DEVELOPMENT OF AN EVALUATION FRAMEWORK FOR THE LOCAL EDUCATION GROUPS (LEGs) INITIATIVE:

PART I: INTERVIEWS WITH LEG LEADS

Research Report (Final)

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DEVELOPMENT OF AN EVALUATION FRAMEWORK FOR THE LOCAL EDUCATION GROUPS (LEGs) INITIATIVE

(The LEGs Evaluation Project)

Part I: Interviews with LEG Leads

Submitted to the

Northern Ontario Academic Medicine Association

(NOAMA)

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DEVELOPMENT OF AN EVALUATION FRAMEWORK FOR THE LOCAL EDUCATION GROUPS (LEGs) INITIATIVE

Part I: Interviews with LEG Leads

EXECUTIVE SUMMARY

November 2014

Alternative Funding Plans (AFPs) in Ontario support physicians who provide clinical teaching to medical students and residents. The Northern Ontario Academic Medicine Association (NOAMA) administers the AFP for the clinical faculty of the Northern Ontario School of Medicine (NOSM), known as the Local Education Groups (LEGs) Initiative. This report presents the findings of interviews conducted January-April 2014 with nine physician Leads of LEGs implemented in the early rounds of funding. The study was designed to inform the development of a draft evaluation framework for the LEGs initiative, as well as provide NOAMA and partners with interim data on the progress of the initiative.

Results. For participants, clinical teaching, or “delivering the NOSM curriculum” per contractual agreement, was understood as the main purpose of the LEG. LEG progress varied, depending in part on local factors such as pre-existing organization and cohesion, the size of the LEG and organizational complexity, physician shortages, model of remuneration, individual physician characteristics and interests, and idiosyncratic factors. As the first wave of LEGs “broke trail” and helped NOAMA work through organizational start-up issues and provide templates (e.g. sample governance agreements), newer LEGs would likely have different, but easier, start-up experiences.

Activity domains. Seven domains of activity were described by participants, including administrative activities (activity tracking and remuneration, governance and membership engagement, and infrastructure development); “delivery of the NOSM curriculum” or base medical education activities; expanded/enhanced medical education (viewed by most participants as non-LEG activity); program development (including development of postgraduate residency programs); professional development (including continuing medical education (CME), faculty development, mentoring, recognition and awards, service and leadership), research, scholarship and innovation (Innovation Grants); and recruitment, retention, and community engagement.

With the exception of base medical education, each LEG varied in terms of which domain(s) were their current focus. However, even if not currently involved in a particular type of activity (e.g. research), participants indicated ambitions to include the other activities in the future. In some cases, there were increases in academic activity attributed to the LEGs, such as increases in learner placements; new education modules, and locally offered continuing education and professional
development (CEPD). Since becoming a LEG, about half of the groups represented had members succeed in obtaining innovation grants.

Benefits and Challenges of becoming a LEG. The key benefits described by participants in the study were better local organization and collective delivery of medical education. Part of this improvement was attributed to the requirement that members hold a NOSM faculty appointment. And while many LEGs emphasized the continuity of medical education rather than major changes resulting from the new LEGs, all participants indicated that the LEG had improved the situation in their community/department, and that greater impact and benefits could be anticipated over time. Other benefits included flexibility and fairness in use of funds; encouragement and support for research and innovation; community benefits (enhanced status of clinical teaching in the community; community acceptance of learners), direct and indirect clinical recruitment, and support for special projects.

However, LEG activity was frequently described as “extra” activity, which made it vulnerable in a hierarchy of priorities, where clinical services came first, clinical teaching was second, and all other academic activities were third. Further, many participants described the start-up process as exhausting, with substantial energy being spent in the organizing process. Burn-out of leaders and passivity of members were a challenge for some LEGs.

Identified challenges included organizational and administrative challenges; challenges for expanding academic activity, and challenges for research, scholarship, and innovation. Challenges related to NOAMA and NOSM were also identified. There was a perception NOAMA made frequent changes in rules and program requirements, and that there was insufficient consultation with the LEGs prior to making changes. For NOSM, a key challenge was the fact that its staff and systems have not yet adapted to working through the LEGs.

Data collection and reporting. The development of systems to collect and report data on physician activity has been a major challenge for other AFPs, and it was no different for the LEGs. At the time of the interviews, few LEGs were collecting data on program activities; for some, even confirming and remunerating for teaching activities was a major challenge, let alone documenting other academic activities. The exceptions were those LEGs using point systems, which in this study was limited to hospital department LEGs. They differed on which activities were tracked, as well as whether tracking was limited to activities paid by the LEG, or whether all academic activity (regardless of funding source) was tracked.

Recommendations for NOAMA. Participants made several recommendations on how NOAMA might improve the LEGs initiative. A majority of recommendations centered on supporting LEGs with start-up and administrative activities. More guidance and structure was desired to reduce the
amount of confusion and energy spent during start-up. Participants also wanted NOAMA to clarify reporting requirements; provide reporting templates; provide or support the creation of tools to help LEGs track member activities; and provide more feedback to the LEGs on their progress.

Another group of recommendations focused on funding, including sufficient support for administrators, and making the LEG funding formula sufficiently flexible and responsive to the diversity and quantity of activities undertaken by LEGs (e.g. more professional development funds for LEGs developing new post-graduate programs). Research funding, in particular, was felt to be insufficient to help LEGs develop the capacity needed to achieve success in applying for grants, conducting research, or publishing and disseminating results. A related issue was availability of funding for protected research time.

A third group of recommendations centered on enhancing communication. While participants in general felt that NOAMA was very responsive to inquiries, more two-way communication with NOAMA would be better; recommendations were to facilitate and support more inter-LEG networking so that LEGs could learn from one another. LEG Leads were clearly enthusiastic about the meetings organized by NOAMA, and offered suggestions for additional knowledge exchange opportunities. Other possibilities included sharing their experience and assisting new LEGs become operational.

In addition to participants’ recommendations, the research team made seven recommendations for NOAMA for evaluation planning: 1) Allow 3-5 years to prepare for evaluation and establish data collection and reporting systems. 2) The evaluation framework must be dynamic. 3) The evaluation framework must be flexible. 4) Explore the feasibility of evaluation plans tailored to different types of LEGs; 5) Qualitative evaluation will remain important. 6) Provide technical assistance to the LEGs to support evaluation planning. 7) Improve communication with and among the LEGs.

**Recommendations for NOSM and NOAMA.** Participants identified four main recommendations requiring the cooperation of NOSM and NOAMA. First, participants described the need to work with NOSM to develop a sustainable model of rural research or “distributed research” that included collaboration and networking, and to strengthen research development and support services. Second, some participants suggested that in order integrate all academic activities, NOSM should pay non-AFP funded activities through the LEG, rather than to individual physicians. Third, because of the lack of perceived benefit to academic promotion at NOSM, participants recommended that NOSM and/or NOAMA create some tangible benefit to promotion. Participants also suggested that NOSM and NOAMA could facilitate activities that would provide for recognition and awards to clinical faculty.
The research team also made two recommendations, based on informational meetings with a number of staff at NOSM, in addition to the interviews with LEG Leads. First, there is a clear need for NOSM to familiarize all staff with the AFP, the role of NOAMA, and the LEGs Initiative, and for NOSM leadership to signal their support of the LEGs. Second, NOSM, NOAMA and the LEGs need to work together to identify and resolve systems issues and communication challenges; this will help NOSM achieve its medical education goals and reduce administrative load on the LEGs.
DEVELOPMENT OF AN EVALUATION FRAMEWORK FOR THE LOCAL EDUCATION GROUPS (LEGs) INITIATIVE

(The LEGs Evaluation Project)

Part I: Interviews with LEG Leads

November 2014

I. INTRODUCTION

Since 2000, the Ontario Ministry of Health and Long-term Care (MOHLTC) and the Ontario Medical Association (OMA) have supported the clinical teaching of medical students and residents physicians at Academic Health Sciences Centres (AHSCs), through alternative funding plans (AFPs). As a new medical school, the first AFP for the clinical faculty at the Northern Ontario School of Medicine (NOSM) was signed in 2009, as a negotiated agreement between the MOHLTC, the Ontario Medical Association (OMA), the Northern Ontario School of Medicine (NOSM), and the Physician Clinical Teachers Association (PCTA).[1] In 2010, the Northern Ontario Academic Medicine Association (NOAMA) was established to administer the NOSM AFP.[2]

Although AFPs have been operating at other Ontario medical schools for many years, NOSM’s distributed medical education (DME) model requires a different approach to supporting clinical faculty.[3,4] The NOSM AFP is largely being implemented through self-organized groups of NOSM clinical faculty - known as Local Education Groups (LEGs) - who are responsible for providing selected medical education services at the undergraduate and/or postgraduate level.

AFPs are also intended to support the growth of an academic culture; all NOSM AFP members are required to hold a faculty appointment at NOSM, and over the past five years, the number of NOSM clinical faculty has nearly doubled, from an estimated 700 to 1,236 individuals, with 640 of current clinical faculty members having been appointed since 2009.¹ All AFP members are eligible to apply for grant funding through the AHSC AFP Innovation Fund (funded by the MOHLTC and locally administered by NOAMA), and the Clinical Innovation Opportunities Fund (funded by NOAMA through AFP funds).

¹ As of August 14, 2014.[5] The counts of clinical faculty included interprofessional (non-physician) clinical faculty, as well as physicians from southern Ontario and other provinces. A count of physicians located in Northern Ontario on the current clinical faculty list yielded 1,029 physicians of all ranks (Lecturer, Assistant Professor, Associate Professor, and Professor), or 83% of all listed clinical faculty members.
Although individual faculty members can participate in the AFP without joining a LEG, LEGs can receive additional funds for professional development, program development, and research development. The purpose of the LEGs is to provide an organizational structure to facilitate the collective delivery of medical education in NOSM’s partner communities, as well as the development of an academic culture. Thirteen groups responded to the first call for LEG proposals in 2011; by 2013, when this project began, there were 23 operational LEGs, with another 17 under development. And of the 870 physicians participating in the AFP, 664 had joined a LEG (76%).

There are a number of differences between the NOSM AFP and other AFPs in Ontario. First, most AFPs include funds for “clinical repair” that are intended to offset lost clinical income from time spent with learners. In this way, clinical service delivery is considered a significant activity domain of other AFPs. However, in northern Ontario, clinical income is already supplemented through other rural and northern focused alternative payment or alternative funding plans, so the NOSM AFP does not cover funding for clinical services. Although the funding model itself is beyond the scope of this study, it should be recognized as a significant structural factor that has impacts on the priorities of the clinical faculty and the LEGs.

Among the LEGs, the division of clinical and academic activities into different funding envelopes, combined with the generally underserviced character of the north, appears to have contributed to the kind of competition anticipated by the National Task Force on the Future of Canada’s Academic Health Science Centres (2010):

> Individual clinical faculty who teach students are paid for providing clinical services, either on a fee-for-service basis or through an alternate funding plan. While the latter may be designed to support teaching or research, in practice income from providing services subsidizes teaching. In some instances it may help to underwrite research. This can create conflict between the need to generate income, respond to escalating patient care demands with limited faculty resources, and teaching, and research and/or other academic obligations. [6]

Other differences between the LEGs model and other AFPs are the self-governing and dispersed character of the LEGs. Other AFPs were developed through existing clinical departments at AHSCs using existing administrative structures, resulting in simpler organizational requirements. For example, the Southeastern Academic Medical Organization (SEAMO) has a single governance agreement for its five member organizations.[7] In contrast, the NOSM AFP is independently administered by NOAMA through each of the 35 LEGs, each of which has its own governance agreement and organizational structure. Some LEGs, such as

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2 As of November 3, 2014, 35 LEGs were operational.

3 An OMA lawyer has provided essential support to all LEGs, including for development of governance agreements.
a Hospital Department LEG (comprised of clinical faculty of a Royal College speciality), or a Family Health Team LEG, may take advantage of existing organizational structures. But other LEGs, such as a large multispecialty community LEG, are creating new organizational structures. Apart from the additional organizational and administrative efforts required by the model, the separation also results in the need to cross institutional boundaries in collaborating with NOSM.

This report presents the findings from interviews with representatives of LEGs selected from among those that were operational as of the winter of 2013-2014. The goals of this study were twofold: First, the findings will be used developing an evaluation framework for the LEGs Initiative. Second, the study also serves as a qualitative process evaluation, providing data to NOAMA and other stakeholders on the progress of the initiative to date.

