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Barriers to Attending Vaginal Breech Birth in the American Healthcare System: A Qualitative Analysis

Hilary Schumer
Seattle University

DNP Project

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Hilary Schumer, RN

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Approved by: Elizabeth Gabzdyl CNM, DNP, APNP Date 6/5/2023

DNP Faculty Mentor: Elizabeth Gabzdyl, CNM, DNP, APNP

Approved by: Rixa Freeze Date June 5, 2023

DNP Project Reader: Rixa Freeze, PhD

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A fetus is considered breech when the presenting part is the buttocks, foot/feet, or hips. Annually, approximately 5% of all pregnancies in the United States (U.S.) are breech at term (Centers for Disease Control and Prevention, 2021). Vaginal delivery of a breech baby is increasingly rare in the U.S., as 95% of those presenting as breech at term are delivered via cesarean section (Centers for Disease Control and Prevention, 2021). While the number of vaginal breech deliveries has been trending downwards since the 1970s, the rate dropped precipitously in 2000 after the Term Breech Trial (ACOG, 2020; Freeze, 2019; Hunter, 2014). The Term Breech Trial (TBT) found that "Perinatal mortality, neonatal mortality, or serious neonatal morbidity was significantly lower for the planned caesarean section group than for the planned vaginal birth group" (Hannah et al., 2000). The most commonly cited concerns about vaginal breech delivery include risk of head entrapment, where the body emerges but the head (typically the widest part of the fetus) is stuck in the pelvis, and birth trauma/injury related to manipulation of the fetus during delivery (ACOG, 2020; Berhan & Haileamlak, 2016).

As a result, for the past 20 years most trainees in obstetrics and midwifery have not been trained in managing vaginal breech births, or receive only rudimentary training in case of an emergency or precipitous delivery (Freeze, 2019; Hogle et al., 2003; Leeman, 2020). This has effectively removed the option of vaginal breech birth for most pregnant people, which severely limits their choices. Indeed, most pregnant people with breech presentations at term have the option to have a cesarean section or first try an external cephalic version, in which a

physician attempts to externally rotate the fetus from breech into a cephalic, or head down, position (ACOG, 2020).

In recent years there has been a push to "rediscover" breech delivery, both to reduce maternal morbidity from major abdominal surgery and to provide birthing people with more choices about their method of delivery (Goffinet et al., 2006; Hunter, 2014; Petrovska et al., 2017). Despite new research, local training initiatives, and efforts from global organizations like Breech Without Borders (BWB), not only do rates of vaginal breech delivery remain low, so too do the number of providers who a) feel comfortable and qualified to safely attend a vaginal breech birth and b) work within a hospital/healthcare system that allows them to offer vaginal breech birth (Furtado & Kitson-Reynolds, 2021; Hunter, 2014; Leeman, 2020). Understanding these barriers is crucial for finding possible strategies to expand options for obstetrical providers and birthing people.

Background and Significance

As noted above, the prevalence of term breech presentation pregnancies is between 4%-5% annually in the U.S. (ACOG, 2020; Centers for Disease Control and Prevention, 2021). In the U.S., over 137,000 people delivered via cesarean section due to breech presentation in 2020, which is 95% of all breech deliveries that year (Centers for Disease Control and Prevention, 2021). Despite the recommendations that pregnant people be offered an external cephalic version, in 2019 fewer than 1% actually attempted one, and of those, approximately 50% were successful (Centers for Disease Control and Prevention, 2021; Devold Pay et al., 2020). The reasons for such low numbers of external cephalic versions and their probability of success are beyond the scope of this project, but it is important to note the implications,

namely that well over 130,000 pregnant people in the U.S. each year find themselves with nearly no choices about how to deliver their breech babies other than to undergo cesarean section. Furthermore, despite being the method of delivery for an average of 30% of babies born in the U.S. each year, cesarean section involves major abdominal surgery, complete with risks for both the pregnant person and neonate (Devold Pay et al., 2020; Fernández-Carrasco et al., 2022; Thompson et al., 2019).

Breech Without Borders (BWB), referenced above, is a 501(c)3 nonprofit organization dedicated to changing this narrative by providing training, education, and advocacy. In addition to conducting research and holding conferences about expanding access to vaginal breech birth, BWB holds a series of workshops worldwide that are designed to help obstetric providers develop skills to safely and confidently attend vaginal breech deliveries (*Vaginal Breech Birth*, 2022). Despite new research, local training initiatives, and efforts from global organizations like Breech Without Borders (BWB), not only do rates of vaginal breech delivery remain low, so too do the number of providers who a) feel comfortable and qualified to safely attend a vaginal breech birth and b) work within a hospital/healthcare system that allows them to offer vaginal breech birth (Furtado & Kitson-Reynolds, 2021; Hunter, 2014; Leeman, 2020). Understanding these barriers is crucial for finding possible strategies to expand choices for birthing people. To that end, this project is rooted in the following question: What are barriers and potential solutions to skilled, trained providers being able to offer vaginal breech birth in the American healthcare system?

Literature Review

A review of the relevant literature suggests that there are two broad categories of roadblocks to offering vaginal breech birth: lack of providers sufficiently skilled and comfortable attending vaginal breech deliveries, and systemic barriers from hospital systems, medical education, malpractice fears, and insurance companies. These two areas are certainly related and interconnected, and understanding the first is crucial for understanding the second. A brief survey of the literature since the landmark 2000 Term Breech Trial, especially as concerns the safety of vaginal breech birth, follows as well.

Personnel and Training

Vaginal breech delivery is vanishingly rare, especially in the U.S.. More than 95% of fetuses in the breech position at term will be delivered via cesarean section (Centers for Disease Control and Prevention, 2021). While the increase in cesarean sections for reasons of breech presentation and fetal distresses had been steadily rising in the latter half of the 20th century, the watershed moment came in 2000, with the publication of the Term Breech Trial (Berhan & Haileamlak, 2016; Freeze, 2019; Hannah et al., 2000; Leeman, 2020). As noted above, the Term Breech Trial found that while maternal morbidity and mortality was essentially the same for those with planned cesarean for breech and those doing vaginal breech birth, there was a significant increase in neonatal/perinatal morbidity and mortality for vaginal breech birth (1.6% vs. 5%) (Hannah et al., 2000; Hunter, 2014).

