

## ORIGINAL RESEARCH

# Obstetric services in small rural communities: what are the risks to care providers?

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## ABSTRACT

**Introduction:** In spite of a sharp decline, since 2000, in the number of rural communities in Canada that offer local maternity care, there remain significant numbers of small rural maternity services that provide elective maternity care without on-site access to cesarean section. In communities with an elective maternity service without local access to surgical capability, practitioners must be prepared to respond to obstetrical emergencies and arrange urgent transfer if a cesarean section is indicated. In most cases reasonably safe care can be provided by this model, but the possibility of an unexpected emergency that threatens the fetus or mother always exists. Although there is an emerging understanding of the stressors faced by rural physicians, little is known about the experience of care providers offering maternity care in low-resourced environments. This article considers the experience of rural maternity care providers from the perspective of the social risks they perceive are incurred by practicing in a low-resource environment.

**Methods:** A qualitative exploratory approach was employed, using in-depth interviews and focus groups with care providers in three rural communities in British Columbia, Canada. The transcripts were thematically analyzed in four stages.

**Results:** Twenty-six care providers were interviewed across the three communities, including 15 nurses and 11 physicians. Participants identified elements of personal risk they perceived were assumed by offering intra-partum care in communities without local access to cesarean section back up, and the potential effects of these risks on themselves and their communities. They



further recognized the unique attributes of maternity care, which, when juxtaposed with other aspects of primary care, led to a heightened sense of social risk in a rural environment.

**Conclusion:** A balanced approach to risk management grounded in a comprehensive understanding of the values that influence decision-making, including acknowledgement of the social risks care providers incur, is a necessary step towards better health services for rural parturient women and their babies. Additional strategies may include community-based identification of the risks and benefits of local care, and programs of professional support for rural obstetrical care providers experiencing stress.

**Keywords:** burn-out, care providers' experiences, maternity, risk assessment, rural health, social risk.

## Introduction

Rural obstetrical practice can be stressful for care providers, particularly in communities with a small volume of local deliveries and limited capability to intervene in an emergency<sup>1</sup>. In spite of a sharp decline since 2000 in the number of rural communities across Canada and in other jurisdictions offering local maternity care<sup>2-6</sup>, there remain significant numbers of small rural maternity services that provide elective maternity care without on-site access to cesarean section<sup>7-12</sup>. Although there is a lacuna in the evidence regarding the safety of delivery in the absence of immediate access to cesarean section, the evidence that does exist suggests that, with access to efficient emergency transport, the outcomes may be no worse than in locations with immediate access to operative deliveries<sup>7-12</sup>. The implications of lack of access to local care are starting to be documented in the research literature<sup>3-4,13-18</sup> and are exacerbated for populations with less material and social resources<sup>19-20</sup>. Studies have also demonstrated a number of adverse effects associated with travel for rural parturient women, which include increased intervention rates; stress; financial loss; separation from spouse, children and community; and lack of continuity of care<sup>13,16-17,21-22</sup>. Within this context, however, little is known about the experience of physicians providing maternity care in environments with low resources. This article considers the experience of rural maternity care providers from the perspective of the social risks they incur by practicing in a low-resource environment.

## Background

Rural physicians encounter a variety of social stressors that impact on their psycho-social wellbeing and ability to practice. Recent Australian studies have examined workplace stress and attrition among rural physicians<sup>23-29</sup>. Reporting on findings from a survey on workplace stressors of rural physicians in New South Wales, Dua suggested that workload, limited time for family and leisure, bureaucratic interference, difficulties accessing continuing medical education and training, and professional isolation were five of the nine major stressors in GPs' work environment<sup>28</sup>. The majority of respondents agreed with statements that attributed job stress to negative relations with the community, such as 'Difficulty to unwind and be anonymous', 'Mistakes can have bad consequences for patients', and 'Negative publicity about GPs'<sup>28</sup>. Other research points to a lack of professional support for rural GPs as a factor influencing workplace morale and distress<sup>23</sup>. To combat these negative psychological effects of rural practice, South Australia's Dr Doc program began in 2000 to improve the well-being of rural and remote doctors and their families through health promotion and crisis prevention and intervention<sup>24</sup>.

