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Care, connection, and social distancing: The challenges of baby loss during the COVID-19 pandemic in Aotearoa New Zealand

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ABSTRACT

Problem: The COVID-19 pandemic hindered access to routine healthcare globally, prompting concerns about possible increases in pregnancy loss and perinatal death.
Background: PUDDLES is an international collaboration exploring the impact of the COVID-19 pandemic on parents who experience pregnancy loss and perinatal death in seven countries, including Aotearoa New Zealand.
Aim: To explore parents' experiences of access to healthcare services and support following baby loss during the COVID-19 pandemic in Aotearoa New Zealand.
Methods: We conducted in-depth, semi-structured interviews with 26 bereaved parents, including 20 birthing mothers, and six non-birthing parents (one mother and five fathers). Types of loss included 15 stillbirths, four late miscarriages, and one neonatal death. Participant ethnicities were broadly representative of Aotearoa New Zealand's multi-ethnic society. Data were analysed using Template Analysis.
Findings: Analysis revealed five themes relating to pandemic impact on bereaved parent's experiences. These were: 'Distanced and Impersonal care'; 'Navigating Hospital Rules'; Exclusion of Non-birthing Parents; 'Hindered Access to Social Support'; and 'Continuity of Relational Care'.
Discussion: The COVID-19 pandemic exacerbated isolation of bereaved parents through perceived impersonal care by healthcare professionals and restrictions on movement hindered access to social and cultural support. Compassionate bending of the rules by healthcare professionals and community postnatal visits by continuity of care midwives following the bereavement appeared to be mitigating factors.
Conclusion: Social isolation is an added challenge for parents experiencing baby loss during a pandemic, which may be mitigated by flexible and compassionate care from healthcare professionals, especially continuity of care midwives.

Statement of Significance

Problem or issue

Perinatal bereavement has significant negative impacts on parents. The effects of health service disruption during the COVID-19 pandemic on care and support of parents bereaved by baby loss is unknown.

What is already known

Sensitive and empathic care from healthcare professionals and social support help parents to negotiate their journey through grief and loss associated with perinatal bereavement.

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What this paper adds

The COVID-19 response, including restrictions on movement, impacted negatively on parents' experience of perinatal loss during the pandemic in Aotearoa New Zealand. Compassionate healthcare professionals, including continuity of care midwives, were mitigating factors.

1. Introduction

Perinatal death has both immediate and long-term negative impacts on bereaved parents. These include high rates of negative psychological symptoms including depression, anxiety, post-traumatic stress, and suicidal ideation [1]. Acute grief usually reduces in intensity or resolves within six months of a loss as the bereaved person integrates grief into their daily lives [2]. Compared to other types of loss such as death of a spouse or parent, rates of complicated grief, where intense grief persists beyond six months, and lead to functional impairment, are higher in perinatal bereavement [3]. Parents also experience negative social impacts of perinatal bereavement including relationship breakdowns, stigma, and greater financial impacts compared with a live birth [4]. Important protective factors for preventing complicated grief following pregnancy loss and perinatal bereavement are respectful and compassionate care provision by healthcare workers around the time of the bereavement, and good social support in the period following [5]. Quality perinatal bereavement care is well described in the literature but parent's access to such care is highly variable [6]. In addition, many bereaved parents experience loneliness, due to a lack of understanding in the community of the impact of perinatal death, minimisation of the loss, and disenfranchised grief [7].

The COVID-19 pandemic impacted healthcare delivery and access globally through prioritisation of the COVID-19 response over routine healthcare and limiting of face-to-face contact in favour of telehealth options. In addition, care was often delayed or deferred by patients themselves due to concern about pressure on healthcare services, or fear of exposure to COVID-19 [8]. Early in the pandemic, indications of an increase in stillbirths was seen in some settings, potentially due to these factors [9,10]. In response to an anticipated negative effect of the pandemic on access to quality maternity care and in particular bereavement care, The Centre of Research Excellence in Stillbirth (Stillbirth CRE) in Australia initiated a multi-country online survey:' Continuing care in COVID-19 Outbreak: A global survey of new and expectant parent's experiences' (COCOON) [11]. As part of the COCOON collaboration a nested qualitative interview study called 'Parents who suffer pregnancy loss and whose babies die during the pandemic: a qualitative study of late-term miscarriage stillbirth and neonatal death' (PUDDLES) was devised involving seven countries participating in the larger COCOON collaboration [11,12]. This paper reports on the findings of the PUDDLES study in Aotearoa New Zealand.