Despite its radical impact on the healthcare landscape, the TBT faced pushback almost immediately. Researchers found several instances where the study violated its own inclusion criteria and protocol, and concluded that over 75% of the deaths in the vaginal breech arm of

the TBT trial were not related to the method of delivery (Glezerman, 2006; Hunter, 2014; Leeman, 2020). Similarly, the PREMODA study, a trial of 8105 women in France and Belgium in 2002, found that no significant differences in neonatal mortality or serious neonatal morbidity between the planned vaginal birth and the planned cesarean groups (1.6% vs 1.45%) (Berhan & Haileamlak, 2016; Glezerman, 2006; Goffinet et al., 2006; Leeman, 2020). Other recent meta-analyses have found similar evidence, and noted that while the absolute risk of neonatal injury might be higher, the relative risk remained low, and the incidence of serious maternal morbidity and mortality from cesarean section was significantly higher than the risk to the neonate (Fernández-Carrasco et al., 2022; Freeze, 2019).

Students of medicine and midwifery in the U.S. are not routinely taught to manage vaginal breech birth, even if that is what patients desire (Freeze, 2019; Furtado & Kitson-Reynolds, 2021; Leeman, 2020; Mattiolo et al., 2021; Walker et al., 2018). By 2019, 74% of fourth-year obstetrics and gynecology residents in the U.S. stated they would not be comfortable with vaginal breech delivery (Leeman, 2020). Organizations (like BWB, and others in Europe) offer trainings and workshops on breech birth, which may lead to increased confidence and ability, but these trainings are not correlated with more personnel being able to offer vaginal breech births (Leeman, 2020; Mattiolo et al., 2021; Thompson et al., 2019). Moreover, true expertise in vaginal breech delivery is possible only with repetition and mentoring, which is challenging, if not downright impossible, for most providers currently practicing in the U.S. (Bovbjerg et al., 2017; Hipsher & Fineberg, 2019; Leeman, 2020; Walker et al., 2018), given the low numbers of vaginal breech births even attempted.

Systems Level Concerns

In today's healthcare environment, physicians and midwives are limited by their hospital systems, insurance, and administration. One obstetrician described facing "enormous pressure" to cease attending vaginal breech births from their hospital administration, and another offers vaginal breech birth at home because his hospital instituted a ban, while others live in states that have sought to legislate vaginal breech birth out of existence (Fischbein & Freeze, 2018; Hipsher & Fineberg, 2019). In the U.S., only George Washington University (GWU) hospital has established a Vaginal Breech Initiative (VBI); a retrospective analysis from 2011 to 2017 found no significant increase in perinatal mortality (Marko et al., 2019). It is important to note that the sample size is quite small: only 47 people total attempted vaginal breech birth in that time period, and only 34 people did so successfully.

Vaginal breech deliveries in the U.S. happen predominantly outside of hospital systems, in birth centers or at home. As a result, most pregnant people do not have real choices when their fetus is persistently breech (Petrovska et al., 2017; Thompson et al., 2019). Many pregnant people with persistently breech fetuses at the end of pregnancy have taken to the internet to search for options, as they have found little to no support from their established obstetrical providers (Hipsher & Fineberg, 2019). Indeed, pregnant people whose fetuses remain breech despite attempted ECVs and express interest in vaginal breech birth report feeling bullied and pressured by their providers into electing for cesarean delivery, and dismayed at the lack of reliable information available to them about their options (Petrovska et al., 2017; Thompson et al., 2019).

Theoretical Framework

This project uses Lewin's Theory of Change as its theoretical framework. Lewin's theory of change features three stages or steps: unfreezing, moving (or change), and refreezing (Burnes, 2020; Hussain et al., 2018). This model is often used to conceptualize organizational change. To that end, this theoretical framework understands that within an organizational unit, there are both driving forces that move people and processes towards change, while there are also restraining elements that hinder change, acknowledging that inertia is a strong force (Burnes, 2020; Hussain et al., 2018; Saleem et al., 2019). This equilibrium is challenging to overcome, and Lewin's theoretical framework notes that both reducing restraining forces and increasing driving forces are necessary for the first step of unfreezing (Burnes, 2020).

Lewin's Theory of Change is an especially useful framework for this project, as the barriers to implementing vaginal breech birth in the American healthcare system are caused by substantial institutional resistance and the lack of pressure in favor of vaginal breech birth. Indeed, those interviewed in the BWB transcripts are uniquely situated in a place where they are currently working in a system hindered by elements that would prevent unfreezing, yet have the skills and experience to provide the kind of knowledge sharing that might help move towards change (Burnes, 2020; Saleem et al., 2019). As these practitioners work within existing systems, their interviews will hopefully provide insights in order to ensure that "refreezing" could occur after any potential changes, which Lewin stresses is crucial for sustainable change.

Methods

Setting

Breech Without Borders (BWB), referenced above, is a 501(c)3 nonprofit organization dedicated providing training, education, and advocacy around vaginal breech birth. In addition to conducting research and holding conferences about expanding access to vaginal breech birth, BWB holds a series of workshops (mostly in the U.S., Australia, and New Zealand) that are designed to help obstetric providers develop skills to safely and confidently attend vaginal breech deliveries (*Vaginal Breech Birth*, 2022). Yet many of those who found a way around the first hurdle by participating in training workshops and conferences with BWB, or who have had the skills to attend vaginal breech births for decades, still find themselves unable to practice vaginal breech birth due to broader factors, many of them systemic (Furtado & Kitson-Reynolds, 2021; Hipsher & Fineberg, 2019; Walker et al., 2018).

