Appendix R: Health economic evidence – completed health economics checklists

Contents

Abbreviations

EIBI	early intensive behavioural intervention
HRQoL	health-related quality of life
N	number of studies
NA	not applicable
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
PSA	probabilistic sensitivity analysis
PSS	personal social services
QALY	quality adjusted life year
RCT	randomised controlled trial
SG	standard gamble

A.1 Interventions aimed at the prevention of behaviour that challenges in people with learning disabilities

A.1.1 Psychosocial interventions for adaptive behaviour

Study: Chasson GS, Harris G, Harris GE. Cost comparison of early intensive behavioral intervention and special education for children with autism. Journal of Child and Family Studies 2007;16:401-13.			
Economic Question: Early intensive behavioural intervention (EIBI) versus standard educational service (special education) for children with autism			
Section 1: Applicability (relevance to specific guideline review question and the NICE reference case)		**Yes/ Partly/ No/Unclear/ NA**	**Comments**
1.1	Is the study population appropriate for the guideline?	Partly	Children with autism
1.2	Are the interventions and services appropriate for the guideline?	Yes	
1.3	Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	No	US study
1.4	Are costs measured from the NHS and personal social services (PSS) perspective?	No	State, local, federal) and private costs
1.5	Are non-direct health effects on individuals excluded?	NA	Cost analysis
1.6	Are both costs and health effects discounted at an annual rate of 3.5%?	No	Time horizon 18 years
1.7	Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	NA	
1.8	Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	NA	
1.9	Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?	NA	
1.10 Overall judgement: Partially applicable			
Other comments:			
Section 2: Study limitations (level of methodological quality)		**Yes/ Partly/ No/Unclear/ NA**	**Comments**
2.1	Does the model structure adequately reflect the nature of the health condition under evaluation?	Partly	Simple model including educational aspects only
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	Yes	18 years
2.3	Are all important and relevant health outcomes included?	NA	Cost analysis
2.4	Are the estimates of baseline health outcomes from the best available source?	NA	
2.5	Are the estimates of relative treatment effects from the best available source?	No	Clinical parameters based on review and assumptions

Study: Chasson GS, Harris G, Harris GE. Cost comparison of early intensive behavioral intervention and special education for children with autism. Journal of Child and Family Studies 2007;16:401-13.			
2.6	Are all important and relevant costs included?	Partly	Only educational costs included
2.7	Are the estimates of resource use from the best available source?	No	Estimates following personal communication
2.8	Are the unit costs of resources from the best available source?	No	Local costs
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?	NA	
2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	No	
2.11	Is there no potential conflict of interest?	Yes	
2.12 Overall assessment: Potentially serious limitations			
Other comments:			

Study: Jacobson JW, Mulick JA, Green J. Cost-benefit estimates for early intensive behavioral intervention for young children with autism – general model and single state case. Behavioral Interventions 1998;13:201-26.			
Economic Question: EIBI versus no intervention			
Section 1: Applicability (relevance to specific guideline review question and the NICE reference case)		Yes/ Partly/ No/ Unclear/ NA	Comments
1.1	Is the study population appropriate for the guideline?	Partly	Children with autism
1.2	Are the interventions and services appropriate for the guideline?	Yes	
1.3	Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	Partly	US
1.4	Are costs measured from the NHS and personal social services (PSS) perspective?	No	Societal perspective
1.5	Are non-direct health effects on individuals excluded?	NA	Cost analysis
1.6	Are both costs and health effects discounted at an annual rate of 3.5%?	Unclear	
1.7	Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	NA	Cost analysis
1.8	Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	NA	
1.9	Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?	NA	
1.10	Overall judgement: Partially applicable		
Other comments:			

Study: Jacobson JW, Mulick JA, Green J. Cost-benefit estimates for early intensive behavioral intervention for young children with autism – general model and single state case. Behavioral Interventions 1998;13:201-26.