This report is organized into four main sections. After the introduction, Section II describes the methods used, and results are presented in Section III. Section IV offers some conclusions and recommendations. Appendices include (A) acronyms, (B) the question guide, and (C) an early draft of the program logic model.

II. METHODS

A formative, qualitative approach was taken to explore the perceptions of LEG Leads and identify potential domains and indicators, with the goal of using the information to develop an evaluation framework. A question guide was developed in consultation with an Advisory Committee, comprised of three members of the NOAMA Board; consultations were also held with other stakeholders from NOAMA and NOSM. LEG-related documents, including initial proposals, were also reviewed. The research protocol and instruments were reviewed and approved by the Laurentian University Research Ethics Board.

Participants. With the goal of learning from the more experienced LEGs, eleven of the 23 LEGs already implemented were purposively selected, following a maximum variation approach. The intent was to obtain representation from a range of geographic characteristics (North East and North West regions, community size) and LEG types (small community LEG, large community LEG, hospital department LEG, family health team / family medicine LEG). LEG Leads, and in some cases Administrators, were invited to participate. Recruitment began in January 2014, with nine interviews completed between January and April 2014.

Interviews. Individual semi-structured interviews were conducted with LEG Leads and one LEG Administrator. The question guide (Appendix B) was designed to elicit discussion on LEG
activity domains and deliverables; change in activities since the implementation of the LEG; issues related to data collection, reporting, and evaluation; benefits of the LEG; and Lead’s vision of success and what the LEG might hope to accomplish within the next 5 years. Participants received a copy of the interview guide with the recruitment package. Interviews took approximately 1 hour on average, but ranged from ½ hour to over 2 hours, based on each participant’s time and interest. Where permission was granted, interviews were audio recorded and transcribed. Three participants declined permission for audio recording; interview notes from the research team were merged and used in place of transcripts. Transcripts and interviewer notes were analyzed using NVivo v10, using a mix of inductive and deductive approaches to identifying themes and analyzing content.

Verbatim quotes are presented in this report, however in most cases, they have been edited for reasons of confidentiality as well as for clarity. Where audio recording was not permitted, quotes are not verbatim, but are paraphrased based on field notes and presented in a narrative style.

Limitations. The purpose of this study was to inform the design of an evaluation framework. Because it is exploratory in nature, and represents the experience of a small number of LEGs, results may not be representative of the experience of all LEGs. In particular, as the LEG model continues to evolve, a number of changes have occurred since the establishment of the first LEGs, thus the newer LEGs are likely to have a different perspective.

It is further worth noting that the opinions of the LEG Leads may not represent the opinions of the LEG membership; in many ways, the Leads have effectively been the “champions” not only of medical education in general, but also the LEG concept. On the one hand, this gives them a critical perspective that most members are unlikely to have; on the other, their role as champions could also result in a positive bias. Therefore, findings may not be generalizable to all LEG organizations members.

III. RESULTS

A. Benefits of Becoming a LEG

All participants indicated that the LEGs initiative overall had benefitted its members. But because the LEGs were still relatively new, all recognized that additional benefits that might be realized in the future, after the LEGs had matured. With a few exceptions, most indicated that their LEG had yet to have a major impact on the quantity or quality of medical education as experienced by the leaner, in part because the teaching activities, including activities related to
curriculum development, were already being conducted or had been planned prior to forming a LEG. Some viewed the LEG as a simple shift of the disbursement mechanism for the AFP funds. Others indicated that the benefits to date were mainly with the promotion of other academic deliverables. But there were a number of changes that could provide the foundation for future enhancements.

Table 1 provides a thematic summary of participant comments. Main benefits included improved organization and delivery of medical education, increased academic activity in the community, greater flexibility and fairness in the use of funds, enhanced status of and interest in teaching in the community, encouragement and support for research and innovation, and benefits to the community.

<table>
<thead>
<tr>
<th>Table 1: Benefits of Becoming a LEG</th>
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<tr>
<td><strong>Main themes and subthemes</strong></td>
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<tr>
<td><strong>Improved organization &amp; delivery of medical education</strong></td>
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<tr>
<td>Better organized</td>
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<td>Funding for administrative support</td>
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<td>Development of a collective approach to medical education</td>
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<td>Local ownership</td>
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<td>Greater consistency &amp; accountability in delivering curriculum</td>
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<td><strong>Increases in academic activity</strong></td>
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<tr>
<td>Increases in learner placements</td>
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<td>New modules / activities</td>
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<tr>
<td>Increases in locally delivered CEPD</td>
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<tr>
<td><strong>Greater flexibility and fairness in use of funds</strong></td>
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<tr>
<td><strong>Encouragement &amp; support for research and innovation</strong></td>
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<td><strong>Enhanced status of clinical teaching in the community</strong></td>
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<td><strong>Community benefits</strong></td>
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<td>Direct and indirect clinical recruitment</td>
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<td>Special projects</td>
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<td>Community acceptance of learners</td>
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It was notable, however, that a benefit to one LEG could be a challenge to another (See Section IV-C, Challenges and Suggestions). This appeared to depend on the group’s organizational starting point and the level of activity implemented or planned prior to the formation of a LEG. Perceptions of the impact of LEG funding also appeared to depend on how members were paid for their clinical services, specifically whether they were remunerated under a fee-for-service (FFS) arrangement. Finally, because of differences between specialities in how care is delivered, the impact of clinical teaching and other academic activities on clinical income could vary.
i. **Improved organization and delivery of medical education.** Participants suggested that since forming a LEG, the delivery of medical education was better organized. This was attributed in part to the LEG providing funds for administrative support, and/or reducing administrative burden on individual physicians. Others focused on the role of the LEG in creating a sense of group or collective responsibility and a team approach for the delivery of medical education, as well as a sense of local ownership. As a result, some thought that there was improved consistency and accountability in delivering the NOSM curriculum.

> It’s gotten us to review how we teach in the community, it’s had us review how we pay for teaching in the community . . . So we will probably be better off in the end having gone through this process because we’ll have more people who understand what’s going on . . . The concept of coming together as a group of preceptors to talk about things is different, we all used to just sort of teach our way, and do it quietly, and when we got the tap on the shoulder that a student was coming, we’d just say yes, and now it’s a bit more structured and organized. And so I think we’re giving a better educational opportunity to people, because we are doing it consciously, rather than just having it happen around us. (Large Community LEG)

ii. **Increases in academic activity.** Although most participants indicated that the LEG had thus far had limited (or no) impact on academic activity – it was too early in the implementation process – a few LEGs suggested that the LEG had contributed to increases in learner placements, the development of some new modules and activities, and increases in locally delivered CEPD. And even where activities may have been planned or in progress prior to the implementation of the LEG, LEG funds had positively contributed to the task.

> Before the LEG was implemented, apart from clinical teaching, we really didn’t do much else. And since the LEG funds have come and we’ve been able to set up our Education Division, we started an ultrasound program, we started a simulation program . . . So certainly the funding aspect has made a huge impact. (Hospital Department LEG)

iii. **Greater flexibility and fairness in use of funds.** Multiple LEGs appreciated the fact that since becoming a LEG, they had more flexibility in how they used AFP funds. This referred not only local determination of priorities, but also being able to shift funds as needs changed, as well as rolling unspent funds over into the next year’s budget.
iv. Encouragement and support for research and innovation. Although the LEGs varied in terms of preparedness for research, participants generally indicated support for research as a benefit of becoming a LEG. In particular, access to two Innovation Grant funds were considered a key benefit, even among some LEGs that were not yet succeeded with their applications.

The key benefit – research funding. This is very relevant to the group, we wouldn’t have gotten so far or be doing so much research without the LEG. (Hospital Department LEG)

v. Enhanced status for teaching/learning in the community. For a few participants, the main benefit of the LEG was improving perceptions among local physicians of the benefits of clinical teaching. In some communities, a history of poor organization of medical education and support for clinical faculty had discouraged some physicians from teaching. Because in part of local organization and control, in part because of other benefits such as enhanced funding for local CEPD, more physicians were willing to become involved:

The first thing is that we’re encouraging physicians to get involved with teaching, that’s one benefit. I can tell you at one time in this community, I was told that teaching was not a priority. Seeing your patients is your priority, NOT teaching . . . And I think that’s changed now . . . (Large Community LEG)

... a lot of those negative vibes have just died right out. And they SEE the benefits. They see the education coming in once a month . . . Everybody looks at this as a much more academic enterprise than we ever had. We’re not just a bunch of isolated, small town physicians. We’re part of a bigger picture, a bigger entity. And that, I think, has raised the profile of teaching and being involved in academic activities a lot more. (Medium Community LEG)

vi. Community benefits. A few participants spoke of LEG benefits as benefits to the community – both in terms of the local health care community and the general community. Some participants suggested the LEG was a kind of professional amenity that would help in
directly recruiting new physicians. Some participants also spoke of how the LEG would improve the educational experience and encourage learners to remain in the community or in the north (indirect clinical recruitment). A couple of participants discussed how the LEG start-up funds were or would be used to finance special projects that increased appreciation for the LEG (more and larger rooms to accommodate learners, new computers for physicians at the local hospital), and one participant commented that the LEG had helped the community to be more accepting of learners.

...we’ve been planning...to carry on with a sort of reserve fund to be able to be used for special projects. I think that improves the profile of the LEG, so physicians then see that the LEG is contributing this to their office or the hospital, it makes everybody feel a bit better about there being a LEG here as well. (Medium Community LEG)

**B. Activities and Innovations**

LEG activities identified by participants are summarized in Table 2. LEG activities, to most participants, were simply those activities that were directly funded through the LEG, but also included activity (remunerated or not) associated with the development and administration of the LEG (e.g. time and effort of the LEG Lead, governing bodies, and members). In practice, this was most often teaching or “delivering the NOSM curriculum,” which had not changed to any significant extent since the formation of the LEG.

Most LEG-related activities pre-dated the formation of the LEG, and the LEGs were viewed as too recent to have resulted in major impacts. Another point that some participants made was that they had been teaching a long time already, and that simply changing the payment mechanism didn’t have a major impact on their activities.

What was considered a “LEG activity” could vary greatly from group to group, because the activities specified in LEG proposals and funded in the initial round of funding also varied. Some LEGs struggled with the idea that LEG funds should be used for anything other than remunerating clinical teaching; others embraced the flexibility to create incentives for other academic activity. In a few cases, all professional activity of the group was considered “LEG” activity, regardless of the source of funding. Sometimes this flexibility resulted in perceived disparities in funding between LEGs.
### Table 2: Activities and Innovations

