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Mixed-methods – Care & outcome after stillbirth

Care in subsequent pregnancies following stillbirth: an international survey of parents

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Objective To assess the frequency of additional care, and parents' perceptions of quality, respectful care, in pregnancies subsequent to stillbirth.

Design Multi-language web-based survey.

Setting International.

Population A total of 2716 parents, from 40 high- and middle-income countries.

Methods Data were obtained from a broader survey of parents' experiences following stillbirth. Data were analysed using descriptive statistics and stratified by geographic region. Subgroup analyses explored variation in additional care by gestational age at index stillbirth.

Main outcome measures Frequency of additional care, and perceptions of quality, respectful care.

Results The majority (66%) of parents conceived their subsequent pregnancy within 1 year of stillbirth. Additional antenatal care visits and ultrasound scans were provided for 67% and 70% of all parents, respectively, although there was wide variation across geographic regions. Care addressing psychosocial needs was less frequently provided, such as additional visits to a bereavement counsellor (10%) and access to named care provider's phone number (27%). Compared with parents whose stillbirth occurred at ≤ 29 weeks of gestation, parents whose stillbirth occurred at ≥ 30 weeks of gestation were more likely to receive various forms of additional care, particularly the option for early delivery after 37 weeks. Around half (47–63%) of all parents felt that elements of quality, respectful care were consistently applied, such as spending enough time with parents and involving parents in decision-making.

Conclusions Greater attention is required to providing thoughtful, empathic and collaborative care in all pregnancies following stillbirth. Specific education and training for health professionals is needed.

Keywords Epidemiology, management, psychosocial/psychology, recurrence, stillbirth, subsequent pregnancy.

Tweetable abstract More support for providing quality care in pregnancies after stillbirth is needed.

Plain Language Summary

Study rationale and design

More than two million babies are stillborn every year. Most parents will conceive again soon after having a stillborn baby. These parents are more likely to have another stillborn baby in the next pregnancy than parents who have not had a stillborn baby before. The next pregnancy after stillbirth is often an extremely anxious time for parents, as they worry about whether their baby will survive. In this study we asked 2716 parents from 40 countries about the care they received during their first pregnancy after stillbirth. Parents were recruited mainly through the International Stillbirth Alliance and completed on online survey that was available in six languages.

Findings

Parents often had extra antenatal visits and extra ultrasound scans in the next pregnancy, but they rarely had extra emotional support. Also, many parents felt their care providers did not always listen to them and spend enough time with them, involve them in decisions, and take their concerns seriously. Parents were more likely to receive various forms of extra care in the next pregnancy if their baby had died later in pregnancy compared to earlier in pregnancy.

Limitations

In this study we only have information from parents who were able and willing to complete an online survey. Most of the parents were involved in charity and support groups and most parents lived in developed countries. We do not know how well the findings relate to other parents. Finally, our study does not include parents who may have tried for another pregnancy but were not able to conceive.

Potential impact

This study can help to improve care through the development of best practice guidelines for pregnancies following stillbirth. The results suggest that parents need better emotional support in these pregnancies, and more opportunities to participate actively in decisions about care. Extra support should be available no matter how far along in pregnancy the previous stillborn baby died.

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Introduction

Globally, around 2.6 million third-trimester stillbirths occur every year.[1] These deaths are associated with enduring psychosocial and economic consequences.[2–4] The risk of stillbirth and other related pregnancy complications[5] is increased for parents who have had a previous stillbirth; a systematic review including over three million women showed an almost five-fold increased risk of stillbirth among women in high-income countries with a previous stillbirth from any cause.[6]

There is currently little evidence to guide clinical management of pregnancies subsequent to stillbirth.[7–10] Women often want increased antepartum surveillance and early birth in these pregnancies,[11] but in many cases the medical benefits of such practices remain uncertain. In addition to recurrent stillbirth, previous stillbirth is associated with various adverse pregnancy outcomes.[5,12,13] some of which may be iatrogenic.[14] In one study, increased surveillance and early birth were commonly recommended by obstetricians for pregnancies subsequent to unexplained stillbirth, regardless of the presence or absence of (other) obstetric risk factors.[14] The Royal College of Obstetricians and Gynaecologists recommends that decisions for scheduled birth following unexplained stillbirth consider the gestational age of the previous stillbirth, previous intrapartum history, and the safety of induction of labour.[15] Similarly, the American College of Obstetricians and Gynecologists encourages clinicians to balance the benefits of early delivery with its potential risks to mothers and babies.[10]

