AOTEAROA NEW ZEALAND RESEARCH

Birth under restrictions: Exploring women's experiences of maternity care in Aotearoa New Zealand during the COVID-19 lockdown of 2020

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ABSTRACT

Introduction: In Aotearoa New Zealand the COVID-19 pandemic in 2020 resulted in a four-week lockdown in March and April of 2020 with ongoing restrictions for several weeks.

Aim: To explore the experiences of women who were pregnant, giving birth and/or managing the early weeks of motherhood during the 2020 COVID-19 alert levels 3 and 4 in Aotearoa New Zealand.

Method: This qualitative study used semi-structured interviews to explore childbirth experiences during the COVID-19 alert level restrictions. Reflexive, inductive, thematic analysis was used to identify codes, subthemes and themes.

Findings: Seventeen women participated in the study. Analysis of the qualitative interviews revealed four themes. The first of these was: **Relationship with my midwife**, in which participants described the importance of the midwifery continuity of care relationship, with midwives often going *above and beyond* usual care and *filling the gaps* in service provision. In the **Disruption to care** theme the participants described feeling *anxious and uncertain*, with concerns about the hospital *restrictions and changing rules*. The participants also described their **Isolation** during postnatal care in a maternity facility due to separation from their partners/whānau; they describe receiving the *bare necessities of care*, feeling they were *on their own*, and working towards their *release home*; all of which took an *emotional and mental toll*. The final theme, **Undisturbed space**, describes the positive aspects of the lockdown of being *undisturbed by visitors*, being better able to *bond with the baby* and being able to *breastfeed in peace*.

Conclusion: Midwifery continuity of care appears to have supported these women and their families/whānau during the service restrictions caused by the COVID-19 lockdown. The partner, or other primary support person, and whānau should be considered essential support and should not be excluded from early postpartum hospital care.

Keywords: COVID-19, childbirth, continuity of midwifery care, restrictions, lockdown

INTRODUCTION

The COVID-19 severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic began in China in 2019, and the disease was transmitted around the world, triggering a global response to combat its spread. The focus of the response was varied among countries but, during 2020, most relied on minimising social contact, maximising the health service response, and identification and contact tracing of cases.

The public health response in Aotearoa NZ

In Aotearoa New Zealand (Aotearoa NZ) various restrictions, isolation periods and lockdown were identified and assigned various "Alert" levels in 2020. There was a progression of restrictions/alert levels as disease transmission increased (Table 1), with the highest measure (Alert level 4) involving community-wide containment with households under "lockdown". On 25 March 2020, Alert level 4 took effect as a national measure, meaning that the whole country was required to isolate at home, with the exception of essential services workers. This was enforced through the declaration of a state of national emergency. Health service changes were undertaken to reduce the spread of the virus but they also resulted in a variety of limitations/restrictions within both community and hospital services. The Alert level 4 lockdown until 28 April was followed by Alert level 3 restrictions for several weeks. After this, lower alert levels were maintained throughout most of the country, with some regions increasing to levels 3 and 4 periodically throughout the year (dependent on presence of community transmission).

Table 1. Aotearoa NZ alert level measures

Alert level	Measures
Alert level 4: Lockdown Likely the disease is not contained. Sustained & intensive community transmission. Widespread outbreaks	Staying home in a "bubble" No travel apart from necessities such as food shopping Work & learn from home All public & education facilities close Health consultations by phone or videoconference
Alert level 3: Restrict Medium risk of community transmission. Multiple cases of community transmission & multiple active but managed clusters	Staying home in a "bubble" Travel still restricted – stay local People unable to work from home can return to work Health care services continue to use virtual, non-contact consultations where possible
Alert level 2: Reduce Low risk of community transmission. Active clusters in more than one region	Connection & socialisation with friends & whānau allowed, including domestic travel Return to work is permitted but alternative ways of working encouraged Health and disability care services can operate as normally as possible
Alert level 1: Prepare Disease is contained in Aotearoa NZ. Could be sporadic imported cases and/or isolated local transmission	No restrictions on personal movements or gatherings All businesses, schools & facilities can open Healthcare facilities must have systems & processes in place to ensure visitors keep records of where they have been

Maternity care

Initially, the full impact of COVID-19 on the health of pregnant women and their infants was unclear but it has since been established that COVID-19 infection during pregnancy leads to an increased risk of maternal and perinatal complications (Akhtar et al., 2020; Kotlar et al., 2021; Metz et al., 2021; Villar et al., 2021). Therefore, limiting the spread of COVID-19 was an important public health measure.

