Data extraction table for studies including perinatal anxiety

Citation (Country)	Study Details	Participants and setting	Key findings	Observations
Ride et al (2016)	Study Design: Economic evaluation, including cost-	Sample size: 359	Primary Findings: The intervention was estimated to cost	Ride et al (2016) investigated the cost- effectiveness of the What Were We
(Ride et al., 2016)		Participants: English-speaking first-time mothers who had recently given birth and	\$A118.16 per participant. The analysis showed no statistically significant difference between the intervention	Thinking (WWWT) intervention, for the prevention of postnatal maternal mental health problems. The intervention was
Australia	Type of intervention [exposure]: What Were We Thinking (WWWT) - a psychoeducational intervention targeted at the partner relationship, management of infant behaviour and parental fatigue. Data collection methods: Data were collected from participants via	attended participating Maternal and Child Health Centres (MCHCs) Setting: 48 Maternal and Child Health Centres in Victoria, Australia.	and control groups in costs or outcomes. The incremental cost-effectiveness ratios were \$A36 451 per QALY gained and \$A152 per percentage point reduction in 30-day prevalence of depression, anxiety, and adjustment disorders. The estimate lies under the unofficial cost-effectiveness threshold of \$A55 000 per QALY; however, there was considerable uncertainty surrounding	estimated to cost \$A118.16 per participant. The analysis showed no statistically significant difference between the intervention and control groups in costs or outcomes. The incremental cost-effectiveness ratios were \$A36.451 per QALY gained and \$A152 per percentage point reduction in 30-day prevalence of depression, anxiety, and adjustment disorders. The estimate lies under the unofficial cost-effectiveness threshold of \$A55.000 per QALY; however, there was considerable uncertainty surrounding the results, with a 55% probability that WWWT would be considered cost-effective at that threshold

Supplemental material

Citation (Country)	Study Details	Participants and setting	Key findings	Observations
et al (2016) (Ammerman	civilian, non-institutionalised population in the	Participants: 2,310 high-risk mothers with depression and 18,221 high-risk mothers without depression Setting: USA healthcare setting Dates of data collection: 1996 to 2011	insurer (0.88 vs. 0.80) and out of pocket expenses (0.86 vs. 0.77) and to have higher insurer expenses (\$4916 vs. \$3521) and out of pocket expenses (\$786 vs. \$522) (in 2015). Additional findings: A higher proportion of the depressed sample was Caucasian which were in relatively worse health than women from other ethnic groups.	Depressed mothers were more likely to incur insurer and out of pocket expenses and to have higher insurer expenses (\$4916 vs. \$3521) and out of pocket expenses (\$786 vs. \$522)
(2015) (Bauer et al., 2015) UK	study analysed the effects of perinatal depression on child development outcomes of children at ages 11 and 16 years from the community-based South London Child Development	Sample size: 120 Participants: Mothers and children Setting: Two antenatal clinics in the UK Dates of data collection: January to December 1986	Primary Findings: Additional risks that children exposed to perinatal depression develop emotional,	The study examined some of the outcomes and long-term economic implications experienced by offspring who have been exposed to perinatal depression.
(2022) (Counts et	analytic model used a simulated cohort of 1,000 Medicaid-enrolled pregnant individuals. Health care costs for individuals receiving postpartum depression preventive intervention or not, over 1 or 5 years postpartum, in a variety of scenarios, including varying rates of	Participants: simulated cohort of 1,000 Medicaid enrolled pregnant individuals	Primary Findings: The main outcome was the amount of clinician incentive shared in a Value-based payment (VBP) model from providing preventive interventions. The likelihood of the health care payer realising a positive return on investment if it shared 50% of 5-year	This economic modelling study found that providing preventive interventions for PND resulted in an estimated 5-year saving of £602 ⁻

