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National Survey of Obstetrician Attitudes about Timing the Subsequent Pregnancy after Perinatal Death

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Abstract

Objectives: After stillbirth or early infant death, parents often query when they can try for another pregnancy. We conducted a national survey of United States obstetricians to assess attitudes about optimal timing of next pregnancy and advice given to parents.

Materials and Methods: The study was an anonymous mail survey of 1500 randomly-selected United States obstetricians asking about physician experiences with perinatal death.

Results: 804/1500 obstetricians completed the survey for a 54% usable response rate. Two thirds of respondents endorsed a waiting time less than six months for parents bereaved by stillbirth who desired another pregnancy.

Comment: Physicians in this national survey supported very short interpregnancy intervals for parents bereaved by perinatal death. Responses may reflect efforts to support parents emotionally while recognizing individuals vary in coping and clinical circumstances. However, this is a provocative finding since short intervals may confer greater fetal risks for poor outcome.

Keywords

fetal death; perinatal death; interpregnancy interval; obstetrical practice

INTRODUCTION

After stillbirth or early infant death, parents often query whether they can attempt another pregnancy and if so, how soon. While the question may sometimes seem premature to physicians, bereaved parents frequently are eager to begin trying to conceive a next pregnancy and may raise this topic soon after the loss.

Multiple studies have demonstrated that a waiting period of 6-18 months between pregnancies reduces the risk of adverse outcomes including prematurity, small for gestational age infants,

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and fetal death. Short interpregnancy intervals (usually defined as less than 6 months) are associated with higher risk of poor outcome.¹⁻⁴ This is particularly relevant for parents with a prior stillbirth since they not only tend to become pregnant again much sooner than parents with a live birth, but already constitute a group at much higher risk for adverse outcomes in the next pregnancy.^{3,5-7} Data about the impact of interpregnancy interval (IPI) on outcomes after stillbirth is limited but suggests short IPI may increase risk for poor fetal outcomes.^{4, 8-10}

Optimal timing of subsequent pregnancy after perinatal death is complicated by the varied grief and emotional responses of bereaved parents to the loss and psychological challenges of the next pregnancy. Pregnancy following a perinatal loss is typically marked by significantly increased anxiety and depressed feelings, and a muted and/or delayed attachment to the fetus even for a much wanted baby.¹¹⁻¹⁷ Qualitative research and clinical studies suggest that while these intense reactions are often labeled as pathologic symptoms, they may be better understood as adaptive maneuvers.¹⁸⁻²⁰ Anxiety, depressive anticipatory grief (expecting another loss) and suspending maternal attachment during the next pregnancy may be all designed to prepare for the danger of losing the pregnancy, thereby reducing the traumatic impact should the worst fear recur.

This national survey solicited the opinions of U.S. obstetricians about their recommendations for optimal timing of a subsequent pregnancy after stillbirth including their beliefs about when they think parents are medically and emotionally prepared.

MATERIALS AND METHODS

The study was a national mail survey to 1500 United States obstetricians, selected through simple random sampling from the American Medical Association Physician Masterfile and confirmed to hold an active United States medical license. The Physician Masterfile includes data on all United States physicians, including both those who are AMA members and those who are not. It also includes data for graduates of foreign medical schools who live in the U.S. Physicians were initially sent the 51-question survey along with a paid return envelope and a \$2 token incentive. Over two months, non-responders were sent up to 2 additional copies of the survey. If an envelope was returned undeliverable, the subject was randomly replaced. The sample size was selected to have adequate power assuming a 50% response rate.

The survey included questions about care at the time of perinatal death, opinions about subsequent conception and pregnancy after perinatal death, personal impact of caring for patients with a loss, and demographic variables. This study was approved by the University of Michigan Institutional Review Board.

Analysis of the results was conducted using Stata SE, version 10. Bivariable regression was performed to evaluate associations between outcomes of interest and the following covariates: years experience, race, gender, professional position, personal or family experience with a perinatal loss, being a parent, and current practice of obstetrical deliveries. Multivariable logistic regression including all of these covariates was also performed to control for potential confounders. Years experience and gender were tested as an interaction term and found not significant.

RESULTS

Out of 1500 mailings, 19 subjects were replaced due to undeliverable envelopes and 15 mailings came back undeliverable after the study ended and these subjects were not replaced. Of the remaining 1485 subjects, 34 physicians returned a form declining to participate, 2

incompletely filled out the survey, and 804 completed the full survey for a usable response rate of 54%.

Respondents were nearly equally split between male and female and median age was 46 with 14 years of practice after residency. (Table 1) 86% were attending physicians and 14% were residents and fellows. 82% currently participate in labor and delivery of pregnant women. Racial distribution, age, and average number of obstetrical deliveries were comparable to the U.S. distribution of obstetricians. Age and years of experience post-residency were collinear, so only physician age was used in multivariable regressions. No other variables were collinear.

