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Contributions of clinical disconnections and unresolved conflict to failures in intrapartum safety

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Abstract

Objective—To explore clinician perspectives on whether they experience difficulty resolving patient-related concerns or observe problems with the performance or behavior of colleagues involved in intrapartum care.

Design—Qualitative descriptive study of physician, nursing, and midwifery professional association members.

Participants and Setting—Participants (N=1932) were drawn from the membership lists of the Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN), American College of Obstetricians and Gynecologists (ACOG), American College of Nurse Midwives (ACNM), and Society for Maternal-Fetal Medicine (SMFM).

Methods—Email survey with multiple choice and free text responses. Descriptive statistics and inductive thematic analysis were used to characterize the data.

Results—Forty-seven percent of participants reported experiencing situations in which patients were put at risk due to failure of team members to listen or respond to a concern. Thirty-seven percent reported unresolved concerns regarding another clinician's performance. The overarching theme was *clinical disconnection*, which included disconnections between clinicians about patient

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needs and plans of care and disconnections between clinicians and administration about the support required to provide safe and appropriate clinical care. Lack of responsiveness to concerns by colleagues and administration contributed to resignation and defeatism among participants who had experienced such situations.

Conclusion—Despite encouraging progress in developing cultures of safety in individual centers and systems, significant work is needed to improve collaboration and reverse historic normalization of both systemic disrespect and overt disruptive behaviors in intrapartum care.

Keywords

Intrapartum care; interprofessional communication; patient safety; teamwork

Clear communication is important in intrapartum care. Miscommunication is a common and significant cause of safety issues (Grobman et al., 2011; Kennedy & Lyndon, 2008; Lyndon et al., 2012; Maxfield, Grenny, Lavandero, & Groah, 2011; Maxfield, Grenny, McMillan, Patterson, & Switzer, 2005; Simpson, James, & Knox, 2006). Several groups have demonstrated improvement in the culture of safety and presumably communication and teamwork in perinatal settings (Pettker et al., 2011; Simpson, Knox, Martin, George, & Watson, 2011; Thanh, Jacobs, Wanke, Hense, & Sauve, 2010). Yet implementation of teamwork training has had variable results depending largely on organizational factors (Farley, Sorbero, Lovejoy, & Salisbury, 2010; Jones, Skinner, High, & Reiter-Palmon, 2013), and implementation of comprehensive safety strategies has not yet reached all corners of intrapartum care. Furthermore, reports of disruptive behavior, problems with clinician performance, and breakdowns in communication continue to surface in the literature (Maxfield et al., 2011; Rosenstein & Naylor, 2012).

Researchers of these issues in intrapartum care have tended to use small samples from single sites or from within specific hospital networks or geographic regions. In this study we sought to explore in a broader sample clinicians' perspectives on whether they experience difficulty resolving patient-related concerns or observe problems with the performance of colleagues involved in intrapartum care. We report findings from a large sample of obstetricians, nurses, and midwives regarding the occurrence of communication and performance problems in intrapartum care.

Methods

We conducted a qualitative descriptive study using a sample of members from four professional associations representing clinicians who attend labor and birth including, Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN), American College of Obstetricians and Gynecologists (ACOG), American College of Nurse-Midwives (ACNM), and Society for Maternal-Fetal Medicine (SMFM). An overview of the design is presented in Table 1.

We randomly selected half of all members with valid email addresses on file from each association to receive an invitation to respond to a story collector survey adapted from two previous surveys (Maxfield et al., 2011; 2005). The other half of association members received an invitation to respond to a multiple choice survey described elsewhere (Maxfield, Lyndon, Kennedy, O'Keeffe, & Zlatnik, 2013). The story collector questions shown in Table 1 were adapted from the previous studies by an expert panel of physicians, nurses, and midwives who each had experience providing intrapartum care. Association membership was tracked by using a unique link for each professional association. No personal identifiers were collected. The study was deemed to be exempt from Institutional Review Board review.