Intrapartum maternity care is an important part of the local health services provided in rural communities to meet the needs of women and families. The nature and sustainability of the service is dependant on an adequate volume of deliveries for local practitioners to maintain competence, acknowledging a higher caseload threshold for communities



that can sustain surgical services. The question of whether or not rural maternity care services require cesarean section capabilities is not definitively addressed in the literature, despite the number of rural obstetric units that, historically, have operated without local surgical backup<sup>8,30-33</sup>. In rural communities with an elective maternity service without local access to surgical capabilities, practitioners must be prepared to respond to obstetrical emergencies and arrange urgent transfer if a cesarean section is indicated. In most cases reasonably safe care can be provided within this model but the possibility of an unexpected emergency that threatens the fetus or mother always exists<sup>10,16,32,34-35</sup>. To this end, providers carefully select women for local delivery based on an absence of complications of pregnancy and, in some instances, restrict practice to multiparous women with previously uncomplicated vaginal deliveries.

Restrictions on local delivery based on clinical evidence take place with an understanding of the social risks incurred by women who must leave the community to give birth. Very much a part of some physicians' deliberations, but rarely if ever articulated, are the potential social effect on the physicians themselves of an unexpected bad outcome. An exploration of this dimension of decision-making by rural practitioners is the subject of this study.

## Methods

### *Participant and site selection*

This qualitative, exploratory study used in-depth interviewing and both professionally homogeneous and heterogeneous focus groups to document rural administrators', care providers', and community leaders' perceptions of sustainable rural maternity care in three BC communities. Ethical approval for the study was obtained through the Behavioral Research Ethics Board and the principal investigators' university. This article presents a sub-analysis of the transcripts, focused on care provider stress and the potential for burn out as barriers to sustainable maternity care.

Study sites were chosen to represent a range in level of services (one had a moratorium on local care, one offered local care without cesarean section, and one offered local care with intermittent access to cesarean section). All communities were isolated (>2 hours transfer to tertiary care by plane) with populations of less than 3000 and a comparable mix of Aboriginal and non-Aboriginal residents. As the potential research population in each community was small, all individuals in the administrator/care provider categories were invited to participate and key community members were identified through their peers and through the snowball technique.

### *Recruitment*

All potential participants were sent a letter explaining the project and inviting participation. Contact information was obtained from The College of Physicians and Surgeons of British Columbia Medical Directory<sup>36</sup> and local phone books. The letter was followed up with a phone call two weeks later. If potential participants were willing to be interviewed or participate in a focus group, the date and location were arranged during the phone call. Additional participants were identified through the snowball technique once the researchers were in the study communities.

### *Data collection*

Initial interviews were offered in participants' homes, work offices or at a location convenient to them and undertaken by two members of the research team, one responsible for conducting the interview and one responsible for note-taking. A written or oral informed consent process was undertaken at the beginning of the interview. All initial focus groups were held in community health centres or hospitals and were audio-recorded with participants' permission. All audio tapes were transcribed for analysis. After preliminary data analysis, a second visit to each community was made and follow-up heterogeneous focus groups were undertaken to verify data interpretation and integrate diverging viewpoints into a cohesive analysis.