	estimated for the period 2020 to 2025. The model was developed between March 5 2021 and July 30 2021. Type of intervention [exposure]: Individual counselling and group-based counselling. Data collection methods: Simulation based on collected Medicaid data.	Dates of data collection: Model developed between March 5 2021 and July 30 2021.	expected savings with a clinician up front was also measured. The simulated cohort was designed to be reflective of the demographics characteristics of pregnant individuals receiving Medicaid; however, no specific demographic features were simulated. Providing preventive interventions for postpartum depression resulted in an estimated 5-year savings of \$734.12 (95% credible interval [CrI], \$217.21-\$1235.67) per person. Without health insurance churn, sharing 50% of 5-year expected savings could offer more than double the financial incentives for clinicians to prevent postpartum depression compared with traditional VBP (\$367.06 [95% CrI, \$108.61-\$617.83] vs \$177.74 [95% CrI, \$52.66-\$296.60], respectively), with a high likelihood of positive return for the health care payer (91%). As health insurance churn increased, clinician incentives from sharing estimated savings decreased (73% reduction with 50% annual churn).	
Dagher et al (2012) (Dagher et al., 2012 USA	Study design: Cross-sectional Data collection methods: Prices of service use and EPDS	Sample size: 638 women. Participants: Women receiving maternal healthcare services, from hospital discharge to 11 weeks postpartum. Setting: USA healthcare setting. Dates of data collection: The year 2001.	visits for the depressed group n =31 was \$138 and the cost for the non-depressed group n= 607 was \$13. This was a statistically significant difference (p < 0.001). Additional findings: The total cost of emergency department visits for the postpartum women was \$84 for the depressed group n = 31 and \$13 for the non-depressed group n = 607. This was a statistically significant difference (p < 0.001).	The Dagher et al., (2012) cross-sectional study from the USA investigated expenditure from health care service from discharge until 11 weeks postpartum. There was a significant difference in healthcare expenditure between depressed and non-depressed women. The EPDS was used to measure depression. The total cost of all mental health counselling visits for the depressed group n =31 was \$138 and the cost for the non-depressed group n= 607 was \$13. This was a statistically significant difference (p < 0.001).

Franta et al	Study Design:	Sample size: Theoretical	Primary Findings:	Using a theoretical cohort, Franta et
		cohort of 180,000 individuals	 A strategy of referral to counselling 	al. (2022) found that counselling was
				a cost-effective preventative measure,
(Franta et		Participants: pregnant	theoretical cohort, with 8,935 fewer cases	leading to fewer cases of perinatal
al., 2022)		adolescents	of perinatal depression, 1,606 fewer	and chronic depression
	adolescents who received versus did not		cases of chronic depression, 166 fewer	
USA	receive counselling interventions	Setting: Obstetric setting	preterm deliveries, 4 fewer neonatal	
			deaths, 1 fewer case of cerebral palsy,	
	Data collection methods: Decision-analytic	Dates of data collection:	20 fewer cases of SIDS. In total, there	
	model using TreeAge Pro software	2018	were 21,976 additional QALYs and cost	
			savings of \$223,549,872, making it the	
			dominant strategy (better outcomes with	
			lower costs).	
			Counselling interventions remained cost	
			saving until the annual direct and indirect	
			cost of chronic, severe depression was	
			set below \$30,000, at which point it	
			became cost effective (baseline input:	
			\$182,309).	
			It is cost effective to refer all pregnant	
			adolescents for preventive counselling	
Grote et al	Study Design: RCT, cost-benefit study	Sample size: 152	interventions. Primary Findings: when controlled for	In this RCT, cost-benefit study, a
(2017)	bludy besign. Hor, cost benefit study	Jampie Size. 102	baseline depression severity, women with	multicomponent collaborative care
(2017)	Type of intervention [exposure]: 18 months	Participants: 152 pregnant	probable depression and PTSD in MOMCare	intervention for depression (MOMcare
Grote et al.,			had 68 more depression-free days over 18	- a choice of brief interpersonal
2017)		with probable major	months than those in MSS-Plus (p05).	psychotherapy or pharmacotherapy or
		depression or dysthymia	Additional \$1,312. depression care cost per	both) with enhanced maternity support
USA		(PTSD). Plus 12 excluded	MOMCare participant with comorbid PTSD.	services (MSS-Plus) in the public
			Incremental net benefit of MOMCare was	health system of Seattle, USA. The
		final data.	positive if a depression free days was valued	incremental benefit and cost and the
	Data collection methods: Blinded telephone		at ≥ \$20	net benefit for women with major
	assessments, including depression severity on	, , ,		depression and PTSD was estimated.
		health centres	Additional Findings:	When controlled for baseline
	actual salary rate + fringe benefits + 30%			depression severity, women with
	overheads	Dates of data		probable depression and PTSD in
		collection: Recruited Jan	(DCS) visit	MOMCare had 68 more depression-
		2010 – July 2012. Study		free days over 18 months than those
		ended 2014	(Both included time for outreach efforts and	in MSS-Plus (p<.05). There was an
			record keeping)	additional £1,943** depression care
1			\$247 fixed cost per patient for caseload	cost per MOMCare participant with
			supervision and info support Other references to US-based data sources	comorbid PTSD. The incremental net
			Other references to 05-based data sources	benefit of MOMCare was positive if