Approximately 3% of respondents submitting narratives reported they did not experience problems in the area being queried. Another 3% of responses were not coded because they were either left blank or the response was so truncated it could not be interpreted. Thematic analysis was conducted on the remaining 94% of the narratives. We coded the data iteratively, explicitly working to identify the ways in which our personal and clinical experiences influenced our interpretations of the data (Whittemore, Chase, & Mandle, 2001). Table 1 outlines the steps of the qualitative analysis. We maintained a questioning stance toward the narratives because they gave only one perspective on the situation described by the participant. Moreover, we did not have outcome data so could not judge the accuracy of the participants' interpretations of events. Inclusion of both clinicians and non-clinicians on the research team strengthened rigor, and comparing interpretations from different positions helped expose interpretive assumptions. Similarly, the inclusion of a physician, registered nurse (RN), and certified nurse-midwife on the research team contributed to rigor by providing analytic triangulation (Whittemore et al., 2001).

Results

The distribution of participants' years of experience in intrapartum care and type of primary work setting are displayed in Table 2. We received 1932 *yes* or *no* responses to question 1 and 1557 *yes* or *no* responses to question 2 (Table 3). We received 1493 narratives: 942 narratives for question 1 and 527 narratives for question 2. Participants reported a range of experience with failure to listen or respond to concern and with unresolved concerns about another clinician's performance within the past two years. Despite the one-sided nature of the data, in many stories about clinical disagreement the analysts could easily see how the other party might have interpreted the situation differently. For example, RNs reported having clinical judgments that seemed correct to the analysts but were ignored by one or more physicians. In other stories, RNs reported what they believed to be inappropriate decisions by physicians and/or failure to listen to the RN, but the physician seemed correct to the analysts given the information provided. Finally, in some cases where physicians complained that nurses refused to follow their orders, our interpretation was that the nurses' decisions were appropriate. These kinds of issues also occurred between physicians and between physicians and midwives.

The overarching theme was *clinical disconnection*, which included disconnections between clinicians about patient needs and disconnections between clinicians and administration about the support required to provide safe and appropriate clinical care. We identified four sub-themes: a) *common ground-different road signs*; b) *perceived imperviousness*; c) *inaction or misguided action*; and d) *resignation*. These themes were situated in practice settings shaped by the dynamic nature of intrapartum care; women's needs and desires; clinicians' philosophies about birth; infrastructure and resource constraints; cultural characteristics of specific hospitals; regulatory and litigation concerns; and historical relationships among professions, specialties, individuals, and groups.

Common Ground-Different Road Signs

Common ground means that everyone is in the situation for a common purpose: to care for the woman in the best manner possible. We assumed this to be true of participants. However, that common ground is also formed in the context of a) the individuals involved (e.g., clinicians, women, and family members), b) the clinical context, which can be very complicated and influenced by nonmedical factors, and c) characteristics of the environment such as internal/external policies, differences in training and experience, malpractice concerns, payers, politics, and the like.

Thus, while the clinicians were all guided by what they believed was the same desired outcome, there was not necessarily agreement on the route to take toward the shared destination. Different clinicians held varying conceptions of what the *best road map* looks like. For example, should labor be actively or expectantly managed? Under what circumstances is oxytocin induction or augmentation helpful or harmful? Differing approaches to care were not necessarily problematic in and of themselves, rather the absence of dialogue created unidentified hazards. When two or more parties to a discussion do not recognize that they are not operating under the same assumptions because they are trying to achieve the same goals from divergent perspectives that may be in conflict, they risk unresolvable disagreement based on underlying differences in perspective that are not made explicit in the active conversation.

Differences in perspective became the stage in which the different road signs were interpreted regarding clinical management. The nurse, acting on hospital policy and her interpretation of the clinical situation may refuse to implement a physician order; this was a common theme across the data set. In a story titled, “The Pitocin wars continue” a physician recounted the fallout when a nurse expressed concern over a clinical interpretation divergent from that of another physician. When the nurse implemented the chain of command, the nurse involved and other staff went on to experience verbal harassment from the treating physician:

> A term patient was admitted for labor and after her epidural, the progress had slowed. Therefore Pitocin was started to augment the labor. When the pattern was category 2 due to variables with each contraction, the nurse instituted standard resuscitation measures and adjusted the Pitocin per protocol. The physician became upset with the nurse when she turned off the Pitocin stating that the tracing had good variability so it was OK to proceed. The nurse reiterated her concern that the baby needed a rest and refused to restart the Pitocin based on hospital protocol. When he again insisted, she instituted the chain of command and was able to get her charge nurse and the department chair involved due to her concerns…. During this time the physician was on labor and delivery bad mouthing the staff, policies, and the hospital in general in front of essentially anyone who would listen. [OB]

