Project Brief – December 2014

Background

Alternative Funding Plans (AFPs) in Ontario support physicians who provide clinical teaching to medical students and residents. AFPs are funded by the Ministry of Health and Long-term Care (MOHLTC), and have existed at Academic Health Science Centres (AHSCs) in Ontario since the 1990s. The first AFP for the clinical faculty of the Northern Ontario School of Medicine (NOSM) was signed in 2009, as a negotiated agreement between the MOHLTC, the Ontario Medical Association (OMA), NOSM, and the Physician Clinical Teachers Association (PCTA).[1]

NOSM has a unique mandate to train physicians for rural and northern communities. Because of NOSM's model of distributed medical education (DME) - with clinical learning sites in over 70 communities across northern Ontario – the NOSM AFP needed a different approach to supporting clinical faculty.[2–4]

The LEGs Initiative is an innovative model of funding the academic activities of clinical faculty, tailored to northern Ontario and DME. AFPs at other AHSCs are largely centralized and implemented through existing administrative structures. In contrast, the NOSM AFP is administered by an independent association, the Northern Ontario Academic Medicine Association (NOAMA),[1] and implemented largely through the Local Education Groups (LEGs) Initiative.[5] LEGs are self-organized groups of physicians with responsibility for academic deliverables and clinical teaching. LEGs are funded to provide an organizational structure to support clinical faculty in NOSM's partner communities.

Thirteen groups of physicians responded to the first call for LEG proposals in 2011; by the fall of 2013 there were 23 operational LEGs, with another 17 under development. Today, there are 35 operational LEGs, with others in the planning stage. Each LEG has its own governance agreement, educational program, objectives, and organizational structure.[2] Four distinct organizational types have been recognized: Community (multispecialty), Hospital Department, Family Health Team, and Pan-Northern.

AFPs are also intended to support the growth of an academic culture among physician clinical faculty, and all NOSM AFP members are required to hold a faculty appointment at NOSM. More than half of NOSM's clinical faculty have been appointed since 2009,[3] reflecting a doubling of participation in the AFP, from 469 to 971 physicians. All AFP members are eligible to apply for grants through the AHSC AFP Innovation Fund[4] and the Clinical Innovation Opportunities Fund.[5] Unlike other AFPs, the NOSM AFP does not provide funding for clinical repair, so payments for clinical service delivery are separate from the AFP.[6]

Although individual clinical faculty members can participate in the AFP without joining a LEG, LEGs are eligible to receive additional funding for administrative support, professional development, program development, and research development. Of the 971 eligible physicians currently participating in the AFP, 627 (65%) have joined a LEG; many other potential LEG members await faculty appointments.

[1] The NOAMA Board of Directors includes representatives from the PCTA (with the majority of voting membership), NOSM, and, since June 2013, NOSM-affiliated hospitals.

[2] An OMA lawyer has provided essential support to all LEGs, including assistance with governance agreements.

[3] As of August 14, 2014.[6] NOSM counts of "clinical faculty" include physicians outside of northern Ontario as well as non-physician interprofessionals (only physicians are eligible to participate in the AFP). In 2014, an estimated 83% of clinical faculty were Northern Ontario physicians.

[4] Funded by the MOHLTC and administered by NOAMA.

[5] Funded by NOAMA.

[6] "Clinical repair" funding is to mitigate loss of clinical income that can result from time spent with learners. Because northern physicians already have rural and northern-focused alternative payment or alternative funding plans to supplement clinical income, the NOSM AFP does not include funds for clinical repair.

The LEGs Evaluation Project

The LEGs Evaluation Project was designed (a) to provide interim feedback to NOAMA and partners for managing and strengthening the LEGs Initiative, and (b) to develop an evaluation framework that will guide evaluation of the novel AFP model.