<table>
<thead>
<tr>
<th>Main Themes and Subthemes</th>
<th>Examples of new/planned LEG activities</th>
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<tbody>
<tr>
<td><strong>Base Medical Education - “Delivering the NOSM curriculum”</strong></td>
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<tr>
<td>LEG is new, teaching is not; mostly a continuation</td>
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<td>Teaching is main LEG activity</td>
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<tr>
<td>Enhancements in delivering medical education</td>
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<tr>
<td>• Journal clubs, rounds</td>
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<td>• More clinical space for learners</td>
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<td>• Learner orientation</td>
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<td><strong>Medical Education - Enhanced-Expanded Activity</strong></td>
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<tr>
<td>Nothing new, not yet</td>
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<tr>
<td>New activities</td>
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<td>Not LEG funded, not a LEG activity</td>
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<td>• Improved completion of learner evaluations; development of new evaluation materials</td>
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<td>• Half-day sessions on ECG interpretation, behavioural medicine, care of the elderly, neonatal resuscitation</td>
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<td><strong>Program Development</strong></td>
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<td>Rural family medicine residency – working on it</td>
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<td>Other new programs</td>
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<td>• Simulation program, ultrasound program</td>
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<td>• Under development: Royal College specialty residency programs; Rural Stream family medicine residency programs</td>
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<td><strong>Professional Development</strong></td>
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<td>Recognition and awards</td>
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<td>Academic service and leadership</td>
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<tr>
<td>• Obtaining CEPD-accreditation for grand rounds</td>
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<td>• Hosting ACLS, ATLS, PALS courses</td>
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<td>• Faculty development breakfasts using McMaster Faculty Development Modules</td>
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<td>• Supporting participation in physician leadership events</td>
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<td>• Mentorship for preceptors</td>
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<td>• Preparation of submissions for member’s teaching awards on behalf of members</td>
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<td><strong>Scholarship, Research, and Innovation</strong></td>
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<td>Innovation Grants</td>
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<td>Research as future activity</td>
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<td>Research planning</td>
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<td>LEG-supported activity</td>
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<td>Learner-driven research</td>
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<td>Other member-driven research</td>
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<td>Research collaboration and networking</td>
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<tr>
<td>• Nine innovation grants awarded to four of the nine groups since becoming a LEG</td>
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<td>• Remuneration of members for chart audits, QI initiatives</td>
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<td>• Hired research coordinator</td>
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<td>• Hosting research planning meetings to develop research ideas</td>
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<td>• Submitted applications for external research funding</td>
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<td>• Research networking</td>
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<td><strong>Recruitment, Retention, and Community Engagement</strong></td>
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<td>Retaining learners into practice</td>
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<td>Community engagement and recruitment</td>
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<td>LEG as a recruitment incentive</td>
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<td>Influence on recruitment criteria</td>
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<td>• New return-of-service agreements</td>
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<td>• Hired recruiter / learner support staff</td>
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<td>• Community engagement in support of a community recruiter</td>
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<td>• Recruitment of academic physicians</td>
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<td><strong>LEG Administration</strong></td>
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<td>Remuneration / point systems</td>
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<td>Governance and member engagement</td>
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<td>Infrastructure, including websites</td>
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<td>• Member-approved point systems to track activity and assign value of remuneration</td>
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<td>• Annual meetings held, transitions to new board members managed, delegation of tasks to committees</td>
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<td>• LEG websites being developed</td>
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i. Clinical teaching – Continued delivery of the NOSM curriculum. Clinical teaching, as structured through learner assignments by NOSM, was universally deemed the main activity of the LEG; among a few LEGs, it was the only activity. Delivery of the NOSM curriculum was understood as the purpose of the LEG, where the LEG represented a reorganization of the financing and administration of distributed medical education. It was difficult to prompt participants into talking about specific education activities in detail, in part because the activities were prescribed by the type of learner(s) that were assigned the LEG – describing the activities was tantamount to describing the curriculum. Instead, participants were more likely to describe the type of learners that they were responsible for - 2nd years, third year/CCC, residents, etc.

The implementation of the LEG was thought to have had little impact on the type and quantity of medical education services delivered – for many, the LEG merely represented a change of payment mechanism, as they continued to do the same activities that they had before. Where new programs (e.g. postgraduate residency programs) were being developed, most had been planned before the LEG was implemented, and would have occurred without the LEG. Most thought it was too early to conceptualize how the LEG might have a future impact on the delivery of medical education. At the same time, some felt that the requirements of the LEG, such as requiring LEG members to become NOSM faculty, and withholding payment for incomplete learner evaluations, had promoted a more standardized and consistent approach to the delivery of the curriculum.

The main activities of the LEG? Strictly, it’s teaching. That’s how I would describe the focus of the activities of the LEG right now. Individually, members partake in many of the activities listed, but this didn’t come about because of the LEG, they were already involved. The focus with the construction of the LEG has been to align itself with the teaching activities. (Small Community LEG)

ii. Medical education – expanded/enhanced activity. For most participants, “expanded” activities were “extra” learner-focused activities, beyond those contracted through base academic funding. A challenge for some LEGs in developing new activities was determining how to remunerate its members for developmental activity. Although most participants indicated that most expanded activities were a continuation of pre-LEG activity, most new educational activity was occurring in this category and in Program Development.
One challenge in inquiring about expanded or enhanced activities was that many of these activities occurred only in the larger cities, and were not considered part of what a small rural community could offer. Another challenge was that many of these activities were not directly funded by the LEG (e.g. funded directly by NOSM), and for some LEGs, this meant that these activities were not considered to be “LEG activities.” And since the activities funded by the LEG varied across LEGs, a LEG activity to one group could be a non-LEG activity to another.

A challenge for some LEGs in developing new activities was determining how to remunerate its members for developmental activity. Ideas about what was eligible for funding (e.g. infrastructure) varied partly because of differences governance agreements (that is, the LEG’s own rules), but also because of potentially erroneous beliefs.
iii. **Program development.** Most comments indicated that new programs were planned prior to the LEG, and/or would have taken place regardless of the LEG. Nonetheless, the support of the LEG was seen as a major benefit to program development. For participants, “program development” generally meant any new educational activity developed by LEG members. This included not only the development of new residency programs and related accreditation activity, but expanded academic activities that were new to the LEG, and CEPD was also described under this concept.

*Virtual Academic Rounds – the VAR - that’s a HUGE commitment, and it’s not even funded by the LEG. The Ministry has restrictions on using funding for that, so . . . The LEG is not allowed to fund those, because that’s technically [didactic] teaching, and the LEG is more for teaching with the clinical work . . . But we still have to do those academic things by being part of the clerkship program . . . It’s a big chunk of teaching time that we have to do that is outside the LEG. So if you were just strictly looking at it from a LEG standpoint, you might say, well, you don’t do that much teaching. Well, yeah, but the VAR is part of our teaching, but it’s not recognized as part of our LEG duties. It muddies the waters in terms of “What do you actually do?”* (Medium Community LEG)

*Since we’ve started getting LEG funds, we’ve been able to get the ultrasound program started here. Before, our residents used to have to go to Sudbury to get their ultrasound teaching, and now they can stay here in Thunder Bay. The other thing is the simulation program, and that’s brand new, we didn’t have that at all. There were some simulation sessions organized through NOSM, the physician would actually fly to TB and give the simulation sessions here, and now because of the LEG funds we’re actually able to pay a couple of our doctors to give monthly simulation sessions to our learners.* (Hospital Department LEG)

Post-graduate residencies were most commonly described. In the case of hospital departments developing five-year post-graduate residency programs, the timing of the LEG opportunity coincided with the development of the residency program; although the LEG did not play an instrumental role in terms of deciding to add the program, the program itself was a significant motivational factor to becoming a LEG. Beyond the hospital departments, two community LEGs were also in the early stages of planning for a rural stream family medicine residency program.
iv. **Professional development.** Participants tended to use the term “professional development” to cover continuing medical education (CME), faculty development (including leadership development), and other professional development activities.

The LEGs initiative came along about the same time that we were developing a new residency program – it was a good opportunity to focus the activity. The LEG was viewed as a good way to make sure the group was achieving its deliverables . . . (Hospital Department LEG)

Once a month, we have a Grand Rounds that’s put on now for the hospital for all faculty and also the hospital interdisciplinary learning environment, so it’s hosted by the LEG and we invite local speakers, so giving a chance for faculty to teach in a formal, powerpoint kind of way. It’s accredited with the CEPD, we’ve had a mix of outside and local speakers. And I think it’s been a good opportunity for faculty to teach in that setting, but also to show off a little bit to the rest of the hospital community, and the local community as well, what our faculty are capable of. So that was something else that wouldn’t have happened without the LEG. (Medium Community LEG)

In terms of faculty development, there was usually greater interest in development as teachers/educators than in academic promotion. The ability of the LEG to specifically fund faculty development activities was highly valued, because although physicians have other sources of support for CEPD, physicians were more likely to use up those resources on areas of clinical interest, leaving little left over for faculty development.

The other thing that’s new is the Faculty Development Committee is using the McMaster small group learning project Faculty Development Modules, and we’ve hosted one faculty development breakfast, we have another one next week, and we have two more planned for this year. And we also developed the application form for our colleagues who go to a faculty development conference to apply to us for funding, thinking that many of us have some CME support, such as through the OMA CME fund, but the last place that people are likely to go is to a faculty development conference if they have other educational needs on their list. (Large Community LEG)
With some exceptions, there was limited interest in academic promotion, as there were no perceived benefits. Some felt it was challenging to become more directly involved with NOSM, because of geographic distance and the challenge of being physically present to participate in activities.

The academic view of success doesn’t parlay into the rural environment. It just doesn’t. There might be a few folks that get excited by that, but often they’re short for the rural environment, like, they’re your typical 3-year average and they’re gone to a larger centre. No, it’s not one of those goals that people are shooting for... And again, well, how do you support the folks out in the periphery to get involved in some of that. (Small Community LEG)

v. Scholarship, research and innovation. The concept of “clinical innovation” and its distinction from “research” was unclear for most participants, with most responding in terms of Innovation Fund (AFP) or Clinical Innovation Opportunity (CIO) grants (although the distinction between the two grant programs was not clear to participants). Eight of the nine LEGs represented had applied, and four had received at least one grant (9 grants in total) since the launch of the LEGs initiative (four had also received a combined 6 grants prior to becoming a LEG; some had applications pending from the most recent call).

Among the most successful LEGs in terms of Innovation Grant awards, there appeared to be one or two individuals responsible for most of the grants. Most of the funded projects were still in progress.

We have 5 innovation grants associated with our LEG. There have been presentations at meetings but no publications at this point. The grant programs are key to to getting smaller research projects up and running, but the dollar cap is limiting bigger research programs... (Hospital Department LEG)

Not all LEGs perceived having the capacity to undertake innovation or research projects. Several LEGs were operating with physician shortages, some quite severe. Because available physicians were exhausted trying to meet the clinical needs of their community, there was no time or energy for “extra” activities. Other LEGs struggled with lack of experience and grantsmanship skills; a few suggested that the application process was unclear and that they would benefit from more information, such as a presentation from NOAMA.
Apart from those activities related to the Innovation Fund grants, there was very limited research activity described by participants as LEG activity; some activities were related to learners’ research projects. However, participants also indicated that a good deal of innovation and quality improvement has been occurring outside of the LEG funded activity, sometimes with external funds, sometimes without funding. However, the capacity to prepare publications and conduct other knowledge translation and exchange activities was limited.

Although the opportunity to conduct research was important, research was usually seen as individual interest, not a group responsibility/effort. Exceptions were two hospital departments developing post-graduate programs, and one considered their advancement of research to be their main success to date. As well, many had different ideas about the purpose of research planning funds, considering them too small to conduct research.
Figure 1: Success Stories - Innovation Grants

Participants identified innovations that had resulted from the grants. Completed programs however were the result of grants that had been awarded prior to the implementation of the LEG.

Innovation in Knowledge Transfer and Exchange - Web-based Library **MI OWL**

The project’s completed, the piece that I’d wanted to do that is not completed is the tail-end evaluation piece because we’d wanted it to be disseminated to more sites, but right now our hospital and clinic are using the tool, it’s called MI OWL for short, it’s the “Medical Interprofessional Open-source Web-based Library.” And the idea was to create a web-based library site where small hospitals and clinics could create compendiums of their policies – it’s the important stuff that allows us to function. So resources, policies, standing orders, that sort of thing. And to have them available so that we know where to go and look for them and we’re not all searching for that blue binder that’s somewhere. And because it’s on the web, it’s completely accessible to anybody. All our tax dollars pay to create our healthcare system, and in creating our FHT back in 2005, we were really sorely disappointed, where we knew that there were programs, but heck if you could get anyone to share that information. And so we said, this is ridiculous, we had to go and create our own, spend taxpayers’ money in doing that . . . And so, we just put everything out there, so if anyone wants something, they can come to our site, and look at what we’ve got, and build from there. (Small Community LEG)

Innovation in Community Health - Blindness Prevention

. . . an ophthalmologist that has privileges at our hospital, I mean he works out of 3 different hospitals, but he received an innovation grant to . . . to see if we could improve the rate of recruitment from the community of patients who might otherwise not have not received – the goal is to prevent blindness. So there are a number of diabetics, people with different retinopathies that potentially are being missed. And so he recruited all the optometrists in town, they decided they’d all work together with this common screening tool, which anybody can fill in, they basically are screening the general public, our physician offices can refer, but it’s sort of an expedited way of referring people who are at risk for blindness and who might otherwise not have access to these services . . . (The grant) provided an extra coordinator person to gather all this data and help streamline appointments, help also analyze and make an evaluation of the project. And he held a workshop, an information session at the hospital here, put on a special one hour rounds, where he came and gave an educational talk and explained his project . . . (Medium Community LEG)

Innovation in Medical Education - Anaesthesia Bootcamp

The innovation grants have resulted in important findings and a major success story, the Anaesthesia Boot Camp for family medicine PGY3 Anaesthesia residents. It has been nationally and internationally recognized, people are coming from Australia, and there’s a waiting list every year. No place else in the country is running such a well-run residency program in a week for FM anesthesia residents. There are invitations to speak at national conferences, simulation conferences, we have inquiries from program directors across country - other medical schools send their students to them every year to take that course. The Halifax Sim Coordinator came last year. The model has not been replicated yet. There are some boot camps in other places but they’re not the same - (Hospital Department LEG)
Some LEGs had difficulty spending research funds, and/or finding a “research champion” among LEG members. As well, the size of innovation grants and sustainability of research funding, including the question of protected time, were challenges to other groups.

