Published in final edited form as:

Birth. 2019 March ; 46(1): 51–60. doi:10.1111/birt.12386.

Women's preference for vaginal birth after a first delivery by cesarean

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Abstract

Background—Nearly 90% of US pregnant women with a prior cesarean give birth by repeat cesarean. Public health goals encourage greater use of vaginal birth after cesarean (VBAC), but there is little prospective data on predictors of women's preference for VBAC. We characterized predictors of women's preferred mode of delivery after a first cesarean and thematically categorized reasons for their preference.

Methods—Data were from a cohort of 3,006 women whose first childbirth was in Pennsylvania in 2009–2011. The analytic sample included women who had their first birth by cesarean and reported mode of delivery preference for their next delivery at 12 months postpartum ($n = 616$). Associations with future birth mode preference were assessed using multivariate logistic regression, and reasons for preference were categorized using content analysis.

Results—At 12 months postpartum, 45% percent of women who delivered by cesarean in their first birth wanted to have their next delivery vaginally. Independent predictors of VBAC preference were Black race/ethnicity, non-recurrent indication for the first cesarean, planning 3 or more additional children, and difficulty recovering from the first cesarean. The most common reason for preferring a vaginal birth was wanting the experience of vaginal birth; the most common reason for preferring cesarean birth was that the first birth was by cesarean.

Conclusion—Nearly half of respondents preferred VBAC in future births, but national estimates indicate that only about 12% of women with prior cesareans have a VBAC. This suggests a need to ensure greater access to VBAC for women who want it.

Keywords

vaginal birth after cesarean; mode of delivery preference; trial of labor

Introduction

National efforts to reduce overall cesarean rates in the United States are meeting with some success,¹ as cesarean rates plateaued and declined slightly after reaching a high of 32.9% in 2009.² However, the US cesarean rate remained at 31.9% of all births in 2016.³ The overall cesarean rate is driven both by primary and repeat cesarean deliveries. Recent clinical guidance has focused on preventing the first cesarean,¹ but national public health goals also include reductions in repeat cesarean deliveries among low-risk women.⁴

Among women giving birth in 2016 who had a prior cesarean delivery, 12.4% delivered vaginally.⁵ Healthy People 2020 goals include an increase in vaginal birth after cesarean (VBAC) to 18.3%.⁴ VBAC rates have fluctuated in recent decades. After peaking at 28.3% in 1996,⁶ the VBAC rate plummeted after an influential 1996 study and resulting professional guideline changes.^{6,7} After subsequent research and a National Institutes of Health consensus conference in 2010, the American College of Obstetricians and Gynecologists updated its guidelines to be more encouraging of VBAC.⁸ Guidelines were updated again in 2017 to further facilitate access to VBAC.⁹ The VBAC rate is affected both by the proportion of women with prior cesareans undergoing a trial of labor, and the proportion of women who have a trial of labor and go on to have a vaginal birth; both of these factors declined in the 2000s.¹⁰ Increasing the VBAC rate to achieve the Healthy People target will likely require greater access to and uptake of trial of labor after a prior cesarean.

Prior US studies have found some differences in the characteristics of women who attempt VBAC (i.e. have a trial of labor after cesarean) compared to those who choose to have a planned repeat cesarean, but there are inconsistencies across studies. For example, some studies show that Black women with a prior cesarean are more likely to have a trial of labor than other racial/ethnic groups,^{11,12} while others have found no racial/ethnic differences.¹³ Another study showed that among women considered to be good candidates for VBAC, obese women and women with a family medicine doctor were less likely to attempt VBAC, while women with midwifery care and those who had had a prior vaginal delivery were more likely to attempt VBAC.¹⁴ Studies in other countries document lower rates of VBAC attempts among women with more education, higher income, who live in less deprived areas, and who have a private obstetrician.^{15–18} However, given the differences in health care delivery systems and policies across country settings, it is not clear how these patterns would apply in the US.

