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Impact of Incarceration for mothers and babies

Advice provided to Legal Aid NSW, 8 February 2023

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This report is provided at the request of Legal Aid New South Wales (NSW). The request from the Letter of Instruction dated 2 February 2023 was to provide a general report on the impact of incarceration for both mothers and babies. This report is provided pro bono.

Qualifications and experience of expert

Professor Caroline Homer (RM MN MscMed(ClinEpi) PhD FAAHMS) is a leading midwifery researcher in Australia and has an international reputation as a scholar and leader in maternal and newborn health care and service delivery. She is the Co-Program Director: Maternal and Child Health at the Burnet Institute and an Emeritus Professor of Midwifery at the University of Technology Sydney. She holds a Leadership Investigator Fellowship from the National Health and Medical Research Council (2023-2027).

Professor Homer obtained her PhD in 2001 (UTS) and since then has led research and development projects in Australia and internationally especially in relation to health services delivery, reproductive, maternal and newborn care, human resources for health workforce development and midwifery education. She has 30 years of experience in the sector – as a clinician, educator, researcher and leader. Caroline is a past President of the Australian College of Midwives and worked continually as a clinical midwife from 1996 to 2016.

In 2017, Professor Homer was awarded an Order of Australia (AO) for distinguished service to medicine in the field of midwifery as a clinician, researcher, author and educator, through the development of worldwide education standards, and to professional organisations.

Professor Homer has more than 320 publications in peer reviewed journals and 15 book chapters. She has supervised to completion 50 PhD, Masters by Research and Honours students. She has provided expert legal advice to a number of legal firms, the NSW and Queensland Coroner's Courts, the Queensland Department of Health and is currently a clinical advisor with the inquiry into Mackay Base Hospital's maternity services.

The Burnet Institute

The Macfarlane Burnet Institute for Medical Research and Public Health ('The Burnet') is an Australian, unaligned, not-for-profit, independent organisation that links public health and medical research with practical action to achieve better health for vulnerable communities.

We have proven expertise in systematic reviews in the area of sexual, reproductive, maternal, newborn, child and adolescent health.

Burnet's mission is to achieve better health for vulnerable communities in Australia and internationally by accelerating the translation of research, discovery and evidence into sustainable health solutions. The Institute has four major thematic programs: Maternal, Child and Adolescent Health, Disease Elimination, Behaviour and Health Risks, and Health Security.

Materials received

The following documents was provided by NSW Legal Aid:

- Department of Communities and Justice Corrective Services Mothers and Children's Program
- Bugmy Bar book chapter on "Incarceration of a parent or caregiver".

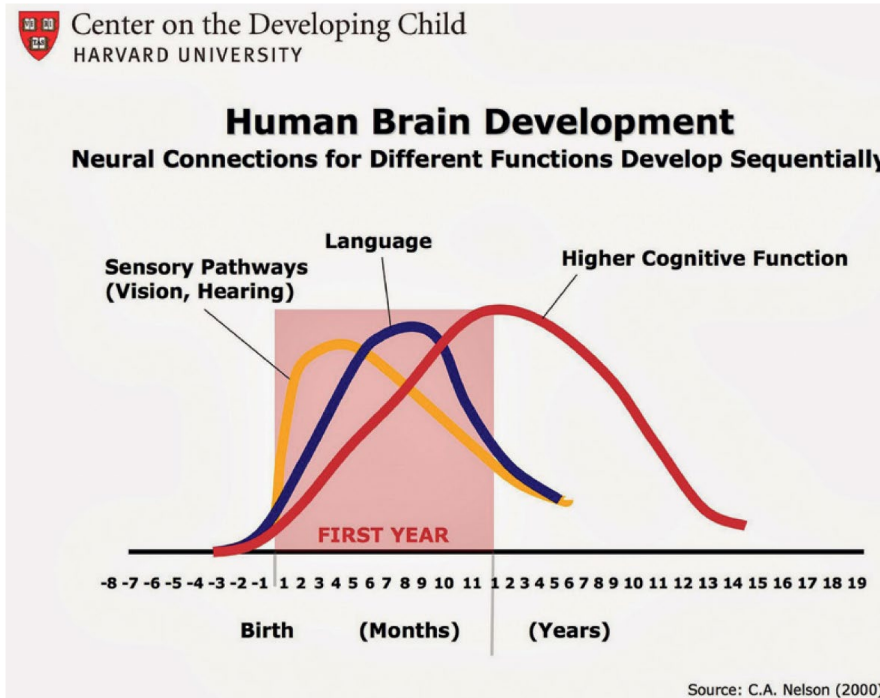
Specific questions to address

Question 1: What are the known benefits to both mothers and babies of early attachment and bonding. If possible, please refer to well established research and findings. In answering this question, could you please include reference to impacts to mental health, social and emotional well-being and other outcomes which are identified in the research or upon which you can provide an expert opinion.