I did an innovations project, and the time that I spent and continue to spend in that is because I’m interested. There’s no remuneration to me. The funds from the AFP Innovation grant [40,000] came to me, but I didn’t apply for any funding for my own time – that was strictly for the research-related expenses. So if you want to have research happen, you need to have protected time, and protected time is funded time. Because right now, the time that I spend in clinic is what pays my bills…  

(Small Community LEG)

vi. Recruitment, retention, and community engagement. Although most LEGs (or their communities) were actively recruiting new physicians, only one was directly funding recruitment as a LEG activity. For other LEGs, recruitment might be viewed as the responsibility of a different group or an activity supported by non-LEG funds.4

When our group lost 3 physicians, we turned to the community and local industry and really spoke to the evidence of having a local recruiter as a benefit… and we were able to support a recruiter position that really made a big difference – One, just for getting locums, because when we were short physicians we were locum-dependent and one of our physicians was spending almost a ½ time position just trying to find locums, so having a recruiter allowed us to fill in some of the gaps, and also allowed us to recruit into the positions and the hours that we wanted. (Small Community LEG)

Where not directly involved in recruitment, the LEG nonetheless could have an impact, from focusing recruitment activities on the recruitment of academic-oriented physicians, to serving as an incentive for prospective physicians. For many LEGs, recruitment and retention were as much an expected or indirect outcome of LEG activity as it was a direct objective, in two ways. The clinical teaching was expected to result in new physicians who would be interested in practicing in the community. The LEG was also viewed as being a community asset that would enhance the appeal of moving to Northern Ontario, particularly among those with more academic interests and expectations.

4 It is noted that recruitment of locum physicians is outside the scope of AFP funding, and is the responsibility of HealthForceOntario.
Clinical teaching was expected to result in indirect recruitment, by retaining learners into practice:

... clinical recruitment would be involved a little bit within our LEG, because we use exposure to our community through the learners’ experiences as a recruitment tool as well. . . . We are, as far as primary care/family physicians and preceptors, probably at half of what we should be at . . . by delivering the CCC or Phase II of NOSM’s curriculum, we’ve been able to recruit two new physicians now, and I kind of hope that it’s going to be an exponential thing, where, with more preceptors we can accommodate more students, and when we accommodate more students we’ll be able to recruit more preceptors.

(Small Community LEG)

Community engagement was not identified as a key activity of any LEG. But to a limited extent, a couple of LEGs mentioned community engagement as part of clinical recruitment, as well as leaner support/enrichment activities. The clear linkage between learner experience and recruitment and retention was reflected in the activity of one LEG that had directly funded physician recruitment as a LEG activity which also crossed over into learner support activity. For this LEG, this approach was deemed a major success:

We have a new member starting this summer. The individual recruited was influenced by the LEG as well as the needs of the new residency program.

(Hospital Department LEG)

Informally, the LEG is part of the recruitment. We see it as added value for someone coming here, to be part of our LEG. We don’t have a specific recruiter the way that lots of other communities do. I think that the LEG does help give us that one extra little piece in terms of recruitment . . .

(Medium Community LEG)
... now that we’re getting fuller and we don’t need to continue recruiting in the same way, some of the attention has turned to the learners in the community and really supporting them to have an excellent experience . . . we’ve been able to create a more functional environment for students, and support a recruiter to really enhance the experience of students when they come here. I think that’s important because we also recognize – and this is the hook that works for education, I think that’s very real for the rural environment – is that learners are potential colleagues . . . And for us, I mean, we can speak really passionately about the fact that there’s many a person that’s been with us as a resident, who has then become our colleague. Or, as a student, then as a resident, then as a resident again, and then as a colleague. So, it really matters. (Large Community LEG)

vii. LEG administration. Participants discussed a number of activities related to the administration of the LEG, development of systems to account for and remunerate activity (e.g. point systems), development of websites for communication with members, governance and member engagement activities, and infrastructure projects.

All nine participants described how their group was – or wasn’t – tracking activity, and some LEGs had not yet made any changes to the previous system of remunerating teaching activity. The three largest and most complex community LEGs discussed how they had considered a point system but had decided that it was not workable for multi-speciality community LEGs. Interestingly, the three groups represented in the study who were using a point system were all hospital LEGs. The three had invested significant effort in developing point systems that were being tested and refined, with one group considering the point system itself an innovation. However, this group also recognized the challenge faced by members in recording and reporting their activities for points, and were considering a further innovation:

Our members like the point system, but the need to report activities for points is a challenge, it is difficult. We have talked about developing a tool where activities can be reported using an app for iPhones/iPads, like tracking CEPD for the Royal College’s Maintenance of Certification points, MAINPORT – it prints out a report at the end of the year. It shouldn’t be too difficult, the creation of a phone app would make it really simple. (Hospital Department LEG)

Governance and member engagement activities described by participants included the formation of governing bodies (board, executive committee), decision making processes,
holding annual meetings, and developing committees/working groups and delegation of tasks to members.

Infrastructure related activities included using start-up funds to set up more exam rooms for learners. Other activities were in various stages of planning and development, with one LEG considering the purchase of new computers for physicians, and two LEGs in the process of developing websites.

C. Local Factors Influencing LEG Development

Although small in number, there was sufficient variation among the LEGs represented in this study suggesting how local factors can affect the development of a LEG.

i. Level of pre-existing organization & cohesion. First and foremost was the level of organization and group cohesion that existed before the LEG was formed. The more organizational development and change required, the greater challenges. In general, hospital department LEGs appeared to be much easier to implement than community LEGs because of their existing organizational structures. Members of one hospital LEG were already functioning as a corporation and had previously developed an internal mechanism for funding academic activities, so it was relatively simple to integrate the LEG funding and administration. Differences were more dramatic among community LEGs. One small community LEG benefitted from its prior organization as a Family Health Team; in contrast, a small community-based Family Medicine LEG was attempting to organize around multiple independent family medicine practices, and faced numerous organizational and administrative challenges. For one large community LEG, the prior organizational structure had been built on interprofessional practice, which clashed with the mandate of a physician-centered AFP; with new guidance and greater flexibility in the use of funds, the LEG was now working to repair damaged relationships and restore interprofessionals’ motivation to participate.

I think we’re very lucky in that we didn’t have any difficulty with that because we were already working together [as an FHT]. Our intraprofessional piece is something that we’ve worked on long and hard, and so it was easy to create a governance and move forward. (Small Community LEG)

ii. Size of community/organizational complexity. In general, the larger the LEG, the more challenges the LEG faced in terms of organization and administration. Logistical difficulties in having working groups meet, or members meet to vote on issues, had contributed
to delays in implementing LEG objectives. Larger groups tended to face more logistical challenges, and tended to take longer to self-organize and accomplish tasks.

*We’re a very large multispecialty LEG. That’s the issue . . . the growing pains are a little worse, funding issues, administrative issues, it was tougher.* (Large Community LEG)

However, this appeared to be more about complexity rather than just about numbers; the larger the LEG, the fewer physicians that were co-located and the more institutional boundaries needed to be spanned; as one participant commented, it was “hard to get all the cats into the room.” Without the opportunity for daily informal interaction, accomplishing the administrative tasks of the LEG appeared more difficult, as it required more formal meetings which could be difficult to schedule. Further, Leads for the larger LEGs faced greater challenges in being informed about members’ activities and successes; for example, LEG Leads were not always informed about successful Innovation grants. Note that a small LEG could experience administrative complexity too, as in the case of the Family Medicine LEG, which was trying to coordinate several physician offices. Moreover, for a LEG comprised of multiple small offices, identifying meeting space able to accommodate a large group became a challenge.

*This is a slow process, bringing this group together. ‘Cause everybody is used to working independently. So, to get them working as one and taking on the assignments is a challenge, because everybody is so busy . . . I find our number large, because, they’re not all in this office, and I find it hard to communicate with them, to get feedback, to get people to agree. And [it’s hard] to get people at a meeting, it would be hard to get quorum at a meeting, because everybody’s busy . . . We had a situation before Christmas where we couldn’t move forward because there wasn’t one from every office. People are REALLY stretched, physicians are stretched to the limit. So to add this additional administrative burden, is HUGE.* (Family Medicine LEG)

iii. **Physician complement, vacancies and workload.** As the main resource barrier, physician shortages had a dramatic impact on the activity level and ambitions of a LEG. Meeting the clinical needs of the community was the first priority, followed by teaching. Where shortages existed, there was relatively little activity. In particular, research, scholarship and innovation were limited by physicians’ time and energy, as they were add-ons to full-time clinical practice. For one remote community, having the approved number of physicians was insufficient to support innovation. “Organizational slack” has long been described as an organizational feature that is positively associated with innovation.[8–10]
iv. **Model of remuneration for clinical services (FFS vs. salaried).** While not a uniform complaint, members most likely to be dissatisfied with the level of remuneration provided by the AFP were those working under a fee-for-service model. In this context, FFS physicians were usually Royal College specialists, and in some cases, this appeared to diminish specialists’ interest in or willingness to teach. Further, it was a major barrier to taking on additional academic activity, which was viewed not only as unpaid, but costing the physician a significant amount in terms of foregone earning. In multispecialty (community-based) LEGs, this could give rise to discussions about the need for greater compensation for specialists than family physicians.

In a related issue, differences in the way specialties organize and deliver clinical services appear to influence the magnitude of teaching impact on volume of clinical services, further exacerbating the impact of teaching on the incomes of physicians under a FFS model, again, usually specialists.

v. **Individual physician characteristics.** Although the development of a “collective” approach to clinical education was cited as a benefit of the LEG, individual physician interests and preferences were frequently cited as an important factor in member activity. This was particularly true of research, which was viewed as an unpaid extra that required an individual’s passion, energy, and time. These characteristics were described in relation to younger, recent graduates, and diminishing as physicians neared the end of their careers.

(...) Out of the five committees, the faculty development committee (FDC) is [most] active and has some ideas of how to utilize our funds, and is hosting faculty development activities . . . What I notice in the FDC is, I lucked out to have four physicians who have been in practice less than five years. So they’re wanting to learn how to teach, they’re highly motivated. They’re young and early in their careers, so they have lots of energy, and I just say “Go team, go” from the sidelines. And I was hoping that’s what would happen in the other groups. Membership in the other groups, however – one committee is people who have been in practice 20 years or greater . . . and they haven’t met yet. (Large Community LEG)
vi. Other (e.g. external events, conflicts, personnel issues). A small number of LEGs reported events that delayed the progress of the LEG, from physician losses, to personnel issues and turn-over, and even leadership conflicts.

D. Challenges and Suggestions for Enhancing the Initiative

Participants were asked to describe barriers and challenges to the development of their LEG and implementation of activities, and whether they had any recommendations for NOAMA. Although asked as separate items, there was considerable overlap between responses to these items.

Table 3 provides a summary of responses. While this summary represents the comments of participants, these should not be understood as unanimous. For example, while some LEGs describe the lack of "protected time" for research as a challenge and recommend that protected time be funded, for another LEG, protected time would not be an option. For some LEGs, confusion over spending rules was a challenge; for others, the rules were clear and unproblematic. Where a couple of LEGs suggested that NOAMA or NOSM provide rewards or recognition, other LEGs were finding ways to do that for themselves (and count that as a LEG activity or innovation).

