Antenatal Depression and the Impact of COVID-19 Mitigation Efforts in Australia

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Abstract

The mitigation efforts of COVID-19 have led to significant changes to the delivery of routine healthcare globally. In Australia, the way maternal health services have been delivered since the beginning of the pandemic has also changed. Maternity care and support are known to influence maternal mental health. One hundred and eighty-eight English speaking pregnant women residing in Australia were recruited using social media advertising between September and November 2020 as part of a larger study. Participants were aged between 19 and 42 ($M = 31.05$, $SD = 4.68$). Compared with previous Australian prevalence rates of around 7% for antenatal depression, rates in this study were 15.9% overall and 19% for those in Melbourne. It is suggested that increased vigilance with screening and assessment will be required to identify and support this cohort of mothers who are not coping.

Keywords: antenatal depression, COVID-19, pregnancy, women, mental health, Edinburgh Postnatal Depression Scale

Introduction

The mitigation efforts of COVID-19 have led to significant changes to the delivery of routine healthcare globally. Many routine appointments have been cancelled, reduced or transitioned to telehealth, less visitors are permitted in hospitals and resources have been stretched (Koonin et al., 2020; Monaghesh & Hajizadeh, 2020; Ralli et al., 2020; Sutherland et al., 2020). In Australia, the way maternity healthcare services have been delivered since the beginning of the pandemic has also changed (Cooper & King, 2020). Women have reported fewer routine pregnancy checks, less face to face appointments and restrictions on birthing practices (e.g., use of water immersion). Women are being asked to birth with less support and attend many appointments alone (e.g., ultrasounds). Some of these decisions seem to be inconsistent with the evidence around COVID-19 mitigation, for example the issue of water immersion for birthing (Australian College of Midwives, 2020). According to a report by the Australian College of Midwives (Cooper & King, 2020), the psychosocial aspects of women's pregnancies have been different to what they anticipated and had previously imagined due to community restrictions. Some women have been unable to have the family and social support they anticipated due to restrictions on borders and travel, others have not been able to attend birthing classes or the classes have been moved online. Many have been unable to have the desired birthing partner/s they wanted with them or have experienced uncertainty about who will be able to attend.

There is an abundance of existing evidence confirming that the nature of maternity care available to women has an important influence on mental health outcomes for the mother and infant (e.g., Gidget Foundation, 2019; World Health Organisation, 2018, 2020).

Healthcare guidelines and research frequently cite early identification and prevention as a way to improve mental health outcomes for mothers, their partners, and children (Gidget Foundation, 2019; Khanlari, Am, et al., 2019; Sandall et al., 2016). In Australia, mental

health screening typically occurs during early pregnancy when preventative efforts are likely to be most efficacious and is recommended to be completed at least twice antenatally (Centre for Perinatal Excellence, 2021). The nature of maternity care provided has also been shown to significantly reduce rates of obstetric interventions, preterm birth and infant loss (Sandall et al., 2016). A report into the cost of perinatal depression and anxiety in Australia commissioned by the Gidget Foundation (2019) recommended services and treatment options should be supported by a high quality and comprehensive screening program and encourage access to informal and formal support networks for mothers and fathers alongside other community health interventions, describing it as invaluable. Due to the mitigation efforts of the pandemic these optimal systems and processes of antenatal care in Australia are expected to have been compromised.

Psychosocial factors are known to increase the risk of postnatal depression (Gidget Foundation, 2019) and antenatal depression is a risk factor for the development of postnatal depression (Eastwood et al., 2017; Khanlari, Eastwood, et al., 2019; Milgrom et al., 2008). Research shows that postnatal depression can have long lasting detrimental effects on families and children, as well as substantial economic costs to the community in the long term (Ayers et al., 2014; Bauer et al., 2014; Gidget Foundation, 2019; World Health Organisation, 2008, 2020). Maternal mental health difficulties are associated with poorer infant outcomes such as prematurity and low birth weight (Gidget Foundation, 2019) and can affect the physical, cognitive, social, behavioural and emotional development of children (World Health Organisation, 2008). Children of parents with postnatal depression are more likely be diagnosed with Attention Deficit Hyperactivity Disorder, develop asthma or respiratory problems, have reduced immune system responses and neurodevelopmental issues (Gidget Foundation, 2019).

