

Appendix Q: Health economic evidence – completed checklists

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Abbreviations

A&E	Accident and Emergency
BAI-Y	Beck Anxiety Inventory-Youth
BDI-Y	Beck Depression Inventory-Youth
CBLD	Challenging behaviour and learning disabilities
HRQoL	health-related quality of life
HUI3	health utility index 3
N	number of participants
NA	not applicable
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
PSS	Personal Social Services
QALY	quality adjusted life year
RCT	randomised controlled trial
SG	standard gamble

Q.1 Psychological and psychosocial interventions to prevent, treat and manage mental health problems in people with learning disabilities

Q.1.1 Psychological interventions aimed at reducing and managing mental health problems in people with learning disabilities

Study: NICE guideline. Challenging behaviour and learning disabilities: Prevention and interventions for people with learning disabilities whose behaviour challenges (2015) Guideline primary economic analysis assessing parent training for the management of behaviour that challenges in children and young people with learning disabilities			
Economic Question: psychological interventions (parent training) versus treatment as usual for children and young people with learning disabilities and mental health problems			
Section 1: Applicability (relevance to specific review question and the NICE reference case)		Yes/ Partly/ No/Unclear/ NA	Comments
1.1	Is the study population appropriate for the review question?	Partly	Children and young people with learning disabilities & behaviour that challenges
1.2	Are the interventions appropriate for the review question?	Yes	
1.3	Is the system in which the study was conducted sufficiently similar to the current UK context?	Yes	UK study
1.4	Are the perspectives clearly stated and are they appropriate for the review question?	Yes	NHS and PSS perspective
1.5	Are all direct effects on individuals included, and are all other effects included where they are material?	Yes	
1.6	Are all future costs and outcomes discounted appropriately?	NA	Time horizon 61 weeks
1.7	Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above).	Partly	HRQoL ratings obtained for children with autism (parents used as proxies) using HUI3, with valuations elicited from the Canadian population using SG

Study: NICE guideline. Challenging behaviour and learning disabilities: Prevention and interventions for people with learning disabilities whose behaviour challenges (2015) Guideline primary economic analysis assessing parent training for the management of behaviour that challenges in children and young people with learning disabilities			
1.8	Are costs and outcomes from other sectors fully and appropriately measured and valued?	NA	
1.9 Overall judgement: Partially applicable			
Other comments: comparator was wait list			
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 topic 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 outcomes included?	Yes	
2.4	Are the estimates of baseline outcomes from the best available source?	Partly	CBLD guideline meta-analysis
2.5	Are the estimates of relative intervention effects from the best available source?	Yes	CBLD guideline meta-analysis
2.6	Are all important and relevant costs included?	Partly	Costs associated with mental health problems not included
2.7	Are the estimates of resource use from the best available source?	Partly	RCT-reported data & assumptions
2.8	Are the unit costs of resources from the best available source?	Yes	National sources
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 and one-way sensitivity analysis conducted
2.11	Is there any potential conflict of interest?	No	
2.12 Overall assessment: potentially serious limitations			
Other comments: probability of relapse based on assumption due to lack of evidence			

Study: Hassiotis A, Serfaty M, Azam K, Strydom A, Blizard R, Romeo R, Martin S, King M (2013) Manualised Individual Cognitive Behavioural Therapy for mood disorders in people with mild to moderate intellectual disability: A feasibility randomised controlled trial. Journal of Affective Disorders 151, 186-195.

Economic Question: psychological interventions versus treatment as usual for adults with learning disabilities and mental health problems

Section 1: Applicability (relevance to specific review question and the NICE reference case)		Yes/ Partly/ No/Unclear/ NA	Comments
1.1	Is the study population appropriate for the review question?	Yes	Adults with mild to moderate learning disability and a mood disorder or symptoms of depression and /or anxiety
1.2	Are the interventions appropriate for the review question?	Yes	
1.3	Is the system in which the study was conducted sufficiently similar to the current UK context?	Yes	UK study
1.4	Are the perspectives clearly stated and are they appropriate for the review question?	Yes	NHS and social care perspective
1.5	Are all direct effects on individuals included, and are all other effects included where they are material?	Yes	
1.6	Are all future costs and outcomes discounted appropriately?	NA	Time horizon 16 weeks
1.7	Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above).	No	Depression & anxiety symptom scales used, relevant to objective of intervention
1.8	Are costs and outcomes from other sectors fully and appropriately measured and valued?	NA	
1.9 Overall judgement: Partially applicable			
Other comments: no QALYs used; intervention more effective in one of the primary outcomes, less effective in the other; required judgement on 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 topic under evaluation?	NA	RCT
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	No	16 weeks
2.3	Are all important and relevant outcomes included?	Partly	BDI-Y and BAI-Y changes; no HRQoL considered