				depression free days was valued below £18**. For women with probable major depression and PTSD, MOMCare had a significant clinical benefit over MSS-Plus, with only a moderate increase in health services cost.1
	care, HV trained to assess for PND plus offering either a CBA or a person-centred approach (PCA) weekly for 8 weeks Data collection methods: Postal questionnaires: Baseline including EPDS and SF36 at 6 weeks, Postnatal questionnaires at 6, 12 and 18 months postnatal. Resource use	practices, 4,084 participants consented, baseline data from 3,449 participants. Participants: 2,241 lower risk women completed EPDS at 6 months – 767 control, 1,474 intervention. 1,459 women provided economic	Primary Findings: 99% probability of cost effectiveness at £20,000 at 6 months postnatal Compared with controls, adjusted 6 months costs were £82 lower with the interventions Additional Findings: Little difference CBA to PCA – CBA marginally higher probability of being cost effective.	This study found that CBT had a marginally higher probability of being cost-effective than a person-centred approach.
Moore Simas et al (2020) (Moore Simas et al., 2020) USA	Study Design: Cohort study Type of intervention [exposure]: PND. Data collection methods: Administrative claims data from the IBM Watson Health MarketScan Databases	Sample size: 135,678 Participants: mother-child pairs with and without postpartum depression (PND) exposure Setting: USA healthcare setting. Dates of data collection: 2010 to 2016	Primary Findings: 33,314 mother-child pairs with PND exposure were propensity score matched to 102,364 mother-child pairs without PND exposure. During the 24-month follow-up period, HRU across most service categories was significantly higher among children in the PND exposure cohort than non-PND exposure cohort. Among outpatient services, the percentages of children with a physician specialist service (68% versus 64%), early-intervention screening (40% versus	PND

^{1 ••} Prices have been inflated and converted to GBP [53].

Petrou et al	Study Design: Economic evaluation in which	Sample size: 206	 37%), and an emergency room visit (48% versus 42%) were greater in children of mothers with PND (all p < .001). Furthermore, children of mothers with PND incurred 12% higher total healthcare costs in the first 24 months of life compared to children of mothers without PND (\$24,572 versus \$21,946; p < .001). After excluding mothers with preterm delivery, the proportion of children with ER visits, physician specialist services, and outpatient pharmacy claims was significantly higher in the PND exposure cohort than non-PND exposure cohort (all p < .001). Additional Findings: The results of this analysis suggest that HRU and costs over the first 24 months of life in children of mothers with PND exceeded that of children of mothers without evidence of PND. Primary Findings: 	Aimed to estimate the economic costs
(2002) (Petrou et al., 2002)	1.1	Participants: Primiparous women at high risk of developing PND	estimated at £2,419.00 for women with PND and £2026.90 for women without PND, a mean cost difference of £392.10 (P=0.17).	of PND in a geographically defined cohort of women at high risk of developing the condition.
UK		Setting: antenatal clinics	The mean cost differences between women with and without PND reached statistical	
	infants. Net costs per mother-infant dyad over the first 18 months post-partum were	Dates of data collection:	significance for community care services (P=0.01), but not for other categories of	
	estimated.	May 1997 to April 1999	service. Economic costs were higher for women with extended experiences of the	
	Type of intervention [exposure]:		condition.	
	Preventative PND intervention.			
	Data collection methods: primiparous women attending antenatal clinics at 26–28 weeks of gestation were screened using a predictive index for PND. Women identified as being at high risk of developing PND were entered into an RCT of a preventive			