Women's decisions regarding attempting VBAC are complex. While no national data are available, state-level studies suggest that some women may have difficulty accessing VBAC due to lack of availability at local hospitals.^{19,20} Beyond accessibility, a number of other factors affect women's decisions to attempt VBAC or not, including: attitudes toward childbirth (including orientation toward natural birth),^{21–23} fear of labor pain,²³ perceptions

of safety and risk,^{23–26} practical considerations such as scheduling convenience,²⁷ expected ease of recovery,^{22,25,26} prior birth experiences (e.g. pain, unplanned cesarean delivery, bonding with the baby),^{23,25,28} perceived likelihood of VBAC success,^{27,29,30} information about the risks and benefits of VBAC,³¹ wanting the experience of vaginal birth,³⁰ and perceptions of clinician attitudes.^{24,30,32,33} Prior research documenting these relationships predominantly come from qualitative studies in countries other than the US (especially the UK and Australia), and may have limited relevance to VBAC decision making in the US. One 2017 quantitative US study examined predictors of VBAC among pregnant women with a prior cesarean, and found that desiring a vaginal birth was a strong predictor of choosing VBAC, while women who reported their health care provider as an information source were less likely to choose VBAC.³⁰ These findings were somewhat limited by the small sample size and retrospective reporting of experiences relating to their first birth.

Emerging professional guidelines and national public health goals encourage greater use of VBAC, but there is little prospective, current data on predictors of US women's preference for VBAC *before* a subsequent pregnancy. In this analysis, we aimed 1) to characterize the importance of socio-demographic characteristics, pre-existing preferences, experiences during the first birth, and experiences during postpartum recovery, and perceived risks and benefits of VBAC in shaping women's VBAC preferences; and 2) to thematically categorize women's open-ended reasons for preferring vaginal or cesarean birth in the future.

Methods

Data are from the First Baby Study, a cohort of 3,006 women who delivered their first child in a Pennsylvania hospital in 2009–2011. Participants responded to a baseline survey in the third trimester of pregnancy, and were surveyed periodically through 36 months postpartum. Women were included in the sample for this study if they delivered their first child by cesarean, were not pregnant and had not had a second child by the 12-month survey, responded to the question about preferred subsequent delivery mode with a preference, and had no missing values on covariates (N = 616).

The key outcome variable was preferred mode of delivery 12 months after the first birth. Women were asked, "If you have another baby, how would you like to have that baby?" Response options were, "by planned cesarean," "vaginally," "I do not plan to have another baby," or "don't know." We excluded 33 women who answered "don't know" to this question and 11 who did not answer because they reported not planning to have more children. From these responses, we created a variable indicating preferred VBAC or planned repeat cesarean among women with a prior cesarean.

We assessed predictors of preference for VBAC in the prior literature, and conceptualized the following categories of factors as possibly impacting women's preferences: sociodemographic characteristics, birth attitudes prior to the first birth, experiences in the first birth and the postpartum period, and perceived benefits and risks of VBAC.

Sociodemographic characteristics included age (18–24, 25–30, or 31–36), race/ethnicity (White, Black, Latina, other), education level (high school degree or less, some college,

Bachelor's degree or higher), insurance type (private vs. no private insurance), and partnership status (married and living together, not married but living with partner, other).

To control for women's attitudes prior to their first birth, we included a scale assessing attitudes toward birth mode during the third trimester of the first pregnancy,³⁴ as well as reported fear of childbirth, also assessed during the first pregnancy. Experiences during the first birth and postpartum period included whether the woman had doula support, the woman's perception of involvement in decision making about the delivery, and if the woman reported not being able to do her normal activities all or most of the time one month postpartum.

To assess potential perceived risks and benefits of attempting VBAC, we included two variables. The first was whether the woman reported planning to have 2 or fewer additional children at the one-month postpartum interview, vs. 3 or more additional children, because effects of cesarean on maternal health are cumulative.³⁵ The second was whether the reason for the first cesarean is considered a potentially recurrent indication³⁶ (arrest of dilation or descent; common non-recurrent indications were breech position and nonreassuring fetal heart tracing), because women with potentially recurrent indications for the first cesarean have a lower predicted chance of VBAC success.³⁶

Analysis

We first examined the relationship between each predictor and preference for VBAC using cross-tabulation with chi-square tests for categorical variables and t-tests for continuous variables. Then, to assess independent associations between the predictors and outcome, we estimated a multivariate logistic regression model including all potential predictors described above.