Physicians were questioned about the advice they give parents about when to start trying to conceive another pregnancy after a perinatal loss. (Table 2) They were asked to assume a scenario in which a patient experienced a third-trimester fetal demise, had a vaginal delivery, and had no outstanding medical issues or testing which needed to be investigated or resolved prior to the next pregnancy. To the question: "On average, when do you tell parents is the earliest they should start trying?" 27% reported that parents could try "as soon as they feel ready," 10% recommended waiting for one or more normal menses, 33% recommended 2-5 normal menses, and 31% advised waiting 6 months or longer. Bivariable analysis identified no significant differences between groups recommending more than or less than six months of waiting in terms of age, gender, race, being a parent, position (resident, fellow, attending), or currently practicing obstetrics. However, multivariable logistic regression controlling for all of these covariates indicated that females were slightly less likely to recommend a waiting period of six months or longer (OR:0.62, CI:0.41-0.92, $p=0.02$).

Additional analysis was performed to evaluate characteristics of the 37% of physicians who endorsed very short waiting times (advising parents to try again for pregnancy "as soon as they feel ready" or with just "one or more normal menses") compared with other physicians. There were no significant differences in bivariable analysis for any of the major covariates or between obstetrical generalists and those with specialty training. In multivariate regression, female gender was significant although the confidence interval was close to one. (OR:1.02, CI: 1.01-2.00, $p=0.044$)

To distinguish between advice which might reflect accommodation of parental emotional needs versus their medical needs, subjects were asked a series of follow-up questions: "On average, when do you believe parents are *emotionally* ready to try?" For this question, 45% of physicians reported parents would be not emotionally ready to try again until six months or longer while 40% answered "as soon as they feel ready," 1% reported the need for one or more normal menses, and 13% reported the need for 2-5 normal menses. There was no significant difference between groups recommending more than or less than six months for emotional readiness in terms of the major covariates in either bivariable or multivariable analysis.

When asked, "On average, when do you believe parents are medically ready to try," just 32% of physicians responded that parents would not be medically ready until six months or more with 9% reporting readiness "as soon as they feel ready," 19% after 1 or more normal menses, and 40% after 2-5 normal menses. In bivariable analysis, older physicians and parents were more likely to endorse waiting times less than six months for medical reasons. In multivariable logistic regression, those answering less than six months were just slightly more likely to be older (OR:1.03, CI:1.01-1.05, $p=0.001$) and female (OR:1.43, CI:1.01-2.03, $p=0.046$), although confidence intervals for both variables were very near to 1. Being a parent was not significant in multivariable regression.

Respondents were also queried to see whether, in their experience, parents wait to try for another pregnancy for as long a period as the physician has recommended. 42% answered that parents "often" or "usually" wait as long as suggested, 13% reported parents "rarely" or "not

so often,” waited, and 44% selected “it varies.” In bivariable analysis, older age, being male, a fellow, a parent, and personal experience with loss predicted an answer of “often” or “usually.” In multivariable regression, only fellows (OR:2.62, CI:1.04-6.60, $p=0.041$) and parents (OR:1.68, CI:1.06-2.65, $p=0.027$) were more likely to report that parents often or usually waited as long as suggested.

COMMENT

This study highlights physician recommendations for brief interpregnancy interval after a stillbirth. The majority of studies which have examined interpregnancy intervals have reported the best perinatal outcomes for pregnancies conceived at least 6 months and perhaps as much as 18 months or longer after a previous pregnancy.^{1-3,10} In this survey, less than a third of physicians recommended that parents bereaved by stillbirth wait six months or longer prior to trying for conception. This is an important finding and warrants additional exploration of the complicated issues presented by a perinatal death.

Women with stillbirth are at higher risk for adverse outcomes in the next pregnancy. Several large studies have reported substantial increases in risk of stillbirth in pregnancies following a stillbirth with similarly large risks for early neonatal death.^{7,21} Subsequent pregnancies after stillbirth also appear to have higher risk for other complications including prematurity, preeclampsia, abruption, and emergency cesarean delivery.⁸

While the cause of subsequent poor outcomes are not always identified, risk factors such as congenital anomalies and genetic disorders, risks for placental abnormalities, preeclampsia, and maternal chronic disease may persist across pregnancies.⁶ An important finding is that as for initial stillbirth, the risk for subsequent stillbirth appears to be substantially higher for African-American mothers compared with whites.²²