## Data analysis

Data analysis was theoretically guided by a logic model framework. A logic model is a graphical depiction of the connections between program ‘inputs’ (resources), activities and processes (implementation), ‘outputs’, outcomes, and impacts<sup>37</sup>. Logic models are used for program planning, management and/or evaluation and, increasingly, to guide research. Haas and Springer suggest that by focusing attention on the logical relationships between program components, policy researchers can identify weaknesses and strengths in the design of a policy or program<sup>38</sup>. Similarly, McLaughlin and Jordan (1999) suggest that logic models make implicit understandings explicit<sup>39</sup>. Initial review of the data revealed stress and the potential for burn out as thematic barriers to sustainable services among care provider participants. Sub-analysis of this theme was subsequently undertaken in four stages including: (i) articulation of the themes corresponding to care provider stress and potential for burn out; (ii) the formulation of categories corresponding to this theme; and (iii) the re-integration of categories into an explanatory narrative. The principal investigator coded all of the transcripts and a research team member coded additional transcripts to compare consistency in the application of the concepts. There was a high level of consistency between the two researchers at this level. Coded transcripts were placed into a data analysis program (NVivo; Melbourne, VIC, Australia <http://www.qsrinternational.com/>) and each theme was written into narrative form.

On completion of the initial analysis, findings were presented to study participants in a focus group setting to determine the level of congruence with their experience. All participants indicated a high level of acceptance of study themes.

## Results

Twenty-six care providers were interviewed across the three communities, including 15 nurses and 11 physicians. There were no midwives currently practicing at the study sites.

Participants identified elements of personal risk that they perceived to assume by offering intra-partum care in a community without local access to cesarean section back-up, and the potential effects on themselves and their communities of incurring these risks. They further recognized the unique attributes of maternity care, which, when juxtaposed against other aspects of primary care, led to a heightened sense of social risk within a rural care environment.

### *Emotional risks to practitioners and community*

All participants in this study spoke clearly of their sense of the personal risks of being involved in either a bad outcome or a ‘near miss’, and how both events would exact a high emotional toll on them. One practitioner, recalling such a ‘close call’, described her reaction:

*I know that I didn't sleep for a month and I still question myself about how I could have done something to make it safer for her. (Masset Hospital, Participant 017)*

Although the situation referred to resolved with no lasting morbidities for the mother or baby involved, the ‘near miss’ precipitated the practitioner to revisit her decision-making within the context of local labour and delivery and question its over-all safety.

For many, internal tension emanated from an awareness of the reality of the lack of options in a resource-limited environment and the imperative to provide a ‘gold standard’ of care to all of their patients, regardless of their geographic location. When participants believed this necessitated access to technology that was not forthcoming, they highlighted their sense of responsibility – and blame – in the instances of a bad outcome:

*I know I'm going to blame myself after if something happens and I'm going to leave, right. (Masset Forum, Participant 9)*



Almost all of the participants recognized that the effects of accepting the risk of a bad outcome extended beyond themselves to include all members of the care provider team:

*But the risks? Yeah, there's the emotional risk of being involved in a critical incident that may lead to post-traumatic on the part of everybody in the room. (QCC, Participant 25)*

The acuity of the risks identified was heightened by the universal belief among the participants in this study about the inevitability of an adverse outcome over time: 'If you keep doing something long enough, you're going to have a problem, eventually...' (Bella Coola, Participant 13)

## **Effects of a 'bad outcome'**

The psycho-social effects of a negative outcome were recognized to be assumed not only by the care provider but also the community, which placed increased pressure on the provider, as a protector of the community's wellbeing. Participants in this study were divided on whether or not a bad outcome would lead to abandoning maternity care – or even stopping practice altogether. As one participant noted, the risk of an adverse outcome is endemic to the profession of medicine:

*Would it stop me from doing obstetrics? I guess not ... but if I had a bad outcome, would it affect me ... yes. The degree to which would depend on how responsible [I would feel] for the bad outcome. It's a risk, I guess, but you take that when you work in a field where there's life and death decisions happening. (QCC, Participant 032)*

For others, however, these inherent risks did not mitigate their perception of the social effect a bad outcome could have on both the physician and the concomitant attitudes of the community. As one respondent said:

*You have a bad obstetrical outcome here, and I think that the physician that would be involved would leave, and I think that the community would develop a negative attitude towards the hospital. (Masset, Participant 016)*

For most participants the impulse to abandon practice, at least in the local community, seemed self-initiated, stemming from a personal sense of responsibility for a bad outcome, and was not appeased by the suggestion of community support for the care provider:

*On a personal level in terms of bad outcomes it comes down to this for me ... I would be totally grateful for the support of the community ... I would obviously feel better ... But ... This place is going to be my home and I have no intention of leaving but I would not work here if I had a bad outcome ... We would leave and we would work elsewhere because it comes down to this for me whatever other people are in the room I'm ultimately the one who is responsible and I hold myself responsible. (Focus Group Participant, Community 1)*

The overall effect on the health as a population of either a care provider abandoning practice or the community losing faith in the skills and judgment of the provider (eg the loss of a care provider) was noted by most respondents and motivated some to abandon maternity care before such an event occurred.

On a more personal level, all participants in this study recognized the relationships that they established in a therapeutic context extended into a social context through the multiple associations they had with others, characteristic of rural communities. This overlap between professional and social spaces led to increased perceptions of stress:

*I find, as I get to know more people in the community [and] almost everybody is somebody that I know personally, I'm more affected by adverse outcomes.*





*And so maybe that adds to the stress. (QCC, Participant 026)*

Beyond the personal connections that arise from multiple roles that care providers fulfill, participants also noted that the implications of a bad outcome were socially significant to them due to their typically prolonged association with patients that may serve as constant reminders of the effects of critical incidents:

*Probably the reason that I say it's a huge impact here is just because of the size of our community and you know, we know all the family, we know...we see them in the grocery, we see as constant reminders. (Bella Coola, Participant 014)*

Reciprocally, all participants described the lack of anonymity they had within the community and the concomitant transparency of hospital outcomes.

For some care providers, the boundaries between friendships and therapeutic relationships converged due to the lack of options for alternate care in some small communities. This kind of situation accentuated even further the vulnerability care providers felt in providing maternity care, as it brought the potential clinical risks close to home:

*It's scary ... I think it's really scary. A very, very close friend of mine up here had a baby last January and it ... she had a wonderful healthy pregnancy, it was her first child, she was 37, I think ... 38 ... can't remember ... and it just turned out to be a nightmare. (QCC, Participant 024)*

Common to all of the insights that participants shared about their role as maternity care providers in a small community was the sense of responsibility they assumed for bad outcomes and the concomitant social cost incurred by this. As one participant said:

*In a small community, you may be related to these people, you may be friends with them socially, you may see the end result of your ... of the delivery, regardless of if it's your fault or not. I think there's always going to be a feeling of ownership even if you're not completely responsible for it. There's the cost to the physician, professionally I think, confidence-wise, professionally wise. (QCC, Participant 25)*

## ***Unique attributes of maternity care***

Many participants, whether or not they were actively involved in providing maternity care, noted the discontinuity between their sense of risk when applied to obstetrics as opposed to other aspects of medicine, and how it influenced their practice decisions:

*A barrier [to providing maternity care] is how quickly things can change in obstetrics. And the emotional kind of dimensions of delivery and it ... there's risks in other situations, why aren't we so flustered about people staying here if they have a heart condition or why aren't we advocating for all of them to go off-island? (QCC, Participant 032)*

The precipitous nature of change in the course of labour and delivery heightened practitioners' sense of the risk of a bad outcome that they felt they incurred by doing obstetrics. Others further identified the nuances of maternity care that set it apart from other aspects of medicine:

*I guess because ... well, we don't like to see things go wrong and I think that when things go wrong in obstetrics, it's different than when things go wrong during ... at a time where death is more common, I guess. (QCC, Participant 032)*