A draft framework was developed using a combination of consultations, literature and document review, and qualitative research with LEG Leads.[7] A draft Program Logic Model (PLM) was developed and reviewed; feedback from an Advisory Committee and the LEGs were used to finalize the framework. The research protocol was approved by the Laurentian University Research Ethics Board. Key deliverables were the research report and evaluation framework document.[7,8]

Interviews with LEG Leads. Nine LEG Leads participated in semi-structured interviews between January-April 2014. LEGs were selected from among those with the most operational experience, mostly from the first wave of LEGs. Interviews were analyzed thematically. Major themes included benefits of becoming a LEG; activities and innovations; factors influencing LEG development; challenges and recommendations; and ideas of success and suggestions for evaluation.

Benefits of Becoming a LEG

The key benefits described by participants were better local organization and collective delivery of medical education. Although most LEGs emphasized that clinical teaching activities continued much the same as they had before, all participants indicated that the LEG had improved the situation in their community/ department; greater impact and benefits could be anticipated over time. Other benefits included increased flexibility and fairness in the use of funds; encouragement and support for research and innovation; enhanced status of clinical teaching in the community; direct and indirect clinical recruitment, and support for special projects.

Table 1: Benefits of Becoming a LEG

Main themes and subthemes
Improved organization & delivery of medical education
Better organized
Funding for administrative support
Development of a collective approach to medical education
Local ownership
Greater consistency & accountability in delivering curriculum
Increases in academic activity
Increases in learner placements
New modules / activities
Increases in locally delivered CEPD
Greater flexibility and fairness in use of funds
Encouragement & support for research and innovation
Enhanced status of clinical teaching in the community
Community benefits
Direct and indirect clinical recruitment
Special projects
Community acceptance of learners

Activities and Innovations. Initially, seven domains of activity were described by participants.[8] *Clinical teaching*, or "delivering the NOSM curriculum" was understood as the main purpose of the LEG. Beyond the base medical education, each LEG varied in terms of which domain(s) were their current focus. Some LEGs described *expanded/enhanced medical education* activities, but these were usually viewed non-LEG activity because they were paid by NOSM, rather than the LEG. *Program development* included development of postgraduate residency programs as well as any new learner activity. *Professional development* activities included continuing medical education (CME), faculty development, mentoring, recognition and awards, and service and leadership. *Scholarship,*

[7] Although this project has focused on the perspectives of the LEGs themselves, the LEGs Initiative also has impacts on affiliated hospitals. Future research may investigate the impact of the LEGs Initiative on community hospitals.

[8] Unlike other AFPs, the NOSM AFP does not provide funding for clinical repair. Because of this, participants generally considered clinical services to be outside the scope of LEG activity.

research, and innovation (SRI) activities overlapped, and were usually described in terms of innovation grants. *Recruitment, retention, and community engagement* were described as goals, activities and outcomes of LEG activity. However, the bulk of initial efforts were a*dministrative activities,* including the development of governance agreements, as the first wave of LEGs worked through organizational start-up issues and developed models to guide future LEGs.

Increases in Academic Activity. Examples of new academic activity attributed to the LEGs included:

- increases in learner placements (greater willingness of members to accept learners)
- new program development (new academic half-days, development of new simulation programs)
- locally offered, accredited continuing education and professional development (CEPD) events
- Nine successful innovation grant applications among members of five of the LEGs.

Other activities, such as development of post-graduate residency programs, benefitted from the LEG, even if initiated prior to organizing as a LEG.

Challenges and Participant Recommendations

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.

Challenges identified by participants included organizational and administrative challenges; challenges for expanding academic activity, and challenges for research, scholarship, and innovation (Table 2). LEG Leads frequently described LEG activity as "extra" activity, making it vulnerable in a hierarchy of priorities, where clinical services came first and clinical teaching came second; all other academic activities were lower priority. Participants

Table 2: Barriers and Challenges (LEG Lead Interviews)

