Proceedings from the Centre for Rural Health Research's Co-Investigator's Symposium

"*Working Towards Solutions: A Partnership Approach to Solving the Rural Maternity Care Challenge*"

November 2, 2007

Hyatt Regency Hotel
Vancouver, British Columbia

Proceedings from the Centre for Rural Health Research's Co-Investigators' Symposium
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Suggested citation:
McDonald M, Kornelsen J, Grzybowski S. Proceedings from the Centre for Rural Health Research's Co-Investigators' Symposium, November 2, 2007, Vancouver, BC. Vancouver: Centre for Rural Health Research; 2008.

ISBN 978-0-9809493-1-5

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Preface

The *Rural Maternity Care New Emerging Team* (RM-NET) was funded in September 2004 by the Canadian Institutes of Health Research to provide an infrastructure for researchers advancing the evidence base to inform rural maternity policy and planning. The work has been underpinned by recognition of the importance of a trans-disciplinary research approach that incorporates multiple disciplines, theoretical approaches, and methodologies to answer the question of how best to meet the needs of rural women in a fiscally responsible way.

Aside from frequent project meetings with project-based investigators, the RM-NET supports an annual meeting to bring everyone together to share emerging and final research results and brainstorm future directions. This approach has given rise to productive collaborative relationships between academics and with community-based clinician investigators, while remaining committed to relationships with care providers, administrators, and women in rural communities. Early into the research trajectory, however, it became clear that a circle of connection was incomplete without the close collaboration of policy and decision-makers representing the Health Authorities and Ministry of Health.

This year, we realized the goal of integrating the knowledge translation constituencies of researchers, decision-makers, and clinicians by gathering representatives from all groups at the annual symposium. This gave rise to a productive day and the beginning of exchanges and linkages that will continue over the coming months and years as we work to expand our understanding of appropriate maternity health services for rural communities. If you would like to receive a copy of one of the power point presentations used during the meeting, please contact Shelagh Levangie: Shelagh@ruralmatresearch.net.

Sincerely,

Jude Kornelsen & Stefan Grzybowski
Co-Directions, Centre for Rural Health Research

A. Introduction

On November 2, 2007, the Rural Maternity Care Research New Emerging Team (RM-NET) at the Centre for Rural Health Research hosted a one-day symposium, "Working Towards Solutions: A Partnership Approach to Solving the Rural Maternity Care Challenge." The goal of this meeting was to bring together policy- and decision-makers and researchers focused on the provision of maternity care in rural environments to engage in collaborative discussions and planning.

Specific objectives of the day included:

- Placing the RM-NET research activities within the context of policy and decision-maker needs;
- Reviewing research to date on rural maternity care;
- Providing an opportunity for researchers and collaborators to present data; and
- Jointly prioritizing research needs for the next 1, 2 and 5 years.

The presenters and participants in the symposium consisted of researchers and co-investigators with the RM-NET, community-based clinicians and researchers, and representatives from the BC Health Authorities, Ministry of Health, BC Perinatal Health Program, and local universities.

The following proceedings summarize the discussions of the symposium.

1. **Working Towards Solutions: A Partnership Approach to Solving the Rural Maternity Care Challenge**
   Jude Kornelsen, PhD & Stefan Grzybowski, MD
   Co-Directors; Centre for Rural Health Research

Drs Jude Kornelsen and Stefan Grzybowski, Co-Directors of the Centre for Rural Health Research, opened the meeting by reviewing the objectives of the day and providing a context for the symposium's presentations and discussions. In preparation for the meeting, each of the invited health planners and decision-makers were asked to state their top five decision making and planning issues in regards to rural maternity care health services. The responses to this were combined into the following categories, which were used as a basis to inform the agenda:

Access to Services
- Appropriate level of care within a context of patient safety and informed choice
- Planned deliveries vs. no planned deliveries

Recruitment and Retention
- Nurses, doctors, midwives, and all other partners in maternity care

Education
- Maintenance of care competency in a low-volume setting
- Identification of supports needed
- Education and skills training, including GP Surgeons

Quality
- Appropriate model of care/number of care providers
- Models to suit each specific hospital and the services they provide
- Prioritization of introduction of midwifery

Sustainability
- Recruitment and retention/sustainability of specialists
- Nurses, doctors, midwives and all other partners in maternity care

Coordination
- Provision of comprehensive perinatal care from conception through the first year of infant life
- Ambulance services in remote areas considering bad weather, difficult terrain

Leadership
- Developing, maintaining, and benefiting from leadership

Evaluation
- Consideration of a cost-benefit analysis in which benefits are often "soft" indicators

Historically, the literature on rural maternity services has been sparse and loosely connected. Activities such as this co-investigators' symposium strive to weave together the vague research landscape. The goal of the knowledge translation (KT) activities guiding the meeting was to weave together a tapestry of the perspectives of all key stakeholders to illuminate the landscape on rural maternity care. Parts of the dialogue included:

- The challenge of sustainable care/meeting the needs of rural parturient women
- The role of GP Surgery
- Tools to support decision-making
- Health Authority priorities & feasibility

- Thinking outside the box: alternative models of care
- Quality assurance/program evaluation
- Identifying what we know and what we need to know.

