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Networked for change? identifying obstetric opinion leaders and assessing their opinions on caesarean delivery

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Abstract

The objective was to determine whether obstetric opinion leaders can be identified and to characterize them in terms of their demographic and professional characteristics and their attitudes toward caesarean delivery. In late 1998, we surveyed 527 obstetricians, 138 family physicians, and 80 certified nurse midwives (overall response rate, 57.8%) practicing in a stratified random sample of California hospitals with at least 1000 annual deliveries ($n = 52$). Participants reported on demographic and professional characteristics and attitudes towards caesarean delivery; they also checked off those hospital colleagues from whom they had sought or would seek advice on labour and delivery. A composite measure of nomination frequency was used to characterize each respondent's degree of "opinion leadership". All analyses were corrected for the complex survey design. Using a nomination cutoff of 0.4 (0–1 scale), opinion leaders were identified in 31% of California hospitals; they were identified in 81% of hospitals using a cutoff of 0.2. Compared with their peers in the lowest fifth of the nomination distribution, clinicians in the top fifth were younger and more likely to be male, to speak English as a first language, to practice obstetrics, to have a maternal–foetal medicine subspecialty, and to practice in higher volume hospitals ($p < 0.05$). Regardless of discipline, opinion leaders held attitudes concordant with reducing the caesarean delivery rate more often than non-opinion leaders. However, only 48% of obstetrical opinion leaders would support reducing the caesarean delivery rate to levels targeted by Healthy People 2000. In conclusion, obstetric opinion leaders could be identified in many California hospitals. However, they did not consistently support policies designed to reduce the caesarean delivery rate. The results have implications for the generalizability of opinion leader strategies.

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Introduction

Physicians are intimately involved in nearly every aspect of medical decision making. Yet considerable

evidence suggests that their decisions are not always evidence based, patient-centred, or cost-effective (Nordin-Johansson & Asplund, 2000; Little et al., 2001; Chapman, Stone, Sandberg, Bell, & Neumann, 2000). Getting physicians to alter their practices could have substantial impact on health care quality and costs. However, the usual approaches to changing physician behaviour have shortcomings. Financial incentives are

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effective but blunt, and they tend to encourage changes in volume of care but not necessarily appropriateness or quality (Rogers et al., 1990). Traditional forms of continuing medical education have been disappointing (Davis et al., 1999). Practice guidelines are often ignored (Lomas, 1991). Reminders, audit and feedback, and computerized decision aids have proven useful in some settings but not in others (Thomson O'Brien et al., 2000a; Oxman, Thomson, Davis, & Haynes, 1995). The search continues for ways to improve physician practice at a reasonable cost.

One promising approach to changing physician behaviour is the use of local clinical opinion leaders. According to one definition, opinion leaders are health professionals nominated by their colleagues as "educationally influential" (Hiss, MacDonald, & David, 1978). Their utility as change agents is predicted by social influence theory, which posits that clinicians may be "influenced significantly by colleagues' judgements of the value and significance of [an intervention] and/or by their decisions to use or ignore it" (Mittman, Tonesk, & Jacobson, 1992). In practice, however, use of local opinion leaders has not been uniformly effective: the most comprehensive review to date found that the results were statistically significant and clinically important in only 2 of 8 clinical trials (Thomson O'Brien et al., 2000b).

Locock, Dopson, Chambers, and Gabbay (2001) recently adduced two possible reasons for these mixed results. First, opinion leaders may be difficult to identify, in part because they are not all cut from the same cloth. Some opinion leaders (e.g., "acknowledged experts") may be more valuable during the introduction of an innovation, whereas others (e.g., "respected peers") may be more important during the implementation and consolidation phase. Second, opinion leaders may not always support a practice change or innovation and may in fact be hostile to it. Thus, in attempting to discern whether opinion leaders might successfully influence practice in their clinical communities, it is important to know something of their attitudes and opinions.

Obstetric care is a rich area for investigation of the role of opinion leaders. During the late 1980s, a number of professional organizations, consumer groups, health plans, and the federal government launched initiatives designed to combat what was then termed an "epidemic" of caesarean delivery in the United States. Caesarean rates declined in the early 1990s but have again risen steadily since 1997—a trend that is international in scope (Leung, Lam, Thach, Wan, & Ho, 2001; Murray & Serani Pradenas, 1997). Although the clinical issues are controversial, many experts believe that the current US caesarean section rate of 24% could be safely reduced. Decisions about mode of delivery are known to be influenced by social as well as clinical factors (Hurst & Summey, 1984). The organization of obstetric practice

in the United States is such that obstetrical clinicians (including obstetricians, family physicians, and nurse midwives) are likely to encounter one another in the hospital, providing ample opportunity for clinical interaction and mutual influence during rounds, conferences, consultations and informal meetings.

Previous studies and case reports have relied primarily on informal methods to identify opinion leaders. For example, in a trial of educational visits to enhance use of systematic reviews in obstetric units, the investigators visited the "lead obstetrician and midwife on the labour ward... because they had usually been nominated to hold these positions by peers as being the most involved in labour ward management, policy making, and training" (Wyatt et al., 1998). In a trial of education and opinion leaders to improve adherence to dementia guidelines, another research group asked neurologists to list up to three local colleagues who were knowledgeable, compassionate, and skilled as teachers (Gifford et al., 1999; Holloway, Gifford, Frankel, & Vickrey, 1999). The neurologists most frequently mentioned in a given region were asked to serve as project opinion leaders.

Sociometry is the use of quantitative approaches to describe relationships within social networks. We employed sociometric techniques to identify local obstetrical opinion leaders in 52 California hospitals. In so doing, we asked three research questions. First, can opinion leaders be identified? If networks of obstetrical providers are so diffuse that clinicians with disproportionate influence cannot be identified in most hospitals, then the generalizability of the opinion-leader approach must be questioned.

Second, what demographic and professional characteristics are associated with high opinion-leader status? We expected that obstetrical opinion leaders would be distinguished by personal and professional characteristics traditionally associated with higher professional status such as (middle) age, (male) gender, and advanced clinical training (i.e., subspecialization). Confirmation of these relationships would support the validity of sociometric methods for identifying opinion leaders. In addition, finding strong associations between clinicians' outward characteristics and opinion leader status might facilitate efficient searches for opinion leaders in future projects aimed at changing clinician behaviour.

Our third research question was how do the attitudes, beliefs, and opinions of obstetrical opinion leaders differ (if at all) from those of their sociometrically less-esteemed colleagues? Even if obstetrical opinion leaders are identifiable in most hospitals, they will not be useful allies for reducing the current caesarean delivery rate safely and appropriately unless they are positively inclined to do so or can be so persuaded (Coleman, Katz, & Menzel, 1957; Coleman et al., 1957).