In addition to specialised clinical care subsequent to stillbirth, it is critical to address parents' unique psychosocial needs. Pregnancies subsequent to perinatal death are often characterised by intense anxiety, fear and other complex emotional responses.[2,4,16] Many women doubt their capacity to maintain a healthy pregnancy, and some may refrain from attachment to their baby as a coping mechanism.[2,4,16] Indeed, disorganised attachment is more common among infants born subsequent to stillbirth,[17] and this may have extended adverse consequences for families.

It is clear that, in pregnancies after stillbirth, expectant parents may benefit from specialised clinical care and emotional support. The aim of this study was to assess the frequency with which additional clinical care and psychosocial support were provided in pregnancies subsequent to stillbirth, and to assess parents' perceptions of the extent to which they received quality, respectful care. We also explored whether the provision of additional care in

subsequent pregnancies differed depending on the gestation of the previous (hereafter 'index') stillbirth.

Methods

Data collection involved a large-scale, multi-language web-based survey of bereaved parents developed as part of *The Lancet* series on Ending Preventable Stillbirths (see Flenady et al.[18] for methods). A section of the survey was devoted to care during pregnancies subsequent to stillbirth, which was made available to parents who responded 'Yes' to 'Have you had another pregnancy since your baby was stillborn?' Categorical items assessed obstetric characteristics of the subsequent pregnancy, provision of additional care in the subsequent pregnancy, and perceptions of quality, respectful care in pregnancies subsequent to stillbirth (see subheadings below). Additional open-ended items assessed parents' perceptions on the most important aspects of care in their subsequent pregnancy and how their care could have been improved (not reported in this manuscript). Parents who had had more than one subsequent pregnancy after stillbirth were asked to answer questions with regard to their first subsequent pregnancy. Because of the recruitment method adopted in this study, we could not determine the total number of parents who received a survey invitation (denominator), and therefore the overall response rate is unknown.

Provision of additional care

Parents were asked via one categorical item whether they received any additional care (beyond standard antenatal care in their setting) in their subsequent pregnancy. Response options included additional antenatal care visits; additional ultrasound scans; the option for early (scheduled) delivery after 37 weeks of gestation; additional emergency room visits; additional visits to a bereavement counsellor; provision of a named care provider's phone number; and specialist antenatal classes for bereaved parents. Parents could select all options that applied, along with an 'other' option with space for free-text. 'Unsure' and 'I prefer not to answer' response options were also provided. Google Translate software was used to translate non-English responses to the 'other' additional care response option, and translations were checked for accuracy and edited where required by co-authors or other volunteers. Responses were coded in SPSS V22 (Version 22, IBM, Armonk, NY, USA).

Provision of quality, respectful care

Seven items measuring quality, respectful care were developed with reference to criteria defined by Small et al.[19] (e.g. 'Did your care providers spend enough time with you?' and 'Did your care providers involve you in decision-making about care?'). Items were measured on a four-point categorical scale ('Never' / 'Some of the time' / 'Most of the time' / 'Always'). An 'I prefer not to answer' response option was also provided.

Statistical analyses

Demographic data, provision of additional care and perceptions of quality, respectful care were assessed using descriptive statistics expressed as frequencies and proportions. To explore trends in care according to geographic location, outcome data were stratified by geographic region. Subgroup differences in provision of additional care by gestation at index stillbirth were assessed across the study sample using chi-square tests with 2×2 contingency tables. Gestation at index stillbirth was dichotomised into ≤ 29 weeks of gestation versus ≥ 30 weeks of gestation. This cut-off was chosen to approximate the distinction between early and late/third-trimester stillbirth. We report the corresponding Pearson chi-square value with continuity correction for 2×2 tables and statistical significance set at $P < 0.05$. Effect sizes for significant results were reported using the Phi coefficient. Magnitude of effect sizes was described according to the conventions in Pallant.[20] All analyses were performed in SPSS V22.

