Challenges of Capacity and Development for Health System Sustainability

COMMENTARY

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ABSTRACT

To achieve sustainability, remote and rural communities require health service models that are designed in and for these settings and are responsive to local population health needs. This paper draws on a panel discussion at the Rural and Indigenous Health Symposium held in Toronto, ON, on September 21, 2017. Active community participation is an important contributor to success in rural health system transformation, as well as health workforce recruitment and retention. Increasingly, communication technology is contributing to the quality and effectiveness of healthcare in remote rural community settings, particularly by ensuring that specialist expertise is accessible to and supportive of the local providers of care. Recent medical graduates bring life experiences and work expectations to rural primary care that are different from their senior colleagues. Successful recruitment and retention of the rural primary care workforce depend increasingly on offering a "turn-key" clinic work supported by a functioning electronic medical record. Rural health system sustainability occurs most frequently through ongoing collaboration and partnerships, partnerships, partnerships. It is through partnerships with communities, health services and healthcare providers that the Northern Ontario School of Medicine (NOSM) has been successful in producing medical graduates who provide care responsive to population health needs in previously underserved communities of northern Ontario. Sustainable healthcare in remote and rural communities is enhanced by active community participation and clustering these communities in local networks. An important key to success is shifting from hospital-centric to community-centric care.

Introduction

This paper is based on a panel session with five presenters and a general discussion. Each presenter spoke for five minutes after which symposium participants in small groups discussed issues for five minutes, before a wide-ranging general discussion. All of the presenters have summarized their five-minute presentation, after which the Discussion section of this paper reflects the general discussion. The Conclusion is based on the closing remarks from panel members.

Setting the Scene – Roger Strasser

Remote and rural communities require health service models that are designed in and for these settings and are responsive to local population health needs. Attempts to take urban-designed service delivery models and implement them in remote rural settings generally have proven unsatisfactory (Strasser 2001, 2003; Strasser et al 1994).

It is important to recognize that the health practitioners in these communities are the front-line providers of care. The role of specialists is as true consultants providing clinical support and education for the on-site rural practitioners. As a general statement, rural practitioners, when compared to their metropolitan counterparts, may be described as "extended generalists." Rural practitioners provide a wider range of services, sustain a heavier workload and carry a higher level of clinical responsibility in relative professional isolation (Hogenbirk et al. 2004). These characteristics hold true for all rural practitioners, whether they are doctors, nurses, pharmacists or other health professionals (Strasser 2016b; Strasser and Neusy 2010; Strasser et al. 2016).

Research undertaken in Australia into sustainable models of rural and remote health services 20 years ago involved 22 in-depth case studies of communities in all parts of rural and remote Australia, some with

successful models of health services and others that were struggling. In all cases, the conventional model of health service delivery was seen to be marginal or unviable.

This research concluded that successful health service delivery in remote rural communities might be seen as a "three-legged stool." Maintenance and improvement in health services require strength in all three legs: the local health service/agency, the healthcare provider(s) and active community participation (Strasser 2001). Community participation in developing health service models promotes a sense of ownership of the local health service, increases local knowledge and skills and strengthens local relationships and networks. In addition, community participation is important for success in recruitment and retention of the health workforce, as the healthcare provider's family members need to feel at home in the community and want to stay.

Despite quality health services, local conditions and systemic challenges are threatening population health …

North Simcoe Muskoka LHIN Health System Transformation – Don Mitchell

In the spring of 2016, the North Simcoe Muskoka Local Health Integration Network (NSM LHIN n.d.) provided endorsement and funding to support Muskoka and area in the development of a health system transformation plan to meet the needs of residents, seasonal residents and visitors. With the NSM LHIN's support, the Muskoka and Area Health System Transformation (MAHST) Council was formed to oversee a grassroots planning process that engaged health, social services and community stakeholders in system reorganization and recommendations for implementation (MAHST Council n.d.).