In addition to women's birth mode preferences, we also examined women's reasons for their preferred birth mode. After women responded to the question, "If you have another baby, how would you like to have that baby?", they were also asked, "Why is that?" and could provide a brief open-ended response. Using content analysis methods, we thematically coded responses.^{37,38} Two members of the research team developed an initial codebook based on a small sample of responses, and through an iterative process, modified the codebook and coded subsequent samples. More than one code could be assigned to each response. In the final coding scheme, some codes applied only to women preferring vaginal birth, some applied only to women preferring cesarean birth, and a third set of codes could apply to both women who reported preferring VBAC and those who reported preferring cesarean birth. Codes with a frequency <5 were combined into an "other" category. Once the final codebook was created, data were divided for independent coding, with an overlap sample of 200 responses. When coding was complete, we calculated Kappa statistics for each code to assess interrater reliability. Kappa was above 0.80 for all codes that occurred at least 15 times in the overlap sample, indicating very good inter-rater reliability. For less frequently occurring codes, Kappa values were above 0.60, suggesting adequate reliability.³⁹

Results

Predictors of preference for VBAC

At 12 months postpartum, 45% percent of women who delivered by cesarean in their first birth preferred to have their next baby vaginally (Table 1). A larger percentage of women age 18–24 preferred VBAC (57.1%) compared to older women. Nearly 75% of Black women reported preferring a vaginal birth for their next delivery, compared to 54% of Latina women and 43% of White women. Married women were less likely to prefer VBAC compared to women with other partnership statuses. Women who had a more positive attitude toward vaginal birth prior to their first birth were more likely to prefer VBAC, as were women who had a doula attend their first birth. Among women who were extremely fearful prior to their first birth, only 25% reported preferring VBAC, compared to over 40% among women reporting lower levels of fear. Among women who reported difficulty performing normal activities all or most of the time at 1 month postpartum, 50% preferred a vaginal birth, while 41% of women who did not have these difficulties preferred vaginal birth. About 90% of women who wished to have three or more additional children at 1 month postpartum preferred VBAC, compared to 44% among those who wished to have fewer additional children. Finally, women who did not have a potentially recurrent indication for their first cesarean were more likely to prefer vaginal birth.

In the multivariate model (Table 2), several factors were independently associated with preferring vaginal birth. Black women had more than 3 times the odds of preferring VBAC compared to White women (aOR 3.22 [95% CI 1.49–6.96]). A more positive attitude toward vaginal birth at baseline was associated with higher odds of preferring VBAC (aOR 2.48 [95% CI 1.73–3.57]). Women who had difficulty recovering from their cesarean birth (not able to do all or most normal activities one month postpartum) had higher odds of preferring VBAC (aOR 1.48 [95% CI 1.04–2.11]). Preference for future VBAC also varied by potential risks and benefits of VBAC. Women with potentially recurrent indications for cesarean were less likely to prefer VBAC (aOR 0.65 [95% CI 0.46–0.92]), and women who wanted 3 or more additional children at the 1-month postpartum interview were far more likely to prefer VBAC than women who wanted only 1 more child (aOR 10.89 [95% CI 2.41–49.30]).

Reasons for preferred birth mode

Table 3 presents the thematic categories identified from women's open-ended responses about the reason for their preferred future birth mode. For each category, the table also presents illustrative quotes and frequencies. The most common reason for preferring VBAC was wanting to have the experience of vaginal birth ($n = 129$), with respondents often expressing a sense of having missed out during their first birth. The most common reason women gave for preferring cesarean birth in the future was that their first birth was by cesarean ($n = 114$). Given that these were short open-ended responses being transcribed by an interviewer, it was not clear whether these women were aware that vaginal birth after cesarean is a safe and/or available option for some women.