Participants and Data Collection

The interviews were collected in 2017 in anticipation of a BWB conference and transcribed by BWB staff. The interviews were conducted via telephone; each interviewee signed an informed consent form before the interviews began. BWB has given its permission for the analysis described above, and the project was deemed “exempt” by the Seattle University IRB board in January 2023. Each of the interviewees was included on the basis of having participated in a BWB workshop designed to help them safely and confidently attend vaginal breech deliveries, being a known/well-publicized provider who attends vaginal breech deliveries or being a healthcare professional referred to the interviewer on the basis of being involved with vaginal breech birth. One of the respondents, a registered nurse who has worked in Labor and Delivery for 15 years, was excluded from this analysis, as their experience and

responses were not relevant to the paper's central question. Basic demographic data for the included fourteen individuals interviewed follows below:

Table 1
Interviewee Credentials

Obstetrician	Family Medicine Doctor	Certified Nurse Midwife
11	2	1

Table 2
Region of Practice

East Coast	South	Midwest	West	Southwest
1	5	4	3	1

Table 3
Decade of Residency/Training

1980s	1990s	2000s
8	5	1

No other demographic information is included in this paper, and has no bearing on the analysis.

Measures

As noted above, the interviews were conducted via telephone and then transcribed by the interviewer (the director of BWB). The conversational nature of interviews led to some tangents, but each participant responded to the same list of questions, with follow up as necessary. The questions interrogate each respondent's training, experience with vaginal breech birth, and process of describing risks/benefits to patients, before moving on to ask questions about the facility in which they practice, including attitudes towards breech delivery, concerns from administrators, and potential obstacles towards and strategies for creating change in hospital settings.

Findings

Analysis

The next step in organizing and interpreting the data was determining which questions are asked of everyone. In the flow of conversations tangents develop, some of them relevant to the PICO question, many not. It was important to determine the relevance of those anecdotes and side questions. Microsoft Excel was utilized to organize data in a way that allowed each interviewee's responses to each questions to be easily visualized (Bree, 2016). After the data was organized, the initial coding of the interviews followed a thematic analysis, meaning that it identified patterns and themes that inform the project's PICO question (Maguire & Delahunt, 2017). The analysis followed Braun and Clark's 6-step framework for doing thematic analysis (Maguire & Delahunt, 2017), the first step of which is to become familiar with the data. The second step was an initial coding, which was an open coding process, as the codes were developed during close reading of interviews (Maguire & Delahunt, 2017). Each interview was closely read twice. This stage of analysis produced 59 distinct codes (see Appendix A).

After this stage, the codes were reviewed to see if they fell into obvious themes. In this third step of the Braun and Clark's framework, the codes were sorted into five overarching themes: patient choice and autonomy, hospital protocols, legal concerns, other obstacles, and change factors (Maguire & Delahunt, 2017). To help visualize this part of the theming analysis, codes and phrases were highlighted with different colors in excel, helping to keep the process clear (Bree, 2016). Once the themes were identified, each interview was read again with those themes in mind, highlighted relevant passages in the relevant color and copying them into a

sorting chart. This helped facilitate the fourth step of theming analysis, reviewing the themes and ensuring that they were supported by the data (Maguire & Delahunt, 2017).

In the next step, the themes identified in the prior two stages were further interrogated and defined, with a goal of understanding how the themes relate to one another and to the overarching PICO question (Maguire & Delahunt, 2017). Lewin's Theory of Change guided this portion of the qualitative analysis, which Braun and Clark define as "defining the themes" (Maguire & Delahunt, 2017). Lewin's theory of change features three stages or steps: unfreezing, moving (or change), and refreezing (Burnes, 2020; Hussain et al., 2018). Equilibrium is challenging to overcome, and Lewin's theoretical framework notes that both reducing restraining forces and increasing driving forces are necessary for the first step of unfreezing (Burnes, 2020). The themes and their supporting data were read through once last time, with an eye towards determining how the themes related to each other and to the questions of what the barriers are to expanding access to vaginal breech birth, as well as possible ways to overcome those obstacles. During this stage, it became clear that one of the themes, hospital protocols, was more accurately understood as a component of the theme of change factors, and the number of overarching themes was reduced to four.

Each of the four themes is discussed below. Each theme was represented in nearly all of the interviews, with a few notable exceptions. A table of the respondent demographics outlined above, correlated to the appearance of each theme, precedes the discussion. This table also includes each respondent's response to the question of "How would you rate yourself on a scale from 1 to 5, how comfortable you feel attending a vaginal breech birth? 5 is very comfortable, 1 is not at all."

Table 4:
Respondent Themes

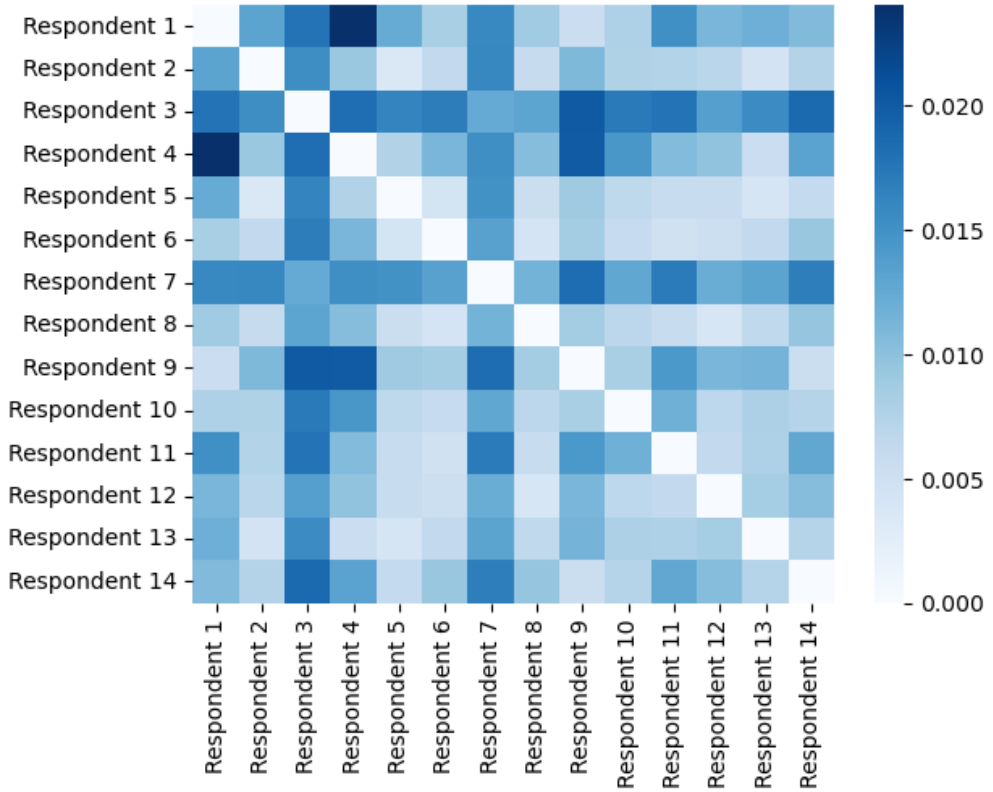
	Comfort Level with Breech on Scale of 1 - 5	Patient Choice and Autonomy	Legal Concerns	Other Obstacles	Change Factors
Respondent 1: OB/GYN, West	5		X	X	
Respondent 2: OB/GYN, South	5	X	X	X	X
Respondent 3: OB/GYN, South	5		X	X	X
Respondent 4: OB/GYN, South	5	X	X	X	X
Respondent 5: Family Medicine, Midwest	4.9			X	X
Respondent 6: OB/GYN, Midwest	5	X		X	X
Respondent 7: OB/GYN, East	No Response	X	X		X
Respondent 8: Family Medicine, Southwest	4-5	X			X
Respondent 9 – OB/GYN, West	5	X		X	X
Respondent 10 – OB/GYN, South	3 - 4	X	X	X	X
Respondent 11 – CNM, Midwest	No Response	X			X
Respondent 12 – OB/GYN, Midwest	4	X	X	X	X
Respondent 13 – OB/GYN, West	5	X	X	X	X
Respondent 14 – OB/GYN, South	5	X	X	X	X