Another common theme was that the nurse would initiate a discussion about the plan of care, offering an alternative approach that he or she judged to be a safer course of action, only to be discounted by the physician or midwife:

> A nulliparous woman was admitted in labor and progressed to complete spontaneously. During pushing, fetal heart rate variables started with each pushing effort. Bedside RN assisted patient with changing positions, pushing every other contraction. CNM aware and would push with patient at certain times. Nearing the birth the variables became more severe and FHR slower to recover…. CNM decided to “take over” the second stage [and] coach patient in closed glottis pushing …. RN voiced concern about change in variables and need to give infant rest. CNM and OB attending made decision to continue pushing through variables until FHR bradycardia ensued and the need for vacuum assisted birth. Both mother and fetus did fine, but RN felt the change in pushing efforts to closed glottis and not allowing fetus to recover were unnecessary and resulted in VAVD. [RN]

This theme of common ground-different road signs was also present in midwife-physician relationships and physician-physician relationships. Often clinicians interpreted the same data differently:

> I was the in house attending for the residency program and a patient arrived in labor who would have been an ideal candidate for a trial of labor [after cesarean]. Her

> attending refused to even consider it although the hospital is ideally set up for this…. As I had spoken with the patient prior to anyone realizing she was a patient of this attending, I knew that she was open to the idea. The attending was adamant that she would not allow the woman to continue to labor. I have significantly more experience both in years and volume than the attending; however, politics is what it is and she was the attending of record, so I voiced my concerns and stepped away. [OB]

Clinicians also reported situations in which their interpretations were at odds with those of the supervisory or administrative personnel who controlled access to necessary resources:

> "The doctor is the best patient advocate." We have a great rapport with our nurses in private hospitals. [But] in the teaching hospitals the nurse can berate the doctor and question anything. For example, a patient was being induced for gestational hypertension…. Her blood pressures were worsening and at 8 am was 190/110 (stroke range). The physician ordered magnesium stat and an emergency c section as well as other iv antihypertensives. After the charge nurse berated her and told her she could not do it and disrupt the OR schedule unless it was emergent, the doctor called it emergent and we had to explain to the nurse manager why this was emergent…. In a teaching hospital like this, the nurses and nurse managers hold all the power and we will get written up as disruptive if we don't cater to them. [OB]

Perceived Imperviousness

A perception that others were impervious to the storyteller's concerns was pervasive. This took two forms: imperviousness to input about clinical performance and imperviousness to input on the clinical picture and plan. All types of clinicians discussed performance concerns related to clinical competence. Clinicians often reported addressing the concern with their colleagues only to be ignored or rebuffed:

> There is a community-based Family Practice Residency in my town. The tradition is that family practitioners teach the residents obstetrics. There are ALWAYS concerns that they are not taking the best care of the patients but they say that they do not have to uphold ACOG standards since they are not ACOG members. [OB]

Participants across the sample described concerns about clinical plans and their execution. These situations typically involved an expression of concern that the participant perceived as being disregarded by other clinicians, particularly decision makers. Stories about nurses, residents, fellows, and obstetricians who declined to follow the plan ordered by the woman's attending physician or recommended by a maternal-fetal medicine or other specialist were also common:

> "Falsely reassured." There was one patient with absent to minimal variability with recurrent late decelerations for a couple of hours, a diabetic who had been in poor control who was being induced. Because the Chief of the MFM Division had not been concerned… I had a hard time convincing the MFM Fellow and the Chief Resident that we needed to do a C/S. It was really hard to mobilize them and even teach from the case. Only after the fellow went in at my insistence to do a fetal scalp stim and it was non-reactive, did she realize that a C/S was indicated. The C/S cord UA was 7.06, BE-6, but I consider this a near miss. [MFM]

