THE RURAL GENERALIST PATHWAY

Progress Update May 2021

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Executive Summary:

Mr. Derek Day, a long-time supporter of the Northern Ontario School of Medicine (NOSM) recalls with fondness the stories his mother shared with him about his grandfather, Dr. William Lincoln Bond (born in 1865), and his experiences working as a physician in Toronto making house calls into the rural exterior of the city. At the age of 12, Dr. Bond lost his father to typhoid, which most likely sparked his interest in studying medicine. Mr. Day recalls his mother's stories about his grandfather and how he kept a barn with a horse and wagon that he used to make house calls in bad weather sharing that, "at that time, it was the only practical way to get around."

These personal stories about his grandfather inspired Mr. Day reflect upon the immediate and critical needs for residents of Northern Ontario to have access to primary care: "*there is a significant and immediate need for rural communities to gain access to quality health care more equitably and it is a critical time to implement long-term sustainable solutions. The Northern Ontario School of Medicine is doing great work in this area and has a clear vision on how to get there."* In its renewed strategic plan, NOSM has committed to pursuing new strategies to meet those needs, one of which is the **Rural Generalist Pathway** - a new training pathway, deliberately designed and intentionally planned to create clinicians who are well-trained and well supported to serve in communities where health human resources continue to be fragile.

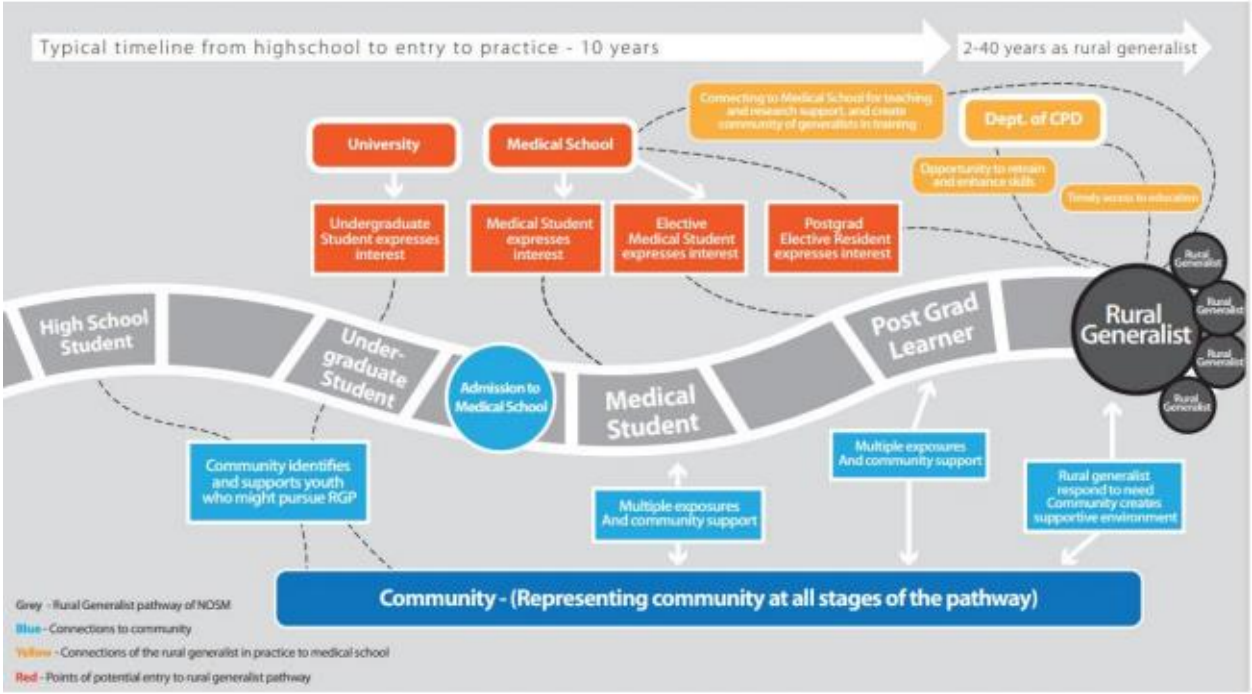
The Northern Ontario School of Medicine was created as a Government strategy, with a ***social accountability mandate,*** to educate and train clinicians, and other allied health professionals, to serve the needs of Northern Ontario communities. In responding to this mandate, NOSM developed a *distributed community engaged learning and research model* that places learners in rural, remote and indigenous communities (over 90 sites) across Northern Ontario, as part of their clinical learning. This approach has resulted in an increase in physician supply in the North, and most of this success has benefited larger urban referral centres in Northern Ontario, leaving rural and isolated communities and a number of needed specialties with continued recruitment and retention challenges.

In November 2020, NOSM launched "The Challenge-Strategic Plan 2020-2025. The Rural Generalist Pathway is aligned with NOSM's Strategic Plan as Priority 1: "Transforming Health Human Resource Planning". NOSM's aspiration in this strategic priority is to include "a transformative approach to the planning and delivery of workforce supply which eliminates the gaps in Northern Ontario Health Human Resources". NOSM's Leadership has committed to transforming health and human resource planning with an overall goal "to link human resources (HHR) to Northern Ontario's needs Francophone, Indigenous, rural and urban) with a focus on specialist and subspecialist training" and Innovating Health Professions Education1 as outlined with the release of "The Challenge-NOSM's Strategic Plan 2020-2025". [https://strategicplan.nosm.ca/]

Building on work in Australia, and outlined in the original Rural Generalist Pathway proposal document (January 2020), NOSM has embarked on the development of the Rural Generalist Pathway. *This pathway will identify interested students prior to medical school and capable learners early in undergraduate medical education, support skills development and attachment to rural communities from undergraduate through*

postgraduate training, and support rural generalists in practice through ongoing continuing professional development and sustainable funding models that recognize the breadth of clinical work and teaching. This dedicated and specifically tailored training to support the needs of those communities is grounded in the success of the Queensland model.

