Preterm labour decision-making and experiences of care for women and clinicians (QUIDS Qualitative): A qualitative exploration

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ABSTRACT

Background: Minimising the risks of mortality, morbidities, and the costs associated with preterm birth is reliant on accurate prediction, appropriate decision-making and timely intervention. This study aimed to determine for the first time the decisional and informational requirements of women and clinicians during preterm labour diagnosis and intervention. A secondary objective was to explore their experiences.

Study design: A qualitative, interpretive approach was used in three tertiary referral units in England and Scotland. Women with experience of or risk factors for preterm birth and clinicians with experience of caring for women in preterm labour took part in semi-structured interviews individually face-face or via telephone, or in a small focus-group. Data was analysed using a framework approach.

Results: Women and clinicians welcomed a more accurate tool for predicting preterm birth. Women wanted to be actively involved in their care, but desired different levels of control over decisions. Communication between women and clinicians influenced women's overall experiences and shaped clinicians' practice. Women found accessing care difficult, due to uncertainty about symptoms and gatekeepers to face-face care. The emotional impact of their experiences influenced family plans and subsequent pregnancies. Women's overall perception of their experience was influenced by their judgement of the care they received.

Conclusions: Decision-making is complex and a tool to more accurately predict preterm birth than is currently available was valued. Further research is warranted to evaluate a tool in clinical practice and to improve services for women with symptoms of preterm labour attempting to gain access to face-face care.

Trial Registration ISRCTN: 41598423 and CPMS:31277.

Introduction

Preterm birth, defined as birth prior to 37 weeks gestation, occurs in 6–7% of pregnancies in Europe [1] and was recorded as 7.9% in England and Wales in 2017, equating to nearly 54,000 births [2]. Preterm birth is associated with a high risk of mortality, short- and long-term morbidities [3], and significant economic costs compared with birth at term [4]. Reducing the detrimental impact of preterm birth relies on the provision of timely and appropriate perinatal interventions, including antenatal corticosteroids, tocolysis, *in utero* transfer, and magnesium sulphate [5–8]. However, accurate prediction of preterm birth is challenging, even with indicative symptoms. Whilst interventions may

improve outcomes, they are associated with risks especially for those in whom preterm birth does not occur. Associated risks include reduced birthweight and neurodevelopment impairment with repeated steroid administration, the potential for magnesium toxicity, complications related to tocolysis, and the emotional, social and financial disadvantages related to inpatient admission and *in utero* transfer [9–12].

More accurate prediction of preterm birth than is currently available could reduce the burdens and risks associated with unnecessary interventions, and enable women and clinicians to make informed decisions regarding their care. Diagnostic tests include biochemical assessment of cervico-vaginal secretions and measurement of cervical length [13]. One such test is fetal Fibronectin (Hologic, Marlborough,

MA, USA), a near bedside assessment of the concentration of the fetal Fibronectin protein in cervico-vaginal secretions collected by swab during speculum examination. The test has excellent negative predictive value [14,15] and is acceptable to women [16]. However, the moderate accuracy with which fetal Fibronectin can positively predict preterm birth [17] means that it is difficult for women and clinicians to make fully informed decisions about initiating interventions.

This study was a precursor to the 'Quantitative fetal Fibronectin to help Decision making in women with Symptoms of preterm labour' (QUIDS) prospective study [18,19], which aims to generate and test a preterm labour prognostic model based on individual patient data from efficacy studies of fetal Fibronectin. From this data a decision support tool will be developed for use in the United Kingdom (UK) NHS. No research to date has focused on the decision-making experiences of women and clinicians during preterm labour. The aims of this study were to determine the decisional and informational requirements of women and clinicians when considering preterm labour diagnosis and intervention, and to explore their experiences.