Barriers and challenges were grouped into five themes: organizational and administrative challenges, challenges to expanding academic activity; challenges for scholarship, research and innovation; challenges with NOAMA, and challenges with NOSM and/or NOAMA.
Table 3. Summary of Barriers and Challenges, and Participants’ Recommendations

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<th>BARRIERS AND CHALLENGES</th>
<th>RECOMMENDATIONS</th>
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<tr>
<td><strong>Organizational / Administrative Challenges</strong></td>
<td>For NOAMA</td>
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<tr>
<td>• Initial lack of structure and guidance</td>
<td>• Clarify reporting requirements and provide reporting tools</td>
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<td>• Accounting for / confirming LEG activity</td>
<td>• Provide support/tools for activity tracking</td>
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<tr>
<td>• Deciding how to spend LEG funds</td>
<td>• Change management - Increase consultation, communication/guidance, and feedback</td>
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<tr>
<td>• Insufficient funding for LEG activity (esp. post-graduate program development; research)</td>
<td>• Provide more feedback to the LEGs</td>
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<td>• Size / complexity (Large community LEGs; community-based LEGs in Sudbury and Thunder Bay)</td>
<td>• Recognize the unique aspects of each LEG and allow variable funding</td>
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<td>• Culture change / lack of experience with group approach</td>
<td>• Facilitate communication, collaboration and KTE among LEGs</td>
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<tr>
<td><strong>Challenges to Expanding Academic Activity</strong></td>
<td>For NOSM and/or NOAMA –</td>
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<tr>
<td>• Physician shortages</td>
<td>• Develop a model of “distributed research” and facilitate research support, collaboration and networking</td>
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<td>• LEG activity is extra activity, and requires extra time and energy (organizational slack)</td>
<td>• Pay all academic activities through the LEG</td>
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<td>• High workload / insufficient funding for the development of post-graduate curricula</td>
<td>• Create value for academic promotion</td>
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<tr>
<td>• Loss of clinical income – FFS / Specialists</td>
<td>• Facilitate awards, recognition</td>
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<td>• Challenges to integrating interprofessional education</td>
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i. Organizational/administrative challenges. For many of the LEGs, the lack of sufficient structure and guidance was a major challenge, sometimes resulting in fatigue and burn-out among the LEG Leads and other champions of the initiative. Accounting for and confirming LEG activity, including base teaching activity, remains a challenge for the lack of an effective system.

Although we do have the dollars budgeted, like we have our account and we know here’s some dollars for research, here’s some dollars for education, faculty development. So we have it there, we just haven’t spent it yet. And, um, it’s not going anywhere. What we’re trying to do is, well, how do we divvy this up, and how do we be fair about it? And so the new board is going to have a close look at that and decide how you do that. I mean it’s the same struggle we had with the remuneration for board members and the time spent on committee. (Large Community LEG)

...So, we spent a lot of effort on the development of the LEG, and it’s cost us some program development, because we used our energy...The fact that this LEG has had to develop all of this stuff on its own, and every other LEG has developed everything on its own, we’ve all spent a lot of time in the development stage...energy has sort of been used a lot on becoming a LEG, and those of us who put a lot of energy into that are feeling less inclined to continue on with being the proponent behind the subcommittee to make sure activities happen. (Large Community LEG)

Delays in establishing governance also contributed to other challenges; some LEGs were actually struggling to decide how to spend their start-up funds; this stemmed as much from uncertainty over program spending rules as difficulty in obtaining consensus on LEG activity. But for others, funding was insufficient for the activities planned; this was particularly the case for LEGs that were working on developing post-graduate residency programs. The only LEG in the study to include ALL academic activity as a LEG activity was struggling with being underfunded.

Large multi-speciality LEGs appeared to face the greatest challenges with organization and administration, including accounting for activity. Community-based LEGs in Sudbury and Thunder Bay could also face unique challenges, given that no NOSM Site Administrative Coordinators were located in those hub communities. Finally, for some LEGs, particularly those whose members had no prior group affiliation, there was the challenge of culture change in working towards a more collective approach to delivering medical education.
ii. Challenges to expanding academic activity. Five subthemes to expanding academic activity were identified. Physician shortages were a significant barrier, as providing clinical care was the members’ main priority. About half of the represented LEGs were from communities with significant physician shortages that limited the amount of time and energy for academic activity. And where significant levels of academic activity were expected (e.g., hospital departments seeking accreditation for post-graduate programs), more physicians could be needed to maintain the same level of service. Where LEGs were experiencing physician shortages and the existing members had to compensate by providing more services, the clinical demand was too high to permit many add-ons beyond the delivery of basic medical education. In these communities, physician shortages were deemed the single most important barrier to expanding the range of academic activities.

... Having the appropriate number of folks here to provide service, that’s our number one priority. At the time when we jumped into the LEG, our community of 9 physicians had gone down to 5 physicians, and we were trying to continue to provide health care as well as wanting to stay involved with education, and when things are squeezed, there’s not a lot of energy for creativity and for taking on new projects. (Small Community LEG)

A related theme was that LEG activity was in addition to full-time clinical practices, and the “extra” activity required extra time and energy, extra organizational capacity, to continue to meet clinical needs.

... Right now the members are conducting the LEG work ABOVE their clinical practice, and there is not enough support. You can do more if you have more support from the LEGs in terms of research, scholarship activities... these require extra time though, and also requires more physicians to maintain clinical services . . . (Hospital Department LEG)
In particular, hospital department LEGs that were in the process of developing post-graduate curricula indicated that their workload associated with the development of post-graduate curricula was challenge for LEG implementation; LEG funding was also perceived as inadequate for this level of activity.

**Work load levels! Our curriculum development – in three years all the curriculum development will be done for all five years of residency – we’re currently tying up and burning out staff, and have another three years...** (Hospital Department LEG)

For physicians working under a fee-for-service arrangement, and for Royal College specialists in particular, the extra work represented a significant loss of clinical income, and was reportedly a barrier to increasing activity by those physicians in both hospital department and community LEGs.

**The LEG does have an impact on clinical services and vice versa. As specialists under FFS, the loss of clinical income is greater than for family physicians. Better funding would encourage an increase in LEG activities. This is a bigger issue for specialists than for family physicians – it’s our biggest stumbling block.** (Hospital Department LEG)

... The distribution of teaching funds... is a little bit of a challenging situation only because - and I’ve heard it from one of the specialists – because the fact that when most of the physicians of our LEG have a student with them in the office, it likely requires them to spend more time with the student and it slows down their practice. But most of us are on a patient enrollment model, so we get paid more or less a flat rate per patient... if we end up slowing down in the office, it doesn’t lead to a loss of income from our clinical services, whereas for some of the specialists, they’re purely on FFS, so if they see fewer patients because they have students, they get paid less. So there’s been some suggestion that the specialists should be compensated more for their teaching than the primary care physicians...** (Small Community LEG)
Challenges to integrating interprofessional education was the final subtheme, where rules about the use of LEG funds to pay interprofessionals for teaching medical learners were reportedly not clear or had been changing. In one community with a high degree of interprofessional integration, the initial “physician only” focus of the initiative had negative impacts on relationships and had discouraged interprofessionals from participating in the community’s medical education initiatives.

...we spent a year and a half saying we can only spend this money on physicians, we may have alienated some of our interprofessional colleagues... We didn’t previously pay for extra teaching activities. Now we pay physicians for extra teaching activities. Administratively, you can only be a LEG member if you’re a physician. We can have non-physicians on our sub-committee, but they’re not feeling empowered... And what we need to do now... is to go back to them and say, “We’ve now been told by NOAMA that we can fund you for things, what do you want to do?”... So if we could somehow empower those folks to take over the interprofessional education component, we might see more things happen. (Large Community LEG)

iii. Challenges for scholarship, research, and innovation. Five main barriers or challenges to increasing scholarship activity included physician shortages, confusion over research planning funds, need for protected time and increased research funding, lack of/need for research support, and lack of time/staff/capacity for publishing and other knowledge translation activities. As with challenges for expanding academic activities, physician shortages reduced the time and energy that members’ had for “extra” activities, including research.

Obviously, with the manpower shortages, come added demands for clinical services as well as other things. So most of us pretty much feel that we have—that our time is precious and we have none of it left as it is, and it’s hard to fine the additional time, time and energy, to move into that kind of area [research] right now. (Small Community LEG)

The purpose of the research planning funds (as part of the LEGs’ initial funding) was interpreted in a number of different ways. Many LEGs, but not all, received a budget amount for “research development,” ranging from $5,000-$15,000, in their start-up funding and proposal-based annual award. Yet comments suggested a lack of clarity or common understanding as to the purpose of these funds, and uses of the funds ranged from support of a single research project, to hosting research development meetings, to (partially) supporting a
research coordinator. Large LEGs in particular struggled with the question of fairness to all members. One consequence of this confusion was that some of the LEGs had not yet used the funds or launched any research activities.

*It depends on what we end up using the dollars for. So, you can’t do big research for $15K per year. You could learn how to do research, and how to go after grants if you chose to do that, but we’re a large community, we’re all physically quite active in patient care, and if there was AN individual who said, “I’m really keen on research,” then we might be able to do something with that. But, for a community as a whole, you can’t take 30 LEG members, and for 15K, make them researchers. It needs to be individually driven . . . So that budget line will probably be our hardest to spend. Unless somebody says, I’m gonna go off and do this course on how to run community-based research projects... At the moment, we have too much money to know what to do with.*

(Large Community LEG)

Nonetheless, available funds, including Innovation Fund grants, were viewed as too small to support any significant research, largely because it could not compensate for physicians’ time (either in terms of lost clinical earnings, or in terms of loss of precious free time). Even where there was interest in developing a research program, there was a feeling that the 50K limit on Innovation Grants was too low to be a major incentive; a grant was “a small carrot, or maybe a radish.” The sustainability of the current funding for research was also questioned, which caused some LEGs to adopt a “wait and see” approach before committing to a research program.

*... Our main barriers are time and money. It comes down to money – the size of NOAMA grants can’t replace clinical earnings, so research is done on top of full-time clinical work. And to increase research, we would need to hire a research coordinator – but the innovation grant money is too small to hire a research coordinator... The grant programs are key to getting smaller research projects up and running, but the grants are not large enough, the dollar cap is limiting bigger research programs...* (Hospital Department LEG)

*... the time that I spend in clinic is what pays my bills . . . I did an innovations project, and the time that I spent and continue to spend in that is because I’m interested. There’s no remuneration to me. Yeah, it’s your life energy that you’re putting in. And we do it because of interest, and we get flow in our lives from it, but there’s a limit to how much time you can put in on top of your clinical time if it’s not remunerated. So if you want to have research happen, you need to have protected time, and protected time is funded time. And that’s what other academic centres get . . .* (Small Community LEG)
Another barrier was the lack of existing research capacity in some LEGs, including grant-writing skills, and the need for research support and research networking. LEGs also needed to develop more capacity to document clinical innovation and/or quality improvement activities, through the preparation of publications or support of other knowledge exchange and translation activities.

Challenges? Identifying somebody who’s got the time to complete the [Innovation grant] application and put it through. And finding the right formula to get them approved. ‘Cause one of our members has applied 2 or 3 times, and hasn’t been successful. (Family Medicine LEG)

... physicians have a tendency to think lots and have these great ideas and programs, but then they get ready to put pen to paper, and they go, “Oh, I don’t have the energy, I’ve run out of steam” . . . And it’s possible that research centres... if they had a person or two here, or that came here periodically help us, put these ideas on paper, then that would encourage more research and more faculty development . . . (Large Community LEG)

Some had members had applied for Innovation Grants without success, and were struggling to get past the discouragement and perceived lack of assistance to develop their research ideas. Some felt the guidelines were not clear and were waiting for more clarity before putting their energies into research.

Some participants mentioned the NOSM research support unit, and although the unit was new and experiences were mixed, participants acknowledged its potential to assist LEGs, but also discussed its limitations:

... I phoned the NOSM research support unit and had a long conversation with one of the staff, and she was very supportive . . . she did help talk me through, saying no, that’s a bad idea, and that’s a good idea, and so, it was very helpful. But it wasn’t like, Oh, I know somebody I can connect you with. It wasn’t the networking piece that I think is critical. I do think they could do more in terms of networking. But it’s just starting, really. (Medium Community LEG)
iv. Barriers and challenges related to NOAMA. Participants described a number of challenges that were recognized as “growing pains,” such as changes to the rules and programs as the initiative evolved. First, participants’ comments indicated concerns over frequent changes to the LEG model, guidelines for implementation, and deliverables. They recognized that the AFP and NOAMA were new and evolving, but at the same time felt that there were unspoken agendas that had not yet been revealed to the LEGs, and concerns that the LEGs would become responsible for yet more activities.