Two unique features of the Aotearoa New Zealand context are important to bear in mind for this study. First, the pandemic response in Aotearoa New Zealand was highly stringent by global standards according to Oxford University's COVID-19 Government Response Stringency Index [13]. As a result, case numbers and deaths from COVID-19 during the study period were significantly lower than most developed countries [14]. Second, maternity care in Aotearoa New Zealand is based on a continuity of care model whereby citizens and permanent residents can access free community-based lead maternity care (LMC) providers, over 90% of whom are midwives [15]. LMC midwives manage the primary maternity care and co-ordinate referrals and transfers to hospital-based secondary or tertiary care when required. They provide a minimum of 7 postnatal visits, 5 of which must be in the woman's home [16]. During the COVID-19 mandated restrictions, LMC midwives were advised to continue providing face-to-face antenatal and postnatal care in the community. However, they were provided with personal protective equipment (PPE) and advised to shorten length of visits and replace in-person visits with telehealth care where physical assessment was not required [17].

2. Participants, ethics, and methods

2.1. Participants and recruitment

Bereaved parents were invited to participate in this qualitative study after indicting willingness to participate in an interview following 1) completion of the COCOON international survey or 2) invitation via on an online bereaved parent support group (Sands NZ). Participants in this study were 26 parents who had experienced baby loss during the COVID-19 pandemic in Aotearoa New Zealand. Types of baby loss included stillbirth (n = 15; defined as death of a baby in utero from 20 weeks gestation or 400 gm); late-miscarriage (n = 4; miscarriage at 14 weeks to 19^{+6} weeks gestation); and neonatal death (n = 1; death of a neonate within six weeks of birth). [18] Parents bereaved through medical termination of pregnancy were eligible to participate. Participant ethnicities were broadly representative of New Zealand's multi-ethnic society comprising New Zealand European (n = 15), Other European (n = 4), Māori (n = 3), Pacific Peoples (n = 2), and South Asian (n = 2).

2.2. Ethics

For this study we convened an advisory group called The Baby Loss during Covid in Aotearoa Research Group to provide feedback on key documents associated with the study and the analysis at various stages and ensure cultural safety and consumer engagement. This advisory group included health professionals and bereaved parents of Māori, Pacific, South Asian, and European ethnicity. Ethical approval for the study was obtained from. Participants were deidentified and detailed demographic data have deliberately not been presented to preserve the confidentiality of participants.

2.3. Data collection

We conducted in-depth, semi-structured interviews with bereaved parents via zoom video-call technology in Aotearoa New Zealand between July 2021 and November 2021. A total of 22 interviews were conducted with 26 bereaved parents including 18 with birthing mothers, 4 with couples, and 2 with non-birthing parents (one father and one mother from a same-sex couple). Interviews lasted between 25 and 113 min (M_{Time} = 65 min) and were recorded for later transcribing. Interviews were conducted according to an interview schedule which had been developed for the Global PUDDLES Collaboration, and subsequently adapted to the Aotearoa New Zealand context.

2.4. Data analysis

Interview data were analysed using a template analysis [19]. Template analysis is a method of qualitative analysis that is philosophically flexible, but highly methodical. It follows a six-stage process: 1) Re-familiarisation with the data; 2) Preliminary Coding; 3) Organisation of themes; 4) Defining the template; 5) Application of the final template to the full dataset; and 6) Finalisation of the template definitions. Template analysis was selected as there were already themes published from the PUDDLES-UK data [12] and analysis of PUDDLES-NZ data was based on these key areas of interest.

Interviews were transcribed verbatim by a professional transcriber. Interview transcripts were hand-coded in Microsoft word utilising key points of interest in relation to the *a priori* themes of 'potential impact of pandemic disruption access to maternity care, bereavement services, social support and returning to the workplace'. All transcripts were re-read to re-familiarise with the data. A subset of six interview transcripts that included different types of loss were selected for preliminary

coding. From this initial coding the researchers' met, and through discussion generated a template which was subsequently used when coding the remaining interviews. During this iterative process the template developed during the preliminary coding was further refined to reflect the researchers' interpretations of the data. All transcripts were individually coded twice by two members of the research team who met regularly with the wider team to discuss and agree on the refinements of the template. Member checking occurred in the form of feedback sought on the emerging themes at the preliminary coding and initial framework stages from the advisory group, and from a third researcher. Finally, transcripts were compared to ensure the most illustrative quote was selected for each theme and are presented in the findings below.