Since COVID-19, internationally, antenatal depression rates have been reported to have increased significantly. Using a cut off score of ≥ 13 on the Edinburgh Postnatal Depression Scale (Cox et al., 1987) other recent studies have found pandemic prevalence rates at 37% in a Canadian sample (Lebel et al., 2020) and 40.7% in a worldwide sample (Davenport et al., 2020), and using a cut off of ≥ 10 (as recommended in Asian samples) prevalence rates were reported to be 34.2% in a Chinese sample (Wu et al., 2020). In Australia, pre pandemic rates of antenatal depression are reported to be around 7% (Buist et al., 2006; Eastwood et al., 2017; Khanlari, Eastwood, et al., 2019). There is no doubt that maternity care has been different for pregnant women in Australia and especially so in Melbourne where the second wave occurred. Melbourne mothers were subject to even stricter mitigation strategies with a lockdown enforced between July - October 2020. This study aimed to explore how the mitigation response has impacted the mental health of pregnant women in Australia and to discuss the potential future impact due to the known effects of antenatal depression and poor maternity care.

Method

Participants and Procedure

One hundred and eighty-eight English speaking pregnant women (28 weeks or greater), residing in Australia were recruited using Facebook advertising between September and November 2020 as part of a larger study. Participants were asked to complete an online survey and were offered entry in a draw for a gift voucher as incentive to participate.

Participants were aged between 19 and 42 ($M = 31.05$, $SD = 4.68$). The project was approved by the Human Research Ethics Committee of the University of New England (HE20-159).

Measures

Demographics. Participants were asked whether they lived in a rural, remote, or urban location. Longitude and latitude data collected by the survey tool Qualtrics™ was used

determine participants located in Melbourne at the time of taking the survey. Participants were also asked about education, relationship status and ethnic background. In relation to their pregnancy, participants were also asked whether this was their first birth, where they planned to birth, and whether they were having a single or multiple birth.

Antenatal Depression. Antenatal depression was measured using the Edinburgh Postnatal Depression scale (EPDS; Cox et al., 1987)). The Edinburgh Postnatal Depression scale is a 10-item self-report questionnaire. Higher scores indicate higher levels of distress. The EPDS has been found to be valid for screening perinatal distress (Baggaley et al., 2007; Bergink et al., 2011; Fernandes et al., 2011; Lee et al., 2001; Terry et al., 1996). The EPDS has established reliability and validity (Lee et al., 2001; Terry et al., 1996) including reliability in pregnancy ($\alpha = 0.82 - 0.84$; Bergink et al., 2011).

COVID-19 Related Distress. COVID-19 related distress was measured using a five-point Likert scale rated from 1 (no concern) to 5 (extremely concerned). Two questions were asked “In relation to having your baby, how concerned are you as a result of the COVID-19 outbreak?” and “Overall, how concerned are you as a result of the COVID-19 outbreak?”. Participants were also asked the open-ended question: “Is your pregnancy care different due to the COVID-19 outbreak? If so, how?”.

Results

Descriptive Statistics

Most of the sample were white European nulliparous women with a university education planning a hospital birth in urban Australia. Characteristics of the sample are outlined in Table 1.

Antenatal Depression

Using the cutoff of ≥ 13 on the Edinburgh Postnatal Depression Scale for probable depression (Cox et al., 1987; Cox et al., 1993) the prevalence rate for antenatal depression in

this sample ($N = 188$) was 15.9%. Participants in Melbourne ($N = 42$) reported rates of antenatal depression at 19% and when removing Melbourne from the sample, the overall prevalence was reduced to 13.9% ($N = 124$). Mean scores are reported in Table 2.

COVID-19 Distress

Mean scores for COVID-19 distress overall ($N = 188$) was 2.54 ($SD = 0.98$) indicating that on average mothers were ‘a little to moderately concerned’ about the impact of COVID-19 on them overall. Participants in Melbourne ($N = 42$) reported a mean score of 2.84 ($SD = 1.04$) indicating they were more concerned compared with the rest of Australia and when removing Melbourne from the sample ($N = 124$), the overall mean was reduced to 2.45 ($SD = 0.96$).

Mean scores for mothers COVID-19 distress in relation to having their baby ($N = 188$) was 2.32 ($SD = 0.98$) indicating that on average mothers were ‘a little to moderately concerned’ about the impact of COVID-19 on their pregnancy and birth. Participants in Melbourne ($N = 42$) reported a mean score of 2.60 ($SD = 0.88$) indicating they were more concerned compared with the rest of Australia and when removing Melbourne from the sample ($N = 124$), the overall mean was reduced to 2.22 ($SD = 0.98$).

