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"Never let a good crisis go to waste": Positives from disrupted maternity care in Australia during COVID-19 ☆

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ABSTRACT

Objective: Due to the COVID-19 pandemic, a number of changes to maternity care were rapidly introduced in all countries, including Australia, to reduce the risk of infection for pregnant women and their care providers. While many studies have reported on the negative effects of these changes, there is a paucity of evidence on factors which women and their providers perceived as positive and useful for future maternity care.
Design: Data was analysed from the *Birth in the time of COVID-19* (BITTOC 2020) study survey. Conventional content analysis and descriptive statistics were used to analyse the data and examine which aspects of COVID-amended care women experienced as positive. Data from women were compared to data from midwives.
Setting: This project took place in Australia in 2020-2021.
Participants: The survey was distributed to women who gave birth and midwives who worked in Australia during the COVID-19 pandemic (March 2020 onwards).
Measurements and findings: Women reported a variety of positives from their maternity care during COVID-19. These included both care-related factors as well as contextual factors. The most commonly mentioned positives for pregnant and postnatal women were care-related, namely fewer visitors in hospital, having increased access to telehealth services. These were also the most commonly reported positives by midwives. Having midwifery continuity of care models, giving birth at home and having their partner work from home were also highlighted by women as positives.
Key conclusions: Despite the negative effect of COVID-19-related restrictions on maternity care, a variety of changes were viewed as positive by both women and midwives, with strong agreement between the two groups.
Implications for practice: These findings provide evidence to support the inclusion of these positive elements of care and ensure that the lessons learned from the pandemic are utilised to improve maternity care in Australia going forward.

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Introduction

The COVID-19 pandemic has caused significant changes to almost every aspect of daily life, including pregnancy and childbirth. Across the globe, pregnancy and childbirth care priorities shifted from a pure focus on the care of the mother and her child to the importance of stopping the spread of COVID-19 and protecting women and their care providers (Jardine et al., 2021; Montagnoli et al., 2021; van den Berg et al., 2022). Among the changes, a range of new options for seeking and receiving perinatal care were attempted in order to reduce the number of in-person encounters, including drive-through clinics and increased availabil-

☆ Note on the language in the following document: The author recognises that individuals have diverse gender identities. Terms such as pregnant person, childbearing people and parent can be used to avoid gendering birth, and those who give birth, as feminine. However, because women are also marginalised and oppressed in most places around the world, the terms woman, mother, or maternity have been utilised in this document. When these words are used, it is not meant to exclude those who give birth and do not identify as women.

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ity of telehealth (Madden et al., 2020; Turrentine et al., 2020). A variety of new care guidelines were released by both country health ministries, as well as professional organisations such as the United Kingdom's Royal College of Obstetricians and Gynaecologists (RCOG), all of which attempted to address providers queries on which model of care would be most beneficial moving forward (Benski et al., 2020).

As the pandemic spread across Australia in early 2020, amended pregnancy and birth guidelines were rapidly developed (AIHW, 2020; RANZCOG, 2020). The wide-sweeping changes included transitioning antenatal care from face-to-face to telehealth services, social distancing at in-person appointments, personal protective equipment (PPE) worn by care providers during clinical encounters, and limitations on the number of visitors and birth support people who could accompany pregnant women to the hospital (Bradfield, et al., 2021; Pavlidis et al., 2021). While these changes were intended to protect stakeholders within the maternity healthcare system, many of the changes were introduced without having a direct evidence base and were done at pace creating significant challenges for women, their families and medical staff (Jackson et al., 2021; Leanne Jackson et al., 2021; Pavlidis et al., 2021).

All women pregnant or giving birth from March 2020 were impacted by the COVID-19 changes. The effect of altered maternity care during the pandemic was significant; unlike other medical services, maternity care is unable to be delayed until after a pandemic. The effects of changes to pregnancy and childbirth care are important since the perinatal experience has long-term physical and mental health implications not only for the mother and her baby, but also for the woman's partner and family as a whole (Lalor et al., 2021; Lemola et al., 2007; Maimburg et al., 2016).