Discussions also revealed that some LEG Leads struggled with understanding spending rules – what was permitted and what was not. For example, one LEG believed that the LEG could not use AFP funds to pay for academic activities like virtual academic rounds (VARs). And trying to establish rules within the LEG on how funds such as program development funds could be used, how to remunerate for LEG administrative activities, etc., could result in debates and delays in implementation.
A related challenge was what was described as insufficient consultation with the LEGs prior to making decisions that affected them. Of particular concern were changes in funding formulas, which, because of the uniqueness of each LEG, would have differential impacts (positive for some, negative for others). Some felt that the perspectives of the full range and variety of LEGs would need to be considered and taken into account before any changes are made, even if that meant individualized funding formulas.

> . . . I think the communication has been there, except sometimes, it’s post-facto. So in other words, I find out about the change after it’s done . . . You know, a better thing would have been to say, “Look, we’re discussing and interested in doing this, what are your thoughts? Ok, maybe that’s good for a group of 5, but it’s not good for OUR group. How are you gonna help compensate for the extra administrative duties? . . . So they need to start considering the larger LEGs, say, ok, for a larger LEG, how is this going to affect them? Change is much harder on a large LEG... (Large Community LEG)

Related to concerns over insufficient consultation were the concerns that rule changes did not affect all the LEGs in the same way. For example, a change requiring more administrative effort from a LEG could have a minimal impact on a small community LEG, but have a major impact on a large LEG, perhaps requiring additional personnel. Participants also struggled with the notion of a common funding formula for LEGs that were varied and unique. In the extreme case, one LEG described the funding formula as a “disaster.”

> Our LEG has to do more with the same share of funds than some other LEGs . . . Not all LEGs are the same, but the funding formula is. Different groups are at different stages of development. Some have residents, some don’t. Some residents do a lot of procedures, ours don’t. They need to look at individual program needs, needs of different disciplines - identify needs and match funding to need. This common funding formula will not work! For us it has been a disaster, an absolute disaster. (Hospital Department LEG)

Concerns over sustainability were related to the fact that medical education programs in their community had long pre-dated the establishment of the AFP and the LEGs initiative. These pre-existing arrangements, including self-financing mechanisms, continue to support many academic activities beyond what was funded by the LEG. For some, there was a “Don’t break what’s working” sentiment, accompanied by conservatism to changing their existing systems, stemming from uncertainty over the LEG model and concerns over the sustainability of the AFP. This contributed to a reluctance to expand LEG programming to cover broader academic
objectives. And given that the first wave of LEG implementation left several of the early adopters feeling burned out or “like guinea pigs,” while others were taking a “wait and see” approach to further development.

... there were a number of people at the table that were considering becoming a LEG, and there were a lot of questions and misunderstandings and, again, hesitancy about committing to something that might not be sustainable. (Small Community LEG)

v. Barriers and challenges related to NOSM. Participants described two barriers or challenges to LEG implementation and administration, and two for expanding academic activity. One administrative challenge revealed in the interviews and stakeholder consultations was that NOSM systems have not yet adapted to the LEGs, and that LEGs have unequal access to information from NOSM. NOSM systems were developed prior to the establishment of LEGs, reflecting a one-on-one relationship with individual physicians responsible for the delivery of clinical teaching. However, with LEGs increasingly becoming responsible for the collective delivery of medical education, the recognition of the LEGs in procedures and adaptation of communication and data systems to the LEGs would reduce administrative challenges for LEGs in a number of ways.

I don’t think NOSM has made the switch to the LEGs . . . I got the clinical teaching requests and the confirmations from NOSM for the group here in our office because I was doing it before. But I wasn’t copied on all of the clinical teaching requests that went out to the other physicians in the LEG. I had to request them, twice, at different points, just to keep abreast of what was going on . . . It’s very frustrating . . . Again, that’s the whole business of people not understanding what the LEG is all about . . . and all you get is “the systems don’t allow for it.” For example, the system doesn’t allow for the e-cheque advice to go to two people, the LEG Lead and the LEG Admin. And there’s all kinds of things like that, where the system hasn’t been modified to accommodate the LEGs . . . (Family Medicine LEG)

For example, according to a NOAMA document, “Clinical teaching is completed when the learner assessments are received from the LEG by UME.”[11] In practice, learner assessments are completed by individual clinical faculty members on NOSM’s One45 system, and received directly from the individual faculty member, not the LEG Lead or Administrator. Currently, LEG administrators are left out of the loop, unless the busy clinical faculty member completes a

5 This did not appear to be as much of an issue for Hospital Department LEGs, whose organizational boundaries were more closely aligned with program boundaries.
second report to inform the administrator. Many LEGs struggle with accounting for and verifying teaching activity. Awareness that the information already exists at NOSM and belief that this information could be accessed on One45 was cited as a challenge to enforcing “duplicate” reporting.

... but I think the way the system was set up, getting information, these other individuals were saying, "Why should I give you the information? You can go to NOSM and get it. You’re wasting my time, you’re asking me to pull things together, when I’m not being remunerated for that, that’s your job". So there was a bit of that going on too. (Large Community LEG)

Some LEGs solved this problem by hiring a part-time administrator who already had a part-time appointment at NOSM as a Site Administrative Coordinator (SAC), so they had access to NOSM information by virtue of their administrator’s dual role. However, not all LEG administrators have this dual role, and there are no SACs in the hub communities of Sudbury and Thunder Bay, which can still have community-based LEGs. Some LEGs may also have Physician Leads with additional NOSM roles (e.g. Section Chairs) that enable access to information. But because not all LEGs can exploit a dual role, the unequal access to NOSM systems and information place some LEGs at a significant administrative disadvantage.

... and our administrator for the LEG is also our part-time our SAC administrator for NOSM, so it becomes fairly easy to track, because she schedules the students with the different preceptors and therefore has that record, and then puts on another hat and becomes our LEG Administrator, and calculates payments for each individual preceptor, based on the scheduling . . . Obviously if it were two different people, it would require a good communication between them to be able to reconcile all that, but in our situation, it’s a little bit easier. (Small Community LEG)

The last administrator we had was struggling, she was having difficulties in wrapping her head around how to get all this information together. There were deliverables being provided, but payment wasn’t being done as quickly as it should. And it was just because, where’s the database, where’s the information, how do we facilitate it, how do we prove that the person provided that deliverable - that was the hardest part. . . . Now we have one person who is also doing the work for NOSM, the Site Administrative Coordinator . . . our new administrator has an “in.” (Large Community LEG)
Another administrative challenge involved the distribution of information from NOSM to the LEGs. For example, one multi-site community LEG was frustrated that its administrator continued to receive information (e.g. scheduling requests) from NOSM only for the physicians in that specific office, instead of for all clinical faculty in the LEG. Repeated attempts to get this corrected were not successful; this administrator’s lack of a formal affiliation with NOSM was thought to be a barrier to improved communication.

...And then I understand that a lot of the other LEGs, the Admin person also works for NOSM, so that’s an advantage that I don’t have. So when I went to that Admin meeting last fall, I needed more basic information than the others in the group who were already working with NOSM. That has also made communication with NOSM difficult. (Family Medicine LEG)

Two challenges to expanding academic activity were limited opportunity to engage with NOSM, and lack of perceived benefit to faculty promotion. LEGs in distant communities faced basic access obstacles to participating in activities based at NOSM:

I think geographic distance is one of the biggest barriers . . . whether it’s because of CME or faculty development opportunities, or even promotions and involvement with NOSM, or involvement with some of the other academic deliverables, whether it’s lectures or anything in Phase I for that matter, or the first two years. It’s even involvement in the admissions process, some of us have participated in in the past, but it’s also something that requires us traveling a certain distance to get there . . . I think most of us, even though we’re in a fairly remote community, prefer face-to-face interactions, face-to-face faculty development. None of us really appreciate web-based or teleconferenced sessions. And I think we tend to avoid those as much as possible . . . (Small Community LEG)
Finally, a number of participants commented about faculty promotion, and how it had limited value particularly in rural communities. It appeared that LEG members in hospital departments were more likely to be interested in promotion, however even in those LEGs, the lack of tangible value to promotion was a barrier.

vi. Suggestions and recommendations for NOAMA. Participants’ recommendations on improving the LEGs initiative were mostly suggestions for NOAMA, but some also included NOSM (Table 3). Again, while the recommendations reported here reflect the comments of participants, that does not necessarily mean that all participants agreed shared the same opinions, or that their comments reflect the opinions of the wider LEG membership.

A number of recommendations for NOAMA focused on assisting LEGs in documenting and reporting their activities; many LEGs were uncomfortable with what they felt was insufficient structure to support accountability for the large sums of money they were managing. None were opposed to more rigorous reporting, and some pointedly requested it. To assist LEGs in doing this, suggestions were for NOAMA to clarify reporting requirements, provide reporting templates, provide or support the creation of tools to help LEGs track member activities, and provide more feedback to the LEGs on their progress.

There’s not a caché or, having lived in the academic environment, and knowing the drive to succeed of academics and how they view success, that doesn’t parlay into the rural environment. It just doesn’t. There might be a few folks that get excited by that, but often they’re short for the rural environment, like they’re your typical 3 year average and they’re gone to a larger centre. No, it’s not one of those goals that people are shooting for. (Small Community LEG)

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I think there needs to be an evolution to more responsibility with regards to the goals that we’ve set out for ourselves, and I think our LEG is not afraid to go there, we’re not afraid to get into more of a reporting mode ... I think that’s important, especially to improve things, to evolve things to a better state. (Small Community LEG)

So if [NOAMA] could produce a nice little software package internally, say “here it is,” pop it in your laptop, plug it in, do your tracking... And then maybe even an app for the students to get onto so that they can do the tracking for us – and then we can be more efficient and proficient at getting the deliverable to the student, and getting the funding to the teacher. So, I think that would be a big plus... (Large Community LEG)
Some of the recommendations were related to funding for the LEGs. Again, some LEGs felt that their specific goals and activities were not taken into account in the early rounds of funding, and that the LEG funding formula should be sufficiently flexible to support the higher funding needs of specific activities (e.g. professional development for LEGs developing new post-graduate programs), or variable diversity and quantity of activities undertaken by LEGs. Research funding, in particular, was felt to be insufficient to help LEGs develop the capacity needed to achieve success in applying for grants, conducting research, or publishing and disseminating results; a related issue was funding for protected time. Another area of concern was funding for administrators – all who had been able to support (part-time) administrators recognized their importance, but some were concerned that the funds were insufficient to encourage other LEGs to do the same, and some were concerned that the administrative load might require a full-time administrator, for which there was insufficient funding.

A third group of recommendations centered on enhancing communication. While participants in general felt that NOAMA was very responsive to inquiries, more two-way communication with NOAMA would be better. Some perceived the Initiative to be “top-down,” with decisions made without sufficient consultation with the LEGs themselves. More guidance and structure was desired to reduce the amount of confusion and energy spent during start-up, and more feedback was desired as LEGs became operational. Other recommendations centered on having NOAMA facilitate and support more inter-LEG networking; most participants felt that they had no idea what other LEGs were doing, and wanted more opportunities to learn from one another. LEG Leads were clearly enthusiastic about the meetings organized by NOAMA, and offered suggestions for additional knowledge exchange opportunities. Other possibilities included sharing their experience and assisting new LEGs.

Everybody’s moving along, but if we talked to all the LEGs, they’d all say, “Rules are changing.” And we have to be careful about changing the rules of the game without communication. You know, a better thing would have been to say, “Look, we’re discussing and interested in doing this, what are your thoughts?” (Large community LEG)

I think that NOAMA has a number of challenges around what they’re trying to do, I think the recognition of geography is a huge one. And I think allowing the cross-pollination that happens when people are brought together, was very effective in the last meeting to spread some of these ideas around the LEGs, and to bring in some of the people that are still on the outside looking in and wondering. So I would encourage them to really look at what ways that they can do the knowledge translation out to the periphery and create links, I think is so important. (Small Community LEG)
Additionally, some felt it was important for NOAMA to meet with LEG in their own communities (although none had made such a request). The purpose of wanting NOAMA to visit ranged from wanting the opportunity to raise issues in private and/or discuss issues that were perceived to be idiosyncratic or local (and therefore not relevant to other LEGs), to wanting NOAMA to interact with the wider membership, for example by attending annual meetings, and perhaps make presentations to the members (e.g. explain Innovation Grant opportunities).