After these themes were identified, the interviews were analyzed through a large language model called spaCy, a software tool for Natural language processing (Guetterman et al., 2018; Nadkarni et al., 2011). Natural language processing (NLP) is often associated with

artificial intelligence (AI), as at its core it seeks to give computers the ability to understand the nuances of the written and spoken word as a human might (Nadkarni et al., 2011; Young et al., 2019). NLP enables a machine to quickly and deeply analyze linguistic connections between words, which can show associations between concepts that might be missed by an individual reader (Lucy et al., 2020; Nadkarni et al., 2011; Young et al., 2019). NLP is increasingly used in the social sciences and humanities for data analysis, though like all forms of AI, NLP is not perfect or created in a vacuum, and can have issues of bias and errors (Lucy et al., 2020), and transparency is important (Guetterman et al., 2018; Young et al., 2019). This model compared how different the interviews were based on vocabulary and content (the interview questions were removed prior to analysis). It is important to note that the model was trained on a large language corpus, so unsurprisingly, the interviews do not appear extremely dissimilar, as they all address similar topics. However, differences did emerge, and worth considering. Figure 1 below is a heat map of differences, comparing each respondent to all of the others; light color indicates similarities, while darker colors indicate differences: the white diagonal line shows where each interview intersects with itself:

Figure 1

Measurement of Differences in Responses



Respondents 3, 4, and 7 appear to be most distinct in their responses across the board. Respondents 3 and 4 are both obstetricians in the south, both of whom share that they have been unable to or pushed out of being able to offer vaginal breech births; respondent 7 is an obstetrician on the east coast who does attend breech deliveries at their hospital. Interestingly, these three respondents are also fairly distinct from one another in terms of setting and practice. Respondent 1 and respondent 4 are the most different from one another, and their overlap is by far the darkest blue square in the chart; while both respondents have had to deal with bans on vaginal breech births, their responses to that ban are extremely different. However, even this difference is overall quite small, as the range of similarity is 97% to 100%.

This NLP analysis reinforces the idea that the interviews are sufficient similarly to generate coherent themes while still distinct enough to provide a variety of suggestions.

Patient Choice and Autonomy

One of the first questions posed to each respondent was: "why do you offer vaginal breech birth?" Nearly all respondents explicitly named patient autonomy in their responses. Language such as "honoring choices" and "respecting options" appears in some form in all but two interviews. Interestingly, language of morality came up frequently, framing offering vaginal breech birth as the "right thing to do" and highlight the importance of allowing pregnant people the option to decide how they want to deliver their babies; as respondent 13 put it, "every woman deserves a trial of labor." All the providers who offer vaginal breech birth have an informed consent process; an important component of this is patient education and true shared decision making. Each respondent outlined their process for ensuring that patients truly understand the risks involved not only in vaginal breech birth but also in cesarean section. Some respondents described showing their patients statements from the American College of Obstetricians and Gynecologists (ACOG) and reviewing literature; others review risks of head entrapment and stalled labor and encourage patients to ask questions and feel educated and empowered to make their own decisions: respondent 1 shared that "I always say, 'I really don't want to talk you into this. This has to be something that you feel is the right thing to do. I'm going to offer it to you, but I'm definitely not going to twist your arm.'"

Many respondents noted that a ban on this vaginal breech birth is at odds with initiatives and laws designed to promote patient autonomy. "It's a total failure to respect patient autonomy," respondent 4 said about the lack of access to vaginal breech. Most people

who work in settings that are not supportive of or hostile towards vaginal breech birth reported that their colleagues and administrators were unmoved by augments about patient choice and coercion: obstetrician colleagues have "the mentality that the uterus is basically chattel, "said respondent 14, while respondent 6 shared that their hospital flipped the argument back around on them, sharing that "the hospital felt like I was somehow being coercive by letting people—that I was telling people they could come here and just refuse [a] c-section and do their thing." Respondent 2 added that "I've heard so many mothers say the doctor wouldn't speak to them [about breech birth] …they wanted to call their partners to speak sense into them. And here is a woman who is autonomous her whole life, and now that she's pregnant her autonomy is gone."

The desire to respect patient autonomy and provide choice for laboring people is a strong motivator for offering vaginal breech birth. These statements were often combined with a sentiment like that expressed by respondent 3: "there are enough studies to support it," or respondent 5: "because I can…to imply that a breech baby is pathologic is very unfortunate." The combination of ACOG guidelines suggesting vaginal breech birth can be safe and a desire to promote autonomy for pregnant people seems to be compelling for individual providers, but not necessarily for hospital administrators or healthcare systems. In the context of Lewin's theory of change, it is worth noting that this theme could be a strong "unfreezing" force.

