Submission to Australian Productivity Commission Mental Health Public Inquiry

23rd January 2020

Contents

1. Introduction

Gidget Foundation Australia's Interest in the Mental Health Public Inquiry

This document outlines a background of perinatal mental health in Australia (including insight into prevalence and cost), the contribution made by Gidget Foundation Australia to the perinatal mental health sector in Australia and lastly, a set of recommendations to improve the mental health outcomes for new Australian parents. This submission is informed by current research, the Gidget Foundation community (including lived experience through new and expecting parents, as well as, clinicians such as psychiatrists, psychologists, obstetricians, GPs, midwives) and program outcomes.

In 2019, the Australian Government announced a $36.6m funding commitment to the 'Maternity to Home' Program which supports undertaking national screening of all expectant and new parents to identify and diagnose those at risk of or experiencing Perinatal Depression and Anxiety (PNDA). The commitment does not detail expansion on pathways to support the cohort. The existing resource and referral pathways are already beyond capacity. A fundamental requirement for screening programs is the provision of appropriate and accessible interventions for those screening positive.

Whilst Gidget Foundation Australia supports National Screening in accordance with the Perinatal Mental Health Clinical Guidelines, the concern is that identifying additional individuals through screening will add a significantly increased burden onto existing perinatal mental and general health services that are already underfunded and at capacity.

This, coupled with the social impact of Gidget Foundation Australia's programs, form the basis of the proposed recommendations which cover two specific strategies to immediately improve perinatal mental health outcomes:

1. Introduction of the Perinatal Treatment Plan (PTP); and
2. An Expansion of Better Access Telehealth services.

An independent evaluation of the *Cost of Perinatal Depression and Anxiety in Australia* was conducted by PricewaterhouseCoopers (PwC) in November 2019. Using data pools from Gidget Foundation Australia, Peach Tree Wellness, Perinatal Wellbeing Australia and PANDA Australia, the evaluation concluded costs were $877 million in the first year alone. The costs are attributed to health services, the economy and wellbeing. It is imperative to address perinatal mental health with early intervention. Adverse outcomes of perinatal depression and anxiety have been observed to have impact beyond the parent - to partners, children and the wider family unit. The welfare of the community into the next generation is at stake.

These two recommendations target early mental health intervention, prevention and health promotion to minimise significant familial and intergenerational impact. The goal of these recommendations is to ultimately aim to reduce long term emotional and economic costs to the extended family unit with a focus on risk reduction.

Lastly, the recommendations ensure consistent perinatal support and services to regional, rural and remote areas of Australia that provide accessible and inclusive care that meets the needs of expectant and new parents.

2. Gidget Foundation Australia

2.1 Gidget Foundation Australia's Story

"Gidget Foundation Australia is focussed on raising awareness, providing advocacy and education and delivering services for the treatment of Perinatal Depression and Anxiety in Australia."

Gidget Foundation Australia is a not-for-profit organisation that provides programs to support the emotional wellbeing of expectant and new parents. The mission of Gidget Foundation Australia is ***"to promote the importance of emotional wellbeing amongst expectant and new parents, their healthcare providers and the wider community to ensure that those in need receive timely, appropriate and supportive care".***

Nearly 1 in 5 mothers and 1 in 10 fathers will experience perinatal depression and anxiety (PNDA) and related disorders such as PTSD and Complicated Grief that are often hidden and not fully understood. Nearly 50% of all parents experience Adjustment Disorders. This range of problems impacts in excess of 100,000 Australians each year, and suicide is the leading cause of maternal death. Gidget Foundation Australia is supported by the generosity of philanthropic individuals and businesses, Government and independent grants and fundraising events and activities.

The Gidget Foundation provides support for those people experiencing perinatal mental health disorders through:

1. Support services for families suffering emotional distress during pregnancy and early parenting
2. Education, advocacy and awareness programs aimed at various stakeholders including health professionals and the wider Australian community.

"Gidget" was the nickname of a vibrant young mother who tragically took her own life while suffering from unrecognised postnatal depression. She hid her suffering from even her loving family and friends. Gidget Foundation Australia was established by Gidget's friends and sisters. The Foundation has grown and is now supported by many passionate individuals, community leaders, government and health professionals across Australia. The Foundation is a grass roots volunteer organisation that is able to leverage its impact and strengthen outcomes by working collaboratively with many professionals who support vulnerable parents.

2.2 Gidget Foundation Australia's Programs

Gidget Foundation Australia support parents with the following mental health treatment programs:

- Gidget House provides ten clinical psychological sessions for expectant and new parents in person at various locations across two states, NSW and Qld.

- Start Talking Telehealth Program provides ten clinical psychological sessions for expectant and new parents nationally via video call service.
- Gidget Emotional Wellbeing Screening Program covers preadmission midwife screening and support for pregnant women at selected hospitals.
- Gidget Village provides group therapy sessions for expectant and new parents at various locations.
- Gidget Emotional Wellbeing Workplace Program offers tailored programs for employees and management to promote engagement and develop strategies for mentally healthy workplaces.
- Education, Research and Online Tools for the community and health professionals as well as professional medical contribution to workshops, conferences, media and professional publications
- Annual Tresillian Scholarship for a child and family health nurse to undertake a 12-month professional mental health course.
- Advocacy and active memberships of professional networks
- Research and contribution to mainstream and professional publications
- Development and distribution of resources to assist parents.

To support these mental health programs, Gidget Foundation Australia has a Clinical Governance Committee comprising of a number of experts in perinatal lived experience, psychiatry, psychology, midwifery, obstetrics, general practice and other primary health stakeholders. The Clinical Governance Committee provides oversight of the delivery of all the Foundation's clinical programs.

In addition to the above, Gidget Foundation Australia provides a variety of support services including:

- Resources including brochures, books, video and online
- Community presentations
- Corporate presentations on parental leave and staff engagement
- Health Professional Education including students, health and allied health professionals

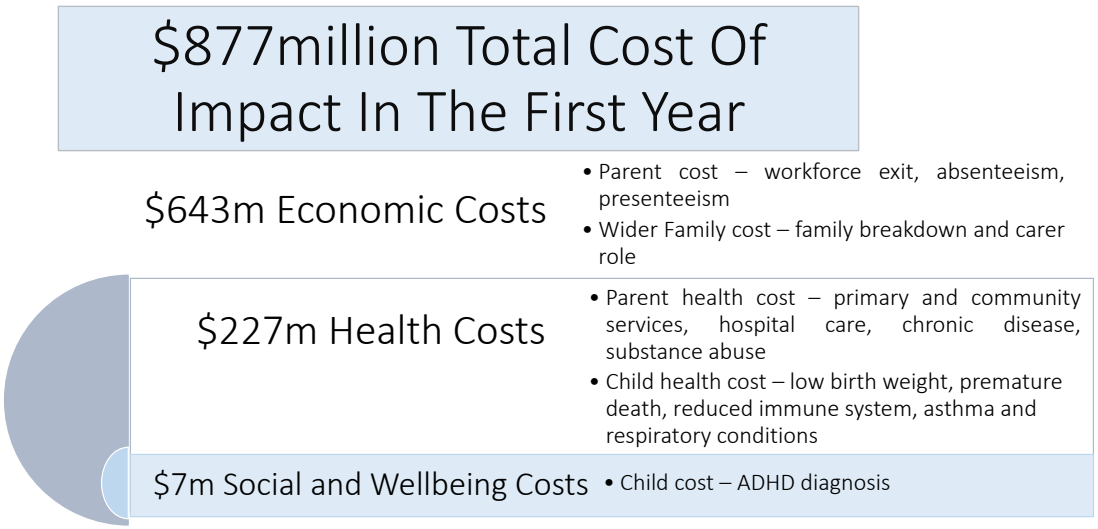
3. Perinatal Mental Health Background

3.1 Prevalence in Australia

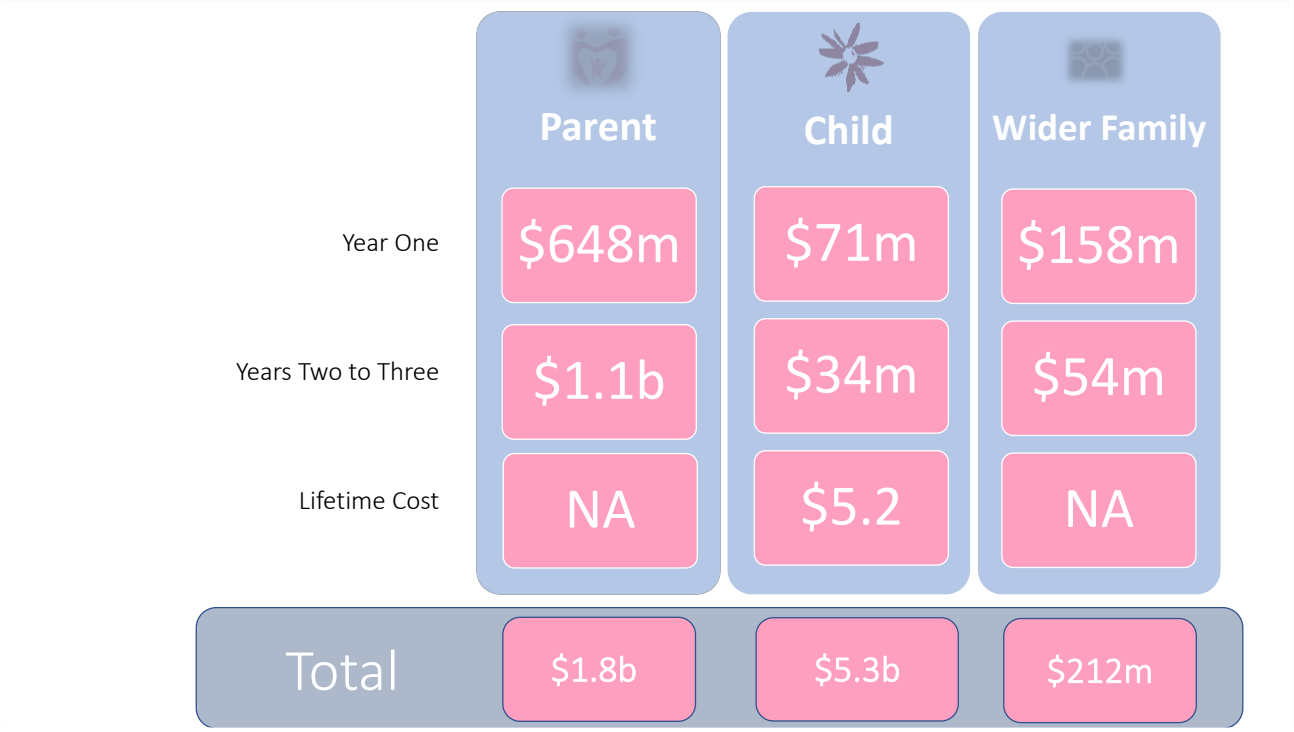
Perinatal Depression and Anxiety is diagnosed in 1 in 6 parents, or over 100,000 Australians each year (1 in 5 mothers and 1 in 10 fathers). Numbers are higher in areas negatively affected by Gaps and Gradients and Social Determinants of health. By identifying additional individuals through expanded screening this number will likely significantly increase. The initial onset of symptoms may occur anytime from pregnancy to the first year after birth, although both risks and actual illness may have preceded conception. Research indicates males underreport mental health symptoms; 45% of fathers are not aware they are susceptible to PNDA. [1] The Edinburgh Postnatal Depression Scale (EPDS; Cox et al 1987) is an internationally accepted instrument for assessment of depressive symptomatology. Research into supporting fathers successfully supported the use of the EPDS to screen for paternal distress and depression.