Qualitative Data

Guided by Braun and Clarke’s (2006) six step thematic analysis approach, responses to the question “Is your pregnancy care different due to the COVID-19 outbreak? If so, how?” generated four themes, in Table 4. Of the 188 responses only 42 mothers reported that there were no changes or that they were unsure of changes to their pregnancy care, indicating that more than three quarters of the mothers experienced some change to their pregnancy care.

Changes to Healthcare

Half of the mothers ($n = 94$) reported that their pregnancy healthcare was different. The most frequently reported change was the use of telehealth. Other changes included reduced routine checks, less birthing options, and more impersonal care. Examples of responses are shown below (spelling adjusted and abbreviations explained):

“I had to do all my appointments solo, a lot of appointments were forced online, my birth plan has been completely shut down and disregarded despite having no COVID-19 cases in our state. I was diagnosed with GD (gestational diabetes) and was given YouTube videos for education rather than an appointment with a dietician.”

“More Telehealth, husband can’t come to appointments to be informed, no glucose drink test, just a fasting sugar and HbA1c (average blood glucose level) test”

“Yes, many of the hospital check-up cancelled and turned to phone consultations”

“Hospital care feels very impersonal, staff are stressed. Decided to try for homebirth this week due to this.”

“Yes, no classes, no tour of the hospital, barely any face to face appointments. Banning water birth has severely impacted my pregnancy.”

“Everything is online - Telehealth consultations. I also am not able to attend birth education classes.”

Less Support

Reduced support was reported by 77 of the 188 mothers. The most common changes reported were having to attend appointments alone and only being allowed one birthing partner. Examples of responses are shown below (spelling adjusted and abbreviations explained):

“Some appointments have been telehealth. Some places won’t allow a support person such as the imaging place in town meaning that if i want my partner at an ultrasound we only have the option of going to the hospital. We have been advised only one support person is allowed when i am in labour”

“When I go into labour, I can only have 1 support person with me. My husband has a phobia of hospitals and all things medical so we originally had planned to have both him and mum with me. Now, since I can only have one person with me, I still don't know who I'm going to have with me.”

“My husband was not able to attend ultrasounds which contributed to me declining ultrasounds.”

“Yes, my husband is only allowed into scans for 5 mins so it's not worth him having time off. Currently it is also 1 birth support person also.”

“Husband is unable to attend midwife appointments and unsure if he will be able to visit for more than 2 hours after the baby arrives”

“Yes as I had planned to bring my parents from overseas but due to covid border restrictions they are not able to come and we had to be alone on ourselves.”

Reduced Access to Face to Face Birthing Classes

Almost one quarter of the mothers reported having less or no access to face to face birthing classes. Examples of responses are shown below:

“Yes. My husband hasn't been able to be involved. I have had to pay for private birth classes as the hospital isn't running them. I am unable to plan to labour or birth in water. I have felt rushed and unsupported.”

“Everything is online - Telehealth consultations. I also am not able to attend birth education classes.”

“Yes. No face to face classes. Restricted antenatal care. Husband unable to attend appointments”

“Very. Missed all pre natal classes and many midwife face to face appointments”

“Yes, the parenting and birthing classes at hospital are cancelled, only my husband can come to the birth”

Discussion

This study found prevalence rates of antenatal depression in Australia to be higher during the pandemic compared to Australian pre pandemic prevalence rates. In the present sample, the prevalence of antenatal depression in Melbourne was almost three times higher

than usual for Australia. Mean scores for COVID-19 related distress indicated that pregnant women were a little to moderately concerned both overall and in relation to having their baby, with women in Melbourne reporting marginally higher mean scores. More than half of the women reported changes to their pregnancy healthcare care, such as less appointments or the use of telehealth and nearly half reported less access to support, such as their chosen birthing partner/s or having to attend appointments alone. Around a quarter reported changes to birthing classes with either no classes or online only options. Less than one quarter reported their care to be no different indicating that most women experienced some differences to their overall pregnancy care. Positively, despite the reported impact of the COVID-19 mitigation response and increased prevalence rate of antenatal depression reported in this sample, Australia appears to be doing better than other countries with regard to antenatal depression prevalence rates during the pandemic (Davenport et al., 2020; Lebel et al., 2020; Wu et al., 2020).

