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# Psychological impact of stillbirths on obstetricians

Victoria A. Farrow[1,2], Robert L. Goldenberg[3], Ruth Fretts[4], and Jay Schulkin[1]

[1]*Department of Psychology, American University, Washington, DC, USA,* [2]*Department of Research, American College of Obstetricians and Gynecologists, Washington, DC, USA,* [3]*Department of Obstetrics and Gynecology, Columbia University, New York, NY, USA, and* [4]*Harvard Medical School, Harvard Vanguard Medical Associates, Wellesley, MA, USA*

**Abstract**

*Objective*: To assess the psychological impact on US obstetricians when they care for women who have suffered a stillbirth and explore whether demographic (e.g. age, gender) and practice (e.g. number of patients, practice type) variables were related to the extent of psychological impact for obstetricians following stillbirth.

*Methods*: Using a questionnaire that could be completed in about 20 min, we surveyed 1000 American College of Obstetricians and Gynecologists (ACOG) members. Physicians were asked about how stillbirths have affected them personally.

*Results*: Half of those surveyed responded (499) and of those 365 currently practiced obstetrics. Virtually all obstetricians have looked after women who have had a stillbirth. Grief was the most common reaction experienced with 53.7% reporting that they personally "very much" experienced grief. Other common and significant reactions were self-doubt (17.2%), depression (16.9%) and self-blame (16.4%). Significant psychological impact on the obstetrician was associated with older age, solo practice, higher volume practices and higher proportion of Medicaid patients; gender was not found to be associated with psychological impact when controlling for age. Further, greater self-reported performance and training regarding maternal and family counseling, management of stillbirth, and knowledge of stillbirth evaluation was associated with greater levels of grief.

*Conclusion*: Physician grief is a common reaction among obstetricians after caring for a patient who has had a stillbirth.

**Keywords**

Physician grief, psychological impact, obstetrician, reactions, stillbirth

**History**

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## Introduction

At some point during their careers, most physicians will care for a patient who dies or be informed of their own patient's death. While the doctor–patient relationship is a professional one, it is also important to acknowledge that it is a relationship nonetheless. Thus, emotional reactions to patient death are not unusual [1]. Potential reactions include feelings of guilt and inadequacy [2,3], depression [4], trauma reactions [5,6] (e.g. avoidance and numbness) and grief [5].

Stillbirth, or fetal death after 20 weeks of gestation, is a unique kind of patient death, where the future of the patient's family is forever changed. Physicians are faced with the death itself, and likely a continued relationship with the mother. Recent estimates (2005) of stillbirths indicate a mortality rate of 6.3 per 1000 live births [7]. Thus, obstetricians are likely to encounter stillbirths during their careers. Grief, bereavement and psychological impact on mother and family following a stillbirth have been well-documented [8–12]. In fact, most obstetricians recommend grief counseling for the patient and family following a stillbirth [13]. Far less research has focused on the psychological impact of stillbirths on the patient's obstetrician. One important study from 2008 did review this topic [14]. In a survey of 804 US obstetricians, 75% of the respondents reported that the experience of delivering a stillbirth took a large emotional toll on them personally. About one-third of respondents reported blaming themselves, or feeling guilty, and 43% reported worrying about legal action. Importantly, in this study, 8% of the obstetricians reported they had considered giving up obstetric practice due to the emotional difficulty of stillbirth deliveries. Overall, however, the literature regarding this topic is sparse.

A variety of factors may contribute to the psychological impact of a stillbirth on a physician (e.g. age, experience, practice type or specialty). For example, in the 2008 study cited above [14], Black/African-American race, male sex and current obstetric practice were predictors of less guilt. Further, physicians who reported adequate training in coping with fetal and infant death without a known cause reported less guilt, and were less likely to have considered

Address for correspondence: Victoria A. Farrow, Research Associate, Department of Research, American College of Obstetricians and Gynecologists, 409 12th St. SW, Washington, DC 20024, USA. Tel: 202-863-4997. Fax: 202-554-4346. E-mail: vfarrow@acog.org

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giving up obstetric practice. Other variables have been noted more generally regarding the psychological impact of patient death, including the physician's personal experience with loss, identification with patients and families, the closeness of the physician-patient relationship and the physician's sense of responsibility for the patient death [5]. Additional research has identified female sex, a longer physician–patient relationship and intern status as risk factors for a strong emotional response following patient death [6].