Globally, there were a number of differing restrictions applied to maternity care, most of which involved reduced frequency of antenatal care contacts; reduced face-to-face care with an increase in virtual care; suspension of homebirth services; and exclusion of partners during antenatal care, sometimes during labour/birth and in the postnatal wards (Lalor et al., 2021). For those experiencing maternity care during COVID-19, these measures have been found to be stressful and challenging, with the potential to impact on emotional health and increase the incidence of anxiety and depression (Kotlar et al., 2021; Mizrak Sahin & Kabakci, 2021; Preis et al., 2020). Sanders and Blaylock (2021) conducted an online survey of user experiences of public health messaging and "socially distanced" maternity care in the United Kingdom (UK), finding that most respondents were generally happy to adopt a precautionary approach in an environment of extreme anxiety and uncertainty, but were also acutely aware of the negative impacts. These widespread changes to services caused confusion, distress and emotional trauma, with descriptions of inadequate antenatal and postnatal care, and frustration about a lack of staff to help with baby care. Similarly, a survey of 3364 Australian women found that women felt distressed and alone due to the COVID-19 maternity care changes and the limited face-to-face contact with health practitioners (Wilson et al., 2021).

In Aotearoa NZ women register with a Lead Maternity Carer (LMC)—a midwife, a general practitioner or an obstetrician—who is responsible for their pregnancy, labour and birth and postpartum care (6 weeks). The majority (94%) of women register with a midwife LMC early in pregnancy and receive continuity of care with input from specialist services as required (Ministry of Health [MOH], 2022). Māori are the tangata whenua (people of the land/indigenous people) of Aotearoa NZ, and Te Tiriti o Waitangi (the Treaty of Waitangi) principles provide the framework for maternity care providers. Within health this involves Tino rangatiratanga (absolute sovereignty), equity, active participation, options and partnership (MOH, 2022). Tino rangatiratanga is described as "enabling whānau, hapū, iwi and Māori to exercise control over their own health" (MOH, 2014, p. 8); equity relates to supporting equitable health outcomes for Māori; active participation involves sharing evidence based information, and actively supporting Māori to make decisions that are best for them; options identifies maternity care enabling Māori to uphold their tikanga (customs), and be culturally safe; whilst partnership with Māori involves a partnered approach to decision-making which includes whānau so that Māori have self-determination over their bodies and reproductive health. During alert levels 3 and 4, the changes in the maternity service resulted in a move to telehealth and much shorter face-to-face physical contact by midwives in the community, with some reduction in frequency of clinical contact, limited access to some maternity services, restrictions on partner/companion/whānau support during antenatal care, restrictions on the number of companions/whānau during labour and birth and restrictions on partner/companion/whānau support in the hospital postnatal wards. At the time of this study the impact of these changes was unknown.

The aim of this research was to explore the experiences of women who were pregnant, giving birth and managing parenting in the early weeks of the postpartum period during COVID-19 alert levels 3 and 4 in Aotearoa NZ during 2020.

Glossary	
Hapū	Kinship group descended from a common ancestor
Iwi	Tribal group with a distinct territory
Te Tiriti o Waitangi	The Treaty of Waitangi, Aotearoa NZ's founding document
Wāhine	Women
Whānau	Family group

METHOD

This was a qualitative descriptive study using in-depth exploratory interviews. Recruitment to the study was through an information email circulated to midwives via the New Zealand College of Midwives membership database. This email was then forwarded to women by their midwives (snowballing). Women were invited to respond if they were living anywhere within Aotearoa NZ, were pregnant or had given birth during the COVID-19 restrictions (between March 2020 and December 2020), were over the age of 18, had access to the internet and a computer, and were able to speak and read English.

Data collection

All data collection was undertaken virtually and interviews were conducted via Zoom (or similar) audio-visual technology. An interview guide was developed and used by the research group to support the conversations (Table 2), and to identify what had worked well and what aspects of care had caused concerns for participants and their families/whānau. For participants who identified as Māori there was the option of having a Māori interviewer. The interviewer used further questions to elicit fuller responses as necessary.

Table 2. Semi-structured interview guide

The following questions were used as a semi-structured interview guide to explore experiences of maternity care:

1. Can you tell me about your experiences of being pregnant/giving birth/early parenting during the COVID-19 pandemic?
2. What changes to your pregnancy care did you experience as a result of COVID-19? How did this make you feel?
3. How did COVID-19 restrictions impact upon your partner/family/whānau or social support?
4. What changes to your birth care did you experience as a result of COVID-19? How did this make you feel?
5. Did your maternity care differ from what you expected it would be?
6. What changes to your postnatal care did you experience as a result of COVID-19? How did this make you feel?
7. Can you talk to us about your postnatal experience? Can you talk about your infant feeding during COVID-19?
8. Did you make any active decisions yourself to change your pregnancy/birth/postnatal plans as a result of the COVID-19 restrictions?
9. COVID-19 has had a huge impact – what might be some of the positive aspects of this pandemic in terms of provision of maternity care?
10. What could your care provider/service have done to make your experience better?