Despite the numerous negative effects caused by the modifications to maternity care in Australia during the COVID-19 pandemic, positive elements of the changes have been highlighted in some recent studies and mainstream media. Women have reported increased family bonding following birth because visitors were restricted from entering the hospital and their homes, with midwives and doctors also viewing the decreased ward traffic as a positive (Bradfield et al., 2021; Vasilevski et al., 2021). In addition to this, the potential utility of telehealth services has been exposed by the pandemic. When a large Victorian healthcare service changed about 50% of their antenatal care from face-to-face to telehealth meetings, they found that the risk of serious adverse pregnancy outcomes such as preeclampsia, intrauterine growth restriction, and gestational diabetes mellitus did not increase significantly (Palmer et al., 2021). While more research is needed before telehealth is widely adopted, this study does present promising data that could help adapt the antenatal care system in the future. Additionally, there are data to suggest that the strict lockdown period in the metropolitan area (Melbourne) was associated with an overall lower rate of preterm birth and stillbirths (Matheson et al., 2021). While this effect is thought to be modulated by a change in lifestyle factors brought on by government restrictions, more data will be required before firm conclusions may be drawn (Matheson et al., 2021).

As the world (and Australia) emerges from COVID-19 related lockdowns and amended clinical care guidelines, many of the changes to pregnancy and childbirth care are likely to revert to normal. However, in this paper, we seek to understand the positive aspects of the changes to antenatal and childbirth care within Australia from the perspectives of both pregnant women and midwives. We hope that by highlighting positive aspects or 'silver linings', we may uncover some elements from an otherwise challenging situation which should be preserved and carried into the future of maternity care.

Methods

Study design

The "Birth in the time of COVID-19" (BITTOC) study is a mixed methods project which aims to understand the landscape of pregnancy and childbirth care in Australia during the COVID-19 pandemic from the perspectives of pregnant women, midwives and midwifery students. The study collected qualitative and quantitative data, with the aim of providing a critical analysis of what occurred during the COVID-19 pandemic, and the effects of these occurrences. While healthcare system change is often borne out of negativity, we felt it particularly important to highlight the positive outcomes of the pandemic, especially since this is a new perspective, which we felt was likely to unearth different findings than negatively framed studies. Human research ethical approval was granted by the Western Sydney University HREC (H13825).

The aim of our study, conducted under the BITTOC umbrella, was to understand the positive experiences of pregnant women during the COVID-19 pandemic. Due to the subjective nature of these experiences, we primarily chose to take a qualitative approach when designing the project. We also utilised quantitative data taken from the participants on the same topic to ascertain whether the qualitative data aligned with these findings and to explain any discrepancies. These data were analysed by a separate team of researchers.

Sampling

The BITTOC 2020 survey was developed from data obtained from interviews with 20 Australian women who were pregnant or had given birth during the pandemic (from March to December 2020). Sixteen midwives were also interviewed to inform the development of a national survey for their discipline. The women's survey was distributed nationally using social media as well as consumer organisations and parenting forums.

Inclusion criteria for the women were: having given birth during or after March 2020, being over 18 years old, and able to speak and write English. Exclusion criteria were: living out of Australia and not having access to a computer or internet services.

Data collection

Our dataset has been extracted from open-ended questions within the survey administered to women (see Supplementary Material, questions 16.1, 3.104, 3.104, and 4.57). The surveys were disseminated online to pregnant women and took approximately 30–40 min to fill out. The pregnant women included in the data represent those who were pregnant at the time of the survey and those who had given birth since March 2020 when the pandemic impacted Australia.

Women who answered the survey were entered into a raffle and had a chance of winning one of 300 vouchers with a value of A$30. Written electronic informed consent was given by each participant, and participants were advised of their right to withdraw their consent at any time. Throughout the process, participant's confidentiality was ensured, and any identifying features were removed prior to the data analysis process.