This imperviousness represents disregard of road signs, even when pointed out by one clinician to another. It was often unclear whether the clinician simply did not see the road sign or whether the clinician was choosing to disregard the road sign for reasons he/she believe are justified. A clinician's correct *read* of the situation may have been ineffectively communicated. On the other hand the *read* may have been wrong, or the situation may have

been one in which team members simply disagreed on the reading or the route. Too often it appears communication failures reached an impasse requiring outside intervention (i.e., chain of command), or the situation was simply not resolved at the risk of complete breakdown:

> "Please believe me." We had a patient who had had a cesarean section and was not stable. Her vital signs were indicating that she was bleeding, but there was no visual bleeding noted. Her uterus remained firm, but yet her blood pressures continued to drop and her pulse rise. She was extremely pale. We had anesthesia at the bedside who kept telling us to bolus her and medicating her as necessary, but we couldn't get the surgeon to believe or hear us. I finally had one of his partners come in and see the patient and he then called his partner back over. We took her to the OR and she had a uterine rupture. [RN]

Inaction or Misguided Action

Many stories involved an immediate need for action from others that was not provided in a timely manner. This manifested frequently as clinicians being unreachable at critical times (a nurse off the floor, a physician or midwife not responding when called) but also included providers refusing to come to the hospital when asked or individuals refusing to intervene in a timely manner for critical clinical needs. Under these circumstances, participants were left feeling stranded, discounted, and often concerned for patient safety. Participants in all groups reported incidents where clinicians, especially nurses, struggled to obtain a timely response or the attending or resident physician explicitly refused to come to the bedside for an evaluation:

> "Delay in responding to request to see a patient." RN caring for patient at term was concerned about excessive bleeding in early labor and a FHR tracing that was flat, no accels but no decels. She called the MD who refused to come and see the patient unless the nurse "thinks she needs a C/S." The nurse said she was not qualified to make that decision but wanted the MD to come and assess. The MD did not come. The nurse went up her chain of command, but the physicians were all in the same group and reluctant to get involved. By the time the nurse and her supervisor (over 2 hours) were able to get a physician to come and decide to do a C/S, the tracing was absolutely flat with a suggestion of late decelerations. At C/S the baby had Apgars of 1/4/6 and had seizures beginning at 6 hours of age. Very small placenta with a small marginal clot. [Midwife]

The reasons that physicians and others did not respond to pages, phone calls, and requests for bedside evaluation in these cases was not clear: they may have disagreed with the assessment, been busy elsewhere, asleep, or simply unresponsive. Whatever the reasons, the problem of failure to respond to requests was pervasive in the dataset and was not limited to physicians:

> "2 for 1, Not All Fun & Games." It was a busy evening and [our staff were] under-qualified. We had 5 nurses with 3 patients in labor [but only one nurse had labor & delivery experience]. The supervisor's response was, "you just have 3 laboring patients and 5 nurses. You should be able to handle that." When I tried to explain bodies don't count but experience does, I was told, "they are nurses and should be able to do patient care no matter where." ….We also had 4 triage patients throughout the shift to evaluate for labor…. The supervisor still sees numbers only and doesn't count the fetus … or the special training required. He doesn't realize that when we get a pregnant patient we are actually getting 2 patients in one…. But he was more than willing to write me up for requesting more help and someone with experience. [RN]

Many participants recounted situations in which they made every effort to address a concern, including taking the issue to supervisors, managers, chiefs of service, and other authority figures, but perceived that absolutely "nothing gets done" in response:

> "Sleep deprivation ignored for staffing coverage." Our department has a specific PRN nurse who is chronically sleep deprived. She has another fulltime position, is [in school], has two small children, works nights, and does not sleep much during the day because she is at home taking care of her two young children. She has been seen falling asleep while sitting and charting. The unit supervisor is aware and the response is, "We need her on for coverage and I'm careful to keep an eye out for her strips." [RN]

Conversely, actions were also taken that were viewed as wrong or inappropriate. Participants reported seemingly wrong actions such as creating rules to protect people with missing competencies or remove risk by hindering other workers. Participants described these misguided actions as leading to problems with patient safety and poor morale and encouraging defeatism:

> "Good rules/bad docs." One MD on staff has generally questionable skills, both physical and intellectual. He seems to be the butt of jokes, until issues of competence arise. At that point…they try to pass policy and procedures to limit his access to similar situations: making good rules to address bad doctors. Most recently, concerns about his competence in performing neonatal circumcisions arose. The admin answer: "ban all OBs from doing circumcisions." …[I'm not] wedded to the procedure, but I was offended that I am now prohibited from doing a procedure that I've been doing off and on for thirty years. [OB]

Of note, a few respondents did provide counter-examples of effective intervention for performance issues, including formal proctoring and limitations on scope of practice.