New models of care need to be considered to meet the challenge of meeting the needs of rural women. These models should encourage inter-professional collaboration in rural environments and alternative models of care for midwives, particularly for First Nations communities. Researchers and policy makers will need to work together to evaluate changes. The success of future decision making will depend on the collaboration of all key stakeholders.

Midwifery: A Potential Solution to the Rural Maternity Care Challenge

Drs Kornelsen and Grzybowski went on to discuss a number of innovative solutions that have been proposed to address some of the issues concerning maternity care services including the introduction of registered midwives. Findings from qualitative research indicate that communities in rural BC are eager to have access to midwifery care. Challenges, however, include integrating midwives into the current system and creating supportive structures for the long-term sustainability of midwifery in rural settings. There are many outstanding questions that need to be answered to determine the effectiveness and success of any possible solution involving midwives. Some of these questions are:

- What is the future demand for midwives in terms of service volume?
- Is there a possibility of an expanded scope of midwifery practice to better meet the needs of low-volume/low-resource communities?
- What kinds of things would be most helpful to best support midwives working in rural/remote settings?

The RMNET Research Trajectory

The current program of research on rural maternity care has followed a trajectory that began with an investigation of the experiences of women and their families in rural and remote communities with limited or no access to local maternity care.

The RM-NET's original studies examined:

- Access to obstetric care (where, how, and level of safety)
- The need for security and predictability around the birthing experience
- Social support during labour, birth, and postpartum (for First Nations especially)
- Self-actualization of vision of birth (the woman's agency in how she gave birth)

This community-based qualitative research is echoed in the work of the two Seed Grant projects presented at the symposium: Len & Barbara Kosiec (Elk Valley and South Country) and Shannon Greenwood (Haida Gwaii).

Local Access to Cesarean Section

It was clear that the presence or absence of local maternity care was inextricably linked to local access to cesarean section services. When cesarean services are not available in a community, providers are less likely to offer care and women are less likely to give birth close to home. Where there is no local access to care, 98 % of women leave the community to give birth; in communities without access to cesarean section, 60% of women leave; and in communities supporting continuously available GP Surgery-based care, 15% of women leave.

Some RM-NET projects that emerged from the first round of research addressed the role of GP Surgeons in the sustainability of local maternity care. They include

- Practice and Training Experience of GP Surgeons (Kornelsen, Grzybowski, Iglesias, and Humber, funded by the MSFHR)
- Rural Surgical Services Symposium (June 2007) & Draft Proposal for GP Surgery training program (Dr Stuart Iglesias)
- Sustainability of Rural Surgical Care (Dr Stuart Iglesias)

Decision-Making Tools and Approaches

Research has also indicated that doctors and mothers have differing perceptions of risk and attitudes toward both the birthing process and the appropriate level of care for their community. Bridging the gap of understanding between these two groups is necessary in order to create local sustainable maternity care services. But how do we determine what level of services are appropriate for a rural population within a context of fiscal realism and feasibility?

The RM-NET has developed the Rural Birth Index, a tool created to predict the most appropriate level of maternity care service to meet the needs of parturient women in a rural community. The Rural Birth Index is based on **population** (1 hour hospital catchment), **social vulnerability**, and **distance** from the next hospital delivering cesarean sections. Once the level of population need based on feasibility issues is determined, policy makers and planners need to consider feasibility issues. Examples of feasibility issues include:

- Public transit access and schedules
- Local infrastructure (existing hospital services)
- Local care provider resources
- Community maternity service history/risk acceptance
- Influence of other organizations (e.g. United Church Health Services)

Within this framework, it is predicted that a community will see adverse effects in the parturient population if the level of care is too low or too high. In the former instance we can expect to see:

- Heightened stress for both the birthing families and care providers
- More instances of travel for care
- Increased adverse perinatal outcomes
- Increased out of hospital births

While in the latter:

- Increased intervention rates
- Problem retaining care providers
- An undermining effect on surrounding services

Some of the studies undertaken through the Centre for Rural Health Research to determine feasibility issues include:

- "A Logic Model Approach for Planning Sustainable Rural Maternity Care" (CIHR)
- "The Development of A Community Process to Determine Level of Services: The Case of Bella Bella"
- "Maternal newborn outcomes attached to catchment definitions"
- "Evaluation of outcomes by level of service" (RBI indicators)
- "Outcomes by place of residence of mother" (BCMSF)
- "Safety of VBAC in Rural Communities" (Dr. Shiraz Moola)

Other issues in feasibility include health human research challenges:

- limited numbers of GP Surgeons
- lowering numbers of rural physician practice due to lifestyle factors and retirement
- social risks from bad outcomes to individual providers who are integrated in the community
- social barriers to retention and recruitment of rural care providers

Linking Outcomes to Hospital Service Sites:
Currently in British Columbia, hospitals services are not linked to their natural geographic population catchment. Population based results are provided for Local Health Areas (LHA's) and Health Service Delivery Areas (HSDA's) but the fit of a given LHA or HSDA population with a natural geographically defined population catchment is variable. Our research team has developed geographic catchment areas based on surface travel time and linked these catchments to postal codes and then to resident populations. This sets the stage for planning and evaluating the effectiveness of rural health services by population outcomes based on geographic proximity.