Another frequent reason for preferring a repeat cesarean was a belief that a cesarean delivery would be medically necessary in a future birth ($n = 84$). Some women described specific

reasons that suggested that a cesarean delivery might be medically indicated, such as having had a myomectomy. Others mentioned difficulties in their first labor that they felt meant that a second cesarean delivery would be necessary, such as not having dilated completely or the baby getting “stuck.” Some responses referred to clinician influence ($n = 37$), such as being told that she was high risk due to having had a first cesarean, or being told by a doctor that her hips were not wide enough. Although 3 women who preferred vaginal birth reported some influence by a provider, the specific influence of the provider in 2 of the 3 cases was discouraging of VBAC, as shown in an illustrative quote in Table 3.

Experiences in the first birth figured strongly in themes that emerged as reasons for preferences regarding future birth mode, both for vaginal and cesarean birth. Among women who preferred a vaginal delivery after cesarean, some reported that this was due to having had a bad experience in the first cesarean ($n = 25$), whether in an emotional sense (e.g., finding it frightening) or a physical sense (e.g. having a negative reaction to medications). Conversely, some women who preferred a cesarean birth after a prior cesarean said that this was their preference because they had a good experience with the first cesarean birth ($n = 21$). Others wished to avoid a similar experience to their first labor ($n = 30$), where in some cases they had a long induction, long labor, or other complications. Forty-eight women preferring VBAC and two women preferring cesarean delivery cited issues with the recovery as the reason for their preference, and for some women, this was related to their recovery experience in the first birth. Those who had a more difficult recovery from the first cesarean preferred vaginal birth because of the potentially easier or shorter recovery, while those who had a relatively easy recovery pointed to this as a reason to prefer cesarean.

Some women also perceived difficulty accessing vaginal birth after cesarean. Twenty-six women, all of whom preferred to deliver by repeat cesarean, reported that they did not have a choice in their future birth mode. Some women specifically mentioned that their hospital or provider had a policy that all women with a prior cesarean must have a repeat cesarean.

Discussion

In this analysis, nearly half of women who had previously given birth by cesarean preferred to deliver vaginally in future births, but available national estimates indicate that only about 25% of women with prior cesareans have a trial of labor after cesarean.¹⁰ This suggests that more than a third of women with a prior cesarean who were interested in vaginal birth may not end up having a trial of labor. Future research should identify why this drop off occurs. Potential explanations are suggested by prior studies showing that VBAC access is geographically uneven,^{19,20} with some areas lacking VBAC-supportive clinicians and birth settings.

The finding that Black women were more likely to prefer VBAC than white women is consistent with prior studies showing that Black women attempt VBAC at higher rates than White women do.^{11,12} Our results are novel in that they identify this preference for future birth mode as already formed by 12 months after the first birth, and before the second pregnancy. Furthermore, this preference appears to be independent of women’s attitudes toward delivery mode prior to first birth, since we were able to control for prenatal birth

attitudes in our analysis. Racial equity in access to VBAC and other evidence-based care is an important part of reducing disparities in maternity care.⁴⁰

Variation in VBAC preference by factors that may affect the risks and benefits of VBAC indicates that women with potentially recurring risk factors may be receiving appropriate counseling from clinicians about future delivery mode. Desiring 3 or more additional children was the variable most strongly associated with preference for VBAC, and these are the women most at risk for complications from having multiple cesarean surgeries.³⁵ Additionally, having a potentially recurrent indication for the primary cesarean is associated with reduced chances of VBAC success.³⁶ Given that maternal morbidity is higher with unplanned cesarean during labor vs. planned cesarean,⁹ some women may prefer a planned cesarean if they do not perceive that their chances of VBAC success are sufficiently high. Although our findings are reassuring regarding risks and benefits of VBAC driving women's plans, there are indications that some women who may be appropriate candidates for VBAC do not have an opportunity to make this choice. For example, other studies have found that women with a prior cesarean had overall low knowledge about risks and benefits of both options.^{31,33} One study found that women choosing a trial of labor after cesarean had higher levels of knowledge than women choosing repeat cesarean, but 45% of women choosing trial of labor were still classified as having low knowledge.³¹ This underscores the need for patient education in addition to clinical recommendations when assisting women in making a decision about VBAC. Notably, however, when describing reasons for future delivery mode preferences, not a single person mentioned a provider being encouraging of VBAC. This is consistent with studies finding that women choosing planned repeat cesarean report being more influenced by clinicians and medical advice.^{24,25,30}