3.2 Cost of Perinatal Mental Health in Australia

In the first year alone, $877 million is the cost of perinatal mental health. This combined cost triangulates impacts to health services, the economy and wellbeing. [1]



$7.3 billion is the total lifetime cost to health services, the Australian economy and wellbeing. [1]



Further, the likelihood of parents remaining married after experiencing PNDA is decreased. [2] One sample of mothers with no psychiatric history were 46 times more likely to have a recurrence of PNDA. [3] PNDA can recur in subsequent pregnancies with significantly increased likelihood.

The strain of PNDA is felt on the family unit, specifically in childhood outcomes. Children are more likely to experience behavioural and neurological disorders and Attention Deficit Hyperactivity Disorder (ADHD). [4, 5] As adults these conditions can persist with increased risks of anxiety and depression. The key recommendations outlined in this document aim to significantly reduce or avoid these costs via addressing them in early intervention.

> "I'm grateful I finally found a practice specifically catering to new parents."
>
> Client Feedback Nov 2019

4. Recommendations

Below are two recommendations Gidget Australia Foundation suggest to substantially improve the mental health outcomes of expecting and new parents in Australia.

4.1 Recommendation 1: Perinatal Treatment Plan (PTP)

The first recommendation is the creation of a dedicated Perinatal Mental Health Care Plan – called the **'Perinatal Treatment Plan' (PTP).** This is specifically a mental health care plan designed for early intervention and facilitates GP referrals directly to appropriate care pathways. This is similar to the *Australian Eating Disorder Treatment and Management Plan* which provides specific and tailored support for patients.

The goal of the PTP is to:

a) Provide holistic and dedicated treatment of perinatal mental health disorders to address the current difficulties and the risk of recurrence
b) Assist in the identification of PNDA
c) Prevention method for ongoing suffering for those at risk
d) Provide tailored support and intervention options according to the needs of patient
e) Minimise potential risk to the infant

4.1.1 Recommendation Details

Below is the proposed Perinatal Treatment Plan' (PTP) structure:

Eligibility Criteria	1) Parent having had a birth, pregnancy or adoption within the last 12 months. 2) A diagnosis of perinatal depression, anxiety, trauma, loss disorders from a GP, obstetrician or psychiatrist.
Outcome tool used	3) DASS 21 - *score 10 or above and EPDS – score 10 or above [6]

	NB: Scores of 1-3 on the EPDS question 10 (self-harm) is a prompt to further immediate assessment.
Risks and comorbidities [1]	OR 2 or more of the following risks or comorbidities: • Obstetric complications eg miscarriage, delivery complications • Infant loss or other problems • Unplanned pregnancy • Fertility issues • History of early loss, abuse, trauma • Other outside stresses eg illness, job loss • Psychiatric history • Family psychiatry history • Alcohol and/or drug misuse • Personality characteristics such as pre-disposition to worry/ruminate, OC • Marital difficulties • Medical or temperamental difficulties with baby
A member of the following cohorts with additional risk of PNDA (due to reduced access to support) *NB: Due to male tendency to under-report Mental Health symptoms, an EPDS score of 5-6 is suggested, or an endorsing the SI item. [7-9]	• Fathers/partners* • Aboriginal and Torres Strait Islander communities • Culturally and Linguistically Diverse (CaLD) communities • Lesbian, Gay, Bisexual, Trans, Intersex and Queer (LGBTIQ+) communities.
Referral Process	• Initial – GP, obstetrician, psychiatrist or other medical specialist makes referral*

*NB: Same referral process as Better Access Mental Health Care Plan however broadened to include referral from Obstetricians and Psychiatrists and increased for a further 10 sessions (totalling 20).	• 10 sessions (currently 6th session) - GP makes referral for ongoing treatment of a further 10 sessions
Treatment Process (Rebates from Medicare)	• Up to 20 sessions available for evidence-based psychological treatments - including face-to-face (one-on-one) and telehealth sessions

4.1.2 Outcome Tools and Score Guide

The plan uses two outcome tools: The Depression, Anxiety and Stress Scale (DASS) 21 and the Edinburgh Postnatal Depression Scale (EPDS). The EPDS assesses perinatal anxiety and depression.[10] The DASS differentiates anxiety, stress and depression states from personality traits.[11, 12] The questionnaire comes in a 42 or 21 question format. The DASS 21 questionnaire gives statistically robust scores and is time efficient. This combination of psychometric tools, although not diagnostic, provides a reliable and valid measurement of PNDA. The EPDS is currently translated into 36 languages and can facilitate CaLD families receiving appropriate care. Gidget Foundation Australia have indicated a score guide targeted to early intervention from empirical evidence. Extensive research shows that males are likely to under report symptoms of distress, thus our score guide is modified accordingly. [7-9, 13, 14]

4.1.3 Risks and Comorbidities

To promote early intervention a list of non-exhaustive risk factors is included. These factors are cumulative, and risk increases with each factor. A diverse eligibility criterion allows at-risk parents effective treatment and reinforces prevention. Closing this gap in healthcare services can ultimately contribute to reducing costs to Australia's economy, health and wellbeing.

4.1.4 Treatment Process

The onset of PNDA and related disorders can occur anytime from pregnancy through to the first year of birth, and they may also be pre-existing. It is vital to support parents through the duration of the perinatal period. The increased number of psychological treatments ensures equity of access and longevity of support. The option of additional treatments allows parents requiring more than 10 sessions in a year to receive effective treatment. Accordingly, positive treatment outcomes can be observed across socioeconomic groups, rather than limited to those able to privately pay for additional treatment. Further, patients could elect to use their available sessions on group-based sessions. This can assist in building community and promoting awareness. The continuation of treatment beyond 10 sessions is preventative to recurring and ongoing PNDA.

4.1.5 Access via TeleHealth

To promote convenient, accessible and inclusive care to regional, rural and remote areas, parents living in locations 4 - 7 in the Modified Monash Model may opt for all sessions via telehealth. A further recommendation as part of the PTP is to expand the geographical criteria specifically to include locations 2 and 3 of the Modified Monash Model (MMM).

Currently, Australians with a Mental Health Care Treatment Plan living in MMM locations 4 -7 can receive psychological treatment via Telehealth with Medicare endorsement. We recommend reform expanding these geographical criteria specifically within the PTP.

Use of audio call or telephone is not currently permitted. Those living in rural and remote areas often have restricted access to stable internet service. By offering up to half of the consultations by telephone will ensure that those parents who are particularly isolated are still able to receive significant support.

From a perinatal perspective, this is critical as a new mother may not be able to drive a car or travel due to surgical procedures (such as caesarean), or simply because she has a baby, or because the baby also may be unwell.

4.1.6 A Case for PTP

To support the creation of the PTP – please see below a summary of parents experiencing PNDA and receiving treatment. A total of 105 responses were received and a summary of the results demonstrates:

- 89% respondents reported sessions improved their sense of wellbeing
- 97% respondents reported they were satisfied with the care provided by their Gidget Foundation Australia clinician
- 99% respondents reported their Gidget Foundation Australia clinician made them feel safe
- 96% respondents reported their Gidget Foundation Australia clinician focused on what was important to them

Survey of Gidget Foundation Australia's Patient Feedback (October- November 2019)

In summary, the creation of the PTP is an immediate way to provide early intervention-based treatment and prevention plans that can provide relevant and specific care to new parents at risk of or diagnosed with PNDA. It supports the patient for the duration of the perinatal period and is preventative for recurring PNDA. Moreover, its implementation is significant in limiting intergenerational impacts and supporting the development of resilient family units who remain united.

4.2 Recommendation 2: Expansion of Telehealth Services

4.2.1 Background

On 1st November 2017, the Australian Government introduced a new measure to *improve equity of access* to mental health treatment services for people in rural, remote and very remote locations.

The changes announced at the time allowed up to 7 of 10 Better Access mental health consultations to be provided through video conferencing, with one of the first four sessions required to be delivered through a face-to-face consultation.

The patient must be located in Modified Monash Model areas 4 - 7 (a town of 15,000 people or less) and at least 15km distance from the treating allied mental health professional by direct road at the time of consultation.

