Pregnancy to Parenthood
Parent & Infant Mental Health Service

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BANKWEST CURTIN ECONOMICS CENTRE
AND PREGNANCY TO PARENTHOOD

# Pregnancy to Parenthood: Changing Life Trajectories for Vulnerable Families

## A socio-economic evaluation of outcomes, prevention and system value in Western Australia

April 2026

**About Pregnancy to Parenthood**

At Pregnancy to Parenthood (P2P), we know the path to healthy and thriving futures begins during pregnancy and the first three years of life through the connections babies have with their parents and primary caregivers.

Informed by evidenced-base research and years of clinical experience in parent and infant mental health, our mission at P2P is to support vulnerable babies under three years of age and their parents through any emotional challenges they experience.

What makes P2P unique is our early relational health approach, recognising the infant and their parents as clients, rather than solely focusing on the mental health of parents. At P2P we place the infant and the relationship they have with their parent at the centre of our service, understanding that they, like older children and adults, experience a range of emotions but rely on their parents to nurture their emotional wellbeing.

Through our range of programs, P2P walks side by side with parents and babies under the age of three to support them in establishing strong connections within their relationships, building confidence in parenting skills, and resilience to weather the storms of parenting and provide the best start to life for babies.

**About the Centre**

The Bankwest Curtin Economics Centre is an independent economic and social research organisation located within the Curtin Business School at Curtin University. The centre was established in 2012 through the generous support from Bankwest (a division of the Commonwealth Bank of Australia), with a core mission to examine the key economic and social policy issues that contribute to the sustainability of Western Australia and the wellbeing of WA households.

The Bankwest Curtin Economics Centre is the first research organisation of its kind in Western Australia, and draws great strength and credibility from its partnership with Bankwest, Curtin University and the Western Australian government.

The centre brings a unique philosophy to research on the major economic issues facing the state. By bringing together experts from the research, policy and business communities at all stages of the process – from framing and conceptualising research questions, through the conduct of research, to the communication and implementation of research findings – we ensure that our research is relevant, fit for purpose, and makes a genuine difference to the lives of Australians, both in WA and nationally.

The centre is able to capitalise on Curtin University's reputation for excellence in economic modelling, forecasting, public policy research, trade and industrial economics and spatial sciences. Centre researchers have specific expertise in economic forecasting, quantitative modelling, micro-data analysis and economic and social policy evaluation. The centre also derives great value from its close association with experts from the corporate, business, public and not-for-profit sectors.

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## ABBREVIATIONS

| | |
|---|---|
| ABC | Attachment & Biobehavioral Catch-up |
| ACEs | Adverse Childhood Experiences |
| ADHD | Attention Deficit Hyperactivity Disorder |
| BCEC | Bankwest Curtin Economics Centre |
| CALD | Culturally and Linguistically Diverse |
| CPP | Child-Parent Psychotherapy |
| EPDS | Edinburgh Postnatal Depression Scale |
| HILDA | The Household, Income and Labour Dynamics in Australia Survey |
| IRSD | Index of Relative Socio-Economic Disadvantage |
| K10 | Kessler Psychological Distress Scale |
| KPCS | Karitane Parenting Confidence Scale |
| MORS | Mothers' Object Relations Scale |
| P2P | Pregnancy to Parenthood |
| PASS | Perinatal Anxiety Screening Scale |
| PREPP | Practical Resources for Effective Postpartum Parenting |
| PRFQ | Parental Reflective Functioning Questionnaire |
| RCI | Relative Change Index |
| WA | Western Australia |





# Executive Summary

# Executive summary

### Background and purpose

The perinatal period from pregnancy through the early years of a child's life is a time of major change for families. Depression and anxiety during this time can affect parents' wellbeing, strain the parent-infant relationship, and shape children's emotional and developmental outcomes well into the future.

Pregnancy to Parenthood (P2P) provides specialist, relationship-focused mental health support to families experiencing challenges during pregnancy and early parenthood. In 2025, P2P delivered 2,132 sessions to 163 families through the P2P Foundational Program, and 659 sessions to 100 families through the Attachment & Biobehavioral Catch-up (ABC) Program.

This evaluation examines how well the P2P Foundational and ABC Programs are working, who they reach, the outcomes achieved for families, and whether they represent good value for money. It also explores what the findings suggest about the potential to expand the P2P model of care across Western Australia.

### Evaluation methods and data sources

This evaluation combines detailed clinical P2P data collected from 2015 to 2025 with nationally representative longitudinal data from the HILDA survey conducted from 2007 to 2023, using a range of rigorous methods. Based on the P2P data on 260 female clients, we examined the changes in depression, anxiety, parenting confidence, and the maternal representation of the infant. We use multiple methods, including pre-post comparisons, effect size analysis, paired sample t-tests, non-parametric Wilcoxon signed-rank tests, reliable change index and clinically significant change measures. The HILDA data was used to link the improvements in mental health to longer-term health, economic, and wellbeing outcomes. The results are then combined with cost-benefit analysis to assess the economic value of P2P and examine the potential benefits of scaling the model to other WA communities.

### Access and engagement with programs

Clients were mainly in their early 30s, with most aged 30-34 at their first session. Most clients were women (92 per cent), and the majority (71 per cent) were mothers attending with one infant. The clinic serves a diverse client group. Nearly one in three identified as culturally and linguistically diverse (CALD). Just over half were married and around a quarter were partnered, while one in five were single, separated, divorced or widowed. More than one-third of clients were referred by nursing and midwifery services, reflecting strong links with frontline maternal and child health care. On average, clients attended 18 sessions, with nearly half attending between 11 and 20 sessions over six to nine months.

### P2P reaches families with high and complex needs

Clients supported by P2P often experience multiple stressors, including high levels of depression and anxiety. Nearly 40 per cent of clients reported four or more adverse childhood experiences (ACEs), and 41 per

cent came from lower socio-economic backgrounds. P2P delivers services across metropolitan and regional WA, including areas with a critical lack of access to specialist perinatal and infant mental health support.

### Mental health and parenting outcomes improve substantially

Most clients experience clinically meaningful improvements in mental health after participating in P2P Foundational or ABC Programs. The greatest improvements were seen among women who entered the model of care with clinically high levels of distress. Using the rigorous Reliable Change Index (RCI) methodology, around half (52 per cent) recovered from depression and more than four in ten (42 per cent) recovered from anxiety, while very few experienced worsening of symptoms.

Beyond clinical treatment, the intervention also serves a critical preventative function. For non-clinical participants, the model of care achieved a 94.5 per cent success rate in preventing depression symptoms from worsening, with nearly 20 per cent seeing a reliable decrease in their symptoms despite starting below the clinical threshold.

The Programs were particularly effective for those in the greatest need. Participants facing "double disadvantage"—people with clinical levels of mental health distress and coming from low socio-economic levels—achieved a 70 per cent success rate in overcoming clinical anxiety. Furthermore, the model of care played a vital role in breaking the cycle of intergenerational trauma. Among parents who had experienced the highest levels of early childhood adversity (four or more adverse childhood experiences), nearly half (48 per cent) achieved full clinical recovery from depression.

Improvements were not limited to parental mental health; they also extended to the parent-child relationship. Around 11.5 per cent of parents saw a reliable reduction in "perceived invasion" (feeling overwhelmed or intruded upon by their child's demands), and 8.8 per cent reported a reliable increase in positive parental warmth.

Nearly one in four parents (24.6 per cent) showed a statistically reliable increase in their reported certainty about their child's mental states. This may reflect greater confidence in considering their child's feelings, thoughts and intentions. However, certainty does not necessarily indicate accuracy, and healthy reflective functioning also involves recognising that another person's internal experience cannot be known with complete certainty. Smaller proportions of parents showed reliable improvements in pre-mentalising and interest and curiosity. Taken together, these findings indicate positive changes in dimensions associated with reflective parenting, although they should be interpreted cautiously given the small sample and self-report nature of the measure.

### Every dollar invested in P2P generates nearly three dollars

The cost-benefit analysis shows that P2P represents strong value for money. The estimated benefit per client ranges from $26,570 (based on EPDS) to $31,564 (based on PASS), compared with a cost of about $11,200. This means that every dollar invested in P2P generates from 2.4 to 2.9 dollars in measurable economic benefits for mothers alone.

These estimates do not include benefits for infants, partners, or the wider community. Other existing research shows that perinatal depression and anxiety can have long lasting effects on multiple aspects of children's lives including mental and physical health, cognitive and non-cognitive development, education, employment and income, highlighting the broader value of early intervention. These benefits have substantial additional implications for public sector spend on health, education and crime, as well as enhancing government tax revenue through higher personal income earnings and productivity.

### Potential for wider impact across WA

With around 33,000 births each year in Western Australia (WA), and evidence suggesting that around one in five women experience perinatal depression or anxiety, the need for support is far greater than current service capacity. If outcomes similar to those achieved through P2P were realised more widely, the social and economic benefits for WA could be transformative—delivering an estimated $51 million annually to the state—and reducing future demand and costs across health, mental health and child protection systems.

### Recommendations

Based on the findings, this evaluation recommends:

- Sustaining and expanding funding for P2P, given its measurable impact for families and strong value for money.
- Prioritising access for families with higher levels of need, including women with clinically high levels of distress, socio-economic disadvantage, and childhood adversity and trauma.
- Reducing practical barriers to access and engagement, through flexible delivery options and outreach, particularly for single parents and families in disadvantaged or regional areas.
- Strengthening outreach to under-represented communities, including culturally and linguistically diverse families and those in the most disadvantaged locations.
- Planning any expansion carefully and in stages, focusing on high-needs areas and maintaining service quality as the model grows.
- Investing in the workforce and service integration, including training, supervision, and strong links with maternal and child health, primary health care, and mental health services.
- Data development strategy: Continue to collect data with a greater sample size and for longer periods will allow deeper evaluation of the model of care in the future. Ideally, tracking families progress beyond P2P will allow to capture long term benefits of the model of care.



# At a glance

## Section 1: Who We Serve (Reaching Those Who Need It Most)

**TOTAL FAMILIES SUPPORTED**



**284**

**Families Supported**
(P2P Foundational Program: 163; ABC Program: 100; CPP: 21).

**SOCIO-ECONOMIC DISADVANTAGE**



**42%**

**of clients live in the most disadvantaged areas**
(IRSD deciles 1–5).

**TRAUMA HISTORY**



**40%**

**of clients reported experiencing 4 or more Adverse Childhood Experiences (ACEs).**

**CULTURAL DIVERSITY (CALD)**



**1 in 3**

**clients identify as Culturally and Linguistically Diverse (CALD).**

**FRONTLINE MATERNAL AND CHILD HEALTH CARE**



**>30%**

**More than one-third of clients were referred by nursing and midwifery services,** reflecting strong links with frontline maternal and child health care.

## Section 2: Clinical Success (Proven Results for Families)

**DEPRESSION RECOVERY (EPDS)**



**52%**

**of mothers in the clinical group** achieved full clinical recovery, with 57% showing reliable improvement.

**ANXIETY IMPROVEMENT (PASS)**



**42%**

**of mothers in the clinical group achieved full clinical recovery,** with two-thirds of mothers showing reliable improvement.

**PREVENTION DIVIDEND**



**96.3%**

**of families with lower-level distress were prevented from clinical deterioration.**

## Section 2: Clinical Success (Proven Results for Families)

TARGETED IMPACT FOR HIGH-NEEDS FAMILIES



**The most significant clinical gains were observed among families experiencing "double disadvantage"—the intersection of mental health distress and socio-economic hardship.**

## Section 3: Economic Value (The Recovery Dividend)

BENEFIT-COST RATIO (BCR)



# $1 » $2.40

**2.41** (For every $1 invested, P2P returns $2.41 in socio-economic value).

ECONOMIC BENEFIT PER CLIENT



# $26,570

**Total lifetime value created per family.**

TAX BENEFIT TO GOVERNMENT



# $24,905

**in increased tax revenue and reduced transfers** per recovered client over 10 years.

HEALTH SYSTEM SAVINGS



# $1,630

**in annual GP visit savings** and $1,166 in hospital visit savings for each mother who recovers from depression.





# Introduction and Background

# Pregnancy to Parenthood (P2P) background

The perinatal period, covering pregnancy and the first year after birth, is a time of enormous change for both mothers and fathers. While it can be a joyful and meaningful stage of life, it can also place significant pressure on parents' mental health. Some parents experience conditions such as perinatal anxiety and depression, postpartum psychosis, post-traumatic stress disorder, and obsessive-compulsive disorder.

In Australia, around one in five mothers and one in ten fathers experience perinatal anxiety or depression each year.[1] These numbers show how important it is to provide early and accessible support for families during this vulnerable time.

Pregnancy to Parenthood (P2P) is Australia's only parent and infant mental health service offering free support to families most in need. As a not-for-profit organisation, P2P provides specialised, evidence-based care that meets families where they are, supports emotional wellbeing, and helps parents build confidence and the skills they need to thrive.

Since 2015, P2P has delivered four main programs to clients across Western Australia (WA), including P2P Foundational Model and Attachment & Biobehavioral Catch-up (ABC), Child-Parent Psychotherapy (CPP) and Practical Resources for Effective Postpartum Parenting (PREPP).

P2P has provided services in multiple locations including Clarkson, Joondalup, Wanneroo, Gosnells, Midland, Success, Geraldton, and Spalding. In 2025, P2P supported 284 families, reaching 761 family members, including siblings and other relatives. Services were delivered across metropolitan and regional areas, with 37 families supported in Geraldton, 102 in the North Metro, and 32 in the South Metro, alongside 100 families supported through the ABC home visit program and nine families supported online.

Over the year, P2P delivered 3,221 appointments, averaging 268 sessions per month, reflecting the scale and intensity of support provided. This included 2,132 sessions for 163 families through the P2P Foundational Program, 659 sessions for 100 families through the ABC Program, and 187 sessions for 21 families through the CPP Program. Appointments were delivered across regions, with 530 sessions in Geraldton, 1,418 in the North Metro, and 268 in the South Metro, as well as 265 ABC home visits and 132 online appointments.

P2P serves a diverse client group: 18.2 per cent of clients were born overseas, 4 per cent identified as Aboriginal or Torres Strait Islander, and 10 per cent spoke a language other than English at home. Most clients were women (92 per cent), and the majority (71 per cent) were mothers attending with one infant. Importantly, P2P's support is associated with positive outcomes in improving warmth in the parent-child relationship, highlighting P2P's role in strengthening family wellbeing across the state.

1 Available at: https://www.piri.org.au/perinatal-mental-health-week-2025/

# Evaluation background

The Bankwest Curtin Economics Centre (BCEC) was commissioned by P2P to conduct research that supports an assessment of the social and economic benefits of P2P services across multiple locations. This evaluation was conducted as part of a broader Lotterywest-funded proposal awarded to P2P.

The main deliverable presented by BCEC is the following report, highlighting the findings of the evaluation conducted regarding outcomes of P2P services. The evaluation aims to help P2P strengthen service capacity by building a strong case for increased and sustained funding, which will enable P2P to continue delivering services to those most in need and support the long-term sustainability of P2P's operations.

The evaluation of services is of great importance to the outcomes of clients and the wellbeing of the community, hence research has aimed to be appropriate, rigorous, and unbiased at all points, so that the full benefits from a thorough evaluation can be gained and are useful for P2P.

The report contributes to the evidence base that supports positive, targeted actions, and family with multi-generational (infant and parent) interventions in the early years.

This research helps inform government and other parties regarding the success of various early intervention programs on improving maternal and infant outcomes, in hopes of potential expansion of P2P services or an increase in funding for the scaling of other such programs across WA.

### Ethical considerations

This research was approved by the Human Research Ethics Committee at Edith Cowan University.



# Evaluation objectives

The evaluation assesses the extent to which P2P's two primary programs, P2P Foundational and ABC, are able to meet their objectives.[2] The evaluation focuses on:

1. The processes of program access and engagement for clients and how these can be enhanced.

2. The effectiveness of the programs in achieving improved outcomes for mothers and the relationship with their infants across multiple areas, including:
   - a. improved maternal mental health (reduced symptoms of depression and anxiety)
   - b. increased parental reflective functioning and confidence
   - c. improved mother-infant relationship (responsive care, and stable and positive interactions).

3. The efficiency and return on investment of the service delivery model.

4. The potential of scaling the novel P2P model of care to other communities across WA.

2 P2P has also delivered the CPP program. However, the data collected up to August 2025 include only two CPP clients. As a result, this report focuses on the P2P and ABC programs.



# Evaluation methods and data sources

This evaluation draws on two main data sources. The first is data provided by P2P, referred to throughout this report as P2P data, which includes information from both the P2P Foundational and ABC Programs. The second is data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey, referred to as HILDA data.

### Analysis of P2P data

The P2P data include information on only two male clients. For this reason, the analysis of P2P data will focus on outcomes of mothers and the relationship with their infants.

The P2P dataset includes information on 260 female clients aged 17 to 49 who participated in the P2P Foundational and ABC Programs between March 2015 and August 2025. Clients were included in this dataset if they met four criteria: (1) pregnant or less than 2 years postpartum, and (2) completed the program, and (3) completed questionnaires routinely administered pre- and post-intervention, and (4) consented to their clinical data being used for research purposes. It is important to note that the total number of clients who used the clinic's services was much higher than the number captured in this dataset.

The data was extracted at two points in time: March 2022 (143 observations) and August 2025 (117 observations). The dataset contains information on clients' demographic characteristics, including maternal age, marital status, cultural and linguistic background, adverse childhood experiences and socio-economic status. It also includes measures of maternal characteristics and outcomes related to maternal mental health, parental reflective functioning and confidence, and the quality of the mother-infant relationship.

We use the P2P data to examine patterns of access to and engagement with the P2P Foundational and ABC Programs, and to assess the effectiveness of these programs in improving outcomes for mothers and their infants.

As no control group is available and there is no comparable data for similar untreated populations, this evaluation focuses on estimating the proportion of clients whose mental health improved or deteriorated after intervention. The changes in outcomes between pre- and post-intervention are assessed using either paired sample t-tests or non-parametric Wilcoxon signed-rank tests, depending on the distribution of each outcome measure (Cohen, 1988). Effect sizes are calculated using Cohen's d and classified as small, medium or large. The research also explores how outcomes differ by intervention intensity and duration, as well as across client groups, including differences by socio-economic status.

Clients are further identified as being in a clinical category prior to intervention. For those clients, we follow the approach outlined by Matthey (2004) to assess whether changes before and after intervention are clinically meaningful. In particular, Reliable Change Index (RCI) is calculated to check whether the change in a client's score after intervention is large enough to be considered a real improvement or deterioration, rather than normal measurement variation. It takes into account how reliable each scale is and how much scores typically vary. For EPDS and PASS, the size of change in a client's score

before and after intervention is compared with a threshold. If the RCI value is 1.96 or higher, the change is considered reliable, meaning it is very unlikely to have occurred by chance. This approach helps distinguish meaningful changes in mental health from small fluctuations that may not reflect real improvement or worsening. More details can be found in the Appendix.

### Analysis of HILDA data

The research also aims to examine the efficiency and return on investment of the P2P service delivery model through a cost-benefit analysis. However, the P2P data alone do not provide sufficient information to estimate the economic and wellbeing benefits of the programs.