... The LEG Lead meetings are very good, but NOAMA also needs to meet with us individually, not just as a group. There are some things that cannot be discussed in the group format. NOAMA should come here and talk to us individually. (Hospital Department LEG)

So, what would be unique would be, for motivational purposes, and I’d underline this one for the NOAMA innovation grants - come here and give a talk, to the membership! Come here to our meeting, and give us a talk on innovation possibilities, and research. (Large Community LEG)

vii. Recommendations for both NOSM and NOAMA. Other recommendations would likely require the support of both NOSM and NOAMA, including recommendations about research/scholarship, NOSM-paid activities, academic promotion, and awards and recognition. First, participants discussed the need to develop new research models and indicators that would be appropriate for NOSM’s rural-focused DME model. For one participant, a model of “distributed research” included aspects of community-engaged scholarship.

... we’re keen on developing “distributed research” within the NOSM community, and we’re looking forward to working on that. NOSM’s strength is the distributed learning, and getting students out of the ivory tower. And research should be carried out similarly, there’s a lot of important issues – including having students and learners be aware of how research is carried out in the periphery and outside of the university hospitals. Distributed research would be research that’s not just centered in the university hospital and then associated with smaller communities, but actually springs from the needs and questions and interests of those in the smaller communities . . . because solutions for rural communities – There are a lot of solutions that could be coming from those rural communities for their own issues, rather than from folks that are in larger centres trying to examine us. So that’s a piece that I’m really excited about. (Small Community LEG)
Second, some participants felt it was confusing to have AFP-funded activities paid through the LEGs but not NOSM-funded academic activities. This made it more difficult for the LEG to coordinate and document the full range of academic activities. Although LEGs could optionally decide to integrate those funds and activities, it was recommended that NOSM should encourage this integration:

Some other NOSM-paid academic activities are currently paid directly to individuals. The LEG has the choice whether to have these activities paid to the LEG, but we would like NOSM to push in that direction, to pay all academic activities through the LEG. Then it would be more clear what all members are doing, more clear what money is going to which members, and where funding is coming from. Right now it’s difficult, with different sources of funding for the same type of [academic] activities... (Hospital Department LEG)

Other participants identified the need to expand the view of research roles in small rural communities, to include recognition of and support for research collaboration, as well as support for the development of collaborative/regional research programs.

... I think that all of the LEGs should have a central clearinghouse for collaboration and research. So if I have our LEG and our research component and our research funds, we could combine with the research funds and the interests and the expertise and patients in another LEG – if I knew they were doing something that I was interested in, we could collaborate ... but we don’t have that central bulletin board or clearinghouse... (Medium Community LEG)

Finally, participants had recommendations regarding academic promotion, and awards and recognition. Some felt that if NOAMA and/or NOSM could create some tangible value to academic promotion, then members might be more motivated to take on extra academic activities and apply for promotion.

NOAMA needs to value to promotion – maybe provide a small bonus for members who get an academic promotion, maybe require everybody to keep up-to-date academic dossiers, maybe provide a financial incentive for that... (Hospital Department LEG)

I think this concept about rewards in terms of our evaluations – so if we’re good at teaching, if we’ve done something unique – maybe NOAMA or NOSM should look at that, let's upgrade this individual, let's give them a teaching award. I don’t think there’s been one in this community for over a decade. (Large Community LEG)
V. CONCLUSIONS AND RECOMMENDATIONS

A. Summary and Conclusions

In this study, we have documented the experiences of the early LEGs, their activities and innovations, and their perspectives on what is working and what could be improved. The findings serve two main purposes. First, the study obtained critical input from the LEGs themselves that has been used to construct the program logic model for an evaluation framework. Second, the study serves as a qualitative process evaluation that provides NOAMA and other stakeholders with data on the progress of the initiative to date; it further provides NOAMA with suggestions on future policy and program actions to further strengthen the initiative.

LEG progress has been variable, depending on the factors discussed in Section III.C, including pre-existing organization and cohesion, the size of the LEG and organizational complexity, physician shortages, model of remuneration, individual physician characteristics and interests, and idiosyncratic factors. As the first wave of LEGs “broke trail” and helped NOAMA work through organizational start-up issues and provide templates (e.g. sample governance agreements), newer LEGs would likely have different, in many ways easier, start-up experiences. Yet each LEG remains unique in terms of context and composition, and new LEGs will undoubtedly provide new lessons.

Seven domains of activity were described, including administrative activities (including remuneration/activity tracking, governance and membership engagement, and infrastructure development); “delivery of the NOSM curriculum” or base medical education activities; expanded/enhanced medical education (often viewed as non-LEG activity); program development (including development of postgraduate residency programs); professional development (including CME, faculty development, mentoring, recognition and awards, service and leadership), research, scholarship and innovation (e.g. Innovation Grants); and recruitment, retention, and community engagement. Challenges and recommendations centred on administrative barriers and communication issues with both NOAMA and NOSM; challenges for expanding academic activity, and challenges for research, scholarship, and innovation. With the exception of base medical education, each LEG varied in terms of which domain(s) were their current focus. However, even if not currently involved in a particular type of activity (e.g. research), participants indicated ambitions to include the other activities in the future.

One goal of AFP funding, including the NOSM AFP, is to facilitate the development of an academic culture. The LEGs Initiative began with a focus on transitioning clinical teaching to
the LEG model, as the activity was already occurring and was thought to be the easiest to implement. However, for many participants, “new” expectations around additional academic activity (“add ons”) appeared to come as a surprise. Despite some feelings regarding perceived lack of transparency and “mission creep,” participants generally welcomed the new opportunities provided by the LEGs, even if their own LEG was not ready to take on new activities.

**Benefits and challenges.** The key benefits described in the study were better local organization and collective delivery of medical education. Part of this improvement was attributed to the requirement that members hold a NOSM faculty appointment; over the past five years, the number of NOSM clinical faculty has grown from an estimated 700 to over 1,200 physicians. And while many LEGs emphasized the newness of the initiatives and the continuity of medical education rather than major changes, all participants indicated that the LEG had improved the situation in their community/department, and that greater impact and benefits could be anticipated over time. However, LEG activity was frequently described as “extra” activity, which made it vulnerable in a hierarchy of priorities, where clinical services came first, clinical teaching was second, and all other academic activities were third. Further, many participants described the start-up process as exhausting, with substantial energy being spent in the organizing process. Burn-out of leaders and passivity of members were a challenge for some LEGs.

**Clarity vs. flexibility.** In some cases, what was a challenge for one group was a benefit for another. For example, a significant amount of confusion appeared to remain among some LEGs in terms of whether certain activities were fundable using LEG money, and this misinformation and uncertainty was a barrier to moving forward. In some cases, the confusion appeared to reflect a lack of awareness of the extent of control residing with the LEG, with some LEGs wanting more direction from NOAMA. Some participants had limited familiarity with their governance agreements, suggesting that these documents represented little more than “bureaucratic hoops” to becoming a LEG. On the other hand, there were LEGs with a clear understanding that their own governance agreements were the main control over their groups’ activities and use of funds. These groups appeared more comfortable in taking initiative and using funds as needs arose, even if that diverged from original funding proposals.

**Data collection and reporting.** As noted frequently in the literature, developing systems to collect and report data on physician activity has been a major challenge for AFPs and similar programs, both in Ontario and elsewhere.[12–17] It is no different for the LEGs. At the time of the interviews, there was very little being done in terms of collecting data on program activities.

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6 Exact numbers of clinical faculty are forthcoming from NOSM.
For some LEGs, even confirming and remunerating for teaching activities was a major challenge, let alone accounting for other academic activities.

The exceptions were those LEGs using point systems, which in this study was limited to hospital department LEGs. Point systems were used for internal allocation of funds and/or to keep colleagues “motivated” to do their share. They differed on which activities were tracked, as well as activities paid by the LEG vs. all academic activities (regardless of funding source). In one LEG, these “non-LEG activities” were nonetheless being tracked so that the group could have a comprehensive understanding of all academic activity. Another LEG had placed all of its academic activity under the “LEG” umbrella. While this helped the LEG understand the total academic productivity of its members, it also revealed to the LEG that the amount of work being done exceeded the amount of funding received.

**NOAMA update and response.** It is worth noting that some of the participants’ recommendations overlap with work in progress at NOAMA, who has implemented a number of changes since the interviews were completed. There is evidence of increased consultation with the LEGs, demonstrated through the Funding Model Working Group, created in response to LEG concerns about a new draft funding formula; the revised funding formula has now been implemented for the 2014-2015 funding year. A LEG Implementation Working Group has also been established to ensure LEG participation in resolving day-to-day issues. An annual report format has also been developed and implemented for the 2014 end-of-year reporting, and information provided is used to determine the next year’s funding. NOAMA has also provided an electronic discussion board on its website to enable LEGs to exchange information.

Other NOAMA enhancements include better structure, guidance, and support for LEGs. Applicants to form new LEGs are provided with templates for governance agreements, based on the examples developed by the first wave of LEGs. A sample job description for a LEG administrator is also now on offer. More assistance is now available to help with developing applications, as well as provide support to LEGs that need it. NOAMA is also discussing the potential development of shared administrative services with some groups (e.g. hospital department LEGs, or small community LEGs in a subregion), as well exploring the potential to provide direct administrative support services to LEGs.

As of October 2014, the number of LEGs with approved governance agreements (deemed operational) had grown to 35 LEGs, and it appears that a kind of “critical mass” has been attained. Based on the presentations at the September 2014 LEG Lead and Administrator’s meetings, the LEGs are moving past the early growing pains and are gaining momentum.
B. Recommendations for NOAMA

In addition to the recommendations made by participants, the research team offers seven recommendations for consideration by NOAMA in moving forward with evaluation planning. These will be revisited as the evaluation plan is developed.

1) **Allow 3-5 years to prepare for evaluation.** Given that the LEGs model is still developing, it is too early for a formal evaluation. And with lack of data as a major barrier to performance assessment and evaluation, results indicate that the same would be true of the LEGs Initiative. As it can take time to establish reporting and data collection systems, this should be the focus of efforts for the near future. Options for developing these systems will be explored in the Evaluation Framework report.

2) **The evaluation framework must be dynamic.** Overall, the LEGs Initiative is still in its early stages and will continue to evolve as new groups form, and as all groups gain more experience. The evaluation framework will need to evolve as well. External factors such as changes in policy or Ministry priorities may also require changes to the framework. An evaluation plan will need to include a process for ongoing review and adaptation to ensure it evolves with the LEGs.

3) **The evaluation framework must be flexible.** The diversity of size, activity, and desired outcomes is very problematic for establishing a common set of evaluation criteria. “One size” will not fit all. The draft Program Logic Model covers the range of program objectives, activities and outcomes described by participants, however, it is unlikely that all will apply to any one LEG. The evaluation plan needs to allow for differences among individual LEGS, support local decision-making in the selection of evaluation criteria that are applicable to each LEG.

4) **Explore the feasibility of evaluation plans tailored to different types of LEGs.** Within this small sample, there was insufficient evidence to determine whether differences between LEGs were completely idiosyncratic, or patterned by type of LEG (e.g. hospital department LEG, small community LEG, large community LEG, multispecialty LEG, family medicine LEG). An evaluation subcommittee could be established to review the logic model and determine whether evaluation criteria specific to the different types of LEG are feasible and desirable.

5) **Qualitative evaluation will remain important.** Each LEG has their own criteria for success, independent of the larger objectives of the AFP. It is important to integrate these perspectives along with any quantitative measures used in evaluation (e.g. narratives about success, success stories/impacts). The evaluation plan needs to address qualitative reporting requirements in addition to the quantitative evaluation.
6) **Provide technical assistance to the LEGs.** Implementation of the evaluation plan will require more hands-on support to the LEGs from NOAMA. We recommend that NOAMA consider creating a Program Officer position to support the LEGs with evaluation planning. Key functions would include liaising with the LEGs, providing on-site support for evaluation planning and development of systems for data collection and reporting, and for ensuring ongoing feedback and adaptation of the evaluation plan.

7) **Enhance information and communication.** From the research team’s perspective, the NOAMA website offered a wealth of information that would answer many LEG questions and/or help address misinformation. However, participants reported rarely or never visiting the site. Because it relied on busy physicians taking the time to explore, however, it appeared that this passive form of communication was less effective than it could be. One suggestion would be for NOAMA to explore more active and regular communication with LEG Leads. Development of more content for the website may encourage more members to visit the site. And as suggested by participants, facilitating more direct communication between LEGs, such as supporting an electronic discussion board, would help LEGs learn from one another.