Results

Characteristics of parents

Of the 4182 respondents to the broader survey, 2716 parents indicated that they had a subsequent pregnancy (2507 female; 204 male; 5 gender not stated). (For detail on responses received for the broader survey of parents, see Flenady et al.[18]) Table 1 presents demographic and obstetric characteristics of these 2716 parents. A breakdown of responses by geographic region and country is presented in the Table S1. Parents were most commonly aged 30–39 years (55%), had an undergraduate/college degree (45%), and were employed full-time (44%). For the majority of parents, the index stillbirth occurred in the antepartum period (74%) and within ≥ 3 years of survey completion (65%). Index stillbirths occurred most commonly at 35–40 weeks of gestation. Around half of parents (55%) reported that an autopsy/post-mortem examination was performed on their stillborn baby. Of these 1504 parents, 90% reported having received some kind of information about the examination results, though the survey did not probe further as to what information was received.

Most (66%) parents conceived their subsequent pregnancy within 1 year following stillbirth. The most common outcome of subsequent pregnancies was a live birth (67%), followed by miscarriage (16%). Around 12% of all parents were still pregnant at the time of survey completion. Approximately 2.9% of parents had a recurrent

Table 1. Demographics and obstetric characteristics of parents

Characteristics	Total (N = 2716) n (%)
Age (years)	
< 20	12 (0.4)
20–29	430 (15.8)
30–39	1493 (55)
≥ 40	779 (28.7)
Not stated	2 (0.1)
Gender	
Female	2507 (92.3)
Male	204 (7.5)
Not stated	5 (0.2)
Highest education level	
No formal qualifications	19 (0.7)
Primary or secondary school	735 (27.1)
Undergraduate university/college degree	1232 (45.4)
Post-graduate degree	457 (16.8)
Trade, apprenticeship or other	232 (8.5)
Not stated	41 (1.5)
Employment	
Not employed	195 (7.2)
Employed part-time	691 (25.4)
Employed full-time	1207 (44.4)
Homemaker, student, retired or other	603 (22.2)
Not stated	20 (0.7)
Interval between index stillbirth and survey completion	
2 years or less	957 (35.2)
3 years or more	1753 (64.5)
Not stated	6 (0.2)
Gestation at index stillbirth (weeks)	
< 24	712 (26.2)
25–29	368 (13.5)
30–34	379 (14)
35–40	940 (34.6)
> 40	311 (11.5)
Not stated	6 (0.2)
Timing of death for index stillbirth	
Antepartum	2014 (74.2)
Intrapartum	510 (18.8)
Unsure or not stated	192 (7.1)
Autopsy/post-mortem examination performed for index stillborn baby	
Yes	1504 (55.4)
No	1073 (39.5)
Unsure or not stated	139 (5.1)
Interval between index stillbirth and subsequent pregnancy	
≤ 5 months	927 (34.1)
6–11 months	861 (31.7)
1–2 years	692 (25.5)
≥ 3 years	230 (8.5)
Not stated	6 (0.2)
Outcome of subsequent pregnancy	
Live birth	1820 (67)
Miscarriage	424 (15.6)
Stillbirth	79 (2.9)
Neonatal death	34 (1.3)
Termination of pregnancy	37 (1.4)
Still pregnant at time of completion	312 (11.5)
Not stated	10 (0.4)

Percentages may not equal 100 due to rounding.
Please see Supplementary material (Table S1) for a breakdown of responses by region, country and income setting.

stillbirth. The majority (88%) of parents resided in high-income countries, with the remainder residing in middle-income countries (see Table S1). The majority of middle-income countries were represented in the Latin America regional grouping (see Table S1).

Provision of additional care

Table 2 shows provision of additional care in subsequent pregnancies overall and by geographic region. Most parents (67%) received additional antenatal care visits, ranging from 54% in southern Europe to 78% in the UK and Ireland. The majority (70%) also had additional ultrasound scans, ranging from 51% in southern Europe to 90% in northern Europe. Around 37% of parents were offered early delivery after 37 weeks of gestation, ranging from 16% in Latin America to 59% in northern Europe. The provision of additional visits to a bereavement counsellor ranged from 6 to 22%, and the provision of a named care provider's phone number ranged from 18 to 36%. Specialist antenatal classes for bereaved parents were uncommon in all regions (1–8%), and particularly western Europe (1%). No additional care was provided to 15% of parents overall, most frequently in southern Europe (24%). Overall, 6% of parents reported receiving 'other' additional care, including delivery at or before 37 weeks of gestation, additional testing or monitoring, and specialist referrals (see Table 2). Provision of these 'other' forms of care ranged from 2% in Latin America to 13% in North America. Two respondents used the 'other' additional care item to indicate that while they did not want any additional care, it had been made available to them (e.g. additional ultrasound scans).