The treating professional can be located anywhere in Australia, subject to the 15km minimum distance requirement being met. A GP Mental Health Treatment Plan is required.

The Telehealth Access to Psychological Services measure was introduced to enhance ease of access to, and increase choice in, mental health services in rural and remote areas of Australia. It is widely recognised that there is a scarcity of mental health professionals in regional areas of Australia, and this can act as a significant barrier for those who need to access these services.

The eligibility criteria, combined with the treatment provision guidelines, in the past prevented the service from being accessed. The restrictive barriers to access the service,

primarily due to unintentional exclusion, contributed to low uptake of the service. From a perinatal perspective, the service also did not take into account that a new mother may not be able to drive a car or travel due to surgical procedures (such as caesarean), or simply because she has a baby, or because the baby also may be unwell.

In September 2018, the Australian Government removed the face-to-face consultation requirements under the Better Access to Psychiatrists, Psychologists and General Practitioners initiative through Medicare, taking immediate effect. Previously, three of the ten telehealth psychology sessions were required to take place face-to-face. By removing this requirement, many more Australians in these communities are now be able to easily access Gidget Foundation Australia's Start Talking telehealth program, providing up to 10 free perinatal psychology sessions via video call.

Suicide is the leading cause of maternal death in Australia, with rates in regional areas increased by a further 40%. The positive impact this change had on new and expectant parents in the regional, rural and remote Australia, who have suffered for too long with a lack of access to specialist psychologists, is significant.

4.1.2 Recommendation Details

Therefore, the second recommendation is to expand the Telehealth Access to Psychological Services measures, specifically to include locations 2 and 3 of the Modified Monash Model (MMM) as well as allow up to half of the consults to occur by telephone.

Currently, Australians with a Mental Health Care Treatment Plan living in MMM locations 4 -7 can receive psychological treatment via Telehealth with Medicare endorsement. We recommend reform expanding these geographical criteria.

Use of audio call or telephone is not currently permitted. Those living in rural and remote areas often have restricted access to stable internet service. By offering up to half of the consultations by telephone will ensure that those parents who are particularly isolated are still able to receive significant support.

This investment provides further reach opportunities to parents and combats challenges to receiving treatment. An expansion to this scheme can be implemented quickly and without additional costs of developing new programs.

This rural, regional and remote health strategy is effective in treating perinatal mental health patients with the Gidget Foundation's 'Start Talking' Program (which is currently undergoing an independent evaluation by PwC with the report due in mid February 2020). With expansion, this program will be accessible to those living in:

- MM2 - Large rural towns: Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are not MM 2 and are in, or within a 15km drive of a town between 15,000 to 50,000 residents. For example: Dubbo, Lismore, Yeppoon and Busselton
- MM3 - Regional centres: Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are in, or within a 20km drive of a town with over 50,000 residents. For example: Ballarat, Mackay, Toowoomba, Kiama, Albury and Bunbury.

Importantly, the expansion redistributes mental health services without relocating clinicians. Reforming this scheme goes some way to meeting the perinatal mental health support needs of new parents in regional, rural and remote communities. People living in regional, rural and remote Australia (i.e. not MMM1) would no longer experience the distress, inconvenience, time and expense of travelling significant distances to access perinatal support services. For some patients, just leaving their home to seek treatment is not possible, with new mothers often facing barriers such as not being able to drive due to the constraints of caesarean or general physical recovery, fatigue and a new baby. This practical change allows all perinatal mental health specialists to better service their patients' mental health care needs.

Patients' Experiences of Gidget Foundation Australia's Telehealth Program, 'Start Talking'

"Useful to prevent the stress of trying to get out of the house with a small baby and also useful because my access to good support isn't limited by my location"

"Working with Gidget so far has been outstanding. I enjoy the online aspect so I don't have to rush to appointments with my baby. I've been given amazing targeted advice for my circumstances"

"I live very remote ... [face to face] would have been impossible or required significant logistics/travel cost /time"

5. Conclusion

The prevalence and cost of perinatal mental health disorders is paramount. This submission outlines two recommendations to promote early intervention and extend the treatment period to combat ongoing mental ill-health. To prevent recurring illness and support those experiencing PNDA, the first proposed recommendation is the creation of the Perinatal Treatment Plan (PTP). The occurrence of PNDA is widely spread and is being experienced by at least 1 in 6 parents. The breadth of PNDA's impact is felt beyond a parent receiving a diagnosis and longer than the duration of symptoms.

Further, with the 'Maternity to Home' announcement centred on national hospital screening, it is evident (and presumably desirable) that screening tools will identify parents currently undetected. With 100,000 parents per year currently diagnosed with PNDA, an inevitable increase in this number is a pandemic needing attention. Receiving treatment will remain an unaddressed challenge without adequate referral pathways and resources. These recommendations for treatment are tailored to new and expectant parents and promote early intervention and prevention. A Medicare-endorsed Perinatal Treatment Plan caters for relevant referrals at any time in the perinatal period from conception to one year post-partum.

The second recommendation is an expansion of the Telehealth Access to Psychological Services. The geographical and accessibility expansion of the existing scheme can ensure rapid and meaningful impact on communities. Further, clinicians and mental health services can assist quickly and without relocation costs. Reforming this scheme meets requirements for expecting and new parents in regional, rural and remote communities nationally.

In summary, Gidget Foundation Australia is open to continuing the dialogue with the Australian Productivity Commission Mental Health Public Inquiry to improve the outcomes of perinatal mental health disorders. The implementation of these two recommendations will provide support to those identified as at risk, experiencing mental ill-health and help reduce consequent adverse effects on the 100,000 Australian families known to be affected by PNDA as well as the many more likely to be identified.

6. Contact Details

Should any questions or further discussion be required, please contact the CEO of Gidget Foundation Australia:
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7. Appendices

References
https://gidgetfoundation.org.au/screening-and-assessment/

EPDS[15]
DASS[16]
Cost of PNDA report

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GidgetFoundationAustralia
Promoting emotional wellbeing for expectant & new parents

Questionnaire

Gidget Foundation Australia

DASS 21

Lovibond, S.H., Lovibond, P.F. (1995)

Name: _____ Date: _____

INSTRUCTIONS

Please read each statement and check the box 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

- ☐ 0 Did not apply to me at all — NEVER
- ☐ 1 Applied to me to some degree, or some of the time — SOMETIMES
- ☐ 2 Applied to me to a considerable degree, or a good part of time — OFTEN
- ☐ 3 Applied to me very much, or most of the time — ALMOST ALWAYS

		NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS	D	A	S
1.	I found it hard to wind down	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
2.	I was aware of dryness of my mouth	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
3.	I couldn't seem to experience any positive feeling at all	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
4.	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
5.	I found it difficult to work up the initiative to do things	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
6.	I tended to over-react to situations	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
7.	I experienced trembling (eg, in the hands)	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
8.	I felt that I was using a lot of nervous energy	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
9.	I was worried about situations in which I might panic and make a fool of myself	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
10.	I felt that I had nothing to look forward to	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
11.	I found myself getting agitated	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
12.	I found it difficult to relax	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
13.	I felt down-hearted and blue	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
14.	I was intolerant of anything that kept me from getting on with what I was doing	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
15.	I felt I was close to panic	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
16.	I was unable to become enthusiastic about anything	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
17.	I felt I wasn't worth much as a person	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
18.	I felt that I was rather touchy	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
19.	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
20.	I felt scared without any good reason	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
21.	I felt that life was meaningless	☐ 0	☐ 1	☐ 2	☐ 3	☐	☐	☐
					TOTALS	☐	☐	☐

Gidget Foundation Australia exists to promote the importance of emotional wellbeing among expectant and new parents, their health providers and the wider community to ensure that those in need receive timely, appropriate and supportive care.

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GidgetFoundationAustralia
Promoting emotional wellbeing for expectant & new parents

Scoring Guide

Gidget Foundation Australia

DASS 21

Lovibond, S.H., Lovibond, P.F. (1995)

DASS Severity Ratings

The DASS is a quantitative measure of distress along the 3 axes of depression, anxiety[1] and stress[2]. It is not a categorical measure of clinical diagnoses.

Emotional syndromes like depression and anxiety are intrinsically dimensional - they vary along a continuum of severity (independent of the special diagnosis). Hence the selection of a single cut-off score to represent clinical severity is necessarily arbitrary. A scale such as the DASS can lead to a useful assessment of disturbance, for example individuals who may fall short of a clinical cut-off for a special diagnosis can be correctly recognised as experiencing considerable symptoms and as being at high risk of further problems.

However for clinical purposes it can be helpful to have 'labels' to characterise degree of severity relative to the population. Thus the following cut-off scores have been developed for defining mild / moderate / severe / extremely severe scores for each DASS scale.

Note: the severity labels are used to describe the full range of scores in the population so 'mild' for example means that the person is above the population mean but probably still way below the typical severity of someone seeking help (ie it does not mean a mild level of disorder.

The individual DASS scores do not define appropriate interventions. They should be used in conjuction with all clinical information available to you in determining appropriate treatment for any individual.

Notes:

1. Symptoms of psychological arousal
2. The more cognitive, subjective symptoms of anxiety

DASS 21 SCORE

DEPRESSION SCORE	ANXIETY SCORE	STRESS SCORE

	Depression	Anxiety	Stress
Normal	0–4	0–3	0–7
Mild	5–6	4–5	8–9
Moderate	7–10	6–7	10–12
Severe	11–13	8–9	13–16
Extremely Severe	14 +	10 +	17 +

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Promoting emotional wellbeing for expectant & new parents

Questionnaire

Gidget Foundation Australia

Edinburgh Postnatal Depression Scale (EPDS)

Cox JL, Holden JM Sagovsky R (1987) Detection of postnatal depression: development of the 10-itemEdinburgh postnatal depression scale. Brit J Psychiatry 150 782-86. Reproduced with permission.