The graphic that follows depicts the Rural Generalist Pathway (Updated November 2020).



This graphic depicts the stages of the Rural Generalist Pathway from high school to undergraduate degree to medical school, postgraduate training and into practice as a rural generalist. The Pathway within NOSM is the grey path. The points of entry are identified along the top and include elective learner entry to the path. Connection to community is depicted along the bottom. The Rural Generalist in practice connects back to the University academic opportunities, and training of future learners. Rural Generalists, at the end of the pathway, are noted to be "joined up" within and across communities for clinical service, education and research in support of their sustainability and resilience.

Current data suggests that, annually, approximately six of NOSM's 64 undergraduate learners per year (10% of the undergraduate cohort) (data hosted on https://www.nosm.ca/our-community/nosm-physician-workforce-strategy/) have established a practice as rural family physicians in Northern Ontario's rural communities. As of December 2020, data gathered by community recruiters suggests that there is a need for 86 rural generalist family physicians. At our current pace, it will take more than 10 years to fill the current gap. The COVID 19 pandemic has also disrupted care delivery, led to an increase in rural populations in some communities, and may lead to an earlier retirement of some of our rural clinicians. These anticipated retirements will need to be planned for and it is anticipated that some communities will require an increase in the number of clinicians in order to meet the needs of the community as a result of changing practice styles, complexity of care, population shifts, work life balance needs, and the increasing teaching expectations of NOSM as a mature medical school. The current and anticipated need for rural generalist physicians will not be met if we continue to produce only 6 rural physicians per year.

In Australia, the Rural Generalist Pathway (RGP) has become a successful model for training family physicians "fit for purpose" to serve Queensland's rural and remote communities. This model has resulted in rural and remote communities in Queensland, that long suffered chronic physician shortages and poorer access to care, now being well supplied with clinicians and it has resulted in improved health outcomes for its population. NOSM has explored this model through an Ontario Ministry of Health (MOH) funded visit to Northern Ontario by the Queensland RGP founder, Dr. Denis Lennox (see Appendix B, C).

The Rural Generalist Pathway (RGP) in Northern Ontario, in synergy with NOSM's regular stream of medical school training, will contribute to realizing the long-term vision for sustainability, and demonstrate the commitment on the part of the MOH to the principles of equity for the citizens of Northern Ontario (Appendix C). It will represent a fundamental recognition by government that the infrastructure of the health care system in small communities is vital to the economic sustainability and vibrancy of rural and remote populations.

Key Activities within NOSM in the Development of the Rural Generalist Pathway

Part 1: NOSM's role: Decreasing fragility and increasing clinical workforce resilience:

NOSM has a role in decreasing the fragility and increasing the resilience of the rural work force. This work requires several actions many of which will need to be done in partnership with other organizations. These actions include:

1. Creating and continuously improving the pathway for a recognized Rural Generalist practice in family medicine.
2. Creating and continuously improving a supply line for Northern Ontario for the Rural Generalist Workforce from pre-admission to in-practice career opportunities and CEPD that support retention including creating and supporting rural academic career paths for Rural Generalists.
3. Supporting effective health human resources planning by working collaboratively with Ontario Health (Health Force), ensuring inclusion of not only clinical roles, but teaching, quality improvement, leadership, and research responsibilities for the rural generalist family physician.
4. Supporting ways in which practices can "join up" to increase resilience and create capacity for future teaching and training of learners, for example through Local Education Groups, through physician recruiters for collaborative recruitment, and through service provision (obstetrics or chemotherapy as examples, for a small cluster of communities, etc.).
5. Working with regional hospitals and specialists to create and support connected networks to support clinical care (as outlined above), education and research in rural communities.
6. Designing and continuously improving a specific curriculum for specialist faculty members and residents so as teachers and future practitioners they are educated to be effective team members for regional networks that support rural generalist family physicians and community teams including the development and maintenance of a broad base of skills for the Rural Generalists.
7. Facilitating the clinical leadership development required to enable effective strategic and

operation planning that will support team-based practice within and across teams of clinicians and inter-professional providers.

8. Working to support a culture of respect, kindness, and professionalism across all clinical teaching sites that will create positive work and learning environments for faculty, learners and staff.
9. Support the "joining up" intention of Ontario Health Teams by:
    - ✓ Re-evaluating and potentially calibrating the learner experience/placements (and curriculum) to align with the new OHT integrated care and interdisciplinary service delivery model.
    - ✓ Establishing ***Continuing Education and Professional Development*** to help existing MDs in practice migrate to the new health service delivery systems under OHTs.
    - ✓ Providing data/analytics with HHR workforce planning, including support with recruitment and retention across the region, that would help inform OHT workforce needs in short, medium and long-term.
    - ✓ Promoting and enabling research activity across the OHT, which would include program evaluation and assessment of impact of the OHT.

Part 2: Admissions at NOSM:

Supporting Entry to the Rural Generalist Pathway:

Admissions practices have been designed to be aligned using best evidence available to identify rurally interested learners.