Many of the reasons that women reported for preferring vaginal or cesarean birth were present in prior literature, although the relative frequencies of different reasons varied. For example, a study of Australian women identified expectation about recovery as relevant to both birth modes, but more common among women choosing trial of labor after cesarean.²⁵ Also in that study, belief that vaginal birth is natural or normal was the second most common reason cited for choosing trial of labor after cesarean.²⁵ In our study, belief that vaginal birth was natural or normal was also a common reason that women reported for preferring VBAC, and recovery was mentioned by women preferring both birth modes, but substantially more common among women preferring VBAC. Concerns about the baby's safety was the most common reason reported by women choosing elective repeat cesarean delivery in the Australian study;²⁵ while this reason was mentioned by a few women in our sample, it was not a common reason and was more frequently mentioned by women preferring VBAC than those preferring a cesarean delivery.

This analysis showed that women who felt positively about vaginal delivery prior to their first birth were more likely to prefer VBAC, highlighting the importance of pre-existing birth attitudes in VBAC decisions. Previous literature has identified women's attitudes toward childbirth as potentially influencing VBAC decision-making. For example, viewing birth as an experience integral to becoming a mother or seeing "natural" birth as an achievement may be part of women's decisions to attempt VBAC.^{21–23} However, these previous studies did not include measures of women's birth attitudes prior to the initial

cesarean delivery. We also found that the most common reason by far for preferring vaginal birth in our sample was wanting the experience of vaginal birth, as reported by another US study.³⁰ These findings suggest that patient education and information provision to encourage VBAC may be part of the broader context of supporting vaginal birth overall.

Strengths and Limitations

Strengths of this study include prospective questions about birth mode preferences after a first cesarean, large sample size relative to other analyses of women's preferences for VBAC, the fact that all women in the sample had only had one prior birth, and the ability to measure women's prenatal attitudes toward birth mode as well as postpartum recovery. There are some limitations. First, although the First Baby Study includes a large cohort of women, it is not representative of the Pennsylvania childbearing population,⁴¹ and findings may not be broadly generalizable. Second, we included some measures in regression models that identified women as potentially good candidates for VBAC, but this measure was constructed based on a combination of self-report and hospital discharge data, not detailed clinical information. Finally, women gave brief responses about reasons for their preferred delivery mode, and many lacked detail, limiting what could be inferred. This was particularly true of the large number of women who reported that the reason that they preferred a cesarean delivery in a future birth was because their first birth was by cesarean.

Conclusions

Twelve months after a first cesarean delivery, 45% of women preferred vaginal delivery for their next birth. Black race/ethnicity, more difficult postpartum recovery, and desiring 3 or more additional children at 1 month postpartum were associated with preferring a vaginal birth after a first cesarean, while having a potentially recurrent indication for the first cesarean and having more positive prenatal attitudes toward cesarean birth were associated with preference for repeat cesarean delivery. The most common reason that women reported for preferring a vaginal birth was wanting to have the experience of vaginal birth, while the most common reason for preferring cesarean birth was that the first birth was by cesarean.

Acknowledgments

Funding

The First Baby Study was funded by the Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH (R01 HD052990).

We are grateful to Amanda Huber, CNM, for her help in developing the coding scheme and carrying out the coding of the open-ended responses.

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Table 1

Characteristics and preferred future birth mode among women with a first cesarean delivery, First Baby Study (n=616), Pennsylvania, USA, 2010–2012.