Name: _____ Date: _____

Weeks pregnant: _____ or weeks postnatal : _____ SCORE TOTAL: _____ Q 10: _____

INSTRUCTIONS

We would like to know how you have been feeling in the past week. Please select the box for each question that comes closest to how you have felt in the last seven days, not just how you feel today.

1. I have been able to laugh and see the funny side of things

- ☐ As much as I always could
- ☐ Not quite so much now
- ☐ Definitely not so much now
- ☐ Not at all

2. I have looked forward with enjoyment to things

- ☐ As much as I ever did
- ☐ Rather less than I used to
- ☐ Definitely less than I used to
- ☐ Hardly at all

3. I have blamed myself unnecessarily when things went wrong

- ☐ Yes, most of the time
- ☐ Yes, some of the time
- ☐ Not very often
- ☐ No, never

4. I have been anxious or worried for no good reason

- ☐ No, not at all
- ☐ Hardly ever
- ☐ Yes, sometimes
- ☐ Yes, very often

5. I have felt scared or panicky for no very good reason

- ☐ Yes, quite a lot
- ☐ Yes, sometimes
- ☐ No, not much
- ☐ No, not at all

6. Things have been getting on top of me

- ☐ Yes, most of the time I haven't been able to cope at all
- ☐ Yes, sometimes I haven't been coping as well as usual
- ☐ No, most of the time I have coped quite well
- ☐ No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping

- ☐ Yes, most of the time
- ☐ Yes, sometimes
- ☐ Not very often
- ☐ No, not at all

8. I have felt sad or miserable

- ☐ Yes, most of the time
- ☐ Yes, quite often
- ☐ Not very often
- ☐ No, not at all

9. I have been so unhappy that I have been crying

- ☐ Yes, most of the time
- ☐ Yes, quite often
- ☐ Only occasionally
- ☐ No, never

10. The thought of harming myself has occurred to me

- ☐ Yes, quite often
- ☐ Sometimes
- ☐ Hardly ever
- ☐ Never

Gidget Foundation Australia exists to promote the importance of emotional wellbeing among expectant and new parents, their health providers and the wider community to ensure that those in need receive timely, appropriate and supportive care.

Gidget Foundation Australia PO Box 4076, Royal North Shore Hospital NSW 2065 Australia
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GidgetFoundationAustralia
Promoting emotional wellbeing for expectant & new parents

Scoring Guide

Gidget Foundation Australia

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SCORING GUIDE — INSTRUCTIONS

Add the number next to each circle that has been filled in.

This is the total score. See below for the range of scores on the EPDS. SCORE TOTAL: _____ Q 10: _____

1. I have been able to laugh and see the funny side of things
- [0] As much as I always could
- [1] Not quite so much now
- [2] Definitely not so much now
- [3] Not at all

2. I have looked forward with enjoyment to things
- [0] As much as I ever did
- [1] Rather less than I used to
- [2] Definitely less than I used to
- [3] Hardly at all

*3. I have blamed myself unnecessarily when things went wrong
- [3] Yes, most of the time
- [2] Yes, some of the time
- [1] Not very often
- [0] No, never

4. I have been anxious or worried for no good reason
- [0] No, not at all
- [1] Hardly ever
- [2] Yes, sometimes
- [3] Yes, very often

*5. I have felt scared or panicky for no very good reason
- [3] Yes, quite a lot
- [2] Yes, sometimes
- [1] No, not much
- [0] No, not at all

*6. Things have been getting on top of me
- [3] Yes, most of the time I haven't been able to cope at all
- [2] Yes, sometimes I haven't been coping as well as usual
- [1] No, most of the time I have coped quite well
- [0] No, I have been coping as well as ever

*7. I have been so unhappy that I have had difficulty sleeping
- [3] Yes, most of the time
- [2] Yes, sometimes
- [1] Not very often
- [0] No, not at all

*8. I have felt sad or miserable
- [3] Yes, most of the time
- [2] Yes, quite often
- [1] Not very often
- [0] No, not at all

*9. I have been so unhappy that I have been crying
- [3] Yes, most of the time
- [2] Yes, quite often
- [1] Only occasionally
- [0] No, never

*10. The thought of harming myself has occurred to me
- [3] Yes, quite often
- [2] Sometimes
- [1] Hardly ever
- [0] Never

Scoring

QUESTIONS 1, 2, & 4 (without an *)

Are scored 0, 1, 2 or 3 with top box scored as 0 and the bottom box scored as 3.

QUESTIONS 3, 5-10 (marked with an *)

Are reverse scored, with the top box scored as a 3 and the bottom box scored as 0.

Range of EPDS Scores

0-9: Scores in this range may indicate the presence of some symptoms of distress that may be short-lived and are less likely to interfere with day to day ability to function at home or at work. However if these symptoms have persisted for more than a week or two further enquiry is warranted.

10-12: Scores within this range indicate presence of symptoms of distress that may be discomforting. Repeat the EPDS in 2 weeks time and continue monitoring progress regularly. If the scores increase to above 12 assess further and consider referral as needed.

13 +: For postnatal clients, scores above 12 require further assessment and appropriate management as the likelihood of depression is high. Referral to a psychiatrist/psychologist may be necessary. The same applies to antenatal clients when they present with a score of 14 or above.

Item 10: Any client who scores 1, 2 or 3 on item 10 requires further evaluation before leaving the office to ensure her own safety and that of their baby.

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The cost of perinatal depression and anxiety in Australia

November 2019

Report prepared by PwC Consulting Australia

Gidget Foundation Australia

perinatal wellbeing centre

PANDA Perinatal Anxiety & Depression Australia

Peach Tree PERINATAL WELLNESS

Disclaimer

This report has been prepared by PricewaterhouseCoopers Consulting (Australia) Pty Limited (PwC Consulting Australia) with input from the Perinatal Wellbeing Centre (ABN 43 775 427 479), PANDA Australia (ABN 64 063 647 374) and Peach Tree Perinatal Wellness (ABN 87 545 227 108) for the use of Gidget Foundation Australia (ABN 52 160 202 960).

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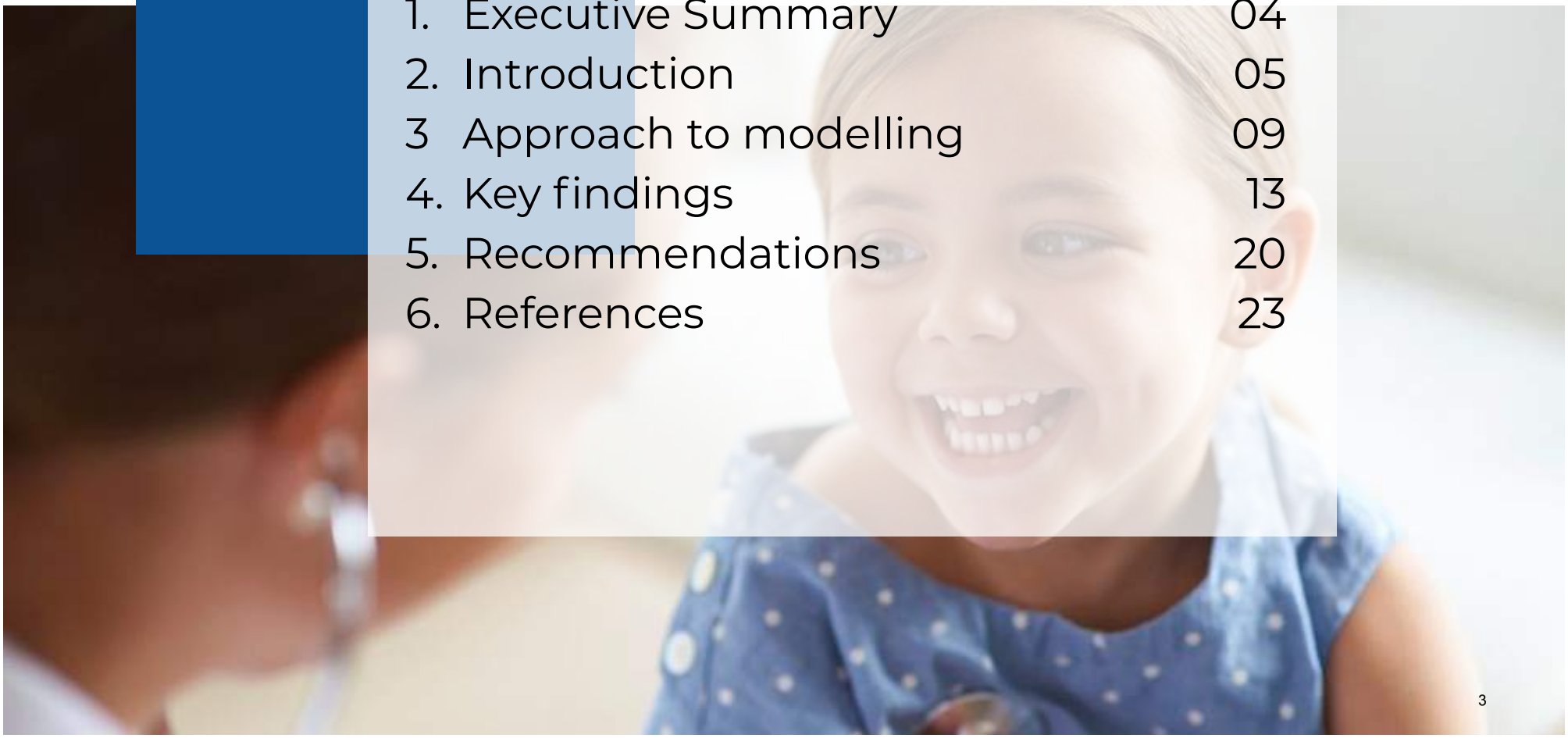
Contents