1. There has been increasing evidence over the last 30 years that highlights the importance of early attachment and bonding between mother and baby.[1] This process starts during pregnancy. The phrase 'maternal-fetal attachment' (MFA) was first defined as "the extent to which women engage in behaviors that represent an affiliation and interaction with their unborn child" (p. 282) and emphasised the establishment and strengthening of this unique relationship.[2] The attachment between mother and infant has also been widely studied since the late 1970s and has highlighted the importance of early mother-baby interactions for many aspects of later development.[3-6] It is increasingly clear in systematic reviews that "good early parent-infant-relationship, in which the parents are sensitive and responsive to their infant's physical and emotional needs, lays the foundation for a child's future self-esteem and resilience, their ability to regulate their emotions and their capacity to form close relationships".[7] A number of authors also highlight that the converse, poor early relationships, has adverse impacts including poor cognitive, social and emotional outcomes.[7]

2. Late pregnancy and the first year of life are a time of rapid and significant brain growth in the baby (see Figure 1) representing the peak period of brain development.[8]

Figure 1: Human Brain Development



Available from the Center on the Developing Child at Harvard University at http://developingchild.harvard.edu

3. A secure attachment with a primary caregiver in infancy (usually the mother) has been shown to impact on right brain development of the infant and impact on their coping abilities and mental health mental health.[9] The quality and consistency of the caregiver–infant relationship and emotional interactions within this context, seem to shape neurological, psychological and social development and have potential long-term effects on psychological and emotional functioning of the child.[1 10]

4. An Evidence Paper from the Murdoch Children's Research Institute (MCRI) in Victoria examined the earliest stage of child development, the period from conception to the end of the child's second year, a period known as the first 1000 days.[11] This report highlights the impact of maternal-infant attachment showing that a consistently responsive and nurturing relationship between the child and its caregiver encourages a secure attachment and facilitates the development of future relationships throughout the child's life, while providing a safe foundation for learning.

5. The MCRI report explains the important of secure attachment which is defined by a sense of attachment security, comfort with closeness and interdependence, and confidence in support seeking and other positive ways of managing stress.[11] This occurs in infants whose caregiver(s) respond to their distress in a consistent, caring, and timely manner (e.g. picking up and comforting the infant).[11] Having a secure attachment in infancy has positive developmental outcomes in later life including self-reliance, self-efficacy, empathy, and social competence.[12] The reverse, insecure attachment, occurs when caregivers are unavailable, unresponsive or unpredictable in responding to the child's needs, proximity seeking fails to relieve the infant's distress, and alternative strategies for emotional regulation (other than proximity

seeking) are developed.[11] Insecure attachment is linked to social and emotional problems later in life for the infant.

6. Research has also shown the importance of early mother-infant bonding (1-4 weeks postpartum). Early bonding was the major predictor of bonding at 1 year but that women who were depressed postnatally can fail to bond well with their baby and this can persist for a year.[13]

7. The understanding of the impact of attachment and bonding in pregnancy and the early months of an infant's life have led to considerable policy attention in many countries. For example, the NSW Government's *First 2000 Days Framework* is a strategic policy document which outlines the importance of the first 2000 days in a child's life (from conception to age 5) and what action people within the NSW health system need to take to ensure that all children have the best possible start in life.[14] This Policy Directive states that:
    a. High quality, strong parent-infant emotional attachment has been shown to have a positive impact on children's mental health, and their physical and social development. Attachment and resilience are related. There are a range of issues that can interfere with a parent's ability to develop a strong, healthy attachment with their child, including depression or anxiety in pregnancy and in the months or years after their baby is born and exposure to family violence (p.10).[14]

8. In other countries, there are policy statements or reviews highlighting the importance of these early years and the quality of maternal-infant interactions. For example, a review into improving the health and development outcomes for babies in England[15] highlighted that the 1,001 days from pregnancy to the age of two set the foundations for an individual's cognitive, emotional and physical development. The report states that:
    b. The emotional health and physical wellbeing, social skills, cognitive and linguistic capacities that develop in the 1,001 critical days form the foundations for an individual's success in school and in later life. These best develop when a baby has at least one stable and committed relationship with an adult. Where a baby forms a secure attachment with their primary caregivers, they feel safe and secure. It's these relationships that build the emotional scaffolding to support early development (p.18).[15]

Question 2: The potential short, medium and long term <u>impacts on a child</u> of separation from a mother soon after birth.