The purpose of this study was to provide information regarding the psychological impact of stillbirths among obstetricians in general, and to further explore whether demographic (e.g. age, gender) and practice (e.g. number of patients, practice type) variables were related to the extent of psychological impact.

## Methods

### Participants

Surveys were mailed in July 2011 to 1000 members of the American College of Obstetricians and Gynecologists (ACOG). Three additional reminder mailings were sent in August, September and October 2011 to encourage non-responders. Of the 1000 members mailed the survey, 600 were members of the College's Collaborative Ambulatory Research Network (CARN), a group of College Fellows who agree to participate in 4–6 surveys every 12 months; 400 were non-CARN members. CARN members are a representative sample (by age, gender and geographic location) of the ACOG membership, of which more than 90% of ob-gyns in the United States are members. During the more than 20-year history of the CARN, comparisons of their responses on surveys to those of randomly selected fellows have rarely indicated any significant differences.

### Measures, procedures and data analysis

Potential participants were mailed a questionnaire on stillbirths. The questionnaire was constructed to be completed in approximately 20 min. Demographic questions included gender, age, years in practice, practice structure and location, physician race, racial distribution of patient population, number of annual deliveries, number of career stillbirths, etc. Physicians were also asked to rate the extent to which they experience a variety of emotional responses following a patient's stillbirth. Additional questions included physician's self-rated performance and training in stillbirth management, and familiarity with stillbirth guidelines.

Data were analyzed using a statistical software package, SPSS 16.0 (SPSS Inc., Chicago, IL). The study was approved by the Drexel University Institutional Review Board. Return of the completed questionnaire indicated consent to participate in the study. Participation was voluntary, with no compensation offered to participants. As males were significantly older than females (Males, mean age = 55.66 years, SD = 8.89 years; Females, mean age = 47.26 years, SD = 7.45 years; $t(327) = 9.282$, $p < 0.001$), all sex analyses were performed controlling for age and all age analyses were performed controlling for sex. Only statistically significant findings are reported (at $p < 0.05$).

Table 1. Characteristics of practicing obstetric providers participating in the survey ($n = 335$).

| Characteristics | Percentage or mean (range)* |
|---|---|
| *Sex* | |
| Male | 50.5% |
| Female | 49.5% |
| *Average age (years)* | 51.6 years (36–75) |
| Age group, 51 and younger | 50.8% |
| Age group, 52 and older | 49.2% |
| *Average years in practice* | 19.2 years (2–46) |
| *Physician race/ethnicity* | |
| White (non-Hispanic) | 81.0% |
| Asian/Pacific Islander | 7.0% |
| Black (non-Hispanic) | 5.8% |
| Hispanic | 3.7% |
| Other | 2.4% |
| Native American/Alaskan | 0.0% |
| *Type of practice* | |
| Partnership/group practice | 46.2% |
| Multispecialty group | 17.0% |
| Solo | 15.8% |
| University full-time faculty practice | 14.0% |
| Other (includes HMO model) | 7.0% |
| *Primary medical specialty* | |
| General Ob-gyn | 84.9% |
| Maternal-Fetal Medicine | 12.4% |
| OB only | 1.2% |
| Other (e.g. family planning) | 1.2% |
| Urogynecology | 0.3% |
| Reproductive endocrinology, genetics, gynecologic oncology | All 0.0% |
| *Majority of patient insurance* | |
| Private | 74.2% |
| Medicaid | 24.2% |
| Uninsured | 1.2% |
| Medicare | 0.3% |
| *Number of annual deliveries performed* | |
| <10 | 4.4% |
| 10–25 | 2.2% |
| 26–50 | 9.0% |
| 51–75 | 10.9% |
| 76–100 | 21.2% |
| >100 | 52.3% |

*Numbers may not add up to 100% because of rounding.

## Results

Surveys received by 13 December 2011 were included in the analysis. A total of 499 surveys were returned (response rate = 49.9%); of these, 335 (67.1% of respondents) currently provided obstetric care. Analyses were conducted on this subset of providers. The percentage of potentially eligible non-respondents (i.e. those who practice obstetrics but did not respond) was unable to be determined.

