

Maternal, Newborn, Child and Youth Strategic Clinical Network: Improving health outcomes and system efficiency through partnerships

Seija Kromm PhD, Deborah McNeil RN PhD, David Johnson MD; for the Maternal, Newborn, Child and Youth Strategic Clinical Network

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Addressing the health needs of mothers, infants, children and youth will improve the health of Alberta's population today and into the future. The most common reason for admission to hospital in Canada is childbirth, and Alberta's birth rate is third highest among Canadian provinces.¹ Alberta also has the highest percentage of preterm births of all provinces (8.4% in 2017).² In parts of Alberta up to 18% of women receive fewer than 4 prenatal care visits (Dr. Amy Colquhoun, Ministry of Health, Government of Alberta, Edmonton: personal communication, 2018). Importantly, the infant mortality rate for First Nations people who live in Alberta is more than double that for the non-First Nations population.² In the adolescent population, medically complex youth transferring to adult services can experience poor outcomes, leading to increased usage of health care services.³ These data show that care and outcomes are not optimal or consistent across Alberta and underscore the need for innovation and more equitable outcomes for people in Alberta.

The Maternal, Newborn, Child and Youth Strategic Clinical Network (MNCY SCN; www.ahs.ca/mncyscn) was established in 2015, following the structure of SCNs in Alberta and led by a small team of 6 people. The leadership team works and partners with network members and others to accomplish the SCN's key objective to bring together people, evidence and data to achieve the best possible health outcomes for mothers, infants, children, youth and families within a sustainable, publicly funded health care system.⁴ This objective and SCN priorities are a direct result of collaboration with network members: front-line clinicians, operational leaders, government, community providers, researchers, and patients and their parents and families (see figure and Appendix 1, available at www.cmaj.ca/lookup/suppl/doi:10.1503/cmaj.190584/-/DC1).⁴ The MNCY SCN has also partnered with researchers to secure grant funding to support its priorities — amounting to more than \$4 million for the 4 projects described here. Each project is an example of how partnerships and collaboration were essential to bringing innovation into Alberta's health care system, leading to improved health outcomes and/or efficient use of health care resources.

KEY POINTS

- The Maternal, Newborn, Child and Youth Strategic Clinical Network's (MNCY SCN) key objective is to bring together people, evidence and data to achieve the best possible health outcomes for mothers, infants, children, youth and families within a sustainable, publicly funded health care system.
- The SCN has partnered with researchers to secure substantial grant funding to support its priority projects, which include a program to stop the routine use of an ineffective test used to predict premature birth, incorporating Family Integrated Care in Alberta's neonatal intensive care units and coordinating research on adolescents transitioning to adult care.
- A patient and family advisory committee is now being created to increase the MNCY SCN's reach.

In 2015, the Institute of Health Economics reported that the rapid fetal fibronectin test used in Alberta to predict preterm labour did not lead to better health outcomes or more appropriate transfers from rural to urban settings, calling into question the value of the test.⁵ The MNCY SCN collaborated with a physician network member and the Alberta Research Centre for Health Evidence to conduct a systematic review to increase understanding of the effectiveness of tests for predicting preterm deliveries in rural areas.⁶ Using this evidence, the SCN engaged with physicians, medical laboratories and clinical researchers to remove the rapid fetal fibronectin test from the list of available laboratory tests and, importantly, the adoption of a new clinical guideline for front-line clinicians to improve the appropriateness of care provided in Alberta. Even with extensive engagement, the SCN faced strong pushback once the fetal fibronectin test was not available. Additional opportunities for discussion and knowledge translation of the evidence for discontinuing the test were provided by the SCN. Evaluation of health outcomes is underway; maternal outcomes (preterm deliveries) 2.5 years after discontinuation of the test remain unchanged (Alberta Health Services physician billing database,

Discharge Abstract Database and National Ambulatory Care Reporting System, 2018), while saving the health system up to \$1 million per year.⁷

A research study focused on Family Integrated Care (FICare) in the neonatal intensive care unit (NICU) was being designed as the MNCY SCN was forming.^{4,8} This project was endorsed by the SCN and led by researchers from the Universities of Calgary, Alberta and Toronto. Alberta FICare is focused on integrating parents into NICU care earlier using relational communication, enhanced parent support and standardized education strategies. These interventions were found to improve both parent and infant outcomes (Alberta FICare: unpublished data, 2019). The MNCY SCN continues to collaborate with these researchers, enabling this successful project to obtain additional provincial grant funding and health system support to spread and scale this innovation to all NICUs in Alberta.

Before the creation of the MNCY SCN, separate groups of researchers and clinicians in Edmonton and Calgary were working in isolation, designing similar approaches to address the problem of how to transition adolescents with medically complex health care needs to adult services more effectively. This is a priority for the MNCY SCN; the network has served as a convener for cross-institutional collaborations and planning sessions that included researchers, front-line staff, patients and families.⁴ Facilitation by the MNCY SCN led to the design and subsequent funding of a multisite, provincial clinical trial (currently underway) to test the