Alternative Models of Care:
Several national organizations have called for alternative models of care to address Canada's maternity care crisis, with attention focused on interdisciplinary collaborations. Although work has been done to look at the feasibility of such models within an urban environment, no attention has been paid to the challenges of collaborative care in low-volume, low-resource rural settings. To address this lacuna, the Centre for Rural Health Research is conducting a study on the barriers to inter-professional maternity care in rural settings.

Currently midwives are practicing in only a handful of rural communities in BC which leads to the need to explore how to support the introduction of midwives more broadly to meet the needs of rural parturient women.

Any new service delivery mechanism needs to be developed in partnership with key stakeholders – local practitioners, decision-makers, and community members. It is useful to frame discussions on alternative models of care around key questions including:

- What models of care may best meet the needs of parturient rural women in BC?
- What criteria are necessary to consider in the choice of sites for a pilot project looking at new models of service delivery?

- Are there efficacious alternative models that can contribute to the sustainability of current services?

Likewise, a key component of alternative models of service delivery is a rigorous and on-going evaluation of services.

Questions

What are some ways to overcome current physician challenges in rural locations?

> On Haida Gwaii, rural care providers would be more comfortable with maternity care without cesarean section access if they had clear data on relative risk. The challenges for doctors in rural communities are different from those who practice in remote isolation. On the remote islands of Haida Gwaii, care providers have different needs and they experience more stress.

In looking at the community profiles in this power point presentation, for what can they be used?

> The community profiles [which in this presentation show detailed hospital information for Merritt] can be used for each hospital in BC to determine how best to utilize resources available. This data gives insight into utilization patterns and what long-term plan needs to be implemented for the success of maternity care in the community. These data sets were created through dialogue between the researchers and contacts in the health authorities.

How do we resolve situations where communities and care providers have different perceptions of risk?

> On Haida Gwaii, care providers present a consent form to parturient women. The goal of the form is to give women a clear understanding of the risk of giving birth on-island. Women, however, perceive the form to be fear-based, reflecting the apprehensions of their care providers. In this setting, the community and hospital are working together with the goal of creating a clear understanding of the social and physical risks for both sides. This dialogic understanding is also necessary to create an "optimal" level of service or model of care.

Theme I: Decision-Making and the Organization of Rural Maternity Services

2. Mapping of Services Using a Graphical User Interface (GUI) to Model Health Services Catchments in Rural and Remote BC

Nadine Schuurman, Associate Professor, SFU Dept. of Geography

History of Project

This research project began in 2001 with the objective of identifying hospital catchments and specific travel times to hospitals. A catchment is defined as the geographical area around an institution that serves a population. Currently in British Columbia, hospital catchments are ambiguous, as many over-lap and do not distinguish services that assigned hospitals provide. Additionally many hospital catchments are currently based on aerial times, which is impractical for use in British Columbia due to the mountainous geography. This gives rise to difficulty for health services planning. The objective of this research is to assign hospitals to one and two hour population catchments including their specific maternity care services in order to assist with health service planning.

How were travel times calculated?

- All travel distances were driven
- Travel time considers stop signs

How does the graphical user interface (GUI) work?

- One can select a community, hospital, and/or specific maternity care service. Then a table is produced showing the percentage of population served/not served & maternity services available
- Scenario demonstrated: Map of OB's in Northern Health Authority including 1 and 2 hour population catchments. What would happen with a hospital closure? The GUI will take this into account.
- If hospitals are 1.5 hours apart the GUI will break the catchment halfway and separate between levels of specialist care.
- All data is online, will be public in approximately 1 year.

Questions

How does the GUI take weather into account?

Weather is an evident issue for travel in British Columbia and therefore it is important to take it into account when calculating travel distances to create catchments. Currently the GUI is able to slow down the travel times by an estimated percentage according to the season. However, this is an issue that needs to be further and more accurately addressed.

Does GUI take into account air-evacuation?

No. Travel distances are only for calculated according to road travel. This is a possibility to include in future research.