3. Findings

Analysis of the interview data revealed five themes relating to pandemic impact on bereaved parent's experiences. These were:

1. Distanced and Impersonal care
2. Navigating Hospital Rules
3. Exclusion of Non-birthing Parents
4. Hindered Access to Social Support
5. Continuity of Relational Care

3.1. Distanced and impersonal care

Participants described how COVID-19 mitigation measures in the healthcare system impacted on how care was provided, resulting in a perception of distanced and impersonal care (Table 1.). COVID-19 policies that impacted most on participants' experiences included companion restriction during hospital appointments and ultrasound scans; shortened antenatal visits; health professionals' use of face-coverings; and rigid maintenance of social distancing guidelines.

The distant nature of the care created barriers for the development of interpersonal relationships during antenatal care. For one pregnant woman with a hearing impairment, inability to see the midwife's face made communication harder. The impersonal effect of brief and distanced interactions with healthcare services compounded the difficulty of receiving the news that their baby had died or may not survive. Even empathic and professional communication at the time of diagnosis of fetal death could still be isolating for the pregnant woman when the clinician was masked, maintained social distancing, and no support person could be present. The impact of physical distancing was not only felt within the healthcare environment, but also extended to funeral homes.

3.2. Navigating hospital rules

Navigating hospital rules was an additional source of stress for many which included needing to negotiate the presence of family members and access to bereavement support at critical time periods. Furthermore, despite the healthcare system permitting one companion to support a woman during labour and birth in New Zealand maternity facilities, many parents were fearful that authorisation would not be given or may be suddenly withdrawn.

Participants described hospital staff having to make extra efforts to reach bereavement support volunteers for memory making, as some were unable to attend due to pandemic restrictions. This staff commitment resulted in all participants reporting that they had photos or some other opportunities to create mementoes, with many describing their appreciation of the volunteers who still came. However, facility restrictions on attendance of support people in the postnatal period precluded some family members from having the opportunity to meet and hold the baby who had died. Midwives often made compassionate exceptions or bent the rules to ensure family members could be present. (Table 2.)

3.3. Exclusion of non-birthing parents

Most women in this study indicated their partner was their best form of support through the loss. However, the exclusion of non-birthing parents from antenatal assessments and ultrasound scans due to pandemic restrictions impacted on parents shared experience of the pregnancy prior to the loss. Some mothers pointed out that their partner felt less attached to the baby because they had been prohibited from attending ultrasound scans during the pregnancy. Furthermore, first-time parents were not able to participate in face-to-face antenatal classes, resulting in the couple missing a shared rite of passage to parenthood. This also meant that they missed the opportunity to form in-person relationships with other expecting parents, adding to their sense of isolation.

For pregnant women, being informed that their baby had died whilst alone compounded the distress of hearing this news. In some such instances, partners were waiting outside in car parks and so were unable to provide immediate comfort, which was traumatic for both parents. In other cases, women had to drive themselves home in a state of shock to deliver the devastating news to their partner. Restriction of partners' attendance at healthcare contacts other than labour and birth also left women without support at other junctures, such as when receiving information about their care options. Women often relied on partners to take in important information relating to the pregnancy and to share in the decision-making about ongoing care. Exclusion from these care contacts was frustrating for the non-birthing parents as it impeded their ability to provide support and be supported. (Table 3.)

Table 1
Theme 1: Distanced and Impersonal Care.

