NICE National Institute for Health and Care Excellence

Surveillance report 2017 – Antisocial behaviour and conduct disorders in children and young people: recognition and management (2013) NICE guideline CG158

Surveillance report

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Contents

Surveillance decision

We will not update the guideline on antisocial behaviour and conduct disorders at this time.

During surveillance editorial or factual corrections were identified:

- Footnote number 7 in the NICE guideline on antisocial behaviour and conduct disorders (CG158) contains a link to the NICE guideline on schizophrenia (CG82). This guideline has been replaced by the NICE guideline on psychosis and schizophrenia in adults (CG178). The link is to be amended so that it directs to CG178.

Reason for the decision

Assessing the evidence

We found 22 relevant studies through surveillance of this guideline.

This included evidence on selective prevention, case identification, interventions with a psychosocial or pharmacological component, and organisation and delivery of care. We asked topic experts whether this evidence would affect current recommendations on antisocial behaviour and conduct disorders in children and young people. Generally, the topic experts thought that an update of these areas was not needed.

We did not find any evidence related to general principles of care, assessment of conduct disorders, indicated prevention interventions or modifications to interventions for coexisting conditions.

None of the new evidence considered in surveillance of this guideline was thought to have an effect on current recommendations.

Equalities

No equalities issues were identified during the surveillance process.

Overall decision

After considering all the evidence and views of topic experts and stakeholders, we decided that an update is not necessary for this guideline.

See how we made the decision for further information.

Commentary on selected evidence

With advice from topic experts we selected 2 studies for further commentary.

Psychosocial interventions – treatment and indicated prevention

We selected the systematic review and meta-analysis by Bakker et al. (2017) for a full commentary as it includes a highly relevant population, a wide range of included interventions, and outcome data as reported by parent, child and teacher.

What the guideline recommends

NICE guideline CG158 (1.5.1–1.5.14) recommends psychosocial interventions to treat and prevent conduct disorders. Interventions should be offered if a child or young person is at risk of, or is diagnosed with, oppositional defiant disorder or conduct disorder or is in contact with the criminal justice system because of antisocial behaviour. Recommendations have been made according to the age of the child or young person with the disorder.

The parents or foster carer/guardian of children and young people aged between 3 and 11 years are to be offered group training programmes.

Children and young people aged between 9 and 14 years should be offered a group programme based on a social and cognitive-behavioural problem-solving model.

Children and young people aged between 11 and 17 years are to be offered multimodal interventions and should involve both the child and their parent or carer.

Individual programmes should be offered if attendance at a group programme is not possible. An individual parent and child training programme should be offered for children with severe and complex needs.

To ensure consistent implementation of the programmes, a developer's manual should be adhered to and all necessary materials employed.

Methods

The Bakker et al. (2017) systematic review and meta-analysis investigated the efficacy of nonpharmacological treatments for children and adolescents with a diagnosis of conduct disorder (CD) or oppositional defiant disorder (ODD). The systematic review identified randomised controlled trials reporting conduct disorder outcomes in participants aged under 18 years. The included trials were needed to compare nonpharmacological treatments with either placebo, waiting list, no treatment or treatment as usual. The use of medications and any comorbidities were not reasons for excluding studies. Only articles written in English were included and study types other than randomised controlled trials were excluded. All outcome measures related to CD problems were included as part of the systematic review and meta-analysis.

Data from included studies were extracted and treatment effect sizes calculated according to type of outcome measure and rater. This included ratings by parents, teachers, self and blinded observers. Statistical analyses presented the overall effect sizes for studies that used multiple outcome measures. For these studies, effect sizes for the lowest and highest scoring outcome measures were also presented.

Results

The systematic review identified a total of 17 studies meeting the inclusion criteria. Of these, 9 included participants with a Diagnostic and Statistical Manual of Mental Disorders (DSM) diagnosis of CD and/or ODD and 8 studies included participants in the clinical range deemed at risk of conduct or externalising problems.

The included studies investigated a total of 19 different psychological interventions which were delivered in clinical, home, school or multiple settings. Group interventions formed the primary focus of 10 studies, individual interventions in 7 studies and a combination was investigated in 4 studies. Across studies, interventions for children or adolescents lasted a median duration of 14 hours increasing to 21.8 hours for parent interventions. Treatment as usual or waiting list formed the control groups for comparison to interventions.