In this case, the HILDA Survey provides the best available alternative. This is a nationally representative household panel survey that tracks the same group of Australians over time. It collects detailed information on economic circumstances, personal wellbeing, labour market experiences and family life, allowing researchers to examine how changes in people's lives affect longer-term outcomes.



Using HILDA, we construct a comparison sample of women aged 17 to 49 between 2007 and 2023 who are similar to clients in the P2P dataset. We identify changes in their mental health and then track subsequent changes in their lives including labour market outcomes for up to 10 years following those mental health changes. The samples in the two datasets show similar patterns in mental health, with comparable proportions of participants recovering from or improving in anxiety and depression.

Regression analysis is used to estimate the net effects of mental health changes, controlling for individual and demographic characteristics. These estimates are then used to quantify the short- and long-term benefits associated with improvements in mental health. Combined with information on program costs, these benefit estimates allow us to assess the cost-effectiveness of the P2P Foundational and ABC Programs.

Finally, the research explores the potential for scaling the P2P model of care to other communities across the state.

### Limitations

The evaluation has several limitations related to data availability. A key limitation is the absence of a comparison (control) group of women and children who did not access P2P Foundational or ABC Programs. In addition, the P2P data do not contain sufficient information to directly estimate the short- and longer-term benefits of participation in the programs. To address these issues, HILDA data is used to support the analysis. Trends in depression and anxiety outcomes are very similar across the P2P and HILDA samples, providing confidence that HILDA is an appropriate supporting benchmark for the analysis. The findings presented in this report should therefore be interpreted in light of the constraints of the available data and the assumptions underlying the analysis.

### Report structure

**Chapter 1** provides background to the evaluation, including the research objectives and methods used in this report. **Chapter 2** describes the demographic profile of clients accessing P2P services and examines factors that may influence service use or create barriers to access. **Chapter 3** presents the analysis of P2P service outcomes for families following program participation. **Chapter 4** summarises qualitative feedback from P2P clients. **Chapter 5** reports the cost-benefit analysis of P2P services, highlighting the cost-effectiveness of the interventions. **Chapter 6** provides concluding remarks.



# Access and Engagement with Programs

# About P2P Foundational and ABC Programs and sample size

### P2P Foundational

The P2P Foundational Program is based on well-established infant mental health principles from the Michigan Infant Mental Health home-visiting model (Jester et al., 2025; Pitzen et al., 2025). It begins with a thorough assessment over the first four sessions, followed by regular weekly sessions where both the mother and her infant take part together.

The Program supports the emotional wellbeing of both mother and infant, while also strengthening their relationship. It is designed to be flexible and responsive, with the length and focus of support tailored to each family rather than set in advance.

A key part of the Program is understanding how a mother's mental health, early life experiences and past challenges can shape the way they relate to and care for their infant. Practitioners provide guidance on infant development and, where needed, help mothers work through unresolved trauma.

Practitioners take a supportive, non-judgemental approach, observing mother–infant interactions and gently reflecting on what is happening emotionally. This helps mothers build stronger emotional connection, manage stress, and grow in confidence as parents over time.

The Program is mainly delivered in a clinic setting, with telehealth used for a short period during the COVID-19 pandemic. Weekly reflective supervision is a core part of the Program and helps ensure care is delivered consistently and to a high standard.

### Attachment & Biobehavioral Catch-up (ABC) Program

The ABC Program is a short, evidence-based home-visiting program that helps parents build warm, responsive relationships with their infants (O'Byrne et al., 2023). Delivered over 10 sessions, the Program supports parents to better understand and respond to their child's cues, follow their child's lead during everyday interactions, and reduce behaviours that may feel overwhelming or distressing for infants. Families who need additional or ongoing help can move into one of the alternative programs within the broader P2P model of care for more intensive support.

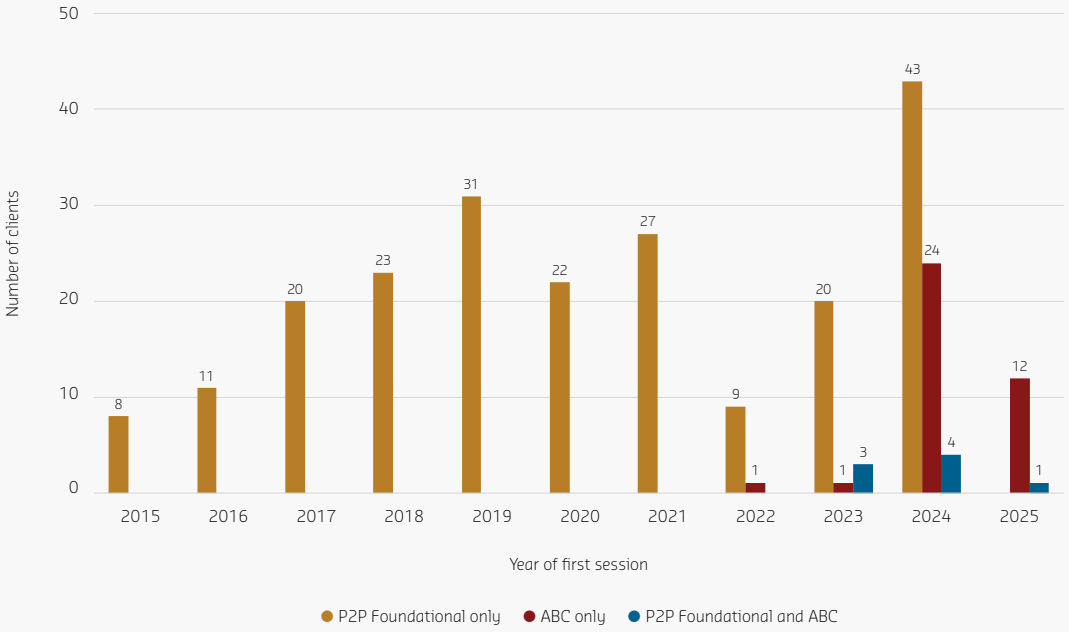
P2P clinicians and trainees undertake rigorous training and reflective supervision to build specialised skills in delivering P2P's evidence-based model of care, which includes the P2P Foundational and ABC Programs.

### Sample size

The final dataset used for the analysis includes 260 female clients: 214 who participated only in the P2P Foundational Program, 38 who participated only in the ABC Program, and 8 clients who participated in both Programs. In this report, the impacts of the P2P Foundational and ABC Programs are examined together.

Tracking program participation over time, Figure 1 shows that P2P Foundational participation has grown steadily since 2017 and has largely been sustained, reaching a peak of 43 clients in 2024. P2P data for 2025 is currently recorded as zero, as the sample includes only clients who

**Figure 1**
Number of female clients by program and year of first session




Note: Data for 2025 only includes clients who completed the intervention before the data extraction date (22 August 2025).
Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

had completed the program by August 2025. Given the longer duration of P2P Foundational intervention, clients who commenced in 2025 were unlikely to have completed by this cut-off.

The ABC Program, introduced in 2022, experienced gradual initial uptake, with participation peaking in 2024. Unlike P2P Foundational, 2025 data is available for ABC due to the Program's shorter duration, allowing clients to complete within the reporting timeframe.

# What is the profile of clients?

Demographic characteristics were collected by the treating practitioners during a clinical interview. This section will portray the profile of the clinic's 260 female clients who participated in the P2P Foundational and ABC Programs in the past 10 years.[3] These characteristics are reported in Table 1.

On average, clients were in their early 30s, with most aged 30–34 at their first session. Nearly one in three identified as culturally and linguistically diverse (CALD). Just over half were married and around a quarter were partnered, while one in five were single, separated, divorced or widowed. Most clients had one child and were in the postnatal period at their first session, suggesting that first-time parents are among those most in need of mental health and caregiving support.

The Adverse Childhood Experiences (ACEs) Questionnaire, a ten-item questionnaire used to quantify instances of adverse or traumatic experiences the individual has

**Table 1**
Demographic characteristics of female clients

| | Observations | Mean |
|---|---|---|
| Age (years) | 258 | 31.4 |
| Age at 1st session: <=29 years | 258 | 32.9% |
| Age at 1st session: 30-34 years | 258 | 57.8% |
| Age at 1st session: >=35 years | 258 | 9.3% |
| Married | 244 | 53.3% |
| Defacto/Engaged/Partnered | 244 | 25.0% |
| Single/Separated/Divorced/Widowed | 244 | 21.7% |
| Number of children | 253 | 1.3 |
| No children | 253 | 12.3% |
| 1 child | 253 | 58.5% |
| 2+ children | 253 | 29.2% |
| CALD (Culturally and linguistically diverse) | 241 | 29.0% |
| Number of ACEs | 234 | 2.9 |
| 0 ACEs | 234 | 19.7% |
| 1 ACE | 234 | 17.5% |
| 2 ACEs | 234 | 11.1% |
| 3 ACEs | 234 | 12.0% |
| >=4 ACEs | 234 | 39.7% |
| Postnatal | 260 | 81.9% |
| Antenatal | 260 | 18.1% |

Note: Only information available in both data extraction times is included in this table. Other characteristics were collected but had substantial missing data, such as education, English fluency, experience of domestic violence, partner's characteristics, are excluded.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

3 This profile is based on 260 female clients observed in the P2P dataset and does not represent all clients who accessed P2P services.

experienced before 18 years of age, was conducted to measure potential increased risk of a range of psychological or health problems, with items including but not limited to childhood psychological, physical, and sexual abuse, or domestic violence. Each item is either not reported ("no") or reported ("yes), with each corresponding to a score of 0 or 1 respectively (Matacz et al., 2025).

Most of the sample reported a history of ACEs, with nearly 40 per cent experiencing four or more events. This is consistent with literature suggesting that a total score of four or more out of ten on the ACE-Q is associated with greater mental health difficulties and thus may result in higher likelihood of clients needing P2P services.

Nearly 40 per cent of clients experienced four or more adverse childhood experiences.

### By socio-economic index deciles

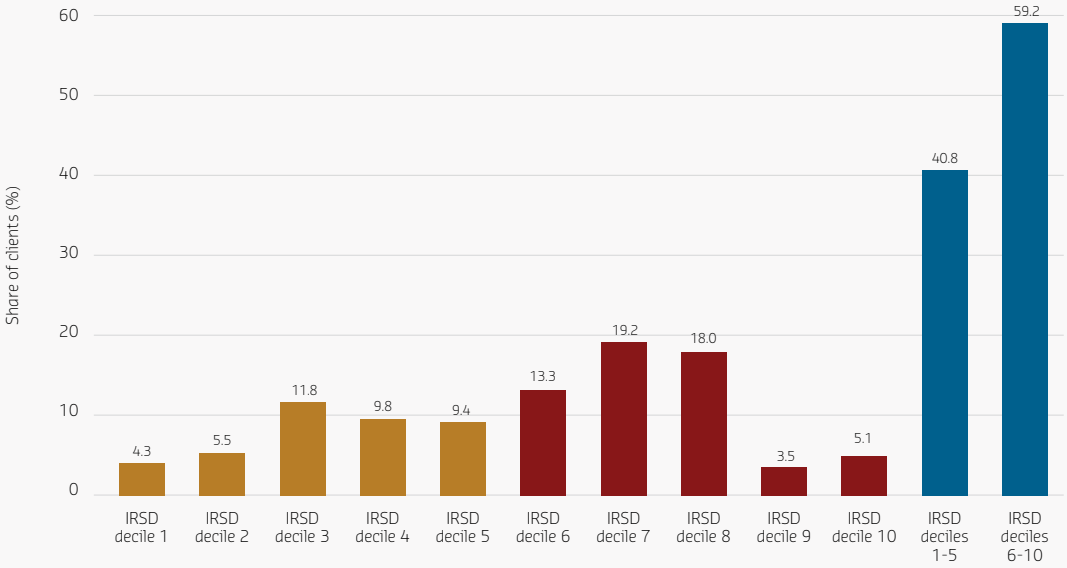
Socio-economic status was identified using clients' residential addresses and the Index of Relative Socio-Economic Disadvantage (IRSD) published by the Australian Bureau of Statistics. The IRSD reflects area-level characteristics such as income, employment, education, housing conditions and access to resources. Areas are ranked into deciles, from decile 1 (the most disadvantaged) to decile 10 (the least disadvantaged). In this report, IRSD deciles are used to help describe the socio-economic environments in which clients live and to better understand how disadvantage may affect access to services and outcomes. Around 41 per cent of clients lived in more disadvantaged areas (IRSD deciles 1–5).

Figure 2 shows that a slightly smaller share of clients live in postcodes ranked in the lower IRSD deciles (1–5). Very few clients live in the most disadvantaged areas, with 4.3 per cent in IRSD decile 1 and 5.5 per cent in decile 2, both lower than in most other decile groups.

These results suggest that families living in highly disadvantaged areas may face greater day-to-day challenges that make it harder to access P2P services. This highlights the potential value of including more questions in future surveys about practical or socio-economic barriers that may affect families' ability to engage with these services.

Over 40% of women in the P2P sample were from lower socio-economic backgrounds.

**Figure 2**
Socio-economic status (IRSD) of P2P clients, percentage share




Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

## Referral pathways to P2P services

Mothers were referred to P2P services from a range of sources. Referrals were grouped into six categories based on the source of referral. 'Nursing and midwifery services' included antenatal, child health, mental health, and obstetric liaison nurses, as well as midwifery-led and triage services. 'Specialist mental health services' comprised referrals from psychologists and psychiatrists. 'Medical (non-psychiatric)' referrals included general practitioners, paediatricians, and antenatal clinic doctors. 'Allied health and community services' covered social workers, family support services, early childhood educators, home-visiting programs, and community organisations. 'Self and family-reported' referrals included self-initiated referrals and referrals made by partners or family members. Finally, 'other' included service transfers and administrative and other referral pathways.

Figure 3 shows where clients are referred from, comparing those living in more disadvantaged areas (IRSD deciles 1–5) with those in more advantaged areas (deciles 6–10). In both groups, nursing and midwifery services are the most common entry point, accounting for just over one-third of all referrals.

Across other referral pathways, clients in less disadvantaged areas are somewhat

more likely to access P2P through self or family referrals and other service pathways.

In contrast, clients in more disadvantaged areas rely more heavily on specialist mental health services and medical referrals, such as GPs and paediatricians. This highlights the important role of specialist and medical providers in helping families in more disadvantaged areas access P2P services.

## Wait times

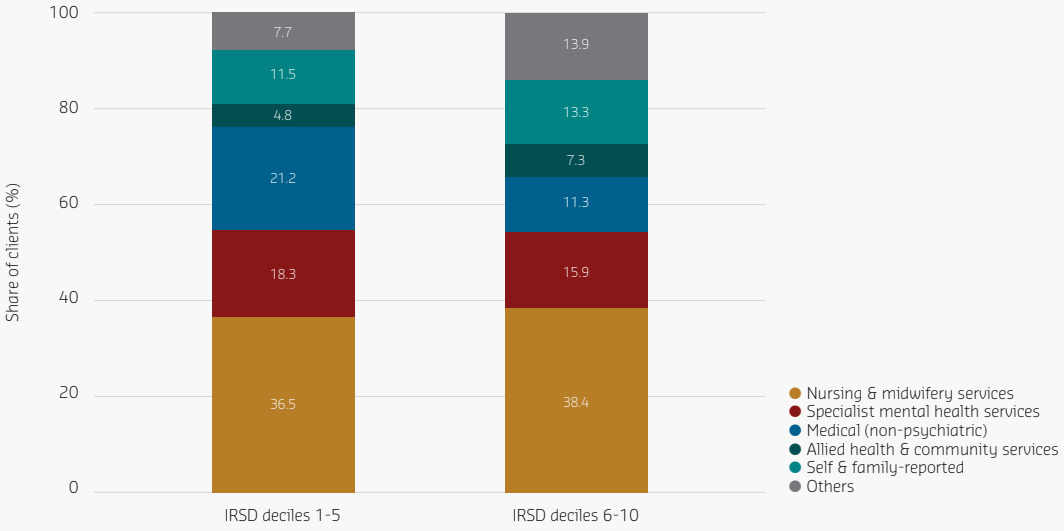
Although the recorded wait time may not always reflect actual waiting since some clients are unable to attend appointments sooner due to their own scheduling constraints, on average, wait time reflects the difficulty faced by most clients accessing the service. For example, the centre may be too far away, services may not be available on weekends, or the clients are too busy (such as single parents, parents with 2+ children), making it difficult for clients to visit earlier.

From Figure 4, clients who are single, separated, divorced, or widowed face longer waiting times than clients with partners, 3.4 months. This finding may reflect greater challenges in managing time or scheduling appointments among this group, particularly with less support from a partner or a higher likelihood of work responsibilities. Clients categorised as urgent are prioritised for allocation and generally begin receiving sessions without entering the standard waitlist.

More than one-third of clients are referred to P2P by nursing and midwifery services.

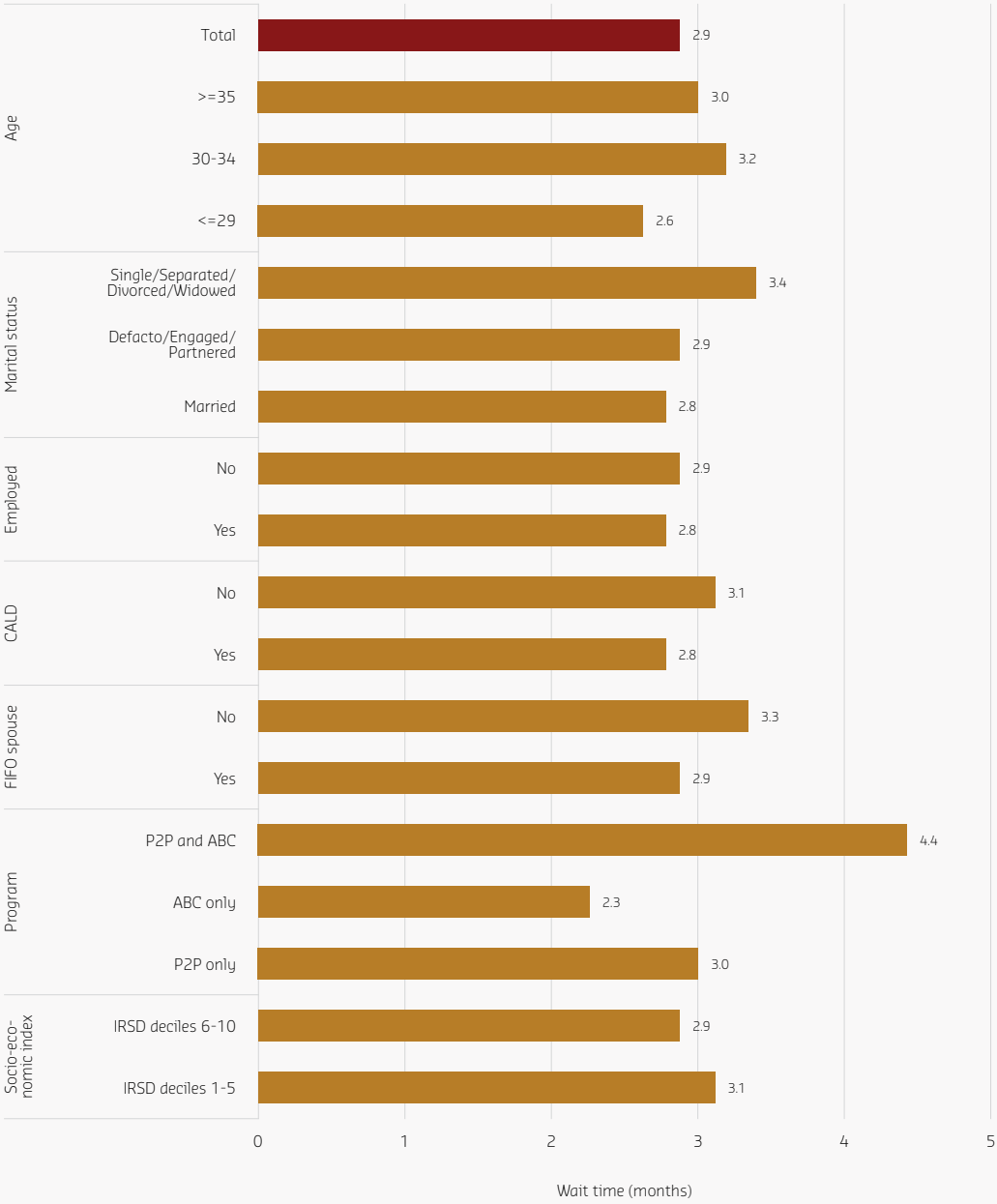
Over 21% of families from lower socio-economic groups are referred to P2P by GPs and paediatricians.