3. Support Tools for Complex Decision Making in the Provision of Rural Maternity Care
Glen Hearns, Policy Analyst, EcoPlan International

Introduction

This research applies support tools for decision making in the context of rural maternity care, privileging the input of all system players (users, practitioners, and administrators). The process involves the following steps:

1. Rapid community assessment ("360 degree evaluation"):
   - Analyze community demographics including birthing statistics
   - Determine access to services:

   (What level of service does the community have access too?
   What is the nearest distance to c/s capability?)
   - What is the level of stress on care providers?
   - What is the skill level and competency of care providers?
   - What are the financial issues and barriers?
   - What infrastructure currently exits?

2. Community analysis (to develop threshold criteria for change)
   - Same as above, but more in-depth
   - Include comparison of services to other communities of same size
   - Socio-economic indicators
   - Indicate HR issues, staff turn-over, etc.

3. Determine strategic objectives:
   - For example:
     - Risk management – promoting the health and safety of women (this is community specific)
     - Decrease economic hardship on families
     - Encourage positive and culturally appropriate patient experiences
     - Maximize cost efficiency
     - Ensure sustainability of service
     - Promote partnerships among health care workers and community

4. Identify actions/alternatives (strategies to meet objectives)
   - Administrative – This includes succession planning and incentive packages
   - Capital Investment – Upgrade diagnostic capacity if needed
   - Educational – Promote community awareness (i.e. increase MORE^{OB} engagement activities)

5. Map out strategies to meet objectives

6. Identify consequences

7. Make decisions

8. Communicate and implement

9. Monitor and evaluate

Results of the process in the Northern Health Authority

Fifty-seven different ideas came out of qualitative community based research where each community facilitated their own strategy. Each of these portfolios includes a list of actions and their level of effect (social and financial) as represented in the diagram below. A number of different issues may be raised through each single action.

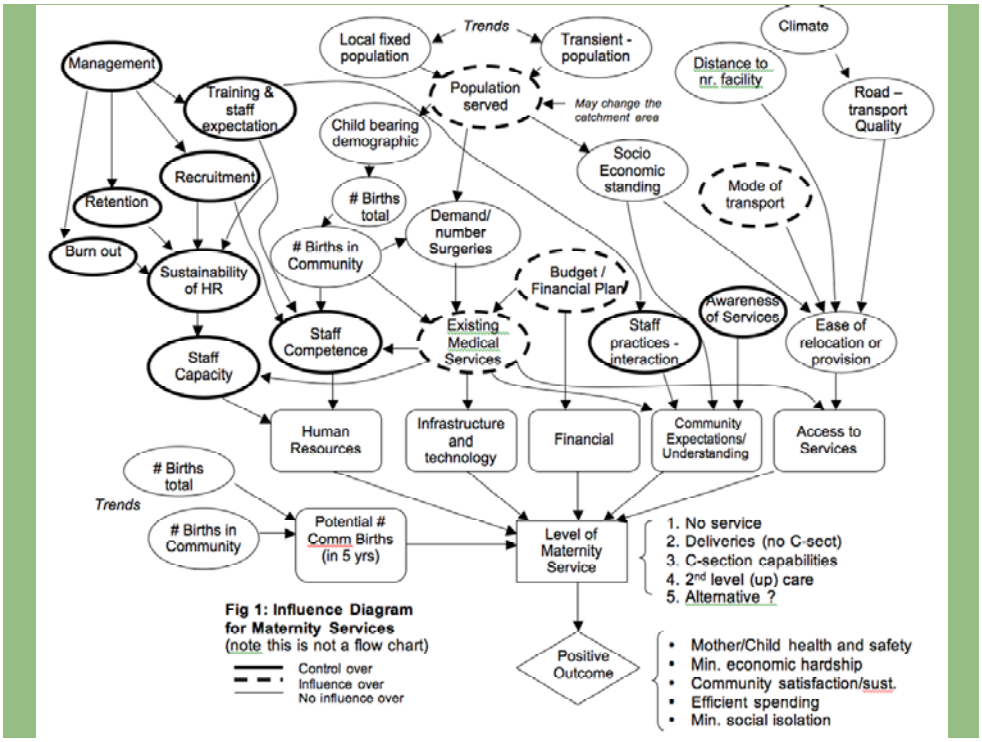

Fig 1: Influence Diagram for Maternity Services (note this is not a flow chart)

Conclusion

A structured approach to decision making ensures objectivity, transparency, and facilitates communication.

Discussion

- Vancouver Coastal Health went through an extensive decision making process, where all stakeholders want different things. Eventually the objectives and priorities became equal.
- The outcome of this process is the creation of a good communication tool.
- The model has elements of conflict resolution (i.e. when care providers and women have opposing values).
- In many rural communities the number is so small that decision making can be very significant. Thus it is necessary to keep the decision making process authentic and to not mis-translate the process. This is important to keep in mind for larger communities as well.
- When the community has input in a decision the conflict level is reduced.
- Community forums could be an important piece to add to this process.