Parent-rated outcomes

Outcomes rated by parents were used in 17 of the 19 interventions and indicated an overall significant improvement in CD problems (weighted mean effect size [ES]=0.37, 95%

confidence interval [CI]=0.27 to 0.47) for psychological treatments compared with controls.

A significant improvement in CD problems was found in each study for the lowest parent rated score (weighted mean ES=0.30, 95% CI=0.20 to 0.40) and for the highest parent rated score (weighted mean ES=0.42, 95% CI=0.33 to 0.52) in favour of psychological treatments. However, tests for heterogeneity indicated inconsistency in these populations.

Teacher-rated outcomes

Outcomes rated by teachers were used in 7 of the 19 interventions and indicated an overall significant improvement in CD problems (weighted mean ES=0.26, 95% CI=0.12 to 0.49) for psychological treatments compared with controls.

An improvement in CD problems was found in each study for the lowest teacher rated score (weighted mean ES=0.18, 95% CI=0.00 to 0.36) and for the highest teacher rated score (weighted mean ES=0.27, 95% CI=0.08 to 0.46) in favour of psychological treatments. However, only the highest rated score was statistically significant and heterogeneity indicated inconsistency in these populations.

Self-rated outcomes

Outcomes rated by the children were used in 2 of the 19 interventions and indicated no overall difference between psychological treatments and control for reducing CD problems (weighted mean ES=−0.01, 95% CI=−0.25 to 0.23).

No significant difference in CD problems was found for the lowest self-rated score (weighted mean ES=0.00, 95% CI=−0.02 to 0.21) or for the highest self-rated score (weighted mean ES=0.10, 95% CI=−0.11 to 0.31). Again, tests for heterogeneity indicated inconsistency in these populations.

Observer-rated outcomes

Outcomes rated by blinded observers were used in 3 of the 19 interventions and indicated an overall significant improvement in CD problems (weighted mean ES=0.26, 95% CI=0.06 to 0.47) for psychological treatments compared with controls. Effect sizes for low and high scores could not be calculated as only one observer rated outcome was reported in each study.

Moderators of treatment effect

Moderators of treatment effect were not found for most participant or intervention characteristics. However, studies with participants aged under 10 years indicated a trend towards larger effect sizes compared with studies with participants aged 10 years or older.

Strengths and limitations

Strengths

The target population in the study is directly relevant to the population in NICE guideline CG158. The study clearly defines the population as children and young people either at risk of or diagnosed with conduct disorder. NICE guideline CG158 used a broader inclusion criteria for the evidence base. This resulted in the inclusion of studies where conduct disorder was only a proportion of the population. The Bakker et al. (2017) study has a more relevant population and the results could be generalised more directly to children and young people with a conduct disorder.

Methodologically, this study is generally well reported with the use of an appropriate risk of bias tool and multiple authors to assess the quality of the included randomised controlled trials.

Limitations

The meta-analysis indicated heterogeneity in the results for effect sizes of low and high rating scores. The results should be interpreted cautiously with this indication of inconsistency in the samples. Also, there is an indication that one of the included studies contained a non-randomised treatment arm. However, this is not accounted for or discussed in the meta-analysis.

Although the study included multiple interventions, there was no meaningful comparison of treatments. From the results it is not possible to determine what the active components of effective psychological treatments are. The low quality of included studies and the lack of sufficient data to perform full sensitivity analyses limit the conclusions that can be made from this study. Although significant effect sizes were found for some of the outcomes, there is a lack of data on medication use within the included studies. This lack of medication use data mean it is unclear what contribution the psychological interventions made to the improvement in conduct disorder outcomes.

Impact on guideline

The results of the study support the recommendations in NICE guideline CG158, highlighting the effectiveness of psychological interventions across age groups in children and young people.

Although some effect sizes favour psychological interventions, the significant effects trend towards small to moderate levels. These small effect sizes, together with a lack of meaningful information on individual treatments, result in inconclusive evidence. No new data was derived from this study to impact on current recommendations.

Pharmacological interventions

We selected the randomised controlled trial by Arnold et al. (2015) for a full commentary because the investigation of risperidone in children is unusual. A full commentary may provide further information on the pharmacological treatment of behavioural disorders in this population.

What the guideline recommends

NICE guideline CG158 (1.6.3–1.6.7) recommends consideration of risperidone for the treatment of severely aggressive behaviour if there has been no response to psychosocial interventions. The recommendations are for young people experiencing explosive anger and severe emotional dysregulation as part of their conduct disorder.