**Figure 3**
Referral pathways to P2P




Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

**Figure 4**
Wait times for people accessing the P2P service




Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

Comparing clients by IRSD deciles, those in more disadvantaged postcodes face longer waiting times, 3.1 months, compared to those in deciles 6-10 who face a wait of 2.9 months. This likely reflects the socio-economic disadvantage of these areas, where clients may face reduced free time or have difficulty with transport to centres. P2P also has fewer clinics in these areas, suggesting that additional funding or increased services could help improve accessibility.

Those participating in the P2P Foundational Program combined with ABC wait the longest for services of all client groups, at 4.4 months, compared to ABC only, 2.3 month, and P2P Foundational, 3.0 months. The longer waiting times is usually associated with clinician availability. Clients with high needs who also wait longer need more support. Clients who attend both are typically complex trauma cases meaning high ACEs and severe mental health issues plus social disadvantage.

### Intervention times

The P2P Foundational Program is designed to be flexible and responsive, with the length of intervention tailored to each family's needs and lasting up to 2 years. Intervention in the ABC Program (10-sessions) is noticeably shorter than P2P Foundational, averaging between 5.1 and 7.9 months, which largely reflects the short-term design of the ABC Program.

The difference in intervention time between P2P Foundational and ABC Programs primarily reflects differences in program design. ABC is a behavioural intervention which focuses on practical components of caregiving, i.e., moment to moment interaction with the infant. P2P Foundational Program, on the other hand, strengthens the parent–infant relationship by helping parents better understand their infant's behaviour and emotional needs. It recognises how parental mental health and past experiences can affect caregiving, and provides therapeutic and developmental support to build confidence, connection, and more responsive parenting over time. Clinically , this requires a degree of reflective function to engage effectively with P2P Foundational and interventions may sometimes be staggered to build this capacity.

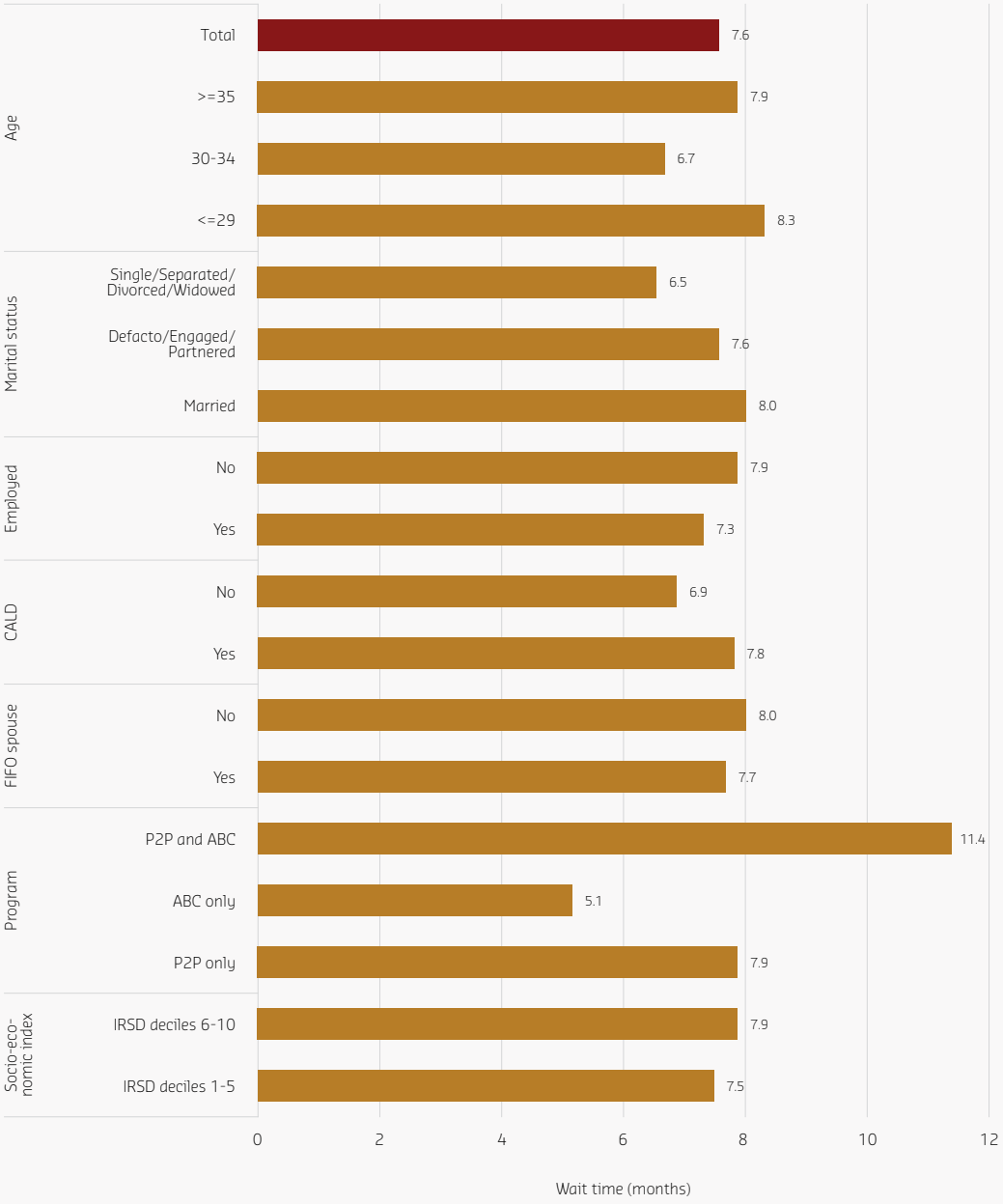
On the other hand, intervention duration may also partly reflect differences in clients' ability to engage with and complete the program. Practical challenges, such as limited time or transport difficulties, may lead some clients to end intervention earlier than planned. For this reason, examining intervention duration across different demographic groups can help identify which families may need additional support from the clinic.

Across demographic characteristics, clients aged 30–34, those who are single, separated, divorced or widowed, and those living in more disadvantaged postcodes (IRSD deciles 1–5) have the shortest intervention durations, as seen in Figure 5. This pattern is consistent with these same groups also experiencing longer waiting times, suggesting similar access challenges, such as time constraints or transport barriers. It may also be due to lack of available services or limited practitioner capacity.

Finally, clients who participated in both the P2P Foundational and ABC Programs had

The length of intervention of the P2P program is tailored to each family's needs and lasting up to 2 years.

**Figure 5**
Intervention duration by program and individual characteristics




Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

the longest average intervention duration, at 11.4 months, which reflects the greater intensity of the combined programs.

## Number of adverse childhood experiences (ACEs)

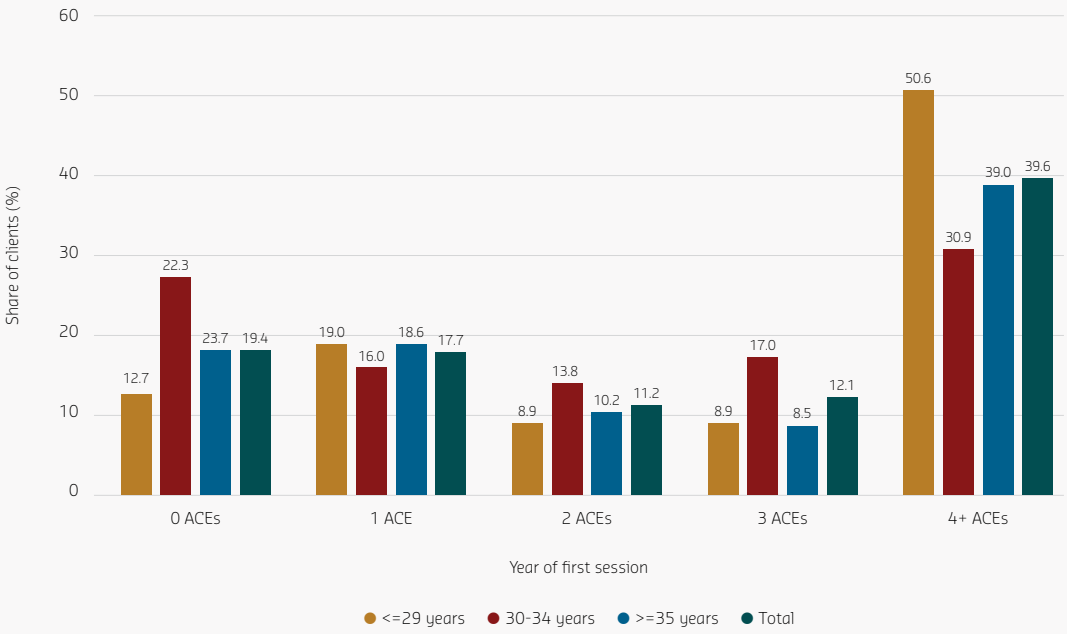
Decades of research evidence demonstrate that those who experience high ACEs and trauma are more likely to experience mental health difficulties in adjusting to parenthood. This typically shows up postnatally as depression, anxiety, and difficulties in interacting/bonding with the infant. In severe cases, these difficulties may involve infant maltreatment, including abuse, rejection or neglect.

As early as possible interventions (i.e. in infancy) thus mitigate the risk of intergenerational transmission of ill mental health, trauma and abuse. And this, while difficult to measure in the current sample, can have rippling economic effects in terms of impact on mental health services and societal wellbeing more broadly. Disaggregating clients by the number of ACEs may therefore provide further insight into program impacts and differential need.

In Figure 6, we can see that clients that have experienced four or more ACEs in their lifetime are the most likely to use P2P services, which is consistent with existing literature regarding those with higher scores at increased risk of mental health difficulties and needs.

Over half of the clients under 29 years old reported having four or more ACEs.

**Figure 6**
Number of adverse childhood experiences (ACEs) by age group




Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

Young women under 29 with four or more ACEs made up the largest share of clients across all age and ACE categories, accounting for 17 per cent of clients (not shown in figure). Regardless of the age group, people suffering from four or more ACEs represent the largest share of P2P clients. In the case of people aged 29 or younger, more than one in two clients has four or more ACEs. This pattern may reflect higher levels of stress and anxiety among younger women, combined with less parenting experience and potentially lower financial stability compared to older age groups.

### Summary of key findings

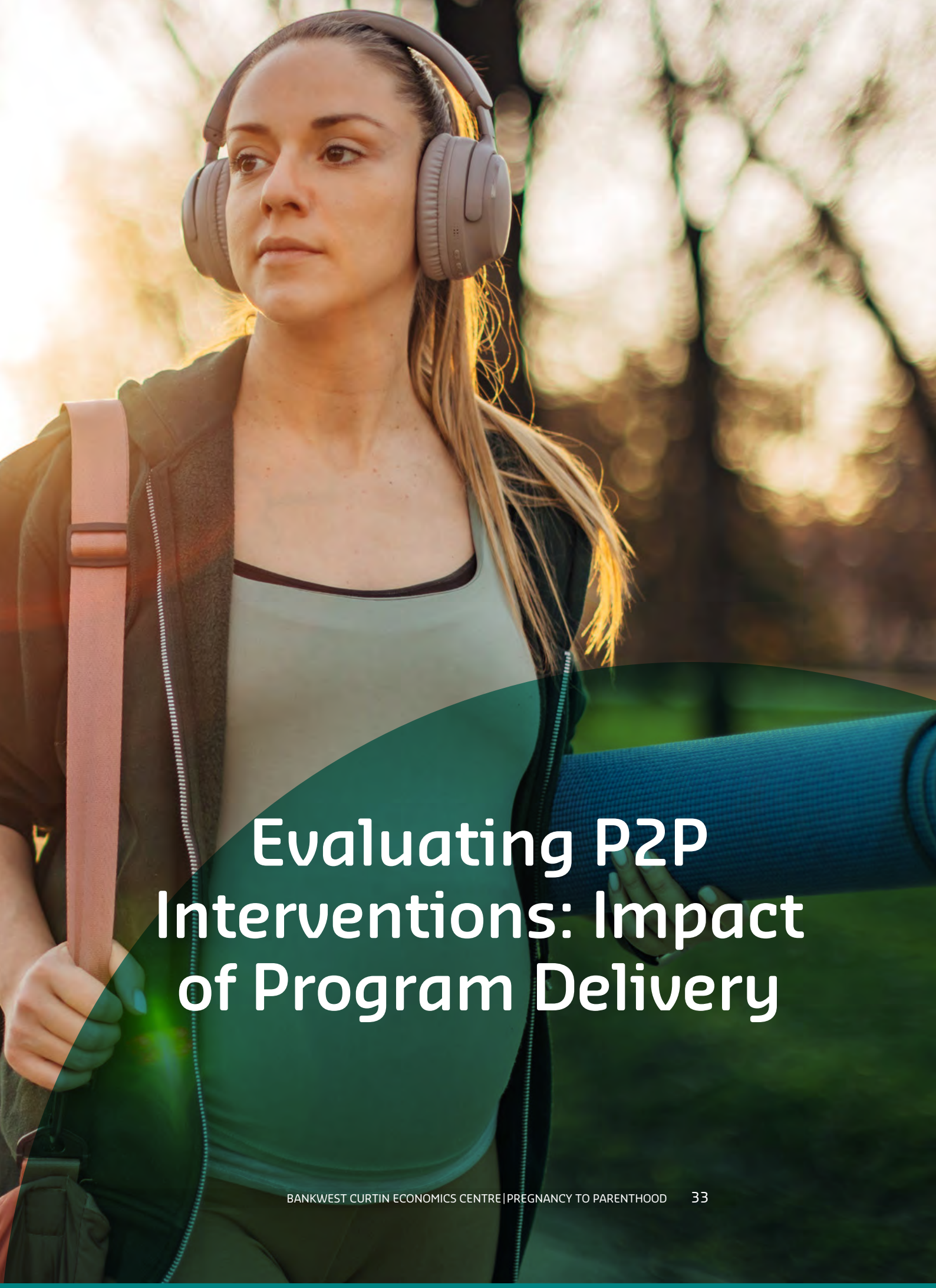
In summary, most people using P2P services are women in their early 30s and are often first-time parents. While most clients have a partner, the number of women who are single, separated or divorced has grown over time, suggesting that more women are turning to P2P when they have limited support elsewhere. Many clients have also experienced significant challenges earlier in life, with a large share reporting multiple adverse childhood experiences and trauma, highlighting the complexity of needs among families using the service.

Slightly fewer clients live in more disadvantaged areas, with relatively few coming from the most disadvantaged postcodes, and participation from culturally and linguistically diverse communities has declined in recent years.

Access and engagement also vary across groups. Clients who are single or living in more disadvantaged areas tend to wait longer to start services and spend less time in intervention, likely reflecting practical pressures such as time constraints, transport, childcare and work responsibilities as well as lack of available services.

Referral patterns suggest that families in more disadvantaged areas often rely on specialist mental health services and medical referrals, such as GPs and paediatricians to access the P2P services. This is likely due to higher disadvantage and ACEs indicating more severe mental health issues and also lack of money to access private services.

Together, these findings highlight opportunities for P2P to strengthen access and engagement by expanding outreach to disadvantaged and CALD communities, offering more flexible appointment options where possible, working closely with referral partners such as GPs, and collecting more information from clients about the practical barriers they face in accessing care.



# Evaluating P2P Interventions: Impact of Program Delivery

# Introduction

Prior research shows the risk of developing a mental health disorder is significant during the perinatal period, with one in six mothers developing postnatal depression within the first year of child's birth (Austin et al., 2017; Woolhouse et al., 2012), and one in 10 women developing an anxiety disorder (Dennis et al., 2017; Fawcett et al., 2019). Approximately 13 per cent of mothers were found to show symptoms of both depression and anxiety in the first 8 weeks postpartum (Falah-Hassani et al., 2016).

The presence of these mental disorders can further impact upon the mother's wellbeing, as well as the mother-infant relationship and the infant's outcomes. Caregivers experiencing a mental disorder may be less responsive or sensitive to infant signals, displaying higher levels of irritability and low levels of warmth towards the infant (Bernard et al., 2018; Ierardi et al., 2019; Lovejoy et al., 2000). Additionally, depressed mothers may withdraw from responding to the infant or become intrusive and hostile (Field, 2010), while anxious mothers may present with too high intensity in infant interactions or show controlling behaviours towards their child (Murray et al., 2008; Kaitz et al., 2010).

Most early intervention studies examining the impact of maternal mental health on caregiving and infant attachment have focused on high-risk or 'complex trauma' populations including women with elevated levels of adverse childhood experiences (ACEs) such as trauma, abuse, and intimate partner violence. Trauma histories and associated mental health difficulties have been shown to shape how a mother thinks and feels about her infant and about herself as a parent.

These disruptions, referred to as *distorted maternal representations*, are characterised by maternal hostility or helplessness, rejection of the infant or the maternal role, and a lack of warmth or joy in relation to the infant (Lyons-Ruth et al., 2006; Newman-Morris et al., 2020). Such distortions are associated with disruptions in caregiving behaviour and the developing attachment relationship. In high-risk samples, parental reflective functioning – the capacity to understand one's own and one's infant's behaviour in terms of underlying thoughts, feelings, and intentions – is often compromised, further limiting sensitive and attuned caregiving. Accordingly, interventions that strengthen maternal representations and enhance parental reflective functioning may reduce the risk of transgenerational transmission of trauma.

This section presents how mothers' mental health and their experiences of the relationship with their infant changed from before to after taking part in the programs.

# Measures of outcome

This research aims to examine the effectiveness of the programs in achieving improved outcomes for mothers and their infants across multiple areas. The measures of depression, anxiety, parenting confidence and mother-infant relationship include:

- **Edinburgh Postnatal Depression Scale (EPDS)**
  A 10-item scale measuring depressive symptoms in the past week, such as low mood and loss of enjoyment. After intervention, ***lower scores*** indicate improvement.