Legal Concerns

Eight respondents mentioned that a large barrier to providing vaginal breech birth in their hospital settings was related to legal or malpractice concerns on the part of administration. "Everything we do is under scrutiny. The legal department of the hospital, of course, is extremely conservative," said respondent 12, though they noted that "breech is a

small player in the litigation field" due to the small number of vaginal breech births that occur. Respondent 3 shared that in residency, "our department chair openly said, 'If any of you get in trouble on a breech delivery, I will happily testify against you.'" Respondents 1 and 13 described outright bans on attending vaginal breech birth in their hospitals; respondent 4 let their hospital privileges lapse due to the legal pressures.

Some risk management/administrators use threats related to credentialing, the legal process by which providers gain privileges to practice in a hospital setting, to limit or discourage attending vaginal breech birth. Respondent 14 noted that for "every single breech delivery that I do…I have to send a letter to the credentials committee or peer review or quality assurance or something explaining how I chose that patient and why I felt it was a safe delivery." Even respondent 11, who works in a very breech-friendly setting, noted that "to get credentialed for doing vaginal breech, we made it a separate, special privilege".

Respondent 10 noted that "Risk management people are generally attorneys, and they could generally put a stop to anything." Respondent 14 noted that they lost their malpractice insurance for being "too high-risk" as a result of doing vaginal breech deliveries; they found new malpractice insurance, but the premium is $20,000 higher than previously. Respondent 13 shared that "malpractice carriers are…dictating to their policyholders that if you do this or do that…we don't cover you for that."

Other respondents expressed the opposite perspective. Respondent 1 shared that "I don't think anyone is afraid of being sued." Respondents 3 and 7 said that their felt their informed consent practices and expertise mitigated legal concerns, while respondent 8 noted that "right now we have the ACOG guidelines that say it's reasonably safe under hospital

protocols," so legal consequences related to breech birth is not a concern, as breech birth is not outside an accepted scope of practice. As respondent 4 said, "I think the malpractice and liability concerns were not the concerns of people who knew how to do vaginal breech deliveries…I think the malpractice and liability concerns were the concerns of management."

Overall, legal and malpractice concerns as barriers to attending vaginal breech birth seem inconsistent. Even respondents who stated they did not feel constrained by malpractice concerns shared that they understood how others could feel pressured by it. Some of this difference may be regional; the respondents from the south noted more concerns than the other respondents, though it is important to note that healthcare laws vary significantly by state. High-quality research looking into malpractice impacts on vaginal breech birth is scant (likely due to the relatively small numbers of breech deliveries done); as comparison, a Florida study found that a physician who has experienced a malpractice complaint is associated with that individual having a 10 percent reduction in vaginal birth after cesarean (VBAC) deliveries (Durrance & Hankins, 2018).

Examined through the lens of Lewin's theory of change, this theme is a barrier to the unfreezing and moving stages. Changing culture and hospital protocols is challenging, and the threat of legal ramifications could be a significant hurdle to overcome. Similarly, implementing change in the face of increasing malpractice insurance premiums, or even perceived fears about liability, is a challenging endeavor. The interviews suggest that anticipating this potential barrier, and coming prepared to respond to potential pushback from risk management, is crucial to a successful change process.

Non-Legal Obstacles

The largest and most persistent obstacle was lack of training for providers who want to provide vaginal breech birth. This was discussed above in the literature review, and is unsurprisingly reflected in the interview data. This is clearly shown in table 3, which outlines the decade that respondents were in training/residency. Over half the respondents trained in the 1980s, and many respondents mentioned the shift away from vaginal breech birth that came after the Term Breech Trial (TBT), published in 2000. Respondent 9 said that "A lot of people got freaked out by [vaginal breech]. A lot of people didn't have the skill set to do it, and so they hurt babies." Respondent 6 echoed this, and noted that for providers working a large, shared-call coverage group, there is no guarantee that the provider who is at the hospital that day will be comfortable delivering breeches: "A lot of the young [providers], they just feel inadequately trained." Respondent 5 shared that even experienced, confident obstetricians who have delivered countless babies are afraid to attend breech deliveries, while respondent 11 noted that in pushing for vaginal breech birth at their facility, "the biggest stumbling block with risk management, surgical services, anesthesia was the fact that no one around us was doing vaginal breech…it's hard for them to wrap their head around it."

The TBT and resulting guidelines from ACOG were cited as particularly large barriers. Following the findings of the TBT, the resulting ACOG statement declaring c-sections to be the safer option "effectively shut down" vaginal breech birth, according to respondent 4. Respondent 10 recalled that once ACOG began to "recommend that people stop doing breech deliveries…everyone stopped, and I did too," noting that they were one of the few who decided to offer them again when ACOG came out with its revised opinion in 2006. Respondent 13

noted that after the TBT, while there was no official policy against vaginal breech delivery, “it would raise eyebrows if you were doing something like a breech delivery in the hospital,” to the point that nurses, anesthesiologists, and pediatricians would send complaints up the chain of command to the chair of their department.

Concerns about bad outcomes—real or anticipated—can limit the ability to provide vaginal breech birth. Respondent 1 shared that the ban on vaginal breech birth at their hospital was based on a bad outcome, while respondent 8 referenced a lawsuit based on a bad outcome at a facility in Oregon that has spooked their hospital. The fear of having a bad outcome is a powerful force for resisting change; respondent 12 noted that some physician colleagues were preemptively worried about bad outcomes, because of, as respondent 14 noted, the “bubble of fear that seems to surround a breech delivery.” Other obstetrical providers can be particularly concerned about this; respondent 2 shared that as someone who does attend vaginal breech births, they “get character assassination. You get labeled as doing things that are unsafe.” Every respondent touched on this idea of fear of vaginal breech births in the American healthcare system: fear of a bad outcome, fear of having insufficient training or skills, fear of a lawsuit, and fear of losing hospital privileges.