Methods

Design and setting

This study adopted a qualitative, interpretive approach and constructionist theory for data collection and analysis to explore the decisional and informational requirements and experiences of participants. Semi-structured interviews and focus groups enabled investigation of the *a priori* themes, while encouraging participants to tell their own stories [20]. Women with experience of preterm birth were involved in the development of the protocol and study resources. The study was carried out in three NHS Trusts in England and Scotland, which follow the same national clinical guidance. The three Trusts each include large specialist centres with facilities to care for extremely premature or unwell neonates and one also includes a smaller district general hospital with facilities to care for neonates born after 32 weeks gestation. Women who live in the locality or who are referred receive care at these Trusts.

Participants and recruitment

Participants were purposively sampled to cover a range of personal and professional experiences of preterm labour and birth. Inclusion criteria were pregnant women with well-known risk factors for preterm birth or who had experienced threatened preterm labour, and postnatal women who had experienced preterm birth (< 34 weeks gestation). Clinicians with experience of caring for women in preterm labour were eligible, including midwives and obstetricians. Exclusion criteria included age under 16 years and non-English speaking. Women were identified by staff in the maternity department and clinicians were identified by members of the research team. Verbal and written information was provided and informed, written consent gained.

Data collection

Data were collected between January and May 2016. Women were invited to focus groups but, for those unable to attend, individual semi-structured interviews face-face or over the telephone were an option. Face-face focus groups were the preferred format for women's interviews with the rationale of understanding what is important to women by consensus. Individual interviews were preferred for clinicians to avoid dominating participant bias or false consensus, and to enable flexibility to interview clinicians when they were available. All data collection methods were chosen to encourage free story-telling, allowing participants to select the issues most important to them, in addition to seeking to understand key *a priori* topics related to the decision support tool. Different semi-structured topic guides were developed for

each group, starting with encouragement to freely describe their experiences of preterm birth or care, and ending with specific questions related to decisional and informational requirements if they had not already been covered. Demographic details were collected prior to the interview. Interviews were audio recorded and field notes taken. The focus-group was facilitated by two female researchers (HW, a midwifery lecturer and researcher with experience of caring for women with preterm birth, and VHM, a practising obstetrician and researcher with a specialist interest in preterm birth) and all individual interviews were facilitated by one researcher (HW); both were unknown to participants. Recapping and summarising were used to clarify meaning and avoid misinterpretation. Reflexivity and acknowledgement of personal bias were maintained by regular debriefing between researchers and written reflective accounts following interviews.

Data analysis

Women's and clinicians' data were analysed separately, and later brought together to demonstrate similarities and differences between the topics raised. Analysis took place in two parts. Initially only data relating to the *a priori* aim of determining decisional and informational requirements were analysed in order to inform the QUIDS prospective study and decision support tool development, and are reported elsewhere [19]. Data relating to women and clinicians' decision-making processes were classed as 'decisional requirements', and data relating to information used or desired by women and clinicians were classed as 'informational requirements'. Subsequent analysis included all data, and is presented here.

Data were analysed independently by three researchers, using a framework approach for all interview and focus group data. The framework approach enabled the large volume of data collected via different methods to be managed and interpreted within the focused *a priori* and experiential secondary aims of the study [21]. The approach complements the constructionist theory that knowledge is constructed through social interchange [22]. Hence topics judged to be most important based on participants' use of language, emphasis and frequency of discussion were identified by the researchers through the lens of their prior social and professional knowledge. Data were transcribed verbatim then checked for accuracy against the original recordings. Data were anonymised and labelled using a study identification number, and later a pseudonym. One researcher (HW) analysed all of the data using NVivo (version 11) software (QSR International) and a large sample of the data were analysed separately by two researchers (TL and VHM). Consensus regarding meaning of emergent themes and confirmation of the final frameworks were reached by discussion.

Following verbatim transcription of the interview recordings, the researchers became familiar with the data by reading the transcripts and field-notes several times. Data relating to the *a priori* themes of decisional and informational requirements, and later recurring emergent characteristics from the participants' free story-telling, were recognised, collated and coded as such. The data were indexed, identifying which sections of transcript related to each characteristic [23]. The characteristics were then mapped into themes and sub-themes based on the emphasis placed on each by the participants, creating two draft frameworks. Finally, the frameworks were interpreted and refined based on the original transcripts [23]. At all stages the transcripts were reviewed to ensure the thematic framework reflected the original context. Having multiple analysts ensured that themes were interpreted directly from the data thus minimising interpretation bias.