9. Given the importance of maternal-infant attachment and bonding, there are significant issues when children are separated from their mothers soon after birth. Early separation (first two years of life) from caregivers can have adverse effects on children's well-being including impacts on social and emotional development[16] and mental health problems.[17] Separations of a month or more prior to age 5 have been linked to increased symptoms of borderline personality disorder in adolescence and adulthood in a large community sample in the United States.[18] Separations that disrupt the maternal-infant attachment may also create instability and chaos in

other parts of the home environment and this has been associated with both emotional distress and lower cognitive functioning among young children.[19 20]

10. Another study across 17 programs in the United States found associations between early mother-child separation and child negativity at 3 years, and child aggression at both 3 and 5 years.[16] The separation was for a week or longer in first 2 years of life. This study was in a population of significantly disadvantaged women; 89% lived in poverty, 39% were teenage mothers, 46% lacked a high school diploma, and 74% lived without a male partner. The authors concluded that the effects of separation on children's aggressive behaviour are early and persistent.

Question 3: The potential short, medium and long term impacts on the mother when separated from a child soon after birth.

11. Being separated from the baby is usually distressing to women and may contribute to anxiety and depression. The *Mental Health Care in the Perinatal Period: Australian Clinical Practice Guideline*[21] highlights that the biggest risk factor for developing perinatal mental health conditions is a previous mental health history. However, the presence of psychosocial risk factors may be associated with greater risk of onset, relapse or exacerbation of mental health conditions. Women who feel isolated either by distance, culture, or both, are more likely to develop distress or mental health conditions in the perinatal period. The likelihood is also greater for women who have experienced life stressors (e.g. family problems, family violence or loss, disability) or multiple trauma.

12. There are significant impacts of mental health conditions for mothers. Maternal mental illness can directly affect a mother's responsiveness and sensitivity during interactions with her baby thus impacting on attachment and bonding and also their capacity to care for themselves. In Australia, suicide is a significant cause of maternal deaths (deaths during pregnancy or the first 42 days after the birth).[22] There were 20 maternal deaths due to suicide from 2011-2020 (Table 1) highlighting the important of monitoring mental health issues especially in women with vulnerabilities.

Table 1: Causes of maternal deaths, 2011–2020

	Maternal deaths				Maternal mortality ratio[a]			
Cause of death	**Direct**	**Indirect**	**Not classified[b]**	**Total**	**Direct**	**Indirect**	**Total[c]**	**Coincidental deaths[d]**
Cardiovascular	5	26	0	31	0.2	0.9	1.0	3
Non-obstetric haemorrhage	5	14	0	19	0.2	0.5	0.6	3
Suicide	7	13	0	20	0.2	0.4	0.7	1
Sepsis	10	10	0	20	0.3	0.3	0.7	1
Thromboembolism	21	1	0	22	0.7	0.0	0.7	0
Obstetric haemorrhage	13	0	0	13	0.4	..	0.4	0
Amniotic fluid embolism	14	0	0	14	0.5	..	0.5	0
Hypertensive disorders	9	0	0	9	0.3	..	0.3	0
Other	3	7	0	10	0.1	0.2	0.3	2
Substance use complications	1	11	0	12	0.0	0.4	0.4	3
Unexplained	0	6	2	8	..	0.2	0.3	0
Ectopic pregnancy	4	0	0	4	0.1	..	0.1	0
Anaesthetic-related death[e]	3	1	0	4	0.1	0.0	0.1	0
Homicide	0	4	0	4	..	0.1	0.1	3
Epilepsy	0	3	0	3	..	0.1	0.1	1
Cancer	0	1	0	1	..	0.0	0.0	9
Motor vehicle trauma	0	0	0	0	..	..	..	15
Not stated	0	0	0	0	..	..	..	3
Total	**95**	**97**	**2**	**194**	**3.1**	**3.2**	**6.4**	**44**

(a) Per 100,000 women who gave birth. The denominator used to calculate the ratios was the number of women who gave birth to at least 1 baby (either a live birth or a stillbirth) of 20 or more weeks' completed gestation or with a birthweight of 400 grams or more from 2011–2020 (**3,022,053**).