- **Perinatal Anxiety Screening Scale (PASS)**
  A 31-item scale assessing perinatal anxiety symptoms, including excessive worry, panic, and infant-related fears. After intervention, ***lower scores*** indicate improvement.

- **Karitane Parenting Confidence Scale (KPCS)**
  A 15-item scale assessing parents' confidence in caring for and responding to their infant, such as feeding, settling, and understanding cues. After intervention, ***higher scores*** indicate improvement.

- **Mothers' Object Relations Scale (MORS)**
  A 14-item scale measuring how parents perceive and feel about their relationship with their infant. The scale has two components: warmth, which reflects positive feelings and closeness between the parent and infant, and invasion, which reflects feelings that the infant is intrusive or demanding. After intervention, ***higher warmth scores*** and ***lower invasion scores*** indicate improvement.

- **Parental Reflective Functioning Questionnaire (PRFQ)**
  An 18-item scale measuring parents' ability to understand and reflect on their child's thoughts and feelings, across three domains: pre-mentalising modes, certainty about mental states, and interest and curiosity in mental states. After intervention, ***lower pre-mentalising scores*** and ***higher certainty and interest scores*** indicate improvement.

To ensure that changes in outcomes are significant and not simply due to random variation or measurement error, we use the Reliable Change Index (RCI). The RCI is a statistical measure used to determine if the difference between a client's pre- and post-intervention scores represents a 'true' change. For all measures in this evaluation, the RCI is calculated based on the standard deviation of the full sample. This takes into account the reliability of the test and how much scores typically fluctuate. If the change is large enough—specifically, an absolute RCI value equal to or greater than 1.96 ($|RCI| \geq 1.96$)—it is classified as statistically reliable, meaning we can be 95 per cent certain the change is real and not just "noise".

All mental health outcomes are measured using the Reliable Change Index (RCI) to ensure that improvements or deteriorations are statistically significant and non-random.

### Mental Health Measures (EPDS and PASS)

EPDS and PASS are used to decide whether a client is clinically depressed (EPDS) or clinically anxious (PASS). This defines our 'clinical group'. The 'non-clinical group' includes people who did not meet the clinical threshold for depression or anxiety but may still have experienced symptoms. We used these groups to assess the success of the intervention.

**Clinical group:** Clients are classified as clinical if their pre-intervention EPDS score is 13 or higher or their pre-intervention PASS score is 26 or higher, and as non-clinical otherwise. Being in the clinical groups indicate that clients experienced clinically high levels of depression or anxiety before intervention. Within this P2P dataset, around 52 percent of clients were in the clinical range for EPDS, and 74 per cent were in the clinical range for PASS before intervention.

For the clinical group, clients are classified into categories based on whether their scores moved across clinical thresholds and whether that move was 'reliable' according to the RCI.

Using the EPDS, clients in clinical group were classified into four outcome groups by combining changes in scores with a clinical cut-off and the Reliable Change Index (RCI). First, change was calculated as the difference between post- and pre-intervention EPDS scores, with decreases indicating improvement and increases indicating deterioration. A clinical cut-off of 12/13 was used to identify whether clients moved into or out of the clinical range.

Clients were then classified as **recovered** if they showed a reliable improvement and moved from the clinical to the non-clinical range, **improved but not recovered** if they showed a reliable improvement but remained in the clinical range, **no change** if changes were not statistically reliable, and **deteriorated** if they showed a reliable increase in symptoms.

For the PASS, the same approach was applied using the PASS clinical cut-off of 25/26. More details on how clients were classified into the four groups are provided in Technical Notes.

**Non-clinical group:** Importantly, we also apply the RCI to the non-clinical group. Although these clients are not classified as clinically depressed or anxious at entry, using the RCI allows us to track significant shifts in their symptoms. For clients starting below the clinical threshold, we track four distinct categories of change: clinical deterioration (a reliable increase in symptoms moving them into the clinical range), reliable increase in symptoms (worsening, but staying below the clinical cut-off), reliable decrease in symptoms (improvement), and no change (stability).



### Other Measures (Parenting and Relational Outcomes)

For the parenting and relational measures—such as the Karitane Parenting Confidence Scale (KPCS), Mothers' Object Relations Scale (MORS), and Parental Reflective Functioning Questionnaire (PRFQ)—we calculate the RCI using the full sample to define three categories of change: positive, negative, and no change.

To maintain consistency in reporting across the evaluation and align with existing figures, we focus primarily on presenting the share of clients who achieved a positive change. A positive change is defined as a statistically reliable shift ($|RCI| \geq 1.96$) in the desired direction. Depending on the scale, the direction of positive change varies.

Please refer to each measure explained above for details on the desired direction.

Given the absence of a control group, we instead examine differences in outcomes based on intervention intensity (e.g. intervention duration or number of sessions attended) and client heterogeneity (e.g. socio-economic status).

# Number of sessions and intervention time

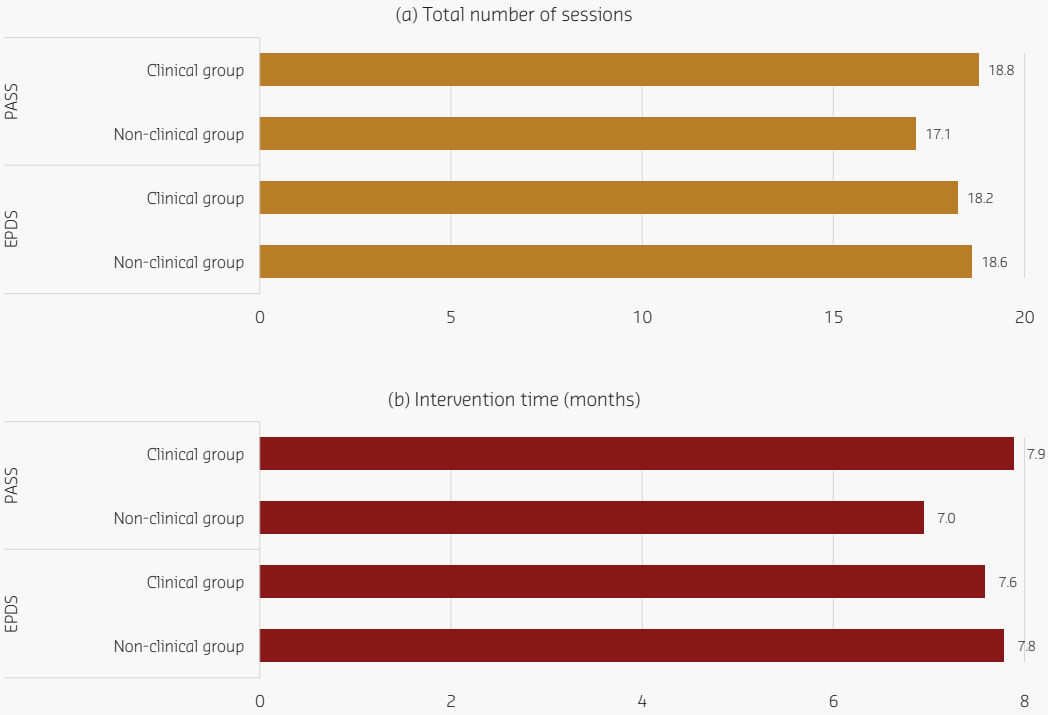
Nearly half the clients attended 11 to 20 sessions, with an average of 18 sessions.

Client engagement with the model of care varies, reflecting different levels of need. On average, clients attended 18 sessions. Around one in five attended 10 sessions or fewer (21 per cent), while the largest group (about 45 per cent) attended 11 to 20 sessions. A further 34 per cent received more intensive support, attending 21 sessions or more.

The average length of participation was 7.6 months. Around four in ten clients completed intervention within six months (39 per cent), while a slightly higher share remained engaged for six to nine months (41 per cent). Just over one in five clients (21 per cent) continued for 10 months or longer, highlighting the program's flexibility in responding to families who need longer-term support.

Clients in both the clinical and non-clinical groups showed very similar levels of engagement with the model of care, regardless of whether mental health was measured using PASS or EPDS (Figure 7).

**Figure 7**
Intervention time duration and number of sessions for clinical and non-clinical groups




Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

On average, clients attended around 17 to 19 sessions, with only small differences between clinical and non-clinical groups. Those in the clinical group tended to attend slightly more sessions under PASS, while under EPDS the pattern was largely similar across groups.

Intervention duration also varies little between groups. On average, clients remained in the model of care for around 7 to 8 months, regardless of clinical status. Clinical clients receiving support under PASS stayed engaged slightly longer than non-clinical clients, while under EPDS the duration was almost identical across groups.

Overall, these patterns suggest that engagement with the model of care is broadly consistent across clinical and non-clinical clients.

41 per cent of clients completed intervention in six to nine months, with an average participation length of 7.6 months.



# How do clients' outcomes change after using services?

The intervention achieved medium to large reductions in depression and anxiety, providing significant relief for the majority of participants.

This section presents changes across all outcome measures from pre- to post-intervention. The results show improvements for a majority of clients across mental health and parenting outcomes.

Table 2 summarises the overall size of the improvements seen in clients' mental health and parenting skills. To understand how impactful the model of care was, we use a measure called an 'effect size', which tells us whether a change is small, medium, or large. The results show that the reductions in depression and anxiety symptoms were medium to large (Cohen's d = - 0.66 and - 0.69). In practical terms, this means that the model of care provided a noticeable and meaningful relief in mental health struggles for these clients. Parenting confidence also improved, but the change was small (Cohen's d = 0.31). This suggests that while parents felt slightly more capable, the shift wasn't as dramatic as their mental health recovery.

The model of care was also linked to positive changes in how parents experienced the relationship with their child (measured by MORS scales). Improvements in parental warmth and everyday interactions were moderate in size (effect sizes (r) around 0.3-0.35), meaning parents experienced a clear and positive difference in how they connect with and understand their children.

There were also improvements in parental reflective functioning, which is parents' ability to think about and understand their child's thoughts, feelings, and intentions (measured by PRFQ scales). These changes were around moderate in size (r ranges from 0.27 to 0.35), indicating steady and meaningful gains in reflective parental functioning.

Taken together, the results suggest that the model of care was associated with substantial improvements in parents' mental health, alongside meaningful positive changes in how parents experienced and understood their child and the parent–child relationship.

### Changes in outcomes by intervention intensity for the clinical group

We further explore how the changes in outcomes vary by the number of sessions attended for the clinical group in Table 3.

For depression (EPDS), just over half of clients were classified as recovered (52 per cent), while a further small share improved but did not fully recover (5 per cent). Around 42 per cent showed no reliable change, and very few clients deteriorated (less than 1 per cent). Recovery rates were slightly higher among clients who attended 11 sessions or more, compared with those who attended 10 sessions or fewer.

For anxiety (PASS), outcomes were more mixed. Around 42 per cent of clients were classified as recovered, and a further 23 per cent showed improvement without full recovery. About 32 per cent experienced no reliable change, and a small proportion (4 per cent) showed deterioration. Recovery rates tended to be higher among clients who attended 21 or more sessions, while deterioration was more evident among those who attended 11–20 sessions, though the overall numbers remain small.

To sum up, most clients experienced meaningful improvements in depression and anxiety, with higher recovery rates generally observed among those who engaged in a

**Table 2**

Significance level and size of the changes in outcomes

| Panel A: Paired samples t-test | Obs | Mean | Std | t | p-value | d |
|---|---|---|---|---|---|---|
| EPDS score | | | | | | |
| Pre-treatment score | 246 | 12.6 | 6.0 | 9.9 | 0.000 | -0.66 |
| Post-treatment score | 231 | 8.8 | 5.4 | | | |
| PASS score | | | | | | |
| Pre-treatment score | 244 | 38.1 | 19.0 | 10.4 | 0.000 | -0.69 |
| Post-treatment score | 227 | 27.1 | 17.6 | | | |
| Karitane score | | | | | | |
| Pre-treatment score | 88 | 29.6 | 15.6 | -2.5 | 0.016 | 0.31 |
| Post-treatment score | 76 | 30.5 | 17.3 | | | |
| **Panel B: Wilcoxson Signed Ranks test** | **Obs** | **Mean** | **Std** | **z** | **p-value** | **r** |
| MORS warmth score | | | | | | |
| Pre-treatment score | 153 | 25.1 | 8.7 | 5.2 | 0.000 | 0.35 |
| Post-treatment score | 127 | 27.3 | 9.7 | | | |
| MORS invasion score | | | | | | |
| Pre-treatment score | 154 | 10.5 | 6.8 | -4.6 | 0.000 | -0.30 |
| Post-treatment score | 127 | 7.8 | 5.9 | | | |
| PRFQ Pre-mentalising score | | | | | | |
| Pre-treatment score | 67 | 1.8 | 0.9 | -3.8 | 0.000 | -0.35 |
| Post-treatment score | 67 | 1.6 | 0.6 | | | |
| PRFW Certainty score | | | | | | |
| Pre-treatment score | 68 | 4.1 | 1.1 | 2.8 | 0.005 | 0.27 |
| Post-treatment score | 66 | 4.4 | 1.0 | | | |
| PRFQ Interest and Curiosity score | | | | | | |
| Pre-treatment score | 65 | 5.9 | 0.9 | 3.0 | 0.003 | 0.28 |
| Post-treatment score | 68 | 6.1 | 0.7 | | | |

Note: Paired samples t-test in Panel A and Wilcoxson Signed Ranks test in Panel B are selected based on distribution of the difference between Pre- and Post-intervention scores.

Panel A: Cohen's d = Mean/SD: small effect = .2, medium effect = .5, large effect = .8.

Panel B: r = z/√number of observations = n × 2 (pre- and post-): small effect = .1, medium effect = .3, large effect = .5.

Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

Among clients in the clinical group, more than half recovered from depression and 42 per cent recovered from anxiety.

**Table 3**

Clinically significant changes in depression (EPDS) and anxiety (PASS) for the clinical group

| | | Reliable Change index + EPDS cut-off category | | | |
|---|---|---|---|---|---|
| EPDS | | Recovered (%) | Improved but not recovered (%) | No change (%) | Deteriorated (%) |
| Total | N = 116 | 51.7 | 5.2 | 42.2 | 0.9 |
| <=10 sessions | N = 19 | 42.1 | 10.5 | 47.4 | 0.0 |
| 11-20 sessions | N = 54 | 53.7 | 3.7 | 40.7 | 1.9 |
| >=21 sessions | N = 43 | 53.5 | 4.7 | 41.9 | 0.0 |
| | | **Reliable Change Index + PASS cut-off category** | | | |
| EPDS | | Recovered (%) | Improved but not recovered (%) | No change (%) | Deteriorated (%) |
| Total | N = 165 | 41.8 | 23.0 | 31.5 | 3.6 |
| <=10 sessions | N = 27 | 40.7 | 22.2 | 37.0 | 0.0 |
| 11-20 sessions | N = 76 | 39.5 | 23.7 | 28.9 | 7.9 |
| >=21 sessions | N = 62 | 45.2 | 22.6 | 32.3 | 0.0 |

Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

The model of care acts as a vital preventative tool for non-clinical participants, with a 94.5% success rate in maintaining or improving mental health.

greater number of sessions. There are very low rates of deterioration across both outcomes.

In the clinical group, we run t-tests to compare the characteristics of clients who recovered or improved with those who did not recover, and those who had no change or deterioration. In the non-clinical group, t-tests are also used to compare clients who improved vs those who had no change or deterioration. The results are presented in the Appendix – Table 12.

Among clients in the clinical group, those who recovered or improved generally had lower symptom severity at entry, particularly for depression (EPDS), where this difference is statistically significant. For anxiety (PASS), pre-intervention severity was also lower among those who improved, although this difference is not statistically significant. Most demographic characteristics, including socio-economic disadvantage (IRSD), cultural and linguistic diversity, adverse childhood experiences (ACEs), number of sessions, and intervention duration, do not differ significantly between the two outcome groups.

Even for those not targeted for clinical treatment, nearly 20% saw a reliable decrease in depression symptoms.

Within the non-clinical group, clients who improved had higher pre-intervention symptom scores than those who showed no change or deterioration, and this difference is statistically significant for depression (EPDS). This indicates that even within the non-clinical range, those closer to the clinical threshold were more likely to show improvement. For anxiety (PASS), the same pattern is observed, but the difference is not statistically significant. As with the clinical group, there are no statistically significant differences by socio-economic status, cultural background, ACEs, number of sessions, or intervention duration.

Across both groups, baseline symptom severity is the strongest factor distinguishing clients who improve from those who do not. The results highlight that initial need and timing rather than intervention intensity alone are most closely associated with positive change.

### Changes in outcomes by intervention intensity for the non-clinical group

Table 4 presents the reliable changes in depression (EPDS) and anxiety (PASS) symptoms for the non-clinical group. It is important to note that while the clinical group (Table 3) were specifically treated for depression and/or anxiety as they exhibited clinical levels of these conditions, clients in the non-clinical group were not. However in Table 4, we examine whether there were "trickle-down" benefits of the intervention for those who were not classified as clinically symptomatic at entry. This means that in this group, we cannot talk about "recovery" but rather an increase or decrease in depression or anxiety symptoms.

Overall, most non-clinical clients remained stable, with symptom improvements being less frequent than in the clinical group, and deterioration occurring in a minority of cases, particularly for anxiety. The intervention seems to be much more effective for people having been clinically diagnosed with depression and anxiety compared to those who were not.

For depression symptoms, a vast majority (76.1 per cent) experienced no reliable change, while 18.3 per cent saw a reliable decrease in symptoms. For anxiety symptoms, 73.7 per cent showed no change,

**Table 4**
Clinically significant changes in depression (EPDS) and anxiety (PASS) symptoms for the non-clinical group

| | | Reliable Change index + EPDS cut-off category | | | |
|---|---|---|---|---|---|
| EPDS | | Clinical deterioration (%) | Reliable increase in symptoms (%) | Reliable decrease in symptoms (%) | No change (%) |
| Total | N = 109 | 3.7 | 1.8 | 18.3 | 76.1 |
| <=10 sessions | N = 17 | 5.9 | 0.0 | 11.8 | 82.4 |
| 11-20 sessions | N = 51 | 5.9 | 2.0 | 21.6 | 70.6 |
| >=21 sessions | N = 41 | 0.0 | 2.4 | 17.1 | 80.5 |
| | | **Reliable Change Index + PASS cut-off category** | | | |
| EPDS | | Clinical deterioration (%) | Reliable increase in symptoms (%) | Reliable decrease in symptoms (%) | No change (%) |
| Total | N = 57 | 12.3 | 3.5 | 10.5 | 73.7 |
| <=10 sessions | N = 9 | 11.1 | 0.0 | 11.1 | 77.8 |
| 11-20 sessions | N = 31 | 9.7 | 3.2 | 12.9 | 74.2 |
| >=21 sessions | N = 17 | 17.6 | 5.9 | 5.9 | 70.6 |

Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

Nearly half of parents with the highest levels of early childhood trauma achieved full clinical recovery from depression.

By supporting recovery for those with the highest needs, the model of care serves as a critical intervention for breaking the cycle of intergenerational trauma.

10.5 per cent had a reliable decrease in symptoms, and 12.3 per cent experienced clinical deterioration. These results suggest that the intervention acts as a powerful preventative tool, ensuring that those who are currently "managing" do not deteriorate into clinical distress, while still offering a reliable decrease in symptoms for nearly 1 in 5 participants in the case of depression. This is despite the fact that depression was not the target of the intervention in these cases.

