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Mode of Delivery: Toward Responsible Inclusion of Patient Preferences

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Abstract

Deciding when and how to incorporate patient preferences regarding mode of delivery is challenging for both obstetric providers and policymakers. An analysis of current guidelines in four clinical scenarios (prior cesarean, twin delivery, breech presentation, and maternal request for cesarean) indicates that some guidelines are highly prescriptive, while others are more flexible, based on physicians' discretion or (less frequently) patient preferences, without consistency or explicit rationale for when such flexibility is permissible, advisable, or obligatory. While patient choice advocates have called for more patient-responsive guidelines, concerns have also been raised, especially in the context of discussions of cesarean delivery on maternal request, about the dangers of unfettered patient preference-driven clinical decisions. In this article, we outline a framework for the responsible inclusion of patient preferences into decision making regarding approach to delivery. We conclude, using this framework, that more explicit incorporation of patient preferences are called for in the first three scenarios, and indicate why expanding access to cesarean delivery on maternal request is more complicated and would require more data and further consideration.

Introduction

Core to obstetrical practice is determining approach to mode of delivery. Assessing the relative merits of planned vaginal versus planned cesarean across a range of clinical situations is a vibrant area of research – and controversy. Recent guidelines on vaginal delivery after prior

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cesarean (VBAC)([1]) raise concern in some quarters about women's meaningful access to vaginal birth.(2) In the other direction, active discussion of whether some women should have access to cesarean delivery in the absence of medical indication is underway.(3)

These events renew questions about the appropriate role of patient preferences in guideline development and clinical decision making regarding delivery mode. Despite increasing advocacy of the "shared decision making" approach to clinical care, careful analysis of how to responsibly and effectively include patient preferences in delivery mode decisions is lacking. There is wide consensus that patients have a right to decline treatment. In contrast, there is little consensus on when and how patients' affirmative preferences regarding treatment should be incorporated into practice guidelines or become determinative of delivery approach.

In this article, we review four delivery scenarios currently marked by controversy and divergence of practice: VBAC, twin gestation, singleton breech, and, most controversially, cesarean delivery on maternal request. We outline a conceptual framework for analyzing the complex issues raised, concluding that more explicit incorporation of patient preferences is indicated in the first three cases but expanding access to the latter requires further investigation.

VBAC

Following a number of well-publicized reports of complications of trials of labor after previous cesareans, and motivated by the small but real risk of uterine rupture (estimated at 0.7%), the American College of Obstetricians and Gynecologists (ACOG) in 2004 issued a Practice Bulletin on VBAC(1) that reversed the trend towards encouragement (and sometimes mandate) of vaginal birth after cesarean that had dominated the 1990's. While underscoring that decisions regarding delivery route "should be made by the patient and her physician," it concluded that VBAC should be offered only in situations in which a physician capable of performing emergency cesarean, an anesthesiologist, and personnel for emergency delivery are immediately available throughout active labor. Access to VBAC has since declined: some doctors are reluctant to provide it; some hospitals now prohibit it; and some professional liability insurance companies will not cover physicians who attend VBACs(2).

Twins

Twins account for 3% of US births.(4) While many providers favor planned vaginal delivery for every patient with vertex/vertex twins or a vertex/breech gestation in which twin B is of concordant size or smaller than twin A,(5) others favor planned cesarean in all twin pregnancies, due to the small but statistically significant risk of complications in delivery of the second twin.(6) Although a recent meta-analysis suggests that both approaches have equivalently low probabilities of adverse outcomes,(7) the ACOG bulletin on this topic recommends that decisions over approach to twin delivery should be left to the provider, with no explicit mention of the role of patient preferences.(8)

Breech

In 2000, a large randomized trial of cesarean versus vaginal delivery for breech, the "Term Breech Trial," found that the combined perinatal and neonatal mortality and serious neonatal morbidity was significantly lower in the planned cesarean group compared with the planned vaginal delivery group (1.6% versus 5%).([9]) Based on these findings, ACOG's 2001 Committee Opinion concluded that "planned vaginal delivery of a term singleton breech may no longer be appropriate," and that external cephalic version should be attempted "whenever possible."(10) The Term Breech Trial has since been criticized; its own 2004 follow up study found no difference in maternal or infant outcomes two years after delivery.(11) In 2006, ACOG revised their guidelines to reflect the new findings, recommending that "[t]he decision

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regarding mode of delivery should depend on the experience of the health care provider,"(11) while continuing to endorse version "whenever possible." Yet provider expertise in vaginal breech delivery has waned, and some have cautioned that revised guidelines may be too late – vaginal breech delivery may be a dying art.(12) As with twins, there is no mention in current guidelines of incorporating patient preferences.

