turner KMR. Randomised clinical trial of a group parent education programme for Australian Indigenous families. 2007;433396(Suppl. 6):429-37.

Van De Wiel NMH. The effectiveness of an experimental treatment when compared to care as usual depends on the type of care as usual. Behavior Modification. 2007;3113039(Suppl. 3):298-312.

van Manen TG. Reducing Aggressive Behavior in Boys With a Social Cognitive Group Treatment: Results of a Randomized, Controlled Trial. [References]. Journal of the American Academy of Child & Adolescent Psychiatry. 2004;.4313074(Suppl. 12).

Verduyn CML. Social skills training in schools: An evaluation study. Journal of Adolescence. 1990;1313152(Suppl. 1):3-16.

Vostanis P, Meltzer H, Goodman R, Ford T. Service utilisation by children with conduct disorders--findings from the GB National Study. European Child & Adolescent Psychiatry. 2003;1219207(Suppl. 5):231-8.

Walker HM, Kavanagh K, Stiller B, Golly A, Severson HH, Feil EG. First step to success An early intervention approach for preventing school antisocial behavior. Journal of Emotional and Behavioral Disorders. 1998;613266:66-80.

Walton MA, Chermack ST, Shope JT, Bingham CR, Zimmerman MA, Blow FC, et al. Effects of a Brief Intervention for Reducing Violence and Alcohol Misuse Among Adolescents A Randomized Controlled Trial. Jama-Journal of the American Medical Association. 2010;30413310(Suppl. 5):527-35.

Wanders F, Serra M, de Jongh AEMA, Wanders FFW. EMDR versus CBT for children with self-esteem and behavioral problems: A randomized controlled trial. Journal of EMDR Practice and Research. 2008 pp;.213318(Suppl. 3).

Webster-Stratton C. Randomized trial of two parent-training programs for families with conduct-disordered children. Journal of consulting and clinical psychology. 1984;5213400(Suppl. 4):666-78.

Webster-Stratton C. Enhancing the effectiveness of self-administered videotape parent training for families with conduct-problem children. Journal of Abnormal Child Psychology. 1990;1813401(Suppl. 5):479-92.

Webster-Stratton C. Individually administered videotape parent training: "Who benefits?". Cognitive Therapy and Research. 1992;1613395:31-52.

Webster-Stratton C. Advancing videotape parent training: A comparison study. Journal of consulting and clinical psychology. 1994;6213403(Suppl. 3):583-93.

Webster-Stratton C. Preventing conduct problems in head start children: Strengthening parenting competencies. 1998a;663489(Suppl. 5):715-30.

Webster-Stratton C. Preventing conduct problems in head start children: Strengthening parenting competencies. Journal of consulting and clinical psychology. 1998b;6613404(Suppl. 5):715-30.

Webster-Stratton C, Kolpacoff M, Hollinsworth T. Self-administered videotape therapy for families with conduct-problem children: Comparison with two cost-effective treatments and a control group. [References]. Journal of consulting and clinical psychology. 1988;.5618853(Suppl. 4).

Webster-Stratton CJR. Preventing conduct problems and improving school readiness: Evaluation of the Incredible Years Teacher and Child Training Programs in high-risk schools. Journal of Child Psychology and Psychiatry and Allied Disciplines. 2008;4913409(Suppl. 5):471-88.

Webster-Stratton CR. Preventing conduct problems, promoting social competence: a parent and teacher training partnership in head start. Journal of Clinical Child Psychology. 2001;3013411(Suppl. 3):283-302.

Webster-Stratton CR. Treating Children With Early-Onset Conduct Problems: Intervention Outcomes for Parent, Child, and Teacher Training. 2004a;333494(Suppl. 1):105-24.

Webster-Stratton CR. Treating Children With Early-Onset Conduct Problems: Intervention Outcomes for Parent, Child, and Teacher Training. Journal of Clinical Child and Adolescent Psychology. 2004b;3313412(Suppl. 1):105-24.

Weis R, Lovejoy MC, Lundahl BW. Factor structure and discriminative validity of the Eyberg Child Behavior Inventory with young children. Journal of Psychopathology and Behavioral Assessment. 2005 Dec;2775(Suppl. 4):269-78.

Welsh BC, Loeber R, Stevens BR, Stouthamer-Loeber M, Cohen MA, Farrington D. Costs of juvenile crime in urban areas: A longitudinal perspective. Youth Violence and Juvenile Justice. 2008;619244(Suppl. 1):3-27.

Westermark PK, Hansson K, Olsson MEMA, Westermark PKpkwss. Multidimensional treatment foster care (MTFC): Results from an independent replication. Journal of Family Therapy. 2011;.3313512(Suppl. 1).

Wiggins TLS. Pathways triple P-positive parenting program: Effects on parent-child relationships and child behavior problems. 2009;483521(Suppl. 4):517-30.

Williams JH, Horvath VE, Wei H, Van Dorn RA, Jonson-Reid M. Teachers' Perspectives of Children's Mental Health Service Needs in Urban Elementary Schools. Children & Schools. 2007;2919157:95-107.

Wilmshurst LA. Treatment programs for youth with emotional and behavioral disorders: An outcome study of two alternate approaches. Mental Health Services Research. 2002;413612(Suppl. 2):85-96.

Wilson SJ, Lipsey MW, Derzon JH. The effects of school-based intervention programs on aggressive behavior: a meta-analysis. J Consult Clin Psychol. 2003 Feb;716(Suppl. 1):136-49.

Wolchik SA, West SG, Sandler IN, Tein JY, Coatsworth D, Lengua L, et al. An experimental evaluation of theory-based mother and mother-child programs for children of divorce. Journal of consulting and clinical psychology. 2000 Oct;6816547(Suppl. 5):843-56.

Wolchik SA, West SG, Westover S, Sandler IN, Martin A, Lustig J, et al. The children of divorce parenting intervention: outcome evaluation of an empirically based program. American Journal of Community Psychology. 1993;2118989(Suppl. 3):293-31.

World Health Organisation. The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines. Geneva: World Health Organization.; 1992.

World Health Organisation. The ICD-10 Classification of Mental and Behavioural Disorders - Diagnostic criteria for research. Geneva: World Health Organisation; 1993.

World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Description and Diagnostic Guidelines. Geneva: WHO; 1992.

Youmans CW. Group counseling compared with individual counseling in the reduction of at-risk behaviors in Black male students. Dissertation Abstracts International Section A: Humanities and Social Sciences. 2001;.6719064(Suppl. 5-A).

Zamora J, Abraira V, Muriel A, Khan K, Coomarasamy A. Meta-DiSc: a software for meta-analysis of test accuracy data. BMC Medical Research Methodology. 2006a. 6.

Zamora J, Abraira V, Muriel A, Khan KS, A. C. Meta-DiSc: a software for meta-analysis of test accuracy data. BMC Medical Research Methodology. 2006b;619303(Suppl. 31).

Zuddas A, Zanni R, Usala T. Second generation antipsychotics (SGAs) for non-psychotic disorders in children and adolescents: a review of the randomized controlled studies. European neuropsychopharmacology : the journal of the European College of Neuropsychopharmacology. 2011 Aug;2119383(Suppl. 8):600-20.