	Section 2: Study limitations (level of methodological quality)	Yes/ Partly/ No/ Unclear/ NA	Comments
2.1	Does the model structure adequately reflect the nature of the health condition under evaluation?	Yes	
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	Yes	From 3 to 55 years of age
2.3	Are all important and relevant health outcomes included?	Yes	Cost analysis, but level of functioning considered
2.4	Are the estimates of baseline health outcomes from the best available source?	Partly	Literature review and assumptions
2.5	Are the estimates of relative treatment effects from the best available source?	Partly	Literature review and assumptions
2.6	Are all important and relevant costs included?	Yes	
2.7	Are the estimates of resource use from the best available source?	Partly	Published literature and further assumptions
2.8	Are the unit costs of resources from the best available source?	Yes	National sources (state)
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?	NA	Cost analysis
2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	No	Limited sensitivity analysis
2.11	Is there no potential conflict of interest?	Yes	
2.12	Overall assessment: Very serious limitations		
Other comments: intervention cost considered in both arms of the model; unrealistic assumptions implicitly made for outcomes of 'no intervention'			

Study: Motiwala SS, Gupta S, Lilly MB, Ungar WJ, Coyte PC. The cost-effectiveness of expanding intensive behavioural intervention to all autistic children in Ontario. Healthcare Policy 2006;1:135-51.

	Economic Question: EIBI versus standard service (mixture of EIBI and no intervention) versus no intervention		
	Section 1: Applicability (relevance to specific guideline review question and the NICE reference case)	Yes/ Partly/ No/	Comments

Study: Motiwala SS, Gupta S, Lilly MB, Ungar WJ, Coyte PC. The cost-effectiveness of expanding intensive behavioural intervention to all autistic children in Ontario. Healthcare Policy 2006;1:135-51.

		Unclear/ NA	
1.1	Is the study population appropriate for the guideline?	Partly	Preschool children with autism
1.2	Are the interventions and services appropriate for the guideline?	Yes	
1.3	Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	Partly	Canada – primary care setting, public funded system
1.4	Are costs measured from the NHS and personal social services (PSS) perspective?	Partly	Direct healthcare and social care costs
1.5	Are non-direct health effects on individuals excluded?	Yes	
1.6	Are both costs and health effects discounted at an annual rate of 3.5%?	Partly	3%
1.7	Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	No	Number of dependency-free years
1.8	Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	NA	
1.9	Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?	NA	
1.1 0	Overall judgement: Partially applicable		

Other comments: no QALYs estimated but outcome measure considered relevant; conclusions based on dominance

Section 2: Study limitations (level of methodological quality)		Yes/ Partly/ No/ Unclear/ NA	Comments
2.1	Does the model structure adequately reflect the nature of the health condition under evaluation?	Yes	
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	Yes	Up to 65 years of age
2.3	Are all important and relevant health outcomes included?	Yes	Level of dependency
2.4	Are the estimates of baseline health outcomes from the best available source?	Partly	Literature review and further assumptions
2.5	Are the estimates of relative treatment effects from the best available source?	Partly	Literature review and further assumptions
2.6	Are all important and relevant costs included?	Yes	

Study: Motiwala SS, Gupta S, Lilly MB, Ungar WJ, Coyte PC. The cost-effectiveness of expanding intensive behavioural intervention to all autistic children in Ontario. Healthcare Policy 2006;1:135-51.

2.7	Are the estimates of resource use from the best available source?	Yes	Provincial government estimates
2.8	Are the unit costs of resources from the best available source?	Yes	Provincial government
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?	Yes	
2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	Yes	
2.11	Is there no potential conflict of interest?	Yes	
2.12	Overall assessment: Potentially serious limitations		
Other comments:			

Study: Peters-Scheffer N, Didden R, Korzilius H, Matson J. Cost comparison of early intensive behavioral intervention and treatment as usual for children with autism spectrum disorder in the Netherlands. Research in Developmental Disabilities. 2012;33:1763-72.

Economic Question: EIBI versus treatment as usual			
Section 1: Applicability (relevance to specific guideline review question and the NICE reference case)		**Yes/ Partly/ No/ Unclear/ NA**	**Comments**
1.1	Is the study population appropriate for the guideline?	Partly	Preschool children with autism (mean age 3 years)
1.2	Are the interventions and services appropriate for the guideline?	Yes	
1.3	Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	Partly	Netherlands –publicly funded system
1.4	Are costs measured from the NHS and personal social services (PSS) perspective?	No	Public sector costs
1.5	Are non-direct health effects on individuals excluded?	Yes	
1.6	Are both costs and health effects discounted at an annual rate of 3.5%?	No	
1.7	Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	NA	Cost analysis
1.8	Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	NA	
1.9	Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?	NA	
1.10	Overall judgement: Partially applicable		
Other comments:			

Study: Peters-Scheffer N, Didden R, Korzilius H, Matson J. Cost comparison of early intensive behavioral intervention and treatment as usual for children with autism spectrum disorder in the Netherlands. Research in Developmental Disabilities. 2012;33:1763-72.