The audio-visual interviews were recorded, password protected and transcribed. All names have been changed to pseudonyms (chosen by the participants themselves, the research interviewers, or by the lead transcriber) to support participants' anonymity. Any identifying details have also been removed.

Analysis

Inductive thematic analysis was used to identify codes, subthemes and themes using Braun and Clarke's (2006) phases for reflexive thematic analysis. This involved: familiarisation with the data; the generation of labels to identify relevant features; the development of initial broader patterns and themes, which were shared and discussed with the wider group and included cultural considerations. Following discussion the themes were re-examined, further refined and then re-checked against the data.

Ethics approval was received from the Auckland University of Technology Ethics Committee (AUTEC; ref 20/147).

FINDINGS

There were 227 respondents to the email advertisement and the first 50 to respond and who met the criteria were sent research information sheets. Of these, 25 expressed an interest in being interviewed and consent forms were sent out, with a reminder two weeks later as necessary. Consent forms from 18 women were received and interviews arranged. One woman did not attend the arranged interview, resulting in 17 participants (Table 3). The majority of participants interviewed were of NZ European ethnicity, with 3 identifying as having Māori ethnicity; most gave birth during 2020 alert levels 3 or 4, although one gave birth at level 2 and one at level 1. One woman was pregnant at the time of interview and during alert levels 3 and 4. Eleven participants had planned to give birth in a primary unit, one changed to a homebirth, six changed to a secondary/tertiary unit and three transferred to a tertiary unit during labour. Two had a homebirth.

Table 3. Participants' background

Pseudonym	Domicile	Ethnicity	Age	Parity	Planned birth place	Actual place of birth	COVID-19 alert level status
Alix	Hamilton	Māori	33	1	Primary unit	Transfer to tertiary unit during labour	Birth Level 3
Belle	West Coast	NZE*	28	1	Secondary unit	Secondary unit	Birth Level 3 with move to Level 4 while in hospital
Bree	Waikato	NZE	29	1	Primary unit	Transfer to tertiary unit during labour	Birth Level 3
Brittany	Dunedin rural	NZE	24	1	Tertiary unit	Tertiary unit	Birth Level 2
Cara	Christchurch	Māori	19	1	Home	Home	Birth Level 4
Clarissa	Auckland	NZE	30	1	Primary unit	Tertiary unit	Birth Level 4
Courtney	Waikato	NZE	31	1	Primary unit	Transfer to tertiary unit during labour	Birth Level 3 prior to Level 4 (March)
Ingrid	Upper Hutt rural	NZE	34	1	Primary unit	Pregnant at date of interview 33/40	Pregnant during level 4
Jaya	Tauranga	NZE	36	5	Secondary unit	Secondary unit	Birth Level 4
Lucy	Lower Hutt	NZE	33	1	Primary unit	Secondary unit	Birth just as moving into Level 3 & 4
Maraea	Tauranga	Māori	23	2	Primary unit	Home	Birth Level 1
Mia	Waikato	NZE	33	2	Primary unit	Tertiary unit	Birth Level 4
Minnow	Taupō	NZE	30	1	Secondary unit	Tertiary unit	Induced Level 4, birth Level 3
Pascalle	Auckland	Other Euro**	39	1	Primary unit	Tertiary unit	Birth level 4
Rebecca	Oamaru	NZE	37	1	Primary unit	Tertiary unit	Birth Level 4
Suzy	Palmerston North	NZE	29	1	Secondary unit	Secondary unit	Birth Level 4
Zoe	Christchurch	NZE (husband Māori)	25	1	Primary unit	Tertiary unit	Birth Level 4

* New Zealand European

**Other European

Table 4. Themes identified in interviews

Theme	Subtheme
Relationship with my midwife	Extra precautions Going above and beyond Filling the gap
Disruption to care	Anxious and uncertain Restrictions Changing rules
Isolation	The bare necessities of care On my own Released home An ongoing emotional toll
An undisturbed space	Undisturbed by visitors Bond with the baby Breastfeed in peace

The relationship with my midwife

Participants identified the importance of the relationship with their midwives during this time of social change. The midwife was central to care provision and supported the woman to understand and adapt to the changes within the maternity services.