Muskoka is the most northerly of five sub-regions of NSM LHIN. A robust health system serves the people of Muskoka and surrounding areas through primary and specialized care, home and community services, acute care and post-acute care services. Despite quality health services, local conditions and systemic challenges are threatening population health and the long-term sustainability of the local system.

While Muskoka shares many challenges with other smaller health systems (College of Family Physicians of Canada n.d.; Price et al. 2015), the Muskoka area is unique as a community. Local populations are among the most vulnerable in the province – a large and growing number of persons with disability, living with poverty and with below-average incomes.

Many local governing boards see a need to further integrate and coordinate strategy in response to local challenges and threats to the system: dispersion of the Muskoka populations over a large and rugged geography; dramatic seasonal fluctuations in populations and demands upon the health system; limited access to specialized services, creating gaps in local care; barriers to wellness that are complex and closely tied to the social determinants of health, such as low wages and income disparity, lack of transportation and affordable housing; health agencies working in "silos" with little strategic alignment; and aging and unsustainable acute care hospitals.

Using what is known as a "Collective Impact" framework (Kania and Kramer 2011), a diverse group of individuals from a variety of health, social service and municipal sectors came together to solve a complex problem and achieve significant and lasting social change.

MAHST's Quadruple Aims are:

- Better health for our population – through advocacy for enabling policy, education of population in self-care and coordinated community-wide action.
- Better care for patients – through wayfinding, care coordination and equitable access to multidisciplinary primary care-led teams, including mental health, addiction, public health and social services and access to acute care services and other specialty services when needed.
- Better value for the system – through less administration, less duplication and overlap, operating efficiencies and the right care in the right place at the right time.
- Better experience for providers – through collaborative networks and peer support, information technology solutions, aligned incentives and a system that is easy to navigate.

A comprehensive five-year plan (2017/18–2021/22) has been developed to address current challenges. The new system centres on "MY HEALTH TEAM": primary care-led multi-professional teams focusing on wellness care and fostering self-management. In this future state, the silos are gone and there are clear pathways into and within the system – and strong links with services outside of the local health system. Service alignment and strong communications ensure seamless physical and mental healthcare that wraps around individuals, caregivers and their families.

North West LHIN Technology-Enabled Care – Jessica Logozzo

The North West LHIN comprises a geographical area of over 450,000 square kilometres, with a population of approximately 235,000, of which 21.5% is Indigenous (North West LHIN n.d.). This presents significant challenges related to access and capacity in small and rural communities. With the mandate to plan, fund and integrate healthcare services, the North West LHIN works with its partners to develop health service models designed in and for rural settings to address these challenges and respond to local population health needs.

Foundational strategies to address the challenges of capacity and development for health system sustainability include leveraging technology and innovative models of care to improve access and equity, working with partners through active community participation to understand and build capacity and redesigning the system to improve access.

Within the North West LHIN, technology is a critical enabler to delivering care and overcoming access challenges. As an example, the Regional Critical Care Response program is an innovative e-health strategy that leverages the Ontario Telemedicine Network (OTN) technology to facilitate videoconferencing for real-time assessment of critically ill patients (OTN n.d.). It connects 11 of the northwest community emergency departments and intensive care units, as well as four remote nursing stations, to critical care-trained physicians, nurses and respiratory therapists at the region's only level three critical care unit and lead trauma unit, Thunder Bay Regional Health Sciences Centre. It enables acutely ill patients to receive care within their communities and prioritizes urgent transportation needs for critically ill patients. The program provides benefits not only to patients and their families but also to physicians through access to clinical experts 24 hours a day, where that expertise is not available. By supporting local practitioners through technology, this enables and increases local knowledge and skills and provides access to a broader system of care that is important for success in recruitment and retention of practitioners to small and rural communities.