In both developed and developing countries, short interpregnancy interval is associated with higher risk of poor fetal outcomes. A 2006 meta-analysis of 67 studies on birth spacing found that compared with interpregnancy intervals of 18-59 months, intervals of less than 18 months were associated with a significantly higher rate of adverse perinatal events with the highest risk for very short (3-6 months) and very long (8+ years) intervals.¹ Studies done in developed nations have reported that intervals less than six months are associated with particularly high risks for low birth weight, prematurity, and neonatal death in the next pregnancy.^{2-3,9-10} These effects appear across races; a report on more than 4 million U.S. births found interpregnancy intervals of less than 6 months were associated with the highest levels of risk for low birth weight and prematurity for every - racial group.² One Swedish study found no adverse effect of short interpregnancy interval once maternal risk factors and outcomes of first pregnancy were taken into account, and suggested that perhaps risks were overstated.²¹ In contrast, a recent U.S. analysis found interpregnancy intervals less than 6 months were associated with higher risk of poor outcomes in second pregnancy, even after controlling for maternal age, adverse outcome in first pregnancy, and other potential confounders.²³ In evaluating these divergent results, it is important to consider that the Swedish population study was evaluating mostly white mothers and that virtually 100% of Swedish women attend prenatal visits.²⁴ The U.S. study included 8% African-Americans and noted inadequate prenatal care for 42% of the women with prior stillbirth and 58% of the population with no prior stillbirth. Although prenatal care may not change fetal outcomes, lack of care is widely accepted as a marker for other maternal risk factors often not measured.

The issue of interpregnancy interval is particularly important for women with stillbirth as this cohort is significantly more likely than women with a live birth to become pregnant again quickly. One study found 20-30-fold higher odds of a subsequent interpregnancy interval less

than 6 months for women whose first birth ended in a stillbirth or neonatal death.³ Another study reported 74% of women with stillbirth were pregnant again in less than 12 months compared with just 21% of women with live birth.²¹ These trends occur whether the stillbirth or infant death occurred in the first, second, or third pregnancy and whether or not the loss was part of a single or multiple gestation.⁵

While there are many studies which document the risks of short IPI for the general population, very little research has evaluated risks for the subgroup of mothers with prior stillbirth.²⁵ However, large studies in developed countries which stratify by or control for past reproductive outcome do suggest short IPI confers additional risk for women with prior stillbirth for many, but not all, outcomes. Four large studies in developed countries which have looked at short IPI in women with prior stillbirth have noted an increased risk in the next pregnancy for pre-eclampsia, abruption, prematurity, low birth weight, small for gestational age, instrumental delivery, cesarean section, and malpresentation.^{4,8-10} One U.S. study which controlled for prior reproductive history but not specifically for loss found short IPI to be a risk which persisted across all reproductive subgroups; the researchers asserted that based on these findings, prior loss was less likely to be a significant confounder of short IPI risk.² Two studies which examined risk for women with prior stillbirth found short IPI conferred no increased risk in subsequent pregnancy for outcomes of stillbirth or neonatal death.^{8,21}

While many studies cited earlier document how emotionally challenging the pregnancy following a loss can be, little research examines the psychological implications of a shortened IPI. Clinical studies suggest that quickly embarking on a subsequent pregnancy may: 1) further increase anxiety with the new pregnancy increasingly experienced as a continuation of the prior lost pregnancy and a heightened fear of the same fate; and 2) intensify depressive reactions with the new pregnancy often overlapping the due date or anniversary of the first loss resulting in grief resurgence.²⁶⁻²⁷ While one study notes elevated anxiety and depression in the third trimester of a pregnancy initiated less than one year after the loss, these same researchers report that elevated distress typically subsides naturally during the year following the birth of a healthy baby.²⁸⁻²⁹

Most physicians in this national survey supported short intervals to next conception for bereaved parents. Given the medical risks of short interpregnancy interval for all populations, including the even higher risk subgroup of women with prior stillbirth, it is worth exploring the factors which might influence physician recommendations on this topic.

First, in some cases, there may be medical indications to support a rapid repeat conception. Women who are older or have a history of known fertility impairment might be best advised not to wait for an extended period before attempting another pregnancy. Although anecdotal reports suggest physicians are less likely to suggest a lengthy delay to next pregnancy for such women, there is no data on exactly how that advice varies among populations, and this was not measured in the survey.

Second, physicians might endorse having another pregnancy soon in order to support parents emotionally. Obstetricians may appreciate the repeated finding that the next pregnancy can facilitate resolution of the prior loss, both by providing the wished-for baby as well as having a healthy pregnancy which restores maternal self-worth so often devastated by perinatal loss.^{15,20,30-35}

A noteworthy finding is the bimodal distribution of obstetricians believing parents are emotionally ready to try to become pregnant as soon as they feel ready versus believing they should wait at least six months. The former group suggests a recognition that duration of grieving is not uniform and obstetrical recommendations may need to be adjusted to individual circumstances. This is corroborated by studies reporting as many as a third of couples

experiencing perinatal loss demonstrate little overt grief, perhaps due to resilient adaptation.³⁶⁻³⁸ Similarly, a large-scale Swedish study which is the only research directly investigating obstetrician attitudes regarding a pregnancy after perinatal loss, reported a strong inclination to provide emotional support during this emotionally difficult pregnancy, with only a small minority (14%) recommending giving advice about optimal timing for the next pregnancy.³⁹ Several qualitative studies also endorse the value of support services individually attuned to the needs of couples delivered by health providers and support groups during a pregnancy after perinatal loss.