Resignation

The cumulative effect of respondents' concerns about performance and responsiveness coupled with lack of visible and appropriate administrative action led to a strong sense of resignation among many participants. Nurses seemed particularly vulnerable to a sense of powerlessness. Many reported situations in which they struggled to get physicians (and sometimes midwives) to respond promptly to their concerns. Nurses were often subject to blame when things went awry and retaliation when they advocated for what they perceived to be the safe course of action:

> Fellow on call was called to assess [Category 2] strips. Said it's ok then left. Again in few mins fht at 150 with lates and variable deceleration with moderate to minimal variability, so we had to call him again. He came not happy. We asked to call his consultant. He said he called and informed her. This happened between 4–6 am. At 0600 consultant came upset because of not updating her of pt's status…. Baby came out flat and intubated....The blame went on to the nurses because we were not strong enough to call the consultant in [the fellow's] presence. [RN]

In the cases of midwives and maternal-fetal medicine specialists, delicate balancing of their consultation relationships with obstetricians also appeared to influence their handling of clinical disagreement and at times led to a sense of their hands being tied.

There was very little description of positive problem solving, but it was present in some narratives in which participants commented on effort their unit or organization had put into teamwork training paying off with good communication. Some participants also gave examples of persistent advocacy that resulted in a positive change in care:

> "Everyone is responsible for the final outcome." Obstetrician not willing to listen to a respiratory tech about the danger of taking someone with abnormal blood gases to C/S. The technician insisted the obstetrician sign the lab results acknowledging he was aware of the results prior to taking the patient to C/S. The tech's proactive behavior caused the OB to change his mind and stabilize the patient prior to surgery. [OB]

The *clinical disconnect* was reinforced by stressful circumstances, near misses, and adverse events, leading to defensiveness, conflict, imperviousness, retreat, and/or unprofessional behavior. All of these reflect the power dynamics within institutions and lack of respect for each other's knowledge and opinions and for the contributions of all team members. In the worst situations, power dynamics, lack of a healthy work environment, and problems with interpretations of events created a toxic environment with potentially dangerous consequences:

> There is no Team on our unit. The majority of the physicians demean and denigrate the nurses regularly. They act out, yell and scream at people, and are particularly brutal at night when awakened…. Most [nurses] are simply unwilling to call the physicians… and only do so if they are absolutely certain about their situation. During one labor, the FHR tracing became worrisome in the middle of the night. [The nurse called the physician who] was angry at having been awakened, and gave orders to call again only if the tracing worsened…Although she was very worried about the recurrent deep variables [as the labor progressed]…the nurse was reluctant to awaken the physician again, and in any case the Charge nurse discouraged her from doing so. Four hours from the initial deceleration there was a severe bradycardia with loss of variability that did not respond to interventions. The physician was 45 minutes away. [RN]

Discussion

More than half of the nurses and maternal-fetal medicine specialists and about one third of obstetricians and midwives reported difficulty getting clinical concerns heard within the last two years. Approximately 40% of nurses and MFMs and approximately 25% of obstetricians and midwives reported being aware of unresolved performance concerns in their settings in the same time frame. The difficulties our participants encountered in coordinating communication around routine care, contacting clinicians when needed, and obtaining administrative response to concerns support the findings of Grobman et al. (2011) and offer additional insight into sources of communication breakdown. *Common ground--different road signs* and *perceived imperviousness* are pivot points at which a conversation can deteriorate, setting the stage for unresolvable conflicts. Imperviousness, inaction, and misguided action in response to concerns represent fundamental leadership failures that promote a cycle of resignation and defeat, wherein problems become un-discussable, conflict becomes interpersonal, and speaking up is viewed as ineffectual (Rogers et al., 2011). Nurses seemed particularly vulnerable to resignation and defeatism in our study, but other clinicians also found themselves in situations they felt unable to safely resolve.