> *My relationship with my midwife became so important. … I didn't realise how important a midwife is. You know, they are your real life line and* [our midwife] *became exceptionally important because we didn't have any other family to support us...* (Rebecca)

As part of the self-isolation messaging, the Aotearoa NZ government and public health authorities developed the concept of "bubbles". This was used to describe the household unit which could also span other members of the family or other households (shared custody/ blended families). Midwives were considered a part of a household's bubble – especially when providing care in the home. Rebecca stated: *I can only imagine the pressure on the midwives because they became such a big part of everybody's wee bubble.*

Extra precautions

During the antenatal period, midwifery care continued but was altered to reduce the risk of transmission, with midwives advised to ensure social distancing, increased hygiene measures and shorter contact times. The participants described how they could still contact their midwife as necessary and felt reassured by this.

> *I didn't feel like my care was compromised in any way, I still had appointments with my midwife. My midwife did change the way she worked, in terms of calling a little bit more than face-to-face but I still had my face-to-face appointments.* (Courtney)

Care adaptations involved less physical contact, and more phone, Zoom or Skype contact and limiting contact with others, such as the partner.

> [My midwife] *was still really good and we were still having appointments and she was still telling me what to do and we just kind of worked around the restrictions. So it was more just I couldn't come and see her at the clinic, it was over Skype.* (Ingrid)

The participants described extra precautions being taken when they went to hospital for labour and birth but that these did not seem to affect their care. For example, Cara explained: *…everyone in the delivery ward and the maternity wards, they still let me have things exactly how I wanted and listened to me when I said "no" and stuff.*

Many of the women talked about the value of having their LMC midwife (or backup midwife) attend the birth with them, although the midwives' role changed as they were required to provide more support for the woman and her partner due to the absence of the whānau.

> *She just said their roles kind of evolve a little bit more because of it… constantly checking in with you that you're alright, because your support people are missing. Your cheerleader, your cheer squad's not there.* (Clarissa)

Following the woman's and baby's discharge home, the midwives continued to provide home assessments during the postpartum period, although care was adapted to limit physical contact.

> *She still came every week, or every couple of days in that first week, but after that first initial visit she would sit outside in the driveway and we would talk over the phone and ask all the questions, and then she'd come in and do a quick check on* [our son] *and do his weight and things like that.* (Courtney)

Going above and beyond

The participants discussed how their midwives worked to ensure they had positive experiences despite the restrictions of the COVID-19 alert status. Courtney felt her midwife in particular was *going above and beyond to make sure I had the experience I wanted around COVID.*

Partners were unable to stay in the hospital following the birth but Clarissa described how it seemed to her that her midwife, while following the rules, managed to maximise the time her partner was able to be with her and the baby.

> *…my midwife was pretty awesome and, I think she fluffed around a little bit in the hospital, so that* [my husband] *could stay with me and the baby for as long as possible. So, I had my shower and she told me, 'just sit in there, take as long as I possibly can' and* [my husband] *was able to just sit with the baby. And then… I got moved to the maternity ward and so, as you're walking out, that's when I had to say goodbye to my husband.* (Clarissa)

The LMC midwife provided time and space for the woman and her partner to get to know their baby, with the understanding that once transfer to the postnatal ward was undertaken the partner was unable to stay with them.

Filling the gap

Several participants identified a gap in service, which occurred postnatally on discharge from their LMC midwife (approximately 5-6 weeks post birth) when they would normally expect follow-on care from a Well Child service, such as Plunket. At this time these services were being provided online (virtual appointments) for the majority of service users. Clarissa was confused as to why other services could not visit, saying: *… if the LMC can come into our homes and check the baby, I don't actually understand why Plunket can't.* The lack of Well Child face-to-face service resulted in some midwives continuing to provide midwifery care longer to fill the gap.

> *Yeah,* [the midwife] *actually came, she stayed until… I think they're allowed to discharge us at 5 weeks, I believe, and she stayed until he would have been… 6 and a half weeks old, just because Plunket wasn't seeing anyone.* (Clarissa)

It is clear some midwives filled the gaps in health service provision (when they saw a need) to ensure that the woman had a positive maternity experience.

Disruption to care

Anxious and uncertain

Participants recalled that their anxiety levels were high during the initial days of lockdown due to uncertainty around COVID-19 itself, but this was also exacerbated by the consequent changes to maternity care. Some of the women worried whether going to hospital to give birth would increase the risk of catching COVID-19 themselves.

> *I guess I was quite anxious when we went into lockdown as well, just worry about getting COVID or things that seemed really–now that I think about–seemed really farfetched but at the time were actually probably could have happened, just little things like, oh my God what if the hospitals are overrun and I give birth and my baby needs the ventilator and there are no ventilators and that kind of thing.* (Suzy)

Anxiety about the new rules also resulted in more discussions about place of birth, and specifically homebirth. Jaya considered homebirth, saying: *I thought that if there were a few cases in the hospital I thought about giving birth at home.* Another focus of anxiety concerned who could be present during labour and birth, with homebirth being considered so that the participant could have family/whānau there. Cara considered homebirth so that she could have her mother present at the birth: *I just wanted to have the homebirth because, in hospital I was only allowed one birthing partner but if I'd had it at home my Mum could have been there as well.*

Restrictions

Participants described how they had to adapt to the restrictions, with partners unable to attend appointments due to the need to minimise contact and reduce the risks for the health professional.