(2006) (Petrou et al., 2006) UK	evaluation was conducted alongside a pragmatic RCT Type of intervention [exposure]: psychosocial and psychological interventions including counselling for the prevention of PND. Data collection methods: Data on health and social care use by women and their infants up to 18 months postpartum were collected, using a combination of prospective diaries and faceto-face interviews	Participants: Women considered at high risk of developing PND were allocated randomly to the preventive intervention (<i>n</i> = 74) or to routine primary care (<i>n</i> = 77) Setting: Health care setting. Dates of data collection: c.2000	 2.21 months (9.57 weeks) during the study period, whereas women in the routine primary care group were depressed for an average of 2.70 months (11.71 weeks). The mean health and social care costs were estimated at £2,396.9 per mother—infant dyad in the preventive intervention group and £2,277.5 per mother—infant dyad in the routine primary care group, providing a mean cost difference of £119.5 (bootstrap 95 percent confidence interval [CI], -535.4, 784.9). At a willingness to pay threshold of £1,000 per month of PND avoided, the probability that the preventive intervention is cost-effective is .71 and the mean net benefit is £383.4 (bootstrap 95 percent CI, -£863.3-£1,581.5). Additional Findings: The preventive intervention is likely to be cost-effective even at relatively low willingness to pay thresholds for preventing 1 month of PND during the first 18 months postpartum. Given the negative impact of PND on later child development. 	the first 18 months post-partum.
Roberts et a (2001)	Study design: Cross-sectional		, ,	A cross-sectional study of 1250 mothers of infants in a Canadian
[42]	Data collection methods: EPDS and the Health and Social Service Utilization Questionnaire (HSUQ)	infants.	EPDS (score of > 12). The total cost for	setting used the EPDS to investigate the costs associated with perinatal depression. It was found that

Canada		healthcare setting Dates of data collection: 1999	those with lower scores. This was statistically significant difference at the (p < .01). Additional findings: Costs for social work visits were higher for mothers with depression and mothers with low incomes.	costs were notably different for mothers with and without depression. The total cost for health and social care was \$845 for mothers with depression and their infant's vs \$413 for those with lower depression scores. This was statistically significant different at p < .01.
			clinical depression (\$845 v \$413). Nursing care costs were greater for mothers with high	
et al (2010) (Stevenson et al., 2010) UK	assess group-CBT (gCBT) in comparison with routine primary care for women with PND in the UK. Type of intervention [exposure]: Group-CBT Data collection methods: SR	analysed from 401 women with an EPDS score of 12 or greater at 6 weeks after childbirth, which had completed both the EPDS and the SF-6D questionnaire at both 6 weeks and 6 months Setting: Postnatal healthcare setting in the UK Dates of data collection: Pre-July 2009 (when PONDER study was	The mean cost per QALY from the stochastic analysis was estimated to be £36,062; however, there was considerable uncertainty around this value. The EVPI was estimated to be greater than £64 million; the key uncertainties were in the cost per woman of providing treatment and in the statistical relationship between changes in EPDS values and changes in SF-6D values. The expected value of perfect partial information for both of these parameters was more than £25 million. Additional Findings: The use of gCBT does not appear to be cost-effective; however, this decision is uncertain. The value of information analyses conducted indicates that further research to provide robust information on key parameters is	effective due to the lack of literature
	Study Design: Modelling study	Sample size: 1,000	_	This economic modelling study
(Wilkinson et	Data collection methods: Hypothetical cohort	Participants: follows a hypothetical cohort of 1000 pregnant women experiencing one live birth	depression and psychosis produced 29 more healthy women at a cost of \$943 per woman.	modelled the cost-effectiveness of physicians screening for and treating postpartum depression and psychosis in partnership with a psychiatrist.
USA		over a 2-year time horizon.	The incremental cost-effectiveness ratios of the intervention branch compared to usual care were \$13,857 per QALY	

