



**Australian Government**

**Australian Institute of  
Health and Welfare**

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**Data from the 2010 Australian National  
Infant Feeding Survey**



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*Authoritative information and statistics  
to promote better health and wellbeing*

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**Information Paper**

Australian Institute of Health and Welfare  
Canberra

Cat. no. PHE 161

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ISBN 978-1-74249-320-6

### **Suggested citation**

Australian Institute of Health and Welfare 2012. Experience of perinatal depression: data from the 2010 Australian National Infant Feeding Survey. Information Paper. Cat. no. PHE 161. Canberra: AIHW.

### **Australian Institute of Health and Welfare**

Board Chair

Dr Andrew Refshauge

Director

David Kalisch

Any enquiries about or comments on this publication should be directed to:

Communications, Media and Marketing Unit

Australian Institute of Health and Welfare

GPO Box 570

Canberra ACT 2601

Tel: (02) 6244 1032

Email: [info@aihw.gov.au](mailto:info@aihw.gov.au)

Published by the Australian Institute of Health and Welfare

**Please note that there is the potential for minor revisions of data in this report.  
Please check the online version at <[www.aihw.gov.au](http://www.aihw.gov.au)> for any amendments.**

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## Acknowledgments

The report was prepared by Pramod Adhikari and Mark Cooper-Stanbury from the Australian Institute of Health and Welfare. Sincere thanks to Ann Hunt and Fadwa Al-Yaman for their constructive comments. The funding was provided by the Australian Government Department of Health and Ageing.

This work depended on the cooperation of the mothers and carers who gave up their time to take part in the survey. We would like to thank all the respondents who shared their personal experiences and provided their valuable information.

## Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
ARIA	Accessibility/Remoteness Index of Australia
ASGC RA	Australian Standard Geographical Classification - Remoteness Area
GP	General Practitioner
SEIFA	Socio-economic Indexes for Area

## Summary

Data from the 2010 Australian National Infant Feeding Survey showed that 1 in 5 mothers of children aged 24 months or less had been diagnosed with depression. More than half of these mothers reported that their diagnosed depression was perinatal (that is, the depression was diagnosed from pregnancy until the child's first birthday). This represents an estimated 111,000 mothers being diagnosed with depression, and of these 56,000 with perinatal depression. Further, of all the cases of diagnosed depression, just over 1 in 5 were diagnosed for the first time during the perinatal period of the infant selected for the current survey.

The majority of mothers suffering from perinatal depression sought treatment from their general practitioner (GP) and support from family and friends.

Perinatal depression was more commonly reported among mothers who:

- were younger (aged under 25)
- were smokers
- came from lower income households
- spoke English at home
- were overweight or obese
- had an emergency caesarean section.

Location also influenced the prevalence of perinatal depression. For example, mothers living in *Major cities* and *Remote/ Very remote* areas reported slightly lower rates of perinatal depression than those from other geographical areas.

Perinatal depression was less commonly reported among mothers who had higher levels of education (bachelor degree or higher), were working at the time of the survey, and primarily spoke a language other than English at home.

### Box 1: Terms used in this paper

#### Perinatal depression

The perinatal period extends from when pregnancy begins to the first year after the baby is born. The term perinatal depression includes a wide range of mood disorders that can affect a woman during pregnancy and after the birth of her child. It includes prenatal depression, the 'baby blues', postpartum depression and postpartum psychosis.

#### Prevalence

Prevalence is a frequently used epidemiological measure of how commonly a disease or condition occurs in a population. It measures how much of some disease or condition there is in a population at a particular point in time.

# 1 Introduction

The 2010 Australian National Infant Feeding Survey, conducted in 2010–11, was the first large-scale, specialised, national survey of infant feeding practices and related attitudes and behaviours conducted in Australia.

The survey's main aim was to provide cross-sectional baseline data on estimates of the prevalence and duration of breastfeeding and other feeding practices adopted by mothers/carers. It also collected information on perinatal depression and the results are the subject of this Information Paper. The list of questions for the depression module is in Appendix A.

The survey collected information from mothers/carers of a representative sample of children aged 0–24 months selected from the Medicare Australia enrolment database. Out of a starting sample of 52,000 children, responses were received for nearly 29,000, a response rate of 55%.

A summary of the survey methodology is in Section 4 and further details and results on infant feeding practices are in the main report, *2010 Australian National Infant Feeding Survey: Indicator results*, available on the Australian Institute of Health and Welfare (AIHW) website.