> *…my partner couldn't come with me to my appointments and he was quite hands-on and because of his farming job we were always able to schedule appointments so that he could be there. And so I think that he found that quite hard…* (Brittany)

Then, of course, as referred to above, family/whānau members' attendance at the birth was restricted, as Jaya commented: *There were restrictions with who you could have at your labour, so we had planned to have my Mum and my husband in there but my Mum wasn't able to.*

All of the participants described being able to have their partner with them during labour and birth but only once the labour had established.

> *My partner dropped me off but he wasn't allowed to come inside. Then at 4pm when they decided to take me into the birthing suite and get things started, he was allowed to come in, so I was by myself in the hospital for about 6 hours while he was waiting in the car outside.* (Zoe)

Changing rules

Changes to alert levels often resulted in changes to rules within the maternity services but this also resulted in rules confusion for many of the participants. For example, Alix explained that *every day they were changing the rules on who could be there, who couldn't be there, whether you could have a support person, whether you couldn't, whether they could stay postnatally…* Some participants suggested there was a lack of logic to some of the rules. For example, Belle said: *I wasn't allowed to see my midwife in the hospital. She was only allowed to go there to birth babies, not to visit, so that was pretty hard.* Alix also described the inconsistencies in the rules:

> *My partner was allowed in the delivery suite but not in the maternity ward, yet he was allowed in NICU, and so while he was down there he could see him but as soon as* [our baby] *came back to maternity he couldn't, so there were just some real funny, wee inconsistencies.* (Alix)

The apparent inconsistencies and changes to the rules, as alert levels changed, increased uncertainty and anxiety.

Isolation

Some of the participants described their early postpartum experiences in a secondary or tertiary maternity hospital, when their partners or whānau were unable to be present.

The bare necessities of care

Hospitals limited physical contact by hospital staff in order to reduce potential transmission. For some of the participants the limited contact resulted in their physical health needs not always being met. Alix explained her inability to provide care to her baby because of her physical condition following a caesarean birth.

> *On the ward, the care was not that great and I think there was a lot of "we're only coming to do what we have to, if you look fine and your catheter bag doesn't need changing, we probably don't need to come into your room right now".* [Baby's name] *was born early Saturday morning… and I remember Sunday morning and* [a midwife] *saying to me, 'how many wet nappies has she had?' And I said, 'well, I haven't changed her nappy once, so I don't know'. Then I felt stupid, of course she needed her nappy changed, but I didn't know where the nappies and all of those things were. I could hardly get out of bed, it was hard to lift her, all those sorts of things. But I think they were trying to limit their contact to bare necessities like your safety.* [But] *it made that part a little bit harder.* (Alix)

The women explained that by the staff limiting physical contact, they perceived their physical and parenting needs were not being met.

On my own

Many of the participants felt that they were on their own, with nobody to provide the help they needed, or to help look after the baby.

> *So I think that was probably the first kind of COVID thing for us, I woke up in the dark at whatever time of day it was, on my own, with just this baby in a bed and no information and no recollection really of what had happened.* (Alix)

Pascalle explained how she was unable to look after herself due to her surgery but also that the hospital staff were extra busy.

> *…then I was given a room,* [my husband] *had to go right away. So it was really hard for me to take care of myself. I was just in and out of consciousness and I couldn't sit up and all that kind of stuff after surgery, it's pretty, it's pretty difficult. So I signed a waiver and I just discharged myself the next day. Yeah I had, I needed care. And you know, the nurses were busy as nobody's husbands were there.* (Pascalle)

Clarissa experienced a postpartum complication, and required surgery. She explained her distress on having to leave her baby.

> *So, I went in for surgery at about 1pm, and the baby had to go to the nurses' station. Because no one can be there. And so then I was put under general* [anaesthetic] *and when I got back to the ward they said, 'oh, the baby's hungry' and then*

> *I was like, 'what?! I feel like I've just ran a marathon' and so then they said, 'oh, you have to feed' and then my milk wasn't in and it was all just, it was horrible. And then I said, 'where has the baby been?' … Wasn't nice to know your baby was with God knows who, when it,* [was] *less than 24 hours old.* (Clarissa)

The COVID-19 restrictions resulted in limited physical contact and interaction with hospital staff, and a disconnection from any physical or emotional support the partner may have been able to provide.