Work to date has included:

1. Update to the admissions context scoring and MMI to identify rurally interested learners using an evidence-based process, including rural specific interview questions as part of the MMI.
2. A new approach to recruiting to admissions has been initiated with "social media influencer" medical students, and will include rurally interested medical students.
3. For the 2022 intake, potential learners have the option to apply to the newly formed Rural Generalist Stream (RGS link) Although progress has been made to attract learners to the RGP, it is acknowledged that the process must allow for identification of potential learners interested in rural and remote medicine, and not just those from rural backgrounds. These candidates should equally have opportunity to undertake the Rural Generalist Pathway of training.
4. Work has been initiated to gauge interest in partnering on combined degrees and exploration of an undergrad degree at Lakehead University and Laurentian University with consideration to protected seats with admission directly into the RGP. While options have been drafted, further progress has been put on hold as a result of the Lakehead University cyber-attack and Laurentian University's formal restructuring which is being undertaken pursuant to the Companies' Creditors Arrangement Act (CCAA), but it is expected that this work will continue in the Fall 2021.

Future work will include:

1. Continuously improving recruitment and admissions processes for the MD program.
2. Continuously evaluating the communications and marketing strategies designed to attract and engage interested students in high school and/or early in the admissions process.
3. Promoting accessible information for potential learners that is specific to practicing rural and remote medicine including information about how to become a rural generalist.
4. Messaging to potential learners the value of the RGP as an optimal training path to ensure readiness for rural practice as an ideal way to start a career in rural medicine.

Part 3: Undergraduate Education at NOSM

Building the Rural Generalist Pathway - Undergraduate: The Rural Generalist Stream (RGS)

Work to date has included:

1. Adapting the process for rural site selection for ICE and CCC for RGS learners, to ensure that rurally interested learners and those in the rural generalist stream have guaranteed access to rural placements.
2. The Theme 1 committee is addressing the presentation of rural life and practice in curricular documents, challenging the rural deficit model, and supporting a more positive and holistic view of rural practice.
3. A learner-led Rural Medicine Interest Group (RMIG) has been established at NOSM, acting as a community of practice for students interested in and aspiring to rural generalist practice.
4. Interested RMIG members were invited and financially supported to participate in the Society Rural Physicians of Canada (SRPC) 2021 conference as an opportunity to support professional identity formation and to introduce them to this national professional community.
5. Work is underway to identify expanded rural hospital/community clinical placements that could host RGS students for additional elective experience between first and second year as SEE (special education experiences).
6. A proposal is being developed to support formal mentorship by rural clinicians for RGS learners as a core part of the RGS.

Future work includes:

1. Focussing on the development of novel and creative learning opportunities that enhance rural generalism across UME.
2. Ongoing understanding of and addressing barriers to rural elective opportunities in order to expand access to undergraduate rural electives. Enabling positive exposure to rural generalism for non-RGS learners will support the RGP at the postgraduate level.
3. Ongoing understanding of and addressing barriers for rural generalist faculty to become visible to NOSM students through participation at academic opportunities will be addressed.
4. Exploration of a direct and seamless path from undergraduate to postgraduate rural generalist training to ensure transition along a rural generalist path has begun and will continue.

Through the COVID19 pandemic, NOSM has delivered its core curriculum virtually. This experience has provided the opportunity to consider supporting learners from rural and remote communities to stay in their

home community whilst pursuing NOSMs formal academic program. This may broaden the appeal of NOSM for health care professionals in rural communities who be able to work part time while attending medical school remotely.

Part 4: Postgraduate Education at NOSM:

Opportunities to support the Rural Generalist Pathway – Postgraduate

Residents in Family Medicine can choose a rural stream and be situated in that rural site for all of their Family Medicine training in each of the two years of Family Medicine training.

Standard postgraduate Family Medicine residency training at NOSM includes 4 blocks of Rural Family Medicine training (two in each of two years). The Rural Stream training sites at which learners can be placed for much of their training includes six months of rural family medicine training in each of the two years. The Remote First Nation Stream provides 16 weeks of core family medicine training in a rural site, however rather than an additional 8 weeks of family medicine, it provides an additional 4 weeks of internal medicine and an additional 4 weeks of mental health training as compared to either the rural family medicine or family medicine training programs.

More information about the training sites and opportunities can be found here:
https://www.nosm.ca/familymedicine/our-streams-at-a-glance/

There are opportunities for postgraduate family medicine trainees to participate in academic days and to do simulation-based training (SIM) through Health Sciences North and the Emergency Department and at Thunder Bay Regional Health Science Center (TBRHSC) as part of their pursuit of competency based education.

There is opportunity for any family medicine resident to access several positions through the enhanced skills funding program including Anesthesia, Emergency Medicine, Care of the Elderly and Surgical Obstetrical Skills. In addition, there is the opportunity to access up to one year of funding through the self-directed enhanced skills program for continued training.

Opportunities to support the Rural Generalist Pathway - Postgraduate

Work had been progressing in the Family Medicine Residency program to:

- ✓ Consider the creation of a path for undergraduate Rural Generalist Pathway students to move direct from NOSM UME to NOSM Family Medicine Residency Rural Stream without having to match through CaRMS;
- ✓ Structure a formal Rural Generalist path while maintaining good, rural positive experiences for all residents of NOSM, as well as elective residents;
- ✓ In 2021, residents in the Rural Family Medicine Stream as well as those in the Remote First Nation Stream were invited to participate in the SRPC conference at a subsidized rate in order to create an opportunity for a professional community for these learners.