Cesarean delivery on maternal request

Increased attention to potential pelvic floor sequelae of vaginal delivery has raised discussion of whether cesarean absent traditional medical indications might be preferred by and appropriately provided to some women.(3) Provider opinion varies significantly on this subject.(13) A 2006 NIH State-of-the-Science Conference concluded that data comparing the risks and benefits of planned cesarean absent medical indication versus planned vaginal delivery does not argue for or against either delivery mode.(14) Subsequently, an ACOG Committee Opinion set limits for acceding to maternal requests for scheduled cesareans, specifying they should not be performed before 39 weeks of gestation, without documentation of lung maturity; or because of lack of effective pain management; and is not recommended for women desiring several children, given risks of previa, accreta, hemorrhage and cesarean hysterectomy in deliveries following a cesarean.(15) Guidelines are notably silent on when, if ever, elective cesarean should be proactively discussed, and how preferences should inform delivery decisions for women not constrained by gestational age, anesthesia concerns, or expected multiparity.

Women's preferences concerning mode of delivery

Approaches to delivery mode across these scenarios are thus currently marked by divergent guidelines, with institutional practices and provider preferences often dictating the approach. Women's preferences regarding delivery mode in these contexts are likely to vary substantially, however, suggesting that their preferences also should play key roles in these decisions. For example, as with women who have not had a prior cesarean, many women facing birth after cesarean strongly value the opportunity to deliver vaginally. For these women, decreased access to VBAC can be experienced as a significant loss. Other women may welcome or strongly prefer a scheduled cesarean, and regard provider or institutional "mandates" for trial of labor with dismay. For them, the small but real risks of a uterine rupture may easily be reason to proceed to cesarean; for others, the 20–40% chance of conversion to a cesarean in the course of a VBAC may be something they wish to avoid. In the context of twins, about 9.5% of cases in which a first twin is delivered vaginally, the second is delivered by urgent or emergent cesarean.(16) While some women facing a twin delivery would find a one in ten chance of delivering "both ways" well worth an attempt at vaginal birth, others may reasonably prefer to avoid it by choosing a scheduled cesarean. Given that vaginal and cesarean modes both carry low probabilities of adverse outcomes in this clinical context, such variation raises the question of whether determination of approach to labor should be made on the basis of provider preferences alone. Women also are likely to have varying preferences on approach to term breech delivery. Women who place high value on vaginal birth may also wish to avoid the significant discomfort and small risk of emergent cesarean associated with external cephalic version, and articulate a reasoned preference for vaginal breech delivery. Others may value the opportunity to schedule a cesarean; for them neither version nor vaginal breech birth may be an attractive option.

Finally, and most controversially, some women without traditional medical indication for cesarean may genuinely value a surgical approach to delivery. Women attempting vaginal delivery face a 20–40% chance of cesarean, about 3% of which will be emergent.(17) A woman with a preference for vaginal over cesarean may have a yet stronger preference to avoid having

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a cesarean after a lengthy trial of labor. Implications of cesarean for future deliveries are not equally salient for all women: a woman planning at most only one more pregnancy may reasonably think the small risk of accreta acceptable.

The above underscores the importance and divergence of women's preferences relevant to mode of delivery, and in ways that may be inadequately represented in traditional analyses. Decision analyses have tended to focus on a narrow range of medical outcomes, centered primarily on pelvic floor dysfunction and rare but catastrophic neonatal outcomes such as death, and to use "expert opinion" estimates of utilities rather than data from pregnant women.(18) Further, much of the existing literature uses optimality indexes that presume a preference for non-medicalized birth, defining potentially valued interventions, such as elective epidural, as "non-optimal."(19) In contrast, women bring a rich and varied set of considerations to bear on delivery decisions, including factors diverse as attitudes about the experience of birth, avoidance of anticipated regret, and, most generally, what enables meaningful birth in the context of their lives.