Active engagement with local partners – including those who work in and use the system – continues to be a foundational element to addressing capacity challenges in the North West LHIN. Recently, the North West LHIN engaged with over 100 primary care providers (including family physicians and nurse practitioners) to explore local primary care capacity. Northern and rural medicine is unique in that family physicians in a small or remote community are not only providing primary care – they are covering the emergency department, inpatient, obstetrics, etc. Therefore, it is important to understand and better define the primary care workforce in each community to inform future workforce planning. The engagement of practitioners in understanding the current state, challenges and potential health service models to address these challenges has begun to strengthen local relationships and networks, as well as build buy-in and ownership of short- and long-term solutions that will support recruitment and retention of critically needed resources to small communities.

Primary Care Workforce – Paul Preston

Culture eats strategy for breakfast.
– Peter Drucker

Any strategy that is developed to deal with primary care health human resources recruitment and retention issues in northern Ontario communities that does not align with the culture of the new graduate physicians and the culture of primary care medicine in Ontario simply will not have uptake with physicians. Nor would any such strategy be sustainable with the flow and expectation of modern practice.

Compared to my genre of physicians from the 1980s, the cultural realities of new graduates include: more female graduates than males; older graduates; greater debt loads but no experience of historically normal interest rates, apparently contributing to a lack of urgency to pay this off and work beyond "normal" work-week hour totals; and a greater value placed on a more "balanced, healthy lifestyle", with more limits on work time per week and hours per day. Having deferred child-bearing and rearing until after beginning practice, many have no interest in working in the office all day and then working in the emergency room (ER) through the evening and over the weekends. Others prefer the containment of hours provided by working in the ER, with its shifts with defined hours, clear time off and no on-call responsibilities.

Thus, communities that are able to offer a delinking of office practice and emergency work will probably have access to a far greater pool of new graduates, especially when a stable of ER physicians is in a larger centre not too far away.

The use of electronic medical records (EMRs) is the emerging standard of care in practice documentation, which has co-occurred with the increased complexity of patients with multiple chronic conditions to manage. Thus, new graduate physicians require full EMR and "turnkey" practices and feel more comfortable in group practices, especially those that are supported by allied health professionals or interprofessional teams. This is typically a family health organization of physicians aligned with a family health team.

The days of the "one-man band" in primary care are receding. As much as possible, we need to establish turnkey, full EMR practice opportunities with interprofessional team support, in group practice settings, and look for possibilities of providing opportunities to new graduate physicians to do both or either office practice or the ER.

It is crucial to work collaboratively with health system stakeholders rather than unilaterally.

Partnership, Partnership, Partnership: Appreciating and Applying the Beautifully Simple but Complex – Neil Walker

The lesson I learned from my work in northern Manitoba's rural health system, and that I continue to practise in my current work in North Simcoe Muskoka's health system, involves three beautifully simple but complex words: partnership, partnership, partnership.

It is crucial to work collaboratively with health system stakeholders rather than unilaterally. An invitation to co-create is the catalyst that will prompt action leading to sustainable change. I believe this basic understanding is shared by my colleagues who successfully manage healthcare systems and by those who respectfully work on the front lines delivering care.

When I worked in northern Manitoba for the former Burntwood Regional Health Authority in partnership with the Northern Medical Unit at the University of Manitoba, we regularly made visits to all 14 First Nations communities in our health region. By meeting community members where they lived, we built a relationship of trust. Upon that foundation, we were able to have a willingness and readiness to make organic planning possible. We used standard planning frameworks, but we tailored those to meet the needs of "the community." We recognized that those who lived in the area understood their needs the best.

To achieve success in transformation, I believe we must be thoughtful about our definition of community. Do we mean residents, practitioners, patients, planners, thought leaders, local leadership? All of these stakeholders experience community, and we need to build a shared definition with them.

