

Appendix S: Health economic evidence – economic profiles

Contents

S.1	Psychological and psychosocial interventions to prevent, treat and manage mental health problems in people with learning disabilities.....	3
S.1.1	Psychological interventions aimed at reducing and managing mental health problems in people with learning disabilities.....	3
S.1.1.1	Clinical / economic question: psychological intervention (parent training) versus treatment as usual for children and young people with learning disabilities and mental health problems	3
S.2	Other interventions to prevent, treat and manage mental health problems in people with learning disabilities.....	4
S.2.1	Annual health checks aimed at preventing mental health problems in people with learning disabilities.....	4
S.2.1.1	Clinical / economic question: Health-check intervention (HCI) versus treatment as usual for adults with learning disabilities.....	4

Abbreviations

A&E	accident and emergency
CBLD	challenging behaviour and learning disabilities
CBT	cognitive behavioural therapy
CI	confidence interval
HCHS	hospital and community health services
HCI	health-check intervention
HUI3	health utility index 3
ICER	incremental cost-effectiveness ratio
N	number of participants
NHS	National Health Service
OR	odds ratio
PPP	purchasing power parity
PSA	probabilistic sensitivity analysis
PSS	personal social services
QALY	quality adjusted life year
RCT	randomised controlled trial
TAU	treatment as usual

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

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

S.1.1.1 Clinical / economic question: psychological intervention (parent training) versus treatment as usual for children and young people with learning disabilities and mental health problems

Economic evidence profile							
Study and country	Limitations	Applicability	Other comments	Incremental cost (£) ¹	Incremental effect	ICER (£/effect) ¹	Uncertainty ¹
NICE CBLD guideline, 2015 UK	Potentially serious limitations ²	Partially applicable ³	<ul style="list-style-type: none"> Group parent training modelled Waiting list modelled as control Measure of outcome: QALY 	£366	0.013	£27,450	Probability of parent training being cost-effective at £20,000/QALY: 0.43 Probability of parent training being cost-effective at £30,000/QALY: 0.52 Reducing relapse for parent training: £23,767/QALY Severe challenging behaviour at baseline: £14,805/QALY

1. Costs uplifted to 2014 GB pounds using the hospital and community health services (HCHS) pay and prices inflation index (Curtis, 2014).
2. Only intervention costs considered, resource use from RCTs included in guideline systematic review, time horizon 61 weeks, efficacy data from 8 trials, a number of clinical input parameters (relapse) based on assumptions, PSA performed.
3. Study population was children and young people with learning disabilities and behaviour that challenges, NHS and PSS perspective, QALYs based on HUI3 (valuations elicited from Canadian population).

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

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

S.2.1.1 Clinical / economic question: Health-check intervention (HCI) versus treatment as usual for adults with learning disabilities

Economic evidence profile							
Study and country	Limitations	Applicability	Other comments	Incremental cost (£) ¹	Incremental effect	ICER (£/effect) ¹	Uncertainty ¹
Cooper <i>et al.</i> , 2014 UK	Potentially serious limitations ²	Directly applicable ³	QALYs estimated using EQ-5D and SF-6D; EQ-5D rating used in PSA	-£54	Based on EQ-5D: 0.11 Based on SF-6D: 0.02	HCI dominant	95%CIs of incremental cost: -£380 to £456 95%CIs of incremental effect: Based on EQ-5D: 0.02 to 0.19; p=0.015 Based on SF-6D: -0.03 to 0.07; p=0.354 Probability that HCI is cost-effective: 0.6-0.8 irrespective of the cost-effectiveness threshold. Intervention cost needs to rise from £54 (base-case estimate) to £100 per person before HCI no longer dominates TAU.
Gordon <i>et al.</i> , 2012 Australia	Potentially serious limitations ⁴	Partially applicable ⁵	Outcome measures: 1) number of vision tests 2) number of hearing tests 3) immunisation rates for hepatitis A 4) immunisation rates for pneumococcus 5) number of weight measurements	£28	ORs: 1) 3.4 2) 4.5 3) 5.4 4) 7.4 5) 3.1	HCI dominant (higher benefits at similar cost)	95%CIs of incremental cost not reported, but incremental cost non-significant 95%CIs of incremental effect (OR): 1) 1.4 to 8.3 2) 1.9 to 10.7 3) 1.8 to 16.3 4) 1.5 to 37.1 5) 1.5 to 6.4

Economic evidence profile							
Romeo <i>et al.</i> , 2009 UK	Potentially serious limitations ⁶	Partially applicable ⁷	Outcome measures (mean number per person): 1) new health needs detected 2) met new health needs 3) met health promotion needs 4) health monitoring needs	£923 (service cost)	1) 2.54 2) 1.3 3) Not reported 4) Not reported	HCI dominant	95% CI in service costs: -£4,661 to £3,116 Level of statistical significance in outcomes: 1) p<0.001 2) p<0.001 3) p< 0.001 4) 0.039

1. Costs converted and uplifted to 2014 GB pounds – converted using PPP exchange rates (<http://www.oecd.org/std/ppp>) and uplifted to 2014 GB pounds using the hospital and community health services (HCHS) pay and prices inflation index (Curtis, 2014).
2. Conducted alongside RCT (N=152), time horizon 9 months, only 76.5% of the intervention group received the intervention, EQ-5D and SF-6D 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).
3. UK study on adults with a learning disability, NHS perspective, no discounting needed, effect on mental health not directly considered but QALYs estimated from participants or carer-rated EQ-5D using UK tariff.
4. Conducted alongside RCT (N=242), time horizon 12 months, some medications and vaccines were potentially excluded from costings as they are not eligible for Pharmaceutical Benefits Scheme claims, secondary care costs not measured, one service provider included
5. Australian study on adults with a learning disability, public healthcare system perspective, no discounting needed, effect on mental health not considered, test and immunisation rates were the measure of outcome
6. Cohort study with matched controls for age, gender and level of learning disability (N=100), time horizon 12 months, intermediate outcomes relating to detected and met health needs, costs collected prospectively for intervention group and retrospectively for control group.
7. UK study on adults with learning disabilities, societal perspective but service costs (NHS and PSS) reported separately, no discounting needed, effect on mental health not considered, no QALYs.