Before treatment, a comprehensive assessment with baseline physical investigations and a diagnosis of conduct disorder should be undertaken by an experienced and qualified healthcare professional. The guideline also recommends the provision of age-appropriate information and a discussion of benefits and side effects with the young person and their parents or carers.

During treatment with risperidone the young person's symptoms, physical health, expected changes, and treatment efficacy should be monitored and recorded.

Methods

Arnold et al. (2015) conducted a secondary outcome analysis of the Treatment of Severe Childhood Aggression (TOSCA) randomised controlled trial. The TOSCA trial included 168

children aged 6 to12 years diagnosed with attention-deficit hyperactivity disorder (ADHD) and either conduct disorder (n=44) or oppositional defiant disorder (n=124). These diagnoses were determined if the child met the diagnostic criteria from the Diagnostic and Statistical Manual of Mental Disorders, 4th edition. Further inclusion criteria needed the children to have severe physical aggression, a score of 27 or more on the Nisonger Child Behavior Rating Form typical intelligence quotient version (NCBRF-TIQ) for disruptive behaviour, and a severity score of 4 or more on the Clinical Global Impressions for aggression. Participants were recruited across 4 clinical sites and randomised at baseline. The trial was comprised of 2 stages over a total 9-week period. All participants received a basic treatment with a stimulant combined with parent training in behaviour management for the initial 3 weeks. The stimulant used was usually an osmotic release oral system methylphenidate. However, the methods do not specify which other stimulants were used. At 3 weeks, participants with potential for further improvement in symptoms were randomised to receive up to 6 weeks of risperidone or placebo in addition to the basic treatment. After accounting for participants who either dropped out or were determined not to need further treatment, a total of 146 children received the additional drug.

The TOSCA trial investigated parent ratings on the disruptive total subscale of the Nisonger Child Behavior Rating Form as the primary outcome. This secondary outcome analysis used the Child and Adolescent Symptom Inventory-4R (CASI-4R) to measure teacher ratings of the child's anxiety, mood, manic symptoms, autism spectrum symptoms, schizophrenia spectrum symptoms and impairment severity. Parent ratings were obtained for the same outcomes as for teachers and additionally included ratings for separation anxiety, enuresis/encopresis, anorexia and bulimia. Outcome measures were taken during screening, baseline and at the end of the trial for each participant. Mean changes to outcome measure scores from baseline to end of trial were calculated for each treatment arm. Differences in change scores between treatments were calculated and adjusted based on recruitment site and diagnosis of the child.

Results

For the 10 parent-rated outcome measures, effect sizes were calculated using intention-to-treat analysis of scores from baseline and end of trial time points. Complete end of trial data were available for 150 children which found no significant differences between risperidone and placebo treatments for any outcome.

For the 6 teacher-rated outcome measures, effect sizes were calculated based on the complete data of 46 children. Significant differences favouring risperidone treatment

compared to placebo was found for the following outcomes:

- Anxiety adjusted change score difference=0.17 (95% confidence interval [CI]=0.04 to 0.31), effect size=0.71, p=0.013.
- Schizophrenia spectrum adjusted change score difference=0.19 (95% CI=0.04 to 0.35), effect size=0.45, p=0.017.
- Impairment adjusted change score difference=0.25 (95% CI=0.04 to 0.46), effect size=0.26, p=0.020.

No significant differences between risperidone and placebo treatments were found for the remaining outcomes.

A sensitivity analysis was conducted on the parent-rated outcome measures for the 46 children included in the teacher-rated analysis. The analysis of this subsample found similar non-significant results compared to the results of the parent-rated whole sample. Full statistical data is not provided for this sensitivity analysis in the full text article.

Strengths and limitations

Strengths

The population in this study is largely relevant to NICE guideline CG158 with the inclusion of children diagnosed with ADHD coexisting with conduct disorder or oppositional defiant disorder and with severe aggression. Special consideration is given in the guideline for children with comorbid conditions as investigated in this study. The investigation of pharmacological treatment with risperidone in this population is also relevant as most studies are conducted in the adult population. This study has the potential to offer a rationale for risperidone treatment in an area with a paucity of evidence.

The study methodology has strengths with the use of randomisation and a sensitivity analysis. These methods go some way to reduce the risk of bias. The outcomes measured are relevant to NICE guideline CG158 and provide interest to clinical practice for this population.