High quality and comprehensive maternity care involving both formal healthcare systems and informal supports are considered to be protective in combating maternal mental health problems (Fenwick et al., 2015; Gidget Foundation, 2019; Sandall et al., 2016; World Health Organisation, 2020). Based on the findings of this study, the effect of the pandemic mitigation efforts on maternity care in Australia has been significant. Antenatal depression is an important risk factor for postnatal depression (Eastwood et al., 2017; Khanlari, Eastwood, et al., 2019; Milgrom et al., 2008) and leads to substantial economic costs to the community (Ayers et al., 2014; Bauer et al., 2014; Gidget Foundation, 2019; World Health Organisation, 2008, 2020). Based on the prevalence rates of antenatal depression observed in this study we may have a concerning trend of increased maternal mental health problems ahead of us. It will be crucial for healthcare providers to maintain vigilance with assessment and screening of pregnant women. It suggested that current COVID-19 mitigation strategies should be

reviewed to ensure that pregnant women are able to access as much ‘usual care’ as possible with consideration to the importance of high quality maternity care and support on long term health outcomes. It is also suggested that existing funding of mental health services targeting women and families in the perinatal period should continue to be made available, and where possible targeted funding for services such as sustained home visiting programs should be increased for this group for an extended period to mitigate the potential social and economic burden on families and the community into the future.

References

- Australian College of Midwives. (2020, August 14). *ACM's updated position on use of water in labour*. <https://www.midwives.org.au/news/acm-s-updated-position-use-water-labour>
- Ayers, S., Jessop, D., Pike, A., Parfitt, Y., & Ford, E. (2014). The role of adult attachment style, birth intervention and support in posttraumatic stress after childbirth: a prospective study. *Journal of Affective Disorders*, 155, 295-298. <https://doi.org/10.1016/j.jad.2013.10.022>
- Baggaley, R., Ganaba, R., Filippi, V., Kere, M., Marshall, T., Sombie, I., . . . Patel, V. (2007). Detecting depression after pregnancy: The validity of the K10 and K6 in Burkina Faso. *Tropical Medicine and International Health*, 12, 1225-1229.
- Bauer, A., Parsonage, M., Knapp, M., Lemmi, V., & Adelaja, B. (2014). *The costs of perinatal mental health problems*. Personal Social Services Research Unit. <https://www.centreformentalhealth.org.uk>
- Bergink, V., Kooistra, L., Lambregtse-van den Berg, M. P., Wijnen, H., Bunevicius, R., Van Baar, A., & Pop, V. (2011). Validation of the Edinburgh Depression Scale during pregnancy. *Journal of Psychosomatic Research* 70, 385-389.
- Braun, V., & Clarke, V. (2006). Thematic Analysis Revised—Final. *Qualitative Research in Psychology*, 3, 77-101.
- Buist, A., Bilszta, J., Milgrom, J., Condon, J., Speelman, C., Hayes, B., . . . Ellwood, D. (2006). The beyondblue National Postnatal Depression Program, Prevention and Early Intervention 2001-2005, Final Report. Hawthorn West, Vic.: *beyondblue: The National Depression Initiative*.
- Centre for Perinatal Excellence. (2021). *Using the EPDS as a Screening Tool*. Retrieved January 28, 2021 from <https://www.cope.org.au/health-professionals/health-professionals-3/calculating-score-epds/>
- Cooper, M., & King, R. (2020). *Women's Experiences of Maternity Care at the Height of COVID-19*. Australian College of Midwives.
- Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression: Development of the 10-item edinburgh postnatal depression scale. *The British Journal of Psychiatry*, 163. <https://doi.org/10.1192/bjp.163.1.27>
- Cox, J. L., Murray, D., & Chapman, G. (1993). A controlled study of the onset, duration and prevalence of postnatal depression. *British Journal of Psychiatry*, 163, 27-31. <https://doi.org/10.1192/bjp.163.1.27>
- Davenport, M. H., Meyer, S., Meah, V. L., Strynadka, M. C., & Khurana, R. (2020). Moms are not ok: COVID-19 and maternal mental health. *Frontiers in Global Women's Health*, 1, 1. <https://doi.org/https://doi.org/10.3389/fgwh.2020.00001>
- Eastwood, J., Ogbo, F. A., Hendry, A., Noble, J., Page, A., & Group, E. Y. R. (2017). The impact of antenatal depression on perinatal outcomes in Australian women. *PLoS One*, 12, e0169907. <https://doi.org/https://doi.org/10.1371/journal.pone.0169907>
- Fenwick, J., Toohill, J., Gamble, J., Creedy, D. K., Buist, A., Turkstra, E., . . . Ryding, E. L. (2015). Effects of a midwife psycho-education intervention to reduce childbirth fear on women's birth outcomes and postpartum psychological wellbeing. *BMC Pregnancy and Childbirth*, 15, 284. <https://doi.org/10.1186/s12884-015-0721-y>
- Fernandes, M. C., Srinivasan, K., Stein, A. L., Menezes, G., Sumithra, R., & Ramchandani, P. G. (2011). Assessing prenatal depression in the rural developing world: A comparison of two screening measures. *Archives of Women's Mental Health* 14, 209-216. <https://doi.org/10.1007/s00737-010-0190-2>