	Section 2: Study limitations (level of methodological quality)	Yes/ Partly/ No/ Unclear/ NA	Comments
2.1	Does the model structure adequately reflect the nature of the health condition under evaluation?	Yes	
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	Yes	Up to 65 years of age
2.3	Are all important and relevant health outcomes included?	Yes	Level of dependency
2.4	Are the estimates of baseline health outcomes from the best available source?	Yes	Literature review and local data
2.5	Are the estimates of relative treatment effects from the best available source?	Partly	Review of meta-analyses and assumptions
2.6	Are all important and relevant costs included?	Yes	
2.7	Are the estimates of resource use from the best available source?	Partly	National data and assumptions
2.8	Are the unit costs of resources from the best available source?	Partly	National data and assumptions
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?	NA	Cost analysis
2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	Partly	
2.11	Is there no potential conflict of interest?	Yes	
2.12	Overall assessment: Potentially serious limitations		

Other comments: efficacy data selected based on their applicability to the Dutch setting / naïve addition of meta-analytic data across same treatment arms

A.1.2 Health awareness interventions

Study: Romeo R, Knapp M, Morrison J, Melville C, Allan L, Finlayson J, Cooper SA. Cost estimation of a health-check intervention for adults with intellectual disabilities in the UK. Journal of Intellectual Disability Research. 2009;53:426-39.
AND
Cooper SA, Morrison J, Melville C, Finlayson J, Allan L, Martin G, Robinson N. Improving the health of people with intellectual disabilities: outcomes of a health screening programme after 1 year. Journal of Intellectual Disability Research. 2006;50:667-77.

	Section 1: Applicability (relevance to specific guideline review question and the NICE reference case)	Yes/ Partly/ No/Unclear /NA	Comments
1.1	Is the study population appropriate for the guideline?	Partly	People with learning disabilities

Study: Romeo R, Knapp M, Morrison J, Melville C, Allan L, Finlayson J, Cooper SA. Cost estimation of a health-check intervention for adults with intellectual disabilities in the UK. Journal of Intellectual Disability Research. 2009;53:426-39.
AND
Cooper SA, Morrison J, Melville C, Finlayson J, Allan L, Martin G, Robinson N. Improving the health of people with intellectual disabilities: outcomes of a health screening programme after 1 year. Journal of Intellectual Disability Research. 2006;50:667-77.

1.2	Are the interventions and services appropriate for the guideline?	Yes	
1.3	Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	Yes	UK study
1.4	Are costs measured from the NHS and personal social services (PSS) perspective?	Partly	Societal
1.5	Are non-direct health effects on individuals excluded?	Yes	
1.6	Are both costs and health effects discounted at an annual rate of 3.5%?	NA	Time horizon 12 months
1.7	Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	No	
1.8	Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	NA	
1.9	Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?	NA	
1.10	Overall judgment: Directly applicable		

Other comments: no QALYs estimated but intervention dominant, so no further judgments required to assess cost effectiveness

Section 2: Study limitations (level of methodological quality)		**Yes/ Partly/ No/Unclear /NA**	**Comments**
2.1	Does the model structure adequately reflect the nature of the health condition under evaluation?	NA	Cohort study with matched controls
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	No	12 months
2.3	Are all important and relevant health outcomes included?	Partly	Intermediate outcomes relating to detected and met health needs
2.4	Are the estimates of baseline health outcomes from the best available source?	Partly	Cohort study with matched controls, N=100
2.5	Are the estimates of relative treatment effects from the best available source?	Partly	Cohort study with matched controls
2.6	Are all important and relevant costs included?	Yes	
2.7	Are the estimates of resource use from the best available source?	Partly	Cohort study with matched controls, N=100

Study: Romeo R, Knapp M, Morrison J, Melville C, Allan L, Finlayson J, Cooper SA. Cost estimation of a health-check intervention for adults with intellectual disabilities in the UK. Journal of Intellectual Disability Research. 2009;53:426-39.
AND
Cooper SA, Morrison J, Melville C, Finlayson J, Allan L, Martin G, Robinson N. Improving the health of people with intellectual disabilities: outcomes of a health screening programme after 1 year. Journal of Intellectual Disability Research. 2006;50:667-77.

