Sustaining the Health Care Services of Rural Communities: The Role of the University

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The gap between the town and the gown is nowhere greater than in small, rural communities. This has only been exacerbated in the last 10 years as people in rural towns have experienced acceleration in the erosion of their local health services. This erosion has been marked by closures of small rural maternity services, surgical services, decreasing numbers of hospital beds, and, in some cases, closures of entire small hospitals. Reasons cited for closures include difficulties with recruitment and retention of care providers (particularly physicians and nurses), concerns about the safety of small rural services, and all-too-often regional health planning priorities focused on centralizing services in referral centres. While from a regional perspective centralizing services may seem to be fiscally prudent and a compelling solution to problems of health service sustainability in small communities, it often generates significant hardship for those affected.

At the Centre for Rural Health Research we have studied the centralization of health services and its attendant effect on rural communities from multiple perspectives over the past six years. Our 'case study' has been a systematic program of research into rural maternity services, starting with immersing ourselves in the birthing experiences of parturient women from small communities. Methodological research has noted the importance of understanding patient experience as the starting point for further research into intervention or system change.[1,2] To this end, in our first round of research we spoke with women from across the province and heard some powerful stories. One woman described giving birth to her first child in the hospital in her community but then having it close its doors on her unexpectedly a few weeks before her due date for her second pregnancy. She then scrambled to organize accessing delivery services elsewhere. Other women described frantic trips to the hospital from their home communities while in labour and expressed the poignancy of leaving small children at home as they left to give birth at a facility removed from the community.

Ironically, the challenge of accessing services in a referral community is often greatest for women who have had previously uncomplicated vaginal deliveries but are now at risk for a precipitous delivery. These women are encouraged to relocate at 36 to 38 weeks gestational age to avoid delivery en route. At this time, they face difficult questions: do they bring their children with them? Does their spouse take time off work or try and dash to the referral community when labour commences? This situation can be even more challenging when the family is socially vulnerable and socioeconomically challenged. Little, if any, support is provided to these families to mitigate the costs of moving to live in a referral community for what can be weeks (excluding minimal travel subsidies available to status First Nations women). This can lead to significant stress for the expectant mother and, as our emerging research suggests, potential complications.[3,4] The situation in British Columbia is mirrored across rural Canada, and the effects of 10 years of regionalized, rural health service management are well entrenched.

The program of research that I co-direct with my colleague Dr. Jude Kornelsen, a health services researcher, was born in response to this context and environment. The goal of our program of research has been to answer the important questions that will lead to better evidence for planning maternity care for residents of rural British Columbia. After completing a series of discrete project grants in the area, the Canadian Institutes of Health Research (CIHR) awarded us a New Emerging Team Grant in 2004 with the participation of several prominent UBC and Simon Fraser University (SFU) researchers. This multi-year infrastructure grant has underpinned our work for the past six years and has provided the foundation for numerous projects and secondary grant applications. The first three years of our work was mostly qualitative in nature. We visited 26 communities in rural British Columbia of under 15,000 catchment population and captured the experiences of women who had to travel to access maternity care, the experience of maternity care providers in limited service environments with no local access to caesarean section, and the experience of policy makers and planners in trying to provide best services for small rural communities.[5,6,7] We were successful in achieving a number of secondary grants, including a CIHR Operating Grant using a program logic-model approach, to try to understand the sustainability of a small rural maternity service. The outputs of this study coalesced into a health services planning model called the Rural Birth Index[4] (RBI) which Dr. Kornelsen and I developed with the support of Dr. Nadine Schuurman, a health geographer from SFU. This model is predicated on establishing a catchment area around each rural maternity care service, which is one hour surface travel time, identifying the postal codes that exist within this catchment zone, and using these postal codes to link, by residence, the mothers who delivered in the study's duration. We used a modified average number of births for a five year period for each catchment zone and adjusted this result to calculate a score for each small rural

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community with a local maternity service in British Columbia. We then aligned the existing level of maternity service with the scores for each community and categorized a series of service levels. Further information on this method is available through our website: www.ruralmatresearch.net.

Our research interests also led us to explore another key issue underpinning rural maternity services in small communities: rural surgical services. Many, if not most, small hospital operative services are sustained by GP Surgeons and GP Anaesthetists (general practitioners with enhanced skills). With the support of GP Surgeons like Dr. Stuart Iglesias and Dr. Nancy Humber, we have begun to try and answer the core questions about the training, scope of practice, and safety of these services. Hopefully this knowledge will lead to better policies and greater sustainability for these important rural services and, ultimately, better care from rural residents.

Our most recent work has involved examining population-based outcomes by level of service for both mothers and newborns and a comprehensive examination of the cost effectiveness of various levels of service for small populations. This program of research has been undertaken with the support of the Vancouver Coastal Health Research Institute (VCHRI), which has provided us with research office space. Also, the Provincial Health Services Association (PHSA) and the Children's and Families Research Institute have provided us with support funding for programmatic grant applications. We have also had support from the Michael Smith Foundation for Health Research (MSFHR), which has provided both Dr. Kornelsen and I with scholar awards. The MSFHR has also supported the BC Rural and Remote Health Research Network, which has had its UBC base in our offices and has provided a broad range of support for rural health researchers.

As rural health services researchers, both Dr. Kornelsen and I believe strongly in the need for better evidence to support effective planning of small hospital services in rural British Columbia and across Canada. Evidence to date has largely consisted of consensus task force recommendations extolling the virtues of providing services "closer to home" without adequate evidence for issues of safety and sustainability. A systematic review of the literature relevant to the planning and sustaining of rural health services is strikingly thin with multiple lacunae related to answers to important questions such as safety and cost. Consequently, our research program has had tremendous support from the policy and planning community, including Perinatal Services of British Columbia and its antecedent organizations as well as the Health Authority Perinatal planning groups. These collaborations have ensured an integrated knowledge translation process which at times has felt like we were being pulled to deliver the answers rather than having to struggle to find someone to listen to our findings. We believe that the rural health services work that we have accomplished in the area of maternity care is directly relevant to planning other services in rural hospitals and are moving forward with plans to extend our work to studying emergency services and primary care. We believe that the University has an obligation to give back to the rural communities of British Columbia in the form of new knowledge and partnerships. We look forward to continuing our contributions in the next ten years.

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The Society of Rural Physicians of Canada: An Appreciation

An Interview by Dr. John Wootton

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The Society of Rural Physicians of Canada (SRPC), online at www.srpc.ca, is a child of the Internet. In the same way that email allows families to stay in touch with their children as