Data analysis

We employed conventional content analysis as our method for analysing these data (Hsieh and Shannon, 2005). Coding was done by hand on printed data sheets. Two reviewers took part in the data analysis process. To minimise bias, the primary reviewer had

Table 1
Content analysis results: pregnant and postnatal responses.

Category/ sub-category			Frequency-pregnancy ($n = 635$)*	Percent-pregnancy (frequency/635 *100%)*	Frequency - postnatal ($n = 1,021$)*	Percent - postnatal (n/1,021 * 100%)*
Care-related factors ($n = 306$ postnatal, 146 pregnant)	Valuing the mandated changes to care ($n = 223$ postnatal, 106 pregnant)	Having fewer visitors in hospital	-	-	145	14.2
		Accessing telehealth and online resources	85	13.4	76	7.4
		Being offered altered glucose testing	11	1.7	-	-
	Appreciating access to specific models of care ($n = 83$ postnatal, 40 pregnant)	Having continuity of care	13	2.0	32	3.1
		Choosing home birth	14	2.2	28	2.7
		Choosing private midwifery	14	2.2	20	2.0
Contextual factors ($n = 115$ postnatal, 142 pregnant)	Supportive factors ($n = 98$ postnatal, 52 pregnant)	Having partners work from home	29	4.6	76	7.4
		Receiving supportive and compassionate care	23	3.6	22	2.2
		Having providers be more focused on mental health	10	1.6	2	0.2
		Working from home	45	7.1	8	0.8
	Calming factors ($n = 17$ postnatal, 102 pregnant)	Experiencing increased public awareness of hygiene	11	1.7	9	0.9

*Note because this data was in free text form, women were able to discuss multiple positives within their submissions. Additionally, only comments that provided actionable points and had a frequency of at least 8 comments from either group were included. Thus, the frequencies and percentages will not add up to the total (n) or to 100%.

not been involved in the creation or development of the study protocols (Lacy et al., 2015). The secondary reviewer was familiar with the dataset and examined the codes derived from the data by the first reviewer. The text-based data were analysed using content analysis, with the number of times each category or subcategory was mentioned being counted to derive descriptive statistics with which a comparison between qualitative pregnancy data and quantitative midwifery data could be drawn. Finally, conclusion verification was performed by revisiting the data to analyse whether the findings of the study were an accurate representation of the data (Forman and Damschroder, 2007).

After cleaning the data there were 1343 responses from pregnant women and 1848 responses from postpartum women ($n = 3,191$). We then discarded responses that did not address the aim, such as those which stated that there had been no positive outcomes in the care during the pandemic ($n = 1280$ from pregnant women and $n = 827$ in postpartum women). After this process, 1021 responses from postpartum women and 635 responses from pregnant women remained ($n = 1676$). We further limited the discussion of our results to comments from this data pool which contained actionable suggestions that could be applied to future practice.

Findings

There were four major categories, two of which pertained to maternity care itself, and two of which were contextual. Care-related categories included "Valuing the mandated changes to care" and "Appreciating access to specific models of care". The contextual categories were "supportive factors" and "calming factors" (Table 1).

Care-related factors

Valuing the mandated changes to care

Some of the mandated changes were valued. These included having fewer visitors in hospital and having access to telehealth services as well as having partners working at home.

Having fewer visitors in hospital

Having fewer visitors in the hospital immediately after birth was the factor most postpartum women reported as a positive experience. Postpartum women reported various benefits to decreased visitors, chief among these being better 'bonding' between parents and newborn (30 mentions,) as is exemplified by the following response:

"Visitors in the hospital! It was such a beautiful time to bond as a family. The dads talked in the parent's room, the mums did not have to get all dressed up for people, nurses were relaxed. Babies were hardly crying? Perhaps because they were not being passed around all day?"

Other benefits of decreased visitors included improved initiation of breastfeeding (18 mentions), time to rest and recover (16 mentions), more time with midwives (10 mentions) and decreased social pressure (7 mentions). While many women felt that having fewer visitors was positive to their birth experience, 15 comments did add the clarification that they would have liked to have been allowed one more key figure to be able to visit (usually the woman's other child or parents), as one woman said:

"No friends or family at the hospital after birth (except I would have loved to have had my son able to meet his sister on the ward)."