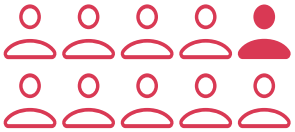
Executive summary

The cost of perinatal depression and anxiety (PNDA) in Australia

Prevalence of PNDA

1 in 5 mothers

1 in 10 fathers/partners



First year impacts

$227m	$643m	$7m	$877m
Health costs	Economic costs	Wellbeing costs	Total impacts

Other insights

35,670 Disability Adjusted Life Years (DALYs) attributable to PNDA for each annual cohort of parents

14.5 days average patient community mental health treatment days

21% of maternal suicides due to severe depression

1-2 in 1,000 mothers experience postnatal psychosis*

45% of fathers are not aware that men can experience postnatal depression as well as women

** The impacts of postnatal psychosis have not been costed in this study.*

The perinatal period, encompassing both the antenatal (from conception to birth) and postnatal (12 months from birth) periods, is a time of great change for mothers and fathers alike. This change can bring with it increased risk and vulnerability for a number of conditions, including perinatal depression and anxiety (PNDA), postpartum psychosis, post traumatic stress disorder (PTSD) and obsessive compulsive disorder (OCD). In Australia, one in five mothers and one in ten fathers/partners experience PNDA. There are psychological, social and physical vulnerabilities that can increase the likelihood of PNDA. Further, Aboriginal and Torres Strait Islander, culturally and linguistically diverse (CaLD) and lesbian, gay, bisexual, trans, intersex and queer (LGBTIQ+) communities can experience additional risk factors.

PNDA touches not only the parent experiencing the condition, but can also have impacts on the child and wider family, with some of these impacts lasting a lifetime. Understanding the cost of PNDA to Australia using updated data and research can support awareness raising to ensure that support to families can be continued during the critical early parenthood stage where it is needed. In this study we estimate the cost of PNDA to the health system, economy and wellbeing of those impacted. As shown alongside, in 2019 the estimated impacts of PNDA totalled $877m, comprised of:

- health costs attributable to PNDA equalling $227m, comprising increased use of primary and community health services and hospital health care services and increased risk of certain conditions for both the parent and child
- economic costs of $643m are attributable to productivity losses associated with increased workforce exit, absenteeism, presenteeism and carer requirements
- monetised social and wellbeing impacts include increased likelihood of developmental issues, depression, anxiety and child ADHD diagnoses, totalling $7m.

Beyond this are estimated lifetime impacts of $5.2b attributable to the increased risk of depression, anxiety and ADHD in the children of parents with PNDA, affecting wellbeing, productivity and health system use.

Many studies have a focus on maternal postnatal depression, and data are limited on the impacts of anxiety compared to depression, as well as the effects experienced by certain cohorts such as LGBTIQ+ couples. This analysis seeks to include in its scope the cost of perinatal depression and anxiety to both parents to enable a broader understanding of its impacts to the individual, family and community more broadly.

01

Introduction

1. Introduction

PNDA affects 1 in 5 mothers and 1 in 10 fathers/partners in Australia, with psychological, social and physical factors increasing risk

Perinatal depression and anxiety (PNDA) is a common condition that many parents experience, having lasting effects on the parent, child and wider family as well as the Australian health system and economy. The perinatal period encompasses both the antenatal (conception to birth) and postnatal (first year after birth) periods. The duration of PNDA is different for every parent within this defined period, dependent on a number of individual and external factors.

PNDA affects 1 in 5 mothers and 1 in 10 fathers/partners.* With around 600,000 people becoming parents in Australia annually, this means that 60,000 mothers and 30,000 fathers/partners will experience PNDA.

This analysis focuses on depression and anxiety experienced during pregnancy and the first year after birth. During the perinatal period, parents may experience other mental illnesses including post-traumatic stress disorder, which affects 4 per cent of women postpartum,[1] among other conditions including postpartum psychosis and obsessive compulsive disorder. These mental illnesses are often experienced in comorbidity with depression and/or anxiety. However, limited research has been conducted on these conditions during the perinatal period.

PNDA presents as a spectrum where diagnoses range from mild to severe. These varying experiences of the condition will require different treatments that result in varied impacts for the parent, child, family and wider health system. This analysis considers where health system costs may differ for parents with PNDA based on the severity of the condition. However, as there is limited data on PNDA prevalence by severity and effect of this severity on other conditions arising for the parent, child and wider family these costs largely do not consider the impact of PNDA severity.

PNDA risk factors

There are a number of psychological, social and physical factors that can contribute to an increased risk of PNDA. Most research focuses on the mothers, however a number of studies have found an overlap between the risk factors for both parents. A number of these risk factors are outlined below.

Psychological:

- previous history of mental illness[2]
- family history of mental illness[2]
- alcohol misuse[2]
- perfectionist or controlling personality[3]
- trauma.[2]

Social:

- mother being born in a country other than Australia[4]
- perceived financial difficulties[4]
- low socioeconomic status[2]
- lack of support network[2]
- poor relationship with partner[5]
- not having enough leave after childbirth[6]
- smoking.[7]

Physical:

- pregnancies to multiple children[8]
- pregnancy or birth complications[2]
- age less than 18 or over 35[3]
- fertility issues.[3]

It is worth noting that in relationships there is often couple comorbidity where both partners experience PNDA simultaneously.

** This prevalence rate has been calculated by triangulating a range of recent Australian data sources so as to include both depression and anxiety in the perinatal period, further validated by representatives from Gidget Foundation Australia, PANDA Australia , Perinatal Wellbeing Centre and Peach Tree Perinatal Wellness.*

1. Introduction

There are cohorts for which PNDA prevalence is different compared to the general population based on additional risk factors

In Australia, fathers/partners, Aboriginal and Torres Strait Islander communities, CaLD communities and LGBTIQ+ communities may experience PNDA differently compared to the general population. These groups can face an increased level of discrimination from the wider Australian community and have reduced support networks or access to preventative treatments for PNDA. The risk factors for each of these groups are described below, with related recommendations provided in section four of this report.

Fathers/partners

Much research on PNDA has focused on mothers' experiences, however 1 in 10 fathers/partners will experience PNDA. Recent studies have found that men also find the perinatal period as a stressful and challenging time that can lead to depression and/or anxiety in a similar manner to women.

Studies have shown that 50 per cent of fathers are unaware that they can also experience PNDA.[9] This lack of awareness means that this group is less likely to reach out to the appropriate support networks or be diagnosed. Other risk factors for fathers/partners can include financial stress, particularly as fathers/partners may be the main income earner following the birth of a child, as well as attitudes towards PNDA and fear of being seen as a 'failure' if they are not coping with parenting as they expected.[9]

Aboriginal and Torres Strait Islander communities

There are a number of interlinking factors that place Aboriginal and Torres Strait Islander communities at higher risk of experiencing PNDA. This includes social risks such as smoking, with the Aboriginal and Torres Strait Islander adult smoking rate being more than double the non-Aboriginal and Torres Strait Islander rate,[10] as well as psychosocial risk factors such as lower socioeconomic status. Lower economic status can also lead to reduced access to health care which is related to poorer perinatal health experienced by Aboriginal and Torres Strait Islander women compared to other Australian women. In turn, reduced healthcare can lead to increased likelihood of complicated pregnancies and births, which is evident within the Aboriginal and Torres Strait Islander population,[10] and also increases the likelihood of PNDA.

Culturally and Linguistically Diverse (CaLD) communities

A significant risk factor leading to an increased likelihood of experiencing PNDA is being born in a country other than Australia and having a limited support network; these factors are often interrelated.

CaLD community members can be less comfortable seeking mental health care due to language difficulties, a limited understanding of how to navigate the health system and lack of proximity to formal and informal support services, among other factors.[11] Studies show that in areas where 20 per cent of the population were born in non-English speaking countries, these communities only comprised 13 per cent of community clients and 15 per cent of inpatients using mental health services.[11] This may further exacerbate the costs PNDA places on the parent, child, family and wider economy.

