TEN to MEN

The Australian Longitudinal Study on Male Health

Insights #3 – Chapter 2

# Health outcomes and health service usage among first-time fathers in Australia

Constantine Gasser, Katrina Scurrah, Mulu Woldegiorgis, Jacqui Macdonald, Jennifer StGeorge, Vincent Mancini, Catherine Andersson and Sean Martin

Australian Government
Department of Health, Disability and Ageing

Australian Government
Australian Institute of Family Studies

# Key messages

First-time fathers in Australia reported lower rates of moderate/severe depression in the year after becoming a father (12%) than men of the same age range who had not become fathers (non-fathers) (18%).

**First-time fathers are**

**29% less likely**

**to have depression compared to non-fathers**

**First-time fathers with previous depression are**

**8 times more likely**

**to have depression than those not depressed pre-fatherhood**

**Risk factors for onset of depression in new fathers**

- Being younger
- Living in a disadvantaged area
- Living in a major city

Obesity and sufficient (7+ hours) sleep did not differ substantially between first-time fathers and non-fathers but men with these conditions pre-fatherhood were more likely to have them as first-time fathers.

The most commonly used health service among first-time fathers was a GP, either alone (23% of first-time fathers) or in combination with other services such as pharmacists and psychologists. Around 1 in 10 first-time fathers did not access any health services in the year after becoming a father.

The most common combinations of barriers, also similar to those for non-fathers, were related to the health system (no service available in area at time needed, waiting time too long/no appointments and/or not taking new patients), along with individual barriers (such as decisions not to seek care and work commitments) and structural barriers (such as costs and/or transportation problems).

**84%**

**of first-time fathers saw a GP in their first year of fatherhood BUT**

**35%**

**reported at least 1 barrier to accessing health services**

## Research and policy implications

These findings highlight the overall positive impact of becoming a father on mental health in the early stages of fatherhood. This report also supports the importance of interventions focused on improving the health of men early (e.g. in late adolescence/early adulthood), given the strong associations between pre-fatherhood and post-fatherhood depression in first-time fathers.

The role of health services, especially GPs, in promoting preconception health is critical to ensure men are positioned to successfully navigate fatherhood. Given that just over one-third of men reported barriers to health service use, it is important to continue to implement strategies to try to reduce these barriers and improve access for both fathers and non-fathers. Building stronger connections for first-time fathers of newborns to the maternal and child health system could provide a way to encourage fathers to access health services for their own health during the perinatal period.

# Overview

Becoming a father (or father figure) can be one of the most significant life events experienced by men, not only impacting them but also those around them, including their families. Almost 300,000 Australian men become fathers each year (Australian Bureau of Statistics [ABS], 2023). Being a father is associated with many health benefits (Garfield et al., 2010; Kotelchuck, 2022) but also some health challenges (Garfield et al., 2006; Saxbe et al., 2018). It is important to address these health challenges as they can also affect fathers' employment and education (Productivity Commission, 2020), the health of mothers (Paulson et al., 2016) and children (Dachew et al., 2023), relationships (Li & Johnson, 2018), parenting behaviour (Constable et al., 2024) and family functioning (Sell et al., 2021).

The Australian Government notes the significance of fatherhood for health systems and more broadly. The *National Men's Health Strategy 2020–2030* mentions fatherhood as an important life stage for many Australian men and of needing more attention within health strategies (Department of Health, 2019). The *National Framework for Universal Child and Family Health Services* discusses the importance of developing 'father-inclusive services' (Australian Health Ministers' Conference, 2011) that bring the perspectives and needs of fathers into health services. Beyond health, one of the priority focus areas under the first action plan for the *Early Years Strategy 2024–2034* is 'empower[ing] parents, caregivers and families…with the skills, resources and information they need to give their children the best start in life' (Department of Social Services [DSS], 2024, p 19).

This report takes a life course approach to examine how being a first-time father, compared to being a non-father, affects key health outcomes as well as the factors associated with these outcomes. It also looks at the use of health services among first-time fathers, compared to non-fathers, and any associated barriers to use.

It is important to disentangle the specific effect of becoming a first-time father from age. Most men become fathers around their late 20s or early 30s, an age associated with transition when men can face a number of pressures and expectations.

### Definition of first-time fathers

In this chapter, becoming a first-time father was defined by whether men aged 18+ years answered 'yes' to a question asking whether they had experienced any of several events in the past 12 months, one of which was 'Becoming a father for the first time'.

AIFS recognises the diversity of family types in contemporary Australia, and the importance of different types of fathers and father-type figures (e.g. stepfathers and foster fathers).

For this study, it is likely that the majority of men who met our definition of a first-time father were first-time fathers of very young children, and their health outcomes in new fatherhood were measured during the perinatal period of up to 12 months after the birth of their child. Across the waves of data used in this report, around 77%–85% of men who met our definition of new father said their first child was 0–1 years of age.

## Health outcomes for new fathers

In this report, we focus on 3 key health outcomes: depression, obesity and sleep. These outcomes were selected on the basis of the availability of data (available from at least 3 of the 4 waves collected), sufficient sample sizes for analyses from all the included waves, and (importantly) gaps in the evidence regarding fathers.

### Depression

There are conflicting results on the risk of depression for new fathers compared to the general population. Longitudinal research from the United States of America (USA) revealed an increase in self-reported depression among fathers during the first 5 years of a child's life but with no change in depression among

men who were non-fathers (Garfield et al., 2014). By contrast, an Australian study found that first-time new and expectant fathers were not at higher risk of depression compared to non-fathers (Leach et al., 2015).

Previous studies using *Ten to Men* data found that preconception depression was associated with postnatal depression in first-time fathers (Giallo et al., 2023; O'Connor et al., 2025). Similarly, research from New Zealand found that earlier depression predicted paternal postpartum depression (Howarth & Swain, 2020). Other research has similarly shown that more than 4 in 5 fathers with depression during the perinatal period had mental health problems prior to their child being conceived (Thomson et al., 2021).[1]

Research from Finland (Filatova et al., 2021) and the USA (Lee et al., 2012) has shown that depression is more likely among younger than older fathers, even after controlling for previous depression.

In comparison to mothers, there is limited research on the mental health of fathers, including depression, especially during the perinatal period. Many previous studies have only included earlier time periods, limited time points (Scarlett et al., 2024), have not included younger fathers and/or have not been representative of the general population.

It is important to consider how age is associated with depression among first-time fathers, given that young men have high rates of poor mental health (Department of Health, 2019). Some previous studies have not compared fathers to non-fathers (Giallo et al., 2012; Giallo et al., 2023), which is worth considering given that the age at which many men become fathers, while others do not, is generally an important transition point in men's lives (Macdonald, 2024). More research on depression among priority populations of fathers is also needed, including those from ethnically diverse backgrounds and lower socio-economic groups (Baldwin et al., 2019; Philpott et al., 2022), both priority groups in the *National Men's Health Strategy 2020–2030* (Department of Health, 2019).

Finally, there is limited Australian research considering factors associated with incidence (i.e. new cases) of depression, with previous research mainly focusing on prevalence. It is important to identify which groups of first-time fathers might be most at risk of developing depression to appropriately focus interventions.

## Weight

There is mixed evidence regarding how being a father is associated with weight gain or Body Mass Index (BMI).[2] A US longitudinal study observed that over a 20-year period, from 1994 to 2014, there was an increase in BMI for fathers, with a corresponding decrease for non-fathers (Garfield et al., 2015). Similarly, Lo and colleagues (2021) found that fathers had a slightly higher BMI at 5–6 months after a child's birth compared to one month before their birth (Lo et al., 2021), though this change was not considered to be clinically significant (Panza et al., 2023). Another US longitudinal study found that parents (both men and women) gained weight more rapidly than childless people over a 15-year period to 2001 (Umberson et al., 2011). By contrast, a recent Australian longitudinal study found that weight gain was similar between men who had had their first child and those who stayed child-free (Tian et al., 2020).

More research focusing on prenatal to postnatal changes in fathers' weight is warranted (Lo et al., 2021). Some limitations of previous studies include either publishing or analysing data collected some time ago (e.g. Umberson et al., 2011) or not considering older fathers. Additionally, most of these studies were conducted in other countries so may not be generalisable to the Australian population.

## Sleep

Sleep is crucial to functioning, and sleep and health are strongly related. Insufficient and/or poor quality sleep is associated with mental ill-health (Macdonald et al., 2021; Wynter et al., 2020) and accidents and injury (Bhattacharyya, 2015), and this affects more men than women (Department of Health, 2019). A lack of sleep can also affect male fertility via sperm quality, which is important for men both pre-fatherhood and also when considering expanding their family (Andersen et al., 2022; Barbouni et al., 2025). Becoming

1 The perinatal period is from the mother's pregnancy up until a year after the child is born.

2 A commonly used measure of overweight or obesity is BMI, which is defined as weight (in kg) divided by height squared (in metres).

a first-time father may impact men's sleep, with many men affected by disrupted and reduced sleep during the first year after a child's birth (Wynter et al., 2020).

A recent US longitudinal study found that fathers reported sleeping for around 13 minutes less at 5–6 months after a child's birth than they did 1 month before the birth (Lo et al., 2021). However, sleep remained stable from 5–6 months to 11–12 months following their child's birth (Lo et al., 2021). A recent Israeli study examined mothers' and fathers' sleep trajectories from pregnancy to 12 months after the child's birth and found that there was a decrease in sleep duration for fathers from pregnancy to 12 months after the child's birth (Horwitz et al., 2023). In a longitudinal German study, Richter and colleagues (2019) found that even 6 years after the birth of their first child, the reported sleep duration of fathers was lower than it was pre-pregnancy, suggesting long-term effects of having children on sleep duration (Richter et al., 2019). The same study also found no associations between age and sleep duration (Richter et al., 2019).

More research focusing on prenatal to postnatal changes in fathers' sleep is needed (Lo et al., 2021). Additionally, more longitudinal research is needed focusing on the medium-term changes in fathers' physical health, including sleep, after the perinatal period (Horwitz et al., 2023).

## Health service use by new fathers

The *National Men's Health Strategy 2020–2030* (Department of Health, 2019) recommends an expansion of the maternal and child health infrastructure to include fathers. Previous research has shown that new fathers want to become more involved and engaged to better support their partner and child during the perinatal and postnatal periods but systems and services are currently not well set up for this (Leahy-Warren et al., 2023). Given that men are highly motivated to support their partner and child, and that both their mindset and degree of interaction with health systems/services can change at this time, new and impending fatherhood is potentially a good time to intervene to support men's health.

It is important to assess which health services are currently being used by fathers for their own health and whether they differ from those reported by men who are not fathers. It is already known that Australian men use health services such as GPs, dental professionals and medical specialists less than women (ABS, 2024).

Many fathers report barriers to health care, such as service hours being inflexible and services lacking father-specific resources and support (Wynter et al., 2024). However, most previous Australian research into barriers to health service access among fathers is qualitative, with quantitative research limited by low response rates and small sample sizes (Wynter et al., 2024). Research on more diverse and representative samples of men, including those from culturally diverse backgrounds, is lacking (Hodgson et al., 2021; Wynter et al., 2024). There is also limited evidence on barriers for engagement in services related to physical health, with most of the literature related to services for mental health and wellbeing (Wynter et al., 2024). Therefore, a greater understanding is needed of the nature and extent of barriers to accessing health care for fathers compared to non-fathers (Macdonald et al., 2022; Wynter et al., 2024).

### Research in context

#### Evidence before this study

- There is inconsistent evidence regarding how being a first-time father is associated with selected health outcomes (depression, obesity and sleep).
- Some fathers also report barriers to health care – for example, a lack of father-specific resources and support or inflexible service hours.