Subgroup analyses of additional care by gestation at index stillbirth

Six parents did not provide data on gestation at index stillbirth, resulting in a sample size of 2710 for subgroup analyses. Table 3 presents chi-square and P values with

Table 2. Proportion of parents who reported receiving additional care in pregnancies subsequent to stillbirth, overall and by geographic region

	Total (*N* = 2716) *n* (%)	Oceania (*N* = 334) *n* (%)	Western Europe (*N* = 260) *n* (%)	Southern Europe (*N* = 688) *n* (%)	Northern Europe (*N* = 241) *n* (%)	Latin America (*N* = 371) *n* (%)	North America (*N* = 293) *n* (%)	UK and Ireland (*N* = 526) *n* (%)
Additional antenatal care visits	1816 (66.9)	240 (71.9)	189 (72.7)	368 (53.5)	183 (75.9)	228 (61.5)	193 (65.9)	412 (78.3)
Additional ultrasound scans	1904 (70.1)	248 (74.3)	192 (73.8)	353 (51.3)	216 (89.6)	236 (63.6)	220 (75.1)	436 (82.9)
Option for early delivery after 37 weeks	1000 (36.8)	149 (44.6)	86 (33.1)	152 (22.1)	142 (58.9)	60 (16.2)	112 (38.2)	298 (56.7)
Additional visits to emergency room	576 (21.2)	74 (22.2)	53 (20.4)	124 (18)	68 (28.2)	105 (28.3)	62 (21.2)	90 (17.1)
Additional visits to bereavement counsellor	276 (10.2)	52 (15.6)	19 (7.3)	39 (5.7)	54 (22.4)	23 (6.2)	35 (11.9)	54 (10.3)
Access to care provider's phone number	726 (26.7)	95 (28.4)	47 (18.1)	130 (18.9)	76 (31.5)	133 (35.8)	90 (30.7)	154 (29.3)
Specialist antenatal classes for bereaved parents	67 (2.5)	17 (5.1)	2 (0.8)	8 (1.2)	18 (7.5)	8 (2.2)	7 (2.4)	7 (1.3)
'Other'	175 (6.4)	27 (8.1)	14 (5.4)	51 (7.4)	11 (4.6)	8 (2.2)	39 (13.3)	24 (4.6)
No additional care	400 (14.7)	44 (13.2)	36 (13.8)	162 (23.5)	14 (5.8)	65 (17.5)	40 (13.7)	39 (7.4)

Data for 'Other' geographic region (*N* = 3) not shown in regional breakdown.
For 'Other' additional care, the single most common responses included: early pregnancy loss or not far enough progressed in current pregnancy (19%); additional testing or monitoring (e.g. non-stress tests, blood tests, amniocentesis) (12%); delivery ≤ 37 weeks (9%); having sought a new care provider, centre, or private care (8%); referrals to specialists such as haematologists, cardiologists (6%).

corresponding effect sizes for each analysis. Compared with parents whose index stillbirth occurred at ≤ 29 weeks gestation, additional antenatal care visits and ultrasound scans were significantly more frequent among parents whose index stillbirth occurred at ≥ 30 weeks of gestation ($P < 0.001$). Both results showed small to medium effect sizes (see Table 3). Additional visits to a bereavement counsellor, provision of a named care provider's phone number, and specialist antenatal classes were also more frequent among parents whose index stillbirth occurred at ≥ 30 weeks of gestation compared with ≤ 29 weeks of gestation, showing small effect sizes. The option for early delivery after 37 weeks of gestation was more likely when the index stillbirth occurred at ≥ 30 weeks of gestation compared with ≤ 29 weeks of gestation ($P < 0.001$), showing a medium to large effect size. Lack of additional care was more likely when the index stillbirth occurred at ≤ 29 weeks, showing a small to medium effect size. There was no difference in visits to the emergency room according to gestation at index stillbirth ($P = 0.225$).