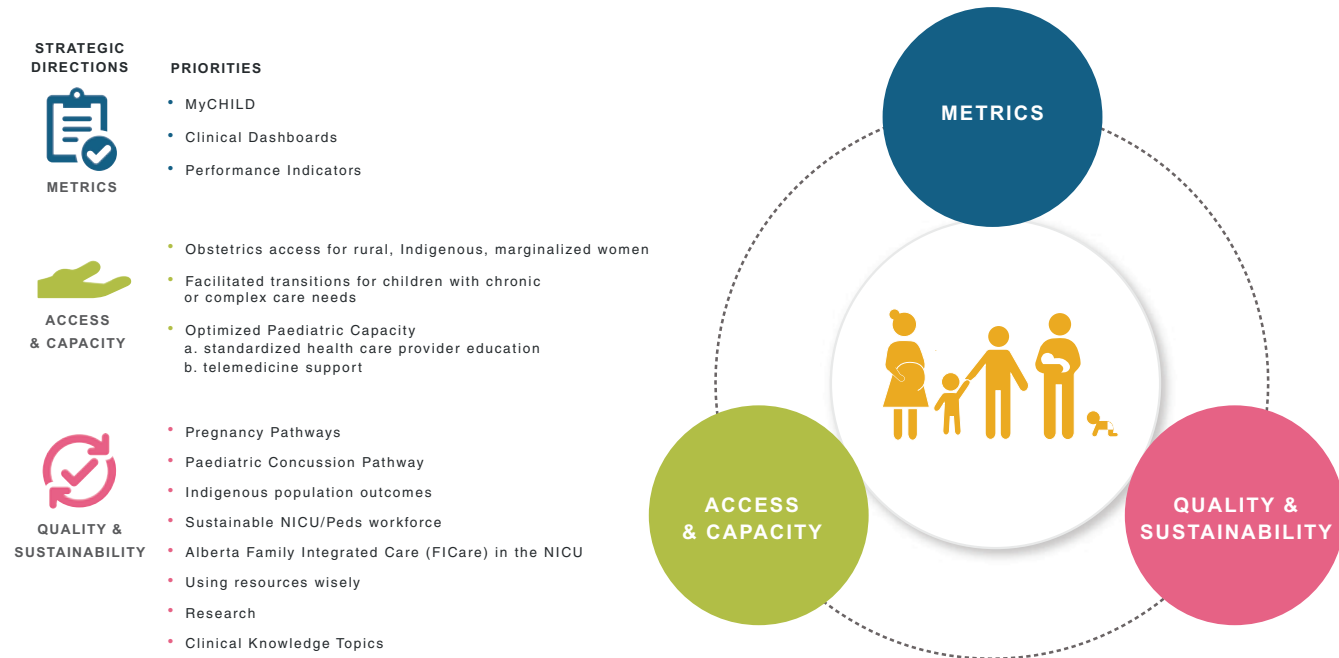
effect of a Patient Navigator on relevant outcomes, and support scale and spread of this initiative across Alberta.⁹

The MNCY SCN quickly recognized the need to partner with and empower communities experiencing disparities in health outcomes and services. Funding from the Merck for Mothers global funding grant and Alberta Innovates was obtained to support the implementation of community-derived strategies to improve maternal health outcomes in 3 communities in Alberta.^{4,10,11} Each community's strategy is specific to its needs: 1) the Pregnancy Pathways program provides safe housing for Edmonton's homeless, pregnant and parenting women, and connects mothers to additional services when they move out on their own.¹¹ 2) One of the Four Nations of Maskwacis Alberta (Montana First Nation) designed a community garden to support maternal health by providing fresh fruit and vegetables; provided learning opportunities for families to harvest, prepare and preserve the produce; and created a safe space to share cultural knowledge.¹¹ 3) The rural northern Cree community of Little Red River is enhancing maternal health and wellness for women by providing maternal-child health support workers with lived experience, home visits and community programming. They are also promoting their culture and language for the healthy social development of infants, children and families. Evaluation of these 3 projects is underway.

These 4 examples of how the SCN collaborated and partnered with its network also came with challenges and important

MNCY SCN VISION:

Healthy mothers, newborns, children, youth & families.



Strategic directions of the Maternal, Newborn, Child and Youth Strategic Clinical Network (MNCY SCN) strategic directions.

lessons learned. First, having a single provider of health care services (Alberta Health Services) makes a provincial network possible. However, local structures and supports must be considered as Alberta is geographically large with some sparsely populated areas, and a wide variety of health conditions are faced by maternal, infant, child and youth populations. Partnering with and empowering communities is essential. Second, even with evidence to support an action (e.g., discontinuation of the fetal fibronectin test) and extensive engagement, not everyone was reached. The SCN needed to go beyond its formal network to ensure all stakeholders were included, taking the time to make adjustments to achieve a workable solution, even at late stages of implementation. Finally, the strength of any network is its members. Engagement in broad collaboration to create strong partnerships that can bring innovation and efficiencies to Alberta's health care system is key to improving health outcomes.

The MNCY SCN's next steps are to continue fostering and building upon existing partnerships created through the work highlighted above. As the MNCY SCN develops, so does the need to be flexible and responsive in our partnerships with key stakeholders. At present, a patient and family advisory committee is being created to increase the MNCY SCN's reach and ability to collaborate with the maternal, newborn, child and youth populations and their families and caregivers. Strengthening the network through collaboration and partnerships will ensure that the SCN continues to bring value to Alberta's health care system.

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Affiliations: Maternal, Newborn, Child & Youth Strategic Clinical Network (Kromm, McNeil, Johnson), Alberta Health Services; Departments of Community Health Sciences (Kromm, McNeil) and Pediatrics (Johnson), Cumming School of Medicine, University of Calgary, Calgary, Alta.

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Correspondence to: Seija Kromm, Seija.Kromm@ahs.ca