Additional PGME Activities to support the RGP 2021-2023:

1. Structure simulation-based education and other academic opportunities, including skills-based workshops, specifically for the Rural Generalist learners, supported by rural generalist faculty and inclusive of rural generalist path UME learners.
2. Provide additional leadership training for Rural Generalist pathway postgraduate learners.
3. Ensure that the school faculty understands that the acquisition of skills for rural practice requires robust high-volume urban rotations in which learners are supported to acquire necessary skills. Ensure access to specialist rotations for skills development (including ICU).
4. Ensure adequate training and assessment to support competency development aligned with the "Key Features and Priority Topics" of the Canadian Family Physicians of Canada (CFPC). This could include:
    a. Privileged access to training opportunities.
    b. Privileged access to conferences and specific skills education (AIME, ALARM, SRPC annual conference).
    c. Specific education related to Indigenous communities and peoples that includes mentoring by an Elder, learning about traditional healing and medicines and a strong focus on cultural safety and sensitivity.
    d. Guarantee of additional enhanced skills time at completion of the standard two-year program to be able to enhance skills in line with the needs of future community practice setting. While NOSM can provide the education for this time, it requires committed funding from government.
    e. Review of policies that limit access to some rotations to specialty residents only and ensure that there is opportunity for rural generalist residents to pursue competency-based learning (e.g. ICU).
5. Ensure that every resident interested in rural generalism has a rural generalist faculty mentor.
6. Develop a specific focus for Rural Generalist Family Medicine Residents on strategies to thrive in rural practice including personal resilience and a deep understanding of the rewards of rural practice.
7. For those interested in academic careers, provide support and opportunity to pursue teaching, leadership and research in rural communities.

In addition, it is important to ensure that electives opportunities are available for external postgraduate learners who are interested in rural generalist experiences in support of potential future rural generalist work.

Part 5: Supporting Rural Generalist Clinical Faculty in Practice:

Continuing Education Professional Development:

Work to date has included:

The Covid19 pandemic enabled new opportunities for NOSM Continuing Education and Professional Development (CEPD) to support rural clinicians; and this opportunity was embraced in the NW region of

the NOSM catchment through COVID19 emergency department simulations. This work was presented at the Canadian Conference on Medical Education in spring 2021, and has led to a simulation program run through TBRHSC, but supported by NOSM CEPD entitled "Nightmares in the North".

The CEPD office recognizes the need to reach and support distributed faculty, considers virtual access to education as a priority and is working on ensuring that content is available virtually to all faculty to support their teaching and education roles. Additional examples of enabling virtual access to educational opportunities included the 2021 Northern Lights leadership conference with virtually accessible modular content post conference, COVID 19 clinical rounds delivered across NOSM's catchment as a support to distributed faculty, and the evolving "leadership rounds" which will be delivered June 8 to Nov. 9th 2021. Northern Constellations 2021 faculty development conference was also delivered virtually ensuring opportunity for rural faculty participation.

In addition, the following will be an important support to rural generalist faculty:

1. A targeted needs assessment regarding clinical skills learning to determine what learning can be driven locally and what can be offered through the expertise of the Office of CEPD centrally and virtually.
    i. One example is furthering the ER skills simulations offered through the Office of CEPD and in partnership with academic health sciences centres.
2. As a Rural Generalist Pathway is built from undergrad to postgraduate training there may be an opportunity to identify how specific skills-based workshops and simulation-based training could be adapted so that learners from UME to PME to clinicians in practice could train together and build a community amongst one another.

Faculty Affairs / Office of Physician Workforce strategy:

In addition to the opportunities noted in CEPD above, NOSM has an opportunity to better support its Rural Generalist Clinical Faculty through several elements of advocacy work which have begun and which must continue.

1. Continued advocacy for:
    a. appropriate remuneration with consideration for a complement designation, breadth of skill set, expectations of teaching, leadership, research and QI to improve health outcomes, has been initiated with letters to Negotiations Task Force (July 2020), Primary Care Working Group (July 2020), and the Rural and Northern Physician Group Agreement (RNPGA) submission to negotiations task force (March 2021).
    b. a clear and straightforward path to skills enhancement including both income protection and an allocation of additional locum days support for periods of re-training (noted in Primary Care Working Group submission July 2020) RNGPA submission to negotiations task force (March 2021).
    c. funding to support succession planning through recruitment of rural generalist physicians to replace departing clinicians, but to do so prior to departure in order to improve integration and enable effective succession (RNPGA submission to negotiations task force).

2. Consideration for the approval of the recommendations completed by consultant, Sue Berry, to determine options for regional clusters of physicians through which they could be "joined up" for clinical service, education and research. This work too, will continue to be refined.

Future work will include:

a. Work with the Ministry of Health, OMA, OCFP, and other appropriate organizations to create:
   i. Access to structured, remunerated mentorship for the first 6 – 12 months of practice with a strong policy framework and training for mentors and mentees.
b. Supporting leadership for joining up into a network of rural generalists for CEPD, shared training and mentorship.
c. Encouraging career options following rural practice – keeping options open for academic contributions, research and teaching both for those who stay in rural practice and for those who choose to transition out of rural practice and have contributions to make to the academic environment.
d. Development, implementation and funding of a coaching and mentoring program which is formally structure to support learners along the path to becoming rural generalists.