At some point every day, I respect the public participation practices of the International Association for Public Participation (IAP2 – Canada). Whether it's engaging in discussions with employees, healthcare partners or recipients, it is critical to have a mutual understanding of how voices will be heard and input applied. All opinions reflect lived experience with healthcare, and all voices can contribute meaningfully. I have learned that we must take extra care in being intentional with dialogue opportunities with rural and northern people. We must ensure that there is authentic engagement.

With this recognition, my experience in northern Manitoba was a true partnership. There was an exchange of information that focused on improving peoples' health experience. Now my work with the NSM LHIN reflects the "nothing about me without me" approach when it comes to partnership and planning. We proactively engage and involve our system partners, including our patients and caregivers, particularly when it comes to matters of cultural and linguistic respect and acknowledgement. We recognize that these relationships are the key to building sustainability. We cannot build sustainability alone.

By listening and responding to our Indigenous and francophone partners in care, we work to address gaps and consider options for building sustainability in our region's healthcare system. These meetings provide the LHIN with a better understanding of local needs, priorities and opportunities within each community, which in turn supports annual and strategic planning.

We are actively involving members of our Indigenous and francophone communities in our new LHIN mandate for developing subregions as focal points for local planning and service management and delivery. The NSM

LHIN is also committed to supporting Indigenous cultural safety training for all local planning tables, LHIN staff and Board members to further enable respectful and positive partnerships.

I am proud to have worked for organizations that recognize partnerships as precious and that care deeply to foster and maintain them. Collaborative relationships deserve our attention each and every day to improve healthcare equity and sustainability.

> *… NOSM is recognized for its success in fulfilling its social accountability mandate …*

Northern Ontario School of Medicine – Roger Strasser

The Northern Ontario School of Medicine (NOSM) opened in 2005 with a social accountability mandate focused on improving the health of northern Ontarians (Tesson et al. 2009). Consistent with social accountability, NOSM developed Distributed Community Engaged Learning as its distinctive model of medical education and health research. Community engagement involves active community participation and occurs through interdependent partnerships between the school and the communities for mutual benefit (Strasser et al. 2015). Community engagement guided the development of NOSM's comprehensive life-cycle approach beginning in high school and extending through to continuing medical education. NOSM's admissions process seeks to reflect the population distribution of northern Ontario in each class, specifically promoting applicants from northern Ontario or similar backgrounds. Community members play a vital role in selecting students for the four-year MD program, educating students by serving as standardized patients and providing local support for students during their community placements (Strasser et al 2013).

Twelve years since the official opening of the school, NOSM is recognized for its success in fulfilling its social accountability mandate: 92% of all NOSM medical students grew up in northern Ontario, with the remaining 8% coming from remote and rural parts of the rest of Canada; 62% of NOSM graduates (almost double the Canadian average) have chosen predominantly rural family practice training, and 94% of the doctors who completed undergraduate and postgraduate education with NOSM are practising in northern Ontario (33% in remote rural communities). Many NOSM graduates are now faculty members, and an increasing number have taken on academic leadership roles (Strasser 2016a).

Discussion

The questions and comments from participants explored many topics, which are summarized in four themes: recruitment and retention initiatives, technological innovations, impact evaluation and engagement with Indigenous peoples.

Symposium participants raised various suggestions to improve remote rural workforce supply, such as required rural service, deployment of international graduates and financial incentives. Commenting on these suggestions, panel members indicated that mandatory rural service has proven to be a mixed blessing and potentially counterproductive (Wilson et al. 2009). For example, in South Africa, all medical graduates undertake two years of mandatory community service, which is frequently in rural district hospitals. Many doctors in this situation feel insufficiently prepared and that there is a lack of support and supervision. Consequently, this experience is often negative, such that the doctors escape to urban

areas as soon as they are able. An exception to this experience is graduates of the University of Stellenbosch Rural Clinical School, who report being well prepared for practising in rural district hospitals (Van Schalkwyk et al. 2015). The experience of international graduates undertaking required rural service is often similar, with the added dimension of a lack of familiarity with their new country's culture and health system, as well as distance from family and friends.