Theme 1: Distanced and Impersonal Care
Exemplars
"I did find it hard with the [COVID-19] restriction … I was still able to see her [midwife] face-to-face, but they [the visits] were cut real short and she was wearing full-on mask and stuff and I found it hard because I felt like it was impersonal. And because I am partially deaf, I found it quite hard to hear her as well, so I didn't want to initiate conversation because I felt like I sort of lost a little bit of the relationship with her."
-Mother, Stillbirth, New Zealand European
"I think the main thing that would have changed [the experience] would have been having someone there at the scans. So, that I had someone there to be able to drive me home, or comfort me, be able to give me a hug …My poor obstetrician had to say sorry from a distance. I don't know that he would have hugged me anyway, but it just felt strange there had to be distance between us."
-Mother, Stillbirth, Other European
"Yeah, it was a weird feeling. It felt like they were trying to get you out as quickly as possible, and I understood that, at the time, didn't really want to be in contact with people for long periods of time. But I have felt before that perhaps they cared more for the protocols than for the care of the actual patients at the hospital."
-Mother, Stillbirth, New Zealand European
"…So he came in like this tiny wee box, which we were sort of prepared for, but it was still quite confronting and it was quite hard because when we got to the funeral home, there was just one lady there and she basically placed this cup on the bench and then stood sort of a distance away. So, we didn't even get him given to us, which I would've obviously preferred, not just this. So that was quite hard in itself."
-Mother, Late miscarriage, New Zealand European

Table 2
Theme 2: Navigating Hospital Rules.

Theme 2: Navigating Hospital Rules
Exemplars
"I was aware of the lockdowns and one of my worries was, oh my gosh, am I going to have to give birth alone? Is my partner going to have to leave the hospital after like two hours? Yeah, that was definitely a worry for me. It was like, if lockdown comes back, I don't know how… Because my partner had been saying, 'even if there is lockdown in place I'm not leaving, they're going to need security to drag me' out sort of thing. -Mother, Stillbirth, New Zealand Māori
"I had another charity… where they take the photos of your baby, and they still came in lockdown and did that with me. Yeah. So, I didn't miss out on that. That's what I was really worried about. I was really worried about not getting photos done, but they were really good. They still came, they wore a mask and yeah, it was fine." -Mother, Stillbirth, New Zealand European
"So we were quite lucky that from what I understand, they initially weren't going to let us have any visitors, but my midwife, she was very vocal and strong behind the scenes and she really pushed for us. So, we were very, very lucky that we were able to have a couple of really close people like parents and siblings to come meet him because that was something really important to us and it was really important for them. So, we feel quite lucky that our midwife sort of fought for us and then they understood the circumstances." -Mother, Stillbirth, New Zealand European

3.4. Hindered access to social support

Support from wider family was critical to coping during the immediate period after the loss. Families and friends offered practical support in terms of bringing meals, assisting with arrangements with funeral directors and around memorial activities. However, for some participants in this study, restrictions on travel within New Zealand during periods of COVID-19 government mandated lockdowns prevented this critical support.

Closure of the international border also meant overseas family could not travel to New Zealand. This compounded the grief for some parents by adding to feelings of isolation and loneliness. Many were able to maintain some access to overseas family support via video technology, including one Māori mother whose family provided karakia (ritual chant to invoke protection) during labour via video link. However, the physical presence of family was still greatly missed.

Funeral rites and mourning activities were another feature impacted by restrictions on movement. One couple returned from hospital following the birth of their stillborn baby to a strict lockdown. They described how this limited their ability to engage in mourning activities, such as not being able to print photos of their baby or join with family and friends for a memorial and intensified their isolation and grief.

However, the impact of restrictions on movement was not always negative. In some cases, there was a silver lining in that bereaved parents could use it to manage visitors when they needed some privacy. Participants, both mothers and fathers, spoke about lockdowns or working from home allowing them more time to adjust to their grief before being expected to be physically back in the workplace. Indeed, many interviewees reported that they needed more time off than they had anticipated, and pandemic restrictions made this easier to do without having to explain to their employers why they were not ready to return to the workplace. The pandemic also offered a shared topic of conversation with others that parents could use to deflect from intrusive conversations about their loss. (Table 4.)

3.5. Continuity of relational care

Continuity of relational care by LMC midwives was beneficial for those receiving this care. LMC midwives helped to smooth arrangements with the hospital along the bereavement journey and were often present for the baby's birth or soon after. During hospital stays, exposure to a range of different healthcare professionals over several days could not always be avoided. However, some parents noted efforts by obstetricians to check in on them outside of their shift and appreciated hospital midwives' rearranging rosters so that a known midwife could care for them during the birth. These efforts to ensure continuity and deliver relational care were seen as validating and compassionate.