2.8	Are the unit costs of resources from the best available source?	Yes	National sources and further estimates
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?	NA	Cost consequence analysis
2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	Yes	Statistical analyses conducted
2.11	Is there no potential conflict of interest?	Yes	
2.12 Overall assessment: Potentially serious limitations			
Other comments: Participants matched with controls for age, gender and level of learning disability; costs collected prospectively for intervention group and retrospectively for control group; small study sample (N=100)			

A.2 Interventions aimed at reducing and managing behaviour that challenges in people with learning disabilities

A.2.1 Psychosocial interventions aimed at reducing and managing behaviour that challenges in people with learning disabilities

Study: Hassiotis A, Robotham D, Canagasabey A, Blizard R, Murad S, et al. Randomized, single-blind, controlled trial of a specialist behavior therapy team for challenging behavior in adults with intellectual disabilities. American Journal of Psychiatry. 2009;166:1278-85.
AND
Hassiotis A, Canagasabey A, Robotham D, Marston L, Romeo R, Kinget M. Applied behaviour analysis and standard treatment in intellectual disability: 2-year outcomes. British Journal of Psychiatry. 2011;198:490-91.

Section 1: Applicability (relevance to specific guideline review question and the NICE reference case)	Yes/ Partly/ No/Unclear /NA	Comments
1.1 Is the study population appropriate for the guideline?	Yes	Adults with learning disabilities and behavior that challenges
1.2 Are the interventions and services appropriate for the guideline?	Yes	
1.3 Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	Yes	UK study
1.4 Are costs measured from the NHS and personal social services (PSS) perspective?	Yes	NHS and PSS
1.5 Are non-direct health effects on individuals excluded?	Yes	

Study: Hassiotis A, Robotham D, Canagasabey A, Blizard R, Murad S, et al. Randomized, single-blind, controlled trial of a specialist behavior therapy team for challenging behavior in adults with intellectual disabilities. American Journal of Psychiatry. 2009;166:1278-85.
AND
Hassiotis A, Canagasabey A, Robotham D, Marston L, Romeo R, Kinget M. Applied behaviour analysis and standard treatment in intellectual disability: 2-year outcomes. British Journal of Psychiatry. 2011;198:490-91.

1.6	Are both costs and health effects discounted at an annual rate of 3.5%?	No	Costs reported for 2 time periods: 0-6 and 18-24 months
1.7	Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	No	
1.8	Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	NA	
1.9	Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?	NA	
1.10	Overall judgment: Directly applicable		
Other comments: no QALYs estimated but intervention dominant			

Section 2: Study limitations (level of methodological quality)		**Yes/ Partly/ No/Unclear /NA**	**Comments**
2.1	Does the model structure adequately reflect the nature of the health condition under evaluation?	NA	Economic analysis alongside RCT
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	Partly	Total duration 2 years, but costs reported for periods 0-6 and 18-24 months
2.3	Are all important and relevant health outcomes included?	Yes	Challenging behaviour
2.4	Are the estimates of baseline health outcomes from the best available source?	Partly	RCT
2.5	Are the estimates of relative treatment effects from the best available source?	Yes	RCT
2.6	Are all important and relevant costs included?	Yes	
2.7	Are the estimates of resource use from the best available source?	Partly	RCT
2.8	Are the unit costs of resources from the best available source?	Yes	National costs
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?	No	Costs and benefits not combined
2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	Yes	Statistical analyses conducted
2.11	Is there no potential conflict of interest?	Yes	

Study: Hassiotis A, Robotham D, Canagasabey A, Blizard R, Murad S, et al. Randomized, single-blind, controlled trial of a specialist behavior therapy team for challenging behavior in adults with intellectual disabilities. American Journal of Psychiatry. 2009;166:1278-85.
AND

Hassiotis A, Canagasabey A, Robotham D, Marston L, Romeo R, Kinget M. Applied behaviour analysis and standard treatment in intellectual disability: 2-year outcomes. British Journal of Psychiatry. 2011;198:490-91.