#### Added value

- Building on previous studies, this chapter examines how being a first-time father (compared to non-father) is associated with selected health outcomes in both the short- and medium-term.
- It provides insights on the factors associated with these health outcomes (including incidence) among first-time fathers.
- It provides detailed quantitative insights on both health service use and barriers to use among first-time fathers.

# Research objectives

*Ten to Men* is unique in providing longitudinal information on a range of health outcomes and potential associated factors among a diverse sample of Australian men at several time points. *Ten to Men* also provides rare quantitative information on a range of health services and their use and barriers to use for first-time fathers. Based on the evidence gaps, data availability and relevance to policy, we addressed the following research questions focusing on the health outcomes, service use and barriers for first-time Australian fathers, using data from Waves 1 (2013–14), 2 (2015–16), 3 (2020–21) and 4 (2022) of *Ten to Men* (TTM):

1. How does being a first-time father impact the short- and medium-term health of men?
    a. What are the prevalence and incidence of selected health conditions (moderate/severe depression, obesity and sufficient sleep) in first-time fathers compared to non-fathers?
    b. Which key factors in pre-fatherhood are associated with the prevalence and incidence of selected health conditions in first-time fathers?
2. What are the health service usage and barriers for first-time fathers?
    a. How does health service use differ by selected health outcomes?
    b. What are the main barriers to health service use for first-time fathers?

# Methods

This section describes the key measures and data analysis techniques used to address the research objectives. Detail about the overall methodology of the *Ten to Men* study is detailed elsewhere (Bandara et al., 2021; Swami et al., 2022). More detailed information about the measures and analysis are provided in the supplementary materials.

## Measures

### Outcomes

The outcomes measured were depression, body mass index and sleep duration as described here.

#### Depression

Depressive symptoms in Waves 1–4 were measured using the Patient Health Questionnaire (PHQ)-9. The PHQ-9 assesses experience and severity of depressive symptoms over the past 2 weeks (Kroenke et al., 2001). For each respondent, a total PHQ-9 score was calculated by summing their responses to the 9 questions, resulting in a total score ranging from 0 to 21. Kroenke and colleagues (2001) classify depression severity by 5 categories: 0–4 (minimal depression), 5–9 (mild depression), 10–14 (moderate depression), 15–19 (moderately severe depression) and 20–27 (severe depression). For this study, we categorised depressive symptoms as: '0 = No to mild depression' (score between 0 and 9) and '1 = Moderate or severe depression' (score of 10 or greater) (Research Question 1); and '0 = No to minimal depression' (score between 0 and 4) and '1 = Mild to severe depression' (score of 5 or greater) (Research Question 2).

#### Body mass index (BMI)

In Waves 1–4, men were asked to report their height without shoes and their weight. This was consistent with questions asked in the National Health Survey 2007–08 (ABS, 2007). This information was used to calculate each man's BMI. For our analyses, BMI was then split into 2 categories coded as '0 = Not obese' for a BMI of less than 30 and '1 = Obese' for a BMI of 30 or more (Weir & Jan, 2025).

### Sleep duration

In Waves 2–4, men were asked, 'In the last 7 days, about how many hours did you usually sleep each night?' for weekdays and weekends. Men were not asked about sleep in Wave 1. This was converted into minutes of sleep per night. We then calculated an average sleep duration by summing the weekday sleep duration multiplied by 5 and the weekend sleep duration multiplied by 2 and then dividing the total by 7. The average sleep duration was then split into 2 categories coded as '0 = less than 7 hours of sleep per night' and '1 = 7 or more hours of sleep per night', which is consistent with adult recommendations of 7 or more hours of sleep per night on a regular basis (Watson et al., 2015).

## Key exposure: Being a first-time father

In Waves 1–4, men aged 18+ years were asked whether they had experienced any of several events in the past 12 months, one of which was 'Becoming a father for the first time'. Responses were coded as '0 = No' for men who were not new fathers and '1 = Yes' for men who were new fathers in the past 12 months. Men who became new fathers at previous wave(s) were excluded from the analyses. We also only retained men who answered either 'yes' or 'no' to the question 'Have you experienced any of the following events in the past 12 months? Becoming a father for the first time' (i.e. did not have missing data for this question). Further detail on this exposure is provided in the supplementary materials.

## Health service use

Health service use was assessed by self-report where men were asked if, excluding any time spent in hospital, they consulted any of 32 health professionals for their own health in the past 12 months. Examples included an accredited counsellor, family doctor/general practitioner (GP), nurse, psychiatrist and psychologist. A full list of health professionals is provided in Table S1. Responses were coded as '0 = no' and '1 = yes'. We used measures from Wave 4 in our analyses, given that this was the most recent wave and could provide us with an understanding of health service use post the COVID-19 pandemic.

## Health barriers

Health barriers were assessed by self-report where men were asked if, during the past 12 months, they were unable to access health care for any of 11 reasons. 'Not applicable' and 'Other' could also be selected. Examples included cost, waiting time too long/no appointments and work commitments. Responses were coded as '0 = No' and '1 = Yes'. Responses coded as 'not applicable' were recoded as 'no'. Health barriers were then grouped into 4 categories: health system (no service available in area at time needed, waiting time too long/no appointments and/or not taking new patients), structural (cost and transportation problems), individual (decided not to seek care/didn't bother, personal/family and work commitments) and cultural (language problems), consistent with previous research (Macdonald et al., 2022). As with health service use, we used measures from Wave 4 in our analyses.

## Demographic and other factors

This chapter uses several demographic and other factors, which were included as exposures or potential confounders for Research Question 1. These variables were age, region, area disadvantage, cultural and linguistic diversity and education. See the supplementary materials for additional information on how these variables were measured and coded.

# Data analysis

Analysis techniques for both research questions included descriptive statistics and adjusted Poisson regression analyses. These methods are summarised in Table 1 and detailed further in the supplementary materials, including Figure S1. See Table S4 for the characteristics for first-time fathers and non-fathers included in the analyses.

**Table 1:** Summary of analysis techniques for research questions

| Qn # | Outcome(s) | Exposure(s) | Confounders | Population included in analyses | Analysis methods[a] |
|---|---|---|---|---|---|
| 1 | Each health outcome (moderate/severe depression, obesity and 7+ hours sleep duration) | Being a first-time father in Wave 2 or Wave 3 versus similar men who were non-fathers[b] | - | First-time fathers and similar men who were non-fathers[b] | Calculated prevalence at new fatherhood and medium-term fatherhood time points[c] and incidence[d] at the new fatherhood time point using unweighted cross-tabulations and 95% confidence intervals<br><br>Used adjusted multivariable Poisson regression analyses to investigate whether (i) being a first-time father was associated with prevalence and incidence of the 3 health outcomes and (ii) factors associated with prevalence and incidence of the 3 outcomes among first-time fathers only<br><br>Fitted separate models for each health outcome in new fatherhood for prevalence and incidence and medium-term fatherhood for prevalence<br><br>Tested whether age modified the association between being a first-time father and prevalence of health outcomes using interaction terms |
| | Each health outcome (moderate/severe depression, obesity and 7+ hours sleep duration) | Being a first-time father in Wave 2 or Wave 3 versus similar men who were non-fathers[b] | For prevalence: pre-fatherhood health status, age, region, culturally and linguistically diverse (CALD) status, area socio-economic disadvantage, education and new fatherhood health status (for medium-term fatherhood)<br><br>For incidence: age, region, CALD status, area socio-economic disadvantage and education | First-time fathers and similar men who were non-fathers.[b] For incidence, restricted to only men without the outcome at the previous wave. | |
| | Prevalence and incidence of each health outcome (moderate/severe depression, obesity and 7+ hours sleep duration) | For prevalence: age, region, CALD status, area socio-economic disadvantage, education, pre-fatherhood health status and new-fatherhood health status (for medium-term fatherhood time point)<br>For incidence: age, region, CALD status, area socio-economic disadvantage and education | See exposure(s) column; no additional confounders | First-time fathers in new fatherhood; first-time fathers in medium-term fatherhood (for prevalence) | |

| Qn # | Outcome(s) | Exposure(s) | Confounders | Population included in analyses | Analysis methods[a] |
|---|---|---|---|---|---|
| 2 | Most common combinations of health services used | Being a first-time father in Wave 4 versus similar men who were non-fathers[b] | - | First-time fathers and similar men who were non-fathers[b] (considered separately)<br><br>Men with depression (mild, moderate/severe), obesity (BMI of 30+) and an average of less than 7 hours of sleep per night | Concatenated variables related to health service use and groupings of barriers. See supplementary materials, including Table S3, for further details on groupings.<br><br>Calculated weighted percentages and 95% confidence intervals of first-time fathers who used each combination of health services (overall and for each outcome) and also each combination of barriers. See supplementary materials, including Table S2, for further details.<br><br>Compared weighted percentages and 95% confidence intervals to those for similar men who were non-fathers[b] |
| | Most common combinations of barriers to use | Being a first-time father in Wave 4 versus similar men who were non-fathers[b] | - | First-time fathers and similar men who were non-fathers[b] (considered separately) | |

[a] All analyses were unweighted unless otherwise specified.
[b] Men of the same age range who were not yet fathers.
[c] The new fatherhood time point was the wave in which they became a first-time father (or similar men at this time point). The medium-term fatherhood time point was the following wave.
[d] Prevalence refers to the proportion of men with a given health condition at a particular time. Incidence refers to men who developed a condition but did not have it at the previous time point or wave.

# Findings

The following sections outline the findings for each research question.

## How does being a first-time father impact the short and medium-term health of men?

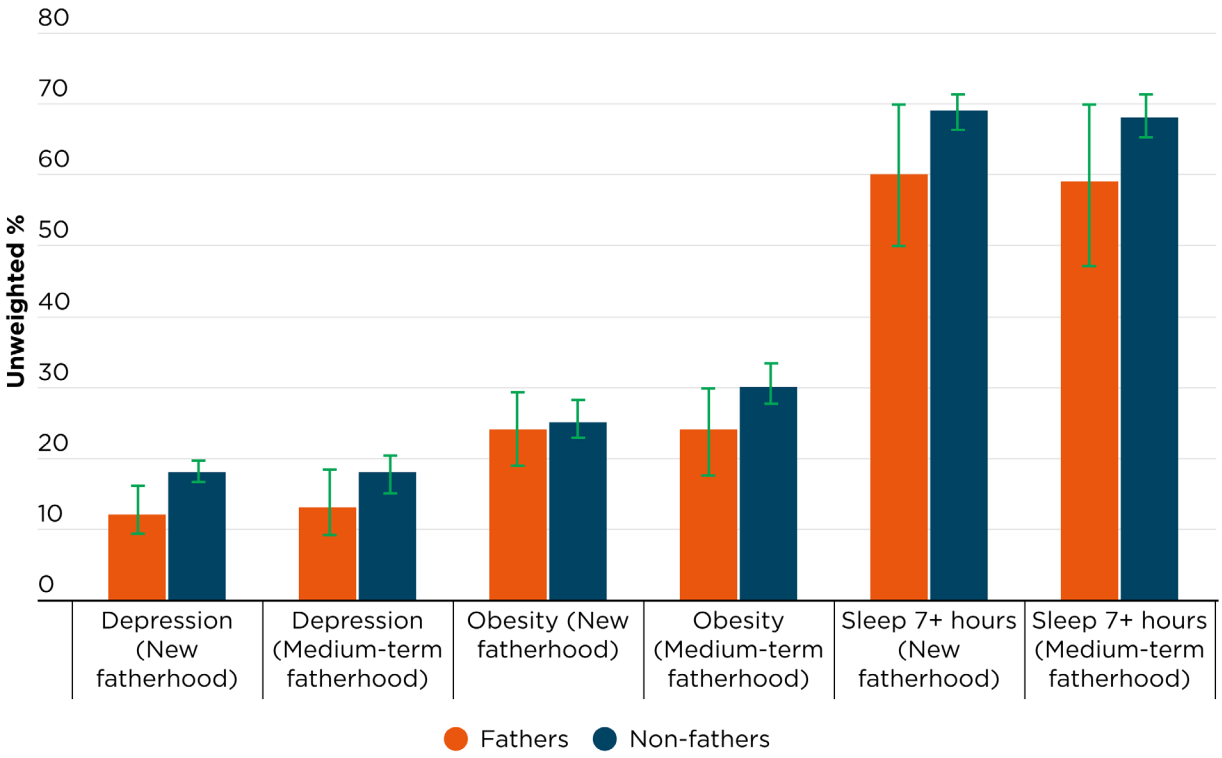
### Prevalence of health conditions in first-time fathers compared to non-fathers

We first investigated the prevalence of selected health conditions in first-time fathers compared to non-fathers. Prevalence refers to the proportion of men with these health conditions at a particular point in time.