(b) Deaths 'not classified' are those considered to be related to the pregnancy or its management, but could not be further classified as either 'direct' or 'indirect'. These deaths are included in the maternal deaths total. These do not include deaths that are awaiting classification.

(c) Includes direct deaths, indirect deaths and not classified deaths.

(d) Coincidental deaths are not included in the maternal mortality ratio calculations.

(e) Anaesthetic-related deaths were not classified prior to 2012.

. . Not applicable

Sources: AIHW analysis of the National Maternal Mortality Data Collection and the National Perinatal Data Collection.

Source: https://www.aihw.gov.au/reports/mothers-babies/australias-mothers-babies/data

13. Other impacts, especially for incarcerated women who are separated from their infants, including being unable to learn to parent. It is recognised that parenting knowledge and skills develop through everyday experiences passed on by adults, usually other parents, modelling parenting behaviours, and through being exposed to family and community rituals, values and habits.[23] The intergenerational transfer of parenting knowledge and skills cannot happen if mothers are separated from their infants.

14. Unresolved traumatic attachment issues in the mother can also impact their capacity to have an emotional interaction with their infant.[1 11] This occurs if the mother herself was separated as a baby thus continuing the cycle of adverse impacts and long-term disadvantage.

15. Research from Canada suggests that a mother's physical health can also be affected by child separation. Physical health impacts may include poorer self-rated overall health,[24] unintentional overdose,[25] and increased mortality from both avoidable and unavoidable causes.[26] These negative physical health outcomes tend to occur more so to mothers who have themselves been removed from family as children and to Indigenous women who may have experienced cumulative losses or life stressors. Such research indicates that early child removal can be a widely disruptive life event that contributes to a negative trajectory in both mental and physical health, particularly for women facing compounding vulnerabilities. [24 26]

Question 4: Please opine whether being a first time mother would be have additional impacts and if so, what would those impacts be.

16. A woman having her first baby is more vulnerable to many of these issues discussed above, but especially the social and emotional impacts of separation and an inability to bond with their baby. In addition, having their first baby puts women at higher risk of many perinatal problems including stillbirth, pre-eclampsia (high blood pressure), preterm birth, anaemia and complications during the birth.[27] It is essential that women having their first baby have access to high quality maternity care, including midwifery care and access to obstetric or other medical care as required.

17. There is a significant degree of social isolation and stigma attached to the separation of a mother and her child which impacts on a woman's mental health and wellbeing.[28] A first-time mother may be particularly vulnerable to such social isolation and stigma and therefore to additional emotional or mental health sequelae. It is also likely that such effects would continue to impact the woman in potential subsequent pregnancies.[28]

Question 5: Please opine on the potential mental health impacts of separation on the mother. Are mental health outcomes likely to be worse for women with pre-existing mental health conditions?

18. There is limited research on the potential mental health impacts of separation on the mother, although one recent study in the United Kingdom found that almost all mothers whose infants were removed from their care experienced acute trauma, overwhelming grief and shame during the separation process.[29] It is my view as explained above, that separation is likely to lead to significant distress, anxiety and potentially depression. In my clinical experience as a midwife over a 10 year period, I was required to separate babies from their mothers soon after birth due to child protection concerns. I saw women experience acute distress due to this process and these women continued to be distressed and, sometimes, clinically depressed for a long time after the separation.

19. As explained earlier, the *Mental Health Care in the Perinatal Period: Australian Clinical Practice Guideline*[21] highlights that the biggest risk factor for developing perinatal mental health conditions is a previous mental health history.

Question 6: What are the benefits of a mother, in particular a first time mother, engaging in community based pre-natal care and community based post-natal support. In doing so, if you are aware of the pre and post-natal support available in the NSW health system, could you please include this in your answer.

20. High quality care during pregnancy, labour and birth and the postnatal period is beneficial and improves outcomes. The latest NSW Health policy, The First 2000 Days Framework[14], shows that that certain interventions in the early years can make a significant improvement to a person's life experiences, health and development.