Most participants in this study received postnatal home visits by an LMC midwife over the six-weeks following birth, which was a significant source of comfort. Participants explained that the midwife took care of both physical and psychosocial needs, providing 'pastoral care'. LMC midwifery support came in the form of reassuring women that their reaction to the loss was normal, debriefing about events around the birth, making referrals for counselling, following up on the results of investigations at the hospital, and simply being there to listen. For these women the relationship that had been formed with their midwife prior to and during the birth was key and mitigated some of the social isolation experienced.(Table 5)

4. Discussion

This study adds important insights into perinatal bereavement care in the Aotearoa New Zealand context during the COVID-19 pandemic. We found five major themes. Four were related to pandemic restrictions and included the challenges of distanced and impersonal maternity care, navigating hospital rules, exclusion of non-birthing parents, and hindered access to social support. The final novel theme was the benefit of relational care for bereaved parents. Although this study has focussed on the impacts of the pandemic on parents' experience, the degree to which

Table 3
Theme 3: Exclusion of Non-birthing Parents.

Theme 3: Exclusion of Non-birthing Parents
Exemplars
"I had to go on my own [for the 20-week anatomy scan], which I was terrified about. Having had two previous miscarriages, I was terrified of going on my own. And my husband hadn't been to any of the scans yet, so he hadn't seen her, or met her, so he wasn't attached yet. So, we had plans for that 20-week scan, he will come along and see her so that he got attached. But obviously that was unable to happen. And then the subsequent scan at 23 weeks when I found out she had passed, I had to be on my own, which again was devastating finding that out and then having to drive home on my own, was devastating." -Mother, Stillbirth, New Zealand European
Yeah, I was in the wait room one day with a woman that was crying because she'd been in lockdown for three weeks, pregnant by herself, and hadn't had contact with anybody else. And yeah, it was hard. We didn't really know what to expect. And I don't drive a lot, so my partner would always drive me to the appointment, but then wasn't allowed to come in. And he is usually the one that asks the questions, I just assumed [incorrectly] that everything was fine." -Mother Stillbirth, New Zealand European
It was really hard, leaving [my wife], but I also didn't want to cause a fuss and make anything any more stressful for her. And I obviously understand why you've got to go, but yeah, that was the point where [baby] was almost definitely going to pass, but there was still that slight uncertainty. And [wife] was still getting sicker. And I was only away from her for a few hours, but I think both of us found that particularly stressful… because I had to be involved in all the decisions - and was being pushed to make a lot of the decisions - but then I also had to keep leaving. -Non-birthing mother, Stillbirth, Other European

Table 4
Theme 4: Hindered Access to Social Support.

Theme 4: Hindered Access to Social Support
Exemplars
"And then my brother and his wife, and their two littlies live in [other country] and because of COVID they weren't able to come home. When we told them something was wrong… They said, "All we want to do is come home and be with you and support you, but we can't…". I totally understood that, but you're having to Zoom call your brother on the other side of the world, and I don't think I've ever seen my brother cry before, he was sitting at his work desk bawling his eyes out as we told him that their niece wasn't going to survive, we'd chosen to terminate. That broke my heart even more." -Mother, Stillbirth, New Zealand European
"I also rang someone from the Māori health unit. So, I rang them, because I knew them. I said I need a kaumātua (respected tribal elder) because my dad's going to be on Zoom and I need a kaumātua to do the blessing…They [my parents] would have come, but it was such a high risk that if COVID happened, they wouldn't have been able to get back. They couldn't come, which was really hard, because I'm probably closest to my parents … they've been instrumental in helping me raise my kids…They are my people. So, it was awful not to have them here. -Mother, Neonatal Death, Māori
"So, we're just waiting [for lockdown to end]. Restrictions are not easy. Because we need to do something, or go out, or go someplace nice and just think about him. But we can't get out of the house. So, I guess these restrictions actually play a big role in our mental health. After this kind of event, this kind of tragedy. It's not easy." -Mother, Stillbirth, South Asian
"I'm so grateful for lockdown right now because I can say it's just a big topic that's happened, that everyone can talk about. It's something else for me to talk to people about. I don't have much else happening to me at this moment, this [the loss] is consuming. I can say, 'Oh, enough about me, how was your lockdown?' Pivot. Just something to keep me from having to keep going down this track time and time again." -Mother, Stillbirth, New Zealand European

Table 5
Theme 5: Continuity of relational care.