- Gidget Foundation. (2019, November 7). *The cost of perinatal depression and anxiety in Australia*. Retrieved January 21 from <https://gidgetfoundation.org.au/wp-content/uploads/2019/11/Cost-of-PNDA-in-Australia-Final-Report.pdf>
- Khanlari, S., Am, B. B., Ogbo, F. A., & Eastwood, J. (2019). Re-examination of perinatal mental health policy frameworks for women signalling distress on the Edinburgh Postnatal Depression Scale (EPDS) completed during their antenatal booking-in consultation: A call for population health intervention. *BMC Pregnancy and Childbirth*, 19, 1-11. <https://doi.org/https://doi.org/10.1186/s12884-019-2378-4>
- Khanlari, S., Eastwood, J., Barnett, B., Naz, S., & Ogbo, F. A. (2019). Psychosocial and obstetric determinants of women signalling distress during Edinburgh Postnatal Depression Scale (EPDS) screening in Sydney, Australia. *BMC Pregnancy and Childbirth*, 19, 407. <https://doi.org/https://doi.org/10.1186/s12884-019-2565-3>
- Koonin, L. M., Hoots, B., Tsang, C. A., Leroy, Z., Farris, K., Jolly, B., . . . Tong, I. (2020). Trends in the use of telehealth during the emergence of the COVID-19 pandemic—United States, January–March 2020. *Morbidity and Mortality Weekly Report*, 69, 1595. <https://doi.org/https://doi.org/10.15585/mmwr.mm6943a3>
- Lebel, C., MacKinnon, A., Bagshawe, M., Tomfohr-Madsen, L., & Giesbrecht, G. (2020). Elevated depression and anxiety among pregnant individuals during the COVID-19 pandemic. *Journal of Affective Disorders*, 277, 5-13. <https://doi.org/https://doi.org/10.31234/osf.io/gdhkt>
- Lee, D. T., Yip, A. S., Chiu, H. F., Leung, T. Y., & Chung, T. K. (2001). Screening for postnatal depression: Are specific instruments mandatory? *Journal of Affective Disorders*, 63, 233-238. [https://doi.org/10.1016/S0165-0327\(00\)00193-2](https://doi.org/10.1016/S0165-0327(00)00193-2)
- Milgrom, J., Gemmill, A. W., Bilszta, J. L., Hayes, B., Barnett, B., Brooks, J., . . . Buist, A. (2008). Antenatal risk factors for postnatal depression: a large prospective study. *Journal of Affective Disorders*, 108, 147-157. <https://doi.org/https://doi.org/10.1016/j.jad.2007.10.014>
- Monaghesh, E., & Hajizadeh, A. (2020). The role of telehealth during COVID-19 outbreak: a systematic review based on current evidence. *BMC Public Health*, 20, 1-9. <https://doi.org/https://doi.org/10.1186/s12889-020-09301-4>
- Ralli, M., Minni, A., Candelori, F., Cialente, F., Greco, A., & de Vincentiis, M. (2020). Effects of COVID-19 pandemic on otolaryngology surgery in Italy: the experience of our university hospital. *Otolaryngology–Head and Neck Surgery*, 163, 86-88. <https://doi.org/https://doi.org/10.1177/0194599820928970>
- Sandall, J., Soltani, H., Gates, S., Shennan, A., & Devane, D. (2016). Midwife-led continuity models versus other models of care for childbearing women. *Cochrane database of systematic reviews*. <https://doi.org/https://doi.org/10.1002/14651858.CD004667.pub5>
- Sutherland, K., Chessman, J., Zhao, J., Sara, G., Shetty, A., Smith, S., . . . Levesque, J.-F. (2020). Impact of COVID-19 on healthcare activity in NSW, Australia. *Public Health Research & Practice*, 30. <https://doi.org/https://doi.org/10.17061/phrp3042030>
- Terry, D. J., Mayocchi, L., & Hynes, G. J. (1996). Depressive symptomatology in new mothers: A stress and coping perspective. *Journal of Abnormal Psychology*, 105, 220. <https://doi.org/10.1037/0021-843X.105.2.220>
- World Health Organisation. (2008). Maternal mental health and child health development in low and middle income families. https://www.who.int/mental_health/prevention/suicide/mmh_jan08_meeting_report.pdf
- World Health Organisation. (2018). *Intrapartum care for a positive birth experience*. World Health Organisation. <https://www.who.int/reproductivehealth/publications/intrapartum-care-guidelines/en/>