2.12 Overall assessment: Potentially serious limitations

Other comments: Costs and outcomes measured over different periods of time; no information of costs between 6-18 months. Small study sample (N=63)

Study: Felce D, Cohen D, Willner P, Rose J, Kroese B, Rose N, Shead J, et al. Cognitive behavioural anger management intervention for people with intellectual disabilities: costs of intervention and impact on health and social care resource use. Journal of Intellectual Disability Research. 2015;59:68-81. DOI: 10.1111/jir.12112
AND

P Willner, J Rose, A Jahoda, B Stenfert Kroese, D Felce, P MacMahon, et al. A cluster randomised controlled trial of a manualised cognitive-behavioural anger management intervention delivered by supervised lay therapists to people with intellectual disabilities. Health Technology Assessment. 2013;17(21). DOI: 10.3310/hta17210

Section 1: Applicability (relevance to specific guideline review question and the NICE reference case)		**Yes/ Partly/ No/ Unclear/N A**	**Comments**
1.1	Is the study population appropriate for the guideline?	Yes	Adults with learning disabilities and behaviour that challenges
1.2	Are the interventions and services appropriate for the guideline?	Yes	
1.3	Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	Yes	UK study
1.4	Are costs measured from the NHS and personal social services (PSS) perspective?	Partly	NHS and PSS
1.5	Are non-direct health effects on individuals excluded?	Yes	
1.6	Are both costs and health effects discounted at an annual rate of 3.5%?	NA	Time horizon 10 months
1.7	Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	No	
1.8	Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	NA	
1.9	Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?	NA	
1.10 Overall judgement: Directly applicable			
Other comments: no QALYs measured but intervention likely dominant			
Section 2: Study limitations (level of methodological quality)		**Yes/ Partly/ No/ Unclear/ NA**	**Comments**

Study: Felce D, Cohen D, Willner P, Rose J, Kroese B, Rose N, Shead J, et al. Cognitive behavioural anger management intervention for people with intellectual disabilities: costs of intervention and impact on health and social care resource use. Journal of Intellectual Disability Research. 2015;59:68-81. DOI: 10.1111/jir.12112 AND

P Willner, J Rose, A Jahoda, B Stenfert Kroese, D Felce, P MacMahon, et al. A cluster randomised controlled trial of a manualised cognitive-behavioural anger management intervention delivered by supervised lay therapists to people with intellectual disabilities. Health Technology Assessment. 2013;17(21). DOI: 10.3310/hta17210

2.1	Does the model structure adequately reflect the nature of the health condition under evaluation?	NA	RCT
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	Partly	10 months
2.3	Are all important and relevant health outcomes included?	Yes	
2.4	Are the estimates of baseline health outcomes from the best available source?	Partly	RCT
2.5	Are the estimates of relative treatment effects from the best available source?	Yes	RCT
2.6	Are all important and relevant costs included?	Yes	
2.7	Are the estimates of resource use from the best available source?	Yes	RCT
2.8	Are the unit costs of resources from the best available source?	Yes	National unit costs; local unit costs where former not available
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?	No	Cost consequence analysis
2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	Yes	
2.11	Is there no potential conflict of interest?	Yes	
2.12 Overall assessment: Potentially serious limitations			
Other comments:			

Study: Guideline economic analysis

Economic Question: parent training for the management of behavior that challenges in children and young people with learning disabilities

Section 1: Applicability (relevance to specific guideline review question and the NICE reference case)		Yes/ Partly/ No/Unclear /NA	Comments
1.1	Is the study population appropriate for the guideline?	Yes	Children and young people with learning disabilities and behavior that challenges
1.2	Are the interventions and services appropriate for the guideline?	Yes	

Study: Guideline economic analysis			
1.3	Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	Yes	
1.4	Are costs measured from the NHS and personal social services (PSS) perspective?	Yes	
1.5	Are non-direct health effects on individuals excluded?	Yes	
1.6	Are both costs and health effects discounted at an annual rate of 3.5%?	NA	Time horizon 61 weeks
1.7	Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	Yes	
1.8	Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	Yes	
1.9	Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?	Partly	SG, Canadian population
1.10 Overall judgement: Partially applicable			
Other comments:			
Section 2: Study limitations (level of methodological quality)		**Yes/ Partly/ No/Unclear /NA**	**Comments**
2.1	Does the model structure adequately reflect the nature of the health condition under evaluation?	Yes	
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	Partly	61 weeks
2.3	Are all important and relevant health outcomes included?	Yes	
2.4	Are the estimates of baseline health outcomes from the best available source?	Partly	Guideline meta-analysis
2.5	Are the estimates of relative treatment effects from the best available source?	Yes	Guideline meta-analysis
2.6	Are all important and relevant costs included?	Partly	Costs of behavior that challenges not included
2.7	Are the estimates of resource use from the best available source?	Partly	RCT-reported data and assumptions
2.8	Are the unit costs of resources from the best available source?	Yes	National unit costs
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?	Yes	
2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	Yes	PSA
2.11	Is there no potential conflict of interest?	Yes	
2.12 Overall assessment: potentially serious limitations			
Other comments: probability of relapse based on assumption due to lack of evidence			