Lesbian, Gay, Bisexual, Trans, Intersex and Queer (LGBTIQ+) communities

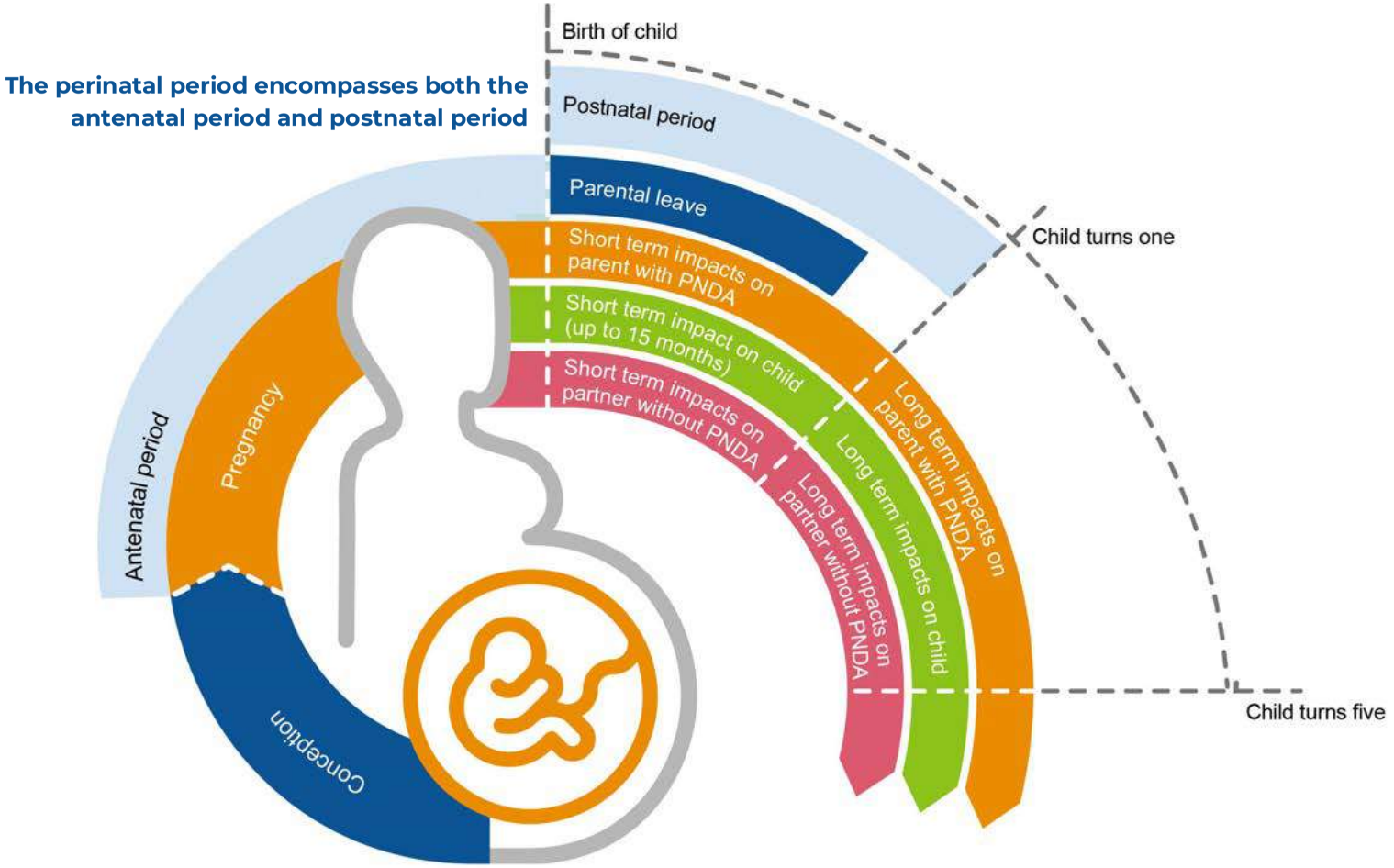
There have been limited studies focused on PNDA in LGBTIQ+ parents however, some research suggests that LGBTIQ+ parents experience higher levels of PNDA than other population groups. It has also been found that lesbian and bisexual biological mothers may be at higher risk for depression when compared to heterosexual biological mothers.[12]

It is known that a lack of support network can lead to increased risk of developing PNDA. LGBTIQ+ communities can often feel socially isolated and without the same access to informal support networks as others. In addition, it can be harder for non-biological parents to access formal support services for PNDA.[13]

1. Introduction

PNDA has varied and long-lasting impacts for the parent, child and wider family

The impacts of PNDA are varied, depending on the stage that the parent and child are at in pregnancy, and life. The approach to frame and stage the costs associated with PNDA is summarised in the diagram below.



02

Approach to modelling

2. Approach to modelling

Modelling has been conducted over a number of impact domains and stakeholder groups

Using existing cost studies and research, a cost framework was developed to summarise the main impacts of PNDA (see **Figure 3** overleaf). As shown in **Figure 1**, this framework includes:

- impact domains - health, economic/productivity and social/wellbeing
- stakeholder groups - parent(s) with PNDA, children of parents with PNDA and the wider family, including partners without PNDA and other children in the family.

Impacts in this framework were either qualified, quantified or monetised, dependent on the level of research, data and insights currently available:

1. monetised - an estimated dollar figure relating to prevalence has been assigned to the cost where there is robust research available to establish a link between PNDA and the associated impact
2. quantified - a link between PNDA and the impact is has been determined by data or research and will be quantified based on the prevalence, but not monetised
3. qualified - where data is not available to either quantify or cost the impact to the individual, qualitative insights will be provided.

These costs were then modelled within the parameters outlined in **Figure 2**. For further detail on the limitations to both the approach and data used, see page 19.

Figure 1 Impact domains and stakeholders of PNDA Cost Framework

Impact domains	Stakeholders
1. Health 2. Economic 3. Wellbeing	1. Parent(s) with PNDA 2. Child of parent with PNDA 3. Wider Family, including partner without PNDA and other children

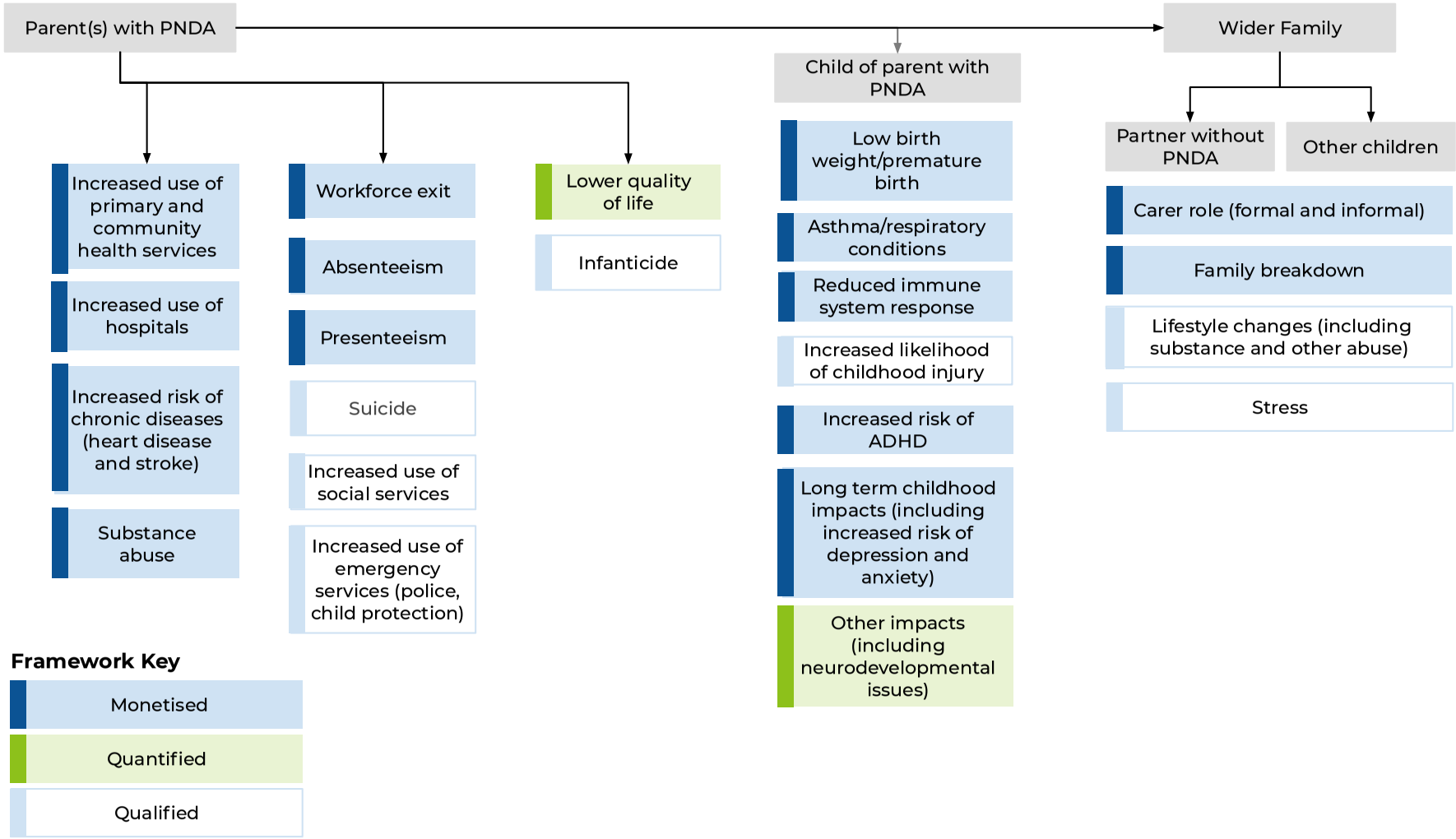
Figure 2 Summary of key modelling parameters

01	Impacts in both the antenatal and postnatal periods are included.
02	'Parents with PNDA' includes the experience of both mothers and fathers/partners.
03	The impacts of perinatal depression and anxiety are considered and costed where applicable.
04	Costs are presented over a one, three and lifetime period as appropriate and attributable to PNDA.

2. Approach to modelling

PNDA affects stakeholders across a number of impact domains

Figure 3 PNDA cost framework



2. Approach to modelling

PNDA affects stakeholders across a range of time periods

PNDA as a condition affects individuals in different ways and for varying time frames, however the perinatal period is typically defined as the time from conception to one year after birth. The health, economic and social impacts of the condition similarly can last for a range of time, dependent on the individual and circumstances. For the purposes of our modelling, the maximum time periods that are monetised are presented in **Figure 4**. Perinatal impacts have been costed for a maximum of one year, whereas other short-term cost elements have been costed up to three years only. In doing so we seek to use a conservative approach to account for other life events and risk factors that may arise after the perinatal period.