21. These interventions include:
    - access to comprehensive antenatal care
    - regular child health and development check-ups from birth until age five
    - sustained nurse home visiting for targeted populations
    - breastfeeding support
    - supporting women to complete their school education to Year 12
    - immunisation
    - oral health services
    - population parenting programs
    - attending 600 hours of quality early childhood education in the year before school
    - school engagement
    - specialised programs for Aboriginal people, refugees and migrant populations.

22. These services are all available in the NSW Health system. In particular, midwifery continuity of care, where pregnant women see the same small group of midwives throughout pregnancy, labour and birth and the postnatal period has been shown to be highly beneficial to women, especially those with social and emotional risk factors,[30-33] and is a service available in almost all large hospitals in NSW.

23. In the postnatal period, women in NSW have access to early home visiting from child and family health nurses, residential parenting programs and family care centres (eg. Tresillian Family Care Centres) and the Sustaining NSW Families (SNF) program. This latter program is a NSW Government initiative to support families having babies. It aims to promote healthy, happy and safe environments to support families to reach their full potential. NSW Health has established the SNF Program to support eligible families with children up to two years of age. The program operates in nine locations across NSW.

24. For Aboriginal and Torres Strait Islander women, or women having an Aboriginal or Torres Strait Islander baby, there also is the Aboriginal Maternal and Infant Health Service (AMIHS). AMIHS teams provide antenatal and postnatal care in the community, from as early as possible in pregnancy to up to eight weeks after birth. AMIHS teams link closely with other maternity services to ensure that risk management, education and support are available. Services provided by AMIHS include:
    - regular antenatal checks
    - help with booking into maternity hospitals
    - referral and support to access other services
    - postnatal checks and support to attend child and family health services
    - health promotion and community activities
    - support and information on nutrition and feeding
    - support to access quit smoking programs.

25. After attending AMIHS, families are linked to child and family health services.

I hope this information has been of assistance to you.

Yours sincerely

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References

1. Newman L, Sivaratnam C, Komiti A. Attachment and early brain development – neuroprotective interventions in infant–caregiver therapy. *Translational Developmental Psychiatry* 2015;3(1):28647. doi: 10.3402/tdp.v3.28647
2. Cranley M. Development of a Tool for the Measurement of Maternal Attachment During Pregnancy. *Nursing Research* 1981;30(5)
3. Ainsworth MS. Infant-mother attachment. *American Psychologist* 1979;34(10):932-37. doi: 10.1037/0003-066X.34.10.932
4. Bowlby J. Attachment and loss (2nd ed.). New York: Basic Books Attachment. 1982.
5. Bowlby J. A secure base: Parent-child attachment and healthy human development: Basic books 2008.
6. Bowlby J. Attachment: Basic books 2008.
7. Wittkowski A, Vatter S, Muhinyi A, et al. Measuring bonding or attachment in the parent-infant-relationship: A systematic review of parent-report assessment measures, their psychometric properties and clinical utility. *Clinical Psychology Review* 2020;82:101906. doi: https://doi.org/10.1016/j.cpr.2020.101906
8. Tierney A, Nelson C. Brain Development and the Role of Experience in the Early Years. *Zero Three* 2009;30(2):9-13.
9. Schore A. Effects of a secure attachment relationship on right brain development, affect regulation, and infant mental health. *Infant Mental Health Journal* 2001;22(1-2):7-66. doi: https://doi.org/10.1002/1097-0355(200101/04)22:1<7::AID-IMHJ2>3.0.CO;2-N
10. Schore A. The experience-dependent maturation of a regulatory system in the orbital prefrontal cortex and the origin of developmental psychopathology. *Development and Psychopathology* 1996;8(1):59-87. doi: 10.1017/S0954579400006970 [published Online First: 2009/03/04]
11. Moore TG, Arefadib N, Deery A, et al. The First Thousand Days: An Evidence Paper. Parkville, Victoria: Centre for Community Child Health, Murdoch Children's Research Institute. 2017.
12. Goldberg S. Attachment and Development. Hillsdale, NJ: The Analytic Press 2000.
13. O'Higgins M, Roberts IS, Glover V, et al. Mother-child bonding at 1 year; associations with symptoms of postnatal depression and bonding in the first few weeks. *Arch Womens Ment Health* 2013;16(5):381-9. doi: 10.1007/s00737-013-0354-y [published Online First: 2013/04/23]
14. Health. N. First 2000 Days Framework Sydney: NSW Government 2019.
15. The Early Years Healthy Development Review. The Early Years Healthy Development Review Report: the Best Start to Life. London: Her Majesty's Stationery Office 2021.
16. Howard K, Martin A, Berlin L, et al. Early mother-child separation, parenting, and child well-being in Early Head Start families. *Attach Hum Dev* 2011;13(1):5-26. doi: 10.1080/14616734.2010.488119
17. Moss E, Cyr C, Bureau JF, et al. Stability of attachment during the preschool period. *Dev Psychol* 2005;41(5):773-83. doi: 10.1037/0012-1649.41.5.773 [published Online First: 2005/09/22]
18. Crawford TN, Cohen PR, Chen H, et al. Early maternal separation and the trajectory of borderline personality disorder symptoms. *Dev Psychopathol* 2009;21(3):1013-30. doi: 10.1017/s0954579409000546 [published Online First: 2009/07/09]