In new fatherhood, the prevalence of moderate/severe depression was lower in first-time fathers (11.7%; 95% CI [8.6%, 15.4%]) than non-fathers (17.6%; 95% CI [15.5%, 19.8%]) (Figure 1; Table S5). Our estimate of depression among fathers was slightly higher than the approximately 8% reported previously using data from the same study (Giallo et al., 2023) – however, their estimate only included new fathers from Wave 2, whereas we considered new fathers from Waves 2 and 3.

The proportion of men with moderate/severe depression was similar between first-time fathers in medium-term fatherhood and non-fathers at the same time point. The proportions of men with obesity and 7+ hours sleep duration were similar between first-time fathers in new and medium-term fatherhood and non-fathers at the same time points.

**Figure 1:** Prevalence of selected health conditions in first-time fathers in new and medium-term fatherhood and non-fathers at the same time points




Notes: Unweighted sample sizes in new fatherhood (% fathers): *n* = 1,598 for depression (23.5% fathers); *n* = 1,516 for obesity (23.6% fathers) and *n* = 1,316 for sleep (8.7% fathers). Unweighted sample sizes in medium-term fatherhood (% fathers): *n* = 1,264 for depression (19.4% fathers); *n* = 1,226 for obesity (20.0% fathers) and *n* = 1,095 for sleep (8.4% fathers).

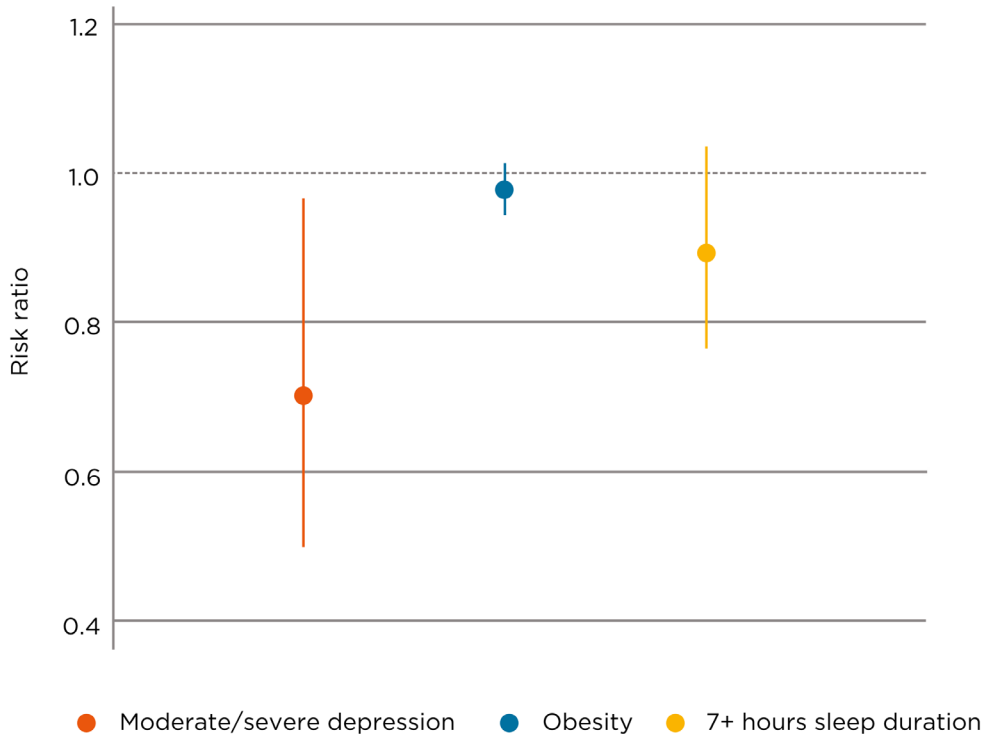
Source: *Ten to Men* data, unweighted

We then investigated whether being a first-time father (compared to non-father) was associated with these health conditions. We found that first-time fathers were around 29% less likely than non-fathers to have moderate/severe depression at the new-fatherhood time point (aRR = 0.71; 95% CI [0.52, 0.97]; *p* = 0.03) (Figure 2, Table S7). However, there was no association between being a first-time father and moderate/severe depression in medium-term fatherhood (Table S7). There were also no associations between being a first-time father (compared to non-father) and obesity or having 7+ hours sleep per night in new or medium-term fatherhood (Table S7).

In new fatherhood, participant age modified the association between being a first-time father and 7+ hours sleep duration (*p* for interaction = 0.02) but none of the other outcomes. For the oldest 50% of men (aged 30–57), first-time fathers were around 28% less likely to have 7+ hours sleep than non-fathers (aRR = 0.72; 95% CI [0.54, 0.98]; *p* = 0.03). However, for the youngest 50% of men, there was no difference between first-time fathers and non-fathers in their likelihood to have 7+ hours sleep (Table S7).

Participant age did not modify the association between being a first-time father and any of the selected health outcomes in medium-term fatherhood.

**Figure 2:** Associations between being a first-time father (compared to non-father) and the prevalence of selected health conditions at the new fatherhood time point

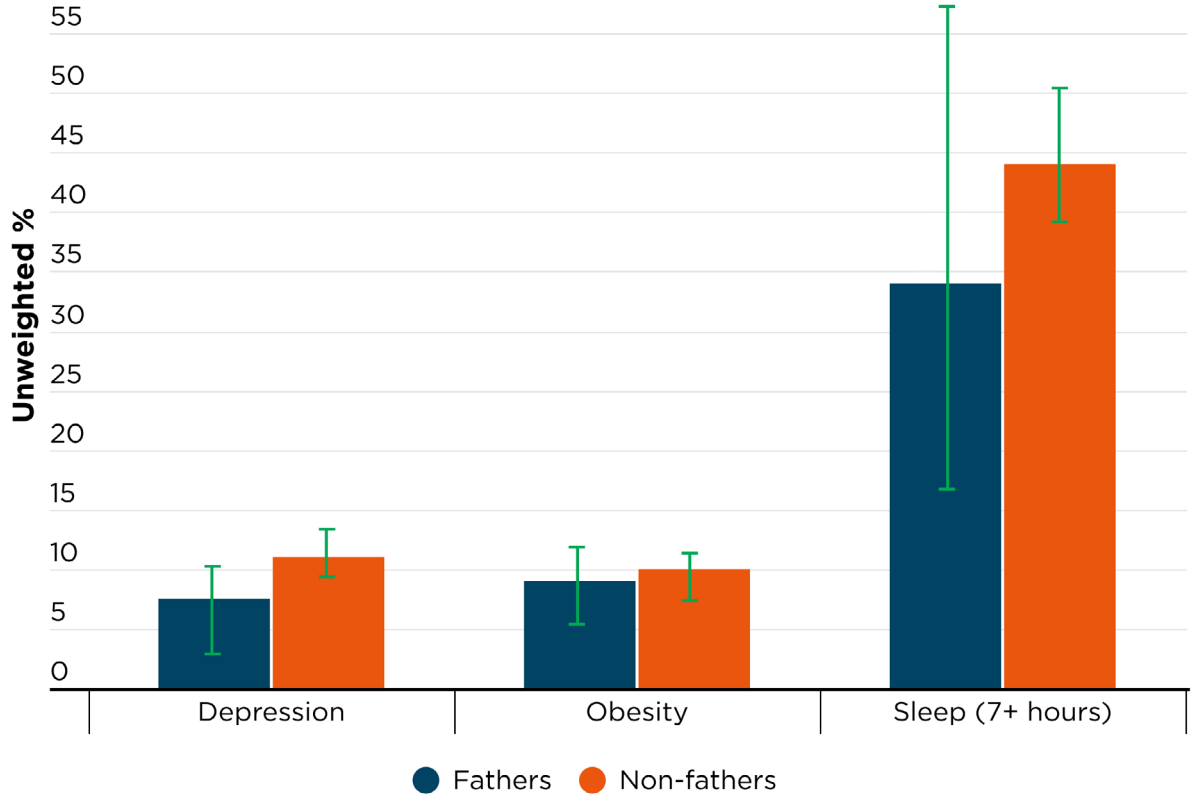



Notes: Circles indicate risk ratios and vertical lines correspond to 95% confidence intervals. Risk ratios above the dotted (reference) line indicate an increased risk for fathers, below indicate reduced risk and across represent no risk. Full results are available in Table S7 of the supplementary materials. Models adjusted for pre-fatherhood health status, age, region, CALD status, area socio-economic disadvantage and education. Unweighted sample sizes for models: *n* = 1,525 for depression; *n* = 1,392 for obesity and *n* = 1,240 for sleep.

## Incidence of health conditions in first-time fathers in new fatherhood compared to similar non-fathers

We calculated the incidence of selected health conditions in first-time fathers in new fatherhood compared to non-fathers. Incidence refers to the proportion of men who developed a health condition but did not have it at the pre-fatherhood time point. The incidence of all selected health conditions was similar between fathers in new fatherhood and non-fathers at the same time point (Figure 3; Table S6).

**Figure 3:** Incidence of selected health conditions in first-time fathers in new fatherhood and non-fathers at the same time point



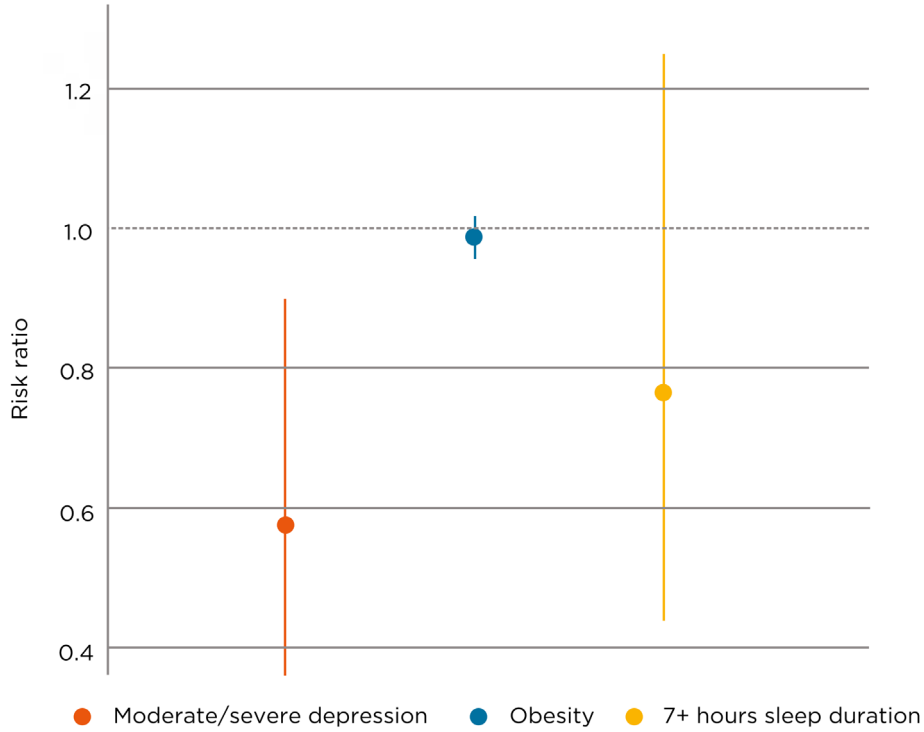

Notes: Unweighted sample sizes (% fathers): *n* = 1,358 for depression (23.7% fathers); *n* = 1,108 for obesity (22.9% fathers) and *n* = 394 for sleep (7.4% fathers).