Study: Hassiotis A, Serfaty M, Azam K, Strydom A, Blizard R, Romeo R, Martin S, King M (2013) Manualised Individual Cognitive Behavioural Therapy for mood disorders in people with mild to moderate intellectual disability: A feasibility randomised controlled trial. Journal of Affective Disorders 151, 186-195.

2.4	Are the estimates of baseline outcomes from the best available source?	Partly	RCT, N=32
2.5	Are the estimates of relative intervention effects from the best available source?	Partly	Feasibility 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, N=32
2.8	Are the unit costs of resources from the best available source?	Yes	National sources
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?	Partly	Some statistical analysis conducted, but level of significance not reported
2.11	Is there any potential conflict of interest?	No	
2.12 Overall assessment: very serious limitations			
Other comments: none			

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Q.2 Other interventions to prevent, treat and manage mental health problems in people with learning disabilities

Q.2.1 Annual health checks aimed at preventing mental health problems in people with learning disabilities

Study: Cooper S-A, Morrison J, Allan LM, McConnachie A, Greenlaw N, Melville CA, Baltzer MC, McArthur LA, Lammie C, Martin G, Grieve EAD, Fenwick E. Practice nurse health checks for adults with intellectual disabilities: a cluster-design, randomised controlled trial. The Lancet Psychiatry 2014; 1(7): 511–521.

Economic Question: Health checks versus treatment as usual for adults with learning disabilities

Section 1: Applicability (relevance to specific review question and the NICE reference case)		Yes/ Partly/ No/Unclear/ NA	Comments
1.1	Is the study population appropriate for the review question?	Yes	Adults with learning disabilities
1.2	Are the interventions appropriate for the review question?	Yes	
1.3	Is the system in which the study was conducted sufficiently similar to the current UK context?	Yes	UK study
1.4	Are the perspectives clearly stated and are they appropriate for the review question?	Yes	NHS perspective
1.5	Are all direct effects on individuals included, and are all other effects included where they are material?	Partly	Effect on mental health not directly considered
1.6	Are all future costs and outcomes discounted appropriately?	NA	Time horizon 9 months
1.7	Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above).	Yes	Based on EQ-5D measurements using UK tariff; participant or carer-rated
1.8	Are costs and outcomes from other sectors fully and appropriately measured and valued?	NA	
1.9 Overall judgement: Directly applicable			
Other comments: None			
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 topic under evaluation?	NA	RCT
2.2	Is the time horizon sufficiently long to reflect all important differences in costs and outcomes?	No	9 months
2.3	Are all important and relevant outcomes included?	Partly	See 'other comments'

Study: Cooper S-A, Morrison J, Allan LM, McConnachie A, Greenlaw N, Melville CA, Baltzer MC, McArthur LA, Lammie C, Martin G, Grieve EAD, Fenwick E. Practice nurse health checks for adults with intellectual disabilities: a cluster-design, randomised controlled trial. The Lancet Psychiatry 2014; 1(7): 511–521.

2.4	Are the estimates of baseline outcomes from the best available source?	Partly	RCT, N=152
2.5	Are the estimates of relative intervention effects from the best available source?	Yes	RCT
2.6	Are all important and relevant costs included?	Partly	See 'other comments'
2.7	Are the estimates of resource use from the best available source?	Partly	RCT, N=152
2.8	Are the unit costs of resources from the best available source?	Yes	National sources
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 any potential conflict of interest?	No	
2.12 Overall assessment: potentially serious limitations			
Other comments: only 65 (76.5%) of the health-check group received the intervention; also one person in the standard care group received the intervention; EQ-5D may not be directly relevant to people with learning disabilities; some measurements were based on proxy ratings, with different carers rating health between baseline and follow-up for some participants; secondary care costs not considered (apart from A&E); small study sample (N=152)			

Study: Gordon LG, Holden L, Ware RS, Taylor MT, Lennox NG (2012) Comprehensive health assessments for adults with intellectual disability living in the community - weighing up the costs and benefits. Australian Family Physician 41(12), 969-972.