Theme II: Practice Safety

4. Rural Maternity Service Closures: Implications for Referral Hospitals

Jude Kornelsen, Co-Director, Centre for Rural Health Research

Goals and Objectives

To examine the effects of the closure of outlying Level 1 hospitals on the maternity care services of referral hospitals in rural British Columbia, and the consequent perinatal health of women in outlying communities.

Specific objectives include:

- To document the intervention rates at community referral hospitals for women living in outlying communities
- To understand induction patterns
- To qualitatively document the impact of closures, referral practices, and other factors contributing to service level decisions

What defines a Referral Hospital?

Defining referral hospitals was a challenge from the beginning of the study and definitions varied between provincial bodies, care providers, and hospital administrators. Referral hospitals were also defined by geography, referral patterns, and perinatal/NICU levels. A total of fifteen study sites were originally included in the study: due to the potential for referral bias, three were included in the final analysis (Kootenay Lake, West Coast General, and Campbell River).

Findings

- No difference in demographic variables for women in vs. out of local health area (LHA)
- No differences in newborn outcomes for newborns in vs. out of LHA
- No differences in maternal outcomes for women in vs. out of LHA except rates of induction ($P < .005$), specifically 'induction for logistical reasons'
- Difference in induction rates reflects on the ground knowledge – no differences in nulliparous but higher rates for multiparous women

Recommendations for Guidelines

A protocol for geographic induction was recommended due to the prevalence of induction for social reasons. A protocol does not necessarily condone the intervention; rather, it acknowledges that Canada's population distribution makes geographic inductions increasingly common. Guidelines may help support more accurate data collection on prevalence, practice patterns, and outcomes. Additionally, this strategy will potentially reduce stresses involved in decision-making about geographic inductions, provide a clear framework for women detailing the options and ultimately increase patient safety. Specific recommendations include:

- Guidelines to induce must rest on existing evidence-based prerequisites
- A comprehensive informed-consent discussion with the patient and other care providers must be undertaken

- Resources should be available to the woman in referral community, including affordable accommodation and community support
- Adequate availability of medical personnel staff in referral hospital (nursing staff for inductions)

Discussion

- Level 2 community referral hospitals feel maternity services are under threat of closure. Thus it is a relief for these hospitals when women come from outlying communities to give birth – it is a sustainability solution.
- Tracking social induction provides a context and framework for decision making
- To induce a woman for social reasons is not ideal; it is difficult for an OB to chart this type of induction.
- In Alberta, geographic isolation is a clinical indication for induction. Words like "condone" imply that social induction is wrong.
- The issue is really about informed consent.
- *What are the relative financial and social costs of birth in a referral community?* This is especially difficult to predict when multiparous women take their whole family to a referral centre early on, waiting for nature to take its course.
- It is common for mothers from outside LHA to go to the referral hospital at 36 weeks, and be there for a month. After a month women often want to go home, and therefore request an induction.
- *When you induce multips, the chance of c/s is not significant – why not induce multips in their home community?* Competent and available maternity nursing staff needs to be available to do so. Often physicians do not feel comfortable to do so. Also, if they had care in their own community they would stay.

5. Outcome for Referral Hospital Delivery after Prior Caesarean Section for Rural Women in British Columbia

Shiraz Moola, Obstetrician, Kootenay Lake Hospital

Introduction

Research on "low risk/low volume" birth units has been primarily focused on perinatal mortality without emphasis on other qualitative and quantitative outcomes. There has been little research undertaken on how the closures of small rural maternity services (Level 1 hospitals) impact the way that women are now receiving maternity care in referral hospitals (Level 2 hospitals). Therefore, the implications of obstetrical outcomes at referral hospitals are unknown.

Objectives

The goal of this research is to quantitatively assess the provision of maternity care to women from communities who have lost their services, and the outcomes that these women face. In particular this research focuses on outcomes related to women who had prior cesarean sections (C/S).

Study Site Criteria

- On-site cesarean section capability
- Availability of at least 1 specialist OB/GYN
- Serves rural locations
- Diversity in mode of access from outlying communities (road and water)
- Representation from different health authorities

Based on the above criteria, the referral study sites included Terrace, Courtney/Comox, Nelson, and Trail.

Results

- Neonatal outcomes: Conflicting data – initially showed low birth weight for referral babies
- VBAC outcomes: Rates dropped over study period – perhaps due to Lyndon-Rochelle study of uterine rupture in multips with prior c/s who have interventions (following this study, many doctors stopped doing VBACs right away)
- SOGC VBAC guidelines stated "immediate" c/s capabilities should be available; one year later the guidelines changed to say "timely"
- It is unclear why rates of emergency cesarean section were higher for women from referral communities

Challenges and Opportunities

- Study looked only at hospitals with OBs, not GP Surgeons
- To capture what contribution VCBACs are making overall to C/S rates in rural communities
- To identify what factors drive the differences in C/S rates across BC
- Doctor preferences, including their comfort with uncertainty and the level of risk they are comfortable accepting, play a significant role in care provision (impact of physician culture).