To more definitively determine if timing the next pregnancy is genuinely collaborative it will be necessary for future research to inquire in more detail about motivations and beliefs of obstetricians regarding the rationale for recommending waiting or not. Although obstetricians in this survey were more likely to report patients usually followed their advice about timing the next pregnancy, it is also possible that obstetricians may abdicate any role in recommending optimal timing believing that, in accord with one of the few studies addressing this topic, women are likely to disregard recommendations to wait at least six months before attempting a subsequent pregnancy.⁴⁰ Alternatively, obstetricians may, in the midst of their own intense feelings of inadequacy or helplessness following an inexplicable perinatal loss, endorse launching into another pregnancy to ease or even deny their own sense of traumatic loss.⁴¹

Like all retrospective studies, this survey has potential for recall bias. In addition, physicians were asked to respond to a general scenario that may not reflect actual advice given to parents or may not capture nuances for individual parents. While the survey had higher response than the average national mail surveys to physicians, the 54% response rate also leaves open the possibility that non-responders might have different opinions for timing next pregnancy than those who responded to the survey.⁴² In addition, we did not survey nonresponders to ensure similar demographics. However, we compared our sample to available data on the U.S. obstetrical workforce. We had more females and trainees than the workforce as a whole, but data on physician age, race, years of experience, and volume of obstetrical deliveries was comparable to national data.⁴³⁻⁴⁴ Wording of these survey questions may be interpreted in different ways by different respondents and for this reason might not reflect actual practice. In addition, this topic would benefit from additional studies which evaluate the specific effect of IPI after stillbirth on outcomes of subsequent pregnancies. Research is also needed to understand preferences of bereaved parents about counseling for the next pregnancy, whether bereaved parents would comply with recommendations to delay the next pregnancy based on medical risks associated with short IPIs, to better clarify reasons why physicians believe a short IPI is frequently appropriate for parents with stillbirth, and what physicians believe are the parameters determining patient emotional readiness (or not) to become pregnant again.

This study found that the majority of surveyed U.S. obstetricians endorsed a short interpregnancy interval after a stillbirth without known cause. This is a provocative finding given that epidemiologic data about pregnancy intervals suggest short intervals carry substantially higher fetal risks. If physicians underestimate the medical complications of closely-spaced pregnancies and endorse rapid pregnancy after stillbirth, bereaved parents may unwittingly increase their already-higher risk of poor outcome in next pregnancy. On the other hand, bereaved parents vary in terms of their grief, coping, and support systems, as well as differing individual fertility and medical risks. Recommendations purely based on epidemiological data may not reflect these important differences and needs among families. Finally, while parents may disregard medical advice to delay pregnancy after stillbirth, the same parents may more relentlessly blame themselves if they ignore the advice to wait and then have a bad outcome. Physicians dispensing advice of any kind must recognize the heightened risk for self-blame in bereaved parents and provide recommendations in a way that does not place judgment on parents who make a different choice, and which is sensitive to the

varying medical and psychological needs and circumstances of bereaved couples. Just as empathic understanding has been found to be indispensable in supporting couples coping with a perinatal loss, it is also a vital ingredient in helping couples contemplating a pregnancy following such a loss.^{20,26,45}

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TABLE 1

Demographics. Total n=804

	<u>Number (%)</u>
<u>Gender</u>	
Male	395 (49%)
Female	409 (51%)
<u>Age (median)</u>	46
<u>Race</u>	
White/caucasian	599 (75%)
Black/African-American	53 (7%)
Asian or Pacific Islander	91 (11%)
Native American or Alaskan Native	1 (<1%)
Missing/unknown	29 (4%)
<u>Hispanic Ethnicity</u>	31 (4%)
<u>Position</u>	
Attending	691 (86%)
Fellow or Resident	112 (14%)
<u>Currently Practice Obstetrics</u>	660 (82%)
<u>Personal Experience</u>	
Self, family, or friend had perinatal death	312 (39%)

TABLE 2

Obstetrician beliefs about pregnancy after perinatal loss

	As Soon as They Feel Ready	1 or More Normal Menses	2-5 Normal Menses	Wait 6 Months or More
Earliest Would Advise Parents to Try	27%	10%	33%	31%
When Parents are Medically Ready to Try	9%	19%	40%	32%
When Parents are Emotionally Ready to Try	40%	1%	13%	45%