The limits of preference-flexibility

Important as patient preferences are, they are obviously not the only factor relevant to guideline development. Most familiar are considerations about clinical outcomes and cost effectiveness. The first has been the subject of considerable research, although more are needed (i.e. predictors of pelvic floor dysfunction); the second are slowly emerging. Less familiar but deeply important are potential downstream effects of expanded choice around delivery mode. Utilization trends can end up having profound systemic effects, shifting not only institutional practices and patterns of provider expertise, but the cultural norms and presumptions against which patients preferences are developed and expressed.(20) These are the "externalities" of patient choice – costs not borne by the individual, and not counted in traditional cost-effectiveness analyses.

Clinical and social externalities are especially problematic in the context of expanding access to planned cesarean. Such expansion has the potential to limit access to low intervention births, as labor and delivery wards further orient toward clinical practices which, however well intentioned, bring higher probabilities of multiple interventions.(20) As many have noted, access to low intervention birth is being increasingly challenged by institutional policies, liability pressures, and practice patterns;(2) if demand shifts too strongly toward cesarean, it may impinge upon women's access to vaginal delivery. Indeed, increases in cesarean rates can be self-reinforcing: as the rate of conversion from attempted vaginal to surgical delivery increases, more women may decide simply to bypass a trial of labor in favor of planned cesarean. Expansion of patient choice, in short, can bring its own costs, even where the choices at issue are individually medically reasonable.

Responsible inclusion of patient preferences in guidelines around mode of delivery

We believe that responsible guidelines around mode of delivery are a function of four considerations, which interact in complex ways. First and foremost are clinical considerations of safety and efficacy, which include the extent to which the provider is comfortable with managing the specific approach. Second are considerations of cost effectiveness, which are especially important for options whose use would be prevalent. Third are the broader clinical and social consequences of expanding choice. Considerations here include the potential for diversion of resources, unintended shifts in institutional practices and provider expertise, as well as potentially subtle shifts in the pressures or untoward cultural presumptions subsequent patients will face. These three factors circumscribe boundary conditions on what providers can

responsibly provide to individual patients; they also provide comparative information key to informing choices within the range of broadly safe and cost-effective options.

Fourth are considerations of patient values and preferences, including the extent to which patients would trade one set of possible outcomes for another, how important differences in potential outcomes are to them, and how robustly variable preferences are across the population. In general, the stronger the preferences, and the greater the divergence among them, the stronger the case for patient-flexible guidelines. For one thing, the standard for acceptable medical risk and cost is in part a function of what patients value: as elsewhere in medicine, an option that brings a slightly higher risk or cost can be acceptable if it has a benefit that some patients value highly. Further, where outcomes are broadly equivalent in aggregate risk of adverse outcomes or cost, patient preferences are of obvious importance.

These four considerations are critical to defining what constitutes responsible care. The higher the probability of significant harm, the more restricted the range of reasonable options, even in the context of divergent patient preferences; the stronger and more variable are patient preferences, the more they should be given directive weight; the higher the externalities, and the less cost effective an option, the more justification for prescriptive guidelines.

While determining the correct balance is challenging, these considerations are all significant for decision making about delivery mode. Safety considerations for mother and baby are of obvious first-order importance; and cost-effectiveness is important to responsible allocation of medical resources. Further, patient preferences and values over mode of birth carry significant importance. Birth, like death, is an arena of medical care in which personal values are often strongly held and varied; process matters in addition to outcome. Finally, birth is already marked by significant disparities in meaningful access to valued options. Whether a woman has access to her preferred delivery mode is heavily influenced by proclivities of provider, hospital practice, and insurance, which may lead to disparities in access to informed decision making. This consideration underscores the importance of incorporating women's preferences into guidelines and decisions around birth and attending to the potential systemic effects of choice.