Funding and ethics

Table 1
Study participants (women).

Study ID/interview type and length	Gestation or postnatal (PN)	Gravida	Parity	Obstetric history (of mid–trimester loss or preterm birth)	Local unit or transferred care?
Arya (face-face, 72 min)	30 + 5	9	1	2 mid-trimester losses at 19 and 20 weeks	Transferred care
Beth (telephone, 33 min)	24 + 0	2	1	Preterm birth at 27^{+2} weeks	Transferred care
Clare (face-face, 53 min)	12 + 0	2	1	Preterm birth at 29^{+0} weeks	Transferred care
Donna (telephone, 42 min)	20 + 2	2	0	Mid-trimester loss at 20 + 2 weeks	Local unit
Eva (focus group, 75 min)	28 + 6	3	1	Mid-trimester loss at 20 weeks and preterm birth at 23^{+2} weeks	Local unit
Fran (focus group, 75 min)	28	1	0	Threatened preterm labour at 27^{+6}	Local unit
Grace (face-face, 48 min)	PN	1	1	Preterm birth at 24^{+4} weeks	Local unit.
Hatti (telephone, 32 min)	PN	1	1	Preterm birth at 24^{+0} weeks	Local unit
Isla (telephone, 55 min)	PN	4	4	Preterm birth at 32^{+4} weeks	Local unit
Jenny (telephone, 36 min)	PN	3	3	Preterm birth at 25^{+6} weeks	Transferred care
Kara (telephone, 57 min)	PN	1	1	Preterm birth at 33^{+3} weeks	Local unit
Lydia (telephone, 36 min)	PN	2	2	Preterm birth at 28^{+1} weeks	Transferred care

Footnote: Participants are identified throughout using a pseudonym. Focus group 75 min; face-face interviews 48–72 min (mean 58 min), telephone interviews 32–57 min (mean 42 min).

Results

Forty individuals (22 women and 18 clinicians) consented to take part and 21 (12 women and 9 clinicians) participated. Nineteen were unable to commit a time or were uncontactable. Of the 12 women, only two were available to take part in a small focus group. The other ten women participated in individual semi-structured interviews, three face-face in a hospital setting and seven over the telephone. Six women were pregnant at the time of the interview and six were postnatal (Table 1). The women were from a range of ethnic groups. Seven women lived locally to the tertiary unit and five had transferred their care. Postcodes indicated that the women represented a range of social and economic backgrounds. Different interview lengths were noted with the differing data collection methods (Table 1); with individual face-face interviews eliciting more different characteristics per participant than either the focus group or telephone interviews. However, the topics raised were similar and sensitive or emotive topics were just as likely to be raised in telephone or face-face interviews. Nine clinicians were interviewed over the telephone, comprising seven obstetricians and two midwives. The clinicians covered a range of professional experiences (Table 2).

The themes explored here are 'decision-making', 'communication', 'accessing care' and 'impact'. These themes incorporate the findings related to the primary aim of exploring decisional and informational requirements and the secondary aim of exploring women and clinician's

experiences. They are presented inductively as they emerged from the participants through data analysis, rather than based on the *a priori* themes. Verbatim quotes are presented to illustrate the themes and are identified using the participant pseudonyms.

Decision-making

Prediction

Predicting preterm birth accurately was viewed positively by women and clinicians and was considered essential for decision-making. The importance to women included emotional and practical preparation, understanding what was happening to their bodies and processing their shock before addressing informational requirements. Clinicians felt the benefit of accurate prediction centred on the ability to reduce unnecessary interventions.