There is also a role for NOSM's Clinical faculty to support the Rural Generalist Pathway in the following ways:

1. Work with NOAMA and the LEG groups to understand and socialize the concept of the Rural Generalist Pathway with communities of clinical faculty.
   i. For rural faculty, this will involve understanding what it means to be a rural generalist including role in community-based needs assessment, local leadership, academics, and the need to "join up" to decrease fragility
   ii. For urban specialty faculty, this will involve understanding their role in training the Rural Generalist Pathway learner for broad skills acquisition.
2. Work with Faculty Affairs and the Division of clinical sciences to determine best way to denote Rural Generalist faculty.
3. Work with Academic Health Sciences and NOAMA on the development of the academic career elements of the Rural Generalist Pathway, including support for distributed research capacity.

Additional Elements in the Successful Implementation of a Rural Generalist Pathway

Beyond NOSM, The Rural Generalist Pathway development will require **Government** to:

1. Commit to funding a specified number of entry level positions in an RGP pathway for MD training, onto protected new positions in residency and ultimately to become dedicated practicing rural clinicians and faculty with transition-to-practice mentorship and CPD "fit for purpose".
2. Understand the added economic and social value of the rural generalist family physician for rural and remote Northern Ontario communities and the opportunity that the Rural Generalist Pathway affords to create local stability and capacity to enable movement past fragile locum dependent health care services to truly flourishing health workforce.
3. Move beyond inflexible contracted physician complement designations to a model that allows

for flexible community-based capacity planning and workforce design.

4. Support the development of physician leadership for rural and remote communities.

It will require **physicians** in rural and remote communities to:

1. Provide local health system workforce leadership to plan, build capacity, and support transformation of the local health care system to a service that is less fragile and more resilient.
2. Embrace their role as academics and champions of the Rural Generalist medicine.
3. Continue to embrace a "collective generalism" and, as a community of clinicians, undertake the training and education necessary to adapt to the needs of the community.
4. Continue to be part of the continuum of education from training, to working in practice to training new learners as part of an assurance of future workforce.

Supporting the Success of the Rural Generalist Pathway: Recommendations

The development of a Rural Generalist Pathway to support "fit for purpose" training of rural generalist family physicians, supported by robust community-based workforce service planning is an opportunity for NOSM to support the communities that make up its campus, ensure its future rural clinical teaching workforce and continue to be a strong partner in the realization of health equity for the communities and citizens of Northern Ontario that underpins the NOSM Social Accountability mandate (Appendix D).

As the Rural Generalist Pathway is developed and formalized within NOSM, there is much work that can be done to support learner exposure to rural communities and a rural generalist career, and to support current rural family physician faculty to develop the leadership skills and an academic career that can sustain them in practice. Incremental changes to support a stronger, more resilient rural workforce will not be delayed in their implementation while awaiting the complete implementation of the Rural Generalist Pathway.

There are two elements that will specifically support the success of the RGP:

1. A responsible lead to support the path within NOSM:
    a. Queensland has established co-directors for the Rural Generalist Pathway, and NOSM will need to consider lead position(s) and potentially resourced office, such as an "Office of Rural Generalist Family Medicine and Rural Workforce Planning". The role of this office and lead position would be to drive the strategy within NOSM to support the development of this path, as well as the work external to NOSM in workforce planning and service design.
2. Clarity of the role and identity at the end of pathway.
    i. The value in the Queensland model has been the ability to ensure that learners "begin with the end in mind" or in other words, that they have a clear understanding at the outset of the role, the responsibilities, the support and the incentives that are part of the Rural Generalist career. In order to be able to invite learners onto the rural generalist path with a clear career destination that has a different cachet than is the current reality, there is work that will need to be done with the MOHLTC and funders to create a well-articulated and incented model to which learners can aspire.

Summary

The Rural Generalist Pathway, built on the model that has been successful in Australia, but tailored to both the Northern Ontario and Canadian contexts (Appendix E) is a pathway with several potential points of entry and through which tailored, specific education opportunities, mentorship, and support in practice, can enable skilled clinicians to become the Northern Ontario Rural Generalist physician workforce. Funding which supports the varied expectations of the Rural Generalist including broad clinical work, teaching, local leadership and research, aligned to a faculty designation has the potential to create a career pathway to which learners can aspire.

The development of networks that "join up" clinicians for service delivery, teaching support, shared mentorship and coaching will help to assure the resilience of the clinical community in service to the populations for whom they are providing care.

The Rural Generalist Pathway will be aligned to community needs, both current and anticipated and a robust plan for community needs assessment and capacity planning must be developed in parallel to the Rural Generalist Pathway in order that training and service can be closely aligned.

The development of the Rural Generalist Pathway requires NOSM, government and community-based clinicians to collaborate to build, fund and sustain the path in support of the health and health equity of Ontario's Northern rural and remote communities, and in support of the future teaching capacity of NOSM's distributed model of education.

The approach of building a pathway, some of the steps of which were implemented almost immediately, together with a robust evaluation strategy to guide future evolution is an opportunity that should not be fully explored to build on the successes since the inception of the RGP. The fulfillment of NOSM's social accountability mandate to the communities that make up its campus depends on it.

References:

1. The Queensland Health Rural Generalist Pathway: providing a medical workforce for the bush; Rural and Remote Health · April 2013 accessed from: ttps://www.researchgate.net/publication/288633000

2. Rural and Northern Health Care Panel downloaded from: http://www.health.gov.on.ca/en/public/programs/ruralnorthern/docs/exec summary rural northern_EN.pdf

3. Communication of data from Health Force Ontario to NOSM Physician Workforce Strategy office.

4. Health Workforce Australia: Rural Medical Generalist DRAFT National Framework. 2013.
5. Australian College of Rural and Remote Medicine. Cairns Consensus Statement on Rural Generalist Medicine: improved health for rural communities through accessible, high quality healthcare: Australian College of Rural and Remote Medicine; 2014.