## How do other factors influence the changes in outcomes?

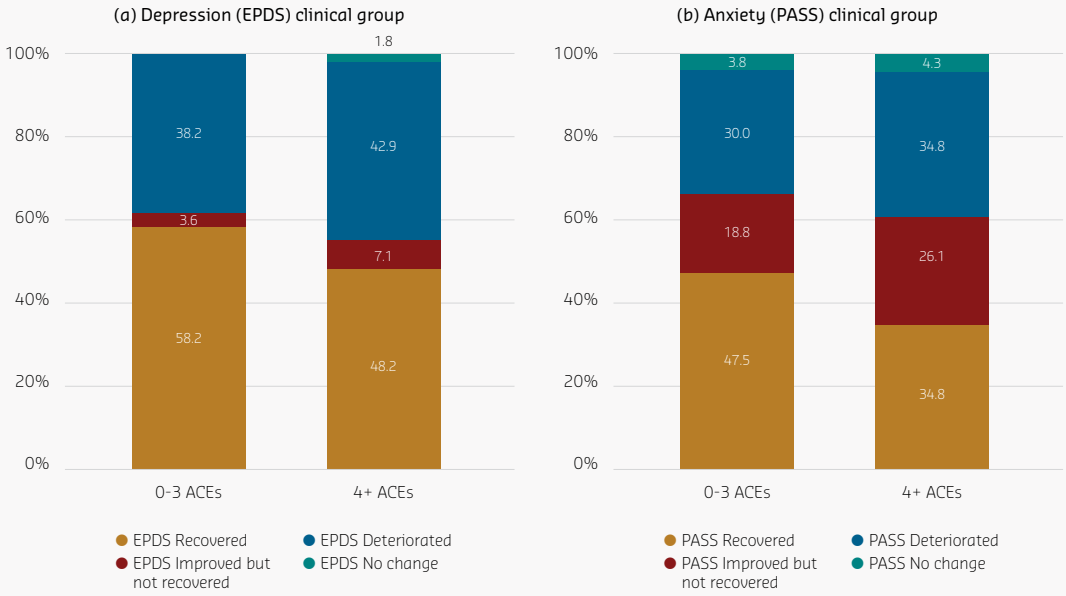
Figure 8 shows the changes in depression and anxiety outcomes for the clinical group, split by the number of adverse childhood experiences (0–3 ACEs vs 4 or more ACEs). This data is critical for understanding the model of care's role in breaking the cycle of intergenerational trauma. While clients with fewer ACEs had higher recovery rates, it is highly significant that nearly half (48.2 per cent) of parents who had experienced 4 or more major childhood traumas still achieved full clinical recovery from depression.

When we combine recovery and improvement, we see that a majority of parents with high trauma exposure (over 55% for depression and 60% for anxiety) moved in a positive direction. These results are incredibly important; by supporting parents with high levels of early adversity to recover and improve their mental health, the model of care is directly facilitating the breaking of intergenerational trauma, ensuring that the effects of past trauma are not passed down to the next generation.

The intervention proved highly effective for disadvantaged households, with 70% of participants showing reliable improvement or recovery from anxiety.

Low-income and disadvantaged participants achieved equal or better mental health outcomes compared to those in more advantaged areas.

**Figure 8**
Changes in depression (EPDS) and anxiety (PASS) by number of adverse childhood experiences (ACEs)—clinical group

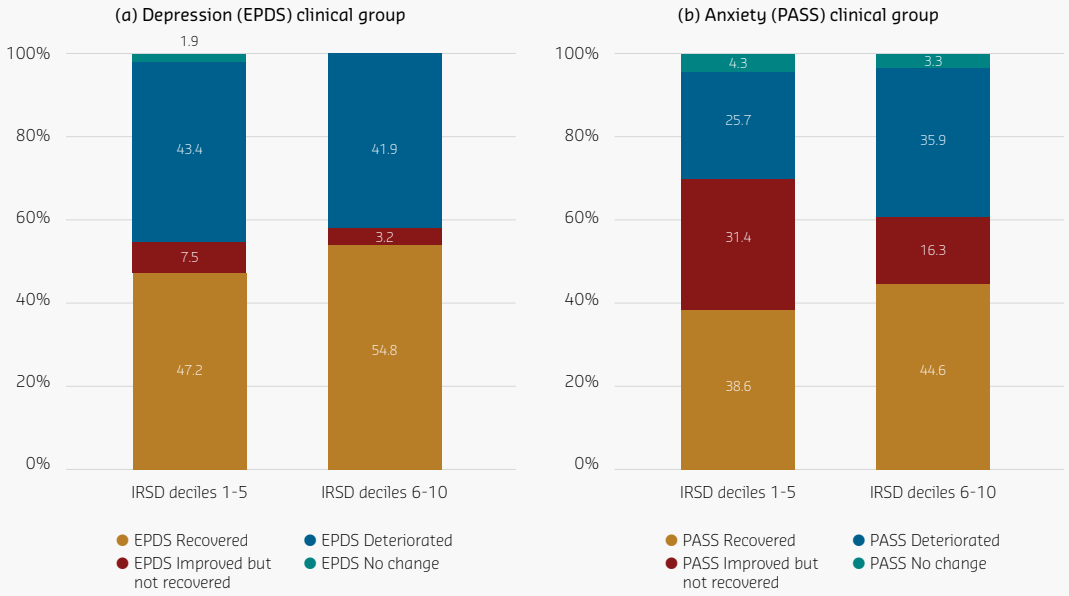



Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

Figure 9 illustrates the combined "recovered and improved" rates by socio-economic background. An important finding of this evaluation is that the intervention is particularly effective for families from lower socio-demographic backgrounds. For anxiety (PASS), disadvantaged households in the bottom five deciles (IRSD 1–5) actually saw a higher total success rate (70 per cent recovered or improved) than those in more advantaged areas (60.9 per cent).

For depression, the intervention also showed strong results for disadvantaged households, with a 54.7 per cent combined recovery and improvement rate. Even though this is slightly lower than the 58 per cent rate for people in less disadvantaged households, the difference is only 3 percentage points, which is an outstanding result. These findings demonstrate that the model of care is not only accessible to but highly effective for low-income and disadvantaged households, providing them with the necessary support to achieve significant mental health gains regardless of their socio-economic circumstances.

**Figure 9**
Changes in depression (EPDS) and anxiety (PASS) by socio-economic (IRSD) decile—clinical group




Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

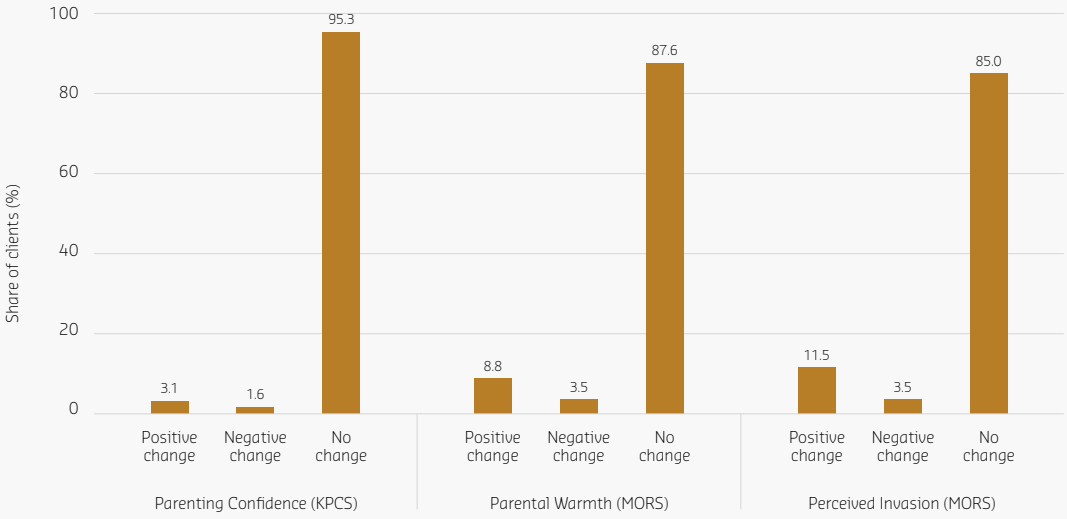
Over 11% of parents reported feeling significantly less overwhelmed by their child's needs, leading to a more harmonious parent-child relationship.

## Changes in parental confidence, attachment and parental reflective functioning

Figure 10 presents the changes in parenting confidence and attachment. We first focus on the positive movements observed across these relational measures. Parental Warmth (measured via MORS) tracks the positive emotional connection and attachment between parent and child, while Perceived Invasion reflects the degree to which a parent feels overwhelmed or "intruded upon" by their child's demands.

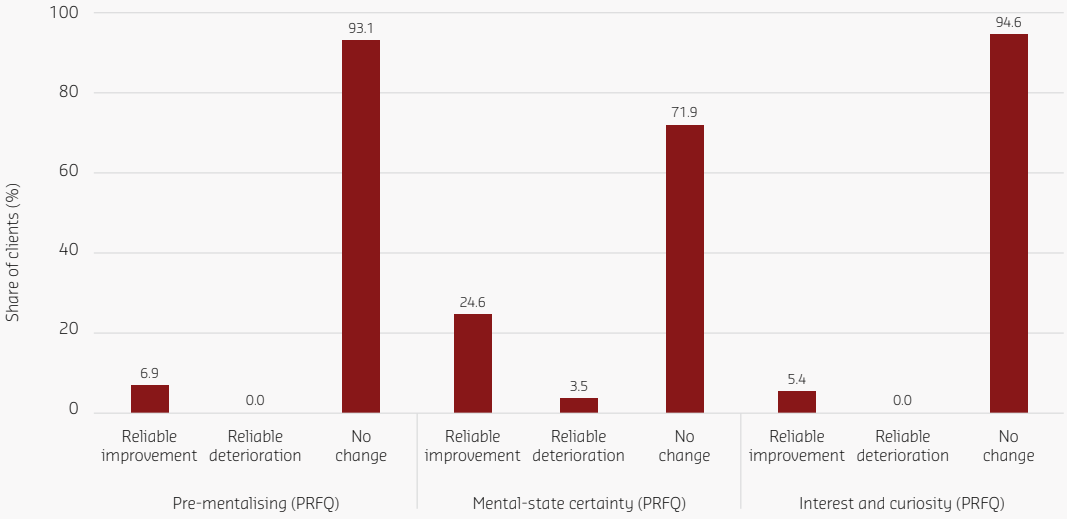
The results show that 11.5 per cent of parents saw a positive reduction in perceived invasion, and 8.8 per cent reported a positive change in parental warmth. While the majority of participants remained stable, these positive shifts represent meaningful improvements in the day-to-day relationship between parent and child. Even a small increase in warmth or a reduction in feeling "invaded" by a child's needs can significantly improve the domestic environment and the quality of parenting, which is the primary goal of the relational component of the intervention.

**Figure 10**
Changes in Parental Confidence (KPCS), Parental Warmth (MORS) and Perceived Invasion (MORS)—all sample




Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

**Figure 11**
Reliable changes in parental reflective functioning (PRFQ)—all sample




Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

Figure 11 shows changes in parental reflective functioning (PRFQ), the capacity to understand the internal mental states (feelings, thoughts, and intentions) of both parents and children. This is a sophisticated skill that is key to healthy child development.

The largest reliable change across the PRFQ domains was in Mental-State Certainty, with 24.6 per cent of parents showing a reliable increase. This indicates that these parents reported greater certainty when considering their child's thoughts, feelings and intentions following participation in P2P.

This finding requires careful interpretation. Greater certainty may reflect increased confidence in thinking about a child's internal experience, but it does not demonstrate that the parent's interpretation is more accurate. Healthy reflective functioning also involves recognising that another person's mental states are not fully knowable, while excessive certainty can sometimes reflect overinterpretation or hypermentalising.

Reliable improvements were also observed for 6.9 per cent of parents in Pre-mentalising and 5.4 per cent in Interest and Curiosity, with no reliable deterioration identified in either domain. Considered together, the results suggest positive changes for a proportion of parents in dimensions associated with parental reflective functioning. However, the findings should be interpreted cautiously given the small sample size and the self-report nature of the PRFQ.

## Summary of key findings

Overall, the findings show that the P2P Foundational and ABC Programs are making a meaningful and measurable difference for families, particularly for parents experiencing clinical levels of stress, anxiety, or depression during the perinatal period.[4]

Using the rigorous Reliable Change Index (RCI) methodology, we find that most clinical clients experienced clear and statistically significant improvements in their mental health. Among clients who entered the model of care with clinically high levels of depression, 52 per cent achieved full recovery, with an additional share showing reliable improvement. Recovery rates for anxiety were similarly strong, with 42 per cent of participants recovering and a further 23 per cent showing significant symptom reduction. The size of these improvements was moderate to large, indicating that the model of care delivers noticeable relief for those in clinical distress.

The programs were particularly effective for those in the greatest need. Participants from disadvantaged socio-economic backgrounds achieved high success rates, with 70 per cent showing reliable improvement or recovery from anxiety.

Nearly 1 in 4 parents showed a reliable increase in their reported certainty about their child's mental states.

4 Apart from these descriptive statistics, we also explored whether outcomes varied with intervention intensity using regression analysis, controlling for baseline clinical status and key demographic factors. While the results suggest that clinical clients, those receiving more intensive support, and clients from more disadvantaged areas were more likely to improve, most associations were not statistically significant due to the small sample size. These findings are therefore not included in this report.

Furthermore, the evaluation highlights the model of care's vital role in breaking the cycle of intergenerational trauma. Even among parents who had experienced the highest levels of early childhood adversity (4 or more ACEs), nearly half (48 per cent) achieved clinical recovery from depression.

In addition to mental health recovery, the model of care supported positive shifts in the parent-infant relationship and parenting skills. Over one in ten parents experienced a reliable reduction in feeling overwhelmed or "invaded" by their child's needs. Nearly one in four participants showed a reliable increase in their reported Mental-State Certainty, reflecting greater certainty when considering their child's internal feelings, thoughts and intentions. This result represents one dimension of parental reflective functioning and should not be interpreted as demonstrating that parents' understanding of their child became more accurate.

Beyond clinical treatment, the intervention also serves a critical preventative function. For non-clinical participants, the model of care achieved a 94.5 per cent success rate in preventing depression symptoms from worsening, with nearly 20 per cent of these participants seeing a reliable decrease in their symptoms despite starting below the clinical threshold.

Clients who engaged more deeply with the model of care also tended to see greater benefits. Those who attended more sessions or stayed in the program longer were more likely to improve, particularly among clients who started with more severe symptoms. For example, the share of clients showing improvement in depression increased from around 64 per cent among those attending 10 sessions or fewer to over 70 per cent among those attending more than 20 sessions, with even higher improvement rates among clients who remained in the program for 10 months or longer. While these findings are descriptive rather than causal, they suggest that sustained engagement supports stronger outcomes.

Finally, while rates of clinical deterioration were observed in a minority of cases—particularly among those with the highest levels of past trauma—the overall results indicate that the programs are safe, supportive, and highly effective at improving the mental health and relational wellbeing of families facing complex challenges.



# Beyond P2P data: Impact of early intervention on children, families and communities

Due to data limitations, our analysis was unable to capture the full impacts of P2P services on infants and the wider family. This section provides a brief literature review on the benefits to infants of intervention in the perinatal phase, in hopes to highlight potential benefits P2P services may bring to children, their families, and the wider community.

Having a parent with postpartum depression and anxiety or other mental health conditions can impact children's health several ways, including increased likelihood of preterm births and low birth weight. Other health impacts are shown to include increased likelihood of asthma or other respiratory conditions, and reduced immune system response that results in increased cases of gastrointestinal infections. These health impacts can continue into adulthood, resulting in long term impacts and an increased likelihood of emergency department presentations (PricewaterhouseCoopers [PwC], 2014; PwC, 2019).

Issues regarding mental health can also arise, including an increased risk of children developing internalising disorders (e.g., depression, anxiety), or externalising disorders (e.g., behavioural problems, self-harm). Evidence shows children born to a parent with depression or anxiety have increased likelihood of developing the same condition later in life, with majority of these mental health conditions lasting into adulthood. Additionally, perinatal depression and anxiety can result in an increased likelihood of neurodevelopmental issues such as attention deficit hyperactivity disorder (ADHD), raising the risk of decreased IQ points and lower cognitive test scores (PwC, 2019).

The impacts to the physical and mental health of children bleed into other aspects of their life, where children whose mother had depression or another mental disorder showed an increased likelihood of conduct disorder, reduced number of school days attended, and higher rates of school dropout (Mekonnen et al., 2018; PwC, 2014). These impacts continue into childhood and adulthood, through reduced educational attainment and reduced earnings potential (PwC, 2014; PwC, 2019).

Beyond the infant, the wider family can be influenced by perinatal depression or other mental health issues during the perinatal phase, largely involving having to step into a carer role to look after the mother and infant. This increased pressure can result in heightened stress for the other family members, which may result in substance or other types of abuse, along with an increased likelihood of family breakdowns, including divorce (PwC, 2019).

Early intervention focusing on the parent-infant relationship during the perinatal period has shown to have positive impacts for infants, including short term improvements in the developmental capabilities of the brain and infant cognitive outcomes (Izett et al., 2021). This is along with more long-term benefits to child mental health and self-esteem through improvements in the child's emotional and behavioural regulation (Wise et al., 2005; Izett et al., 2021). Even in the long term, programs administered during early childhood showed a positive effect on children's socialisation and peer relationship, crime rates, employment, grade retention, high school graduation, and overall achievement, setting children up for lifelong improvements in wellbeing (Izett et al., 2021; Wise et al., 2005).

Perinatal depression and anxiety can have wide-ranging and long-lasting impacts on infants and partners through multiple aspects in their lives including physical health, mental health, brain development, wellbeing, education, and employment outcomes.

To the best of our knowledge, the literature on the benefits of the P2P Foundational Program on infants were limited, however a large amount of evidence is available to show the benefits of the ABC Program on children and families.

