Rapid EVIDENCE Reports

Rural Obstetric Care

Dissemination Event

The Newfoundland & Labrador Centre for Applied Health Research

Presenter: Colin Walsh

Subject Expert: Dr. Jude Kornelsen

2:30pm NST | October 23, 2019

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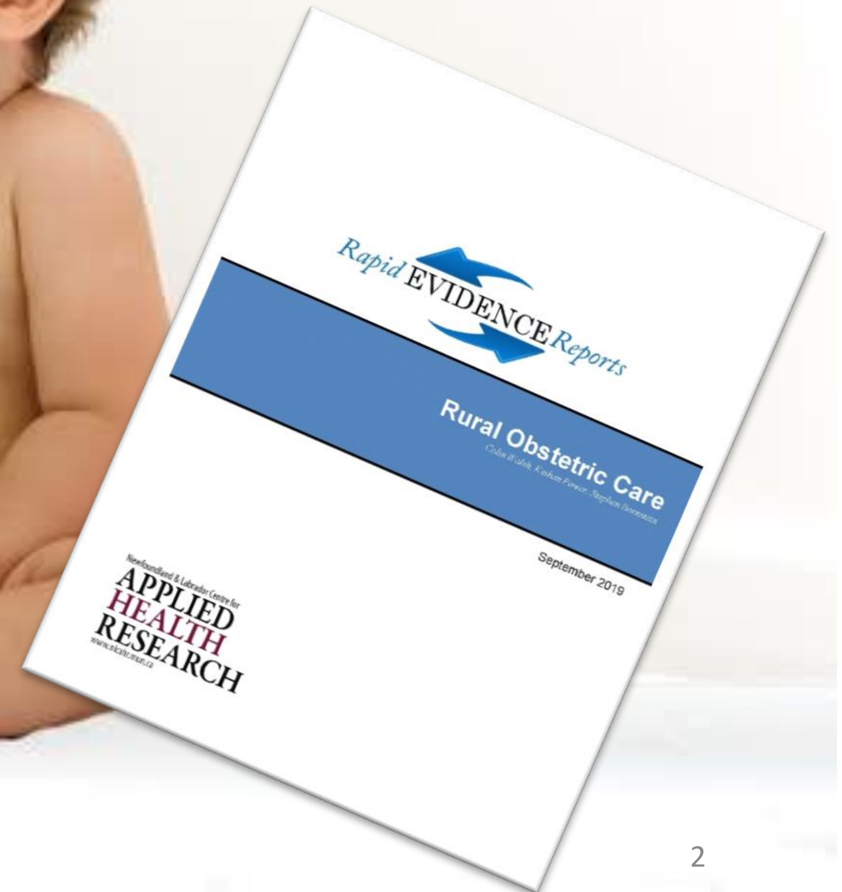
Presentation Overview

- About Rapid Evidence Reports
- Background
- Research Question
- Literature
- Evidence Categories
- Contextualization to NL
- Conclusion



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- Support evidence-based health system decisions
- Provide expedited information
- Synthesize the best evidence
- Focus on priority research topics

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- Overview of issue/ background
- Scope/nature of the literature
- Key features of the evidence
- List of peer-reviewed research literature
- Selective list of policy reports/ grey literature
- Analysis of contextual issues that might influence the use of the evidence in the Newfoundland and Labrador healthcare context
- Guided by a subject matter expert
    - Dr. Jude Kornelsen from the University of British Columbia

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Background: key issues

- Impact of regional centralization
- NL health system interested in better quality of care for people in rural places
- Defining “rurality” is challenging in NL
  - Everywhere more than an hour outside St. John’s
- Refining the research question:
  - Research literature focuses on the skills/ effectiveness of provider groups rather than on the organization of obstetric services

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The research question:

"What models of obstetric care have been shown to increase safety and promote patient satisfaction in rural areas?"