Study: Guideline economic analysis		
Economic Question: interventions for the management of sleep problems in children and young people with learning disabilities		
Section 1: Applicability (relevance to specific guideline review question and the NICE reference case)	**Yes/ Partly/ No/ Unclear/ NA**	**Comments**
1.1 Is the study population appropriate for the guideline?	Yes	Children and young people with learning disabilities and sleep problems
1.2 Are the interventions and services appropriate for the guideline?	Yes	
1.3 Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	Yes	
1.4 Are costs measured from the NHS and personal social services (PSS) perspective?	Yes	
1.5 Are non-direct health effects on individuals excluded?	Yes	
1.6 Are both costs and health effects discounted at an annual rate of 3.5%?	NA	Time horizon 38 weeks
1.7 Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	Yes	
1.8 Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	Yes	
1.9 Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?	Partly	SG, Canadian population
1.10 Overall judgement: Partially applicable		
Other comments:		
Section 2: Study limitations (level of methodological quality)	**Yes/ Partly/ No/ Unclear/ NA**	**Comments**
2.1 Does the model structure adequately reflect the nature of the health condition under evaluation?	Yes	
2.2 Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	Partly	38 weeks
2.3 Are all important and relevant health outcomes included?	Yes	
2.4 Are the estimates of baseline health outcomes from the best available source?	Partly	Guideline meta-analysis and further assumptions
2.5 Are the estimates of relative treatment effects from the best available source?	Yes	Guideline meta-analysis
2.6 Are all important and relevant costs included?	Partly	Costs associated with sleep

Study: Guideline economic analysis			
			problems not included
2.7	Are the estimates of resource use from the best available source?	Partly	RCT-reported data
2.8	Are the unit costs of resources from the best available source?	Yes	National unit costs
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?	Yes	
2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	Yes	PSA
2.11	Is there no potential conflict of interest?	Yes	
2.12 Overall assessment: potentially serious limitations			
Other comments: probability of relapse based on assumption due to lack of evidence			

A.2.2 Pharmacological interventions aimed at reducing and managing behaviour that challenges in people with learning disabilities

Study: Romeo R, Knapp M, Tyrer P, Crawford M, Oliver-Africano P. The treatment of challenging behaviour in intellectual disabilities: cost-effectiveness analysis. Journal of Intellectual Disability Research. 2009;53:633-43.
AND
Tyrer P, Oliver-Africano PC, Ahmed Z, Bouras N, Cooray S, Deb S, et al. Risperidone, haloperidol, and placebo in the treatment of aggressive challenging behaviour in patients with intellectual disability: a randomised controlled trial. The Lancet. 2008;371:57-63.
AND
Tyrer P, Oliver-Africano P, Romeo R, Knapp M, Dickens S, Bouras N, et al. Neuroleptics in the treatment of aggressive challenging behaviour for people with intellectual disabilities: a randomised controlled trial (NACHBID). Health Technology Assessment. 2009;13(21). DOI: 10.3310/hta13210.

Section 1: Applicability (relevance to specific guideline review question and the NICE reference case)		Yes/ Partly/ No/ Unclear/NA	Comments
1.1	Is the study population appropriate for the guideline?	Yes	Adults with learning disabilities and behavior that challenges
1.2	Are the interventions and services appropriate for the guideline?	Yes	
1.3	Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	Yes	UK study
1.4	Are costs measured from the NHS and personal social services (PSS) perspective?	Partly	Societal (services and informal care)
1.5	Are non-direct health effects on individuals excluded?	Yes	
1.6	Are both costs and health effects discounted at an annual rate of 3.5%?	NA	Time horizon: 26 weeks
1.7	Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	No	
1.8	Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	NA	
1.9	Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?	NA	
1.10	Overall judgment: Partially applicable		
Other comments:			
Section 2: Study limitations (level of methodological quality)		Yes/ Partly/ No/Unclear /NA	Comments
2.1	Does the model structure adequately reflect the nature of the health condition under evaluation?	NA	Economic analysis alongside RCT

Study: Romeo R, Knapp M, Tyrer P, Crawford M, Oliver-Africano P. The treatment of challenging behaviour in intellectual disabilities: cost-effectiveness analysis. Journal of Intellectual Disability Research. 2009;53:633-43.