Figure 4 Modelling time period for individual cost elements

Estimated cost element	Impact domain	Maximum quantitative modelling period
Parent with PNDA		1 year / 3 years / Lifetime
Increased use of primary and community health services	Health	
Increased use of hospitals		
Increased risk of chronic diseases		
Increased risk of substance abuse		
Increased workforce exit	Economic	
Absenteeism		
Presenteeism		
Child of parent with PNDA		
Increased risk of low birth weight/premature birth	Health	
Reduced immune system response		
Increased likelihood of asthma/respiratory conditions		
Increased risk of depression	Wellbeing	
Increased risk of anxiety		
Increased risk of ADHD		
Wider family of parent with PNDA		
Increased likelihood of family breakdown	Economic	
Required to fill carer role		

03

Key findings

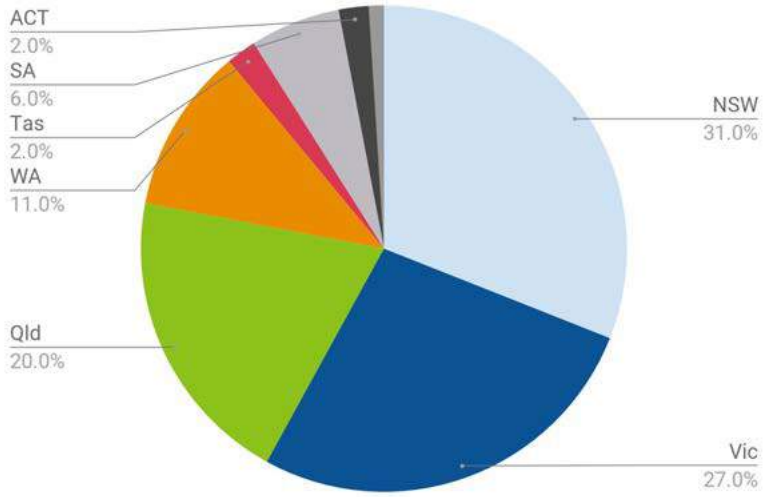
3. Key findings

Estimated impacts of PNDA in the first year alone total $877m, with additional lifetime costs

Of the 600,000 parents birthing in Australia annually, it is estimated that 60,000 mothers and 30,000 fathers/partners have PNDA. With the average ages of mothers and fathers in Australia at 30.6 and 33.3 respectively[14] [15] the onset of PNDA can have significant impacts on health, productivity and social wellbeing for years to come.

Using the number of mothers with PNDA, and accounting for those who give birth to multiples (i.e. twins/triplets), it is estimated that up to 61,000 children will be impacted by the effects of PNDA. As shown in **Figure 5**, births nationwide are heavily distributed toward NSW, Victoria and Queensland. Despite this, appropriate care settings should be available and accessible to all mothers across Australia to prevent and treat PNDA and subsequently avoid the detrimental impacts to the parent, child and wider family.

Figure 5 State and territory of birth, based on AIHW Data tables for Australia's mothers and babies (2017)



As shown in **Figure 6,** PNDA has a significant health, economic and wellbeing burden over a one, three and lifetime period of analysis. Health costs are greatest in the first year due to the increased level of hospital and primary and community health services used by mothers and fathers/partners experiencing PNDA in addition to the health system costs associated with an increased likelihood of preterm birth and low birth weight. Economic and productivity costs are present at both one and three years, due to presenteeism, absenteeism and increased workforce exit. Social and wellbeing impacts are evident over all periods of analysis, with significant lifetime impacts due to an increased probability of depression, anxiety and ADHD in children of parents with PNDA.

Figure 6 Summary of costs associated with PNDA

Year one impacts

$227m	$643m	$7m	**$877m**
Health costs	Economic costs	Wellbeing costs	Total impacts in year one

Years two to three impacts

$195m	$1.0b	$14m	**$1.2b**
Health costs	Economic costs	Wellbeing costs	Total impacts in years two to three

Lifetime impacts

$5.2b	**$5.2b**	**$7.3b**
Wellbeing costs	Total lifetime impacts	Total overall impacts

3. Key findings

The parent, child and wider family are all affected by PNDA

There are three stakeholder groups directly impacted by PNDA, as outlined in the figure below. In addition to these groups, each of these impacts also has flow-on effects to the wider economy, and wellbeing of wider Australia.

Figure 7 Summary of impacts PNDA by stakeholder group

Parents with PNDA not only face a lower overall quality of life and increased health system use, but are also impacted by PNDA in their personal and work lives. Impacts for parents with PNDA include:

- increased use of primary and community health services
- increased use of hospitals
- increased risk of chronic diseases
- increased risk of substance abuse
- increased workforce exit
- absenteeism
- presenteeism
- lower quality of life
- increased risk of suicide.

Children of parents with PNDA are affected in both the short and long term, with a number of impacts including:

- increased risk of low birth weight/premature birth
- increased likelihood of childhood injury
- reduced immune system response
- increased likelihood of asthma/respiratory conditions
- increased likelihood of childhood trauma
- increased likelihood of neurodevelopmental issues
- increased risk of depression
- increased risk of anxiety
- increased risk of ADHD.

Whilst the health care costs of low birth weight, premature birth, reduced immune system response and asthma/respiratory conditions are captured in the first year costs of PNDA, the more significant impacts on children of parents with PNDA are not seen until later in life. These include reduced productivity and increased health system costs due to depression, anxiety and ADHD.

The wider family of a parent with PNDA, including partners without PNDA and other children are also impacted by an increased likelihood of family breakdown in addition to the increased likelihood that they will have to step up and fill a carer role.

3. Key findings

Health costs are substantial for both parent and child in the short to medium term

Parents with PNDA

Parents with PNDA generate costs to the healthcare system due to increased use of both hospital and primary and community health service usage. Based on survey responses from the National Infant Feeding Survey,[16] it has been estimated that seven per cent of all parents with PNDA will see their GP for treatment, 46 per cent will see either a psychologist or counsellor, 15 per cent will be treated by a psychiatrist and one per cent will be admitted to hospital. Both generalist treatment and specialist care may be used in a hospital setting, relative to individual support requirements. Parents who are not seeking treatment for their PNDA or are using other interventions have been excluded from this analysis. In total, an estimated $67m in primary and community health services and $8m in hospital care annually has been attributed to PNDA as shown in **Figure 8.**

In addition to the use of health services for PNDA directly, costs are also incurred for the additional cases of chronic diseases and substance abuse arising from PNDA. Increased risk of type-2 diabetes, chronic disease and stroke has been linked to depression, [17] with subsequent annual healthcare costs for treatment totalling an estimated $10m in the first year, with an additional $20m of costs in years two and three. PNDA has further been linked with increased risk of substance abuse (alcohol and tobacco)[18 19] resulting in increased costs to the health system and wider economy of $77m in the first year and $155m in years two to three.

Children of parents with PNDA

Increased health care costs attributable to children of parents with PNDA includes estimatd treatment costs of $54m for increased cases of premature birth or low birth weight (LBW),[20] $4m in increased cases of gastrointestinal infections due to reduced immune system response[21] and an increased likelihood of asthma and other respiratory conditions[22] resulting in $5m cost in the first year. Whilst not quantified in this study, research has also shown that there is a link between PNDA and an increased likelihood of unintentional childhood injury,[23] likely representing additional health care and wellbeing costs annually.

Wider Family

Whilst not quantified in this study, PNDA has been associated with additional feelings of stress and less support in partners without PNDA,[24] potentially leading to a range of lifestyle changes and increased risk for substance or other abuse.[25]

Figure 8 Estimated health costs for parents with PNDA

	Year one	Years two to three	Lifetime
Primary and community health services	$67m	NA	NA
Hospital care	$8m	NA	NA
Chronic diseases	$10m	$20m	NA
Substance abuse	$77m	$155m	NA

Figure 9 Estimated health costs for children of parents with PNDA

	Year one	Years two to three	Lifetime
LBW and premature birth	$54m	NA	NA
Reduced immune system	$4m	$9m	NA
Asthma and respiratory conditions	$5m	$11m	NA

3. Key findings

Economic impacts are greatest for the parent with PNDA and wider family

Parents with PNDA

There are a broad range of economic and productivity impacts for parents experiencing PNDA. There is a reduced probability of mothers with PNDA being employed after birth,[26] resulting in increased workforce exit totalling $175m in the first year after birth. Further, mental health conditions result in a number of absenteeism and presenteeism hours per person annually.[27] For parents with PNDA, this totals $71m and $238m of estimated costs respectively due to reduced productivity in the first year alone.

In this study, the quantum and value of domestic and childcare work has not been explicitly measured due to the difficulty of quantification. Further, there is a lack of research on the effect of PNDA on the distribution of this work between parents in both heterosexual and other couples. Additionally, whilst not quantified in this study, 21 per cent of maternal suicides can be attributed to severe depression,[28] incurring significant health system, productivity and emergency service costs per incident.[29]

Figure 10 Estimated economic costs for parents with PNDA

	Year one	Years two to three	Lifetime
Workforce exit	$175m	$351m	NA
Absenteeism	$71m	$141m	NA
Presenteeism	$238m	$469m	NA

Wider family

Of the women with a child under two in Australia, 86 per cent are married,[30] and those with PNDA face a reduced probability of remaining married after childbirth.[24] Divorce has been associated with a reduction in equivalised household income for women,[31] with a total estimated cost of $27m in the first year post birth and an additional $54m in years two to three for mothers with PNDA.

Further, it has been assumed that the more severe cases of PNDA will require a family member to step in as a carer for the mother or father/partner experiencing the condition. Those Australians that are a primary carer are estimated to have a reduced earnings potential annually,[31] totalling $131m in the first year of PNDA alone.

Figure 11 Estimated economic costs for the wider family of parents with PNDA

	Year one	Years two to three	Lifetime
Family breakdown	$27m	$54m	NA
Carer role	$131m	NA	NA

3. Key findings

There are significant lifetime wellbeing cost for the child and parent with PNDA

Parents with PNDA

Parents with PNDA face a significantly lower overall quality of life due to their condition, equating to 35,670 DALYs. Each of these years lost due to ill-health represent a significant social and wellbeing cost for these parents, their children and wider family.

Further to these social costs, severe PNDA can increase the risk of infanticide,[32] however this risk is higher for cases of postpartum psychosis which has been excluded from this study. Costs attributable to infanticide have therefore not been considered.

Children of parents with PNDA

Significant social costs are evident for the children of parents with PNDA, who are at risk of lifetime impacts to development, productivity and wellbeing. Children born to a parent who experienced antenatal depression have an increased likelihood of experiencing depression themselves later in life,[33] resulting in increased health and productivity impacts of an estimated $400m over their lifetime. Similarly, antenatal depression has been associated with increased likelihood of anxiety in children at 18 years of age[34] resulting in an additional $1.3b of lifetime costs.