Released home

Women who have had a caesarean section usually remain in hospital for several days so that they can rest, have their post operation recovery monitored, and receive parenting support. Due to the limited practical help, some of the participants worked to secure their discharge as was the case with Brittany and Alix.

> *I buzzed in the midwife and she came in and I kind of asked what I had to do to get discharged and she ran me through it and said that ideally they'd want me to stay another night and that they, yeah there were a whole lot of things I had to tick off before and you know definitely not before the evening, they didn't want me discharged. So I asked again if, because of that, my partner could come back because I really wasn't coping. And they said 'no' and so at that point I just kind of, got determined to get myself discharged.* (Brittany)

> *I remember waking up at 5 o'clock in the morning and being, 'you need to take my catheter out, I need to be able to go for a poo, I need to be able to tick off all of these things because I'm not going to be allowed to leave otherwise and I don't want to stay here anymore'.* (Alix)

An ongoing emotional toll

Several women described how the separation from their partner and whānau in the hospital, during a time of extreme physical and emotional vulnerability, left an ongoing emotional impact.

> *It's really hard just to capture the emotional and mental toll of things … I guess all of those moments that you don't have a support person that you need. And actually, you only get that chance with a new baby once and so not having that kind of support there on what's already a challenging journey at times I think is really, really hard.* (Alix)

For some the postnatal experience continued to cause upset some weeks after the birth.

> *The bad thing is that I think that week, probably even though I am really quite happy and healthy now, it still really, really, it does lurk there.. Like I was driving to town the other week, I saw an ambulance and I burst into tears because I just all of a sudden think of that.* (Bree)

> *…it was the separation from my partner that I found really hard. And I still try not to think about it because I actually get quite upset about it. Yeah, probably the hardest thing I've ever done.* (Rebecca)

One participant explained how the emotional impact can also have a physical effect.

> *…being allowed support people in birth is seen as quite like, 'oh it's just women being emotional' but people don't realise how much your emotion and how comfortable you are and how secure you feel actually really impacts the medical outcomes of birth as well.* (Brittany)

The participants also identified the frustration their partners felt at being unable to provide any support or help.

> *I think for him seeing that that was taking a real physical and emotional toll on me and just having no ability to do anything or help really in any kind of practical way, was definitely the hardest.* (Alix)

Having support from partners/family/whānau at a time of vulnerability appeared to be essential to the emotional, cultural and physical health of these women and their babies.

An undisturbed space

Participants described how the requirement for households to isolate was a positive aspect of the COVID-19 restrictions once they returned home following the birth. At this time they were required to stay within their own bubbles, with visitors restricted. This meant that they were able to learn about their baby in an undisturbed space.

Undisturbed by visitors

There is often a balance that needs to be struck between being able to share your baby with family/whānau and friends, whilst also having private time to get to know the baby. Our participants described the valued opportunity to rest and recover at home following the birth without needing to worry about other visitors. As Cara stated: *…it meant that we didn't have all these people rushing in to disturb me and my partner with him…,* with Courtney echoing this sentiment: *If anything it was actually quite nice to not have unexpected visitors every day.* Being undisturbed by visitors was considered positive, alongside the use of scheduled video chats so that family/whānau and friends could see the baby when it suited the parents.

> *I was really happy to video chat with my family and show her off because you know I'd had a brand new baby who was gorgeous and rosy cheeked and everything and I wanted everybody to meet her but I was glad that she wasn't being handed from person to person.* (Pascalle)

Bond with the baby

The undisturbed space supported the parents to have time to get to know and bond with their baby. Brittany found it was nice *just being able to have heaps of time just mummy, daddy and baby,* and Cara identified the importance for her partner: *So* [my partner] *actually got to bond with the baby before he went back to work.*

Breastfeed in peace

For many of the women the restriction on visiting also appeared to be helpful when on their breastfeeding journeys, with Jaya saying: *I felt more rested than what I would have been, which is the only positive because when your milk comes in and you can feed your baby properly and you're not stressed out.* Participants explained that they could breastfeed without becoming stressed by being observed by others or by the interruptions visitors cause.

> *Yeah, I think that it was nice that I didn't have a million people coming around to see us because during, especially when I was having the troubles with breastfeeding, I think it would have been a million times worse with people coming over all the time.* (Suzy)

The lack of visitors also meant not having to worry about how the house looked or whether there was food for the visitors.

> *It was really nice, not having to worry about state of your house or what food you had in the house because you were having visitors come round and learning to breastfeed. I didn't have to learn to be discreet if that's what you choose and that's what you want but I could just do whatever I wanted and learn the way I liked without any feedback from anyone.* (Courtney)

The uninterrupted space supported the parents to learn about their baby, bond and breastfeed in a peaceful environment.