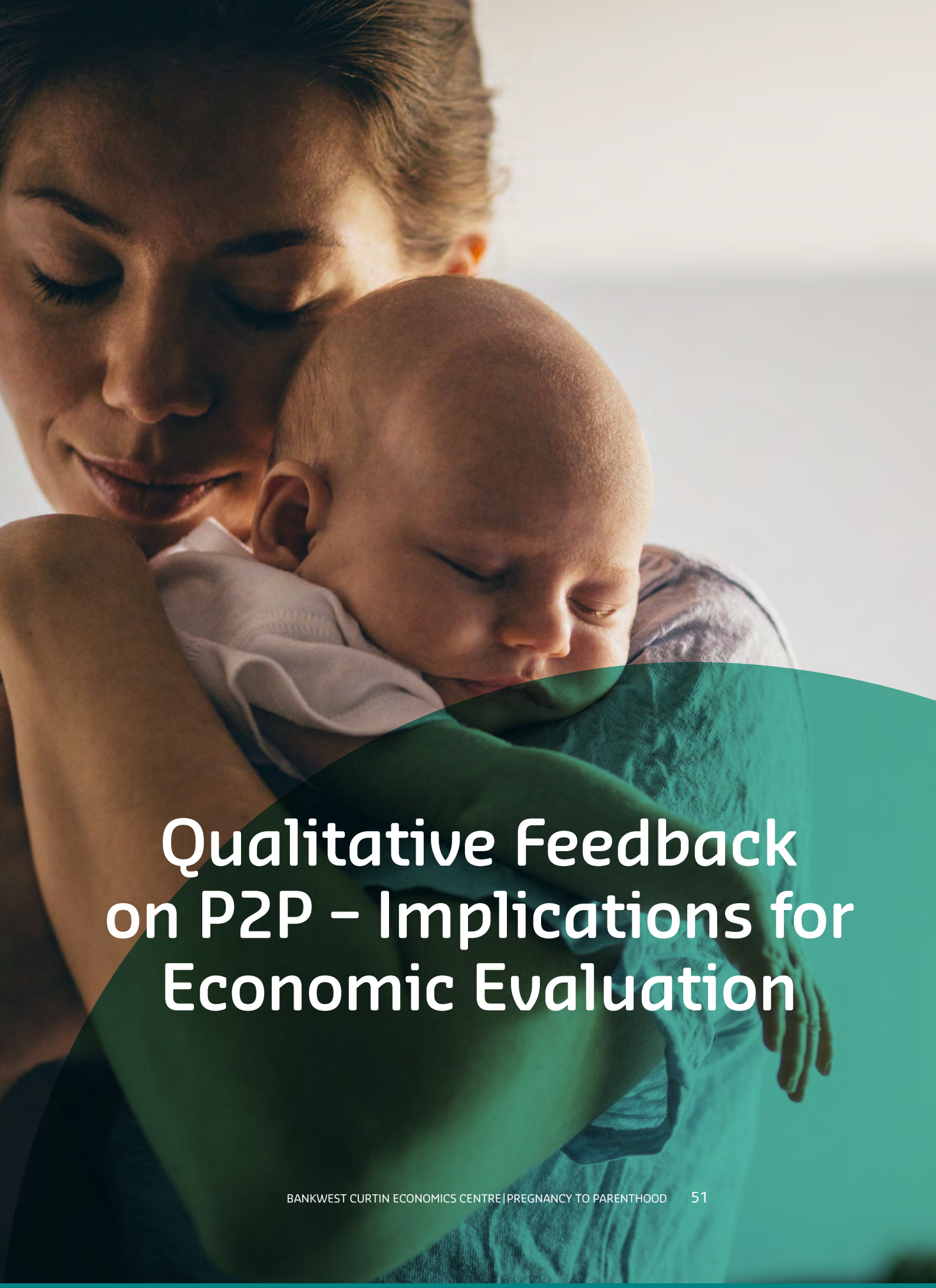
Children that had undergone the ABC Program in infancy had higher respiratory sinus arrhythmia and a lower heart rate at rest during middle childhood, showing an impact of the Program on children's autonomic regulation (Tabachnick et al., 2019). Additionally, the intervention showed improvements in an infant's regulation of their cortisol production and patterns, which indicate a reduction in stress (Grube & Liming, 2018). Furthermore, children were shown to have improvements in their cognitive development, assisting with normal function development within the brain and increased ability regarding language skills acquisition (Grube & Liming, 2018; Bernard et al., 2017).

The literature also shows that infants undergoing ABC had higher activity in response to maternal cues in the area of the brain commonly associated with social cognition, which may help support their cognitive and brain development. Additionally, greater activity in these areas of the brain is associated with fewer behavioural problems, with expectations that increased neural pathway development may prevent future problems, enduring into at least middle childhood (Valadez et al., 2021). Regarding impacts on the wider family, research by Grube et al. (2024) found that families which originally presented as having low family function transitioned to a higher function level upon program completion, where family function encompasses family interactions, family safety, family health, and social and community life.

Several studies have estimated the cost of perinatal depression and anxiety.

The increased risk of developing depression, anxiety, and ADHD in children of parents with perinatal depression or anxiety has an estimated lifetime cost of $5.2 billion, arising from impacts to wellbeing, productivity, and health care use. The increased risk of children developing depression has $400 million in health and productivity costs over the lifetime, while the increased likelihood of anxiety in children has an additional $1.3 billion in lifetime costs. Intervention costs for health are $54 million for increased cases of premature birth or low birth weight only, with an extra $4 million for increased cases of gastrointestinal infections and $5 million for asthma or other respiratory conditions in the first year after birth alone. Estimated health costs from conduct disorder, depression, emergency department presentations, asthma, are $6.6 million each year after the first, or $54.8 million in the 20 years after birth (PwC, 2014; PwC, 2019).

In summary, the literature shows that mental health conditions during the perinatal period can have wide-ranging and long-lasting impacts on infants and other family members, affecting multiple aspects in their lives including physical health, mental health, brain development, wellbeing, education, and employment outcomes.



# Qualitative Feedback on P2P – Implications for Economic Evaluation



This chapter summarises qualitative feedback from 55 participants across three cohorts between December 2024 and August 2025. Feedback was collected through post-program interviews and analysed thematically. The findings provide insight into how clients experienced the service and help contextualise the quantitative results presented in earlier chapters.

While the statistical analysis demonstrates measurable improvements in depression, anxiety, parenting confidence and parental representations, the qualitative findings provide insight into how participants experienced these changes and the factors that may have contributed to them. Taken together, these findings strengthen confidence in the model of care's effectiveness and economic value.

## Engagement and Expectations

Participants approached the P2P Foundational Program with varied expectations, with many reporting limited prior understanding of what the Program would involve. Most were referred by a trusted professional, including midwives, child health nurses or general practitioners – consistent with earlier findings that over one-third of referrals come from nursing and midwifery services.

Several participants described beginning the Program with uncertainty but reported that the service exceeded expectations:

> **"I kind of just went with no expectations though I knew I needed help... it exceeded those expectations."**

Clients highlighted that the P2P Foundational Program addressed both maternal mental health and the developing parent–infant relationship. This dual focus aligns with quantitative findings showing improvements not only in depression (69 per cent improved) and anxiety (73 per cent improved), but also in parenting confidence and parental representations at program discharge/post-program.

A participant's decision to attend was frequently shaped by perceived safety, relevance to the challenges of pregnancy and early parenting, and trust in the referral source. As one participant described:

> **"There was a deep interest in what was happening... these people really do care and... want to help."**

This reinforces the importance of integrated referral pathways and trusted entry points into care.

## Therapeutic Environment and Relational Care

A consistent theme across cohorts was the experience of psychological safety. Participants described the service as welcoming, non-judgemental and respectful. Many noted feeling genuinely "seen" as individuals rather than defined solely by their role as a parent.

> **"[Practitioner] welcomed me and my girls in and she allowed me the space and time to work through things, and she saw me for me."**

Others described feeling valued beyond their parenting role:

> **"I was valued as a person... encouraged to see who I am and look at my wants and needs as well as my [children]."**

This relational safety appears to underpin the measurable improvements observed in maternal mental health outcomes. Reductions in EPDS and PASS scores were medium to large in size (Cohen's $d$ = -0.66 and -0.69), suggesting substantial improvements in day-to-day functioning.

Participants described how reflective conversations with the practitioner helped make distress feel more manageable:

> **"...she would put things into perspective and break down little situations, so they didn't feel so big."**

These accounts suggest that relational safety and continuity of care were central to client engagement and the improvements observed in mental health outcomes.

## Changes in Mental Health and Emotional Regulation

Participants frequently described improvements in emotional regulation, reduced overwhelm, and greater capacity to manage distress. These self-reported experiences align closely with the quantitative reductions in depression and anxiety.

> **"I'm calmer than I used to be... able to regulate my emotions better."**

Clients in the clinical group reported particularly meaningful change, consistent with the finding that 52 per cent recovered from depression and 42 per cent recovered from anxiety. Qualitative accounts suggest that improvements were not limited to symptom reduction but extended to increased self-awareness and confidence in managing intense emotions.

Importantly, participants described feeling supported during periods of heightened distress:

> **"I think I trauma dumped quite a bit and felt bad about it but [the practitioner] was just like, 'I'll continue seeing you solo' ... no one has ever supported me like that... I felt truly supported."**

Very few participants described negative experiences or worsening symptoms, reinforcing the quantitative finding of very low deterioration rates.

## Parenting Confidence and Parental Representations

Beyond mental health, participants described meaningful changes in how they experienced their infant and their parenting role. Many reported:

- feeling calmer and more confident in responding to cues
- greater patience and curiosity about their infant's behaviour
- reduced feelings of intrusion or overwhelm

These reflections align with improvements observed in parenting confidence (KPCS), parental warmth and perceived invasion (MORS), and parental reflective functioning (PRFQ).

Participants described developing the capacity to pause and reflect before responding:

> **"...the program encouraged reflection and gave us things to try at home rather than expecting someone to fix it for us."**

Others reflected on changes in emotional communication within the family:

> **"He's getting a bit more open to talk about emotions... having that external person validate things was probably the most helpful."**

While effect sizes for parenting measures were moderate, qualitative data suggest that even modest statistical changes translated into meaningful shifts in daily interactions.

## Practical Strategies and Skill Development

Participants highlighted the usefulness of practical strategies tailored to their child's developmental stage. Techniques such as grounding exercises, structured play and co-regulation strategies were frequently cited as helpful:

> **"...moving his body around... blowing bubbles... all of those little things were really effective."**

Participants valued the focus on empowerment and skill development:

> **"...trying to empower me to kind of do things myself... reminding us that we weren't alone."**

This aligns with the quantitative finding that nearly half of clients reported improved parenting confidence.

## Access, Barriers and Areas for Refinement

Although satisfaction was high overall, participants identified practical considerations including travel and scheduling challenges, a desire for written or digital resources, and occasional need for clearer framing to avoid feelings of self-blame. For example, some participants noted that without clear explanation of how early experiences can shape parenting, discussions about attachment or intergenerational patterns could initially feel confronting or be interpreted as criticism. Providing clear, strengths-based framing and normalising these challenges was viewed as important in supporting engagement.

> **"Sometimes it felt like I was doing everything wrong... but once it was explained properly, it made sense."**

Despite these considerations, overall satisfaction remained high, and participants overwhelmingly reported recommending the service:

> **"I couldn't recommend you guys enough."**

> **"...I've tried to express how grateful and significant it's been."**

These reflections align with earlier findings showing longer wait times and shorter intervention durations for single parents and families in disadvantaged areas. Addressing logistical barriers may further strengthen engagement and maximise model of care impact.

## Conclusion

The qualitative findings align with and help contextualise the quantitative outcomes presented earlier in this report.

Participants' descriptions of improved emotional wellbeing, increased parenting confidence, and changes in how they experienced and understood their infant are consistent with the observed reductions in depression and anxiety scores and improvements in parenting measures. These accounts illustrate how changes captured through standardised self-report measures were reflected in daily interactions and lived experience.

Importantly, qualitative feedback suggests that changes were not limited to symptom reduction. Participants frequently described shifts in self-perception, confidence and relational understanding that may extend beyond the immediate intervention period.

While these longer-term impacts are not directly measured in this evaluation, they are consistent with the broader literature on early intervention in perinatal and infant mental health.

Taken together, the qualitative and quantitative findings present a coherent picture of the P2P Program impact, demonstrating measurable improvements alongside meaningful changes in how participants experienced their parenting and their relationship with their infant.



# Cost Effectiveness of P2P Interventions

To understand the value of the P2P services, this report uses a cost-benefit analysis to compare the costs of delivering the model of care with the benefits achieved. We focus on the benefits for female clients only due to a lack of suitable data for infants and families. However, the impacts of P2P are likely to extend well beyond individual clients, benefiting children, families, and the wider community, meaning the total benefits are likely to be much larger than those estimated in this report. Future analysis could capture these broader and longer-term benefits as more data become available.

# Costs

Within the 2025 financial year, total net costs of delivering P2P services were $3,163,877 (see Appendix Table 14). As expected for an intensive clinical service model, workforce expenditure represented the largest cost driver, accounting for approximately 72% of total costs. Other operating expenses comprised 20%, while facilities (3%) and materials and equipment (5%) represented a relatively small proportion of overall expenditure.
This cost profile reflects a service model where investment is directed primarily to frontline clinical delivery, consistent with P2P's focus on intensive, relationship-based early intervention.

To find the cost to the clinic for each participating family, the total cost of services can be divided by the number of clients. With 163 clients undertaking P2P, 21 in CPP, and 100 in ABC, a total of 284 clients were using P2P services in financial year 2025. From Table 5, it can be seen that this equals an expected cost of $11,140 to the centre for each family's use of services within the year.

**Table 5**
Costs per program and by family

| Program | Number of clients/families | Share of clients/families (%) |
|---|---|---|
| P2P Foundational Program | 163 | 57.4 |
| CPP | 21 | 7.4 |
| ABC | 100 | 35.2 |
| Total | 284 | |
| **Cost per client/family** | **$11,140** | |

Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

# Benefits

There are no directly comparable mental health measures in publicly available datasets that match the EPDS or PASS used in the P2P data. In the absence of a control group and long-term outcome measures within P2P, the HILDA survey provides the best available and comparable data to estimate the benefits of the changes in mental health of women.

### Methodology: The Kessler Psychological Distress Scale (K10) and the HILDA survey baseline

The data includes information on the Kessler Psychological Distress Scale (K10), a widely used scale that measures recent psychological distress, particularly symptoms of anxiety and depression. The K10 consists of 10 questions, with each question scored on a five-point scale, giving a total score ranging from 10 to 50. Higher scores indicate higher levels of psychological distress. Unfortunately, there is no information on whether the women are in the perinatal period in the HILDA data. To ensure the comparison is as relevant as possible, the analysis focuses on women aged 17 to 49 and accounts for the presence of young dependent children aged 0 to 4.

Following established practice in the literature, K10 scores are grouped into four levels of psychological distress (four risk categories). Scores from 10 to 15 indicate low distress, reflecting few or no symptoms of anxiety or depression. Scores from 16 to 21 indicate moderate distress, suggesting some symptoms but not typically at a clinical level. Scores from 22 to 29 indicate high distress, which is associated with a greater likelihood of clinically significant anxiety or depression, while scores from 30 to 50 indicate very high distress, reflecting severe and persistent symptoms.

In this report, individuals with low or moderate distress (scores 10-21) are classified as non-clinical group, while those with high or very high distress (scores 22-50) are classified as clinical group. The final data used for analysis include 2,282 observations observed every two years from 2007 to 2023 when the information on K10 was available, including 1,116 observations in the clinical group, and 1,166 observations in the non-clinical group before any change in their mental health.

To examine the impacts of the changes in women's mental health on their later lives, we then use this HILDA data sample to replicate the P2P data's patterns of improvement, stability, and deterioration after intervention.

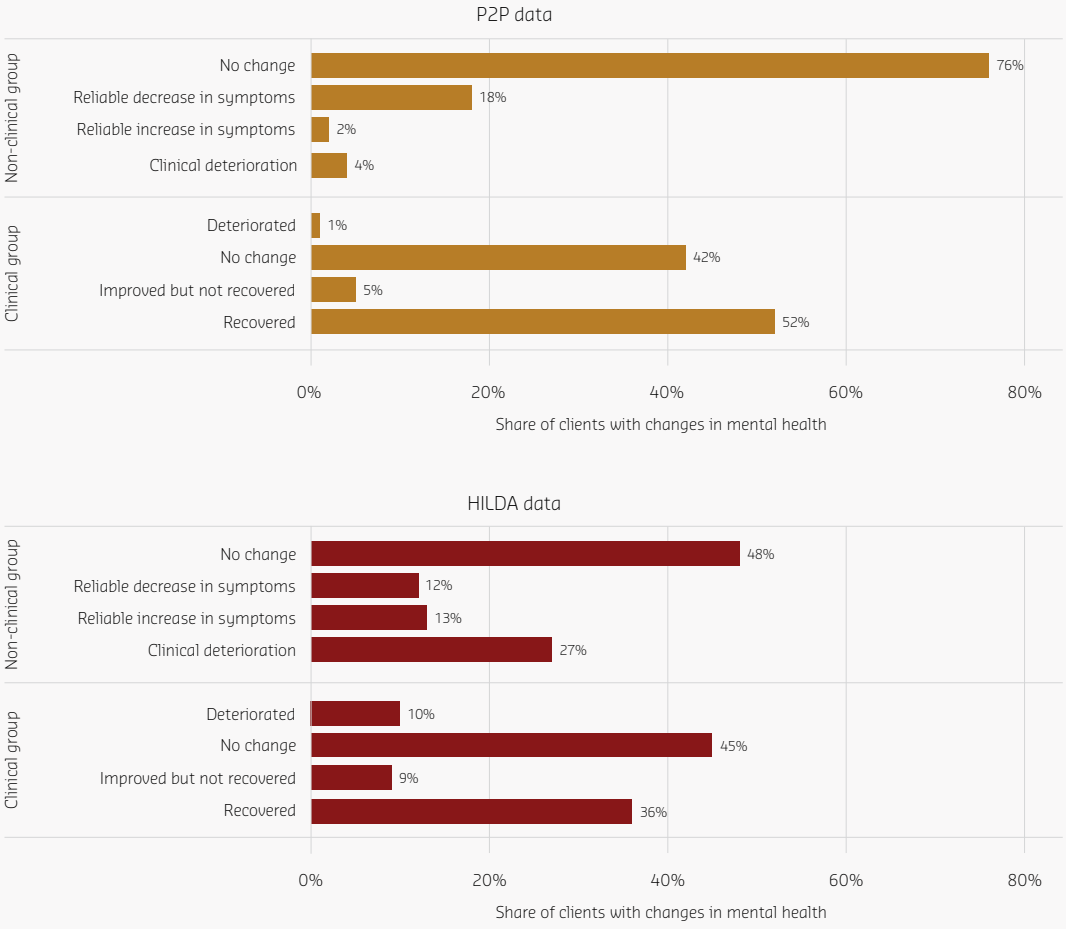
### Changes in the clinical group (high or very high distress at baseline)

Women in the clinical group are those who had high or very high psychological distress at the start. Changes over time are defined as follows. A woman is considered recovered if her distress moves from high or very high levels to moderate or low distress, indicating a shift out of the clinical range. A woman is considered improved but not recovered if her distress reduces from very high to high, showing improvement but still remaining in the clinical range. A woman is classified as having no change if she remains in the same K10 risk category over time. A woman is classified as deteriorated if her distress worsens from high to very high distress.

### Changes in the non-clinical group (low or moderate distress at baseline)

Women in the non-clinical group are those who had low or moderate psychological distress at the start. To ensure consistency with the P2P clinical data, changes for this group are also defined using the Reliable Change Index (RCI). A woman is classified as **improved** if her K10 score shows a reliable decrease, indicating a statistically significant reduction in distress levels. A woman is classified as having **no change** if her score remains stable or the change is

**Figure 12**
Patterns of mental health change in P2P and HILDA data




Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

within the range of normal measurement variation. A woman is classified as **deteriorated** if her K10 score shows a reliable increase, indicating a significant worsening of psychological distress. Using this rigorous standard for the HILDA sample ensures that the economic benefits we estimate are linked to real and meaningful improvements in mental health.