Further to depression and anxiety, children born to parents with PNDA are more likely to be diagnosed with attention-deficit/hyperactivity disorder (ADHD)[35], with the majority of these childhood cases persisting into adulthood.[36] During childhood, ADHD has health care costs[37] and educational impacts, with increased probability of grade repetition and lower math and reading test scores.[38] In adulthood, ADHD has additional health system costs as well as crime and justice and productivity costs.[37] Of the children born to parents with PNDA annually, there are $21m estimated costs in the first three years after birth due to ADHD in addition to a further $3.4b in lifetime costs

Whilst not included in this study, children born to parents with PNDA have an increased likelihood of neurodevelopmental issues, attributed to decreased IQ points[39] and lower cognitive test scores.[40]

Figure 12 Estimated wellbeing costs for children of parents with PNDA

	Year one	Years two to three	Lifetime
Depression	NA	NA	$400m
Anxiety	NA	NA	$1.3b
ADHD	$7m	$14m	$3.4b

Overall, it is evident that PNDA has significant health, economic and wellbeing costs for parents, children being born and the wider family of those experiencing the condition. A summary of the costs for stakeholder groups over each time period of analysis is shown in **Figure 13**. These costs include the health, economic and wellbeing costs detailed in the preceding pages.

Figure 13 Summary of all estimated costs by stakeholder

	Year one	Years two to three	Lifetime	Total
Parent	$648m	$1.1b	NA	$1.8b
Child	$71m	$34m	$5.2b	$5.3b
Wider family	$158m	$54m	NA	$212m

3. Key findings

There are a number of limitations to the approach and data used in this study, that additional research would reduce

The approach to modelling has been subject to a number of limitations which are outlined below. Many of these limitations are due to data and research gaps where the impact was unable to be quantified. Where there has been a limitation, a conservative approach has been taken and it is likely that the cost presented in this report is understated.

Research has centred on depression with less focus on anxiety

The term PNDA covers depression and anxiety experienced during pregnancy to one year after birth. Many studies to date have focused on postnatal depression, particularly maternal postnatal depression. It has therefore been difficult to quantify the isolated difference in prevalence rates and costs for depression and anxiety experienced in the antenatal period as well as for the postnatal period.

Where studies have focused on the impacts of PNDA as a whole we have assumed that the impacts are consistent across both depression and anxiety. Further, as our research focuses on the prevalence rates of PNDA as a whole, we have not explicitly been able to determine the overlap between groups experiencing depression and anxiety and whether it occurs in the antenatal or postnatal period.

The impact of PNDA between parents is unknown

There has been limited research exploring how one parent experiencing PNDA affects the potential onset in the other parent as a result. In this study, we estimate childhood impacts using the number of mothers with PNDA (including multiple births), however this number does not account for situations where the father/partner may be experiencing PNDA and the mother is not.

There is a higher likelihood of PNDA in some cohorts

As noted in the introduction, there are some cohorts that are generally more exposed to risk factors associated with PNDA, including Aboriginal and Torres Strait Islander, CaLD and LGBTIQ+ communities. Members of these communities often face barriers to access of mental healthcare services, whether due to lack of proximity or perceptions of stigma associated with mental illness. As such, many cases of PNDA in these communities may go undiagnosed and will not be included in studies in this area. This lack of diagnosis and untreated PNDA is likely to lead to higher costs in the long-term.

As there is little research on PNDA within these specific communities, this study has taken a conservative approach and has not adjusted for the increased prevalence and subsequent cost of PNDA within these communities.

Little is known about the experience of LGBTIQ+ couples with PNDA

There has been very little research on LGBTIQ+ couples and their experiences with PNDA. The research that exists tends to focus on maternal PNDA for biological mothers in LGBTIQ+ couples, meaning there is very little information on men with children in LGBTIQ+ relationships. This limitation is further confounded by the relatively limited amount of research on paternal PNDA.

As discussed above, members of this community are exposed to a number of risk factors associated with PNDA that are likely to exacerbate their experience of the condition. This study has made a conservative attempt to include the cost of PNDA for LGBTIQ+ couples by using the number of people who become mothers and fathers annually as a starting point. We acknowledge that this does not include non-biological parents (for both heterosexual and LGBTIQ+ couples) and this is an area for further research.

The value of domestic work has not been quantified

In calculating the cost of PNDA we have included costs of lost work hours at a job. It is difficult to quantify both the quantum and the value of domestic and childcare work and therefore the value of the work that is lost due to a parent experiencing PNDA and the cost of someone else taking on this role. This study has taken an approach to value this work based on the number of hours lost at work due to the secondary or another carer becoming the primary carer as the primary carer is experiencing PNDA.

04

Recommendations

4. Recommendations

PNDA is a complex and far-reaching issue that requires holistic prevention and treatment

PNDA has significant impact on individuals, families and the Australian economy. Therefore, prevention, early intervention, and tailored treatment and integrated support pathways are essential mechanisms to assist in the reduction of society's financial burden and to foster improvement in the mental health and wellbeing of families.

There must be proactive identification and prevention

Opportunities for the prevention of PNDA should be explored, including comprehensive antenatal programs focusing on overall parental health and wellbeing, with rapport building front of mind when administering these programs. Further, services and treatment options should be supported by a high quality and comprehensive screening program which has been developed in collaboration with health professionals and consumers.

Informal and formal support networks for mothers and fathers during this period of life change are invaluable and should also be encouraged and supported alongside other community health interventions.

Ongoing treatment is essential

In an environment of increasing demand, it remains crucial that investment is prioritised for a broad range of integrated, evidence based services, support and treatment options to ensure that appropriate options are available to families. Service requirements are varied, ranging from individual clinical care through to group support options, and must be offered in a variety of modalities including face-to-face and tele-health. Service providers can range from peers to clinicians to community health organisations, dependent on the individual's needs and preferences.

Challenges of diagnosis and barriers to receiving treatment still exist

Programs and services should include a focus on supporting vulnerable cohorts, such as Aboriginal and Torres Strait Islander, Culturally and Linguistically Diverse and LGBTIQ+ communities. These cohorts are also considered less likely to seek help due to barriers to access which may include proximity to services, language barriers, perceived shame, stigma and social isolation and a lower mental health literacy level. Therefore, effort should be made in helping to identify cases of PNDA and provide culturally appropriate treatments in culturally safe environments.

There is a risk of PNDA recurrence

The risk of experiencing PNDA is higher for those who have a previous history of mental illness. Similarly, the risk of recurrent PNDA is relatively high, particularly when the PNDA is experienced towards the severe end of the spectrum. A study has found that women who are hospitalised for the first episode of PNDA were 46 times more likely to experience PNDA in subsequent pregnancies.[41]

This information should be used to highlight the importance of previous episodes of PNDA and a history of mental illness as predictors for future occurrences and to allow treatment and identification plans to be tailored accordingly.[42]

Holistic care is required to reduce PNDA risk factors

There are a number of factors that increase the risk of a parent experiencing PNDA. Of these, smoking and alcohol misuse and could benefit from focused interventions and holistic care to reduce overall risk.

In Australia, overall fewer women are smoking during pregnancy now compared to 15 years ago (8.3 per cent in NSW), however many Aboriginal women who are pregnant still smoke (41.3 per cent).[43] Similarly, 44 per cent of women have been reported to consume alcohol whilst pregnant, with 16.2 per cent drinking 1-2 times per month.[43] Focusing awareness and efforts on these preventable risk factors may help to reduce the likelihood of mothers experiencing PNDA.

4. Recommendations

PNDA is a complex and far-reaching issue that requires holistic prevention and treatment

An increased focus on awareness raising would assist in building community understanding

A sustained awareness raising program should be funded using social and traditional media to increase understanding of perinatal mental health at a population level, and to increase the number of people seeking help, therefore improving overall family wellbeing.

Information should be made available in a variety of community languages to ensure accessibility. Further, media campaigns need to reflect the diversity of the community, and short videos in different languages should be produced for social media campaigns targeting those with low health literacy or have English as a second language.

Support from workplaces is necessary to reduce family pressures

A recently published survey of more than 6,000 Australian parents[44] has shown that over 62 per cent find it difficult to look after their own physical and mental health as they attempt to balance work and family pressures. Further:[44]

- one-third of parents reported that the combination of work and family responsibilities contributed to stress and tension in relationships with their partners and children
- one in four parents and carers report that they had considered, or actively intended leaving their job in the next 12 months, due to difficulties combining their job with caring
- half of all parents returning to work after parental leave report significant fatigue, a third are worried and anxious, and one in five report feeling depressed
- two-thirds of parents reported that it was more acceptable for women to use family-friendly work options than for men
- men face more barriers accessing flexible work citing the impact on their career and reputation, how it would be perceived by their employer or colleagues and whether they could afford it.

It is clear from these findings that workplaces have a long way to go to help supporting parents during pregnancy and in their return to work after the birth of a child. Employee mental health can be affected by a number of risk factors in the workplace such as high job demands, poor support, poor organisational culture, remote work or traumatic events.[45]

Workplace policies and practices that reduce these organisational risk factors in addition to encouraging parents to balance their carer and other at-home commitments should be developed and advocated for at all leadership levels. Further, these policies and flexible working options should be available for both men and women equally, supported by a culture of acceptance and encouragement to reduce the stigma around mental health conditions in general and in particular in the period of pregnancy and childbirth.

Further research opportunities exist

Ongoing research should include all aspects of perinatal mental health and wellbeing, including the prevalence and impact of paternal PNDA, and the needs of more vulnerable communities. A focus on defining and capturing data evidencing the needs of individuals, families and the services that support them is fundamental in better meeting the needs of people across Australia. Research into the best approaches to preventing and treating PNDA should continue and be built upon as new data and literature becomes available.

05

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