The 335 providers in the sample consisted of 72.9% CARN members and 27.1% non-CARN members. Groups did not differ in mean age. CARN and non-CARN members differed on only two variables, and thus responses were collapsed for these groups. About half of the sample was male (50.5%). Mean age of physicians was 51.57 years (SD = 9.2 years) and they had an average of 19.2 years in post-residency practice (SD = 9.3 years). Additional demographic information is detailed in Table 1.

### General psychological impact

Table 2 reflects the distribution of responses regarding psychological impact. Obstetricians were given three options

Table 2. The Extent to which obstetricians reported to have personally experienced various psychological responses when they managed a pregnancy that ended in a stillbirth.

| | Very much (%) | Some what (%) | Not at all (%) |
|---|---|---|---|
| Grief | 53.7 | 42.9 | 3.4 |
| Depression | 16.9 | 38.2 | 44.9 |
| Self-blame | 16.4 | 48.0 | 35.6 |
| Self-doubt | 17.2 | 56.6 | 26.2 |
| Feelings of guilt | 14.9 | 53.6 | 31.5 |
| Fear of legal action | 13.4 | 55.5 | 31.2 |
| Inability to sleep for two or more weeks | 3.8 | 16.3 | 79.9 |
| PTSD | 1.8 | 15.5 | 82.7 |

regarding the extent to which they have personally experienced various symptoms/emotional responses when a stillbirth occurred in a pregnancy that they managed (''very much'', ''somewhat'' or ''not at all''). Overall, grief was the most common emotional response to a stillbirth, with 96.6% of the respondents indicating they ''very much'' or ''somewhat'' experienced grief. Over half of the sample (53.7%) rated the extent of their grief as ''very much.'' Other common reactions that obstetricians ''somewhat'' experienced were self-doubt (56.6%), fear of legal action (55.5%), feelings of guilt (53.6%) and self-blame (48.0%). More than a third of the sample (38.2%) ''somewhat'' experienced depression. Most respondents did not (''not at all'') experience an inability to sleep (79.9%), or PTSD[1] (82.7%). (Table 2 presents the distribution of responses.)

## Psychological impact by physician demographics

To examine whether differences in psychological impact varied by physician demographics, chi-square analyses were performed on all demographic variables. Among our respondents, older physicians ($\geq$52 years) were more likely than younger physicians ($\leq$51 years) to ''very much'' or ''somewhat'' experience depression after a stillbirth (64.6% versus 46.1%, $\chi^2(2) = 11.21$, $p = 0.004$). This trend remained significant when controlling for gender.

Another characteristic that was related to emotional response was practice category. Specifically, physicians in solo practice reported greater symptoms. 75.5% of the physicians in solo practice reported experiencing grief ''very much'' following a stillbirth, compared to only 50.0% of the physicians in other practice settings ($\chi^2(2) = 10.895$, $p = 0.004$). Additionally, physicians in solo practice were more likely than those in other practice settings to report ''very much'' or ''somewhat'' experiencing depression (73.5% versus 52.0%, respectively; $\chi^2(1) = 7.735$, $p = 0.004$).

Patient demographic characteristics were also related to psychological impact. We compared physicians whose majority of patients carried private insurance to physicians whose majority of patients utilized Medicaid. Physicians with primarily Medicaid patients reported greater psychological impact on a number of variables. They were more likely than physicians whose patients carried private insurance to ''very much'' or ''somewhat'' experience depression (66.7% versus 52.5%, $\chi^2(1) = 4.794$, $p = 0.019$), self-doubt (84.6% versus 70.8%, $\chi^2(1) = 5.843$, $p = 0.010$), and self-blame (75.6% versus 61.3%, $\chi^2(1) = 5.269$, $p = 0.014$) following a stillbirth.

Annual number of deliveries was also related to psychological impact on physicians. Physicians performing $\geq 51$ annual deliveries were more likely to ''very much'' or ''somewhat'' experience depression following a stillbirth (58.1%) than were physicians who performed 50 or fewer annual deliveries (38.8%) ($\chi^2(1) = 6.251$, $p = 0.010$). Similarly, physicians were more likely to ''very much'' or ''somewhat'' experience guilt if they performed more annual deliveries (71.8% versus 56.5%, $\chi^2(1) = 4.214$, $p = 0.032$).