Source: *Ten to Men* data, unweighted

We then investigated how the incidence of these health conditions in first-time fathers compared to non-fathers. We found that for men who did not have depression at the pre-fatherhood time point, first-time fathers were around 43% less likely than similar non-fathers to have moderate/severe depression at the new-fatherhood time point (aRR = 0.57; 95% CI [0.36, 0.90]; *p* = 0.02) (Figure 4, Table S8).

There were no associations between being a first-time father (compared to non-father) and the incidence of obesity or having 7+ hours sleep per night in new fatherhood.

**Figure 4:** Associations between being a first-time father (compared to non-father) and the incidence of selected health conditions at the new fatherhood time point

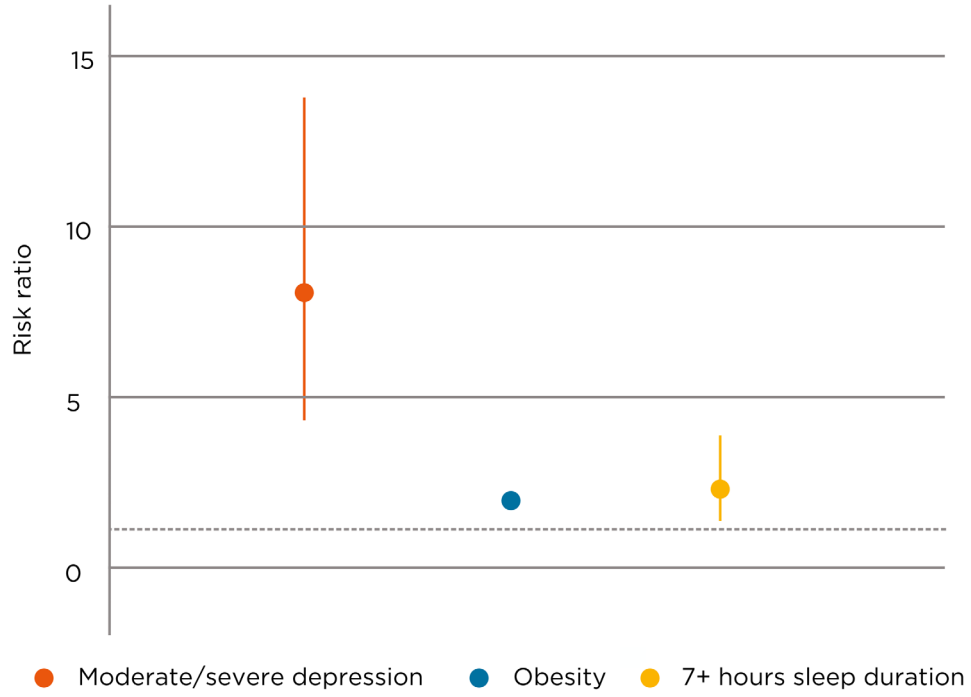



Notes: Circles indicate risk ratios and vertical lines correspond to 95% confidence intervals. Risk ratios above the dotted (reference) line indicate an increased risk for fathers, below indicate reduced risk and across represent no risk. Full results are available in Table S8 of the supplementary materials. Models adjusted for age, region, CALD status, area socio-economic disadvantage and education. Unweighted sample sizes for models: *n* = 1,325 for depression; *n* = 1,074 for obesity and *n* = 379 for sleep.

## How is pre-fatherhood health status associated with health conditions in new and medium-term fatherhood among first-time fathers?

We then considered how pre-fatherhood health status was associated with the prevalence of health conditions among first-time fathers. Non-fathers were not included in this analysis. All pre-fatherhood health measures were associated with the same outcome in new fatherhood for first-time fathers (Figure 5, Table S9). The strongest association was for depression, where men who had moderate/severe depression in pre-fatherhood were 8 times more likely to have moderate/severe depression in new fatherhood (aRR = 8.06; 95% CI [4.60, 14.14]; $p < 0.001$). This finding is consistent with previous research (Giallo et al., 2023; O'Connor et al., 2025) using *Ten to Men* data, which found that preconception depression was associated with postnatal depression among first-time fathers.

**Figure 5:** Association between pre-fatherhood health status and the prevalence of selected health conditions in new fatherhood




Notes: Circles indicate risk ratios and vertical lines correspond to 95% confidence intervals. The confidence intervals for obesity are present but very small so cannot be seen in the figure. For obesity, aRR = 1.64, 95% CI [1.54, 1.74]. Risk ratios above the dotted (reference) line indicate an increased risk, below indicate reduced risk and across represent no risk. Full results are available in Table S9 of the supplementary materials. Models adjusted for age, region, CALD status, area socio-economic disadvantage and education. Unweighted sample sizes for models: *n* = 336 for depression; *n* = 312 for obesity and *n* = 88 for sleep.

Among first-time fathers, all new-fatherhood health measures were associated with the same outcome in medium-term fatherhood (Table S9). Similar to associations between pre- and new-fatherhood health measures, the strongest association was for depression, where men who had moderate/severe depression in new fatherhood were almost 5 times as likely to have moderate/severe depression in medium-term fatherhood (aRR = 4.78; 95% CI [2.40, 9.50]; $p < 0.001$). For first-time fathers, being obese in pre-fatherhood (aRR = 1.19; 95% CI [1.05, 1.35], $p = 0.006$) was also associated with the same outcome in medium-term fatherhood (Table S9).

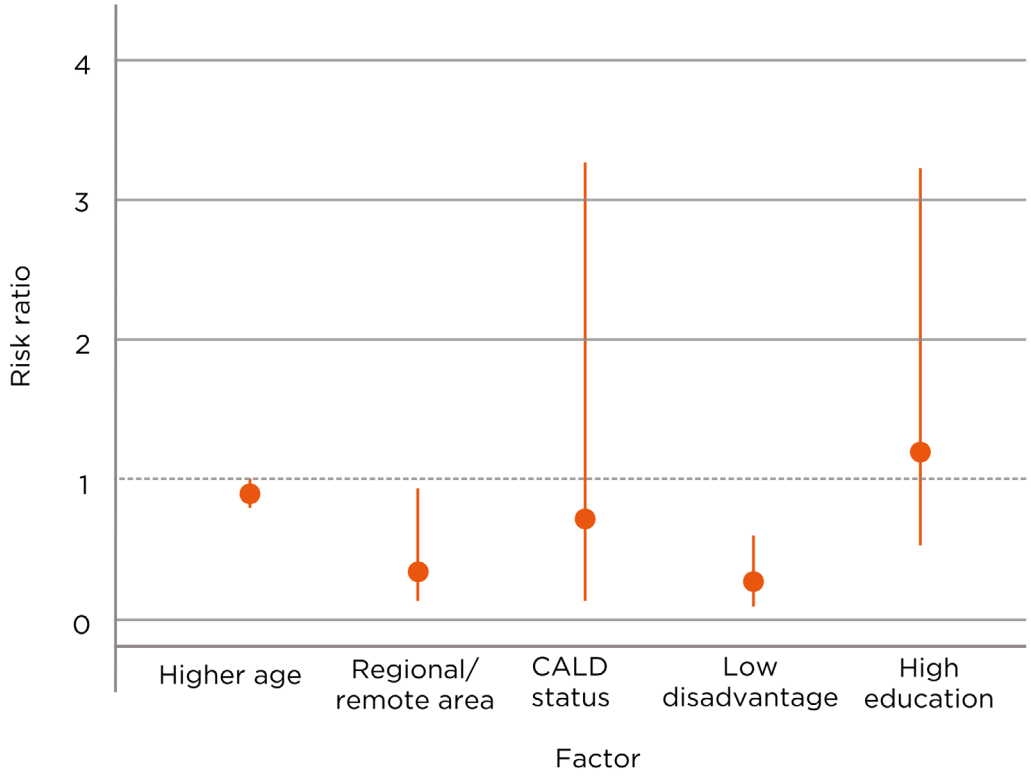
## Which factors before fatherhood are associated with the incidence of health conditions in first-time fathers?

We considered which factors before fatherhood were associated with the incidence (i.e. new onset) of health conditions in new fatherhood in first-time fathers. Non-fathers were not included in this analysis.

Among first-time fathers, living in an area of middle or low (compared to high) disadvantage (aRR = 0.29; 95% CI [0.13, 0.64]; $p < 0.01$) and living in a regional/remote area (compared to a major city) (aRR = 0.33; 95% CI [0.12, 0.91]; $p = 0.03$) in pre-fatherhood were associated with lower incidence of moderate/severe depression in new fatherhood (Figure 6; Table S10). The incidence of depression also decreased with age and, for every additional year, the risk decreased by 9% (aRR = 0.91; 95% CI [0.83, 0.996]; $p = 0.04$).

Among first-time fathers, no pre-fatherhood factors were associated with the incidence of obesity or sleep duration outcomes in new fatherhood (Table S10).

**Figure 6:** Association between various factors and the incidence of depression in new fatherhood for first-time fathers




Notes: Circles indicate risk ratios and vertical lines correspond to 95% confidence intervals. Risk ratios above the dotted (reference) line indicate an increased risk, below indicate reduced risk and across represent no risk. Full results are available in Table S10 of the supplementary materials. Model included age, region, CALD status, area socio-economic disadvantage and education. Unweighted *n* = 305.

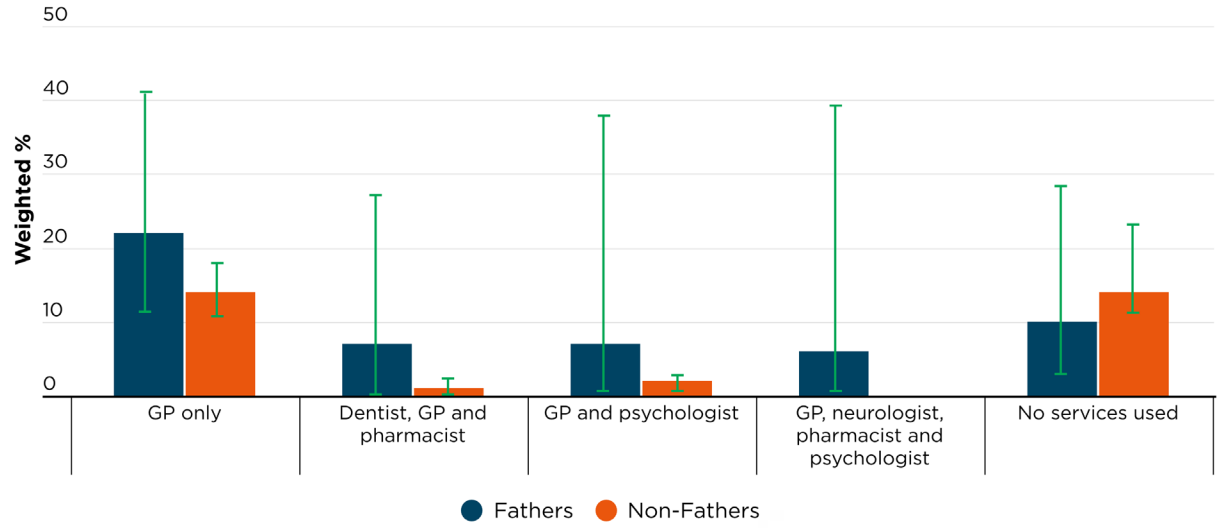
## Which health services do first-time fathers use?