Theme 5: Continuity of Relational Care
Exemplars
"I think she (LMC Midwife) went over-and-above what would be expected anyway, she met us in the hospital each time there was a problem. She stayed overnight through the whole labour. She came in to see us again once [my baby] was born and then passed, just to make sure we were ok. And then she came to see us at home once a week for six weeks. And I think that kind of continuative care, and someone who knew us, and we didn't have to keep repeating the story and things as well, was really helpful." -Non-birthing Mother, Stillbirth, Other European
"I think the midwife, I just can't fault her… There was no question that was a silly question. With her, there was just no timeframe. She wasn't rushed. All the emotions that I was feeling, she just let me know that was all okay, it was normal. She asked me if I had the right supports in place. And she actually did home visits after, I think after I had been discharged from her care, she still came past. She lives close to where we live. Just a one-off visit just to see how we were going as well. And I really appreciated that." -Mother, late miscarriage, New Zealand European
"I kind of feel like, although we had an overall pretty positive experience, that was on us and the way we prepared and the way our midwife prepared us… she probably wasn't expecting me to give birth so early or so quickly, but she was coming round in the following days. Yeah, I don't know, she's just really great. At that point, it was pretty much just pastoral care. I wasn't her patient anymore, but she was just coming round and checking on us, and seeing how we were doing, and just having a cup of tea, which was really nice." -Mother, Stillbirth, Other European
''I felt quite lonely afterwards not having an LMC [midwife] to talk to or connect with… If I had an LMC [midwife] or someone that I could talk to, then I could have called them. Yeah, I think I just would have loved to have had a midwife … for those six weeks afterwards, just to talk to … it was really hard." -Mother, Stillborn, Pacific

participants were impacted by the pandemic depended on timing of key events along the care continuum in relation to the government mandated lockdowns and periods of greater restriction. Because the pandemic related restrictions in Aotearoa New Zealand were stringent but intermittent, for many women the impact of the pandemic appeared to be minimal. Rather than COVID-19 dominating the experience, it instead formed a backdrop to the tragedy of their baby's death which overshadowed all else.

Because COVID-19 case numbers were so low in Aotearoa New Zealand during the period of the study [14], negative impacts of the pandemic described in this study related primarily to barriers to social and humanised interaction with healthcare providers. This was particularly so in hospital settings due to restriction of attendance by non-birthing parents and other social support due to lockdowns. A positive aspect was advocacy by the midwives around hospital rules, and continuity of LMC midwifery care for postnatal home visits following the loss, which went some way towards mitigating the social isolation.

Our finding that the COVID-19 response contributed to a perception of impersonal care by bereaved parents agrees with reports in the UK [12] and Australia [20]. Sensitive and empathic communication by healthcare professionals as well as acknowledgement of the loss is essential for quality bereavement care [6]. We found social distancing and PPE were a barrier to humanised social interaction between care providers and bereaved parents, and while this was accepted as necessary by most, there were times when the need for measures of such stringency was questioned.

We found that the physical presence of family members around the time of the loss was missed by bereaved parents, something which was only partially mitigated by use of video technology. It is well established that bereaved parents with greater social support are less likely to experience complicated grief and other negative psychological sequelae of a perinatal death [21]. Parental loneliness following perinatal death is common due to minimisation of perinatal death, and the hidden nature of the loss in that the child who has died is not known by wider social networks, [22] which may have been exacerbated by the pandemic.

Grandparents and other family members are also impacted by perinatal death and their inclusion in bereavement care is beneficial to both extended family and to the parents themselves [23]. It is understood that the time with the baby is very short in the instance of stillbirth and so there is only 'one chance to get it right' and create memories for the family of their loved one [6]. In this study, hospital staff and LMC midwives at times bent the rules by facilitating visits with the baby by siblings, grandparents, and other family members, which was very much appreciated.