6. Rural Road Map for Action downloaded from 20Directions%20ENG.pdf

7. Personal communication to NOSM from Denis Lennox

8. From presentation to Summit North by Dr. Denis Lennox

9. Downloaded from: https://rrmakingitwork.eu/ https://www.researchgate.net/publication/288633000 The Queensland Health Rural Generalist Pathway providing a medical workforce for the bush.

10. International Approaches to Rural Generalist Medicine – a scoping review Human Resource Health. 2018; 16: 62. Published online 2018 Nov 21. doi: 10.1186/s12960-018-0332-6

11. Schubert et al; (2018). International Approaches to Rural Generalist Medicine. *Human Resources for Health 16*; article 62 downloaded from: https://human-resources-health.biomedcentral.com/articles/10.1186/s12960-018-0332-6

12. Australian College of Rural and Remote Medicine. Cairns Consensus Statement on Rural Generalist Medicine: improved health for rural communities through accessible, high quality healthcare: Australian College of Rural and Remote Medicine; 2014.

13. "Increasing the number of rural physicians" https://www.cmaj.ca/content/178/3/322

14. "Pathways to rural family practice at Memorial University" https://www.cfp.ca/content/64/3/e115

15. "Does rural generalist focused medical school and family medicine training make a difference? Memorial University of Newfoundland outcomes" https://doi.org/10.22605/RRH4426

16. "From pipelines to pathways: The Memorial experience in educating doctors for rural generalist practice" https://doi.org/10.22605/RRH4427

Appendix A: Defining the Rural Generalist

In small communities across Northern Ontario – like Wawa, Atikokan, Marathon, Iroquois Falls, and Temiskaming Shores - family physicians provide care in the clinic, in the ER department, care for their inpatients, deliver babies, provide procedural care, and many have additional specific skill sets in anaesthesia, general surgery, obstetrics, or addiction medicine. These family physicians provide the kind of comprehensive care individually and collectively that meet the majority of the needs of the population that the physicians serve. These family physicians work in ways that are distinct from family physicians in many urban settings and are **rural generalists.**

The importance of defining rural generalism has led to the two international summits in recent years in which NOSM was an important participant – one in Cairns Australia in 2013 and one in Montreal in 2015.

A rural generalist can be defined as **primary care physician, general practitioner (GP), or family practitioner/family physician, with 'recognized skill sets and qualifications, credentialed to provide primary care, hospital, emergency and population health care as well as one or more areas of advanced specialized practice in a rural, remote and/or regional setting'** (1).
This definition is consistent with the Cairns Consensus Statement (May 2014), which describes Rural Generalist Medicine RGM as 'the provision of a broad scope of medical care by a doctor in the rural context that encompasses the following:

- Comprehensive primary care for individuals, families and communities;
- Hospital in-patient and/or related secondary medical care in the institutional, home or ambulatory setting;
- Emergency care;
- Extended and evolving service in one or more areas of focused cognitive and/or procedural practice as required to sustain needed health services locally among a network of colleagues;
- A population health approach that is relevant to the community;
- Working as part of a multi-professional and multi-disciplinary team of colleagues, both local and distant, to provide services within a 'system of care' that is aligned and responsive to community needs'.

Much work has been done, particularly in Australia, in close partnership with government, to define a Rural Generalist Pathway - from recruitment of medical students through to completion of training - as well as appropriate payment, incentives and support for retention and practice.

NOSM recognizes the need to train rural generalists – family physicians who can meet the needs of the communities they serve – through a pathway from recruitment to undergraduate training, through postgraduate training to ongoing education and training once in practice.

Appendix B: The Rural Generalist – Background and Fit for NOSM

Background:

In the spring of 2020 the Board approved the **proposed draft** NOSM Challenge 2025 Strategic Plan with the four Strategic Directions and four Strategic including as the first priority, the transformation of health human resources. NOSM's aspiration in this strategic priority is to include "a transformative approach to the planning and delivery of workforce supply which eliminates the gaps in Northern Ontario Health Human Resources". Additionally, the draft strategic plan proposes to pursue innovation in health education including the development of educational pathways such as the Rural Generalist Pathway and the Indigenous Health Pathway.

This project is a "whole school initiative" that will require the leadership of all portfolios - from admissions through UGME, PGME to Faculty Affairs and CEPD - and will include stakeholders from our external partners and communities; with special attention to our Indigenous and Francophone partners, academic health sciences network partners and other academic partners.

Academic Principles:

The RGP aligns with the following academic principles:

***Integration*:** Integration is the combination and interaction of individuals, groups and programs around common purposes to create meaningful experiences and address life-long learning and the continuum of education of health professionals.

Community Engagement: Community engagement is the conceptual and pragmatic understanding of the dynamics of communities in Northern Ontario (geographical, social, cultural, linguistic and communities of practice) and the creation of meaningful, enduring partnerships involving all Northern Ontario communities and NOSM, the hallmark of which is integrated networks of education and research.
(meeting a priority need of Northern Ontario rural communities,

Generalism: Generalism is a broad, holistic and integrated view and approach to activities, values and knowledge in educational, organizational and patient care activities.