We considered the use of services and barriers among first-time fathers in Wave 4 (and similar men who were non-fathers) because we were interested in looking at service use and barriers following the COVID-19 pandemic. At Wave 4 (2022), the top 4 combinations of health services first-time fathers reported using were GP only (22.9%), dentist, GP and pharmacist (6.6%), GP and psychologist (6.5%) and GP, neurologist, pharmacist and psychologist (5.6%) (Figure 7).[3] Around 1 in 10 fathers (9.9%) reported using no health services from those listed (see supplementary materials for further detail).

There was no evidence that the use of health services differed between fathers and non-fathers but the lack of these differences is likely due in part to small sample sizes (this also applies to the results for each health outcome below).

3 When considering the health services reported in Figure 7 separately, 84.4% of fathers and 74.8% of non-fathers used a GP, 42.0% of fathers and 36.9% of non-fathers used a dentist, 24.1% of fathers and 15.9% of non-fathers used a pharmacist, 17.0% of fathers and 14.1% of non-fathers used a psychologist and 5.9% of fathers and 0.9% of non-fathers used a neurologist.

**Figure 7:** Top 4 combinations of health services used by first-time fathers and comparison of these combinations with non-fathers



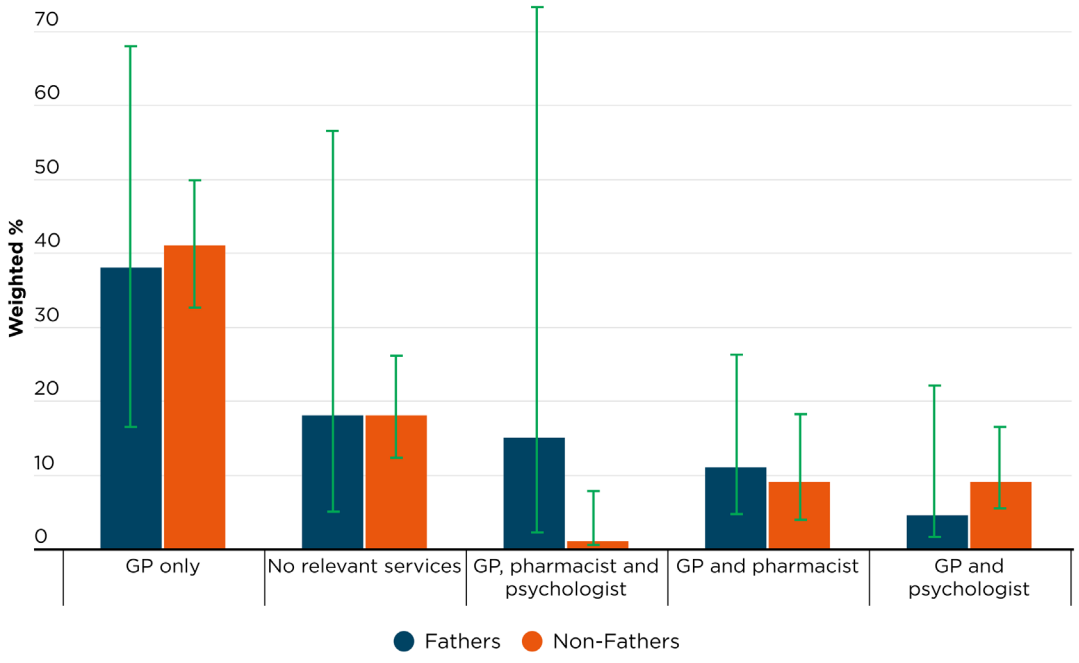

Notes: Sample consists of first-time fathers in Wave 4 compared to similar men who were non-fathers (not yet fathers and of the same age range). *N* = 993. Fathers: *n* = 102; Non-fathers: *n* = 891. Error bars indicate 95% confidence intervals.

Source: *Ten to Men* data, Wave 4, weighted

## Health service use of first-time fathers with depression

At Wave 4, 31.5% of first-time fathers (95% CI [20.2%, 45.6%]) had symptoms of mild to severe depression compared to 46.1% of non-fathers (95% CI [41.0%, 51.2%]) (Table S11). For these fathers, the most common combinations of health services used were GP only (37.7%), GP, pharmacist and psychologist (15.6%), GP and pharmacist (11.7%) and GP and psychologist (5.2%) (Figure 8). Around 16.7% of first-time fathers reported using no relevant services for depression. See Table S2 for relevant services for depression.

**Figure 8:** Top 4 combinations of health services used by first-time fathers with depression and comparison with non-fathers



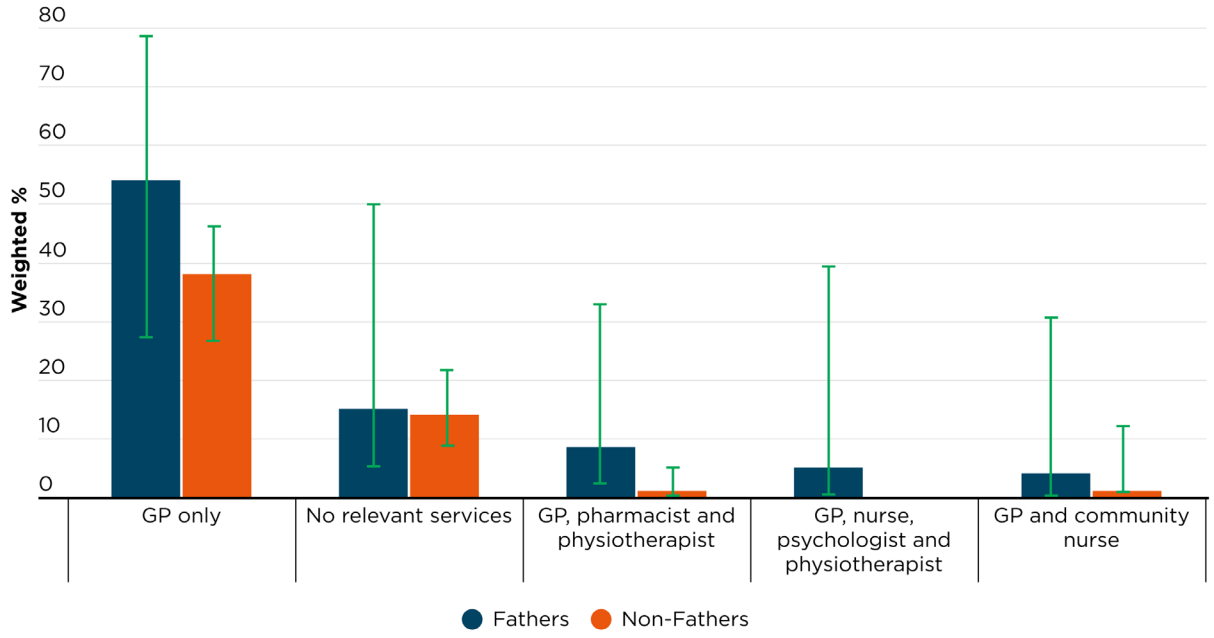

Notes: Sample consists of first-time fathers in Wave 4 compared to similar men who were non-fathers (not yet fathers and of the same age range) who had mild, moderate or severe depression: *n* = 400. Fathers: *n* = 34; Non-fathers: *n* = 366. Error bars indicate 95% confidence intervals.

Source: *Ten to Men* data, Wave 4, weighted

## Health service use of first-time fathers who were obese

At Wave 4, 28.8% (95% CI [17.2%, 44.0%]) of new fathers were obese compared to 27.9% (95% CI [23.4%, 33.0%]) of non-fathers (Table S11). For these fathers, the most common combinations of health services used were GP only (54.5%), GP, pharmacist and physiotherapist (8.1%), GP, nurse, psychologist and physiotherapist (5.8%), and GP and community nurse (4.1%) (Figure 9). Around 16.0% of first-time fathers reported using no relevant services for obesity. See Table S2 for relevant services for obesity.

**Figure 9:** Top 4 combinations of health services used by obese fathers and comparison with non-fathers



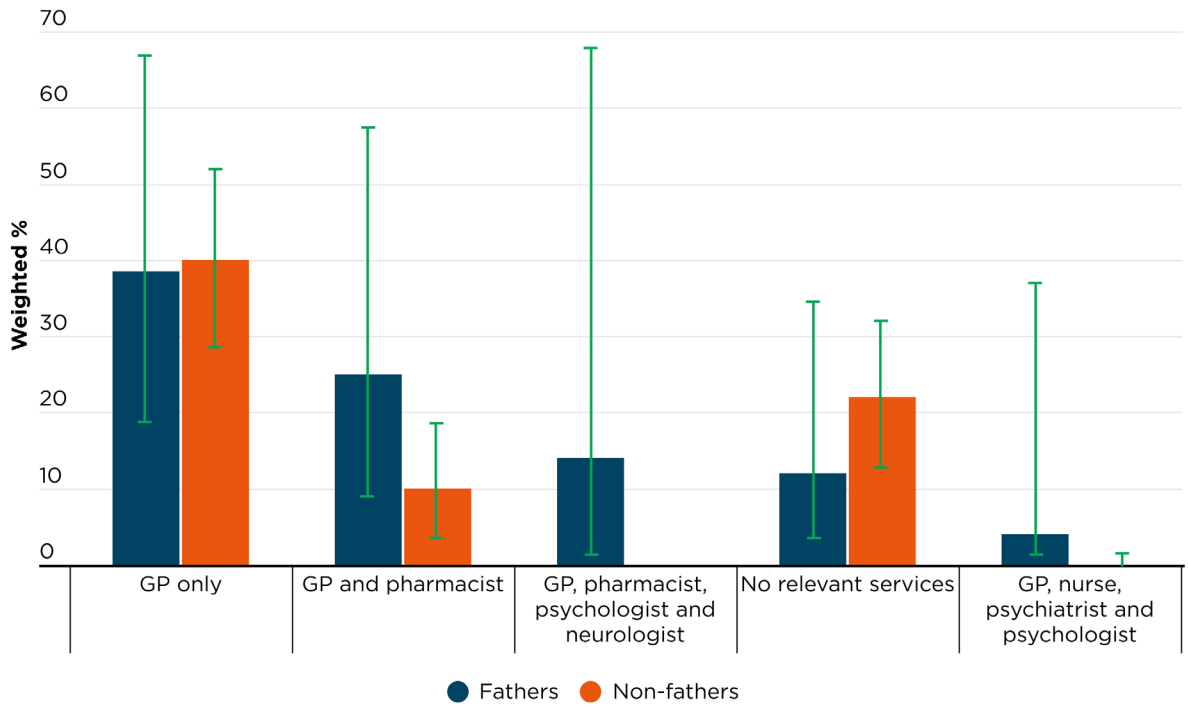

Notes: Sample consists of first-time fathers in Wave 4 compared to similar men who were non-fathers (not yet fathers and of the same age range) who were obese: *n* = 280. Fathers: *n* = 29; Non-fathers: *n* = 251.

Source: *Ten to Men* data, Wave 4, weighted

## Health service use of first-time fathers with an average of less than 7 hours sleep per night

At Wave 4, 40.2% (95% CI [26.6%, 55.5%]) of first-time fathers had less than 7 hours sleep per night compared to 31.6% (95% CI [26.9%, 36.8%]) of non-fathers (Table S11). For these fathers, the most common combinations of health services used were GP only (37.8%), GP and pharmacist (25.8%), GP, pharmacist, psychologist and neurologist (13.7%) and GP, nurse, psychiatrist and psychologist (4.3%) (Figure 10). Around 13.1% of fathers reported using no relevant services for sleep. See Table S2 for relevant services for sleep.

**Figure 10:** Top 4 combinations of health services used by men with less than 7 hours sleep per night and comparison with non-fathers




Notes: Sample consists of first-time fathers in Wave 4 compared to similar men who were non-fathers (not yet fathers and of the same age range) who had less than 7 hours sleep per night: *n* = 300. Fathers: *n* = 42; Non-fathers: *n* = 258.