Accessing telehealth services and online resources

The next factor most likely to be perceived as positive was the increased use of, and access to, telehealth services and online resources such as virtual birthing classes and support lines. Telehealth and online services were mentioned 76 times by postnatal women and 85 times by pregnant women. Many of the comments discussing the positives of telehealth spoke about it being more convenient, easier to access for women in remote settings, better for issues where women felt appointments were unnecessary (such as collecting referrals or receiving results), less time spent waiting, and more accessible for women with other children. The convenience of telehealth is emphasised in the following quote:

"I think a lot of the appointments could be done virtually such as reviewing diabetes results as it saves travel time and time waiting and off work."

Women also spoke about telehealth being a positive when it was presented as an option, rather than having it forced on

them, for example, this comment in which the word “option” was stressed:

"The OPTION of Telehealth apps, I feel would be beneficial for women who find it difficult to make it to appointments…But as an option, not as the only choice."

Being offered altered glucose testing

Altered glucose testing for gestational diabetes was another factor which many women viewed as positive. This consisted of a fasting blood glucose test in place of the standard two-hour oral glucose tolerance test usually administered to test for gestational diabetes mellitus, which allowed clinics to reduce the number of women in their waiting rooms (Nouhjah et al., 2020). Eleven pregnant women pointed to this as the main positive in their disrupted care, with some also remarking that they appreciated the overall decreased intervention during this time. Reasons for appreciating altered glucose testing included not having to wait at the clinic, greater convenience, and feeling that the oral glucose tolerance test was unpleasant anyway for those who had experienced it before. Women remarked that they greatly preferred the fasting blood glucose tests they were administered during the pandemic, for example:

"The glucose tolerance test…I was able to skip this and have a fasting blood test instead which means I did not have to sit in the high-risk room for 3 h."

Appreciating access to specific models of care

The other care-related factors which women identified as having played a positive role were the models of care women chose for themselves and the ways that they were cared for.

Having continuity of care

Women identified that having continuity of care and carer was greatly appreciated during this time. Continuity of care was mentioned 13 times by pregnant women and 32 times by postnatal women. Many of these comments were in relation to being cared for by a midwifery group practice (MGP) or private midwifery service, as the following woman stated:

"Continuity of care made a huge positive impact for me, especially in-home care postnatally. There needs to be more funding and greater accessibility to MGP and private midwifery services."

Many of those who highlighted the importance of continuity care spoke about the relationship they felt they had built with their provider, and that this made them feel more in control and at ease throughout their maternity care.

Choosing home birth

A number of women (28 postnatal and 14 pregnant women) chose to have a homebirth which they considered to be most positive about their pregnancy and childbirth. Some made the decision to give birth at home due to the restrictions in the hospitals and felt that this had been a beneficial choice, as evidenced by the following:

"Home birth. The pandemic pushed me to have a homebirth despite the costs. I would now do this if I were to have another baby. The home birth was very positive."

Many of the women who were able to access homebirth remarked that they felt homebirth should be more widely accessible, and some suggested that Medicare rebates (public health insurance model in Australia) may assist with this.

Choosing private midwifery care

Choosing to utilise private midwifery care was also discussed by many women as the key positive element of their maternity care. This was mentioned 14 times by pregnant women and 19 times by postnatal women. Six pregnant and two postpartum women made similar comments relating to receiving care from private obstetricians. The main benefit of private midwifery care was that it remained largely unchanged during the pandemic as compared to women who received care in the public system. This was often because care was provided at home or in a birthing centre. Women also remarked that private midwifery care allowed their families to be more participatory in the pregnancy, as the following woman discussed:

"Having a private midwife has kept normalcy and excitement surrounding my pregnancy and allowed my husband and daughter to play an active role in this experience."