Women were universally positive about tests, such as fetal Fibronectin, and the proposed decision support tool. Clinicians reported high confidence in fetal Fibronectin for ruling out preterm birth, but were less certain of its value in positive prediction. They used fetal Fibronectin to reinforce their clinical judgement or *"gut feeling"* (Obs6 and Obs3), rather than to make the decision for them. Clinicians felt that the proposed decision support tool would enhance their decision-making abilities.

Table 2
Study participants (clinicians).

Study ID	Job title	Years' experience	Unit type
Obs1	Consultant Obstetrician	3 + years post consultant qualification	Specialist referral centre (level 3); 8.5 k births (also experience in working at level 1 and 2 neonatal units)
Obs2	Specialist Trainee Obstetrics and Gynaecology	Year 2 of specialist training	Specialist referral centre (level 3); 8.5 k births (also experience working in a smaller level 3 unit and has held a research post)
Obs3	Specialist Trainee Obstetrics and Gynaecology	Year 3 of specialist training	Specialist referral centre (level 3); 8.5 k births
MW1	Midwife	4 years qualified	Specialist referral centre (level 3); 8 k births (also has experience working at another large level 3 neonatal unit)
Obs4	Clinical Research Fellow (preterm birth)	Specialist trainee year 4 equivalent	Specialist referral centre (level 3); 8 k births (also has experience working at a smaller level 2 neonatal unit)
Obs5	Clinical Research Fellow (preterm birth)	Specialist trainee year 5 equivalent	Specialist referral centre (level 3); 8 k births (also has experience working at two smaller level 2 neonatal units)
MW2	Midwife	9 years qualified	Specialist referral centre (level 3); 6.8 k births
Obs6	Consultant Obstetrician	2 years post consultant qualification	District general hospital (level 2 neonatal); 2.8 k births
Obs7	Consultant Obstetrician	9.5 years post consultant qualification	Specialist referral centre (level 3); 6.8 k births

Footnotes: All interviews took place over the telephone, lasting 23–40 min (mean 33 min). Level 3 neonatal units accept very unwell babies and babies at all gestations, hence in utero or ex utero transfer would only be considered for resource or capacity reasons. Level 2 and level 1 neonatal units accept babies at gestations over 28 weeks (this varies). Hence in utero or ex utero transfer may be considered more frequently.

Women's decision-making

All women wanted to be involved in decisions about their care. However, they defined 'involvement' differently, from being fully in control of decisions to being informed about them. Some women feared making the wrong decision due to their vulnerability and competing priorities such as other children at home.

"But should the decision have been mine? I don't think so; I think it should be the clinician's. I think for any number of reasons mums will make decisions that aren't right." [Arya]

Others felt frustration at not being involved.

"…no, it was just up to them. They didn't even ask whether, what I wanted or, you know, what would I – we were just no; we are going to follow our guidelines." [Hatti]

Equally, some women questioned whether 'choice' in this context was a fallacy. They felt that as certain care options were in the best interest of their babies there were no other options. Women were willing to accept care that they did not want or found scary, such as speculum examination, admission or *in utero* transfer, if they believed it could keep their babies safe.

Clinician's decision-making

Clinicians found decision-making complex, and drew on a number of sources to diagnose and plan care. Senior clinicians expressed how fetal Fibronectin testing worked well to rule out preterm birth but was not a good test to predict it, yet they didn't have a better test or approach. Some junior clinicians felt under-confident in complex clinical situations such as early gestations or when test results conflicted with clinical assessment. The problem of over-admitting and over-treating women with threatened preterm labour was acknowledged by many. However, given the detrimental effects of 'getting it wrong' some clinicians explained that they would rather *"play it safe"* (Obs3) or *"err on the side of caution"* (Obs4). Understanding the power of language, clinicians reported presenting intervention options to women in a manner that guided them to the recommended choice.

Communication

Women and clinicians reported that verbal communication was used to impart information. Perceived benefits of this method included the ability to answer any questions, develop a relationship, and express or gauge understanding, anxiety or concerns. Women appreciated plain speaking and explanation of terminology. Women and clinicians felt that high quality written or visual information could also be useful.