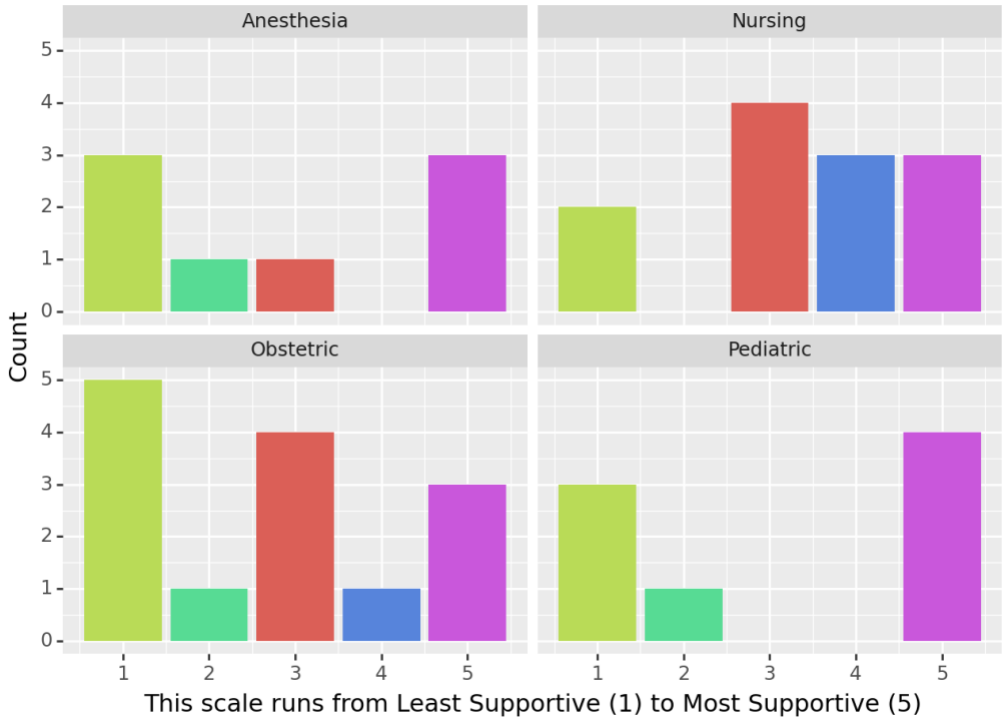
Respondent 10 shared an experience where they were driving in to deliver a planned vaginal breech, and in the 15 minutes it took to drive to the hospital, another OB at the hospital had taken the laboring person to the operating room. As respondent 12 noted, “I think the biggest obstacle really is going to be the physician’s attitudes. The midwives are probably supportive, but our midwives are not trained in breech…it’s the provider’s attitudes towards even opening your mind up that you could do it, that it’s okay to do [vaginal breech birth].”

Opposition from fellow obstetric providers was so strong, reported respondent 14, that another doctor “deliberately threw away my Piper forceps… [which are designed to be used] to deliver the aftercoming head” in order to limit their ability to do vaginal breech births.

While other obstetrical providers can be a barrier, one of the more common obstacles cited is lack of support from other types of healthcare professionals: nurses, pediatricians, neonatologists, anesthesiologists, and maternal fetal medicine doctors. “Nurses, they get very nervous when you do anything that’s not totally ordinary. Especially the young ones,” said respondent 7. Respondents 3, 4, 6, 13, and 14 highlighted concerns from pediatricians being a main obstacle, with respondent 4 noting that “Pediatricians: they’re worse than obstetricians, I think. As a group, they see the fetus as their patient,” and respondent 3 stating that “[pediatricians] really feel that, as advocates for the baby, that a C-section is much safer.” Respondent 6 described working with pediatricians in a hospital setting “who were very inflammatory. They would come in and counsel these people, ‘Don’t you know what you’re doing is putting your baby at risk?’” Peer review committees can question vaginal breech births; respondent 14 noted during a meeting that an anesthesiologist told them the vaginal breech birth they had just done was unsafe. Respondent 1 noted that in order to lift a ban on vaginal breech birth that exists in their facility, securing better and supportive pediatric care would be necessary. Each respondent was asked to rank their colleagues’ level of support on a scale of 1-5, and the results are show in Figure 2 below.

Figure 2

Support from Colleagues



Finally, the reality of the situation is that there is limited financial incentive to offer vaginal breech birth. Several respondents noted that cesarean deliveries earn hospitals more money than vaginal deliveries, so "there's no financial downside to a hospital banning breech delivery," as respondent 13 stated. Moreover, offering vaginal breech birth might add even more costs to a hospital system, if places need to have "the surgical crew in-house for the whole labor," said respondent 12. Respondent 7 echoed these economic concerns, noting that many of the hospitals in their area are unable to offer vaginal breech birth because of legal-financial reasons: "most of these hospitals are self-insured now. They can't afford it. They can't afford to let anything of any risk. So, they make it easy for themselves: they just ban it." Economic concerns are a significant barrier to the unfreezing process, and convincing a system

to embrace changes that may cause them to lose money may be, in many cases, a nearly insurmountable barrier. Indeed, delivering at hospitals that make higher profits from cesarean deliveries is associated with a greater likelihood of cesarean delivery compared with those who deliver at hospitals with lower profits from surgical birth, and a hospital that does large numbers of cesarean deliveries is in a position to negotiate for higher reimbursement rates from insurance companies (Hoxha et al., 2017; Sakai-Bizmark et al., 2021)

Overall, most of these obstacles are barriers to Lewin's unfreezing process. Some are forces of inertia—lack of training, ingrained skepticism about breech birth relating from the TBT, a culture of fear from other providers, economic concerns—while the lack of pressure from organizations, staff, and colleagues constitutes a significant lack of driving forces to push for greater access to vaginal breech birth. Each obstacle deserves its own consideration for moving past it or addressing related concerns, many of which are addressed in the section below on potential change factors.