DISCUSSION

This study set out to explore women's experiences of their maternity care during the COVID-19 alert levels 3 and 4 lockdown periods in Aotearoa NZ. The findings provide an in-depth understanding of the experiences of the 17 participants. The participants described the importance of their relationship with their LMC midwife who was the main point of contact in the community, and able to provide advocacy, liaison and support between the woman and hospital services. This differs from other countries such as the UK, Australia and the United States (US). In the UK, during their periods of restrictions, there were substantial service changes with a 70% reduction in antenatal appointments, and a 56% reduction in postnatal appointments (Jardine et al., 2020). These service changes caused a number of unintended negative consequences with confusion over advice, along with distress and trauma (Sanders & Blaylock, 2021). A UK survey involving 1451 pregnant women, which explored perceptions of maternity care during the pandemic, found that virtual consultations were considered impersonal (Karavadra et al., 2020). Similarly, a survey of 388 people who gave birth in the US found that participants experienced insufficient physical and emotional support during their pregnancy and birth, with many also identifying loneliness, anxiety and stress (Breman et al., 2021). Likewise, in Australia, a survey of 3364 women's experiences of maternity care during the pandemic found that women felt distressed and alone due to the limited face-to-face contact with health professionals and other service changes (Wilson et al., 2021).

It would appear that the changes in service provision in Aotearoa NZ may have been mediated by the relationship women have with their community (LMC) midwife and the continuity of care these midwives provided. Crowther et al. (2021) examined relationships and social connectivity in the context of midwifery care in Aotearoa NZ and the COVID-19 pandemic, finding that the midwife was a major influencer and initiator for uninterrupted relational care at the frontline throughout the COVID-19 lockdown. Continuity of midwifery care is known to reduce interventions and increase maternal satisfaction with care, as well as increasing perceptions of trust, safety and quality of care (Fernandez Turienzo et al., 2021). It has also been found to moderate maternal stress during disaster events and improve infant neurodevelopment when mothers experienced disaster-related stress during pregnancy (Kildea et al., 2017; Simcock et al., 2018). Our study adds to this evidence by finding that continuity of midwifery care was important for the study women during the time of the pandemic and can moderate some of the distress and anxiety that restrictions in maternity care may cause.

Postnatal care in hospital

Restricting the presence of partners and whānau in the early postpartum period in hospital resulted in some of our participants not having their emotional, cultural and physical support needs met and, for some, led to early discharge home. This has also been identified in other studies. In the UK, Gray and Barnett (2021) found that lack of the physical presence of others, who are significant to the woman, during the postnatal hospital stay was considered challenging. This was compounded when there was also a lack of face-to-face support from health professionals. Sanders and Blaylock (2021), in their UK survey, found participants were unhappy whilst in hospital due to restrictive visiting policies, and others identified feeling lonely, frustrated and upset by a lack of staff to help them care for their new baby. Silverio et al. (2021) argue that partners should not be excluded and should be deemed essential in all aspects of maternity care.

The safety of women and hospital staff underpinned public health decisions during the pandemic, with the need to restrict visitors to decrease COVID-19 transmission. It could be argued that the lack of staff in the postnatal wards, alongside restricted companion/whānau support may also decrease safety–clinically, emotionally and culturally for women and their babies–and may also result in an increase in emotional trauma. Emotional and mental trauma can have longer term effects on the woman's and her partner's health, the mother-infant bond, early parenting interaction and a longer term impact on child development and health (Fernandes et al., 2021; Lalor et al., 2021; Lebel et al., 2020). It is now well documented that the pandemic increased depression and anxiety in the general population, as well as in specific populations–such as pregnant and parturient women (Czeisler et al., 2020; Lebel et al., 2020; Masters et al., 2021). A Canadian study explored levels of anxiety and depression for pregnant women during the COVID-19 pandemic during April 2020, finding substantial increases in clinically relevant symptoms of depression (37%), and anxiety (57%) in their cohort of 1987 pregnant women (Lebel et al., 2020). A survey of women in the US found that participants experienced insufficient physical and emotional support during their pregnancy and birth, with many also identifying loneliness, anxiety and stress (Breman et al., 2021).

There were three wāhine identifying as Māori in our study and a key factor for Māori is holistic health. This involves the recognition of the wider network of support structures such as whānau, hapū and iwi that assist and provide support for them when managing their health (MOH, 2014). By restricting the involvement of whānau, both during and following the birth, maternity services may have inadvertently exacerbated health inequity for Māori. The government approach to the pandemic has been criticised as being a "one size fits all" model which did not address specific Māori needs (Pihama & Lipsham, 2020). Te One and Clifford (2021) argue that Tikanga Māori and Māori leadership should be positioned at the centre of decision-making within health so that they can lead responses in future pandemic situations. This means including Māori in future response planning, and utilising cultural, social and political frameworks that consider the needs of Māori as tangata whenua who, Te One and Clifford maintain, "experience daily the failure of the current health system" (p. 97).