Women valued information because they felt they had little knowledge of preterm birth or mid-trimester loss prior to their experiences. Women listed numerous informational requirements, including the meaning of their symptoms, explanation of tests and results, clear diagnoses and plans of care, and sensitive discussion about the prognosis for their baby. The challenge of providing this information was acknowledged by clinicians, who believed the complexity and volume was difficult to relay during such a sensitive time.

Some women realised that the information they had been given was incomplete, which damaged the trust they held in their caregivers. Honesty was desired, even when this meant bad news.

"nobody was actually saying to me that you're dilated, the likelihood is your baby is going to be born soon and she is not going to live – which sounds brutal but that's what a woman needs to know." [Donna]

Yet women also wanted clinicians to be sensitive to their concerns, striking the right balance between honesty and empathy. Women perceived these traits through verbal and non-verbal communication.

The language chosen by clinicians was crucial to how women felt about their interactions. Women found certain terminology damaging or distressing; such as *'fetus'*, *'viable'*, *'spontaneous abortion'* and *'miscarriage'*. The choice of words could trivialise or dehumanise their experiences.

"It makes you want to scream because it means so much more to you than that … well actually it wasn't a miscarriage, I actually went into labour and the baby was born alive." [Donna]

Accessing care

Women reported that they only gained reassurance following a physical check-up, not from a telephone review. Uncertainty about symptoms made the decision to seek care difficult. Often women recounted vague symptoms, summarising that '*something didn't feel right*' [Arya and Donna]. This reflected some failed attempts to access care, seemingly unable to describe symptoms clearly enough to acquire a face-face assessment. These women felt dismissed, unwelcome and not listened to.

"…then when I called them it was like 'oh, it's nothing to worry about, you're 18 weeks, this kind of thing happens." [Arya]

Anxiety was heightened when concern about wasting clinicians' time conflicted with worry about symptoms.

"…the lady looked at my notes, and I could tell she was thinking, 'oh, she's here again'. … people always think, I know, that you're wasting their time. I think that's why some people don't bother coming." [Grace]

Some women felt that clinicians had failed to act on the bigger picture when they attempted to seek care on numerous occasions. Repeated normalisation of concerning symptoms by clinicians led some women to reset their view of 'normal' and subsequently delayed or avoided care.

"obviously that's not normal but… once you see it, like, and you think everything is fine and everything medically looks okay you do start to think well maybe I'm alright, maybe it is alright…" [Isla]

In contrast, women with a previous experience were often expressly encouraged to call or attend for advice and reassurance. They described confidence in their ability to recognise signs and symptoms and successfully garner care, which had previously been so difficult. However, this was often off-set with low or wavering confidence in their ability to reach full-term and give birth to a healthy baby.

"I have more confidence this year because, but also more fear because I know what I went through and having to go through it again makes me more scared." [Beth]

Impact

How it feels

Women felt that the emotional impact of their experience of preterm birth or mid-trimester loss was severe and long-lasting, especially those who lost their babies.

"The physical side of it is very traumatic but the aftermath of it is horrible, like, obviously like your mental health … nobody should ever lose their child." [Donna]

Many women experienced shock. Some explained that their traumatic experience would prevent them planning another baby.

For those who were pregnant again, their previous experience impacted on their current pregnancy. Worry, anxiety and the need for constant reassurance pervaded.

"Yes, yes. Oh, my goodness, yes. I am very worried. I think about it all

the time." [Beth]

One woman demonstrated her hypervigilance by explaining that she *"looks for everything"* [Eva]. Women coped by living one day at a time. Reaching different milestones of pregnancy was significant, including the gestation of their previous preterm birth or mid-trimester loss and other gestations they associated with different outcomes for their babies.

> *"I'm like, oh, okay there you go, I have passed 24 weeks, now I have to just get to 25 then 26 and it's like I'm counting down to when* [Baby] *was born and I'm telling myself at least if I pass when* [Baby] *was born then at least that is going to be better."* [Beth]

Early pregnancy and waiting until the gestation when regular reviews and monitoring began was difficult as women were aware of their 'high-risk' status. Some women gained sufficient reassurance from reviews, whereas others felt it was not enough.