World Health Organisation. (2020). Maternal mental health.

https://www.who.int/mental_health/maternal-child/maternal_mental_health/en/

Wu, Y., Zhang, C., Liu, H., Duan, C., Li, C., Fan, J., . . . Li, X. (2020). Perinatal depressive and anxiety symptoms of pregnant women during the coronavirus disease 2019 outbreak in China. *American Journal of Obstetrics and Gynecology*, 223, 240. e241. <https://doi.org/https://doi.org/10.1016/j.ajog.2020.05.009>

Table 1*Sample Characteristics (N = 188)*

Measure	<i>n</i>	<i>%</i>
Nulliparous	164	87.2
Multiparous	24	12.8
Ethnic Background		
Aboriginal or Torres Strait Islander	2	1.1
White European	130	69.1
Indian	6	3.2
Asian	24	12.8
Middle Eastern	1	0.5
North American	1	0.5
South American	1	0.5
Mixed race	11	5.6
Other	12	6.4
Geographical location		
Urban/City	138	73.4
Rural	43	22.9
Remote	7	3.7
In a relationship		
Yes	183	97.3
No	5	2.7
Same sex relationship	3	1.6
Education		
No formal qualifications	2	1.1
Completed high school	14	7.4
TAFE certificate/diploma	51	27.1
University degree	121	64.4
Single births		
Multiple birth – Twins	3	1.6
Multiple birth – Triplets or more	0	0
Birth education classes - yes		
Birth education classes - no	115	61.2
	73	38.8
Planned caesarean		
	13	6.9
Birthing in hospital		
Birthing in private birth centre	172	91.5
Birthing in home environment	5	2.7
	11	5.6

Table 2*Means and Standard Deviations of Distress Measures*

Measure	<i>n</i>	<i>M</i>	<i>SD</i>
Edinburgh Postnatal Depression Scale All locations	188	7.50	5.47
Edinburgh Postnatal Depression Scale Melbourne	42	8.40	5.24
Edinburgh Postnatal Depression Scale Outside Melbourne	124	7.15	5.48
COVID Distress in relation to baby All locations	188	2.32	0.98
COVID Distress in relation to baby Melbourne	42	2.60	1.04
COVID Distress in relation to baby Outside Melbourne	124	2.22	0.96
COVID Distress Overall All locations	188	2.54	0.98
COVID Distress Overall Melbourne	42	2.83	0.88
COVID Distress Overall Outside Melbourne	124	2.45	0.99

Note: Of the 188 participants 22 had unknown location.

Table 3

Prevalence above cut off for Depression on the Edinburgh Postnatal Depression Scale (≥ 13) by Location

Location	<i>n</i>	%
All locations	188	15.9
Melbourne	42	19.0
Outside Melbourne	124	13.9

Table 4

Themes derived from the question “Is your pregnancy care different due to the COVID-19 outbreak? If so, how?” (N = 188)

Theme	<i>n</i>	%
Changes to healthcare (e.g., face to face appointments/increased telehealth/disconnect from health services)	94	50
Reduced access to face to face birthing classes	44	23.4
Less support (e.g., less hospital visitors and attendees at appointments)	77	41
No different or unsure if different	42	22.3