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# Thematic analysis of US stakeholder views on the influence of labour nurses' care on birth outcomes

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## ABSTRACT

**Background** Childbirth is a leading reason for hospital admission in the USA, and most labour care is provided by registered nurses under physician or midwife supervision in a nurse-managed care model. Yet, there are no validated nurse-sensitive quality measures for maternity care. We aimed to engage primary stakeholders of maternity care in identifying the aspects of nursing care during labour and birth they believe influence birth outcomes, and how these aspects of care might be measured.

**Methods** This qualitative study used 15 focus groups to explore perceptions of 73 nurses, 23 new mothers and 9 physicians regarding important aspects of care. Transcripts were analysed thematically. Participants in the final six focus groups were also asked whether or not they thought each of five existing perinatal quality measures were nurse-sensitive.

**Results** Nurses, new mothers and physicians identified nurses' support of and advocacy for women as important to birth outcomes. Support and advocacy actions included keeping women and their family members informed, being present with women, setting the emotional tone, knowing and advocating for women's wishes and avoiding caesarean birth. Mothers and nurses took technical aspects of care for granted, whereas physicians discussed this more explicitly, noting that nurses were their 'eyes and ears' during labour. Participants endorsed caesarean rates and breastfeeding rates as likely to be nurse-sensitive.

**Conclusions** Stakeholder values support inclusion of maternity nursing care quality measures related to emotional support and providing information in addition to physical support and clinical aspects of care. Care models that ensure labour nurses have sufficient time and resources to engage in the supportive relationships that women value might contribute to better health outcomes and improved patient experience.

The relationship between nurse-staffing and patient safety and quality in medical-surgical acute care hospital settings in the USA and Europe is well established. Nurse-sensitive quality indicators in acute care include patient falls, pressure ulcers, nosocomial infection, patient satisfaction and failure to rescue (death from complications not present on admission).<sup>1 2</sup> Failure to rescue and missed nursing care, also known as care left undone, have been associated with nurse staffing levels.<sup>3-7</sup> Missed nursing care has been linked with patient satisfaction in US and European hospitals.<sup>8 9</sup> Despite interest in nurse-sensitive quality measures, research on nurse-sensitive measures for maternity care has been sparse.

Childbirth is a leading reason for hospitalisation in the USA, with approximately 4 million women giving birth annually.<sup>10</sup> Most US births occur in community hospitals where labour care is managed by nurses under physician or midwife supervision. Nurses in these settings have considerable autonomy in providing support, surveillance and moment-to-moment management of labour,<sup>11 12</sup> and registered nurses have a similar role in Canada and some other countries. To date, nurse-sensitive measures for the labour nurse context are lacking. Thus, measures for assessing the influence of maternity nursing care on patient outcomes and for considering how nurse staffing mediates this influence are critically needed to direct nursing policy and practice. While the labour nurse role is not universally used outside North America, there is overlap with intrapartum midwifery care (table 1). Women's care needs during labour are likely to be similar in other industrialised countries,<sup>13 14</sup> and quality measures have

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**Table 1** Comparison of UK midwife and US labour nurse responsibilities

Responsibility	UK midwife	US labour nurse
Monitoring and examining women during pregnancy	✓	Only during labour, birth and immediate postpartum period
Developing, assessing and evaluating individual programmes of care	✓	For nursing care during labour
Providing full antenatal care, including screening tests in the hospital, community and the home	✓	–
Identifying high risk pregnancies and making referrals to doctors and other medical specialists	✓	Identifying risk factors and notifying physician or midwife
Arranging and providing parenting and health education	✓	Providing health education
Providing counselling and advice before and after screening and tests	✓	Provide education regarding tests
Offering support and advice following events such as miscarriage, termination, stillbirth, neonatal abnormality and neonatal death	✓	✓
Supervising and assisting mothers in labour, monitoring the condition of the fetus and using knowledge of drugs and pain management	✓	✓ Scope of management decision-making more limited—under supervision of attending physician or midwife
Giving support and advice on the daily care of the baby, including breast feeding, bathing and making up feeds	✓	✓
Liaising with agencies and other health and social care professionals to ensure continuity of care	✓	✓
Participating in the training and supervision of junior colleagues	✓	✓

Source: <https://www.prospect.ac.uk/job-profiles/midwife>.

not been validated for many aspects of this care. Therefore, measures of quality of nursing care during labour may be applicable or adaptable to other settings using labour nurses or where midwives routinely provide these aspects of care.

The Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) has supported investigations to develop maternity care nursing quality guidelines and measures, including staffing guidelines<sup>15</sup> and 10 measures for maternity nursing care quality.<sup>16</sup> Two of these measures are presently being tested, but the full set of measures has not been validated. AWHONN is also working to evaluate the effect of nurse staffing on patient outcomes during labour and birth. One approach is to use the concept of missed nursing care to measure the effect of staffing on outcomes. Findings reported here are part of this second effort. Our larger study considered both the aspects of nursing care during labour and birth that stakeholders believe influence outcomes, and the aspects of nursing care during labour and birth that might be missed. We previously reported on nurses' perspectives on care that might be missed and the potential effects of missed nursing care during labour and birth.<sup>17</sup> The purpose of this paper is to examine the aspects of nursing care during labour and birth that nurses, new mothers and physicians believe influence birth outcomes.

## METHODS

### Data collection

We used focus groups to explore perceptions of nurses, new mothers and physicians regarding the influence of nursing care on birth outcomes using

semistructured discussion guides (table 2). Practising labour nurses with at least two years of experience, physicians who attend births and mothers who had given birth within the prior six months participated in 15 focus groups conducted at eight sites. Nurse and physician participants were recruited via contacts at their hospitals. New mothers were recruited from hospital-based support groups. Participants received a meal and a \$25 gift in appreciation for their time.

Hospital recruitment sites comprised a range of birth volumes and types (urban, suburban, rural, and with and without teaching programmes). Two investigators were present at each focus group and alternated facilitation and note-taking. All groups were audio recorded and transcribed verbatim. For the mothers', physicians' and final two nurses' groups, participants were asked if they thought existing perinatal quality indicators from The Joint Commission (TJC) are nurse-sensitive. TJC is an accreditation body for US hospitals that requires members to report specified 'core' quality measures.<sup>18</sup>

### Participants and settings

We conducted 11 focus groups with 6–8 registered nurses per group (n=73), 2 with 10–13 new mothers per group (n=23) and 2 with 3–6 physicians per group (n=9). Nurses had a mean 13.2 years labour experience (range 2–35). Physicians had median 19 years obstetrics or family practice experience (range 4–38). We did not ask new mothers about mode of birth, gestational age or risk status. However, women spoke about their birth experiences in answering discussion questions. Groups included first-time and experienced mothers from a variety of backgrounds

**Table 2** Selected discussion questions

Participant type	Questions regarding important aspects of care
Nurses	<ul style="list-style-type: none"> <li>▶ What specific aspects of care during labour and birth contribute to patient outcomes?               <ul style="list-style-type: none"> <li>– Probe: Tell us about some of the specific things you do that make a difference for patients.</li> </ul> </li> <li>▶ Do you think these measures are sensitive to nursing care during labour and birth? (Joint Commission Perinatal Care Measures)</li> </ul>
Mothers	<ul style="list-style-type: none"> <li>▶ What aspects of nursing care were most important to you during labour and birth? What was the most helpful nursing care?</li> <li>▶ What did you think made a difference in your outcome?</li> <li>▶ Were there types of care that you expected to receive and did not?</li> <li>▶ Do you think these measures are sensitive to nursing care during labour and birth? (Joint Commission Perinatal Care Measures)</li> </ul>
Physicians	<ul style="list-style-type: none"> <li>▶ What aspects of nursing care do you consider most important to influencing outcomes during labour and birth?</li> <li>▶ Do you think these measures are sensitive to nursing care during labour and birth? (Joint Commission Perinatal Care Measures)</li> </ul>

who described having high-risk and low-risk births; spontaneous, induced and augmented labour; ‘natural’ birth and medical pain management; planned and unplanned caesareans; and term and preterm births. Several women described complications such as caesareans for low fetal heart rate and infant admission to neonatal intensive care.

Nurse groups were conducted at four Washington, DC-Baltimore area hospitals, a rural Missouri hospital and a suburban Missouri hospital. Mother’s groups were conducted at a large suburban St. Louis hospital. Physician groups were conducted in Northern California. Hospitals ranged in volume from 750 to 8500 annual births, and included a rural facility, an inner city setting with a high proportion of Medicaid-insured clients, an academic medical centre and four suburban community hospitals, some of which served diverse patient populations and high-risk patients.