Change Factors

Several of the respondents noted that their path towards offering vaginal breech birth was eased by the fact that they did not need to go through a cumbersome change process, either because their hospital was a small, independent, community facility without large administrative apparatuses or they offered vaginal breech birth outside of the hospital setting (respondents 4, 6, 11, and 14), or like respondent 5, they are a family medicine doctor who also serves as the pediatric provider in their community. However, this is a unique situation that does not apply to most practitioners, especially in this era of hospital system mergers and

acquisitions, which often leads to increased bureaucracy (Burns & Pauly, 2023; Fulton et al., 2022).

As mentioned above, resistance from nursing, anesthesia, and pediatrics can be significant. For many respondents, however, interdepartmental support is crucial for their ability to attend vaginal breech births. “Any endeavor you do, you need administrative, medical staff, nursing staff, nursing leadership, neonatal support, pediatrician support, and OB/GYN support too. You need to pull all of your whole team together to gather the support in anything you do in obstetrics,” said respondent 12, while several other respondents noted that, like respond 4 stated, “it helps to have more than one person” pushing to be able to attend vaginal breech birth.

Significantly, even those who discussed having a supportive team pointed to the impact of having a central, well-connected cheerleader: “Number 1, hands down, is having a supportive MD/doctor/provider. That person has to be the driver of the desire to get the service. If that piece isn’t there, it’s too much of an outlier,” said respondent 11. This sentiment was echoed by most respondents; words like “champion” and “lead” were used by several respondents; respondent 8 noted that it helped that they were part of the leadership team. While the nursing staff is identified as a potential obstacle in the section above, some respondents noted that having a nurse in the CEO or other administrative position can be helpful, with respondent 11 saying that their CEO “has a nurse mentality when she approaches issues, problems, new ideas. I think that nurses approach things with the interest of the patient first,” which encouraged the CEO to be open to and supportive of vaginal breech birth. Perseverance was a common theme as well, along with the idea that changing hospital culture

and people's minds might be a long process: "I've been told just recently that I was a fly in the ointment," said respondent 14.

Trust in the providers and staff pushing for these changes is a key theme in many interviews; respondent 2 stressed it was the most important aspect, while respondent 6 noted that trust went a long way towards changing the culture to one of acceptance of vaginal breech birth. This support seems vital for both the unfreezing and moving phases of Lewin's theory of change, though it seemingly sheds more light on how to unfreeze the obstacles that are preventing the implementation of vaginal breech birth. Many respondents compared vaginal breech birth to the fight to offer VBAC at their hospitals: respondent 1 noted that their hospital had a ban on VBAC for 10 years before being able to get that changed, and respondent 13 noted that malpractice concerns about VBAC are still a limiting factor.

Others suggested appealing to evidence and literature. "I got all the literature together and threw it in their face," said respondent 9:

> They're stuck on that one article and the fact that nobody wants to do it and there could be liability associated with it…the key to that is, 'We're confident, we're competent, we can deliver babies using this. And it's well-known. ACOG even agrees that if you follow these protocols and you know how to do it, do it. They don't really state don't do it.' So administration has no reason to go against ACOG.

Respondent 7 agreed, saying that "I'd call them on it. I'd say, 'You have scientific evidence that's supported by…nationally and internationally recognized obstetrical societies, who say that it is scientifically okay. Let us practice medicine.'" Similarly, respondent 5 suggested

bringing in an expert from a European country where vaginal breech birth is more commonplace.

Appeals to respecting patient autonomy are not necessarily successful. However, if people in the community are clamoring for vaginal breech birth, it can be a compelling change factor. Respondent 9 described patients seeking them out and being encouraged to continue offering vaginal breech birth, respondent 10 noted that patients transfer care to them because they are known as a breech-friendly provider, and respondent 7 described patients driving over 60 miles to deliver with them because they are known to offer vaginal breech birth. If patients are sufficiently vocal in their positive feedback and requests for vaginal breech birth, that could be a contributing change factor. After all, as respondent 1 said, pregnant people who want a breech birth are "usually pretty motivated people," and can be helpful in pushing for the cultural change that is necessary for Lewin's unfreezing process.

All but 4 respondents who are able to offer vaginal breech birth at their facilities spoke of having set of formal, written hospital protocols. Respondent 3 said that they "think a stated policy would be really helpful…being very open about their selection criteria and their concerns for safety." Respondent 9 echoed this, describing the importance of "having a protocol for the hospital that everybody's comfortable with. And so that goes through risk management and that goes through the OB department and so forth." Significantly, the 4 respondents said their hospital did not have a formal protocol corresponded with a hospital that has a ban on vaginal breech birth (respondent 1), a hospital that pushed the respondent out of practice (respondent 13) and two hospitals that are extremely hostile to vaginal breech birth (respondents 3 and 14).

These protocols address several factors that might influence the success of a vaginal breech birth, and the more salient ones are outlined below in Appendix B. Establishing protocols may be a way to help with not only an institution allowing breech birth (Lewin's stage of moving), but might also help unfreeze the current culture to allow change to occur. Respondent 8 stressed the importance of strictly following a protocol, and respondent 6 attributed their success to the fact that they "developed a good protocol and stick with some guidelines to show to the institution that we're not just willy-nilly—we're just going to do this because of some granola thing." Interestingly, respondent 14 was adamant that the need to have a protocol undermined their ability to offer vaginal breech birth: "You don't need a protocol for VB delivery. You don't need one at all; it's just a delivery." Overall, however, respondents felt that having an agreed-upon hospital protocol would help address concerns from colleagues and administrators alike, and provide cover for any legal concerns: "We've talked to our malpractice provider. Their guidance is: as long as you guys have a protocol and you follow it, there is no additional charges, there is no additional reason you can't do this," said respondent 6.

Discussion

Taken together, and viewed through Lewin's framework, two of the themes represent barriers, while two themes represent potential solutions. Individual respondents did not necessarily provide solutions to each barrier they raised, but this analysis puts each interview in dialogue with the others, and the implications are both interesting and practical. The main obstacles and potential solutions identified in this analysis are described in the table below, which shows barriers paired with change factors, as discussed in the theming analysis above.