> *"It is horrible because two weeks doesn't seem long, but to wait two weeks in between appointments it's, kind of, like I know anything can happen in that time, it doesn't seem regular enough…"* [Donna]

Impact of care

Women valued an approach that was caring, friendly, conscientious and open to building a relationship, as this made them feel comfortable and relaxed.

> *"…because you go through an experience together… that's something built from just a few hours. So it can be done."* [Grace]

Women's trust in their clinicians influenced faith in test results, care plans and recommended interventions. Confidence that they would be listened to and that the right recommendations would be made was associated with feeling positive about their experiences.

> *"I'm just grateful that I am here and I'm getting the care I'm getting. And that I know I have complete confidence that if something happens they're going to take care of me."* [Arya]

Women's experiences with individual clinicians influenced their opinions of the whole hospital. Women's overall perception of their experience seemed as closely linked to their judgement of the care they received as the outcome for them and their baby.

Discussion

This study set out to explore the decisional and informational requirements of women and clinicians in relation to preterm labour, and explore their experiences. The data analysis technique, based on constructionist theory, allowed the themes that the researchers interpreted as most important to the participants to be elevated over the *a priori* themes. Regardless, decision-making emerged as a main theme for both women and clinicians. Reflecting findings of research into women with a prior pregnancy loss, the women in this study were not passive recipients of care and wanted to be involved in decision-making [24]. They demonstrated high levels of knowledge and active involvement. However, the level of desired control over decisions varied, corroborating findings from an in-depth qualitative exploration of women's decision-making during a high-risk pregnancy [25]. Irrespective of the variance in women's level of desired control over decisions, the importance of their babies' wellbeing was universal and women indicated they would make decisions to ensure this. In general, women who trusted their clinicians to keep their babies safe appeared happy to follow advice, whereas those who did not desired more control over

decisions. Our findings are consistent with previous literature that congruence between women's desired level of control over decisions and what was offered was important to them [25]. Clinicians should take opportunities to gain women's trust and determine how they wish to be involved in decisions about their care.

Women and clinicians indicated that decision-making in preterm labour was dependent on accurate prediction, and the ability to do so more accurately was welcomed. Their insights suggest that a decision-support tool used as an adjunct to fetal Fibronectin testing is acceptable and would provide women and clinicians with additional information on which to base decisions.

The information that women and clinicians use to make decisions generally came from verbal communication. However, communication featured in all narratives relating to more than just information provision; it influenced women's experiences and shaped clinicians' practice. Women wanted clinicians to strike the right balance between honest, accurate appraisal of their clinical situation and a sensitive, caring approach that took account of their vulnerability and concerns. As in other studies, some terminology was distressing for women [24]. Whilst the participating clinicians were mindful of this, women's numerous examples of distressing terminology indicates that some are not aware of the negative power of language.

Timely diagnosis and interventions can improve outcomes for preterm birth [5–8]. However, provision of these is reliant on women with symptoms of preterm labour seeking and accessing care at the appropriate time. Qualitative enquiries into women's experiences of preterm labour reflect our finding that accessing face-face care can be difficult due to the uncertainty of symptoms [26–28]. Indeed, women reported that they only gained reassurance from a face-face assessment and monitoring, but often did not feel reassured by a telephone conversation. This study and others suggest that women have an instinct that something is not right, even when symptoms are vague [26–28]. Yet, ambiguous symptoms hindered attempts to access face-face care causing women to accept reassurances that conflicted with their instincts. Reflecting other studies, this resulted in anxiety, humiliation and frustration [28] at not being taken seriously by clinicians who acted as gatekeepers and caused confusion about how and when to seek care again. Some women normalised such symptoms to coincide with the expert's judgement and delayed seeking care in the future [28]. Systems and processes, such as access to previous notes, should allow for clinicians to view the whole picture to aid decision-making when women seek face-face care.