Continuity: Continuity encompasses an approach to educational experiences from undergraduate through to continuing health professional development, as well as research that recognizes transitions between professional educational stages in a synergistic way

Professional Identity Formation: "Each individual's journey from layperson to skilled professional is unique and is affected by "who they are" at the beginning and "who they wish to become." Identity formation is a dynamic process achieved through socialization; it results in individuals joining the medical [health professional] community of practice."

The goal of the Rural Generalist Pathway

The overarching goal of the Rural Generalist Pathway is to align training with community need, create a career that is appealing in the short and long term, and to build and support a robust Rural Generalist workforce for our Northern Ontario communities as part of the overall physician workforce strategy for Northern Ontario.

This pathway, a model of educational continuity, will identify interested students prior to medical school

and capable learners early in undergraduate medical education, support skills development and attachment to rural communities from undergraduate through postgraduate training. For rural generalist family physicians it will offer support tin practice, through ongoing continuing professional development and sustainable funding models that recognize the breadth of clinical work and teaching. This dedicated and specifically tailored training to support the needs of those communities is grounded in the success of the Queensland model and replicates elements of the Memorial University of Newfoundland which has demonstrated success in the Canadian context through a similar pathway.

The Rural Generalist Pathway is not solely about the clinical workforce, however, but is also about building a resilient and flourishing rural academic community of clinical teachers that will sustain NOSMs distributed clinical education model. The importance of this cannot be understated as the number of skilled rural generalist clinicians involved in medical education is a factor that supports and enables learners to envision that same career for themselves.

An article in CMAJ summarized entitled ""Increasing the number of rural physicians" by Dr. James Rourke, highlighted the factors that make rural practice attractive to physicians and these are noted in appendix 1. In addition, the article provided some understanding of the features which enable physicians to pursue a rural generalist career, and also identified factors to be mitigated (appendix 2). The Rural Generalist Pathway will incorporate as many of the attractors as are under NOSM's control and through the Office of Physician Workforce Strategy will work to mitigate the challenges.

Box 1: Factors affecting the number of physicians in rural practice

Education factors

- Admission of students from rural areas to medical school
- Rural medical education
- Continuing professional development and education
- Positive attitude toward rural practice

Practice factors

- Rural group practice
- Arrangements for time off and locum relief
- Rural clinic and hospital facilities with multidisciplinary resources and support
- Regional support
- Medical students and residents included in practice

Financial factors

- Payment for enhanced skill set
- Payment for on-call and after-hours work
- Return-of-service education grants
- Return-of-service contracts
- Financial incentives

Regulatory factors

- Licensure
- Practice restrictions
- Hospital privileges

Community factors*

- Welcome to the community and employment for spouse or partner
- Education and safety for children
- Leisure activities, including recreation, cultural and social opportunities
- Geography, environment, community size, isolation and transportation

Personal factors

- Rural background, experience, interest
- Spouse or partner's rural background, experience, interest
- Family location, support, interest

*Some community factors cannot be changed; however, some can be modified with overall community-enhancement activities or financial compensation.

Interplay of positive (solid arrows) and negative (dashed arrows) factors that affect the number of medical graduates interested in rural practice.

James Rourke, MD MCLSci CMAJ 2008;178: 322-325

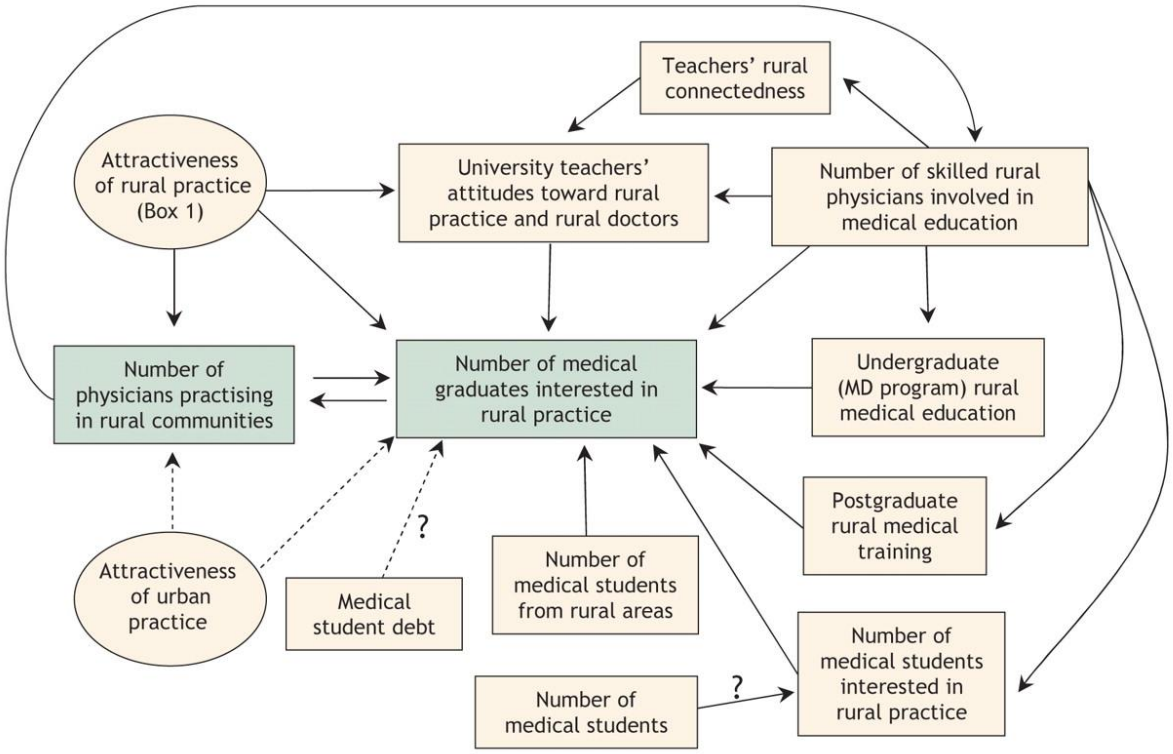


Figure 3: Interplay of positive (solid arrows) and negative (dashed arrows) factors that affect the number of medical graduates interested in rural practice.