Provision of quality, respectful care

Across the study sample, elements of quality, respectful care most consistently carried out were treating parents with kindness and respect, and talking to parents in a way that they could understand, both reported to have 'always' occurred by 63% and 60% of parents, respectively (see Table 4). Around 53% of all parents 'always' felt listened to, ranging from 43% in southern Europe to 69% in North America, while 53% felt their concerns were 'always' taken

Table 3. Provision of additional care in pregnancies subsequent to stillbirth by gestation at index stillbirth (*N* = 2710)*

	≤ 29 weeks (*N* = 1080) *n* (%)	≥ 30 weeks (*N* = 1630) *n* (%)	χ^2, *P***	*Phi*
Additional antenatal care visits	616 (57)	1198 (73.5)	78.78, $P < 0.001$	0.17
Additional ultrasound scans	644 (59.6)	1259 (77.2)	95.49, $P < 0.001$	0.19
Option for early delivery after 37 weeks	160 (14.8)	840 (51.5)	374.58, $P < 0.001$	0.37
Additional visits to emergency room	216 (20)	359 (22)	1.47, $P = 0.225$	—
Additional visits to bereavement counsellor	78 (7.2)	198 (12.1)	16.69, $P < 0.001$	0.08
Access to care provider's phone number	230 (21.3)	494 (30.3)	26.48, $P < 0.001$	0.10
Specialist antenatal classes for bereaved parents	13 (1.2)	54 (3.3)	11.13, $P = 0.001$	0.07
No additional care	262 (24.3)	137 (8.4)	128.79, $P < 0.001$	0.22

*Gestation at index stillbirth not reported by six participants
**Pearson chi-square test with continuity correction for 2 × 2 tables.

Table 4. Quality, respectful care overall and by geographic region

	Total (*N* = 2716) *n* (%)	Oceania (*N* = 334) *n* (%)	Western Europe (*N* = 260) *n* (%)	Southern Europe (*N* = 688) *n* (%)	Northern Europe (*N* = 241) *n* (%)	Latin America (*N* = 371) *n* (%)	North America (*N* = 293) *n* (%)	UK and Ireland (*N* = 526) *n* (%)
Were you given the information you needed?								
Always	1310 (48.2)	173 (51.8)	140 (53.8)	282 (41)	131 (54.4)	173 (46.6)	179 (61.1)	229 (43.5)
Most of the time	801 (29.5)	103 (30.8)	83 (31.9)	190 (27.6)	78 (32.4)	102 (27.5)	71 (24.2)	174 (33.1)
Did your care providers spend enough time with you?								
Always	1276 (47.0)	178 (53.3)	139 (53.5)	235 (34.2)	126 (52.3)	180 (48.5)	177 (60.4)	239 (45.4)
Most of the time	714 (26.3)	84 (25.1)	76 (29.2)	187 (27.2)	75 (31.1)	85 (22.9)	70 (23.9)	137 (26.0)
Did your care providers involve you in decision-making about care?								
Always	1391 (51.2)	184 (55.1)	156 (60)	282 (41)	141 (58.5)	177 (47.7)	194 (66.2)	254 (48.3)
Most of the time	691 (25.4)	85 (25.4)	65 (25)	183 (26.6)	62 (25.7)	88 (23.7)	61 (20.8)	147 (27.9)
Did your care providers talk to you in a way you could understand?								
Always	1622 (59.7)	203 (60.8)	178 (68.5)	351 (51)	166 (68.9)	201 (54.2)	217 (74.1)	303 (57.6)
Most of the time	683 (25.1)	90 (26.9)	60 (23.1)	201 (29.2)	56 (23.2)	87 (23.5)	52 (17.7)	137 (26)
Did your care providers listen to you?								
Always	1443 (53.1)	195 (58.4)	166 (63.8)	297 (43.2)	145 (60.2)	177 (47.7)	203 (69.3)	258 (49)
Most of the time	640 (23.6)	79 (23.7)	51 (19.6)	172 (25)	62 (25.7)	83 (22.4)	50 (17.1)	143 (27.2)
Did your care providers take your concerns seriously?								
Always	1441 (53.1)	196 (58.7)	164 (63.1)	289 (42)	148 (61.4)	181 (48.8)	191 (65.2)	269 (51.1)
Most of the time	601 (22.1)	69 (20.7)	50 (19.2)	172 (25)	56 (23.2)	74 (19.9)	56 (19.1)	124 (23.6)
Did your care providers treat you with kindness and respect?								
Always	1714 (63.1)	220 (65.9)	187 (71.9)	376 (54.7)	171 (71)	224 (60.4)	226 (77.1)	308 (58.6)
Most of the time	580 (21.4)	75 (22.5)	43 (16.5)	168 (24.4)	49 (20.3)	71 (19.1)	46 (15.7)	127 (24.1)