C. **Recommendations for NOSM and NOAMA**

Although NOSM was not the focus of this study, it is not surprising that participants had suggestions and recommendations for NOSM as well as NOAMA. Clinical faculty are required to hold academic appointments at NOSM to participate in the AFP and to be a LEG member. Further, the LEGs hold contractual agreements with NOSM to deliver medical education. Thus effective interactions with NOSM are a key factor in the success of the LEGs.

There were several challenges and recommendations focusing on NOSM. First, participants described unequal access to NOSM information (scheduling, completion of evaluations, evaluations of faculty); where LEG administrators or Leads had dual roles through appointments at NOSM, the LEG was able to take advantage of increased access to information. But LEGs lacking personnel with a dual appointment faced barriers to obtaining the same information. Second, LEGs described how NOSM had not yet adapted to the LEGs, meaning that NOSM staff were accustomed to interacting one-on-one with clinical faculty, rather than collectively through the LEG. Third, many expanded academic activities were paid directly through NOSM and were not funded by the AFP; for some LEGs, this meant that the activity was outside of the LEG. Some suggested that integration of all academic activities in the LEG would be facilitated by NOSM pushed to pay all activities through the LEG. Fourth, participants described the need to work with NOSM to develop a sustainable model of rural research and to strengthen research development and support services. Fifth, LEGs in more
distant communities felt there were limited opportunities to participate in NOSM leadership activities because of the distance; despite the availability of teleconferencing, some felt the opportunities (e.g. meeting locations) should be better distributed, and/or that NOSM could do more outreach to LEGs. Finally, because of the lack of perceived benefit to academic promotion at NOSM, most felt that their members did not have any incentive to pursue promotion; recommendations were to create some tangible benefit to promotion.

In addition to the interviews with LEG Leads, the research team met with various stakeholders in NOSM, and also observed that some staff members were not familiar with NOAMA or the LEGs. In addition to the recommendations made by participants, the research team offers two suggestions:

8) **Familiarize all NOSM staff with the purpose of the AFP, with the role of NOAMA, and with the LEGs Initiative.** As a key partner in delivering distributed medical education, it is important that all NOSM staff understand the role of NOAMA and the LEGs in implementing the NOSM curriculum. The success of NOSM and the LEGs go hand-in-hand, and sustainability of the LEGs hinges in part in NOSM systems adapting and working with and through the LEGs. Possible mechanisms include presentations to the Academic Council, articles in NOSM publications, and staff information sessions. In addition to raising awareness, NOSM leadership should signal their support for the LEGs so that staff will understand the importance of effective communication and collaboration with the LEGs.

9) **Work with NOAMA and the LEGs to identify and resolve systems issues.** Interviews revealed some specific issues where NOSM systems were not oriented toward the new organizations or their collective responsibility for medical education. This increases the administrative load on the LEGs and may result in duplication of efforts. These system barriers also draw energy and resources away from innovation and other activities. For example, modifying information systems to include a LEG Identifier in faculty or student records will enable information systems and products to begin responding to information needs at the LEG level. Another possibility is to enable LEG Administrators access to One45, regardless of whether they are appointed as SACs. This needs to be a collaborative effort with NOSM staff, NOAMA, and representatives from the LEGs.

This report will be reviewed by the members of the project advisory committee, prior to review by the NOAMA Board and PCTA Board. A revised version of this report will be prepared for public dissemination.
D. **Next Steps – Developing the Program Logic Model**

The findings from this exploratory study provide an empirical basis for the development of a Program Logic Model (PLM) tailored to the unique context of medical education in Northern Ontario; a first draft is included in Appendix C. For each activity domain, the PLM identifies goals, resources needed, strategies, activities, and outputs and outcomes. The PLM will form the basis of a future evaluation strategy, intended to be sufficiently flexible to account for differences among LEGs, while also encompassing the full range and scope of LEG activity.

While subject to revision, activities described can be organized into five main activity domains:

- Clinical Teaching & Program Development
- Professional Development
- Scholarship, Research, & Innovation
- Recruitment, Retention and Community Engagement
- Administration & Governance

Importantly, a number of resource conditions were identified that would need to be met to enable LEGs to achieve specific goals. For example, a key condition for scholarship, research, and innovation, was a sufficient number of physicians to meet the clinical needs of the community and enable LEG members to have the time and energy for scholarship. Indicators of resource conditions should be developed, measured, and monitored, and used in the interpretation of any process, output or outcome indicators.

The draft Program Logic Model, along with this report, will be reviewed by the Advisory Committee and then shared with the study participants to elicit feedback. Consultations will also be held with stakeholders within NOSM. A second report will be prepared with the final Program Logic Model.
Reference List


LIST OF APPENDICES

APPENDIX A: List of Acronyms
APPENDIX B: Question Guide
APPENDIX C: Draft Program Logic Model
APPENDIX A
LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AFP</td>
<td>Alternative Funding Plan</td>
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<tr>
<td>AHSC</td>
<td>Academic Health Science Centre</td>
</tr>
<tr>
<td>LEG</td>
<td>Local Education Group</td>
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<tr>
<td>MOHLTC</td>
<td>Ontario Ministry of Health and Long-term Care</td>
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<tr>
<td>NOAMA</td>
<td>Northern Ontario Academic Medical Association</td>
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<tr>
<td>NOSM</td>
<td>Northern Ontario School of Medicine</td>
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<tr>
<td>PLM</td>
<td>Program Logic Model</td>
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<tr>
<td>SAC</td>
<td>Site Administrative Coordinator</td>
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<tr>
<td>SEAMO</td>
<td>Southeastern Ontario Academic Medical Organization</td>
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</tbody>
</table>
1. Evaluation criteria will be identified for “domains” or categories of activity.
   a. What types or categories of activity currently describe the main activities of your LEG?
   b. What additional types of activity does your LEG hope to add in the future?
   c. How comfortable would you (and your members) be reporting on these activities for program evaluation purposes? Are there any barriers or sensitivities that would impede or compromise reporting?

2. What is your understanding of the scope of the NOSM academic deliverables?
   a. Which deliverables are significant to your members?
   b. What research/scholarship deliverables are appropriate for your LEG?

3. How does your LEG support expanded academic activities? Has your members’ participation in these types of activities changed since your LEG was established? Why/Why not?
   - Post-graduate academic half days
   - Post-graduate simulation sessions
   - Post-graduate exam preparation
   - Resident mentoring and advising
   - Postgraduate admissions/recruitment
   - Learner assessments/evaluations
   - LEG program evaluation
   - Faculty assessment/development

4. How does your LEG support the other academic deliverables? Has engagement with these types of activities changed since you joined a LEG? Why/Why not?
   a. Research program development
   b. LEG academic program development
      i. Small DL sites – development of a post-grad experience
      ii. Participation in development of an accredited postgraduate program
      iii. Participation in NOSM formal remediation
      iv. Delivery of Structured Academic Sections

Examples of Activity Domains:
- Medical Education
- Medical Education Innovation
- Research
- Scholarship
- Clinical Innovation
- Clinical Recruitment
- Clinical Services
- Administration
- Leadership
- Community Engagement
- Organizational Development/
  Systems Development
- Professional Development
- Faculty Development
5. What information does your LEG currently collect about your members’ productivity related to the NOSM Academic Deliverables?
   a. Have you established an internal reporting system? If yes, what data do you collect?
   b. What data do you think you should be collecting?
   c. What would your LEG need to facilitate reporting of information for evaluation purposes?

6. LEGs members have access to grants through two sets of Innovation Funds.
   a. Has any member of your LEG applied for an innovation grant? Has anyone succeeded?
      i. If yes, can you describe the innovation?
      ii. If no, do you intend to apply in the future?
   b. What is the relative importance of these grant programs to the overall success of the LEGs initiative?

7. How would you describe the benefits of the LEGs initiative, to date?
   Probes: Autonomy; empowerment; career development; group accountability; income; academic opportunity; learner experience
   a. Is the situation for your members better or worse since the LEG has implemented? How and why?
   b. Do you have any stories or examples of a success or an innovation related to the LEG?

8. Think about how you would like to see your LEG develop over the next 5 years or so - What would “success” look like for your LEG?
   a. What are your hopes for the LEG? What do you / your members want to achieve?
   b. What are some outcomes you hope to achieve? Short term, mid-term, long term?
   c. Has your LEG established any performance targets or benchmarks?
   d. What challenges does your LEG face to achieving success?

9. Is there anything else you think we should know as we develop the evaluation framework?
The program logic model is intended to ensure that explicit relationships between goals, strategies, activities, outputs and outcomes are identified, as well as to acknowledge the resources and other pre-conditions necessary to achieve desired outcomes. The framework supports different types of evaluation (process, outcome), and in this case, is intended to work at two levels: first, at the individual LEG level, and second, at the AFP level (LEGs in the aggregate). A major challenge was to identify goals and activities that represented the interests of a very diverse group of organizations, as well as the objectives of various stakeholders.

For each goal, the model identifies resources needed, strategies to accomplish the goal, activities or processes of implementation, and outputs (short-term) and outcomes (long-term) as different types of indicators. The goals were identified from a combination of LEG documents and participants’ reasons for becoming a LEG, the benefits of becoming a LEG, and expectations for the future. It is explicitly recognized that not all goals and activities will be relevant to all LEGs. Resource needs represent some of the systems factors that facilitated or benefitted the LEG, or alternatively represented barriers or challenges to accomplishing their goals. Strategies were derived mainly from LEG successes and accomplishments, or where there were gaps, from the literature. The activities or processes summarize either actual or planned activities, or gaps in activity identified during interviews. Outputs are intended to represent the short-term and proximate results of an activity; output measures facilitate more direct attribution of impact to the program being evaluated, but tend to be intermediates or proxies to the actual desired outcomes. Outcomes tend to take more time to realize, and may be more distal and difficult to attribute exclusively to program impact, but represent what the program ultimately hopes to accomplish.

This format was chosen for two main reasons. First, it reflects the approaches take by other AFPs and may provide a bridge to prior work, even though the domains, goals, and activities reflect a very different kind of AFP (see for example, the technical report of the AHSC AFP, 2007).[1] It was also chosen because it supports the inclusion of important contextual information. A key message from participants was that success of the LEGs hinged on resource limitations in general, and physician shortages in particular. Explanatory indicators can be derived from identified requirements, and used in interpreting the results of process, output and outcome indicators.

The following are suggested as some guiding principles to be observed in developing the PLM, and are presented for further discussion:

- The framework is intended to enable evaluation at both the individual LEG level and in the aggregate (AFP Level).
• LEGs operate under variable conditions of resources and constraints that are beyond the control of the LEG. Two major constraints in Northern Ontario are geography/distance, and the supply of physicians relative to demand for clinical services. Resource indicators should be included in the PLM to allow for measurement of the necessary (if insufficient) conditions of academic productivity, in support of contextually informed evaluation.

• To the extent possible, evaluation indicators should reflect the same criteria that would be used in evaluating contributions for academic appointments and promotions. Development of a LEGs activity reporting system based on those deliverables could also enable individual physicians to track activity for the preparation of academic dossiers. This added value may encourage greater cooperation with collecting and reporting data.

• Not all domains are relevant to all LEGs at this time, and given the variability among LEGs, this is likely to remain true. Goals activities and measures are described for all domains, but LEGs should initially focus on those activities agreed on in the annual Academic Funding Template. Newly established LEGs might want to focus on structure and processes for the first few years.

• LEGs should be assisted in developing data systems for measuring and influencing the work of individual members as well as the collective.

• The focus of the evaluation framework should be on evaluating LEG activity, not individual physicians. But because the AFP also funds non-LEG members, data should also be collected for non-LEG members to enable measurement of the difference between LEG and non-LEG members. Data obtained from non-LEG members should be aggregated.

• Evaluation should ideally rely on data that are readily available, centrally collectable, standardized, reliable and applicable to most LEGs. As these are not currently available, development of a system of data collection, monitoring and evaluation should be a long-term goal.

Note that the Program Logic Model forms the basis of a measurement and data plan. The next step will be to translate indicators into measures, and identify potential data sources, to operationalize the plan. This can be expected to result in revisions to the model.

Reference List