Conversely, women with a prior experience felt welcome to call at any time for reassurance. This was positively valued by women, as their pregnancies were shrouded by anxiety about the risk of a recurrent experience. However, the confidence and increased certainty about symptoms and being welcome to access care that came with a previous mid-trimester loss or preterm birth did not assuage anxiety. Corroborating the findings of prior research, women who had high confidence in recognising symptoms felt the burden of responsibility to seek face-face care appropriately [28]. Accepting that pregnancy does not guarantee a full-term, healthy baby [24,29] women were determined to follow their intuition and seek care at the correct time, leading to hypervigilance [26,29].

The emotional impact of women's experiences was clear from their vivid descriptions and the influence it had on subsequent family plans. Some felt their mental health had suffered. However, some women's descriptions used positive language and portrayed a favourable perception of their experiences, even when they had experienced trauma or loss. Their tendency to do this appeared to be linked to positivity about the care they received and the trust they held in their caregivers.

The strengths of this study include that participants were encouraged to freely tell their stories. Only once they had completed these

were they asked specific points related to the *a priori* aim of understanding decisional and informational requirements. This enabled participants to focus on the aspects of preterm labour care that were most important to them. The data analysis technique further enhanced this, meaning that topics raised by the participants were just as likely to emerge as themes as the *a priori* themes. Hence, unexpected findings emerged from this study, including how women access care, the impact of experiences and the importance of communication. Women with a vast array of experiences were included in this study, reflecting the diversity that clinicians encounter when caring for a cohort of women at risk of preterm labour. Despite the variation, data saturation was achieved as women recounted similar experiences, views and feelings. Aspects of care that were important to women also featured prominently in the clinician's narratives, suggesting an awareness of women's needs.

Limitations of the study include that our sample size was small and self-selected. Clinicians with an interest in preterm birth or confidence in their practice may have been more inclined to being interviewed than those who were not. However, findings were interpreted acknowledging this. Different data collection methods were utilised pragmatically, offering choice to participating women and flexibility of timing for clinicians, including focus groups and individual face-face or telephone interviews. During analysis the researchers acknowledged that differences in the data collection methods may have affected the data collected, including that the emphasis placed on topics may differ based on non-verbal cues and encouragement to pursue a topic from the researcher [30]. The proximity of the researcher to the participant differed between the data collection methods, possibly resulting in the researchers having a less immersive understanding of participants' meaning through their specific use of language [23]. Attempts were made to ameliorate these disadvantages during telephone interviews, including devoting time to rapport building prior to interviews, checking and clarification of meaning and offering frequent verbal encouragement. Slight differences were noted in the data collected between the methods, including that telephone interviews were generally shorter than face-face [30] (Table 1). However, the number of different characteristics brought up in each interview was similar (mean of 50 during face-face, 46 during telephone and 47 during focus group interviews). Although all three sites in our study were tertiary referral centres, our sample included participants who had received or provided care in smaller hospitals. Hence the potential limitation of not including preterm birth considerations such as *in utero* transfer was mitigated. We were unable to recruit partners and no non-English speaking participants were included, which restricts understanding of the experiences of these groups.

Conclusion

Decision-making for preterm labour care remains a complex process. Although all women wanted active involvement in decision-making, the level of control they desired varied. Clinicians' decision-making was influenced by many factors and underpinned by a tendency to "*err on the side of caution*". Both groups agreed that more accurate prediction of preterm birth and decision support would be valuable. Implicit in the data was that optimal care centres on keeping babies safe. Yet, positive experiences of communication, feeling safe with trusted clinicians and achieving the desired level of control over care all had a significant influence over how the women felt about their experience and the long-term impact it had on the women who were accessing maternity care in a future pregnancy.

The difficulty women experience in accessing care is worthy of further research, as this is a potential barrier to women receiving optimal care. Furthermore research is required to explore the experiences of clinicians and women using a predictive model decision-support tool in clinical practice.

Ethics and consent to participate

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