Financial incentives may improve recruitment in the short-term but have not been proven to ensure long-term recruitment. In Ontario, financial incentives through the Underserved Area Program have assisted recruitment of physicians, many of whom did not stay beyond their contracted time. Since NOSM, the supply of skilled doctors and other health workforce has improved in northern Ontario. One study of eight northern Ontario remote rural communities that were struggling to maintain medical services before NOSM with 30 full-time equivalent (FTE) vacancies found that active involvement of these communities through hosting NOSM medical students and residents had substantially improved the situation for these communities. At the time of the study, the eight communities had one FTE vacancy and had moved from perpetual crisis mode (filling vacancies next week and next month) to planning ahead and were spending less money on physician recruitment (Mian et al. 2017).

Symposium participants raised questions about the innovative use of communication technology to improve access to care. There are many examples of technology-enabled care in northern Ontario, many of which are facilitated by OTN, which began in 1999 as NORTH Network, providing room-based videoconference connections for doctors and patients to access real-time specialist advice. OTN has evolved to provide laptop computer/tablet connectivity, which enables not only doctor–patient connections but also tele-rehabilitation, tele-home care and tele-wound care. The use of video technology may be counter-productive if it undermines local networks between regional centres and remote rural communities. In addition, many First Nations lack sufficient high-speed broadband Internet connectivity to be able to access these services.

There was also discussion regarding data-sharing, which is a different potential use of communication technology. Currently, the use of electronic health records is variable between clinical services, which means that the full potential of data sharing to enhance healthcare is yet to be realized in Ontario. For research, the Institute of Clinical Evaluative Sciences (ICES) is an Ontario government Institute that has privileged access to government-held data. This enables a wide range of health research and will soon be more accessible in northern Ontario via a satellite of ICES known as ICES North.

Another important issue raised by symposium participants is evaluation of initiatives designed to improve rural and Indigenous healthcare and the workforce. Since the beginning of NOSM, the Ontario Ministry of Health and Long-Term Care has funded NOSM tracking and impact studies. NOSM's success in producing graduates who choose rural family medicine and other general specialties appears to be the result of clinical learning in the northern Ontario context, role modelling and teaching by rural generalist physicians and intense interaction with patients during the third year of Comprehensive Community Clerkship, in which students learn their core clinical medicine from the community family practice perspective. The socio-economic impact of NOSM on northern Ontario communities includes new economic activity over $100 million in 2016, more than double the school's budget, and a sense of empowerment among

participating communities, attributable in large part to NOSM.

Several comments and questions were raised regarding genuine engagement with Indigenous peoples and respecting Indigenous traditional knowledge. NSM LHIN has an Aboriginal health circle, which is similar to the North West LHIN Aboriginal Advisory Council and the NOSM Indigenous Reference Group. From its very beginning, NOSM sought guidance from Indigenous peoples, beginning with the *Follow Your Dreams* workshop in June 2003, which was attended by over 100 Indigenous people from across northern Ontario. NOSM has implemented many of the *Follow Your Dreams* recommendations, including: all first-year medical students having a four-week immersive cultural experience in Indigenous communities; the creation of a director of Indigenous Affairs position and an Indigenous Affairs unit; Indigenous people being involved in all aspects of the school, including as board members, faculty members, staff members and learners, and establishment of the Indigenous Reference Group as an advisory committee to the dean-CEO about the Indigenous dimensions of the school. Drawing on discussions in other sessions of the symposium, it was noted that genuine engagement with Indigenous peoples requires Indigenous peoples "coming to the table" to enable respectful, collaborative communication and action.

Conclusion

Drawing this session to a close, panel members reiterated the importance of partnerships, partnerships and partnerships, which are all about trusting relationships. Sustainable healthcare in remote rural and Indigenous communities is enhanced by active community participation and clustering these communities in local networks. An important key to success is shifting from hospital-centric to community-centric care.

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