Discussion:

- GP Surgeons from South Africa are keeping the surgical services in rural communities in BC alive- future research possible in this area.
- A key factor in influencing the relationship between a mother and practitioner is the psyche of the practitioner.

Theme III: Human Resources

6. Sustainable Rural Maternity Care

Stuart Iglesias, GP Surgeon, St. Mary's Hospital & Community Based Clinician Investigator

Introduction

Maternity care sustainability depends on local, or close by, cesarean section capability. For communities of less than 25,000 people local c/s is underpinned by GP Surgeons (GPS). I began discussions with the society of rural physicians in the late '80s early '90s regarding sustainable rural maternity care and the context of GP surgery within this. A joint position paper on training for rural family practitioners in cesarean section (1999) was written which addressed the need to train specialized GPs in surgery and anesthesia "regardless of good outcomes" because rural communities are in need. Soon after, many services closed around BC. This disappointment leads me to think that we must be missing something. We need to find out what we don't know? Is GP surgery the only sustainable model? Are surgical services sustainable only for c/s capability?

What We Know About GP Surgery

- *Safety*
  - Outcomes have been good and procedures have been safe.
  - There have been many outcome studies on appendectomy, cesarean section, endoscopy, and perception of safety in communities.
  - The research clearly shows that all local players have high satisfaction in their surgical services.
- *Linkages*
  - Maternity care is the lynchpin of surgical care, yet GP surgeons are able to treat other moderate surgical issues depending on confidence and competency.
- *Attrition*
  - Recent program closures include: Fort St. James, Bella Bella, Princeton & Castelgar.
  - Reduction in services include: Hazelton, Burns Lake, Bella Coola, Golden, Nelson, Revelstoke, Grand Forks & Creston.
- *Human resource crisis*
  - Currently there are no Canadian trained GP surgery programs.
  - It is difficult to credential IMG GP Surgeons (2/3 of Canada's GP surgeons)
  - Although retention is a challenge for all rural care provider professions, GP surgeons are harder to replace after they retire as there is no Canadian training program and no regulatory or educational framework.
- *Working conditions are often difficult*
  - Hostile training environments (abusive even)
  - Difficulties with credentialing skill sets between communities (have to get privileges credentialed again when they go to a new community)
  - Professional isolation (no home for them in professional circles)
  - Lack of continuing medical education (CME)
  - Support in the past was provided among experienced and established GP Surgeons through a collegial support program (predominantly among United Church Health Services GPS)

Ongoing Research
To address these challenges to GP Surgical programs, research through the RM-NET has investigated the training, experiences, and sustainability of GP Surgeons:

- Practice Experiences of GPS; Rural Surgery Programs in BC (Jude Kornelsen & Stefan Grzybowski)
- Rural Surgery Programs in BC (Nancy Humber)
- Sustainability of Small Volume Rural Surgical Programs (Stuart Iglesias)

Knowledge Translation
The results of this research have been shared through a number of knowledge translation activities:

- Invitational meeting on Rural Surgical Services held in June 2007
- Proposal for GPS training program; proposal for rural surgery support program (Director of program at UBC would coordinate training centers, CME, on call relief, and create a home for GPS)

Discussion

- Currently in BC, GP Surgeons are the heroes and visionaries that sustain rural maternity care programs
- Things have not changed much in the last 10 years because no significant crisis has captured the necessary attention (i.e. no headlining morbidity)
- We don't need to wait for negative medical outcomes before exacting change – birth is a social issue and those morbidities should be enough. We need a comprehensive approach (nursing, IT, diagnostic services). Local community voices have historically been taken away.
- Locum coverage for GP surgeons is paramount
- A key part of a support program would be for nurses: nursing support and a locum program for rural OR nurses
- Midwifery integration is essential for rural GP Surgeon communities

7. The Integration of Midwifery into a Rural Maternity Care Delivery System

Ilene Bell, Midwife & Community Based Clinician Investigator, Nelson

Introduction: Midwifery in Nelson, BC

Registered midwifery has been established for 10 years in Nelson. However, midwifery was practiced for years before it was officially registered. During that time there was a lack of communication between care providers when a mother needed to be transferred from her home to the hospital. Because of this reason Ilene quit her practice for a period of time. Once midwifery became a registered practice in Nelson, it took a lot of time to build communication between care providers. With time, strong inter-professional relationships have been built between midwives and nurses, GP's and OB's. Currently in Nelson, 30% of deliveries are assisted by midwives.

Issues in Rural Maternity Care

- There are fewer family physicians practicing maternity care and less medical students entering maternity care
- There has been a loss of rural maternity care services throughout BC
- There is a lack of shared call for maternity care in rural settings
- Birthing away from home increases social, emotional, and financial stress
- Poorer women are at a greater disadvantage in receiving optimum maternity care

Can Midwives Be Apart of the Solution for Rural Maternity Care?