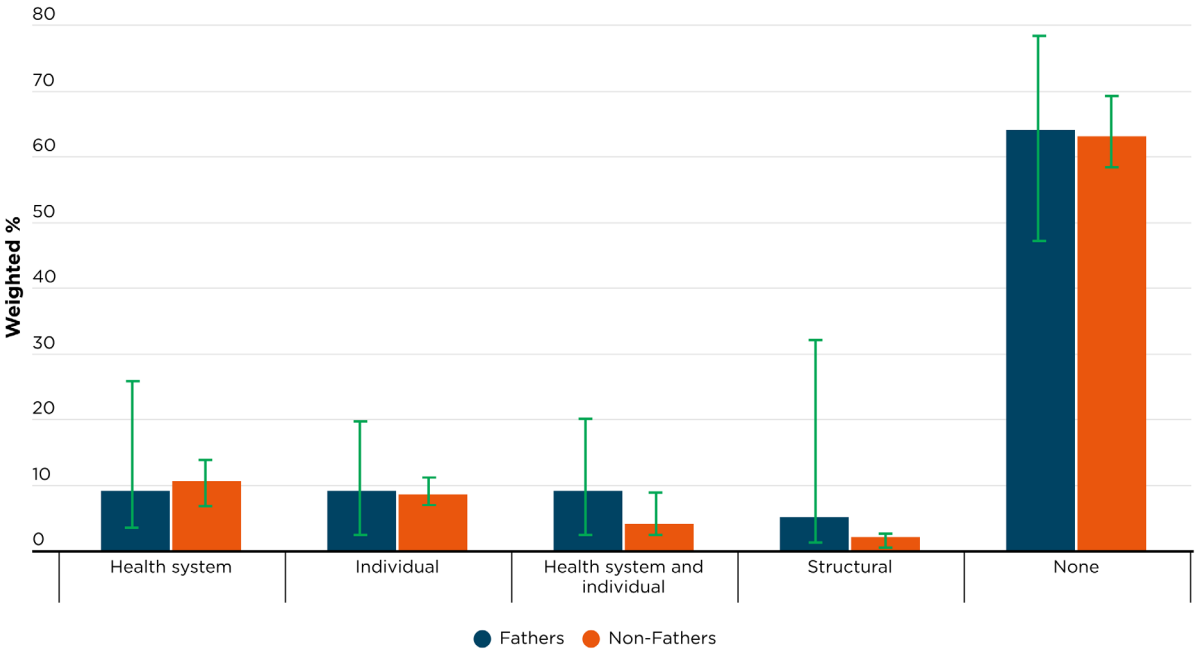
Source: *Ten to Men* data, Wave 4, weighted

## Barriers to health service engagement

In Wave 4, almost two-thirds of first-time fathers (64.6%) reported no barriers to health service engagement. For first-time fathers, the most common combinations of barriers were health system-related barriers (no service available in area at time needed, waiting time too long/no appointments and/or not taking new patients) (9.4%), individual-related barriers (e.g. decided not to seek care, work commitments) (9.3%), barriers related to the health system and individual (8.7%) and structural-related barriers (cost and/or transportation problems) (5.6%) (Figure 11).[4] There was no evidence that these combinations of barriers differed between fathers and non-fathers.

4 When considering health system-related barriers separately, 6.5% of first-time fathers reported having no service available in the area at the time needed, 17.2% reported the waiting time being too long/no appointments as a barrier and 7.8% reported the barrier being due to not taking new patients. For individual-related barriers, 11.1% reported that they decided not to seek care/didn't bother, 14.7% reported personal/family responsibilities as being a barrier and 10.4% reported work commitments as being a barrier. For structural-related barriers, 7.9% reported cost being a barrier with none reporting transportation problems as a barrier. No first-time fathers reported language problems (a cultural barrier).

**Figure 11:** Top 4 combinations of barriers to health service engagement reported by first-time fathers and comparison with non-fathers




Notes: Sample consists of first-time fathers in Wave 4 compared to similar men who were non-fathers (not yet fathers and of the same age range). *N* = 1,038. Fathers: *n* = 123; Non-fathers: *n* = 915. Error bars denote 95% confidence intervals.

Source: *Ten to Men* data, Wave 4, weighted

# Summary

This research aimed to provide insight on the health of first-time fathers, factors which affect this, and the use of health services and associated barriers among fathers in Australia. Our report demonstrates how health changes for men during this critical period of new fatherhood. Detailed information is also provided on the use of health services, and associated barriers, among first-time fathers. These results highlight areas of focus for policies and interventions aimed at improving the health of new fathers.

## Health outcomes of first-time fathers

Our findings revealed that the health of men who are first-time fathers was similar to, or better than, the health of non-fathers of a similar age. A lower proportion of first-time fathers had moderate/severe depression in new fatherhood (12%) compared to non-fathers (18%). Further, first-time fathers were around 29% less likely to have moderate/severe depression in new fatherhood than non-fathers at this time. This proportion was higher for men who did not have depression pre-fatherhood, with first-time fathers around 43% less likely to have moderate/severe depression in new fatherhood than similar non-fathers at this time point.

By medium-term fatherhood the proportions between first-time fathers and non-fathers were similar for depression. Given our finding that first-time fathers had a lower risk of moderate/severe depression than similar men who were non-fathers, it may be that the non-fathers are less connected with the health system at this time.

Being a first-time father was not associated with obesity or reduced sleep in new or medium-term fatherhood.

Note, the better mental health outcomes for first-time fathers should not be interpreted as fatherhood being protective for men in general, as some fathers may not experience poorer mental health until the birth of second or subsequent children (Ruppanner et al., 2019).

## Factors associated with health conditions of first-time fathers

Among first-time fathers, we found that pre-fatherhood health measures (depression, obesity and sleep) were associated with the same health outcome in new fatherhood, and in medium-term fatherhood for obesity. The strongest association was for depression, where fathers who had moderate/severe depression in pre-fatherhood were 8 times more likely to have depression in new fatherhood.

These findings align with those of previous studies (Giallo et al., 2023; O'Connor et al., 2025) that found that preconception depression was associated with postnatal depression among first-time fathers. Similar results have also been reported for mothers (Ogbo et al., 2018; Silverman et al. 2017; Yang et al., 2022), including in Irish research showing that poor mental health prior to and during pregnancy was associated with poor mental health after the child's birth in first-time mothers (Hannon et al., 2022).

Taken together, these findings focus our awareness on risk factors associated with depression for both parents. They also suggest that interventions could focus on both mothers and fathers with a history of depression prior to the birth of their child to better support the family as a whole.

Our results provide strong evidence for the need for early identification of men with depression prior to having children (from adolescence and early adulthood). Recent data from 3 Australian jurisdictions (Queensland, Tasmania and the ACT) show that over 70% of women receive mental health screening during pregnancy (Australian Institute of Health and Welfare [AIHW], 2024). However, a review of Australian and international studies revealed that there is no routine mental health screening or assessment for fathers (Hutchinson et al., 2025; Wynter et al., 2024).

Along with screening women for the risk of poor mental health during pregnancy and the perinatal period, the Centre of Perinatal Excellence Australian Clinical Practice Guidelines now also recommend mental health screening for non-birthing parents at these time points (Highet and the Expert Working Group and Expert Subcommittees, 2023). Research shows that early identification of men with poor mental health and appropriate interventions focused on these groups of men is likely to benefit families, including partners (Paulson et al., 2016) and children (Le Bas et al., 2025), and reduce the economic burden of perinatal depression among fathers (Deloitte Access Economics, 2012).

The incidence of depression among first-time fathers differed for some groups of men. More specifically, among first-time fathers, being younger, living in an area of high disadvantage and living in a major city were associated with the incidence of depression in new fatherhood. However, no pre-fatherhood factors were associated with the incidence of obesity or 7+ hours sleep in new fatherhood among first-time fathers.

The association between young age and the incidence of depression in new fatherhood is consistent with previous research from Finland (Filatova et al., 2021) and the USA (Lee et al., 2012). Young fathers often find it more challenging to secure what they need to be a good father, have insecure education, insecure employment experiences and are most disadvantaged by the housing system (Tarrant, 2025, May). They often also lack peer support and suffer from isolation and loneliness around this time (Tarrant, 2025, May). Policies and programs aiming to improve the mental health of young fathers may be useful.

## Health service use and barriers for first-time fathers and comparison with non-fathers

Given the similarities in prevalence and incidence of most health outcomes between fathers and non-fathers, we also investigated whether health service use and barriers were similar for first-time fathers and non-fathers. For most first-time fathers identified in our study, health service use and barriers were measured during their child's perinatal period. We investigated the use of services and barriers at Wave 4 as it provided the most recent data and was the only wave completed after the COVID-19 pandemic.

We found that GPs were the most commonly used health service by first-time fathers for their own health, either alone or in combination with other services. The top 4 health service combinations used all included a GP, with the top one being a GP only (22.9% of fathers). Findings were similar when we considered men with depression, obesity and less than 7 hours sleep per night.

Our results are consistent with previous literature, which has revealed that family doctors (GPs) are the preferred health care professionals fathers approach for mental health and wellbeing (Baldwin et al., 2019) as well as recent data showing that GPs were the most common health professionals seen in Australia in 2023–24 (ABS, 2024). However, in our research, we considered combinations of over 30 different health services in a diverse sample, rather than considering services in isolation.

These service combinations were used to a similar extent by non-fathers, indicating that first-time fathers and non-fathers appear to receive similar attention from physical and mental health services. However, around 1 in 10 first-time fathers reported using no services for their own health. Given the engagement of first-time fathers with health services for their child's health, one might expect fathers to engage more with services for their own health.

For first-time fathers of newborns, one option, as identified in the *National Men's Health Strategy 2020–2030* (Department of Health, 2019), is to expand the maternal and child health system to include fathers. This is in line with the World Health Organization's view, which Wynter and colleagues (2024) note strongly recommends interventions to promote male partners' involvement in maternal and newborn health.

Concerningly, we found that over one-third (35.4%) of first-time fathers and a similar proportion of non-fathers reported at least one barrier to health service engagement. Some men used one or more health services but still reported barriers to other services.

Around 6%–9% of first-time fathers (and similar proportions of non-fathers) reported the most common barriers to their engagement with health services were related to structural, systemic and/or individual factors. The *National Men's Health Strategy 2020–2030* suggests a number of strategies to remove barriers to health service use, including 'expanding the availability of male-focused community health services and interventions' (Department of Health, 2019, p 9) and 'promoting and supporting the use of digital health services that are available' (Department of Health, 2019, p 9).

Other research has pointed to the potential for service approaches tailored specifically for men or 'gender-responsive approaches' (Seidler et al., 2018; Seidler et al., 2024). Additionally, co-design strategies might be beneficial where, along with researchers and clinicians, men who use mental health services are given opportunities to provide feedback for treatment trials (e.g. in focus groups) (Seidler et al., 2018). Further research into how health care can be effectively provided specifically for men is needed (Smith et al., 2006).

## Data considerations

This research has several strengths. It is a nationwide study and builds on previous research by including men from a wide range of socio-economic backgrounds. Our analyses used data from multiple waves of *Ten to Men*, including pre-, new- and medium-term fatherhood time points for physical and mental health outcomes. For Research Question 1, we combined fathers and men of a similar age who were non-fathers from Waves 2 and 3, increasing sample size and statistical power. We were also able to build on previous research in this field by comparing fathers to non-fathers. Some previous studies have only considered fathers (Giallo et al., 2012; Giallo et al., 2023; Lo et al., 2021).

However, when applying and interpreting these findings, the following should be considered.