Private midwifery care was also often mentioned in relation to homebirth and being able to continue having face-to-face appointments, as the following woman’s response indicates:

"Having such a positive experience with my private midwife and birthing in the …. with my first daughter - I already knew we were in good hands. When the pandemic 'hit' I became even more confident and proud of my decision. We had given ourselves the perfect set up to have an uninterrupted, natural birth."

Contextual factors

The other major category of factors which women viewed as positive during their COVID-19 experience of pregnancy and childbirth were the contextual elements which influenced their experience in ways that were either supportive or calming.

Supporting factors

Having their partner work from home

The most common positive supportive factor mentioned by women was having their partner work from home. There were 29 comments from pregnant women and 76 comments from postnatal women who wrote specifically about having their partner work from home. Reasons for this being so positive included increased bonding time and more sharing of responsibilities, especially those pertaining to childcare, as exemplified by the following quote:

"Husband working from home means he is around to see the baby grow up, and he was around during pregnancy and could provide more support."

Additionally, as highlighted by the above quote, having one’s partner at home following birth was pivotal for many women, some of whom remarked that their partners were able to be far more present due to COVID-related work from home arrangements than they would have been otherwise.

Receiving supportive and compassionate care

Having supportive and compassionate providers was also a category frequently addressed by pregnant and postnatal women. This was mentioned in 23 comments by pregnant women and 22 comments by postnatal women. Women commonly recognised that their carers went out of their way to show them support despite the difficulty and uncertainty of the situation, as one woman stated:

"The staff at the public hospital I gave birth at were all still so friendly and positive, doctors, nurses, midwives, cleaners, lunch ladies, etc. They were able to maintain that level of positivity and friendliness even in the middle of a lockdown and uncertainty about what would happen."

Women also felt supported by providers who acknowledged their confusion and dismay at experiencing their pregnancies during this period of upheaval, as evidenced by the following quote:

"Care providers that were compassionate about how upsetting some of the restrictions can be and who explained the reasons behind the restrictions thoroughly."

Having providers who seemed more focussed on mental health

In a related sub-category, a number of pregnant (10 comments) and postpartum (2 comments) women wrote that they were appreciative of provider's increased focus on mental health during the pandemic. These women felt that their mental health was seen as a greater priority during maternity care and that their providers were more likely to probe deeply into issues relation to their mental health, as the following woman stated:

"A midwife prodded me during a visit when I was distressed but hiding it. However, through her questions I was able to confide in her and she referred me to the support I needed. Had she not taken that extra step of checking in on my well-being (more than just filling out a sheet I can fib on) I am not sure what state I would have ended up in."

Calming factors

Working from home (self)

Having the ability to work from home was seen as very positive by many of the women (45 mentions by pregnant women and 8 mentions by postnatal women). Women were enthusiastic about having the option to work from home, especially if they felt unwell or tired. As one woman said:

"Yes, as mentioned before, working from home had allowed me to rest when feeling unwell and be comfortable in my own home while still completing my job. Also makes me feel safer at home away from the COVID risks. I used to drive 2 h a day (1 h each way) to/from the office, so working from home has reduced that. I do not know how I would have done that being so tired all the time."

Experiencing increased public awareness of hygiene

Public awareness of the importance of hygiene was also seen as a calming factor during this time (11 comments by pregnant women, 9 by postnatal women). Women described a variety of ways in which this affected them, including having less people around their baby, people washing their hands at a greater frequency, and being able to feel safer taking their baby out before they had completed the 6-week vaccinations. Women were appreciative of the fact that people were less likely to approach them or touch them or their children in public. Some of these considerations are highlighted in the following comment:

"People are a lot more cautious when visiting/touching your baby, ensuring their hands are washed, and not visiting when sick."

This was echoed in other comments, some of which even suggested that a level of social distancing remain in place after the pandemic as a method of disease prevention.