Limitations

As this is a secondary outcome analysis of a previous trial, the methodology of the original

trial is not fully reported. Based on the current study it is unclear how a randomisation sequence was generated, whether allocation concealment took place or whether outcome assessors were blind to treatment allocation.

Although the included outcomes are relevant to NICE guideline CG158, the guideline considers these as important but not critical outcomes. Critical outcomes of interest would have been the overall effectiveness of the intervention on behaviour, educational attainment or agency contact. However, as this is a secondary analysis some of these were covered as primary outcomes in the original study. The use of these secondary outcomes does limit the applicability of the results to NICE guideline CG158.

The significant effects found in this study are limited to teacher ratings and the link between anxiety and aggression remains a hypothesis. This is particularly pertinent when considering that teacher-rated data only relates to 46 of the total 168 participants. This may increase the risk of bias from missing data or results from a subgroup.

Impact on guideline

The evidence used to develop NICE guideline CG158 recommendations on the use of risperidone consisted mainly of trials including participants with coexisting ADHD. The evidence of benefit for risperidone from these trials was derived primarily from teacher and parent rated outcomes. Also, risperidone was the only drug licensed for use in the UK with a specific indication for conduct disorder. Recommendations for the use of risperidone were made specifically for young people with conduct disorder and severely aggressive behaviour as the benefits of medication may outweigh the risk of harm.

The results of this study indicate some beneficial effects of risperidone for this population. However, the significant effects are limited to teacher ratings and the link between anxiety and aggression in this population remains a hypothesis. Also, the methodological limitations, lack of critical outcomes and potential risk of bias mean these results are unlikely to have an impact on NICE guideline CG158.

How we made the decision

We check our guidelines regularly to ensure they remain up to date. We based the decision on surveillance 4 years after the publication of NICE's guideline on antisocial behaviour and conduct disorders (CG158) in 2013.

For details of the process and update decisions that are available, see ensuring that published guidelines are current and accurate in developing NICE guidelines: the manual.

Previous surveillance update decisions for the guideline are on our website.

Evidence

We found 7 studies in a search for randomised controlled trials and systematic reviews published between 1 May 2015 and 8 November 2016.

We also considered evidence identified in previous surveillance 2 years after publication of the guideline. This included 15 studies identified by the 2-year surveillance review.

From all sources, we considered 22 studies to be relevant to the guideline.

We also checked for relevant ongoing research, which will be evaluated again at the next surveillance review of the guideline.

See appendix A: summary of evidence from surveillance for details of all evidence considered, and references.

Views of topic experts

We considered the views of topic experts, including those who helped to develop the guideline and other correspondence we have received since the publication of the guideline.

Views of stakeholders

Stakeholders commented on the decision not to update the guideline. Overall, 2 stakeholders commented. See appendix B for stakeholders' comments and our responses.

Two stakeholders commented on the proposal to not update the guideline: 1 agreed with the decision and 1 disagreed with the decision. One stakeholder comment suggested that the guideline should address fetal alcohol spectrum disorder, pharmacological interventions for people with coexisting learning disabilities, populations in contact with the criminal justice system and restrictive practices. The areas highlighted in the comments were included in the guideline. Current recommendations advise on conducting a comprehensive assessment for case identification and include assessment of alcohol use during pregnancy. Similarly, the guideline recommends interventions when children and young people aged between 3 and 11 years are in contact with the criminal justice system because of antisocial behaviour. Although children with coexisting learning disabilities are included within the scope of this guideline, other more relevant guidelines cover pharmacological treatments in detail for this population (see the NICE guideline on mental health problems in people with learning disabilities). Although no evidence was found to impact on the guideline at this time, these areas will be considered again at the next surveillance review of NICE guideline CG158.

We requested stakeholders to comment on the removal of 5 priority research recommendations. One stakeholder disagreed with the proposal to remove the research recommendation about the effectiveness of parent training programmes. Having considered the views of stakeholders, this research recommendation will now be retained and considered again at the next surveillance review of NICE guideline CG158. No further responses were received for any of the other research recommendations.

Stakeholders were requested to comment on areas excluded from the scope of the guideline and any equalities issues. No comments on equalities issues were made by stakeholders during consultation.

Overall, we decided not to update the guideline.

See ensuring that published guidelines are current and accurate in developing NICE guidelines: the manual for more details on our consultation processes.

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