Yes. However there are challenges.

Challenges to Rural Practice for Midwives

- Small population of midwives in BC (120, mostly urban, not all full time).
- Difficulties establishing rural practice (it is especially difficult for a solo practice because it is more challenging to find clients and easier to burn-out).
- Difficulties obtaining hospital privileges; administration/doctors/nurses often uncomfortable with midwifery model of care and how it integrates with the current system (i.e. fear of home deliveries, legal liability for hospital, etc.). These systemic difficulties are due in part to a lack of education in understanding midwifery.
- Challenges in consultation: Who is most responsible when a midwife consults with a doctor? What are the respective responsibilities?
- Restriction of Midwifery Schedule of Drugs: narcotics, oxytocin augmentation, etc.
- Confusion of overlapping responsibilities between nurses and midwives during deliveries.

Study Objectives

(Study currently obtaining ethical approval)

- To examine relationships in health care teams including midwives
- To identify challenges to interdisciplinary collaboration in maternity care
- Illustrate how the inclusion of midwives has had an impact on other practitioners and hospital staff
- To provide an inside perspective of an integrated multi-disciplinary maternity care team
- To demonstrate alternative models of integrated midwifery care including:

1. Independent practice in community, working closely with hospital
2. Solo midwife in community backed-up by and backing-up local family physician
3. Midwife included as member of family physician on-call team (Revelstoke possibility)
4. Midwives and family physicians create a multidisciplinary model (like South Vancouver)

Pre-requisites for Rural Midwifery Models

- Better understanding of doctor, nurse, and midwife relationships in the community
- Alternative funding models
- Modifications to model of care to fit rural practice
- Changes to schedule of drugs
- Expanded scope of practice for midwives
- Expedite registration of midwives (heavily based on clinical practice in years 3 and 4 (if preceptors were paid more then they'd be happy to take midwifery students for a year)

Discussion

- *What is the difference between a midwife and a doctor's scope of care?* Midwives do antepartum, delivery, and postpartum care, this includes relationship building.
- Collaborative practice models have been supported by multiple research projects. The challenge is implementation.
- Training and recognition of traditional Aboriginal midwives is another area that we need to put resources into, potentially in the form of a pilot project.
- *How do we forecast supply and demand? How many births do we need to support midwives in a community?* The answer seems to be around 100 births, but this is ambiguous.
- *We have clearly identified a need for more rural care providers. It seems interesting that few graduates tend to go into maternity. Would the introduction of midwives to rural settings discourage family physicians from providing maternity care?* Yes, some rural GP physicians will choose not to practice maternity care, but we need a sustainable solution. Midwives are the solution in rural and remote settings.

8. Nursing Models

Diane Sawchuck, RN, PHD, Perinatal Nurse Consultant, BCPHP

Introduction

When it comes to rural perinatal issues we have more unanswered questions than we have answered questions. To sum-up the experience of maternity care for rural nurses three words come to mind: stress, fear, and competence. This may be because currently, we have many RN's completing their nurse training without maternity experience. This fear translates to the experiences of birthing women.

Problem

We have educational models that do not provide adequate knowledge on maternity care. This may be because they are fear based.

Competencies and Credentialing

- Approximately 2,000 RN's in BC currently provide intrapartum care
- Health Professions Act & CRNBC Regulation – This is a new certification process required for nurses providing care for women in normal labour in an institutional setting when the primary care provider is absent
- BCPHP developing Standards, Competencies, and Decision support tools for RNs – they have requested that an amendment be made on the regulation from section 10 to section 8, and that the term "normal" should be taken out

Challenges

- How is "normal" defined? What is the scope of "normal" labour? We cannot train nurses for only normal delivery.
- Should there be a different competency required for rural, non- labour and delivery room designated RN's?
- Skill set: Do we include induction, internal fetal monitoring?
- Time required for clinical training is an issue.
- Skills maintenance in low-volume facilities: Should we include emergency training? If we parallel to airline training emergencies, flight attendants are trained 1-2 days a year for emergencies but we don't find this in obstetrics.
- Nurse staffing models

Solutions

There is recognition that money is required to develop a level of competence in training RN's in the provision of intrapartum care. As a result, it is important to look at alternative modes of education including distance education (i.e. CME, online learning). Additionally, nurses should be required to do yearly skills drills to ensure maternity nursing competencies.

Discussion

- Previously nurses were required to do 3 months of perinatal nursing before taking exams
- The challenge is the disconnect between what the basic educational level is and what the facilities and employers require. A lot is required from each individual specialty between medical departments (OR, OB). Do we need to have perinatal specific nurses in BC?

- In Bella Coola we have 2 OR nurses who are heroes in keeping the OR open. Obstetrical programs are fragile in terms of surgeons and nurses.
- South African doctors are used to working with experienced midwives, but when they come to BC, they often work with recent grads who have seen a minimal number of births.