- As we combined data from 2 cohorts of men, we could not weight the data to provide nationally representative results for Research Question 1.
- For some analyses, sample sizes were quite small, leading to wide confidence intervals and affecting the precision of estimates.
- The sample sizes for some priority groups of men were too small and could not be included in our analyses. Additionally, sample sizes of first-time fathers were too small to allow adjustment for many confounders in the current analyses.
- Information on some known confounders such as traumatic birth, child developmental delay and low birthweight was not available in *Ten to Men*.

- Men were only asked whether they became a first-time father at any time in the last 12 months. Therefore, the exact age of their child was unknown. Fathers' health outcomes such as depression and sleep may differ depending on the age of their child.
- We did not have specific information on whether men were biological fathers or step- or foster fathers. We hope to gain a clearer understanding of specific family relationships as future waves of *Ten to Men* data become available.
- As is the case in most longitudinal studies, there was loss to follow-up. Men who were lost to follow-up may have been more likely to have poorer health outcomes than those remaining in the study.
- We did not consider anxiety as a mental health outcome. As this was only measured in Waves 3 and 4, we could not consider this outcome in medium-term fatherhood. This is an area that warrants future research with new waves of data.
- Finally, all health measures and the use of health services and barriers were self-reported and therefore subject to measurement error. However, we were interested in perceptions of health service use rather than actual visits to health services.
- Additionally, we did not have any detail about the reasons for using particular health services such as GPs or reasons for men reporting no barriers, which could be other avenues for further research. Some men may be reporting no barriers to health service use due to low levels of health literacy (Oliffe et al., 2020) and therefore not understanding the importance of engaging with health services for their own health.

## Future research opportunities

More participants were recruited into the study following Wave 4 of *Ten to Men* at the top-up phase in 2023–24. Therefore, future analyses using data from the top-up sample and Wave 5 (2024) will include a larger sample size. Several related research areas could be investigated with current and future *Ten to Men* data:

- How do longer-term health outcomes compare between first-time fathers at later stages of fatherhood and non-fathers at the same time points? For example, using Wave 5 data, future research could consider outcomes in Wave 4 for new fathers in Wave 2 and outcomes in Wave 5 for new fathers in Wave 3 (i.e. 2 waves after they became a new father).
- Analyses to include other priority population groups – for example, men with disability, LGBTQA+ people and First Nations men. There are gaps in the research for some groups of fathers.
- Other mental health outcomes, such as anxiety, could be considered at multiple time points once there are more waves of data on these. Additionally, future research could examine depression in men using the Male Depression Risk Scale (MDRS) (Herreen et al., 2022), which will be available from Wave 5 onwards and better captures male-specific depression symptoms.
- What are the health outcomes and associated factors for fathers of second and subsequent children, compared to first-time fathers and non-fathers?
- What are the health service usage and barriers for first-time fathers in Wave 5 (2024)?

Other research questions could be investigated using other datasets:

- How do results for fathers compare to those for mothers? For example, it is important to consider both maternal and paternal depression in the family context, given that parental depression is associated with negative parenting, poorer health and wellbeing (National Research Council (US) and Institute of Medicine (US) Committee on Depression, Parenting Practices, and the Healthy Development of Children, 2009), and depression in children (Chithiramohan & Eslick, 2023; Dachew et al., 2023). Moreover, depression in mothers is associated with poorer child development (Rogers et al., 2020). Evidence also shows that depression in fathers during the child's first year can negatively affect their child's behaviour and development at 4–5 years of age (Fletcher et al., 2011).
- How do results compare between Australia and other countries?

- What are the mechanisms and pathways that lead to a lower risk of depression among fathers compared to non-fathers? For example, are depressed men less likely to become fathers or are those struggling to become fathers ending up depressed?
- Where are first-time or prospective fathers learning about fatherhood and what are the informal sources (e.g. partners, friends, peers and social media) helping them to prepare for fatherhood?

## Key conclusions for policy and practice

The *National Men's Health Strategy 2020–2030* refers to fatherhood as an important life stage for these Australian men and one that needs a stronger focus within health strategies (Department of Health, 2019). Our findings suggest the following to support improved health outcomes for fathers:

- Younger age, living in an area of high disadvantage and living in major cities were associated with the incidence of depression in new fatherhood among first-time fathers. Interventions aiming to decrease the incidence of depression among fathers should focus on these groups.
- Depression before fatherhood is a significant factor in later depression for new fathers. Interventions aimed at improving the health of fathers should include a focus on men with depression in late adolescence or early adulthood.
- Around 1 in 10 first-time fathers are not engaging with health services. Building stronger connections for first-time fathers of newborns (more than three-quarters of the fathers in our sample) in the maternal and child health system could provide a way to encourage fathers to access health services for their own health during the perinatal period.

# References


Andersen, E., Juhl, C. R., Kjøller, E. T., Lundgren, J. R., Janus, C., Dehestani, Y., Saupstad, M. et al. (2022). Sperm count is increased by diet-induced weight loss and maintained by exercise or GLP-1 analogue treatment: A randomized controlled trial. *Human Reproduction, 37*(7), 1414–1422.

Australian Bureau of Statistics (ABS). (2007). *National Health Survey: Summary of Results, 2007–2008* (Reissue) (Cat. No. 4364.0). Canberra: ABS.

Australian Bureau of Statistics. (2023). *Births, Australia, 2023*. Canberra: ABS. www.abs.gov.au/statistics/people/population/births-australia/latest-release#cite-window1

Australian Bureau of Statistics. (2024). *Patient Experiences*. Canberra: ABS. www.abs.gov.au/statistics/health/health-services/patient-experiences/latest-release.

Australian Health Ministers' Conference. (2011). *National Framework for Universal Child and Family Health Services*. Canberra: Department of Health, Disability and Ageing.

Australian Institute of Health and Welfare (AIHW). (2024). *Perinatal mental health screening in Australia*. Canberra: AIHW. www.aihw.gov.au/reports/mothers-babies/perinatal-mental-health-screening-australia/contents/about

Baldwin, S., Malone, M., Sandall, J., & Bick, D. (2019). A qualitative exploratory study of UK first-time fathers' experiences, mental health and wellbeing needs during their transition to fatherhood. *BMJ Open, 9*(9), e030792.

Bandara, D., Howell, L., Silbert, M., & Daraganova, G. (2021). Ten to Men: *The Australian Longitudinal Study on Male Health, Release 3 (Waves 1–3)*. Melbourne: Australian Data Archive. doi.org/10.26193/JDE1TD, ADA Dataverse, V4

Barbouni, K., Jotautis, V., Metallinou, D., Diamanti, A., Orovou, E., Liepinaitienė, A. et al. (2025). When weight matters: How obesity impacts reproductive health and pregnancy – a systematic review. *Current Obesity Reports, 14*(1), 37.

Bhattacharyya, N. (2015). Abnormal sleep duration is associated with a higher risk of accidental injury. *Otolaryngology–Head and Neck Surgery, 153*(6), 962–965.

Chithiramohan, T., & Eslick, G. D. (2023). Association between maternal postnatal depression and offspring anxiety and depression in adolescence and young adulthood: A meta-analysis. *Journal of Developmental & Behavioral Pediatrics, 44*(3), e231–e238.

Constable, R., Price, S., & Mallan, K. M. (2024). Paternal postnatal depression and parenting behaviours in the first year of life. *Child: Care, Health and Development, 50*(1), e13219.

Dachew, B., Ayano, G., Duko, B., Lawrence, B., Betts, K., & Alati, R. (2023). Paternal depression and risk of depression among offspring: A systematic review and meta-analysis. *The Journal of the American Medical Association, 6*(8), e2329159–e2329159.

Deloitte Access Economics (DAE). (2012). *The cost of perinatal depression in Australia*. Canberra: DAE. Retrieved from LINK.

Department of Health. (2019). *National Men's Health Strategy 2020–2030*. Australian Government, DoHAC. www.health.gov.au/sites/default/files/documents/2021/05/national-men-s-health strategy-2020-2030_0.pdf

Department of Social Services (DSS). (2024). *Early Years Strategy 2024–2034: First Action Plan 2024–2027*. Canberra: DSS. www.dss.gov.au/system/files/documents/2024-12/eys-first-action-plan.pdf

Filatova, S., Upadhyaya, S., Luntamo, T., Sourander, A., & Chudal, R. (2021). Parental age and risk of depression: A nationwide, population-based case-control study. *Journal of Affective Disorders, 282*, 322–328.

Fletcher, R. J., Feeman, E., Garfield, C. & Vimpani, G. (2011). The effects of early paternal depression on children's development. *The Medical Journal of Australia, 195*(11), 685–689.

Garfield, C. F., Clark-Kauffman, E., & Davis, M. M. (2006). Fatherhood as a component of men's health. *The Journal of the American Medical Association, 296*(19), 2365–2368.

Garfield, C. F., Duncan, G., Gutina, A., Rutsohn, J., McDade, T. W., Adam, E. K. et al. (2015). Longitudinal Study of Body Mass Index in Young Males and the Transition to Fatherhood. *American Journal of Men's Health, 10*(6), NP158–NP167.

Garfield, C. F., Duncan, G., Rutsohn, J., McDade, T. W., Adam, E. K., Coley, R. L. et al. (2014). A longitudinal study of paternal mental health during transition to fatherhood as young adults. *Pediatrics, 133*(5), 836–843.

Garfield, C. F., Isacco, A., & Bartlo, W. D. (2010). Men's health and fatherhood in the urban Midwestern United States. *International Journal of Men's Health, 9*(3), 161–174.

Giallo, R., D'Esposito, F., Christensen, D., Mensah, F., Cooklin, A., Wade, C. et al. (2012). Father mental health during the early parenting period: Results of an Australian population based longitudinal study. *Social Psychiatry and Psychiatric Epidemiology, 47*(12), 1907–1916.

Giallo, R., Wynter, K., McMahon, G., Seymour, M., Fogarty, A., Cooklin, A. et al. (2023). Preconception factors associated with postnatal mental health and suicidality among first-time fathers: Results from an Australian Longitudinal Study of Men's Health. *Social Psychiatry and Psychiatric Epidemiology, 58*(8), 1153–1160.

Hannon, S., Gartland, D., Higgins, A., Brown, S. J., Carroll, M., Begley, C. et al. (2022). Maternal mental health in the first year postpartum in a large Irish population cohort: The MAMMI study. *Archives of Women's Mental Health, 25*(3), 641–653.

Herreen, D., Rice, S., & Zajac, I. (2022). Brief assessment of male depression in clinical care: Validation of the Male

Depression Risk Scale short form in a cross-sectional study of Australian men. *BMJ Open, 12*(3), e053650.

Highet, N.J., & the Expert Working Group and Expert Subcommittees. (2023). *Mental health care in the perinatal period: Australian clinical practice guideline*. Melbourne: Centre of Perinatal Excellence (COPE). www.cope.org.au/uploads/images/Health-professionals/COPE_2023_Perinatal_Mental_Health_Practice_Guideline.pdf

Hodgson, S., Painter, J., Kilby, L., & Hirst, J. (2021). The experiences of first-time fathers in perinatal services: Present but invisible. *Healthcare (Basel, Switzerland), 9*(2), 161.

Horwitz, A., Bar-Shachar, Y., Ran-Peled, D., Finkelstein, O., Ben-Zion, H., Bar-Kalifa, E., et al. (2023). Sleep of mothers, fathers, and infants: A longitudinal study from pregnancy through 12 months. *Sleep, 46*(9), zsad029.

Howarth, A. M., & Swain, N. R. (2020). Predictors of postpartum depression in first-time fathers. *Australasian Psychiatry, 28*(5), 552–554.