Discussion

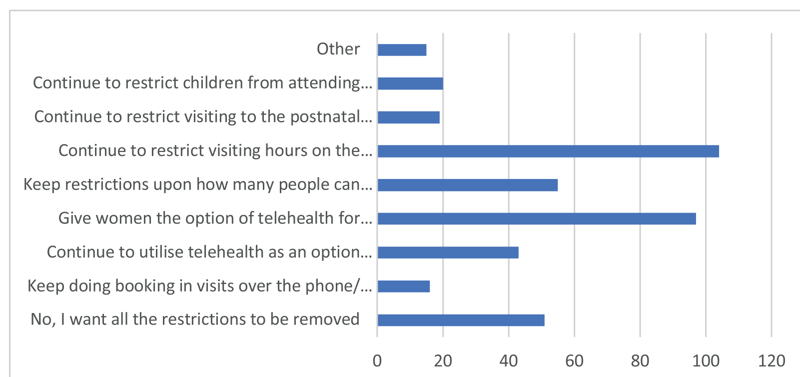
The aim of our study was to understand the positive experiences of both pregnant/postpartum women and midwives during the COVID-19 pandemic. The most commonly mentioned positive element from postnatal women was having fewer visitors in the hospital. Women in our study reported appreciating the time to bond with their neonate, improved opportunity to initiate breastfeeding, increased attention from midwives, and relief from the pressure to socialise immediately after birth. One factor noted in many women's responses was that while they enjoyed the restrictions on visitors during their time in the hospital, they missed having other individuals present, most commonly older children or their own parents.

Studies from Australia and other countries with similar restrictions are beginning to shed light on the reduced hospital visitors. Research from Ireland suggests that 89% of women giving birth during the pandemic agreed with hospitals imposing restrictions on visitation, with 84% of women reporting that they enjoyed the time alone with their neonate, and, like women in our study, felt that having fewer visitors led to better bonding, improved breastfeeding initiation, and more time to recover after birth (Cullen et al., 2021). A mixed methods study by Wilson et al. on Australian women's experiences of birth during the COVID-19 pandemic gives further evidence that many women appreciated the decrease in visitation, with women going so far as saying that they would support permanent hospital visitor restrictions (Wilson et al., 2021).

Despite the emerging evidence that many women have greatly appreciated having fewer visitors in hospital, not all studies into this topic have demonstrated positive results. Recent data from a United Kingdom- based study found that the majority of birthing women surveyed were displeased with COVID-19- related hospital visitor restrictions, with 72% stating that the restrictions had led to increased feelings of loneliness (Sanders and Blaylock, 2021). However, women in this context reported that one of the key elements which caused them to feel negatively about the restrictions was that they had less interaction with the midwives during their hospital stay (Sanders and Blaylock, 2021). This is in contrast with what women in our study reported, with many stating that the midwives had more time to spend with them due to the decrease in number of visitors, a phenomenon which is supported by the findings from Wilson et al., in which women similarly reported being afforded extra time and attention from midwifery staff at the hospital due to having fewer visitors (Wilson et al., 2021),

Another factor commonly cited as positive by both pregnant women and midwives during the COVID-19 pandemic was having increased access to telehealth services. Telehealth has been considered as a means of increasing access to maternity services, especially for those women living in rural and remote communities, for a number of years (Westwood, 2021). However, due to necessity during the pandemic, utilisation of telehealth was adopted rapidly, often outpacing the technological capabilities of hospitals and health systems (Fryer et al., 2020; Galle et al., 2021). While women in our cohort found the increased access to telehealth to be very positive, many of them provided caveats to their endorsement of the practice. These were chiefly related to wanting telehealth to be offered as an option rather than a mandate, but some women also spoke about a variety of settings in which they felt telehealth was appropriate, for example, when a woman already knew her providers from a previous pregnancy, or for minor appointments such as test results or referrals, especially among multiparous women. For example, many women in this study mentioned positive aspects of avoiding the full glucose tolerance test. This, in conjunction with the previously mentioned study suggesting the safety of telehealth, provides a basis for cautious research to begin into how telehealth can best be incorporated more fully into the maternity care system, ideally in a manner that avoids the exacerbation of health disparities, especially for low income women (Fernandez Turienzo et al., 2021; Palmer et al., 2021; Ukoha et al., 2021; Westwood, 2021). Another key consideration will be ensuring that telehealth services are of high quality and can adequately maintain the relationship between patient or client and provider, which previous research (as well as data from our study) has suggested to be integral to a positive pregnancy and birth experience (Hildingsson et al., 2019; Lewis, 2019).