	Preferred delivery mode for subsequent birth			<i>P</i>
	Total	Cesarean	Vaginal	
	N (Col. %)	Row %	Row %	
Total	616 (100)	54.7	45.3	--
<i>Sociodemographic Characteristics</i>				
Age				0.010
18–24	119 (19.3)	42.9	57.1	
25–30	311 (50.5)	59.2	40.8	
31–36	186 (30.2)	54.8	45.2	
Race/ethnicity				0.001
White	518 (84.1)	57.5	42.5	
Black	48 (7.8)	27.1	72.9	
Latina	28 (4.6)	46.4	53.6	
Other	22 (3.6)	59.1	40.9	
Education				0.333
High school or less	96 (15.6)	47.9	52.1	
Some college	151 (24.5)	55.0	45.0	
Bachelor's degree or higher	369 (59.9)	56.4	43.6	
Insurance type				0.088
Private	487 (79.1)	56.5	43.5	
Non-private	129 (20.9)	48.1	51.9	
Partnership status				0.022
Married, living together	446 (72.4)	57.9	42.2	
Not married, living together	100 (16.2)	50.0	50.0	
Other	70 (11.4)	41.4	58.6	
<i>Birth attitudes prior to first birth</i>				
Prenatal attitude toward vaginal delivery (mean (SE); range 1–5) ^a	4.18 (0.02)	4.1	4.3	<0.001
Extent fearful about delivery prior to first birth				0.043
Extremely	48 (7.8)	75.0	25.0	
Quite a bit	77 (12.5)	58.4	41.6	
Moderately	196 (31.8)	52.6	47.4	
A littl bit	207 (33.6)	51.2	48.8	
Not at all	88 (14.3)	53.4	46.6	
<i>Experiences in first birth and postpartum recovery</i>				
Doula at first birth				0.032
No	592 (96.1)	55.6	44.4	
Yes	24 (3.9)	33.3	66.7	
High level of involvement in decision making at first birth				0.934

	Preferred delivery mode for subsequent birth			<i>P</i>
	Total	Cesarean	Vaginal	
	N (Col. %)	Row %	Row %	
No	169 (27.4)	54.5	45.6	0.028
Yes	447 (72.6)	54.8	45.2	
Not able to do normal activities all or most of the time 1 month postpartum				0.028
No	306 (49.7)	59.1	40.9	
Yes	310 (50.3)	50.3	49.7	
<i>Perceived risks and benefits of VBAC</i>				
Number of additional children desired at 1 month postpartum				<0.001
0–2	597 (96.9)	56.1	43.9	
3 or more	19 (3.1)	10.5	89.5	
Recurrent indication for first cesarean				0.040
No	279 (45.3)	50.2	49.8	
Yes	337 (54.7)	58.5	41.5	

^aScale items consisted of 10 statements with response choices of agree or disagree on a 5-point Likert scale. Item scores were added and divided by the number of items, with some items reversed, resulting in a scale with a theoretical range of 1–5, where higher scores represent a more positive attitude toward vaginal delivery.

P-values are from chi-squared tests for categorical variables and t-tests for continuous variables.

Table 2

Adjusted odds of preferring to deliver vaginally in a subsequent birth at 12 months postpartum, First Baby Study (n=616), Pennsylvania, USA, 2010–2012.

	Adjusted OR (95% CI)
<i>Socio-demographic characteristics</i>	
Age category (Reference = 18–24)	
25–30	0.56 (0.31–1.03)
31–36	0.69 (0.35–1.35)
Race/ethnicity (Reference = White)	
Black	3.22 (1.49–6.96)
Latina	1.43 (0.62–3.34)
Other	1.02 (0.40–2.59)
Education level (Reference = High school or less)	
Some college	1.02 (0.56–1.86)
Bachelor's degree or higher	1.10 (0.59–2.06)
Insurance type from discharge data (Reference = Private)	
Non-private	0.76 (0.41–1.42)
Partnership status (Reference = married)	
Not married but living with partner	1.05 (0.60–1.86)
Other	1.29 (0.62–2.68)
<i>Birth attitudes prior to first birth</i>	
Prenatal attitude toward vaginal delivery (higher indicates more positive toward vaginal delivery) ^a	2.48 (1.73–3.57)
Less fearful about upcoming birth	1.25 (1.06–1.47)
<i>Experiences in first birth and postpartum recovery</i>	
Doula support during first labor	1.87 (0.72–4.81)
High level of involvement in decision making at first delivery	1.22 (0.82–1.83)
Not able to do normal activities all or most of the time at 1 month postpartum	1.48 (1.04–2.11)
<i>Perceived risks and benefits of VBAC</i>	
Desired 3 or more additional children at 1 month postpartum	10.89 (2.41–49.30)
Recurrent indication for first cesarean	0.65 (0.46–0.92)

^a A one-unit change in this scale corresponds an average change of 1 point for Likert response items ranging from “strongly disagree” (1) to “strongly agree” (5). Higher scores indicate a more positive attitude toward vaginal delivery.