Intrapartum care is inherently dynamic and nuanced, and crucial evidence gaps exist. Thus the road signs may be unclear or change quickly, leading providers to have completely different interpretations of the right thing to do. Conflicting approaches are easily exacerbated by the dynamic nature of labor, the fact that many births naturally happen at night, and many obstetricians and midwives have multiple places they need to be at once. Differences of opinion and prioritization are bound to occur with some regularity. Our data suggest that despite encouraging progress in developing cultures of safety in individual centers and systems (Grunebaum, Chervenak, & Skupski, 2011; Pettker et al., 2009; Pettker

et al., 2011; Simpson et al., 2011; Thanh et al., 2010), there is still significant and necessary work ahead to reverse overt disruptive behaviors in labor and delivery and what Leape et al. (2012) described as more subtle forms of systemic disrespect. Systemic disrespect is a profound example of normalization of deviance wherein understaffing, excessive workloads, and psychological intimidation are often so interwoven into the fabric of work environments that they seem normal. The stories in our dataset reflect a need for sustained transformational leadership to change this dynamic.

Limitations include potential selection and non-response bias. We mitigated the selection bias inherent in using professional association databases by randomly selecting half of the potential participants to receive the study invitation. Non-response bias is a concern, as non-responders may have had different views on the occurrence, severity, and types of problems with communication and performance that may occur in intrapartum care. We also do not know about the quality of the safety culture in the institutions where our participants practice, if facilities with particularly serious problems might have had several responders participating, or how frequently individual participants experienced the kinds of events they reported. With both the Safety Attitudes Questionnaire (SAQ) and the Hospital Survey on Patient Safety Culture (HPSC) individual level data are aggregated to the level of the unit or hospital to obtain a safety culture measure for the local unit or organization. These two surveys are very useful for identifying a positive or negative safety climate, identifying problematic healthcare provider attitudes in an organization, and gauging the safety climate of organizations at the unit and institutional level. They provide information on the health of the unit or organizational safety culture and may be used to track changes in safety culture over time and in response to interventions (Sexton et al., 2006; Sexton et al., n.d.; Sorra & Nieva, 2004).

While there are items about the ease and/or frequency of reporting errors or events on these two surveys, they do not specifically query the respondent about the occurrence of problematic situations in their work settings. Based on earlier studies indicating problems with obtaining a response to clinical concerns and ongoing performance issues in other kinds of settings (Maxfield et al., 2011; 2005) our survey was designed to capture individual experience with these issues in intrapartum care settings. This level of information is not obtainable with the HSPSC or the SAQ.

The most important limitation of our study is the one-sided nature of the stories collected. The stories provide a window into the experiences of the participants, but the story collector methodology inherently limits the scope of the analysis of any individual incident and precludes linking specific behaviors to positive or negative outcomes. We did receive multiple stories reporting serious adverse events.

The mindset and tools for producing a culture of safety and high reliability in perinatal care are well defined (Knox & Simpson, 2011; Knox, Simpson, & Garite, 1999; Simpson et al., 2011). Many resources are publicly available (Agency for Healthcare Research and Quality, n.d.). Focused site-specific strategies have also been used to uncover the sources of communication defects and design solutions (Grobman et al., 2011), and movement toward increasing use of in-house laborists or obstetric hospitalists may improve access to response in many situations. However, it is critical to recognize the degree of systemic disrespect still present in many health care organizations, and that it will take more than checklists and SBAR to resolve these issues. Research is needed to determine how and why some clinicians are able to persist with their concerns under circumstances where other clinicians frequently acquiesce in spite of concern. Organizations that engage team training “whole” rather than implementing it in a piecemeal fashion may obtain better results (Farley et al., 2010), and organizations that have embraced a comprehensive safety strategy have

demonstrated impressive improvement (Grunebaum et al., 2011; Pettker et al., 2009; 2011; Simpson et al., 2011). More advanced communication training opportunities that go beyond didactic content are needed for clinicians providing intrapartum care. An evidence-based approach would include at least eight hours of workshop-style training emphasizing small group work with skills practice and opportunities for reflection, feedback, and discussion (Berkhof, van Rijssen, Schellart, Anema, & van der Beek, 2011). Most importantly, serious and sustained administrative commitment to assessing the work environment and continuously and transparently addressing any observed deficiencies in interpersonal interaction and clinical performance are essential for creating the psychological safety necessary to achieve optimal care of childbearing women.