James Rourke, MD MCLSci CMAJ 2008;178:322-325

Appendix C: Definitions and Data:

Northern Ontario: Ontario Census Divisions included in the Ontario Health North Region. When referring to the region of Northern Ontario, only those communities included in the Ontario Health North region are to be included.

Rural: Communities with a Rural Index Ontario (RIO) score of 40 or greater. When referring to a rural community, placement, program or the like, only those communities with a RIO score greater than 40 are to be included.

Rural Northern Ontario: Communities that fall within the defined scope of Rural and Northern Ontario. When referring to a rural Northern Ontario community, placement, program or the like, only those communities with a RIO score greater than 40 and which fall within the Ontario Health North regions are to be included[1].

Informing the Rural Generalist Pathway: Data

As noted previously, the current NOSM data would suggest that while approximately 50% of NOSM undergraduate learners go on to practice in Northern Ontario, only 10% are entering practice in Northern Ontario's rural communities. [https://www.nosm.ca/our-community/nosm-physician-workforce-strategy/]

The needs of Northern Ontario remain high and at the time of this writing there is a need for at least 86 full time equivalent rural generalist family physicians in rural Northern Ontario. This reflects historic contract positions that are available, and not necessarily the current need of the population, particularly the needs of remote indigenous communities. This number of positions also does not take into consideration the broader clinician workload expectations including the need to engage in quality improvement, local and system leadership and teaching for NOSM undergraduate students in particular. All of these work expectations need to be considered as part of sustainable workforce predictions.

[1] Berry, S. Assessment of Clinical Teaching Capacity Report. August 2020.

Appendix D: Evaluation and Continuous Quality Improvement Strategies for the Rural Generalist Pathway

Formation of the RGP Evaluation and Research Advisory Group has been established to support a robust evaluation process of outcomes in recruitment to and retention in rural communities in NOSM's catchment, and impact on service delivery to citizens of rural, remote and indigenous communities.

In addition to these two ultimate outcome measures, additional metrics have been established through the development of Objectives, Key Results (OKR) and Key Performance Indicators (KPIs) to support NOSM's strategic direction. An evaluation of the RG Pathway will include:

1. Impact on teaching and research capacity for NOSM.
2. Measurement of new research focused on the health needs and priorities of rural communities.
3. Measurement of intake of students to the rural generalist pathway.
4. Measurement of retention of students on the path from Undergraduate MD through postgraduate training through to place of practice.
5. Impact on intake of students from other UG MD programs to the RG Pathway for residency.
6. Perception of rigour of Rural Generalist Pathway on attainment of competencies at completion of residency.
7. Impact of development of the Rural Generalist Pathway on rural generalist faculty, including perception of value of role to NOSM of Rural Generalist faculty designation.
8. Through improved research a better understanding of needs and priorities of rural, remote, Indigenous and francophone communities and people.
9. An established performance and evaluation process provides value to government:
    a. Short term decrease in locum utilization and inherent costs
    b. Longer term decrease in recruitment incentives (due to improved retention)
    c. Retention and stability of workforce with improved patient outcomes
    d. Improvement in the health of the population overall with anticipated long-term cost savings

The evaluation should also include feedback on the elements of the path in such a way as to support iterative improvement in each step of the pathway.

Finally, parallel research that examines reasons that NOSM learners might choose to go, or not to go, to work in the rural communities of NOSMs campus should be conducted so that the issues beyond training that are barriers to practice can be addressed.

Appendix E: Some History:

2002: In 2002 the Northern Ontario School of Medicine began as a response to the ongoing challenges of physician human resource shortages with a mandate to be "of the North, for the North, by the North", and with the goal of improving the health outcomes of the population of Northern Ontario through better access to well-trained health care professionals.

August 2009: The Ontario Government established the Rural & Northern Health Care Panel to provide recommendations to the government on how to better coordinate the delivery of health care services in Ontario's rural and northern areas. The Panel's executive summary to the Rural and Northern Health Care Report, released in 2011, can be found here.(1)

February 2017: the CFPC and SRPC jointly release the Rural Road Map for Action which called for better supports for Rural Generalists across the country and from education into practice. https://srpc.ca/Rural_Road_Map_Directions.

January 2018: NOSM, together with Health Force Ontario and the Northeast and Northwest LHIN's hosted "Summit North" which launched the Northern Physician Resources Task Force, including a visit by Dr. Denis Lennox to explore the Rural Generalist Pathway concept in the Ontario context.

January 2019: The "Making it Work" conference was hosted by NOSM. This summit brought together several circumpolar countries to discuss their successes in recruiting and retaining physicians in rural and remote places.

August 2019: The Rural Generalist Pathway draft document was released and a series of conversations with rural faculty were initiated.

March 2020: Assistant Dean of Physician Workforce Strategy role launched and work on formalizing the Rural Generalist Pathway was initiated.

November 2020: Strategic Plan 2020-2025 is launched with the Rural Generalist Pathway embedded in the work as an innovation in education in support of the "Transformation of Health Human Resources" priority.