## 2 Objectives

The survey's objectives were to:

- collect and report national baseline data on the prevalence and duration of breastfeeding
- collect and report national baseline data on other foods and drinks consumed by infants and toddlers
- analyse and report on the barriers to initiating and continuing breastfeeding by exploring the associations with demographic and other characteristics of the child and parent/carer
- collect and report national baseline data on perinatal depression.

## 3 Main findings

The prevalence of diagnosed depression among mothers of children aged 24 months or less was nearly 20%. Therefore, the total number of mothers of infants/children aged 24 months or less who were ever diagnosed with depression is estimated to be 111,000 in 2010–11. Of all the cases of depression that had been diagnosed, 1 in 2 were diagnosed with perinatal depression (that is, depression occurring from pregnancy until the child's first birthday). This shows a period prevalence of diagnosed depression among all the mothers surveyed of 10%. Of these, an estimated 25,000 (44%) were diagnosed for the first time during the perinatal period of the selected infant/child.

More than 8 in 10 mothers suffering from perinatal depression sought or received treatment or assistance. The GP was the major source of treatment or assistance and family and friends the major source of support.



### 3.1 Prevalence of depression

The survey asked all mothers whether they had ever been diagnosed with depression by a health professional. The results showed that 1 in 5 (20%) mothers had been diagnosed with depression.

### 3.2 Timing of diagnosis

When mothers who reported being diagnosed were further asked to report the time of diagnosis, 7 out of 10 (73%) reported being diagnosed before being pregnant with this child, nearly 1 in 5 (19%) reported being diagnosed in the first year after the birth of the child, and 4% reported being diagnosed while pregnant (Table 1).

**Table 1: Time when depression first diagnosed (per cent)**

Time when first diagnosed with depression by health professional	Proportion
Before I was pregnant with this child	73.4
While I was pregnant with this child	3.7
In the first year after the birth of this child	18.8
After this child's first birthday	4.1
<b>Total</b>	<b>100.0</b>

### 3.3 Treatment sought or received for perinatal depression

Mothers who were diagnosed with depression while pregnant or in the first year after the birth of the child were asked whether or not they sought or received treatment or other assistance. The survey showed that more than 8 in 10 (84%) sought treatment or other assistance from a health professional for their depression.

### 3.4 Source of treatment or assistance for perinatal depression

Those mothers who sought treatment or assistance were asked to list the health professionals they contacted. The survey showed that the most frequently cited source was the GP, followed by a psychologist (Table 2). Some mothers who sought treatment or assistance from the GP also sought treatment or assistance from a psychologist, psychiatrist or a midwife or other nurse.

**Table 2: Sources for treatment or assistance for perinatal depression (per cent)**

Health professionals contacted for treatment or assistance	Proportion
GP, local doctor	69.7
Psychologist	28.2
Midwife or other nurse	19.9
Counsellor (including telephone counsellor)	18.2
Psychiatrist	14.5
Other health professional	9.6
Other medical doctor	2.6

*Note:* Mothers could report more than one source of treatment or assistance.

### 3.5 Support for perinatal depression

The survey asked mothers who were experiencing perinatal depression whether they received any support from family, friends, mothers and babies groups or other support groups, and the extent of support received. This question was asked of all mothers who were diagnosed with perinatal depression for the first time, or reported experiencing perinatal depression irrespective of whether they sought or received assistance from a health professional for their depression. The data showed that the most support was provided by families, followed by friends.

When the extent of support was further analysed, it was found that the least support was from perinatal support groups or mothers and babies groups, followed by the 'Other' category (Table 3). The 'Other' group included health practitioners, such as GPs, psychiatrists, nurses and midwives.

**Table 3: Support received from various groups for perinatal depression (per cent)**

Support received from	Level of support		
	No support	A little support	A lot of support
Family (including partner)	7.7	30.6	61.9
Friends	19.6	43.4	37.0
Mothers and babies groups	60.6	24.0	15.4
Support groups	79.9	8.7	11.4
Other <sup>(a)</sup>	47.4	10.0	42.7

(a) In the survey mothers were asked to report the level of support from each source they received. Their responses are not mutually exclusive. The 'Other' category included groups such as GPs, nurses, churches, midwives, hospitals and community health centres.