Data for 'Other' geographic region (*n* = 3) not shown in regional breakdown.

seriously, ranging from 42% in southern Europe to 65% in North America. Just over half (51%) of parents felt that they were 'always' involved in decision-making about their care, most commonly in North America (66%) and least commonly in southern Europe (41%). Around half (48%) of parents were 'always' given the information they needed, ranging from 41% in southern Europe to 61% in North America. Spending enough time with parents was the least consistently applied aspect, which 'always' occurred according to 47% of all parents.

Discussion

Main findings

The majority of parents conceived their subsequent pregnancy within 1 year following stillbirth. Increased antepartum surveillance in subsequent pregnancies, particularly additional ultrasound scans, was common, although there was wide variation across geographic regions. Care specifically addressing psychosocial needs was less frequent across all regions. Compared with parents whose index stillbirth occurred at ≤ 29 weeks of gestation, parents whose index stillbirth occurred at ≥ 30 weeks of gestation were more likely to receive various forms of additional care, particularly the option for early delivery after 37 weeks of gestation. Roughly half of all parents felt that elements of quality, respectful care were applied consistently. The greatest opportunities for improvement across all regions related to listening to and spending time with parents, providing information, involving parents in decision-making, and taking parents' concerns seriously.

Strengths and limitations

This study is strengthened by the large international sample, capturing of data from multiple geographic regions. The use of a multi-language survey further enhanced our capacity to gain an 'international picture' of care. However, participating parents were largely recruited through charity and support groups in high-income countries, which may not be representative of the broader population of parents who have had a stillbirth. Indeed, our sample over-represented educated men and women, those with the means and willingness to respond to a web-based survey. It is possible that the findings over-estimate the level of compassionate care received by the broader population of parents, which would only reinforce the need for improvements in care. The survey sought to gain a comprehensive picture of parents' experiences while minimising the burden placed

on respondents and optimising the quality of data obtained. For this reason, information was not collected about potentially important aspects of parents' experiences, including specific procedures performed, screening for depression, or cause of death for the index stillbirth, all of which might be expected to influence clinical care. Finally, our study is confined to the care experiences of those parents who had a subsequent pregnancy and did not identify or address the care of those who may have attempted but not achieved a new pregnancy.

Interpretation

The risk of stillbirth recurrence in the current study was 2.9%, which is similar to that reported in the systematic review by Lamont et al. (2.5%).[6] Our findings around increased antepartum surveillance are also consistent with previous research.[11,14,16,21–23] Additional antenatal care visits and ultrasound scans therefore appear to be frequently provided in pregnancies subsequent to stillbirth, often bringing increased healthcare costs.[24] However, although most parents received additional antenatal care visits and ultrasound scans, far fewer received additional care specifically addressing psychosocial needs. Specialist antenatal classes for bereaved parents were rarely provided, despite the benefits of group-based/peer antenatal support and education programmes for parents who have experienced loss.[16,25] Unavailability of the necessary infrastructure, staff and expertise, as well as competing demands on resources, may explain the relative rarity of these psychosocial aspects of care. In addition, dedicated clinical guidelines around care in pregnancies after stillbirth appear to be rare, as found in a recent survey of UK practice.[22] According to the UK study, availability of such guidelines was limited and, where guidelines were available, these tended to concentrate on the prevention of stillbirth recurrence through antepartum surveillance, rather than on parents' psychosocial wellbeing.[22] Altogether, evidence suggests that the medical risks associated with previous stillbirth are addressed far more frequently than the psychosocial risks, even though the latter are more common.

The opportunities for improvement in providing quality, respectful care identified in this study mirror those that enhance parents' emotional wellbeing in pregnancies subsequent to stillbirth or neonatal death.[16] Active involvement in care and shared decision-making[26] are particularly valued, and may aid coping in these anxiety-laden pregnancies by enhancing self-confidence and feelings of control.[27,28] These elements of care also reflect good practice in bereavement care, where similar deficiencies in quality have been identified.[2,18,29] Lack of time, lack of confidence, embarrassment, and lack of understanding of stillbirth among care providers are major barriers to providing quality bereavement care.[29] These same barriers are likely to impact care in pregnancies after stillbirth also. Therefore, as for bereavement care, training in communication skills and providing thoughtful, empathic and collaborative care is undoubtedly needed for those providing care in subsequent pregnancies following stillbirth.