Economic Question: Health checks versus treatment as usual for adults with learning disabilities

Section 1: Applicability (relevance to specific review question and the NICE reference case)		Yes/ Partly/ No/Unclear/ NA	Comments
1.1	Is the study population appropriate for the review question?	Yes	Adults with learning disabilities
1.2	Are the interventions appropriate for the review question?	Yes	
1.3	Is the system in which the study was conducted sufficiently similar to the current UK context?	Partly	Australian study
1.4	Are the perspectives clearly stated and are they appropriate for the review question?	Yes	Public healthcare system

Study: Gordon LG, Holden L, Ware RS, Taylor MT, Lennox NG (2012) Comprehensive health assessments for adults with intellectual disability living in the community - weighing up the costs and benefits. Australian Family Physician 41(12), 969-972.			
1.5	Are all direct effects on individuals included, and are all other effects included where they are material?	Partly	Effect on mental health not considered
1.6	Are all future costs and outcomes discounted appropriately?	NA	Time horizon 12 months
1.7	Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above).	No	Tests and immunization rates measured, relevant to intervention
1.8	Are costs and outcomes from other sectors fully and appropriately measured and valued?	NA	
1.9 Overall judgement: Partially applicable			
Other comments: None			
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 topic under evaluation?	NA	RCT
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 outcomes included?	Partly	Tests and immunization rates measured, no HRQoL or impact on mental health
2.4	Are the estimates of baseline outcomes from the best available source?	Partly	RCT, N=242
2.5	Are the estimates of relative intervention effects from the best available source?	Yes	RCT
2.6	Are all important and relevant costs included?	Partly	See 'other comments'
2.7	Are the estimates of resource use from the best available source?	Partly	RCT, N=242
2.8	Are the unit costs of resources from the best available source?	Yes	National sources
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 analysis conducted
2.11	Is there any potential conflict of interest?	No	
2.12 Overall assessment: potentially serious limitations			
Other comments: some medications and vaccines were potentially excluded from costings as they are not eligible for Pharmaceutical Benefits Scheme claims; secondary care costs were not measured; short time horizon; one service provider included			

Study: Romeo R, Knapp M, Morrison J, Melville C, Allan L, Finlayson J, Cooper SA (2009) Cost estimation of a health-check intervention for adults with intellectual disabilities in the UK. Journal of Intellectual Disability Research, 53(5), 426-39.			
Economic Question: Health checks versus treatment as usual for adults with learning disabilities			
Section 1: Applicability (relevance to specific review question and the NICE reference case)		Yes/ Partly/ No/Unclear/ NA	Comments
1.1	Is the study population appropriate for the review question?	Yes	Adults with learning disabilities
1.2	Are the interventions appropriate for the review question?	Yes	
1.3	Is the system in which the study was conducted sufficiently similar to the current UK context?	Yes	UK study
1.4	Are the perspectives clearly stated and are they appropriate for the review question?	Partly	Societal
1.5	Are all direct effects on individuals included, and are all other effects included where they are material?	Partly	Effect on mental health not considered
1.6	Are all future costs and outcomes discounted appropriately?	NA	Time horizon 12 months
1.7	Is QALY used as an outcome, and was it derived using NICE's preferred methods? If not, describe rationale and outcomes used in line with analytical perspectives taken (item 1.4 above).	No	Intermediate outcomes relating to detected and met health needs
1.8	Are costs and outcomes from other sectors fully and appropriately measured and valued?	NA	
1.9 Overall judgement: Partially 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 topic 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 outcomes included?	Partly	Intermediate outcomes relating to detected and met health needs;

Study: Romeo R, Knapp M, Morrison J, Melville C, Allan L, Finlayson J, Cooper SA (2009) Cost estimation of a health-check intervention for adults with intellectual disabilities in the UK. <i>Journal of Intellectual Disability Research</i> , 53(5), 426-39.			
			impact on mental health or HRQoL not considered
2.4	Are the estimates of baseline outcomes from the best available source?	Partly	Cohort study with matched controls, N=100
2.5	Are the estimates of relative intervention 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, see 'other comments'
2.8	Are the unit costs of resources from the best available source?	Yes	National sources & 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 any potential conflict of interest?	No	
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)			