Figure 12 shows that changes in women's mental health follow similar patterns in the P2P data and the HILDA survey when the same RCI-based approach is used. In both datasets, the proportions of the total sample that fall into each mental health change category are comparable. For the clinical group, the recovery rate in the P2P data represents 26.7 per cent of the total sample, which is similar to the 20.4 per cent clinical recovery rate observed in the total HILDA sample.

Similarly, for the non-clinical group, both datasets are characterised by high levels of stability and improvement. In the P2P data, 36.9 per cent of the total sample were non-clinical clients who showed no reliable change, while 8.9 per cent experienced a reliable improvement. These patterns are broadly mirrored in the HILDA data (20.8 per cent and 5.4 per cent respectively). Overall, these similarities confirm that the HILDA data provides a reliable basis for estimating the longer-term economic benefits associated with the mental health improvements achieved through P2P services.

### Linking mental health changes to later life outcomes

To examine how changes in women's mental health are linked to later life outcomes, regression analysis is used to estimate the impacts of different types of mental health change over time. The outcomes considered include healthcare use (number of GP visits and hospital visits per year), health behaviours (cigarettes smoked per week and standard drinks consumed per week), and economic outcomes (weekly wages and salary from all jobs).[5]

All results are compared to a reference group made up of women whose mental health did not change or deteriorated. These two groups are combined because the number of women whose mental health deteriorated is relatively small, and combining them provides a more stable and reliable comparison group.

The analysis tracks outcomes over time, from 1–2 years after the mental health change through to 9–10 years later, allowing both short-term and longer-term effects to be examined. All models control for key background factors, including age, marital status, country of birth, education, whether the woman lives in a major city, survey year, and the number of young dependent children aged 0–4, to ensure the results reflect changes associated with mental health rather than differences in individual characteristics and personal circumstances.

5 Mental health changes may affect many areas of life. To avoid double counting, these effects are grouped into three main domains: healthcare service costs, harmful behaviours, and income.

Women who recovered from high psychological distress experience the most consistent and meaningful improvements through reduced use of health services, lower smoking and drinking levels, and substantial gains in earnings.

**Table 6**
Regression results – Clinical group

| Program | Number of years after the change | | | | |
|---|---|---|---|---|---|
| | 2 years | 4 years | 6 years | 8 years | 10 years |
| **Outcome variable** | **Reference group: No change & Deteriorated** | | | | |
| Number of GP visits per year | | | | | |
| Recovered | -3.564** | -5.666** | -2.033 | -5.052 | |
| Improved but not recovered | -0.787 | -2.230 | -2.617 | -9.481 | |
| Observations | 486 | 288 | 148 | 109 | |
| Mean | 12.66 | 13.19 | 14.36 | 14.26 | |
| Number of hospital visits per year | | | | | |
| Recovered | -0.252 | -0.883** | -0.661 | -1.159* | |
| Improved but not recovered | -0.011 | -0.650 | 0.208 | -2.004* | |
| Observations | 490 | 290 | 148 | 109 | |
| Mean | 0.769 | 0.879 | 0.946 | 1.165 | |
| Number of cigarettes usually smoked each week | | | | | |
| Recovered | -6.392* | 1.803 | -7.118 | -4.306 | -13.640 |
| Improved but not recovered | -6.673 | -3.105 | -10.289 | -4.591 | 3.458 |
| Observations | 1116 | 613 | 364 | 225 | 127 |
| Mean | 26.48 | 27.60 | 28.41 | 28.94 | 27.61 |
| Number of standard drinks per week | | | | | |
| Recovered | 1.451 | -2.435 | -9.312* | -10.447* | -13.824 |
| Improved but not recovered | 1.785 | -0.223 | -11.216 | -1.940 | -8.490 |
| Observations | 1116 | 613 | 364 | 225 | 127 |
| Mean | 21.04 | 21.38 | 21.31 | 21.16 | 25.02 |
| Weekly gross wages & salary – all jobs ($) | | | | | |
| Recovered | 174.926*** | 155.592*** | 186.370** | 171.399* | 159.808 |
| Improved but not recovered | -67.251 | 80.393 | 13.894 | 143.143 | -97.098 |
| Observations | 1116 | 613 | 364 | 225 | 127 |
| Mean | 363.9 | 343.1 | 357.1 | 346.3 | 417.2 |

Note: Ordinary Least Squares (OLS) is estimated with control variables including age, marital status, country of birth, education, major city, year of survey, and number of children aged 0-4. * p<0.1, ** p<0.05, *** p<0.01
Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

The analysis is conducted separately for the clinical and non-clinical groups.

The results in Table 6 show that among women in the clinical group at baseline, those who recovered from high psychological distress experience the most consistent and meaningful improvements. This group shows reduced use of health services, lower smoking and drinking levels, and substantial gains in earnings, with income improvements becoming larger several years after recovery. Women who improved but did not fully recover show more modest and less consistent changes, with some reductions in healthcare use but smaller and no statistically significant improvements in other areas.

Table 7 shows the regression results for women in the non-clinical group at baseline. Unlike the clinical group, those who started with low or moderate psychological distress did not show statistically

**Table 7**
Regression results – Non-clinical group

| Program | Number of years after the change | | | | |
|---|---|---|---|---|---|
| | 2 years | 4 years | 6 years | 8 years | 10 years |
| **Outcome variable** | **Reference group: No change & Clinical deterioration & Increase in symptoms** | | | | |
| Number of GP visits per year | | | | | |
| Reliable decrease in symptoms | -0.718 | 1.844 | -1.646 | -0.637 | |
| Observations | 370 | 220 | 120 | 84 | |
| Mean | 9.27 | 9.61 | 10.57 | 9.24 | |
| Number of hospital visits per year | | | | | |
| Reliable decrease in symptoms | -0.029 | -0.219 | -0.025 | -0.609 | |
| Observations | 371 | 221 | 120 | 84 | |
| Mean | 0.33 | 0.45 | 0.32 | 0.54 | |
| Number of cigarettes usually smoked each week | | | | | |
| Reliable decrease in symptoms | -1.422 | 6.342 | -2.302 | -4.278 | 2.530 |
| Observations | 855 | 461 | 298 | 199 | 121 |
| Mean | 14.81 | 14.62 | 14.32 | 17.78 | 14.48 |
| Number of standard drinks per week | | | | | |
| Reliable decrease in symptoms | -0.046 | 7.236 | 0.486 | 0.632 | 2.654 |
| Observations | 855 | 461 | 298 | 199 | 121 |
| Mean | 17.68 | 17.22 | 18.09 | 19.49 | 19.79 |
| Weekly gross wages & salary – all jobs ($) | | | | | |
| Reliable decrease in symptoms | 48.676 | 76.468 | -27.157 | -227.280 | -174.097 |
| Observations | 855 | 461 | 298 | 199 | 121 |
| Mean | 573.7 | 567.7 | 634.1 | 696.1 | 674.3 |

Note: Ordinary Least Squares (OLS) is estimated with control variables including age, marital status, country of birth, education, major city, year of survey, and number of children aged 0-4. * p<0.1, ** p<0.05, *** p<0.01
Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

significant changes in healthcare use, health behaviours, or income after their mental health improved. While the results for GP and hospital visits show a negative trend in the short term, they do not reach the threshold for statistical significance. This suggests that while mental health improvements are undoubtedly valuable for individual wellbeing and prevention, they do not translate into the same measurable economic or healthcare savings observed when clients recover from high clinical distress.

## Cost-benefit results

We combine information from the P2P data and the HILDA analysis to estimate the overall benefits of the model of care. First, the P2P data are used to identify the share of clients experiencing different types of mental health change (based on EPDS) totally for the whole P2P dataset, as well as the cost per client of delivering P2P services.

Next, results from the HILDA regression analysis are used to estimate the impacts associated with each type of mental health change. Only impacts that are statistically significant are included, and these impacts

Total benefit per client from the P2P clinic's services ranges from approximately $26,500 to $31,500.

are converted into dollar values, covering changes in health service use, unhealthy behaviours, income, and tax revenue. For each mental health change group, these dollar values are summed up using a discount rate of 5 per cent to convert the future benefits to present value.

The total benefit per client is then calculated by weighting the benefit for each mental health change group by the likelihood of a client falling into that group, based on the total P2P data. Clients whose mental health shows no change or deterioration are assumed to generate no measurable benefits. Finally, all benefit estimates are converted from 2023 prices to 2025 prices to ensure consistency with the model of care cost, allowing a direct comparison and calculation of the benefit-cost ratio.

Overall, the estimated total benefit per client is $26,570 in 2025 prices, compared with a cost of around $11,140 per client, resulting in a benefit-cost ratio of 2.4 (Table 8). This indicates that for every dollar invested in

**Table 8**
Cost-Benefit results

| | Total sample (N=225) | Clinical group (N=116) | | | Non-clinical group (N=109) | |
|---|---|---|---|---|---|---|
| P2P data | | Recovered | Improved but not recovered | No change & Deteriorated | Decrease in symptoms | No change & Clinical deterioration & Increase in symptoms |
| No. of clients with changes | | 60 | 6 | 50 | 20 | 89 |
| % of clients with changes in each group | | 52% | 5% | 43% | 18% | 82% |
| % of clients with changes in total sample | | 27% | 3% | 22% | 9% | 40% |
| Cost per client (AUD) derived from P2P | 11,140 | | | | | |
| HILDA data | | Recovered | Improved but not recovered | No change & Deteriorated | Decrease in symptoms | No change & Clinical deterioration & Increase in symptoms |
| Benefit estimated from HILDA analysis (AUD) | | | | | | |
| GP visits | | 1,631 | - | | | |
| Hospital visits | | 1,166 | 678 | | | |
| Smoking | | 1,330 | - | | | |
| Drinking | | 6,004 | 5,215 | | | |
| Income | | 58,113 | - | | | |
| Tax benefit to the government | | 24,906 | - | | | |
| Benefit per person (AUD) from HILDA analysis | | 93,149 | 5,893 | - | - | - |
| Total benefit per client (AUD) – 2025 prices | 26,570 | | | | | |
| Benefit-Cost Ratio | 2.4 | | | | | |

Note: The cost-benefit analysis is conducted for both the P2P Foundational and ABC Programs. Unit costs are assumed to be $100 per GP visit, $500 per hospital visit, $2.20 per cigarette, and $5 per standard alcoholic drink. The tax benefit to the government is estimated by applying a proxied average tax rate of 30 per cent to the estimated income gain.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

the P2P Foundational and ABC Programs, at least $2.40 is returned in economic benefits through increased earnings and reduced pressure on the healthcare system.

Given that mental health changes in the P2P data were measured using both depression (EPDS) and anxiety (PASS), the estimated benefit varies slightly depending on which measure is used. Under the PASS-based classification, 31 per cent of clients were in the clinical group and achieved recovery, while 16 per cent were in the clinical group and showed reliable improvement without full recovery. A further 3 per cent of non-clinical clients showed a reliable decrease in anxiety symptoms. Based on these estimates, the total benefit per client is $31,564 (in 2025 prices), resulting in a benefit-cost ratio of 2.9.

This benefit-cost ratio is consistent with findings from recent research by the National Mental Health Commission, which compared returns on investment across a range of early intervention and mental health prevention programs. Their research found a return on investment of 1.63 for a psychotherapy intervention targeting postnatal depression, with costs and benefits assessed over a five-year period. Another exercise-based intervention for postnatal depression showed a return on investment of 2.54 over a similar timeframe (National Mental Health Commission [NMHC], 2019).

### Potential of scaling the novel P2P model of care to other communities across WA

The cost-benefit analysis shows that the total minimum benefit per client from the P2P clinic's services is $26,570, while the cost per client is $11,140. To estimate the total potential benefit in WA, the analysis first calculates the net benefit per client by subtracting program costs from total benefits. This results in a minimum net benefit of $15,430 per client.

We then estimate how many women in WA could potentially benefit from an intensive perinatal and infant mental health intervention aligned with the P2P model of care each year. The number of women in the perinatal period can be proxied by the annual number of births in WA, as perinatal mental health conditions occur during pregnancy and the first year after birth. In 2025, there were 33,232 births registered in WA.[6]

Comprehensive state-level prevalence data for perinatal mental health conditions in WA are not systematically collected. However, research conducted in Australia found that one in five mothers experience perinatal depression and anxiety during pregnancy or in the first year after birth (PwC, 2019). Based on this evidence, we use 10 per cent as a conservative and illustrative estimate. Applying this prevalence rate suggests that around 3,300 women in WA may have mental health issues and need to access the P2P services each year.

The benefit-cost ratio of P2P services is between 2.4 and 2.9, demonstrating a strong return on investment for the state.

6 Available at: https://www.wa.gov.au/government/announcements/new-baby-names-enter-was-most-popular-lists-2025

Scaling the P2P model of care across Western Australia could deliver an estimated $51 million in economic benefits to the state every year.

Multiplying this by the average net benefit per person of $15,430 yields an illustrative estimate of approximately $51 million in potential economic benefit to the state per year.

The estimates above are intended to give a broad sense of the potential benefits of expanding the P2P model of care, rather than a precise forecast. In practice, the cost and delivery of services would differ across communities. Providing support in regional and remote areas, for example, can be more expensive and may involve challenges such as staff availability, travel, and access to suitable facilities.



Scaling the model of care would also take time and careful planning. P2P relies on highly skilled clinicians, and building this workforce requires investment in recruitment, training, and ongoing supervision. These factors mean that any expansion would need to be tailored to local conditions, rather than assuming the same costs and outcomes everywhere.

At this stage, the analysis uses simplified assumptions about costs and benefits across different regions, reflecting the data currently available. P2P can work towards a more detailed understanding of costs at different sites, and future analysis comparing locations such as Geraldton and Wanneroo would help build a clearer picture of how the model could be expanded sustainably.

Even with these uncertainties, the findings highlight a clear gap between need and current service capacity. While thousands of women in WA may experience perinatal depression or anxiety each year, P2P currently supports around 280 clients annually. This gap underscores both the unmet need for perinatal mental health support and the potential value of expanding effective models like P2P over time.



# Conclusions

# Summary and policy discussion

## Summary of key findings

This report provides strong evidence that Pregnancy to Parenthood (P2P) delivers meaningful benefits for mothers, infants, and families during a critical life stage. Drawing on detailed clinical data from P2P clients and nationally representative longitudinal evidence from the HILDA Survey, the analysis shows that participation in P2P programs is associated with substantial improvements in maternal mental health, parenting confidence, and the quality of parent-infant relationships.

Across the client sample, improvements in mental health were widespread and clinically significant. The evaluation utilised the Reliable Change Index (RCI) to ensure that reported changes are meaningful and non-random. Notably, the model of care served as a highly effective preventative intervention; for non-clinical participants, P2P achieved a 94.5 per cent success rate in preventing depression symptoms from worsening. Reductions in depression and anxiety across the sample were medium to large in size, indicating meaningful improvements in daily functioning and wellbeing rather than small shifts in symptoms.

Outcomes were particularly strong among women who entered the model of care with clinically high levels of depression or anxiety. Among this clinical group, 52 per cent achieved full recovery from depression and 42 per cent recovered from anxiety, while very few experienced a deterioration in symptoms. Furthermore, the model of care demonstrated a critical role in breaking cycles of intergenerational trauma: nearly half (48 per cent) of parents with the highest levels of early childhood adversity (four or more adverse childhood experiences) achieved full clinical recovery from depression. These findings highlight the model of care's capacity to support recovery among women experiencing significant perinatal distress.

The evaluation also points to the importance of sustained engagement. Intensive intervention models like the P2P Foundational Program rely on sustained engagement to build foundational trust and deliver long-lasting improvements. Clinical clients who engaged in higher numbers of sessions typically reported the most robust improvements in both depression and anxiety, reinforcing the value of P2P's intensive intervention model of care.

Beyond mental health, many clients reported reliable improvements in parenting outcomes. Specifically, 11.5 per cent of parents experienced a reliable reduction in feeling overwhelmed or "invaded" by their child's needs, and 8.8 per cent reported a reliable increase in parental warmth. Nearly one in four parents (24.6 per cent) showed a reliable increase in their reported Mental-State Certainty, with smaller proportions showing reliable improvements in Pre-mentalising and Interest and Curiosity. These findings suggest positive changes for some parents in dimensions associated with parental reflective functioning. However, increased certainty should not be equated with greater accuracy in understanding a child's internal experience, as reflective functioning also involves recognising that mental states are not fully knowable. The findings should also be considered in light of the PRFQ's small sample size and reliance on parent self-report.

P2P serves a highly vulnerable population. Nearly 40 per cent of clients reported

experiencing four or more adverse childhood experiences, and over 40 per cent came from lower socio-economic backgrounds. Notably, the intervention proved exceptionally effective for these cohorts. For instance, families facing "double disadvantage"—the intersection of clinical mental health distress and socio-economic hardship—achieved a 70 per cent success rate in overcoming clinical anxiety, demonstrating that the service is highly effective for families who stand to benefit most.

Feedback from clients between December 2024 and August 2025 further reinforces these findings. Participants consistently highlighted the safe and non-judgemental environment, personalised therapeutic relationships, practical parenting strategies, and improvements in confidence, mental health, and parent–child interactions. While some areas for refinement were identified, overall feedback suggests sustained benefits that reinforce the clinical and economic value of the model of care.

The cost-benefit analysis further demonstrates that P2P represents strong value for money. The estimated total benefit per client ranges from $26,570 (based on EPDS) to $31,564 (based on PASS), compared with a cost of approximately $11,200, resulting in benefit-cost ratios between 2.4 and 2.9. The benefit-cost ratio is consistent with findings from the National Mental Health Commission, which report positive returns for postnatal depression interventions, ranging from 1.63 to 2.54 (NMHC, 2019). These findings are consistent with national evidence and support the economic case for sustained investment in mental health early intervention for infants and their caregivers.

Finally, the evaluation provides evidence to support scaling the P2P model of care across Western Australia. Applying conservative prevalence estimates to WA birth numbers suggests that thousands of women each year may experience perinatal depression or anxiety, while current service capacity reaches only a small proportion of this need. Scaling outcomes consistent with those demonstrated by P2P could deliver substantial social and economic benefits across WA, estimated at around $51 million annually.

### Policy discussion: why these findings matter

The findings from this evaluation have clear implications for policy, service delivery, and future investment in perinatal and infant mental health. First, they highlight the importance of early, relationship-based support during pregnancy and the first year of parenthood. Mental health difficulties during this period can affect not only parents' wellbeing, but also infants' development and family relationships in lasting ways. The medium-to-large reductions in depression and anxiety observed among P2P clients show that early intervention can support real recovery, particularly for women experiencing high levels of distress.

Second, the findings show that targeted services can be both effective and fair. P2P works with families facing significant disadvantage and high levels of adversity, and the strongest improvements were often seen among those living in more disadvantaged areas. This suggests that well-designed early intervention services can help reduce inequalities by reaching

families who have the greatest needs and the most to gain.

Third, the evaluation makes a strong economic case for investing in integrated perinatal and infant mental health services. Evidence from national data suggests that recovery from poor mental health is linked to broader gains, including lower use of health services, healthier behaviours, and improved employment and earnings. These wider benefits are likely to grow over time, further strengthening the case for early intervention. The estimated benefit-cost ratios of between 2.4 and 2.9 indicate that the benefits of P2P substantially outweigh its costs.