AND

Tyrer P, Oliver-Africano PC, Ahmed Z, Bouras N, Cooray S, Deb S, et al. Risperidone, haloperidol, and placebo in the treatment of aggressive challenging behaviour in patients with intellectual disability: a randomised controlled trial. The Lancet. 2008;371:57-63.

AND

Tyrer P, Oliver-Africano P, Romeo R, Knapp M, Dickens S, Bouras N, et al. Neuroleptics in the treatment of aggressive challenging behaviour for people with intellectual disabilities: a randomised controlled trial (NACHBID). Health Technology Assessment. 2009;13(21). DOI: 10.3310/hta13210.

2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	Partly	Total duration 26 weeks
2.3	Are all important and relevant health outcomes included?	Yes	Challenging behaviour and quality of life
2.4	Are the estimates of baseline health outcomes from the best available source?	Partly	RCT
2.5	Are the estimates of relative treatment effects from the best available source?	Yes	RCT
2.6	Are all important and relevant costs included?	Yes	
2.7	Are the estimates of resource use from the best available source?	Partly	RCT
2.8	Are the unit costs of resources from the best available source?	Yes	National costs
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?	Yes	
2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	Yes	Statistical and sensitivity analyses, PSA
2.11	Is there no potential conflict of interest?	Yes	
2.12 Overall assessment: Potentially serious limitations			
Other comments: Small study sample (N=58)			

Study: Guideline economic analysis

Economic Question: Antipsychotics aimed at behaviour that challenges in children and young people with learning disabilities

Section 1: Applicability (relevance to specific guideline review question and the NICE reference case)		Yes/ Partly/ No/Unclear /NA	Comments
1.1	Is the study population appropriate for the guideline?	Yes	Children and young people with learning disabilities and behavior that challenges

Study: Guideline economic analysis			
1.2	Are the interventions and services appropriate for the guideline?	Yes	
1.3	Is the healthcare system in which the study was conducted sufficiently similar to the current UK NHS context?	Yes	
1.4	Are costs measured from the NHS and personal social services (PSS) perspective?	Yes	
1.5	Are non-direct health effects on individuals excluded?	Yes	
1.6	Are both costs and health effects discounted at an annual rate of 3.5%?	NA	Time horizon 34 weeks
1.7	Is the value of health effects expressed in terms of quality-adjusted life years (QALYs)?	Yes	
1.8	Are changes in health-related quality of life (HRQoL) reported directly from patients and/or carers?	Yes	
1.9	Is the valuation of changes in HRQoL (utilities) obtained from a representative sample of the general public?	Partly	SG, Canadian population
1.10 Overall judgement: Partially applicable			
Other comments:			
Section 2: Study limitations (level of methodological quality)		**Yes/ Partly/ No/Unclear /NA**	**Comments**
2.1	Does the model structure adequately reflect the nature of the health condition under evaluation?	Yes	
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	Partly	34 weeks
2.3	Are all important and relevant health outcomes included?	Yes	
2.4	Are the estimates of baseline health outcomes from the best available source?	Partly	Guideline meta-analysis
2.5	Are the estimates of relative treatment effects from the best available source?	Yes	Guideline meta-analysis
2.6	Are all important and relevant costs included?	Partly	Costs associated with behaviour that challenges not included
2.7	Are the estimates of resource use from the best available source?	Partly	RCT-reported data
2.8	Are the unit costs of resources from the best available source?	Yes	National unit costs
2.9	Is an appropriate incremental analysis presented or can it be calculated from the data?	Yes	
2.10	Are all important parameters whose values are uncertain subjected to appropriate sensitivity analysis?	Yes	PSA
2.11	Is there no potential conflict of interest?	Yes	
2.12 Overall assessment: potentially serious limitations			

Study: Guideline economic analysis

Other comments: probability of relapse based on assumption due to lack of evidence

Study: Guideline economic analysis

Other comments: probability of relapse based on assumption due to lack of evidence