#### Data analysis

We conducted a thematic analysis following Braun and Clarke.<sup>19</sup> We read the transcripts closely, identified codes (units of meaning) in the text, identified and defined patterns of meaning (themes), checked the relationship of themes to data elements and developed relationships between concepts. Two investigators coded data and developed preliminary themes independently. All investigators then compared themes and resolved discrepancies to consensus. Investigators selected representative data elements to demonstrate themes for reporting purposes and again solicited comments. We analysed transcripts sequentially: nurses’ groups followed by mothers’ groups, followed by physicians’ groups. We also convened two groups of expert nurses ( $\geq 5$  years experience) to review and comment upon the nursing group analysis.

The researchers are two nurse scientists who are also perinatal clinical nurse specialists, and a health economist with expertise in nurse-sensitive measures and nurse staffing. We informed participants of our backgrounds and asked for explanations to uncover taken-for-granted meanings. Investigators debriefed after each focus group to review initial impressions and modify the interview guide as needed.

## RESULTS

### Thematic findings

Although emphasis among different types of participants differed somewhat, the unifying theme from all groups was that the most important things nurses do to influence outcomes during labour and birth are to provide support and advocacy for women (table 3). The importance of this theme was expressed in positive and negative comments on the quality of nursing care from nurses, new mothers and physicians.

#### Nurses’ groups

Nurses overwhelmingly described support and advocacy for women when asked to focus on the most important aspects of care. They seemed to take technical aspects of care for granted, raising issues of surveillance, fetal monitoring and medication administration primarily in response to what could get missed, rather than what is most important. Support and advocacy entailed several subcomponents including *explaining*, *building a relationship*, *caring/being there/being with*, *advocating* and *supporting*.

Nurses almost universally brought up *explaining* or patient education as central to patient outcomes. They described the importance of going over what patients and families could expect to happen during labour, reviewing how things might progress during the woman’s care, deciphering medical jargon and ensuring that women understand their options during labour and birth. Nurses identified the goals of explaining as promoting a positive birth experience by building women’s confidence, helping women to maintain control and ensuring inclusion of family members in the birth process.

**Table 3** Overarching theme: support and advocacy

Nurses	Mothers	Physicians
Building a relationship		
Caring/being there/being with	Cheerleading/supporting me	Emotional support
Explaining	Informing me	Education
Supporting (physically and psychologically)	Avoiding a caesarean Breastfeeding support	Labour support and management, including avoiding caesarean
Advocating	Following my wishes	Advocacy

I always encourage them to ask questions – always, no fears. No question is inappropriate or should not be asked because a lot of them are afraid.

Nurses' ability to provide support and advocacy rested on *building a relationship* with the patient and her support persons so that the patient would feel comfortable confiding in and entrusting their care to the nurse during the more difficult parts of the birth process. This also assisted nurses in *caring/being there/being with*, providing an empathetic presence at the bedside.

I think it's important to always build a relationship with the family and then from there build trust because when someone trusts you then they are looking [for direction from you] as she progresses through her labor whether she's going natural or she gets an epidural.

When things were going well, these aspects of the nurses' work contributed to *supporting* the patient both physically and psychologically in achieving their desired birth outcomes. Nurses described providing physical support for unmedicated labour; keeping patients relaxed, calm and happy to promote labour progress; managing the labour process through labour support techniques or medication; and providing focus for women during more difficult aspects of labour, such as pushing. They also described providing a calming presence and communicating effectively as aspects of supporting women during labour

I've had patients say that to me, 'Really hearing your voice helped me stay focused while I was pushing and hurt and I didn't want to push, but your voice was what got me through it'. So, they get to know you during the whole process. That's how I think you set the mood.

Nurses described their efforts at building relationships and understanding the patients' wishes as central to their role as advocates for women during labour and birth. Nurses discussed making sure they knew what women's preferences were for labour and working with them to achieve those goals. They described facilitating communication between providers and women to achieve women's goals for labour, as well as asking for time to avoid caesarean birth or taking other actions to prevent interventions that they viewed as unnecessary.

Sometimes [women are] just not comfortable telling the doctor what they really want. I've had people say, 'I really don't want my membranes ruptured'. And then the doctor will come in and say they want to do it. And then [the women] feel like they can't say, 'Well, can we not do that?' or why or ask questions. It's just things like that, understanding what their rights are as patient, the natural process and you don't have to have certain things if you don't want them. I think that's a big thing, a big part of what we do.