### 3.6 Completion of depression-related questionnaire

The survey sought information on whether mothers completed a questionnaire on experiencing depression (including a questionnaire that was completed by someone else in consultation with the mother of the child) about perinatal depression while pregnant, and/or during the first year after the birth of the child. The survey showed that nearly 2 in 5 (37%) mothers reported that they completed a questionnaire about whether they were experiencing depression while they were pregnant.

Of those who reported completing a questionnaire to identify if they were experiencing depression while pregnant, 71% said that they subsequently completed the questionnaire again during the first year after the birth of the child.

The survey also showed that irrespective of whether the respondent completed a questionnaire about depression experience or not during pregnancy, half of all mothers (53%) reported completing a questionnaire on experiencing depression in the first year after the birth of the child.

### 3.7 Factors associated with perinatal depression

The following three tables (tables 4–6) show the prevalence of perinatal depression rates by various factors (correlates).

Data from Table 4 show that age, parity (number of times a mother has given birth), education level, smoking status, birth place of mother, and language spoken at home are all associated with a greater or lesser likelihood of perinatal depression.

Prevalence of perinatal depression was higher among mothers who were:

- younger (aged under 25)
- smokers
- from low-income households
- born in Australia
- from households where English is the main language.

Perinatal depression was less prevalent among mothers who were highly educated (bachelor degree or higher).

Data from Table 5 show that perinatal depression is related to where mothers live — prevalence is higher in more disadvantaged areas. Mothers from *Major cities* and *Remote/Very remote* areas reported slightly lower rates of perinatal depression than those from other geographical areas.

Data from Table 6 show higher prevalence of perinatal depression among mothers:

- who were overweight or obese
- whose infant regularly used a dummy (pacifier/comforter)
- who delivered their baby by emergency caesarean section
- who did not take leave for the birth or care of the child
- who were not working.

**Table 4: Experience of perinatal depression, by sociodemographic characteristics (per cent)**

<b>Sociodemographic characteristics</b>	<b>Proportion</b>
<b>All</b>	<b>10.0</b>
Mother's age (years)	
24 or under	13.5
25–29	9.5
30–34	9.2
35 or higher	10.5
Number of times a mother has given birth	
Once	9.2
Two or more times	10.7
Education	
Bachelor degree or higher	8.2
Diploma/certificate	11.6
Year 12 or equivalent	10.6
Year 11 or below <sup>(a)</sup>	11.5
Smoking status	
Daily	18.8
Occasionally	15.0
Not at all	9.2
Gross household income (per year)	
\$156,000 or more	7.2
\$88,400–\$155,999	9.4
\$52,000–\$88,399	9.2
\$26,000–\$51,999	11.6
\$25,999 or below	13.7
Mother's/carer's country of birth	
Australia	10.7
Overseas	8.0
Main language at home	
English	10.5
Other	5.0

(a) Includes 'did not go to school'.

**Table 5: Experience of perinatal depression, by area level characteristics (per cent)**

Area level characteristic	Proportion
<b>All</b>	<b>10.0</b>
SEIFA quintile <sup>(a)</sup>	
1st quintile	11.2
2nd quintile	11.7
3rd quintile	10.3
4th quintile	9.6
5th quintile	8.7
State/territory	
NSW	8.4
Vic	10.7
Qld	10.1
WA	11.7
SA	12.8
Tas	9.1
ACT	12.4
NT	7.9
Remoteness	
Major cities	9.7
Inner regional	10.7
Outer regional	11.9
Remote/ Very remote	9.8

*Notes*

(a) Socio-Economic Indexes for Areas (SEIFAs) are categories that summarise the socioeconomic conditions of an area. They are derived by the Australian Bureau of Statistics (ABS) from the 2006 population Census. The 1st SEIFA quintile means that the area is the most disadvantaged and the 5th quintile that the area is least disadvantaged.

(b) The geographic regions are based on the ABS Australian Standard Geographic Classification Remoteness Structure (ASGC RA), which is based on the Accessibility/Remoteness Index of Australia (ARIA+). Each respondent was classified to this structure, and include the categories of *Major cities*, *Inner regional*, *Outer regional* Australia, *Remote* and *Very remote*.