Many women in our dataset spoke about appreciating access to private care. This involved care at home, homebirth, and the utili-



* Note that respondents could choose more than one answer. Thus, the frequencies will not add up to the total (n).

Fig. 1. Midwives response to question: "Have you experienced any changes to the way maternity care is delivered that you hope will remain after the risk of COVID-19 has passed?"

sation of private providers, such as, obstetricians and midwives. Interestingly, privately practising midwives were the most commonly referenced provider when women spoke about private care, despite the fact that a higher proportion of women in our sample accessed private obstetricians than private midwives. This likely speaks to the significance that women place on their relationship with midwives as a key support in the perinatal period, and also to the fact that women spend more time with their midwives than they do with obstetricians (Davison et al., 2015; Sibbritt et al., 2013). Many of the women who had access to private care acknowledge that they were in a privileged position, this highlights the disparities uncovered by the pandemic, which have been observed not only in Australia, but globally as well.

There were two common themes throughout our results which women emphasised: autonomy and relationships. These are both factors which have long been identified as pivotal to women's perspectives on their pregnancy and childbirth care. Autonomy and choice have recently been highlighted as central to respectful maternity care by the World Health Organization (WHO), and also identified as key quality of care indicators (Kingma, 2021; WHO, 2018). Additionally, the concept of control is often considered essential in ensuring women's satisfaction with their birth experience (Fair and Morrison, 2012; Gibbins and Thomson, 2001). In our cohort, women pointed to the importance of control over the options being presented to them when discussing a variety of categories, including telehealth, choice of provider or care model, and having fewer visitors in hospital. As has already been discussed, this was often in the context of women stating that while they found certain aspects of their COVID-19 amended care to be positive, they found the mandatory nature of the changes undesirable.

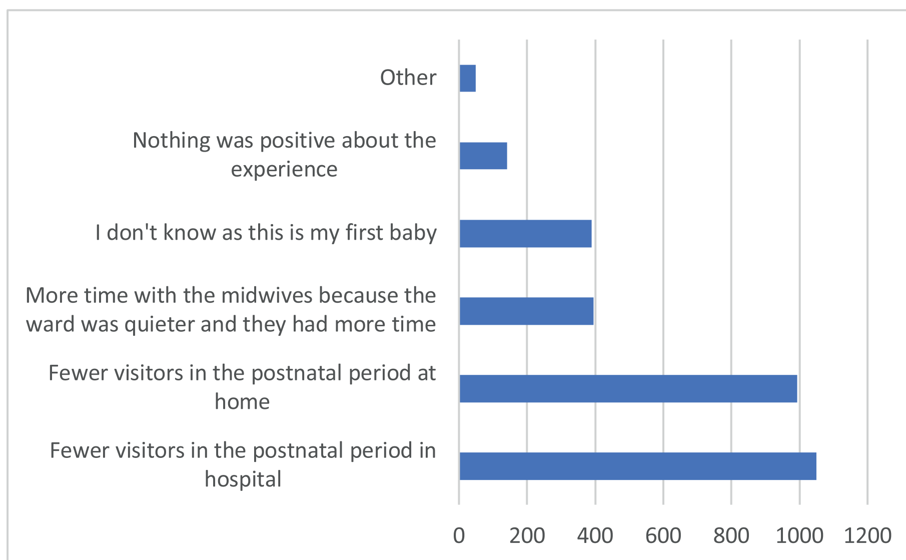
The other overarching theme women discussed was the importance of relationships and support networks during this time. This was mentioned in comments on the relationship women had with their providers (as we have discussed in reference to private midwifery), but also in comments discussing women's relationships with their partners and babies. For example, many of the comments about the increase in public awareness of hygiene were centred around fewer strangers intruding into the mother-newborn bonding space. This freedom from intrusion was seen in comments about decreased hospital visitation as well. Other studies on maternity care reconfiguration during the pandemic have pointed to increased reliance on the family due to decreased ability to rely on healthcare providers, underscoring the importance of familial relationships during this time (Silverio et al., 2021). Furthermore, for many women in our cohort, having their partner work from home was another element that women saw as strengthening their relationships, which many women said strengthened both the inter-partner relationship and the family relationship as a whole. This raises the question as to having a more nuanced look at paternity leave considering these findings and enabling a period, or a hybrid model, of work from home following the birth of baby. The impact of this on postnatal depression and relationship stress following the birth of a baby is worth exploring further,