The majority of parents conceived their subsequent pregnancy within 1 year following stillbirth, and over one-third within 5 months. These data are consistent with previous studies,[30–32] and may be explained by the overwhelming desire among many women to fulfil their reproductive aspirations and expectations.[4,23,32] An interpregnancy interval of 15–24 months has been recommended[33] following stillbirth to reduce the risk of adverse outcomes, although evidence to support this recommendation is limited.[33] Regardless of obstetric risks, women who conceive within 1 year of a stillbirth may have a higher risk of depression and anxiety in the subsequent pregnancy, whereas women who delay conception for 1 year may be at no higher risk than the general population.[31] Conversely, delaying conception may bring an added psychological burden to women struggling with feelings of 'emptiness' or having 'failed',[23,32] while intensifying potential fears about age-related fertility decline.[32,34] Future research assessing the emotional impact of unwanted delays in conception following stillbirth will inform counselling efforts and assist care providers to offer balanced information to parents.

The current study showed that the option for early delivery after 37 weeks of gestation was significantly more common among parents whose index stillbirth occurred later in pregnancy compared with earlier in pregnancy. The inclination towards early delivery may be heightened at near-term gestational ages (37–39 weeks) when the risk : benefit ratio becomes more favourable,[35] and when approaching the gestational age at which the index stillbirth occurred. Additional antenatal care visits and ultrasound scans, additional visits to a bereavement counsellor, provision of care provider's phone number and specialist antenatal classes for bereaved parents were also more likely when the index stillbirth occurred at later gestations. It is therefore possible that both the impact of the previous loss and its perceived preventability, which may be thought by some to be greater for later gestation stillbirths, alters care pathways in subsequent pregnancies. Stillbirths occurring at earlier gestations are often associated with complications such as spontaneous preterm birth,[36] which carry a substantial recurrence risk, but are difficult to prevent.[37] Nonetheless, because stillbirth recurrence risk[36,38] and parents' emotional needs in subsequent pregnancies are no less important for those who experienced stillbirth at lower gestations, such differential allocation of services does not seem justified. Future research in care in subsequent pregnancies may shed more light on these findings and has been prioritised by bereaved parents and care providers.[18,39]

Conclusion

Greater attention is required to providing thoughtful, empathic and collaborative care in all pregnancies following stillbirth. Formal training and clinical practice guidance for providing care in pregnancies subsequent to stillbirth is urgently needed, emphasising emotional and psychological aspects of care in addition to obstetric management, and doing so irrespective of the gestational age of the stillborn baby. The roles of specialist services and staff for providing care in pregnancies after stillbirth should be further explored.

Disclosure of interests

Full disclosure of interests available to view online as supporting information.

Contribution to authorship

AMW led the development and writing of the manuscript and conducted data analyses. VF led the development of the survey instrument and methodology with AMW, FMB, JB, JC, PC, JJE, LF, MMG, AEPH, SHL, KP, CR, JR, DS, RMS, CS, AV, PM and DE. AMW coordinated the dissemination of the survey with contributions from FMB, JB, JC, PC, JJE, LF, MMG, AEPH, SHL, MM, KP, CR, JR, DS, RMS, CS and AV. AMW and SHL coordinated translations of the survey instrument with contributions from JB, JC, PC, JJE, MMG, CR and AV. PC, JC, JJE, MMG, CR and AV completed checking of translations for the 'other' additional care responses. TM contributed to the interpretation of findings. All authors reviewed and added input to the manuscript.

Details of ethics approval

This study was approved by the Mater Health Services Human Research Ethics Committee on 29 November 2013 (Ref #HREC/13/MHS/121), within the guidelines of the Australian National Statement on Ethical Conduct in Human Research, and by the University of British Columbia Office of Research Services, Behavioral Research Ethics Board on 22 December 2014 (Ref #H14-02784) (Vancouver, Canada).

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Supporting Information

Additional Supporting Information may be found in the online version of this article:

Table S1. Breakdown of responses by geographic region, country, and income-setting.

Video S1. Author insights. ■

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