**Table 6: Experience of perinatal depression, by other correlates (per cent)**

<b>Other correlate</b>	<b>Proportion</b>
<b>All</b>	<b>10.0</b>
Mother's Body Mass Index at the start of the pregnancy	
Underweight	7.1
Normal	8.9
Overweight	11.5
Obese	13.5
Mother's current Body Mass Index	
Underweight	10.1
Normal	8.2
Overweight	10.4
Obese	15.2
Child's regular use of dummy	
No	8.4
Yes	11.7
Month started regular use of dummy	
Before 1 month of age	12.1
Before 2 months of age	10.0
Before 3 months of age	13.4
Before 4 months of age	11.3
At 5 months or after	7.8
Child delivery method	
Vaginal	9.6
Elective or planned caesarean	10.6
Emergency caesarean	11.3
Whether mother/carer took leave for the birth or care of the child	
Yes	9.5
No	10.6
Currently working (among those who worked for any time since the birth of the child)	
Yes	8.6
No	11.7

## 4. Explanatory notes

The data in this Information Paper are derived from questions asked of 'mothers only' in the 2010 Australian National Infant Feeding Survey.

The initial methodology for the survey was developed by the Australian Government Department of Health and Ageing in consultation with Medicare Australia and the ABS. A summary of the relevant literature was completed in October 2008. This summary was used by the ABS to inform the development of the survey questionnaire, which was completed in June 2009.

A pilot survey to test the survey method and instrument was conducted in August–September 2010. The main survey was conducted between October 2010 and February 2011.

A primary approach letter explaining the purpose of the survey was sent in late September 2010 to the primary Medicare card holder on which the selected infant or baby was listed. About a week later, a survey instrument along with reply paid envelope was sent. There was also an option of completing the survey online. A week later, a reminder/thank you letter was sent to all survey participants (except those who notified the AIHW to opt out from the survey). A fourth and last mail-out reminding the non-responding mothers/carers to complete the survey was done in the first week of December 2010.

More details on the survey methodology are in Appendix A of the main survey report available at <<http://www.aihw.gov.au/publication-detail/?id=10737420927>>.

## Appendix A Depression module used in the 2010 Australian National Infant Feeding Survey

98 While you were pregnant with this child, did you complete a questionnaire about whether you were experiencing depression?

**Note**

- Include a questionnaire which was completed by someone else in consultation with you.

- ☐ Yes  
☐ No  
☐ Don't know or not sure

99 In the first year after the birth of your child, did you complete a questionnaire about whether you were experiencing depression?

**Note**

- Include a questionnaire which was completed by someone else in consultation with you.

- ☐ Yes  
☐ No  
☐ Don't know or not sure

100 Have you ever been diagnosed with depression by a health professional?

- ☐ Yes  
☐ No ➡ Go to 106  
☐ Don't know ➡ Go to 106

101 When were you first diagnosed with depression by a health professional?

- ☐ Before I was pregnant with this child  
☐ While I was pregnant with this child ➡ Go to 103  
☐ In the first year after the birth of this child ➡ Go to 103  
☐ After this child's first birthday ➡ Go to 106



**102 While you were pregnant or in the first year after the birth of your child, did you experience depression?**

- ☐ Yes
- ☐ No ➡ Go to 106
- ☐ Don't know/can't say ➡ Go to 106

**103 Did you seek and/or receive treatment or other assistance from a health professional for your depression?**

**Note**

- Include treatment or assistance from doctors, nurses, counsellors and other health professionals.

- ☐ Yes
- ☐ No ➡ Go to 105
- ☐ Don't know ➡ Go to 105

**104 From whom did you seek and/or receive this treatment or assistance?**

Mark all responses that apply to you

- ☐ General practitioner (GP, local doctor) ☐ Psychiatrist
- ☐ Other medical doctor ☐ Psychologist
- ☐ Counsellor (including telephone counsellor) ☐ Midwife or other nurse
- ☐ Other health professional – please specify

**105 Did you receive no support, a little support or a lot of support for your depression from each of the following groups?**

**Note**

- Support groups include groups that provide support for depression or other health conditions. Include support groups accessed through the Internet.

	No support	A little support	A lot of support
Family (including partner)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mothers and babies groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other – please specify	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>			

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Data from the 2010 Australian National Infant Feeding Survey showed that 1 in 5 (20%) mothers of children aged 24 months or less had been diagnosed with depression. More than half of these mothers reported being diagnosed with depression during the perinatal period. Perinatal depression was more commonly reported among mothers who were younger (aged under 25), smokers, overweight/obese and from lower income households.