Table 5

Obstacles paired with solutions

Barrier	**Solutions**
Legal Concerns	Hospital protocols Strong leadership/“champion”
Administration	Hospital Protocols Evidence and Literature Interdepartmental support Strong leadership/“champion”
Other Healthcare Staff	Hospital protocols Evidence and Literature Patient Autonomy/Patient Desire Interdepartmental support
Finance	Patient Autonomy/Patient Desire Strong leadership/“champion”

This table describes practical pathway towards moving through the three stages of Lewin’s Theory of Change in a way that could be implemented by individual providers and hospitals. As noted in the findings above, the path is not simple or even straightforward, and some of the barriers are steeper than others. Moreover, the interviews showed a wide variation in which obstacles will be more challenging for specific places and people, with a significant difference between regions, type of facilities, and stakeholders. Indeed, the

significant obstacle of lack of training and trained providers who can competently and confidently attend vaginal breech births is a broader, thornier concern, and discussed below. Concerns about financial implications appear to be the most challenging to overcome for individual facilities, especially given the fiscal landscape of healthcare in America post-pandemic, and likely require the most personalized solution (Fulton et al., 2022). Yet this analysis suggests there is a useful blueprint for those hoping to expand access to vaginal breech birth in their workplaces.

Areas for future consideration

Somewhat beyond the scope of the central question of this paper is how to support and maintain a facility's ability to offer vaginal breech birth. Once a facility or system has gone through Lewin's unfreezing process, several things are important to be part of the moving and refreezing stages of change. Respondent 13 suggested that a hospital might have "A skilled, dedicated breech team so that if a patient comes into the hospital and the doctor on call doesn't know how to do breech delivery, they can say, 'Hey, but we have an on-call breech team so I'm going to call them.'" In terms of maintaining a culture that supports vaginal breech birth, respondent 4 suggested creating "a significant training program for all of their staff, for all of the staff that's involved in birth; so all of the labor & delivery nurses, all of the midwives in the hospital, all of the obstetricians." Several respondents noted that this would need to include information about how breech babies might transition to life differently: "expect the meconium…be ready for the depressed APGAR [score]" at 1 minute of life, said respondent 11, referring to the standardized evaluation of neonatal wellbeing at 1 and 5 minutes of life.

The lack of sufficient training for those who would like to attend vaginal breech deliveries has been discussed at length. Seen through the lens of Lewin's theory of change, even if providers were able to offer vaginal breech birth in hospital settings, the lack of confident and competent obstetric providers complicates the refreezing stage. The longevity and sustainability of such change is tenuous, and the role of training future generations of providers will be crucial moving forward: "what's going to limit us is time. Time is going to pass us by, and then that will be it. At this hospital, as supportive as they are, I'm still the only person that does breech," said respondent 2. The implications of this analysis are that small-scale changes and efforts will likely be unable to solve this problem, at least in the short term. This will require a systemic change, where physicians are learning this skill during residency, or increased access to trainings such as the one BWB provides.

Conclusion

Those interviewed for this analysis are uniquely situated to have the knowledge and experience to consider factors that might hinder or help move towards change around vaginal breech birth (Burnes, 2020; Saleem et al., 2019). In the course of their interviews, these 14 individuals identified barriers and potential solutions that were organized into themes of patient autonomy, legal concerns, non-legal obstacles, and change factors. These obstacles and change factors were viewed through the framework of Lewin's Theory of Change, which facilitated the translation of these ideas into practical actions. With the exception of how to create systemic change in terms of training more providers in the skills of vaginal breech birth, this analysis provides an outline of steps towards changing unit culture, gathering an intradepartmental team spearheaded by a strong physician leader, and beginning

conversations with the legal and administrative bureaucracy. Indeed, this sketch of a blueprint could be fleshed out to an even more practical toolkit in future projects, providing a starting point for expanding access to vaginal breech birth and creating a healthcare landscape with increased choices and autonomy for pregnant people.

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Appendix A: Codes and Themes

Codes	Themes
Autonomy	Patient Choice and Autonomy
Trust	Legal Concerns
Ethics	Hospital Protocols
Forced cesarean	Change Factors
Upright/Hands and Knees	Obstacles
Consent	
Harm Reduction	
Assault	
Patient Education/Informed Consent	
Danger of C-Section	
Litigation	
Safe	
Bad Outcome	
Peer Review	
Risk Management	
Hospital policy	
Ban	
Fear	
Liability	
Administration	
ACOG Guidelines	
Canadian Guidelines	
Pelvis size	
Frank, Footling, or Complete Breech	
Multip/Multiparous	
Deliver in OR	
Head flexion	
BMI	
Systematic approach/Pitocin Use	
Adequate Training	
Support From Other Departments	
Evidence Based	
Culture	
Experience	
Personality	
Workarounds/Loopholes	
Community Hospital	

Provider interest
Physician Champion
Change
Nurse involvement
Midwife
Literature/Research
Proactive
Patient Feedback
Competition/Financial Incentive
1980s
Decline in Knowledge/Discomfort with VBB
Nurses
Pediatrics
Region
Term Breech Trial/ Hannah Trial
Anesthesiologists
Politics
Money
Shared Call
Depressed APGAR
Reactive
Credential/Privilege

Appendix B: Protocol Comparisons

Respondents 4, 5, 6, and 10 stated they had no upper weight limit; otherwise all respondents except for 2 and 8 have an upper limit for estimated fetal weight of 3500 – 3800 grams; respondents 2 and 8 follow the ACOG and (Society of Obstetricians and Gynaecologists of Canada (SOGC) guidelines, which recommend an estimated fetal weight between 2500 and 4000 g (ACOG, 2020; Kotaska & Menticoglou, 2019). All respondents follow the ACOG and SOGC guidelines of wanting patients to be term (at least 37 weeks' gestation) and requiring a breech to be frank or complete. Protocols varied more in terms of whether clinical or MRI pelvimetry is necessary (only 3 respondents said it was), if nulliparous women who have never given birth were appropriate for vaginal breech birth (3 respondents said their protocols said they were not), whether an ultrasound is necessary to confirm that the baby's head is flexed, which would help avoid the feared head entrapment (6 respondents do this), and if Pitocin can be used to augment labor (4 respondents specifically said no, while the other respondents did not mention whether it was a part of their protocols).