Career experience with stillbirth was likewise associated with emotional response. Those physicians who have managed $\leq 15$ pregnancies resulting in stillbirth were more likely to ''very much'' experience grief following a stillbirth (59.1%, compared to 42.4% of physicians that have managed $\geq 16$ pregnancies ending in stillbirth; $\chi^2(1) = 7.727$, $p = 0.021$). Similar trends of less experience with stillbirth being related to greater psychological impact were noted with respect to depression ($p = 0.084$) and self-doubt ($p = 0.073$), although these did not reach significance.

Only 15.8% of our sample reported having personally been named in a lawsuit that occurred because of a stillbirth. Perhaps not surprisingly, those who had been previously named in a lawsuit were more likely to report ''very much'' experiencing fear of legal action following a stillbirth than those who had never been named in a lawsuit (25.0% versus 11.3%; $\chi^2(2) = 6.43$, $p = .040$).

## Psychological impact by physician self-rated performance and training

Physicians were asked to rate their current performance regarding maternal/family counseling, post-delivery of a stillbirth. An interesting trend was found, such that as self-rated performance increased, so did the percentage of physicians ''very much'' experiencing grief following a stillbirth. Specifically, 41% of the physicians who rated their performance in this area as ''barely adequate'' responded that they ''very much'' experience grief, compared to 51.9% of the physicians who rated their performance as ''adequate'' and 63.4% who rated their performance as ''comprehensive'' ($\chi^2(4) = 20.03$, $p < 0.001$).

Similar patterns of increased rates of psychological impact were found with regard to comprehensiveness of residency training. Physicians were also asked to rate their residency training regarding several areas of stillbirth management. In terms of physicians' residency training for managing a pregnancy in a woman with a prior stillbirth, 63.8% of the physicians who rate their training as ''comprehensive'' reported ''very much'' experiencing grief following a stillbirth, compared to 51.1% who rated their training as ''adequate'' and 46.2% who rated their training as ''barely adequate'' in this area ($\chi^2(8) = 16.717$, $p = 0.033$).

Physicians who rated their residency training in interpreting fetal autopsy and other tests to parents after a stillbirth as

[1]PTSD: Posttraumatic Stress Disorder is an anxiety disorder that can occur following a traumatic event; symptoms include re-experiencing the event (e.g. intrusive unwanted memories), avoidance (e.g. avoiding reminders of the event) and arousal (e.g. exaggerated startle response).

''comprehensive'' were more likely to ''very much'' or ''somewhat'' experience self-blame following a stillbirth (79.1%) than those who rated their training as ''adequate'' (67.1%), barely adequate (67.1%), inadequate (46.9%) and non-existent (50.0%) ($\chi^2(4) = 10.927$, $p = 0.027$).

Further, a trend emerged of physicians who rated their training in evaluating the cause of a stillbirth post-delivery as ''comprehensive'' being more likely to ''very much'' experience grief following a stillbirth (62.7%) than those who rated their training as ''adequate'' (54.8%) and ''barely adequate'' (41.0%), although this trend did not reach significance ($p = 0.054$).

Finally, physicians were asked about their familiarity with the 2009 ACOG Practice Bulletin *Management of Stillbirths* [15]. Those who have heard of the bulletin, but not read it were most likely to ''not at all'' experience feelings of guilt following a stillbirth (41.7%), compared to 31.0% of the physicians who had skimmed the bulletin, and 28.0% of the physicians who had read it thoroughly ($\chi^2(4) = 14.154$, $p = 0.007$).

## Discussion

This national survey demonstrates management of a pregnancy that ends in a stillbirth causes significant grief in obstetric providers, among other common psychological reactions. Over the past decade there has been an increased awareness about the impact a stillbirth has on the family and mothers in particular [16], yet few studies have addressed the psychological impact on providers.

Our findings show that several demographic variables were related to psychological impact. Age was one such variable, with older physicians more likely to experience depression following a stillbirth. (Importantly, when controlling for age, physician gender was *not* found to be associated with psychological impact.) Additionally, obstetricians performing $\geq 51$ annual deliveries were more likely than those performing fewer deliveries to experience depression or guilt following a stillbirth. Perhaps older physicians and those with a greater clinical caseload feel they could have done something to prevent the stillbirth, given that they have more experience (than those who perform fewer deliveries or are younger). Alternately, those physicians who have more experience with stillbirths specifically (having managed $\geq 16$ pregnancies ending in stillbirth throughout their careers) experienced less grief (and to a non-significant extent, depression and self-blame) than those with less experience. Although potentially still upsetting, continued exposure to stillbirths may habituate providers, thereby decreasing levels of psychological turmoil.