Contrary to this, participants reported a greater degree of reluctance to such rule-breaking when it came to antenatal visits and ultrasound scans, from which partners were almost wholly excluded. This acted as a significant stressor for both parents. In some cases, the feeling of attachment between father and baby was reportedly lower than in previous pregnancies. Although fathers and non-birthing parents were ostensibly excluded due to pandemic restrictions, this is not something unique to the COVID-19 pandemic. Lack of facilities for and inclusion of partners in perinatal bereavement care has been highlighted by others [24–27].

In this study, the non-birthing parent's presence was desirable for recall and comprehension of critical information and for decision-making about ongoing care. It is well established that the immediate shock of experiencing death of a baby impairs parent's ability to process

information and make decisions, therefore it is recommended that care providers allow parents time to take-in information and consider their options [28]. Separating bereaved parents from one-another at these critical junctures is likely to impact negatively on information sharing and decision-making [29].

Unique to this study was that ongoing provision of relational care by LMC midwives during the six-weeks following the bereavement offered parents much needed postpartum support. This finding aligns with previous research demonstrating that continued contact after perinatal loss is a source of comfort for parents and healthcare providers [30]. Yet, ongoing care both physical and psychosocial following perinatal bereavement has been highlighted in several studies as inadequate, with parents frequently reporting feeling abandoned [12,31,32]. Our study suggests that the beneficial effects of home visiting by a continuity of care midwife following a perinatal death may be an underreported benefit of midwifery continuity of care.

A strength of this study is the pragmatic yet methodical approach to gleaning and presenting first-hand impacts of the pandemic disruption on parents in Aotearoa New Zealand who suffer perinatal bereavement. Limitations of this study include aggregation of the findings pertaining to a range of types of loss with highly variable and contextualised experiences, and uneven representation of birthing and non-birthing parents. A further limitation is that it was focussed on impacts of the COVID-19 pandemic on parents who experienced baby loss, yet participant accounts revealed highly variable quality of bereavement care unrelated to the pandemic. Negative experiences not related to the pandemic were significant and included delays in being able to access the hospital for those without an LMC midwife, insensitive or clumsy communication by healthcare personnel, lack of access to a designated bereavement room, lack of navigational support to access funeral services, cost of funeral services, and a paucity of professional psychological follow-up.

Further interview-based studies by the PUDDLES Global collaboration are anticipated to highlight bereaved parents care experiences and needs during a health crisis in a range of country settings. Meanwhile, strengthening of existing perinatal bereavement care systems should be a priority to ensure optimal care for all parents following pregnancy and perinatal loss.

5. Conclusion

The pandemic health system shock of COVID-19 exacerbated negative impacts of perinatal loss for bereaved parents in Aotearoa New Zealand. Flexibility and compassion by healthcare professionals, and particularly the maintenance of continuity of relational care afforded by the extant model of midwifery continuity of care in the country, offered some mitigation of these negative effects. The exclusion of non-birthing parents from the care was a particularly difficult aspect contributing to divergent experiences of the loss and additional distress for both parents. Better understanding of the psychosocial needs of bereaved parents, including non-birthing parents and wider family members will help healthcare services to improve the quality of perinatal bereavement care and minimise negative impacts of future health system shocks on bereaved parents.

Ethical approval

Ethical approval for the study was obtained from the Victoria University of Wellington Human Ethics Committee approval #29246.

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CRediT authorship contribution statement

Billie F. Bradford: Conceptualisation, Resources, Data curation, Formal Analysis, Supervision, Funding acquisition, Investigation, Visualization, Project administration, Writing – original draft. **Robin S. Cronin:** Conceptualisation, Resources, Formal Analysis, Funding acquisition, Visualization, Writing – review & editing. **Tosin Popoola:** Conceptualisation, Resources, Formal Analysis, Funding acquisition, Visualization, Writing – review & editing. **Nicola Bright:** Validation, Writing – review & editing. **Sergio A. Silverio:** Conceptualisation, Resources, Formal Analysis, Supervision, Funding acquisition, Validation, Investigation, Methodology, Writing – review & editing.

Declaration of Competing Interest

None of the authors have any competing interests to declare.

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To honour the memory of the precious babies who passed away some of their names are recorded here (with parental permission); Quinn, Peter Pan, Bonsai, Tadpole, Anárion, Willow, Ezra, Max, Edith, Susana, Rossi May, Button, Hunter, Loki, Willow.

Contributors

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