Although nurses considered support and advocacy critical to meeting patient needs in labour, they noted that explaining, being with and support could be first to go when they were busy. Nurses described limiting teaching and bedside support when necessary to manage their workload when they had multiple patients in labour or in recovery after birth. They also indicated they had limits to what they considered 'appropriate' patient needs. Birth plans were not universally welcomed. Nurses often used language, suggesting they viewed labour as risky and requiring limits on women's options, despite their stated support for vaginal birth and women's choices. Nurses expressed frustration with what they perceived as lack of education or motivation among some women and their family members, and some reported that this annoyed them and made it hard for them to connect authentically with their patients. Nurses also described situations where they felt that their peers were either 'lazy' or lacked the requisite labour management skills to promote vaginal birth.

#### Mothers' groups

Mothers took nurses' technical expertise for granted and focused on support and advocacy as central aspects of care. Categories within support and advocacy included *informing me/keeping me updated, cheerleading/supporting me, following my wishes, avoiding a caesarean* and *breastfeeding support*. Importance of these forms of advocacy and support to mothers was demonstrated by care women received and care women wished they had received.

Mothers often used similar language to the nurses in describing nurses' role in providing information to women and their families. Mothers valued anticipatory guidance about things that can happen in labour, and inclusion of family members in the process of keeping women informed.

To me it was being informed. I just really wanted to know what was going on

I think it would have been good if she would have been able to point it out – 'Well, this is happening because you're having a contraction' or the baby's heart rate is supposed to fluctuate or something ... It would have been a little helpful to explain that medical stuff.

Like nurses' descriptions of being with women and setting the mood and focus for women during labour, mothers described mood, encouragement and physical presence as important ways in which nurses supported women and served as cheerleaders for them during the process of labour and birth.

She kept calm, but someone else mentioned cheerleader and our nurse, she was definitely like that during the pushing stage. She was like a super cheerleader, which was really important to me. I felt very empowered and encouraged.

Mothers emphasised how important it was to them that nurses knew, understood and followed their wishes and treated them as the decision-maker. One woman noted that, contrary to most participants, she did not want nursing presence during her labour and this was respected, which was important to her. Another woman noted that she was disappointed when her nurse did not support her birth plan.

I wanted a natural birth. Well, she was pushing for them to pop my water and Pitocin and all those things that weren't in my birth plan.

A specific form of support and advocacy mothers noted was care they perceived as promoting their capacity for vaginal birth and *avoiding a caesarean*. Mothers identified emotional support, patience, positioning and oxytocin management as strategies nurses used in their care to help them avoid a caesarean birth, and felt these actions made a difference in facilitating their vaginal births.

The one nurse ... was definitely really motivated to get me to progress. That made a big difference in my delivery.

However as with the birth plan that was not followed, some mothers noted that their nurses either did not pay enough attention to them during labour or did not respect their wishes.

The second nurse I had was horrid. It was bad from the minute she walked in ... 'You can't have that'. And I'm like, 'No, I can have that. My doctor said I can'. And she kept arguing with me, fighting with me about it.

Mothers endorsed *breastfeeding support* as nursing care that influenced their success. Both women with term, uncomplicated births and women with infants in neonatal intensive care discussed the importance of skin-to-skin and breastfeeding support in building their confidence to continue breast feeding.

[My nurse] knew that I was going to try breastfeeding and she immediately brought him up to me and watched him latch on, told me what I need to be looking for, and I think that really made a difference in our breastfeeding relationship because from the start I felt confident that we were doing things correctly.

However, some mothers stated they did not receive any help with breast feeding from the nurse attending their birth. Others noted breastfeeding support could be variable depending on the nurse.

#### Physicians' groups

Like nurses and mothers, most physicians in our study focused on nursing support and advocacy as potentially influencing patient outcomes. Support included *labour support and labour management*, including avoidance of caesarean; *education* and *emotional*

*support*. Physicians explicitly addressed the nurse's *advocacy* role, though they also noted that this could generate tension in the *nurse-physician relationship*.

Physicians felt that nurses influence mode of birth through provision of labour support and labour management, nurses' skills in this varied, and they valued working with nurses who were committed to vaginal birth and skilful at achieving it.

A good nursing partner will lower your C-section rate, no question .... A good partner in a sense to facilitate vaginal delivery and it may not be just Pitocin. It may be a nurse who's comfortable with patients in different positions ... being patient.

There was consensus among physicians that nurses were spending too much time on the computer, which interfered with their performance. One physician argued that some nurses in their hospital lacked requisite labour management skills and felt this was a barrier to optimal outcomes.