Further, those in solo practice were more likely to experience grief and depression than other practice types. Other studies have also found solo practice to be a predictor of poorer mental health (specifically, stress) [17,18]. It may be that solo providers are isolated and lack the support of colleagues to process a stillbirth, leading to negative psychological consequences. Alternately, physicians in solo practice may develop closer relationships with their patients than those physicians in other settings; close relationships may indicate more emotional investment on the part of the physician, and thus lead to more grief and depression.

An interesting finding showed that obstetricians with a greater proportion of Medicaid patients (as opposed to providers with a greater proportion of patients with private insurance) were more likely to experience depression, self-doubt, and self-blame following a stillbirth. While the reasons behind such a trend may be complex, one possible explanation is that physicians who work with more disadvantaged populations (i.e. those on Medicaid) may see a stillbirth as another obstacle or struggle for their patients who may already experience much adversity in their lives. Alternately, perhaps those providers who choose to work with low-income populations may have different personal psychological profiles than their peers (e.g. greater levels of empathy), thus explaining the difference in psychological impact following a stillbirth.

We were also able to examine the relationship between physicians' self-rated levels of performance and training and their reported psychological impact following a stillbirth. For a number of areas (maternal/family counseling post-stillbirth, managing a pregnancy in a woman with a prior stillbirth, interpreting fetal autopsy and evaluating the cause of a stillbirth), higher self-ratings in performance/training were associated with greater levels of psychological impact (specifically, grief and self-blame). One possible interpretation of our findings is that those who believe they have had excellent training and performance may feel that given these factors, there is more they could have done to prevent the stillbirth, thereby leading to various psychological consequences. Indeed, we may all be able to call to mind individuals with high personal standards and goals who have the training and performance to match; when they do not live up to these standards/goals (even if there was in fact nothing they could have done to prevent negative outcomes), a variety of distressing psychological outcomes may follow. An alternate explanation is that those physicians who have obtained additional training and knowledge in stillbirths may be more interested in the topic and thus more likely to grieve with the patient. A previous survey of US obstetricians published by Gold and colleagues [14] showed that physicians who reported adequate training in coping with neonatal or infant death were less likely to feel guilty and report worrying about disciplinary or legal action for a death without a known cause; they were also less likely to report that they had considered giving up obstetric practice because of the emotional difficulty of perinatal death. In an unadjusted model, physicians who reported adequate training in coping with neonatal or infant death were less likely to report that stillbirths took a large emotional toll, although when other variables were taken into account (e.g. age, personal experience with perinatal death, etc.), this was no longer significant. The present study examined perceived knowledge and training regarding topics related to the management of stillbirth, whereas the Gold and colleagues focused on physician perception of adequacy of training on coping with neonatal and infant death. While educating physicians regarding topics related to the management of stillbirths is important, it may be key to also incorporate training on coping with neonatal death to minimize psychological stress.

A number of psychological responses were measured in this study, including grief, depression, self-blame, self-doubt,

guilt, and trouble sleeping. From a mental health perspective, these reactions are not distinct constructs, but likely overlap. A depressive episode (or even non-pathological feelings of ''being depressed'' for a few days) often includes feelings of self-doubt, guilt and trouble sleeping. Similarly, experiences of grief may include self-blame and guilt, and feelings of depression. Thus, rather than targeting specific symptoms (e.g. self-doubt, guilt), efforts aimed at reducing general psychological impact may be more effective. Mindfulness and acceptance-based approaches, for example, generally focus on the process of physician reactions. The specific symptoms themselves (e.g. depression, self-blame – which we believe may be quite natural) are not targeted; rather, the way the physician relates to these symptoms is addressed. Thus, these types of interventions may be applicable to a wider range of individuals.

Previously the impact of stillbirth has been under appreciated and under studied. Our study of a nationally representative sample adds to this sparse literature and provides estimates regarding the psychological impact of stillbirths on obstetricians. A number of limitations, however, should be noted. As with any retrospective self-report study, there exists the potential for recall bias. Further, only about 50% of those surveyed responded, a low but fairly typical response rate among physicians [19]. With a low response rate, there is the possibility of a response bias, such that physicians who are more interested in stillbirth issues may be more likely to respond. Additionally, self-reports of ''grief'' and ''depression'', for example, may also be somewhat subjective, and some physicians may have interpreted the questions differently (e.g. ''depression'' could mean depressed mood, or a clinically significant Major Depressive Episode). Finally, our study did not assess the amount of time elapsed since the physician's last stillbirth. It is possible that those physicians who have had a very recent experience with stillbirth responded quite differently than those who have had some time elapse since their last stillbirth. Thus, future research should continue to explore the issue, and expand upon and clarify our findings.