Within this context of physiological risk acceptance in maternity care balanced with the concomitant sense of the personal risk that practitioners felt, the most challenging situation for participants in this study was the instance of



home birth, especially when the birth occurred outside of a regulatory framework. This sometimes occurred in response to the perceived lack of options by the birthing woman. Home birth scenarios did not relieve the burden of responsibility – and sense of social risk – for the practitioner, instead they accentuated the sense of vulnerability in the situation:

*I don't have a problem with people necessarily doing home births BUT, when you have somebody who is like 3 weeks overdue, and there's a few risk factors ... it's terrifying actually. (Masset, Participant 015)*

## Discussion

Identifying 'obstetrical risk' takes on an added meaning in small rural communities with no on-site surgical services. In these communities, practitioner stress is heightened by the uncertainties of providing intra-partum care. Findings from this study suggest that for some practitioners this stress is amplified by their underlying belief that if a bad outcome occurs, there may be significant social consequences for them which might include the need to leave the community. This stress may be exacerbated by the lack of opportunity for peer support for some providers in isolated and remote communities.

Decision-making that takes place in the course of prenatal care about the place of delivery has traditionally prioritized clinical risk factors. An assessment of social risk is often undertaken in the context of the parturient woman and focused on socio-demographic issues such as single parenthood, socioeconomic status, and level of education or behavioural issues such as smoking status or alcohol consumption. The social risks for expectant rural mothers associated with separation from one's home community during the intra-partum period have been described by several authors but it is not always clear how these risks are weighted in the decision-making process about delivery locally or away for a given patient<sup>21,40-42</sup>. There is no evidence, however, that attention has been paid to the social

risks faced by the *care provider* which have been described above and are most appreciable in small rural communities without local access to cesarean section. Our findings highlight this dimension of the interactive struggle that plays out between a rural care provider and parturient woman as they balance alternative choices of care and the complex interrelationship between clinical and social risks and the mitigating influences.

Historically, the concept of risk has primarily been applied to minimize adverse outcomes for a population<sup>40</sup>. In this study, rural physicians articulated a definition of risk that included adverse social outcomes they may incur which, ultimately, may contribute to burn out and attrition. An acknowledgement of these influences and the development of strategies to mitigate them are essential in efforts to develop a sustainable rural obstetrical workforce.

## Conclusions

### *Limitations*

The relationship between geographic realities and access to specialists in referral centres dominates the debate on safety and risk in rural maternity care. Although selection criteria for community study sites included diversity of geographic circumstances, including distance and conditions of access to the nearest referral centre, the geographic diversity of rural communities cannot be represented by three study sites. Caution must be exercised in transferring findings to other geographic locations.

### *Clinical care implications*

A balanced approach to risk management grounded in a comprehensive understanding of the values that influence decision making is a necessary step towards better health services for rural parturient women and their babies. The experiences of participants in this study suggest that this balanced risk management approach should include an acknowledgement of the social risks care providers perceive.



This may be undertaken through public forums with community members to discuss all the risks and benefits of local delivery and the adoption of decision-making tools on an individual level. Such tools may augment the communicative process by making explicit the values and concerns guiding each perspective.

To minimize the workplace stressors that Canadian rural care providers encounter, hospital administrators and physician colleges may consider instituting a program of professional support for rural care providers experiencing stress. The MORE[OB] program professional development program created by the Society of Obstetricians and Gynaecologists of Canada offers comprehensive training modules to help improve competency in maternity skills, but lacks a structured program of psychological support for rural care providers. The Dr Doc program in South Australia would be an appropriate model of professional support as it seeks to improve the care that rural physicians provide to themselves. Run by the Rural Doctors' Workforce Agency, the program supports rural physicians facing stress and personal crisis due to isolated practice. Key elements of the program that would be useful for adoption in other jurisdictions include peer mentorship, telephone counseling, community orientation for physicians' families, personal or professional crisis support and management (including access to psychologists/psychiatrists), coverage for childcare, travel, and meals in the event of an emergency, as well as practice retreats.

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