The specific balance of considerations depends on the clinical scenario. In the management of delivery following prior cesarean, we believe that stronger language on the importance of patient preferences is warranted: conditional on the recommended setting and clinical scenario, and assuming adequate patient counseling, a woman's own preferences should be determinative of approach. Current research indicates that VBAC and repeat cesarean are sufficiently comparable in their safety to both be reasonable choices if performed in recommended settings; and preference-flexibility is arguably unlikely to increase the aggregate cesarean rate (indeed, better institutional attention to what individual patients most value when delivering after prior cesarean may contribute to lowering the cesarean rate overall).

Twin and term breech deliveries bring with them more medical complexity. In the appropriate environment with adequate provider expertise, though, both delivery modes carry low probabilities of adverse outcomes. Further, increasing patient flexibility may be more likely to change who has cesareans rather than how many are performed overall: if cesareans increase in practices where vaginal delivery is currently standard, they will likely decrease in practices that now emphasize cesareans. Given these factors and the likely variation in women's own preferences, we believe that guidelines should emphasize the need for shared decision making, and that woman's informed preferences should be an explicit and strong consideration in determining approach to delivery. Providers who lack relevant expertise for vaginal delivery in these scenarios should disclose those limits, with the possibility of referring to another provider. In short, in these three scenarios, we believe that clinical guidelines should indicate

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a “range of reasonable options” rather than articulate a recommendation of the “best” approach to delivery. Both approaches to delivery should be discussed and offered if expertise and clinical considerations allow.

Cesarean delivery on maternal request is more complex. Some women have important reasons for preferring a surgical approach; cesareans carry low risk of adverse outcomes (indeed, the safety of cesarean is precisely what is emphasized in many other clinical scenarios); medical implications for future deliveries are not of relevance to all women. On the other hand, precisely because it would not be limited by medical indications, this option carries greater propensity for introducing problematic externalities, including diminishment of obstetrical expertise in managing vaginal deliveries in certain contexts and amplification of cultural pressures toward cesarean. The fundamental question that choice over delivery in this context raises, we believe, is whether the benefits that would accrue to individual women from expanded access to cesarean are sufficient to justify these potential clinical and social costs. The answer to this question is currently unknown. Whether latent demand would be revealed were the option to be made more widely available has not been studied; analyses of the implications of expanded access to fully elective cesareans if done without renewed efforts to keep meaningful access to vaginal birth have not been done. Most centrally, we cannot know whether, how much, or how many women would benefit from expanded access to cesareans without better data on what women most value in giving birth; and data here are sorely lacking.

Until further data are forthcoming, we concur with ACOG in sounding a cautious note on cesarean delivery absent traditional medical indication. Acceding to patient request, if sufficiently informed, is, we believe, ethical; indeed, providers should be sensitive to the possibility that a minority of individual patients may have strong and important reasons that may favor scheduled primary cesarean. But suggestions that all women be offered a choice of delivery approach cannot be supported without further analysis.

Conclusion

Much of the discussion in development of guidelines over delivery mode focuses on the clinical ramifications of the options considered and, to a lesser extent, the cost effectiveness of cesarean delivery. Important as these issues are, recommendations cannot be made on their resolution alone. Key to respectful and quality care for birthing women are considerations of what individual women care about in the context of their lives and families, as well as what systemic influences may compromise access to options that many value.

Attention to this framework supports expansion of patient choice in many clinical scenarios even as it cautions against unfettered preference flexibility. Most centrally, it underscores that decisions over delivery mode should be made in the context of what matters most to the patient, not just to numeric trade-offs on discrete medical outcomes, institutional targets for a given mode of delivery, or provider views of what makes for an ‘optimal’ birth. As guidelines around mode of delivery continue to strive to be evidence-based and patient-centered, attention must be paid both to the immediate patient and the ways in which guidelines can end up influencing the context against which individual choice is exercised. Critical to this effort will be development of decision tools and provision of better data, qualitatively based and quantitatively robust, on what women value in birth. Here, as in other value-laden arenas of medicine, measures of central tendency may be less important than measures of distribution and range. Finally, the above underscores the importance of insuring that institutions support, and clinicians retain, expertise on how to facilitate vaginal birth in a safe and supportive context, not because a target percentage of women should deliver this way, but because many women deeply care to do so.

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