Despite the transmission risks involved in pandemics there is a need to balance optimal public health alongside optimal support for women during maternity care.

In future lockdown situations and despite the risks involved in transmission, the role of the partner in the early postpartum period will need to be recognised as an essential support for women. There is a need to balance optimal public health alongside maternal support following birth. Partners and whānau are important to maternal emotional and physical support and parental transition. Improved staffing within hospital postnatal wards should also be considered essential to ensure the physical needs of women and babies can be met. In Aotearoa NZ, the long term implications of

the restrictions on pregnant and birthing women and new mothers have not been explored and are not yet fully understood. Further research is required to identify and address the negative impacts of this pandemic and to reduce harm from restrictions imposed during future pandemics.

The undisturbed space

Participants in our study identified how the pandemic allowed an undisturbed space once they were home with their babies. This supported breastfeeding and bonding without the interruptions of visitors. Wilson et al. (2021) in their Australian survey also found that some women described visitor restrictions as beneficial, with more time to rest, establish breastfeeding and bond with their baby. Similarly, Gray and Barnett (2021), in their semi-structured interviews with 10 first-time mothers, found having fewer visitors enabled more time to attend to their babies and more time with their partners. In the UK, a survey of 1219 breastfeeding women found that 41.8% felt breastfeeding was protected due to lockdown (Brown & Shenker, 2020), which enabled more time to focus, more privacy, an increased ability to feed responsively (infant-cued feeding) and greater partner support. Conversely, 27% of their survey participants struggled to get support when breastfeeding, with insufficient professional support being one of the most common reasons for breastfeeding cessation. Lack of face-to-face support postnatally at home was also an issue identified by Gray and Barnett (2021) and by Wilson et al. (2021) in their Australian studies. Gray and Barnett (2021) concluded that the common challenges often experienced by new mothers were amplified by the pandemic and lack of face-to-face support. The move to online health service provision during the early days and weeks following birth has been criticised, with findings that some services in the UK have yet to fully re-establish face-to-face care provision (Best Beginnings, Home Start, & Parent-Infant Foundation, 2021). A UK report on the impact of the pandemic health service restrictions on families found that many of the usual support services for parents and their babies were unavailable. It highlighted the risks associated with moving away from face-to-face service delivery, particularly for babies and young children.

The participants in our study identified the need to stay in their bubble during their postpartum care, with the community (LMC) midwife considered part of this bubble and continuing to provide midwifery care in the woman's home. However, we also found that face-to-face service delivery appeared to cease for our participants once midwives were no longer involved in their care. This resulted in a gap of services provision for women and babies at a vulnerable time. Some of the participants described midwives stepping into this gap when necessary to ensure continued monitoring of health for vulnerable mother/baby dyads.

STRENGTHS AND LIMITATIONS

This study has provided an in-depth exploration of 17 women's experiences of their maternity care during the first COVID-19 lockdown in Aotearoa NZ in March 2020. As such, it provides rich information about these women's perspectives of their care. Our participants, albeit self-selected, were geographically diverse but may not represent the fuller diversity of maternity services users in Aotearoa NZ. Results cannot be generalised to the larger maternity population.

CONCLUSION

For this cohort, midwifery continuity of care appears to have supported them and their families during the changes to care provision throughout the COVID-19 lockdown. Midwives were trusted health professionals who often went above and beyond to fill gaps in health service provision, and ensure women's health needs were met.

Limiting partner and whānau access in the early postpartum period in hospital resulted in less emotional and physical support for women, and led to some choosing early discharge home. For some women there was an ongoing emotional impact from this time. Despite the transmission risks involved in pandemics there is a need to balance optimal public health alongside optimal support for women during maternity care. The woman's partner, or other primary support person, and whānau should be considered essential and should not be excluded from early postpartum hospital care.

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The authors acknowledge that we did not specifically ask our participants about their gender identity. Our use of the word "women" in this article therefore includes all pregnant people.

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The authors state that there are no conflicts of interest.

Key points

- Midwifery continuity of care continued during the COVID-19 pandemic lockdown but was adapted to minimise the risk of transmission.
- Postnatally, restrictions and separation from partners/whānau left some women feeling anxious, alone and eager to be discharged from hospital.
- Participants valued the continued relationship with their midwife, who supported them to have as positive an experience as possible.

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