Hutchinson, D., Le Bas, G., Macdonald, J., Teague, S. & Aarsman, S. (2025, June 17). *When new dads struggle, their kids' health can suffer: Tackling mental distress early can help*. Melbourne: The Conversation. theconversation.com/when-new-dads-struggle-their-kids-health-can-suffer-tackling-mental-distress-early-can-help-253024

Kotelchuck, M. (2022). The impact of fatherhood on men's health and development. In M. Grau, M. las Heras Maestro, & H. Riley Bowles (Eds.), *Engaged fatherhood for men, families and gender equality: healthcare, social policy, and work perspectives* (pp. 63–91). New York City: Springer International Publishing.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606–613.

Le Bas, G., Aarsman, S., Rogers, A., Macdonald, J., Misuraca, G., & Khor, S. et al. (2025). Paternal perinatal depression, anxiety, and stress and child development: A systematic review and meta-analysis. *JAMA Pediatrics, 16*, e250880. doi: 10.1001/jamapediatrics.2025.0880

Leach, L. S., Mackinnon, A., Poyser, C., & Fairweather-Schmidt, A. K. (2015). Depression and anxiety in expectant and new fathers: Longitudinal findings in Australian men. *British Journal of Psychiatry, 206*(6), 471–478.

Leahy-Warren, P., Philpott, L., Elmir, R., & Schmied, V. (2023). Fathers' perceptions and experiences of support to be a parenting partner during the perinatal period: A scoping review. *Journal of Clinical Nursing, 32*(13–14), 3378–3396.

Lee, Y., Fagan, J., & Chen, W.-Y. (2012). Do late adolescent fathers have more depressive symptoms than older fathers? *Journal of Youth and Adolescence, 41*(10), 1366–1381.

Li, P.-F., & Johnson, L. N. (2018). Couples' depression and relationship satisfaction: Examining the moderating effects of demand/withdraw communication patterns. *Journal of Family Therapy, 40*(S1), S63–S85.

Lo, B. K., Kang, A. W., Haneuse, S., Yu, X., Ash, T. V., Redline, S. et al. (2021). Changes in fathers' body mass index, sleep, and diet from prebirth to 12 months postbirth: Exploring the moderating roles of parenthood experience and coparenting support. *Annals of Behavioral Medicine, 55*(12), 1211–1219.

Macdonald, J. A. (2024). *How hard is it for men to transition into their 30s?* Melbourne: Deakin University. this.deakin.edu.au/society/how-hard-is-it-for-men-to-transition-into-their-30s

Macdonald, J. A., Graeme, L. G., Wynter, K., Cooke, D., Hutchinson, D., Kendall, G. et al. (2021). How are you sleeping? Starting the conversation with fathers about their mental health in the early parenting years. *Journal of Affective Disorders, 281*, 727–737.

Macdonald, J. A., Mansour, K.A, Wynter, K., Francis, L. M., Rogers, A., Angeles, M.R. et al. (2022). *Men's and boys' barriers to health system access: A literature review*. Prepared for the Australian Government Department of Health and Aged Care, Canberra.

National Research Council (US) and Institute of Medicine (US) Committee on Depression, Parenting Practices, and the Healthy Development of Children, England, M. J., & Sim, L. J. (Eds.). (2009). *Depression in parents, parenting, and children: Opportunities to improve identification, treatment, and prevention*. Washington D.C.: National Academies Press (US).

O'Connor, E. J., Zajac, I. T., Brindal, E., & Kakoschke, N. (2025). Transitioning to fatherhood: Prospective effects of wellbeing on future depression symptoms. *Journal of Affective Disorders, 371*, 147–155.

Ogbo, F. A., Eastwood, J., Hendry, A., Jalaludin, B., Agho, K. E., Barnett, B. et al. (2018). Determinants of antenatal depression and postnatal depression in Australia. *BMC Psychiatry, 18*(1), 49.

Oliffe, J. L., Rossnagel, E., Kelly, M. T., Bottorff, J. L., Seaton, C., & Darroch, F. (2020). Men's health literacy: A review and recommendations. *Health Promotion International, 35*(5), 1037–1051.

Panza, E., Kip, K. E., Venkatakrishnan, K., Marroquin, O. C., & Wing, R. R. (2023). Changes in body weight and glycemic control in association with COVID-19 shutdown among 23,000 adults with type 2 diabetes. *Acta Diabetologica, 60*(6), 787–795.

Paulson, J. F., Bazemore, S. D., Goodman, J. H., & Leiferman, J. A. (2016). The course and interrelationship of maternal and paternal perinatal depression. *Archives of Women's Mental Health, 19*(4), 655–663.

Philpott, L. F., Leahy-Warren, P., FitzGerald, S., & Savage, E. (2022). Prevalence and associated factors of paternal stress, anxiety, and depression symptoms in the early postnatal period. *Global Mental Health, 9*, 306–321.

Productivity Commission (PC). (2020). *Productivity Commission Mental Health Inquiry Report*. Canberra: PC.

Richter, D., Krämer, M. D., Tang, N. K. Y., Montgomery-Downs, H. E., & Lemola, S. (2019). Long-term effects of pregnancy and childbirth on sleep satisfaction and duration of first-time and experienced mothers and fathers. *Sleep, 42*(4).

Rogers, A., Obst, S., Teague, S. J., Rossen, L., Spry, E. A., Macdonald, J. A. et al. (2020). Association between maternal

perinatal depression and anxiety and child and adolescent development: A meta-analysis. *JAMA Pediatrics, 174*(11), 1082–1092.

Ruppanner, L., Perales, F., & Baxter, J. (2019). Harried and unhealthy? Parenthood, time pressure, and mental health. *Journal of Marriage and Family, 81*(2), 308–326.

Saxbe, D., Rossin-Slater, M., & Goldenberg, D. (2018). The transition to parenthood as a critical window for adult health. *American Psychologist, 73*, 1190–1200.

Scarlett, H., Wiernik, E., & van der Waerden, J. (2024). Longitudinal trajectories and associated risk factors of paternal mental illness in the nine years surrounding the transition to fatherhood. *Journal of Affective Disorders, 362,* 363–374.

Seidler, Z. E., Benakovic, R., Wilson, M. J., McGee, M. A., Fisher, K., Smith, J. A. et al. (2024). Approaches to engaging men during primary healthcare encounters: A scoping review. *American Journal of Men's Health, 18*(2), 15579883241241090.

Seidler, Z. E., Rice, S. M., Ogrodniczuk, J. S., Oliffe, J. L., & Dhillon, H. M. (2018). Engaging men in psychological treatment: A scoping review. *American Journal of Men's Health, 12*(6), 1882–1900.

Sell, M., Daubmann, A., Zapf, H., Adema, B., Busmann, M., Stiawa, M. et al. (2021). Family functioning in families affected by parental mental illness: Parent, child, and clinician ratings. *International Journal of Environmental Research and Public Health, 18*(15).

Smith, J. A., Braunack-Mayer, A., & Wittert, G. (2006). What do we know about men's help-seeking and health service use? *The Medical Journal of Australia, 184*(2), 81–83.

Silverman, M. E., Reichenberg, A., Savitz, D. A., Cnattingius, S., Lichtenstein, P., Hultman, C. M. et al. (2017). The risk factors for postpartum depression: A population-based study. *Depress Anxiety, 34*(2), 178-187.

Swami, N., Prattley, J., Bandara, D., Howell, L., Silbert, M., Renda, J., et al. (2022). Ten to Men: The Australian Longitudinal Study on Male Health: Waves 1–3. *Australian Economic Review, 55*(1), 155–165.

Tarrant, A. (2025, May). *Co-creating a father-inclusive practice and policy ecosystem: Insights from young fathers and family support in the UK*. Paper presented at the Australian Fatherhood Research Symposium 2025, Melbourne, Australia.

Thomson, K. C., Romaniuk, H., Greenwood, C. J., Letcher, P., Spry, E., Macdonald, J. A. et al. (2021). Adolescent antecedents of maternal and paternal perinatal depression: A 36-year prospective cohort. *Psychological Medicine, 51*(12), 2126–2133.

Tian, J., Smith, K. J., Cleland, V., Gall, S., Dwyer, T., & Venn, A. J. (2020). Partnering and parenting transitions in Australian men and women: Associations with changes in weight, domain-specific physical activity and sedentary behaviours. *International Journal of Behavioral Nutrition and Physical Activity, 17*(1), 87.

Umberson, D., Liu, H., Mirowsky, J., & Reczek, C. (2011). Parenthood and trajectories of change in body weight over the life course. *Social Science & Medicine, 73*(9), 1323–1331.

Watson, N. F., Badr, M. S., Belenky, G., Bliwise, D. L., Buxton, O. M., Buysse, D. et al. (2015). Recommended amount of sleep for a healthy adult: A joint consensus statement of the American Academy of Sleep Medicine and Sleep Research Society. *Sleep, 38*(6), 843–844.

Weir, C. B., & Jan, A. (2025). *BMI classification percentile and cut off points*. Tampa: StatPearls Publishing.

Wynter, K., Francis, L. M., Fletcher, R., McBride, N., Dowse, E., Wilson, N. et al. (2020). Sleep, mental health and wellbeing among fathers of infants up to one year postpartum: A scoping review. *Midwifery, 88*, 102738.

Wynter, K., Mansour, K. A., Forbes, F., & Macdonald, J. A. (2024). Barriers and opportunities for health service access among fathers: A review of empirical evidence. *Health Promotion Journal of Australia, 35*(4), 891–910.

Yang, K., Wu, J., & Chen, X. (2022). Risk factors of perinatal depression in women: a systematic review and meta-analysis. *BMC Psychiatry, 22*(1), 63.

# Acknowledgements

The authors of this chapter are grateful to the many individuals and organisations who contributed to its development and who continue to support and assist in all aspects of the *Ten to Men* study. The Department of Health, Disability and Ageing commissioned and continues to fund *Ten to Men*. The study's Scientific Advisory and Community Reference Groups provide indispensable guidance and expert input. The University of Melbourne coordinated Waves 1 and 2 of *Ten to Men* and Roy Morgan collected the data at both these time points. The Social Research Centre collected Wave 3 and Wave 4 data.

A multitude of AIFS staff members collectively work towards the goal of producing high-quality publications of *Ten to Men* findings. This publication greatly benefited from the guidance of the AIFS Executive (Liz Neville, Catherine Andersson) and Communications teams (Katharine Day, Rachel Evans). Thanks are particularly extended to the survey methodology (Karen Biddiscombe, Aeysha Corrigan, Anais Keenan) and data management and linkage (Melissa Suares, Frank Volpe, Michelle Silbert) teams at AIFS for their efforts in collecting and managing *Ten to Men* data. We would also like to thank Dr Monsurul Hoq for his advice on the analyses for this chapter, and Anais Keenan for her assistance with the referencing and supplementary materials for this chapter.

We would especially like to thank every *Ten to Men* participant and their families who give so generously with their time and energy in completing our study surveys.

# About the authors

Constantine Gasser, Katrina Scurrah, Mulu Woldegiorgis, Catherine Andersson and Sean Martin are from the Australian Institute of Family Studies. Jacqui Macdonald is from Deakin University. Jennifer StGeorge is from the University of Newcastle. Vincent Mancini is from the Kids Research Institute Australia.




*Ten to Men*: The Longitudinal Study on Australian Male Health is conducted in partnership between the Australian Government Department of Health, Disability and Ageing and the Australian Institute of Family Studies (AIFS). The mission of the *Ten to Men* study is to build the evidence base on male health and wellbeing to inform the development of health policy and programs targeted to the changing needs of boys and men.

Cover image: Getty images/YukiKONDO

Edited by Katharine Day
Design by Rachel Evans

Suggested citation: Gasser, C., Scurrah, K., Woldegiorgis, M., Macdonald, J., StGeorge, J., Mancini, V., Andersson, C., & Martin, S. (2025). *Health outcomes and health service usage among first-time fathers in Australia*. Insights #3, Chapter 2. Melbourne: Australian Institute of Family Studies.