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Search Strategy

- Consultation to produce key terms
- PubMed, Embase CINAHL, reference lists from unpublished provided articles
- Joint Position Paper
- 2005 to present

	Inclusion Criteria
Population	• Patients requiring obstetric care
Intervention	• Models of rural obstetric care
Comparator	• Standard care in urban centres
Outcome	• Patient/birth outcomes, safety, patient satisfaction
Setting	• Rural areas (ideally similar numbers to NL rural communities)

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What we found

10 publications in total:

- 4 Systematic reviews
- 5 Primary Studies
- 1 Joint Position Paper

Evidence Categories:

- Specialist-led models of care
- General Practitioner-led models of care
- Midwifery-led models of care
- Other models (GP Group Practice)

Specialist-led models of care

- SR on obstetrician-led care in rural settings
- Women said:
    - they trust the specialist-led model of care
    - the hospital is the best place to give birth
    - specialist-led care is the safest choice
    - Bias Alert: women in this study had already self-selected into a specialist model of care

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General Practitioner-led models of care

- SRs (2) on GP-led care: 1 focused on *rural* GPs.
- Women said that GPs provide:
  - informative maternity care
  - good information about choices for rural women
  - personalized care
  - good continuity of care
- GPs with Enhanced Surgical Skills (GPESS) were compared to specialists (low-risk pregnancies only):
  - same rates of surgical error
  - no difference in complications or neonatal outcomes
  - GPESS = higher rates of referral to acute care, longer stays
- GPESS units with C-section capacity compared to GPESS units without it:
  - 20% more deliveries were performed in units that had capacity to perform C-sections, possibly reflecting patient preference for units with this capacity

Midwifery-led models of care

- 3 SRs, 2 primary studies plus subgroup “midwifery group practice”
- Midwives seek obstetrical help when procedures exceed scope of practice (i.e., “normal births”)
- Women consider midwives as effective as (if not superior to) physician-led care
- 2 of 3 SRs in urban settings; however, midwifery practices work well in low-resource settings
- 1 SR looked at midwifery in rural settings – rural women who want to give birth close to home see midwife care as realistic, acceptable, and appropriate

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Midwifery-led models of care

- One very high-quality SR found that adverse clinical outcomes were less likely with midwives
- Another very high-quality SR found that midwives use fewer procedures in labour
- Midwife-led care is associated with more spontaneous births (i.e., fewer labours were induced)
- No difference in maternal, fetal, or neonatal outcomes, or in C-section rates, between midwife-led care and physician-led care
- “Midwifery Group Practice” had similarly positive overall outcomes; however, the group practice option requires a minimum number of annual births to make the practice viable—possibly not a feasible model for small rural areas with low annual birth rates.

Association of Midwives
of Newfoundland and Labrador

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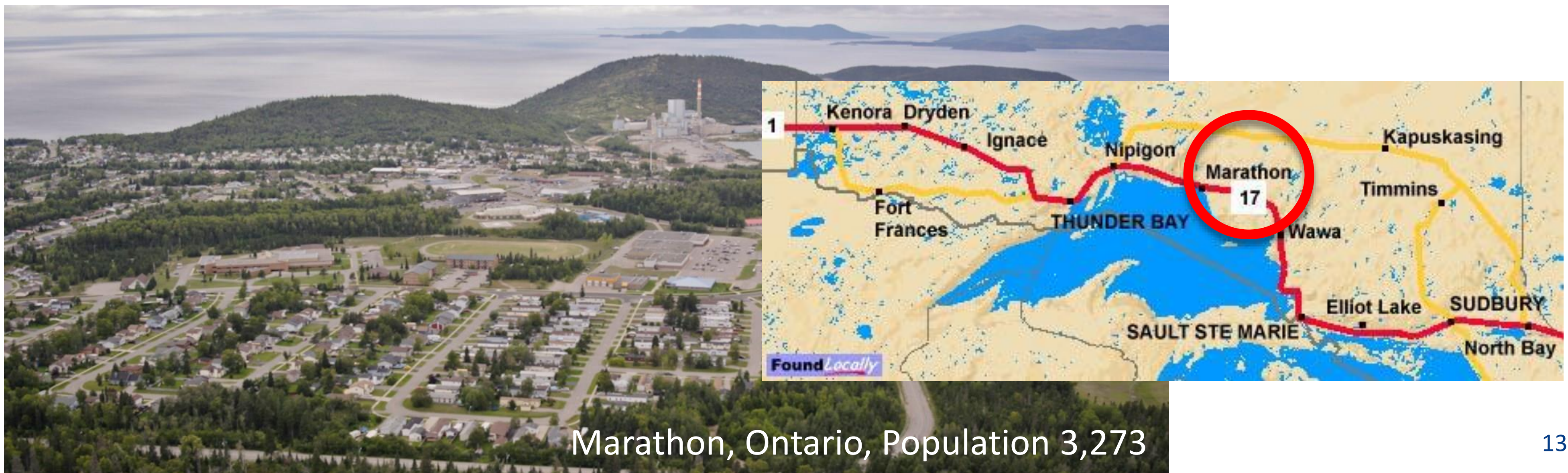
Other models: GP group practice