Similar to nurses and mothers, physicians were quick to point to the importance of nurses' *education* of patients for guiding women through labour, and they relied on nurses to set the tone for labour with *emotional support*.

Education is important during the labor process and giving expectations to patients about [the] process. ... A lot of things aren't predictable, so just education is a really huge foundation for excellent nursing care.

The nurses offer emotional safety for patients and, physicians have a certain role to play, but it's different .... this is a very vulnerable time, and to have someone emotionally there with you ... I think that makes a difference.

Physicians noted their reliance on nursing care and importance of having a good nurse-physician relationship with open communication. Several physicians felt that the importance of nursing care to labour outcomes has increased with changing physician practice patterns.

OB is really a team sport [now] .... You really have to make communication as critical, and adaptability is critical... We're really relying on the nurses to be our eyes and ears of what's going on.

In this context, physicians expected nurses to engage in the advocacy role, but to do so within limits. They did not want nurses striking out on their own, and they were sometimes frustrated by nurses' enforcement of or reliance on institutional policies and procedures, which they felt could often impede effective labour progress, especially in the case of oxytocin management.

[T]he nurse should be sort of an advocate for the patient and the patient having the birth experience they want to have.

One of the things the nurses do that gets in the way sometimes is they enforce the protocol, they enforce the rules of the hospital.

Physicians believed nurses exert substantial control over unit culture and practices, and thought these practices influence birth outcomes:

[Nurses] control the culture of the hospital a little bit more because there's a more mass of them there. ... you might find that what they do [at hospital A] has something different than places like [hospital B or C] where the section rate is above 30%.

#### Joint Commission core measures

Assessment of nurse-sensitivity of TJC measures varied between the three groups of respondents (table 4). However, all three groups agreed that measures of caesarean birth rate among low-risk nulliparous women and exclusive breast milk feeding rate are likely sensitive to nursing care.

#### DISCUSSION

We found remarkable consensus between groups of nurses, mothers and physicians regarding potential contributions of nursing care during labour to patient outcomes. All three groups focused on the nurse's role in supporting and advocating for women during labour. Support and advocacy in this context meant informing women and their families, being present with women, setting emotional tone, knowing and advocating for the women's wishes and avoiding caesarean birth. Mothers and nurses took technical aspects of nursing care (eg, surveillance and medication administration) as a given, whereas physicians incorporated this aspect more explicitly in acknowledging that nurses were their 'eyes and ears' during labour. All groups agreed that, of Joint Commission measures, caesarean birth and exclusive breast feeding may be nurse sensitive.

Our findings are consistent with previous literature on women's expectations for care during labour and their experience of labour support showing that

women valued emotional and physical support, information, advocacy, trusting relationships, empathy and interpersonal and cultural competence from their clinicians.<sup>13 20</sup> Mackinnon *et al*<sup>21</sup> suggest that women's accounts of the value they place on nursing presence run counter to discourses that privilege biomedical components of the nursing role. Our findings support ensuring women receive supportive care which is known to influence outcomes<sup>22</sup> and are consistent with the recently published framework for pregnancy and childbirth outcome measurement from the International Consortium for Health Outcomes Measurement (ICHOM).<sup>14</sup>

We found stakeholder consensus that provision of information, emotional support, physical support and advocacy can influence outcomes during childbirth and that nursing care influences mode of birth. However, women also described care that was not supportive, and nurses described ways in which they thought women's options during labour and birth should be limited. This may partially explain previous difficulty with demonstrating associations between caesarean rates and supportive care by labour nurses in North America.<sup>23</sup> Hodnett proposed that highly technical settings may dilute the effect of supportive nursing care in labour.

Jacobson *et al*<sup>24</sup> observed that some strategies labour nurses used for education and advocacy veered into paternalistic territory and risked creating confusion and emotional suffering for women. One of the conditions under which this occurred was nursing concern for safety, similar to our finding that nurses used their sense of risk to frame constraint of women's options. Others note that covert power differentials in healthcare can result in women actively choosing care they do not want,<sup>25</sup> and differences in midwifery education and philosophy might not fully mitigate this potential in the context of facility-based care.<sup>26</sup> The potential for loss of dignity and dehumanisation during labour and birth can arise whenever women feel disregarded, disrespected or discounted, whether the provider is a nurse, physician or