Finally, the evaluation points to ongoing challenges around access and engagement. Although P2P has strong referral pathways from nursing, midwifery, and primary care services, some families still face barriers to sustained participation. Single mothers and families in more disadvantaged communities, in particular, are more likely to experience longer waiting times or shorter periods of engagement. These patterns highlight the practical constraints many families may face, such as time pressures, transport, childcare, and competing responsibilities. Addressing these barriers will be essential to ensure that services reach those who stand to benefit most.

Overall, the evaluation shows that P2P delivers meaningful and lasting benefits for families and represents a sound use of public and philanthropic resources. The findings support continued investment in P2P and point to clear opportunities to improve access, strengthen equity, and carefully expand effective perinatal mental health services across WA.



# Recommendations

As workforce capability becomes embedded and a greater proportion of practitioners complete intensive training pathways, there may be potential for increased service delivery capacity, improved practitioner efficiency, and stronger delivery of evidence-based models of care. Further evaluation at a more mature stage of service development may provide additional insight into longer-term cost-effectiveness and scalability.

The following recommendations are intended to support the continued strengthening, sustainability and scalability of the model within the WA service landscape.

## Recommendations

### 1. Secure sustained investment in early intervention for infants and families

The evaluation demonstrates measurable improvements in maternal mental health, parenting confidence and parental representations, alongside positive cost–benefit ratios. These findings align with the broader evidence base supporting early intervention during pregnancy and the first years of life.

In the WA context, sustained investment in specialist perinatal and infant mental health services may strengthen the early intervention tier of the system and support continuity of care for families experiencing vulnerability. Ongoing, stable funding would support retention of a specialised workforce and enable consistent delivery of evidence-based models of care.

### 2. Prioritise access for families experiencing disadvantage and clinical complexity

The evaluation indicates particularly strong improvements among families experiencing higher levels of disadvantage, including those presenting with more complex or clinically significant perinatal mental health concerns. Prioritising targeted early intervention for these cohorts may yield meaningful benefits.

Funding and referral mechanisms that prioritise equitable access including consideration of socio-economic factors and regionality may enhance impact at a population level.

### 3. Reduce practical barriers to engagement through flexible and integrated service pathways

Consistent with participant feedback and observed engagement patterns, practical barriers such as transport, competing caregiving demands and appointment availability can affect service access and continuity. Flexible delivery approaches, including telehealth and community-based options, may improve engagement and reduce early disengagement.

Strengthening integration with maternity services, primary care, child health nurses and mental health pathways may also support timely referral and coordinated care.

**4. Strengthen outreach and culturally responsive service delivery for under-represented communities**

Targeted outreach and culturally responsive approaches may strengthen engagement among culturally and linguistically diverse families, Aboriginal families, and families in highly disadvantaged areas. Improved monitoring of engagement patterns and reasons for non-engagement may assist in tailoring service responses and improving equity.

Further work to strengthen partnerships with local community organisations and culturally specific services may support access and appropriateness of care.

**5. Invest in workforce capability to deliver high-quality evidence-based PIMH interventions**

The outcomes observed in this evaluation were delivered through a structured, specialist workforce model incorporating evidence-based training, reflective supervision and fidelity to intervention frameworks. The findings suggest that workforce capability is a central driver of impact.

In the WA context, where specialist perinatal and infant mental health (PIMH) capability remains limited, strategic investment in workforce development may be critical. This includes training pathways, reflective supervision capacity and implementation infrastructure to ensure high-quality interventions are delivered consistently and with fidelity across settings.

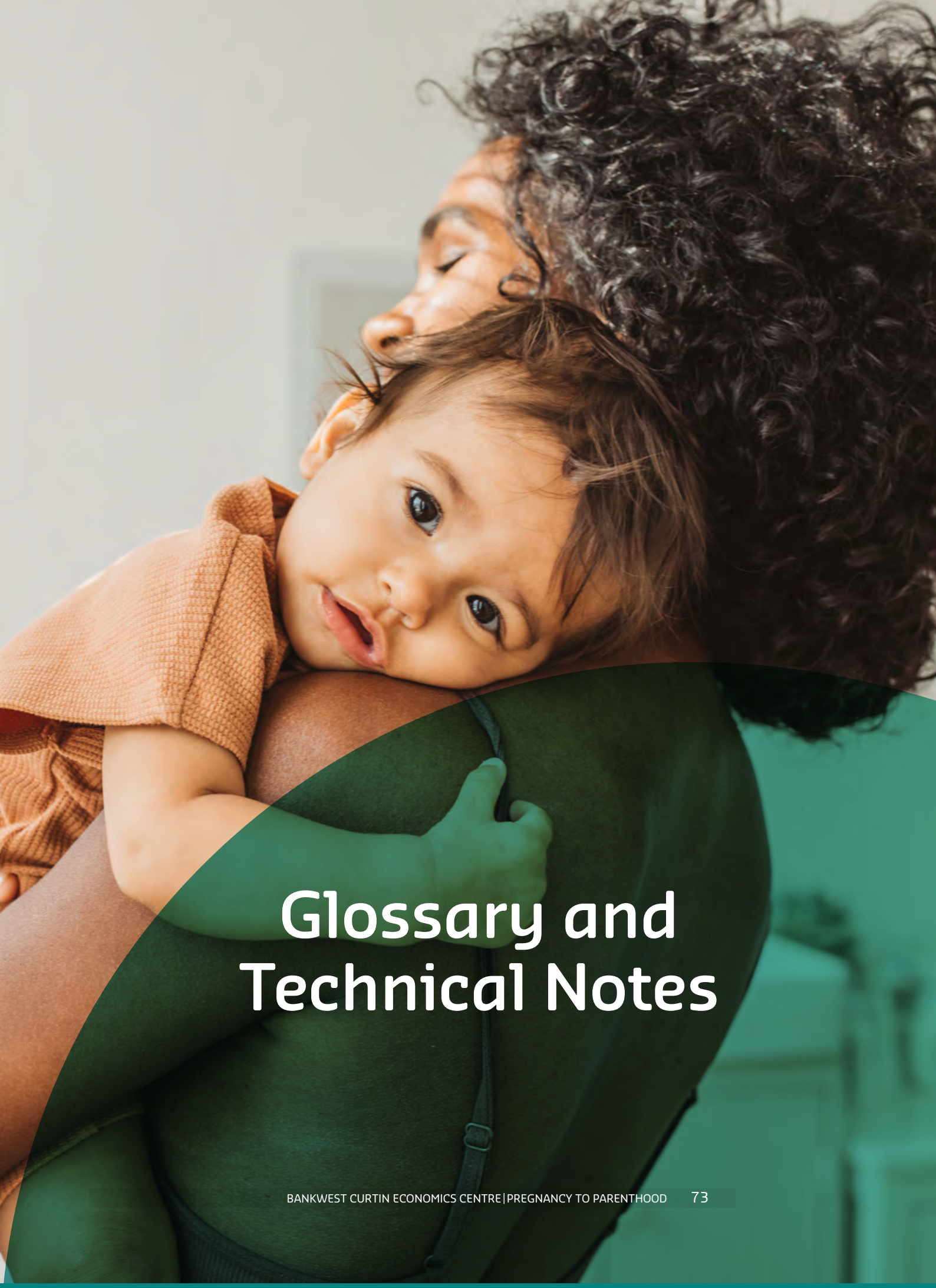
**6. Consider scalable expansion within WA's service system**

Given documented access barriers and service gaps, particularly in regional areas, there may be scope to explore staged expansion of intensive perinatal and infant mental health services within WA. Any expansion would require careful attention to workforce availability, training infrastructure and integration with existing health and community service pathways. The current evaluation provides initial evidence to inform such planning.

**7. Strengthen data capability and commission longer-term evaluation to capture system-level impact**

The current evaluation focuses primarily on short-term maternal mental health and parenting outcomes. While these outcomes are associated with longer-term benefits in the literature, broader impacts on child development, service utilisation and system demand were not directly measured.

A structured data development strategy, including larger sample sizes, longitudinal follow-up, and linkage to relevant health and community datasets where feasible would support continuous improvement and enable future evaluations to better capture longer-term outcomes and system-level benefits.



# Glossary and Technical Notes

# Glossary

### HILDA Survey

The Household, Income and Labour Dynamics in Australia (HILDA) Survey is a nationally representative, household-based panel study that began in 2001. It follows the same individuals over time and collects information on economic circumstances, subjective wellbeing, family life and labour market experiences. HILDA is widely used in Australian research to examine changes in people's lives and wellbeing over time.

### Kessler Psychological Distress Scale (K10)

The Kessler Psychological Distress Scale (K10) is a widely used measure of psychological distress and has been included in both the HILDA and LSAC surveys. It consists of 10 questions that ask respondents about feelings such as nervousness, sadness, restlessness and hopelessness over the past four weeks. Each question is scored on a five-point scale, with total scores ranging from 10 to 50. Higher scores indicate higher levels of psychological distress.

### Edinburgh Postnatal Depression Scale (EPDS)

The Edinburgh Postnatal Depression Scale (EPDS) is a 10-item questionnaire designed to screen for symptoms of depression during pregnancy and the postnatal period. It asks parents about their mood, emotional wellbeing and experiences such as low mood, guilt, anxiety and loss of enjoyment over the past week. Higher scores indicate more severe depressive symptoms.

### Perinatal Anxiety Screening Scale (PASS)

The Perinatal Anxiety Screening Scale (PASS) is a 31-item questionnaire used to assess anxiety symptoms during pregnancy and the postnatal period. It captures a broad range of anxiety-related experiences, including worry, fear, panic, social anxiety and trauma-related symptoms. Higher scores reflect higher levels of anxiety.

### Karitane Parenting Confidence Scale (KPCS)

The Karitane Parenting Confidence Scale is a 15-item questionnaire that measures parents' confidence in caring for their infant. It asks about everyday parenting tasks such as feeding, settling, establishing sleep routines, responding to crying, soothing a distressed infant and understanding the infant's cues. Higher scores indicate greater parenting confidence.

### Mothers' Object Relations Scale (MORS)

The Mothers' Object Relations Scale (MORS) is a 14-item measure that assesses how a parent experiences their relationship with their infant. It includes questions about warmth, enjoyment and connection, as well as feelings of irritation, intrusion or emotional distance. The scale captures both positive and challenging aspects of the parent–infant relationship, helping to reflect the overall emotional quality of interactions.

### Parental Reflective Functioning Questionnaire (PRFQ)

The Parental Reflective Functioning Questionnaire (PRFQ) is an 18-item measure that assesses a parent's ability to think about and understand their child's thoughts, feelings and behaviours. It includes questions about how confident parents feel in interpreting their child's inner world, their curiosity about what the child may be thinking or feeling, and difficulties engaging emotionally with the child.

The PRFQ is reported across three subscales: Pre-mentalising modes, Certainty about mental states, and Interest and Curiosity in mental states.



# Technical Notes

**Table 9**
Reliable Change Index (RCI)

| EPDS | PASS |
|---|---|
| RCI = $(x_2\text{-}x_1)/S_{diff}$. where $S_{diff} = \sqrt{[2(S_{EM})^2]}$<br>$S_{EM} = s_1\sqrt{[1\text{-}r_{xx}]}$ where $r_{xx} = 0.87$ and $s_1 = 5.97$<br>Thus: $S_{EM} = 5.97\sqrt{[1\text{-}0.87]}$<br>$S_{EM} = 2.15$ | RCI = $(x_2\text{-}x_1)/S_{diff}$. where $S_{diff} = \sqrt{[2(S_{EM})^2]}$<br>SEM = $s_1\sqrt{[1\text{-}r_{xx}]}$ where $r_{xx} = 0.96$ and $s_1 = 18.96$<br>Thus: $S_{EM} = 18.96\sqrt{[1\text{-}0.96]}$<br>$S_{EM} = 3.79$ |
| Thus, the standard error of difference is:<br>$S_{diff} = \sqrt{[2(S_{EM})^2]}$<br>$S_{diff} = \sqrt{[2(2.15)^2]}$<br>$S_{diff} = \sqrt{[9.08]}$<br>$S_{diff} = 3.04$<br>RCI = $(x_2\text{-}x_1)/S_{diff}$<br>RCI = $(x_2\text{-}x_1)/3.04$ | Thus, the standard error of difference is:<br>$S_{diff} = \sqrt{[2(S_{EM})^2]}$<br>$S_{diff} = \sqrt{[2(3.79)^2]}$<br>$S_{diff} = \sqrt{[28.74]}$<br>$S_{diff} = 5.36$<br>RCI = $(x_2\text{-}x_1)/S_{diff}$<br>RCI = $(x_2\text{-}x_1)/5.36$ |
| Note 1: RCI = Reliable Change Index; $S_{diff}$ = standard error of difference between two scores; $S_{EM}$= the standard error of measurement for the test; $r_{xx}$ = Reliability coefficient for the EPDS (0.87: Cox et al., 1987); $s_1$=standard deviation of the P2P EPDS (5.97); $x_1$ and $x_2$ = the pre and post EPDS scores.<br><br>Note 2: An RCI of 1.96 or more indicates that the difference in scores is likely to be a real difference (95% confidence level). | Note 1: RCI = Reliable Change Index; $S_{diff}$ = standard error of difference between two scores; $S_{EM}$ = the standard error of measurement for the test; $r_{xx}$ = Reliability coefficient for the PASS (0.96: Somerville et al., 2014); $s_1$ = standard deviation of the P2P PASS (18.96); $x_1$ and $x_2$ = the pre and post PASS scores.<br><br>Note 2: An RCI of 1.96 or more indicates that the difference in scores is likely to be a real difference (95% confidence level). |

**Table 10**
Combinations of improvement classification and reliable change index (RCI) based on Matthey's classification method (2004) for EPDS

| EPDS change score | Cut-off determination | RCI score | RCI determination | RCI + Cut-off determination |
|---|---|---|---|---|
| Post-score – Pre-score | 12/13 cut-off used | EPDS change score (absolute value)/3.04 | If RCI ≥ 1.96, the change in EPDS scores is likely to be due to a real change in the individual (95% confidence). | Combination of RCI and the cut-off determination |
| **Clinical group** | | | | |
| Negative value and pre-/post-scores crossed 12/13 cut-off | Changed (improved) | ≥ 1.96 | Reliable change | **Recovered** |
| | | < 1.96 | No change | No change |
| Positive value | No change | ≥ 1.96 | Reliable change | **Deteriorated** |
| | | < 1.96 | No change | No change |
| Negative value | No change (improved) | ≥ 1.96 | Reliable change | **Improved but not recovered** |
| | | < 1.96 | No change | No change |
| Zero | No change | < 1.96 | No change | No change |
| **Non-clinical group** | | | | |
| Positive value and pre-/post-scores crossed 12/13 cut-off | Changed (deteriorated) | ≥ 1.96 | Reliable change | **Clinical deterioration** |
| | | <1.96 | No change | No change |
| Positive value | No change | ≥ 1.96 | Reliable change | **Reliable increase in symptoms** |
| | | <1.96 | No change | No change |
| Negative value | No change (deteriorated) | ≥ 1.96 | Reliable change | **Reliable decrease in symptoms** |
| | | <1.96 | No change | No change |
| Zero | | <1.96 | No change | No change |

**Table 11**
Combinations of improvement classification and reliable change index (RCI) based on Matthey's classification method (2004) for PASS

| PASS change score | Cut-off determination | RCI score | RCI determination | RCI + Cut-off determination |
|---|---|---|---|---|
| Post-score – Pre-score | 25/26 cut-off used | PASS change score (absolute value)/5.36 | If RCI ≥ 1.96, the change in PASS scores is likely to be due to a real change in the individual (95% confidence). | Combination of RCI and the cut-off determination |
| **Clinical group** | | | | |
| Negative value and pre-/post-scores crossed 25/26 cut-off | Changed (improved) | ≥ 1.96 | Reliable change | **Recovered** |
| | | <1.96 | No change | No change |
| Positive value | No change | ≥ 1.96 | Reliable change | **Deteriorated** |
| | | <1.96 | No change | No change |
| Negative value | No change (improved) | ≥ 1.96 | Reliable change | **Improved but not recovered** |
| | | <1.96 | No change | No change |
| Zero | No change | <1.96 | No change | No change |
| **Non-clinical group** | | | | |
| Positive value and pre-/post-scores crossed 25/26 cut-off | Changed (deteriorated) | ≥ 1.96 | Reliable change | **Clinical deterioration** |
| | | <1.96 | No change | No change |
| Positive value | No change | ≥ 1.96 | Reliable change | **Reliable increase in symptoms** |
| | | <1.96 | No change | No change |
| Negative value | No change (deteriorated) | ≥ 1.96 | Reliable change | **Reliable decrease in symptoms** |
| | | <1.96 | No change | No change |
| Zero | | <1.96 | No change | No change |



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# Appendix

**Table 12**
Comparing clients in the clinical group

| Panel A: EPDS | Reovered or improved but not recovered | No change or deteriorated | Difference | |
|---|---|---|---|---|
| | mean | mean | difference in mean | p-value |
| Pre-intervention EPDS | 16.46 | 17.89 | -1.43* | (0.02) |
| IRSD deciles 1-5 | 48.0% | 44.6% | 3.4 | (0.72) |
| CALD | 28.3% | 18.8% | 9.5 | (0.26) |
| >=4 ACEs | 54.3% | 47.7% | 6.7 | (0.49) |
| Antenatal | 26.0% | 15.2% | 10.8 | (0.16) |
| Total number of sessions | 18.58 | 19.23 | -0.65 | (0.72) |
| Intervention time (months) | 7.51 | 7.89 | -0.37 | (0.63) |
| Observations | 50 | 66 | 116 | |
| **Panel B: PASS** | **Reovered or improved but not recovered** | **No change or deteriorated** | **Difference** | |
| | mean | mean | difference in mean | p-value |
| Pre-intervention PASS | 44.62 | 46.81 | -2.19 | (0.37) |
| IRSD deciles 1-5 | 36.8% | 46.7% | -9.8 | (0.23) |
| CALD | 30.9% | 24.5% | 6.4 | (0.4) |
| >=4 ACEs | 50.0% | 44.2% | 5.8 | (0.5) |
| Antenatal | 32.8% | 15.9% | 16.9* | (0.02) |
| Total number of sessions | 19.16 | 19.3 | -0.14 | (0.94) |
| Intervention time (months) | 7.66 | 8.11 | -0.45 | (0.55) |
| Observations | 58 | 107 | 165 | |

Note: Mean variables are reported. Differences between groups are tested using a t-test. p<0.1, ** p<0.05, *** p<0.01.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

**Table 13**
Costs by component, financial year 2025

| Cost ingredients | P2P Category | Total Cost – FY25 |
|---|---|---|
| Personnel | Staff Wages & Super & Contractors | $2,298,479 |
| Facilities/space | Property & Associated Costs - Opex. | $90,265 |
| Materials and equipment | Property, Plant & Equipment - Capital | $151,144 |
| Other inputs | Other Operating Expenses | $623,990 |
| **Net Costs** | | **$3,163,878** |

Source: Bankwest Curtin Economics Centre | Authors' calculations based on data provided by P2P.

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## Contact

**Bankwest Curtin Economics Centre**
Tel: +61 8 9266 2873
Email: bcec@curtin.edu.au

**bcec.edu.au**

**Pregnancy to Parenthood**
Enquiries: 1800 470 900
Email: info@p2pclinic.com.au

**p2pclinic.com.au**

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