- One primary study looked at a model for GP group practice piloted in Marathon, Ontario
- Each GP took one month to be the maternity caregiver for the area, leaving the other GPs time to focus on their private practices.
- Researchers then surveyed:
  - patients who received care and delivered their babies in Marathon,
  - patients who received care in Marathon and delivered their babies outside the town, and
  - the physicians involved in the program
- Results showed high satisfaction rates overall; however, study methodology was problematic



Marathon, Ontario, Population 3,273

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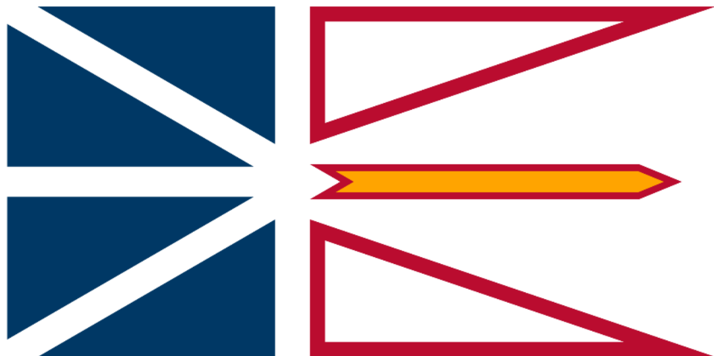
Contextual Factors in Newfoundland & Labrador

Consultants helped us to consider how the evidence might be applied for use here in NL

- Elaine Warren, Vice President and Chief Information Officer, Eastern Health
- Arlene Scott, Director of the Women's Health Program, Eastern Health
- Dr. Robert Kennedy, Clinical Chief of the Women's Health Program, Eastern Health
- Subject expert Dr. Jude Kornelsen also highlighted broader contextual issues



Newfoundland and Labrador Health Regions

Nain
1014
Happy Valley-Goose Bay
Churchill Falls
Labrador City
Gander
St. John's
Grand Falls-Windsor
1012
1011
Corner Brook
1013

- 1011, Eastern Regional Integrated Health Authority
- 1012, Central Regional Integrated Health Authority
- 1013, Western Regional Integrated Health Authority
- 1014, Labrador-Grenfell Regional Integrated Health Authority

Source: Statistics Canada, Health Regions: Boundaries and Correspondence with Census Geography, (82-402-X). Produced by the Statistical Registers and Geography Division for the Health Statistics Division, 2015.

Statistics Canada Statistique Canada

Canada

Contextual Factors in Newfoundland & Labrador

Defining "rurality" in Newfoundland & Labrador can be challenging:

- We defined it as anywhere with an hour or more commute to a hospital with specialists & NICU
- In NL, this will mean all communities that are an hour or more away from St. John's.