Table 3

Reasons for birth mode preference at 12 months following a first cesarean delivery, First Baby Study (n=616), Pennsylvania, USA, 2010–2012.

Code	Definition and examples	Illustrative quotes	Frequency of code
<i>Codes applying to women who preferred vaginal birth.</i>			
Experience of vaginal birth	Wants to have the experience of vaginal birth; feels that she missed out on this experience with cesarean.	Had c-section first time and would like to experience the vaginal birth.	129
Recovery ^a	Belief that recovery from preferred birth mode is easier/fast/less painful	The recovery time for the c-section before was long.	48
Natural/normal	Sees vaginal birth as more natural or normal.	It's more natural.	42
Vaginal birth less medically intrusive	Wants to avoid surgery.	Not happy about having surgery.	33
Bad experience in first cesarean	Desires vaginal birth because of a negative experience in the first cesarean, such as having a bad reaction to medications or finding it scary.	I got really sick from my c-section, and I'd rather not do that again.	25
Safety/risk ^a	Any mention of safety or risk as reason for preferred future delivery mode, or being more healthy for mom or baby.	Easier recovery and less risk.	14
Other ^a	Responses that do not fit into the defined categories.		10
Preference ^a	States preference for a mode of delivery with no other reason.	That's just my preference at this time.	7
Physically easier ^a	Specific mention of the delivery being less painful, faster, easier with desired mode.	C-section hurts more.	5
Provider influence ^a	Any mention of provider	I had a c-section the last time and the doctor told me I would probably have to have another one.	3
<i>Codes applying to women who preferred cesarean birth.</i>			
First birth was cesarean	Reason given is that the first birth was by cesarean; code applied only when no other reason given.	Because the first one was a c-section.	114
Cesarean will be medically necessary	Believes there is a medical reason that cesarean delivery will be necessary, or that she will be unable to have a vaginal birth	Medical reasons based on my intrauterine growth restrictions from my first pregnancy. My pelvis is too narrow to get a baby out.	84
Avoid similar experience to first labor	Wants to avoid similar experience to first labor, such as a long and exhausting labor, not dilating, etc.	I had a cesarean last time after 24 hours of labor. I'd rather have it planned and not be so exhausted.	30
Provider influence ^a	Any mention of provider	Would like to deliver vaginally but cannot due to doctor's advice; since [I] had a cesarean the first time [I] would need to deliver that way again	34
Does not have a choice	Expresses not having a choice in future birth mode.	Hospital has a policy once you have a c-section your subsequent pregnancy must be c-section.	26
Convenience or logistical factors	Prefers cesarean because of convenience or logistical factors, such as being able to control timing, knowing what to expect, and being able to arrange things like childcare.	I had my son that way, and I think it's better for me mentally to be prepared and know what's happening. Easier, can schedule when you deliver.	21

Code	Definition and examples	Illustrative quotes	Frequency of code
Good experience in first cesarean	Believes that repeat cesarean is desirable because first cesarean went well.	My c-section went really well the last time, so it killed the anxiety a little bit.	21
Physically easier ^a	Specific mention of the delivery being less painful, faster, easier with desired mode.	Easy and there is no pain.	20
Fear of vaginal birth	Wants to avoid vaginal birth due to fear, anxiety, concern, or other negative emotions.	I am nervous about vaginal delivery because I had problems with the first delivery and I had to have a C-section.	7
Preference ^a	States preference for a mode of delivery with no other reason.	It's just what I prefer.	6
Safety/risk ^a	Any mention of safety or risk as reason for preferred future delivery mode, or being more healthy for mom or baby.	Because of the risks involved with the uterus.	5
Recovery ^a	Belief that recovery from preferred birth mode is easier/fast/less painful	Daughter was a big baby and [had] a good recovery with the c-section.	2
Other	Responses that do not fit into the defined categories.		2

Note: More than one code could be assigned to each response.

^aCode could apply to both women who preferred vaginal birth and women who preferred cesarean birth.