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Table 1

Study Design

	Design Elements
Data Collection	Email with direct link to a survey about clinical scenarios in the past 2 years. The survey was hosted on a secure survey platform. If participants answered YES to the prompts listed below they were asked to write a description of the situation and title the story. Story 1: Have you been in a situation where you believe patients may have been at risk due to failure of one or more team members to listen to or respond to another team member's concern? Story 2: Have you experienced unresolved concerns about problems with another caregiver's performance in the intrapartum care setting?
Data Analysis	Frequencies were used to characterize categorical responses to the two questions listed above. Textual data were grouped by association membership; Atlas.ti software was used to organize and assist in data analysis. Thematic analysis of the free-text responses following the methods of Braun & Clarke (2006): • 3 team members independently inductively coded the first five responses for Story 1 from each clinician group to develop a preliminary codebook. • Codes were reviewed and discussed by the entire research team, applied to the next 20 stories, and iteratively examined to achieve consensus on coding and definitions. • New codes that were identified as coding progressed were discussed by the group and compared to existing codes. Codes were expanded, collapsed, or condensed as needed. • Upon completion of coding all the stories, each analyst independently clustered codes as predominant themes. • Themes from each analyst were compared, contrasted, and integrated based on commonalties across the data set. • Diagramming strategies were used to assist with developing relationships among concepts, and an iterative consensus process to develop the final thematic integration.
Data Exemplars	Multiple candidate exemplar stories judged to be representative of the dataset were proposed for illustrating each theme. Iterative consensus was used to select the final representative quotations.

Table 2

Distribution of Years of Experience and Work Setting by Professional Association

	SMFM % (n=69)	ACOG % (n=573)	ACNM % (n=237)	AWHONN % (n=1053)
Years of Intrapartum Experience				
0–5 years	3	4.3	9.2	10.9
6–10 years	11.9	13.8	11	12.7
11–20 years	23.9	28.7	25.7	23.9
21–30 years	47.8	35.3	29.4	29.4
>30 years	13.4	17.9	24.8	23
Missing[a]	2.9	7.5	8	6
Main Practice Setting				
Hospital with limited specialty services available	0	11.4	10.6	19.6
Hospital with intermediate level of service – 24 hour availability of all essential specialties	13.8	33.3	31.7	31.9
Hospital with comprehensive service, highest level of specialty care	84.6	52	40.7	37.5
In-hospital birth center	1.5	3.1	4	10.6
Out-of-hospital birth center	0	3.1	7	0.1
Home birth	0	0.2	6	0.2
Missing[a]	5.8	9.8	16	6.4

Note: SMFM, Society for Maternal-Fetal Medicine; ACOG, American College of Obstetricians & Gynecologists; ACNM, American College of Nurse Midwives; AWHONN, Association of Women's Health, Obstetric and Neonatal Nurses.

[a]Missing values excluded

Table 3

Response Distribution by Professional Association

	Question 1		Question 2	
	Have you been in a situation where you believe patients may have been at risk due to failure of one or more team members to listen to or respond to another team member's concern?		Have you experienced unresolved concerns about problems with another caregiver's performance in the intrapartum care setting?	
Organization	**% Yes (n)**	**Submitted a Story**	**% Yes (n)**	**Submitted a Story**
SMFM	52 (69)	37	41 (56)	17
ACOG	32 (573)	197	29 (442)	124
ACNM	40 (237)	100	25 (177)	65
AWHONN	56 (1053)	608	43 (882)	321
Total	1932	942	1557	527

Note: SMFM, Society for Maternal-Fetal Medicine; ACOG, American College of Obstetricians & Gynecologists; ACNM, American College of Nurse Midwives; AWHONN, Association of Women's Health, Obstetric and Neonatal Nurses.