Obstetric volume in NL is very low (outside of St. John's)

- In the literature, "low volume" refers to fewer than 1,000 annual births
- Many rural regions across NL have had ***far fewer*** than 1,000 annual births in recent years:

2018 EASTERN HEALTH DATA	Number of obstetricians	Number of births
Burin	1	**93**
Carbonear	2	**194**
Clarenville	3	**137**
St. John's	12	2274
Eastern Health Region (Total)	18	**2698**

Total Number of Births in other Regions

2017 Community Accounts Data

- Central Health: **575**
- Western Health: **500**
- Labrador-Grenfell Health: **375**

In 2018, the **total number of births in NL** was 4,344— an all-time low in the recorded history of the province.

Contextual Factors in Newfoundland & Labrador

Services in NL are mainly provided by obstetricians and GPs trained in obstetrics. Adding more midwifery services has been challenged by the requirement to provide corresponding obstetrician coverage, which varies across regions.*

Is the current NL model sustainable? Small NL communities have obstetricians who also provide primary maternity care. In other places, obstetricians primarily serve women at high risk of complications and would not serve in communities without sustainable service volumes.

The implications of internationally-trained medical graduates in NL should be considered. Such graduates may delimit the number of GPs providing maternity care. NL may have internationally-trained obstetricians who do not qualify as board-certified but who could be granted privileges to do C-sections. Future research on this issue may be warranted.

Developing a comprehensive rural maternity care strategy could help guide the planning of rural maternity services across the province. At present, such a strategy does not exist.

The lack of high-quality research on rural obstetrics makes it difficult to draw firm conclusions about all potential models available for rural obstetric care.

**In 2019, the NL government hired four midwives for Central Health. One midwife began work in June 2019 and families in the Gander area should have access to midwifery services by year end (2019). The provincial midwifery consultant, Gisela Becker, is also working with groups in Goose Bay and Carbonear to establish midwifery practices and is in discussions with other regional health authorities to work toward midwifery services right across the province.*

(Source: http://www.amnl.ca/ accessed October 7, 2019)

Joint Position Paper on Rural Maternity Care

Society of Obstetricians and Gynaecologists of Canada recommendations:

- Maternity care should be provided as close to home as possible. Care should be patient-centered, culturally-sensitive, and respectful.
- An integrated perinatal system should be provided when local surgical and anaesthetic services are not available.
- Services should address the social and emotional needs of women. This is particularly important when women are required to leave their local communities.
- Inter-professional models (these consist of physicians, nurses and midwives) are an important component of rural maternity care. Compensation of healthcare providers should reflect the unique challenges and responsibilities in rural maternity care.
- Healthcare providers who are skilled in neonatal resuscitation and newborn care are necessary for rural maternity care.
- Training programs for healthcare providers should reflect all skills and competencies required for rural maternity care. This would include generalist training in maternity care, surgery and anaesthesia.
- Support should be provided for continuing education and patient safety programs.

Conclusions from the report

Rapid EVIDENCE Reports

Key messages:

- The lack of robust research evidence on this topic makes evidence-informed decisions on rural obstetric care challenging.
- When compared to physician-led models, midwifery models of care are associated with improved outcomes, fewer interventions, and increased patient satisfaction.
- Outcomes are comparable whether perinatal surgical care is performed by General Practitioners with Enhanced Surgical Skills (GPESS) or by specialists.
- The Joint Position Paper on Rural Maternity Care provides a series of recommendations regarding the provision of obstetric care in rural areas. Inter-professional models of care are recommended.
- Numerous contextual issues will have a bearing on the applicability of the evidence in NL, including: geography, demographics, number of births, and health human resources. The unique challenges of healthcare delivery in rural NL must be considered when developing strategies in this province.

QUESTIONS?

Link to full report with references

https://www.nlcahr.mun.ca/CHRSP/Rural_Obstetric_Care_RER_2019.pdf