The findings of our study provide important evidence on care options that pregnant women find to be acceptable or preferable, which is especially important given the lack of evidence for many of the COVID-related maternity care guideline changes (Pavlidis et al., 2021). Our research also provides a baseline explanation on what aspects of maternity care women perceived as positive during the COVID-19 pandemic, as well as why these elements were seen to be beneficial. Further research is necessary to effectively improve, target and implement the options which were uncovered as a necessity during the pandemic. It will also be imperative to ensure that as new options are introduced, pre-existing health disparities are not exacerbated.

Strengths and Limitations

There are several questions left unanswered by our research, including whether primiparous women were affected differently than multiparous women by the restrictions, and the effect of the changes across the various Australian states since restrictions were not uniform across the country. Our study also focused on women who spoke English, therefore, a number of communities are likely to be underrepresented by the results. Further consideration and additional research into the experiences of women from culturally and linguistically diverse backgrounds is necessary to understand how these populations are best served. Another limitation of the study is that we did not have access to the demographic data relating to each respondent. This information would likely have impacted our results, and our conclusions are weakened by our inability to infer conclusions based on this contextual data. Furthermore, cultural influences must be considered when deciding on aspects of both ante- and postnatal care. This is due to the significance of the pregnancy and birth period in many cultures, which will dictate what women and their families will appreciate being offered (Eberhard-Gran et al., 2010).

The major strength of this work lies in its large data set, as well as the fact that it provides evidence for a previously unexamined topic. There are several limitations of this study. The major limitation is that the survey questions analysed were framed as asking about positive experiences. Thus, the questions were somewhat leading, and women may have been more likely to skew their answers to adequately answer the question. This means that the re-



** Note that respondents could choose more than one answer. Thus, the frequencies will not add up to the total (n).

Fig. 2. Women's response to Question asked: "Did you consider any of the following positive regarding giving birth during the COVID-19 pandemic?"

sults may not be representative of the views of many women who were pregnant or gave birth during the COVID-19 pandemic. Further analysis of other questions in the data set may give a better perspective on the negative aspects of the pandemic.

Conclusion

Despite the negative effects of COVID-19 related restrictions on pregnancy and childbirth care in Australia, the pandemic has uncovered a number of changes which women and their midwives perceived to be positive. Many of these factors were care-related, meaning they have direct implications for the future of maternity care. With autonomy and relationships being key elements in ensuring that women experience positive and fulfilling pregnancies and births, further research is warranted to examine the safety and accessibility of these expanded options. This will ensure that women receive effective and secure care while being empowered to experience the pregnancy and birth that best suits them, their families, and their lifestyles.

Ethical approval

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

CRediT authorship contribution statement

Dvora Kluwgant: Methodology, Formal analysis, Investigation, Writing – original draft, Writing – review & editing, Project administration. **Caroline Homer:** Methodology, Validation, Resources, Writing – review & editing, Supervision, Project administration. **Hannah Dahlen:** Conceptualization, Methodology, Validation, Resources, Data curation, Writing – review & editing, Supervision, Project administration.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.midw.2022.103340.

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