Theme IV: Decision-Maker Priorities and Research Agenda Setting

9. Research and Decision-maker collaborative agenda: Case study of IHA and the RM-NET

Marty Willms, Leader of Maternal & Child Services, Interior Health Authority

Introduction

There is a great importance in building partnerships between researchers and decision-makers. This ensures collaborative decision making processes where research is responsive to health authority needs; in turn health authorities are able to make decisions that are relevant.

Community Profiles

In responding to health authority needs, the RM-NET created community profiles that include relevant descriptive and utilization information for each community within each health authority. The profiles include:

- Population demographics,
- Service delivery model (PSP levels and RBI levels),
- Complement of care providers,
- Catchment birthing statistics,
- Hospital birthing statistics,
- Isolation factor,
- Transportation,
- Rural Birth Index (RBI) score,
- Where the women from in the catchment are going,
- Where the women birthing in the hospital coming from.
-

In the future, maternal newborn outcomes, cesarean section rates, and induction rates will be included.

Discussion

- A financial component should be added. For example, what is the cost of adding another nurse?
- We could potentially use these as a common tool for each health authority.
- There is immense value in analyzing all of these values in order to make decisions for the provision of maternity care.

C. Concluding Discussion: Developing a Collaborative Research Agenda

- Health authorities need practical applications for planning in order to ensure an interdisciplinary approach in decision making.

- Small communities need to take more responsibility for their births – even if they do not provide maternity services, they should integrate care for birthing moms into the local system.

- It is necessary to move forward with the integration of midwifery into rural communities.

- In future discussions we should bring in key people from the Ministry of Health. This would help in building a more collaborative program as they would hear and hopefully understand where things need to change.

D. Seed Grant Recipient Research Presentations

1. Maternity Care Experiences of Women from the Elk Valley and South Country from January 2004-January 2006

Len & Barbara Kosiec, Seed Grant recipients

Introduction

Since the closure of maternity services at Sparwood Hospital, there has been an emotionally and politically charged climate surrounding maternity care. This gave rise to an abundance of support from the community to facilitate this research project.

Objectives

The overall aim of this exploratory study was to identify the needs and concerns of local childbearing women and their families in the Elk Valley. Specific objectives included:

- To describe local women's experiences with maternity care services
- To identify the challenges women had securing prenatal, intrapartum, postpartum and/or newborn care in their home communities.
- To identify any concerns women had about having to travel to a regional centre to receive maternity care
- To invite women's suggestions for improving maternity care services.

Methodology

- 37 women living in the Elk Valley and South Country Region who had given birth between January 2004-June 2000 participated in a questionnaire
- 19 of the 37 women volunteered for follow-up interviews
- Interview responses were transcribed and organized thematically
- Participants were recruited through an advertisement placed in the Fernie Free Press and through recruitment posters displayed in physician's offices, local businesses, and/or other public places where childbearing women and their families might congregate

Results

- The experiences of most women who participated indicated that the actual maternity services provided in the Elk Valley were of good quality, despite the lower level of service
- Some mothers expressed a desire for alternative models of care and birthing support
- Many respondents voiced a desire for ultrasound capability and other diagnostic testing to be available closer to home
- Women who needed to travel for maternity services expressed some emotional and financial strain and therefore spoke of increased need for social, emotional, and financial support in their community

Discussion

- Community engagement is important in maternity care issues
- Rural maternity care issues are important, especially in the Elkford Valley area
- Concerns raised about women traveling to regional centre to access maternity care

2. The Prenatal and Postnatal Support Needs of Women Leaving Haida Gwaii to Birth

Shannon Greenwood, Seed Grant recipient

Introduction

Currently there is a moratorium on maternity services in Masset. This means that a large percentage of pregnant women must leave the Queen Charlotte Islands to give birth in referral communities. The focus of this research project was on the types of maternity services provided for pregnant women and their families on Haida Gwaii, both before they leave and after they return from giving birth.

Objective

The objective of this research project was to investigate the needs of birthing women in Haida Gwaii in order to understand how communities can better support families during their pregnancy and postpartum period.

Methodology

- In depth interviews with local women and care providers
- Women recruited through posters
- 11 women interviewed
- 12 care providers interviewed

Community Visions

- To increase continuity of care from prenatal to postpartum
- To increase support networks for pregnant women and their families
- To facilitate more holistic care including emotional support throughout all stages of the pregnancy
- To establish a more organized referral system including increased networking with doulas and midwives
- To increase financial support for non-Native families for housing and food during referral visits
- To bridge perceptions of risk between care providers and community
- To create a mechanism for breastfeeding support

Discussion

- This project was very rewarding as changes are already beginning to take place in the community
- Masset and Old Masset developed a perinatal group. This group facilitates peer-to-peer mentorship and discussion, education, and a mother preparation kit for new moms
- There is a need for community discussion around the informed consent process in communities where there is risk associated with giving birth (no local access to C/S).