19. Brooks-Gunn J, Johnson A, Leventhal T, editors. *Disorder, turbulence, and resources in children's homes and neighborhoods*. Washington, DC: American Psychological Association, 2010.
20. Evans GW. Child development and the physical environment. *Annu Rev Psychol* 2006;57:423-51. doi: 10.1146/annurev.psych.57.102904.190057 [published Online First: 2005/12/02]
21. Austin M-P, Highet N, Expert Working Group. Mental Health Care in the Perinatal Period: Australian Clinical Practice Guideline. Melbourne: Centre of Perinatal Excellence. 2017.
22. AIHW. Maternal deaths Canberra: Australian Institute for Health and Welfare; 2022 [Available from: https://www.aihw.gov.au/reports/mothers-babies/maternal-deaths-australia accessed 4 February 2023.
23. Fowler C, Dawson A, Rossiter C, et al. When parenting does not 'come naturally': providers' perspectives on parenting education for incarcerated mothers and fathers. *Studies in Continuing Education* 2018;40(1):98-114. doi: 10.1080/0158037X.2017.1396449
24. Kenny KS, Ranville F, Green SL, et al. Family separation and maternal self-rated health: Evidence from a prospective cohort of marginalized mothers in a Canadian setting. *Maternal and Child Health Journal* 2019;23(9):1232-39. doi: 10.1007/s10995-019-02762-z
25. Thumath M, Humphreys D, Barlow J, et al. Overdose among mothers: The association between child removal and unintentional drug overdose in a longitudinal cohort of marginalised women in Canada. *International Journal of Drug Policy* 2021;91:102977. doi: doi.org/10.1016/j.drugpo.2020.102977
26. Wall-Wieler E, Roos LL, Nickel NC, et al. Mortality among mothers whose children were taken into care by Child Protection Services: A discordant sibling analysis. *American Journal of Epidemiology* 2018;187(6):1182-88. doi: 10.1093/aje/kwy062
27. Department of Health. Clinical Practice Guidelines: Pregnancy Care. Canberra: Australian Government Department of Health 2020.
28. Broadhurst K, Mason C. Child removal as the gateway to further adversity: Birth mother accounts of the immediate and enduring collateral consequences of child removal. *Qualitative Social Work* 2019;19(1):15-37. doi: 10.1177/1473325019893412
29. Mason C, Ward H, Broadhurst K. Giving HOPE and minimising trauma: An intervention to support women who are separated from their babies at birth due to safeguarding concerns. *Child Abuse Review* 2023;32(1):e2809. doi: doi.org/10.1002/car.2809
30. Rayment-Jones H, Dalrymple K, Harris J, et al. Project20: Does continuity of care and community-based antenatal care improve maternal and neonatal birth outcomes for women with social risk factors? A prospective, observational study. *PLoS One* 2021;16(5):e0250947. doi: 10.1371/journal.pone.0250947 [published Online First: 2021/05/05]
31. Rayment-Jones H, Silverio SA, Harris J, et al. Project 20: Midwives' insight into continuity of care models for women with social risk factors: what works, for whom, in what circumstances, and how. *Midwifery* 2020;84:102654. doi: 10.1016/j.midw.2020.102654 [published Online First: 2020/02/18]
32. Homer C, Leap N, Edwards N, et al. Midwifery continuity of carer in an area of high socio-economic disadvantage in London: a retrospective analysis of Albany Midwifery Practice outcomes using routine data (1997-2009) *Midwifery* 2017;48:1–10.

33. Homer C. Models of Maternity Care: Evidence for midwifery continuity of care. *Medical Journal of Australia* 2016;205(8):370-74.

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