While medical training may reinforce the concept that physicians should be emotionally detached, some obstetricians do form significant bonds with their patients. When a stillbirth does occur, there are evolving support systems for parents, but to date there has been little focus on the effect of these losses on providers. Although there is a wider literature on the impact of patient deaths, stillbirths are a unique experience, as the provider likely will have continued contact with the patient.

Colleagues can be a source of significant support, as many providers in a previous study reported talking informally with colleagues as a coping method following a patient's stillbirth [14]. Physicians may be well served to form their own support groups; particular attention should focus on providers in solo practice as they appear to be at risk, possibly because of the lack of social support. Drawing attention to the issue of the psychological impact on physicians may reduce any stigma associated with distress, because as our study has shown, these reactions are quite common and normal.

## Declaration of Interest

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## References

1. Thiedke C. Balancing act: grieving the death of a patient. Fam Pract Manag 2000;75:78.
2. Ahrens WR, Hart RG. Emergency physicians' experience with pediatric death. Am J Emerg Med 1997;15:642–3.
3. Serwint JR. One method of coping: resident debriefing after the death of a patient. J Pediatr 2004;145:229–34.
4. McCready S, Russell R. A national survey of support and counselling after maternal death. Anaesthesia 2009;64:1211–7.
5. Jackson VA, Sullivan AM, Gadmer NM, et al. ''It was haunting...'': physicians' descriptions of emotionally powerful patient deaths. Acad Med 2005;80:648–56.
6. Redinbaugh EM, Sullivan AM, Block SD, et al. Doctors' emotional reactions to recent death of a patient: cross sectional study of hospital doctors. BMJ 2003;327:185.
7. Health, United States. With special feature on socioeconomic status and health Internet. Hyattsville, Maryland: National Center for Health Statistics. 2011. Available from http://www.cdc.gov/nchs/hus.htm [last accessed 28 May 2012].
8. Badenhorst W, Riches S, Turton P, et al. The psychological effects of stillbirth and neonatal death on fathers: systematic review. J Psychosom Obstet Gynaecol 2006;27:245–56.
9. Turton P, Evans C, Hughes P. Long-term psychosocial sequelae of stillbirth: phase II of a nested case-control cohort study. Arch Womens Ment Health 2009;12:35–41.
10. Hughes P, Turton P, Hopper E, et al. Assessment of guidelines for good practice in psychosocial care of mothers after stillbirth: a cohort study. Lancet 2002;360:114–18.
11. Boyle FM, Vance JC, Najman JM, et al. The mental health impact of stillbirth, neonatal death or SIDS: prevalence and patterns of distress among mothers. Soc Sci Med 1996;43:1273–82.
12. Bennett SM, Litz BT, Maguen S, et al. An exploratory study of the psychological impact and clinical care of perinatal loss. J Loss Trauma: Int Persp Stress Coping 2008;13:485–510.
13. Spong CY, Erickson K, Willinger M, et al. Stillbirths in obstetric practice: report of survey findings. J Maternal-Fetal Neonatal Med 2003;14:39–44.
14. Gold KJ, Kuznia AL, Hayward RA. How physicians cope with stillbirth or neonatal death: a national survey of obstetricians. Obstet Gynecol 2008;112:29–34.
15. American College of Obstetricians and Gynecologists. Management of stillbirth. ACOG Practice Bulletin No. 102. Obstet Gynecol 2009;113:748–61.
16. Froen JF, Cacciatore J, McClure EM, et al. Stillbirths: why they matter. Lancet 2011;377:1353–66.
17. Lewis JM, Barnhart FD, Howard BL, et al. Work stress in the lives of physicians. Tex Med 1993;89:62–7.
18. Linzer M, Gerrity M, Douglas JA, et al. Physician stress: results from the physician worklife study. Stress Health 2002;18:37–42.
19. Cook JV, Dickinson HO, Eccles MP. Response rates in postal surveys of health care professionals between 1996 and 2005: an observational study. BMC Health Serv Res 2009;9:160.