**Table 4** Participant responses to nurse-sensitivity of Joint Commission Perinatal Care Measures

Perinatal measure	Important to measure related to nursing care, N (%)					
	Nurses (n=17)		New mothers (n=23)		Physicians (n=9)	
	Yes	No	Yes	No	Yes	No
Elective birth before 39 completed weeks of gestation	14 (82)	3 (18)	11 (48)	12 (52)	2 (22)	7 (78)
Caesarean birth in low-risk first-time mothers with a singleton vertex fetus	16 (94)	1 (6)	19 (83)	4 (17)	8 (89)	1 (11)
Antenatal steroids given to all women meeting criteria who present in preterm labour before 34 weeks	6 (35)	11 (65)	17 (74)	6 (26)	2 (22)	7 (78)
Healthcare-associated blood stream infections in newborns	16 (94)	1 (6)	17 (74)	6 (26)	6 (66)	3 (33)
Exclusive breast milk feeding and/or exclusive breast milk feeding considering mother's choice	16 (94)	1 (6)	22 (96)	1 (4)	7 (78)	1* (11)

\*Two physicians commented that this was relevant to postpartum nursing care, not labour nursing care.

midwife.<sup>27</sup> Thus, nurses and other clinicians must take care to support women as women wish to be supported, which may not always align with clinicians' own views of what should happen.

Despite previous mixed success in determining specific contributions of nursing care to caesarean rate,<sup>22 23 28 29</sup> there was strong support among our participants for including caesarean rate as a potential nurse-sensitive outcome. Our finding that explaining, being with and support could be first to go when nurses were busy, are consistent with a study of missed care in US hospitals where providing comfort, talking with patients and planning care were frequently missed,<sup>8</sup> and with literature suggesting organisational factors limit nurses' capacity to provide supportive care during labour.<sup>23 30–32</sup>

A limitation of this research is that it does not show causal links between participant perceptions and birth outcomes. While our sample of nurses and mothers was robust, participation by physicians was limited and views expressed may differ from physicians practising in other settings. Transferability of our findings is supported by consistency of themes between groups and consistency of themes with finding from other studies that asked specifically about labour experience or labour support, whereas we asked which aspects of nursing care during labour affect patient outcomes.

#### Clinical and research implications

Further research is needed to develop maternity care measures that are sensitive to nursing and to link nursing care with outcomes for women during labour and birth. Many such measures are likely to overlap with indicators of midwifery quality and may be applicable to intrapartum aspects of facility-based midwifery care in other industrialised countries. We were unable to locate established publicly available indicators specific to the full range of nursing or midwifery care processes in labour. In a review of maternity care measures used in Europe, Escuriet *et al*<sup>33</sup> found that while intrapartum care is a primary focus of measurement, little of that measurement has to do with non-intervention, support for normal physiological birth or positive outcomes. While ICHOM measures could be used across provider types, the ICHOM Birth Experience measure (Birth Satisfaction Scale—Revised) measures perception of support during labour, but not many of the processes that comprise support for normal birth.<sup>14</sup> Further development in these areas could potentially benefit women, labour nursing and midwifery alike, as could attention to tensions between individualised and protocol-driven maternity care across settings and clinician types.

Participants endorsed measures of caesarean birth and breastfeeding initiation as potentially nurse-sensitive, and these outcomes could be tested using existing metrics aligned with ICHOM specifications.

Caesarean birth also increases the risk for severe maternal morbidity,<sup>34</sup> another ICHOM outcome.<sup>14</sup> Delayed care and absence of 1-to-1 midwifery care in labour are considered 'midwifery red flag events' in the UK.<sup>35</sup> Further research can address women's satisfaction with labour care and measures of missed maternity care for both nursing and midwifery. Such measures should include emotional support and providing information as these aspects of care were deemed important by nurses, mothers and physicians alike and are endorsed in midwifery standards.<sup>35</sup> Information quality and birth experience measures from ICHOM could be tested for nurse sensitivity.

From a clinical perspective, engaging in supportive and relationship-building activities valued by nurses, mothers, midwives and physicians requires focused time at the bedside. Organisations providing care to women during childbirth should work together with stakeholders to evaluate care delivery models and staffing to ensure that clinicians have the time and resources necessary to be present for, be emotionally involved with, provide physical support to and advocate for women during labour and birth.

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**Contributors** KRS and AL designed the study, collected the data and conducted the analysis. JS participated in study design, data collection and analysis. AL led the development and revision of this manuscript. KRS and JS critically reviewed and revised the manuscript.

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