Setting: US	A healthcare gained (below the commonly accepted
setting.	willingness to pay threshold of
	\$50,000/QALY gained) and \$10,182 per
Dates of da	ta remission achieved.
collection:	data were • These results were robust in both the
obtained fro	m literature deterministic and probabilistic sensitivity
published be	etween 1995 and analyses of input parameters.
2015.	
	Additional Findings:
	Screening for and treating postpartum
	depression is a cost-effective intervention and
	should be considered as part of usual
	postnatal care, which aligns with the recently
	proposed recommendations from the U.S.
	Preventive Services Task Force.

Data extraction table for studies including maternal health and well-being

Citation (Country)	Study Details	Participants and setting	Key findings	Observations
al (2019) (Chojenta et al., 2019) Australia	Data collection methods: Health economics modelling study. Data were taken from the	Sample size:12,689 Participants: Three cohorts of women born 1973–78, 1946–1951 and 1921–1926, with a fourth cohort born in 1989–1995 added in 2012. Setting: Australian healthcare setting. Dates of data collection: 1921 to 1995		This modelling study from Australia, utilising cohort data from 1921 to 1995 found that the healthcare costs for postnatal women who had poor mental health prior to birth was \$1,792 (AUSD). This is on average 11% more than for mothers with no previous history of poor mental health.
al (2000) [34] UK	Type of intervention [exposure]: Up to 10 home visits in the first postnatal month of up to three hours duration by a community postnatal support worker.	Setting: Home and community Dates of data collection: Recruitment on labour wards from October 1996 to November 1997	No evidence of use of fewer NHS services by women using the support worker versus controls at 6 weeks or 6 months. Additional costs per woman at 6 weeks	This study found that there were no savings to the NHS over six months after the introduction of a community support worker service and no improvement to the health status among the women in the intervention group, which was measured by an SF-36 questionnaire. At six weeks, the mean total NHS costs were £975° for the intervention group and £700 for the control group. At six months, the figures were £1,250 and £980, respectively.
Ride	Study Design: Modelling study (health economics)	Date of model: 2018 The models were developed using TreeAge Pro 2015 software (TreeAge Software, Inc.,		By ignoring broader sets of costs and outcomes, resources in postnatal mental health may be misallocated, and as a result, some women may not benefit as

(Ride,	Data collection	Williamstown, MA, USA). The population of	estimated cost-effectiveness. Inclusion	much from interventions that might be
2018)	methods: Decision analytic	interest was postnatal women and their children	of family effects without extension of the	cost-effective given a broader time-
	modelling	in the United Kingdom, because much of the data	time horizon had little impact, but where	horizon.
UK		came from that setting; this gave an explicit	a longer time horizon was used, family	
		societal threshold of £20,000 to £30,000 per	effects could make a significant	
		QALY for cost-effectiveness analysis in health	difference to the conclusions drawn from	
		care. A health sector perspective was taken,	cost-effectiveness analysis	
		except for the children's model, which expanded	-	
		to a public sector perspective to accommodate	Additional Findings:	
		educational costs. A discount rate of 3.5% was	The authors note that it is important not	
		applied to costs and QALYs, with discounting	only to consider caregiving but also	
		applied back to the child's birth. All costs were	family health effects in the outcomes of	
		converted to 2014 pounds sterling.	maternal health studies.	