Main themes and sub-themes
Organizational / Administrative Challenges
• Initial lack of structure and guidance
• Accounting for / confirming LEG activity
• Deciding how to spend LEG funds
• Insufficient funding for LEG activity (post-graduate program development; research)
• Size / complexity (Large community LEGs; community-based LEGs in Sudbury/Thunder Bay)
• Culture change / lack of experience with group approach
Challenges to Expanding Academic Activity
• Physician shortages
• LEG activity is extra activity, and requires extra time and energy (organizational slack)
• High workload / insufficient funding for the development of post-graduate curricula
• Loss of clinical income – Fee for Service/ Specialists
• Challenges to integrating interprofessional education
Challenges for Scholarship, Research and Innovation
• Physician shortages
• Confusion over research planning funds
• Need for protected time and increased/sustainable funding for research
• Lack of/need for research support, research networks
• Lack of capacity, support for Knowledge Translation and Exchange (KTE), including publications
Challenges with NOAMA
• Changing goals, changing rules
• Understanding spending rules – how funds can or should be used
• Common funding formula, unique LEGs
• Insufficient consultation
• Sustainability concerns
Challenges with NOSM
• NOSM systems not adapted to LEGs
• Information/communication barriers for Administrators who lack a NOSM affiliation
• Distance / limited opportunity to engage with NOSM
• Lack of perceived benefit to faculty promotion

Note: Themes were identified from qualitative interviews; these are not quantified or rank-ordered; not all issues apply to all LEGs.

often described spending a lot of energy in the start-up process, and burn-out of leaders was a threat.

Challenges with 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. A key challenge in working with NOSM was the fact that its staff and systems had not yet adapted to working with and through the LEGs.

LEG Leads also gave recommendations on how NOAMA might improve the LEGs Initiative. More support to LEGs with start-up and administrative tasks was desired. Participants also wanted reporting templates, tools to help track members' activities, and more feedback from NOAMA.

Other recommendations focused on ensuring sufficient funding for administrators, and ensuring a funding formula would be flexible and responsive to the diverse needs of the LEGs. Funding for professional development related to new residency programs, and for developing research capacity, was sometimes insufficient. A related issue was the need to develop a sustainable model of rural research. A final set of recommendations centered on enhancing communication between NOAMA and the LEGs, and facilitating more communication and networking between the LEGs.

Program Logic Model

A Program Logic Model (PLM) identifies relationships between goals, strategies, activities, outputs and outcomes. The PLM also identifies the pre-conditions that support the activities. All of the elements of the PLM were empirically derived from the LEG Lead interviews. The PLM covers the full range of goals, activities and outcomes described by participating LEGs combined; this does not imply that any single LEG should work on all of goals.

Feedback. After obtaining feedback from the Advisory Committee, LEG Leads and Administrators participated in teleconferences in October 2014 to give their feedback. Participants affirmed that the goals were comprehensive, and while most thought that all the goals were appropriate (even if not a current priority), three goals were controversial (A4, A6, and B3) and might not be appropriate for all LEGs. Table 3 presents the final activity domains and goals, (the full PLM is available as Appendix A).

Table 3: Activity Domains and Goals

A	**Medical Education & Program Development**
A1	Deliver the NOSM curriculum effectively and consistently
A2	Increase in post-graduate learning opportunities
A3	Offer more learning opportunities for students/residents in the community
A4	Promote interprofessional learning and care
A5	Increase participation of LEG members in medical education leadership activities
A6	Improve recognition of excellence in clinical teaching
B	**Professional Development**
B1	Increase the local availability of accredited CME
B2	Increase participation in faculty development activities
B3	Strengthen mentoring by and for clinical faculty
B4	Increase participation in Leadership Development
C	**Scholarship, Research & Innovation (SRI)**
C1	Develop research capacity
C2	Develop and participate in LEG research networks
C3	Increase regional research collaboration
C4	Increase in documented clinical innovation/quality improvement activities
C5	Conduct community engaged scholarship
C6	Increase in funded research conducted by LEG members
D	**Recruitment, Retention, and Community Engagement**
D1	Increase or maintain physician complement
D2	Retain learners into practice
D3	Contribute to local partnerships & initiatives
E	**LEG Administration**
E1	Improve organization of clinical teaching & reduce administrative burden on individual physicians
E2	Ensure effective, fair, and transparent governance
E3	Ensure continuity and sustainability of LEG
E4	Support the development of academic culture
E5	Engage in knowledge exchange, peer support, collaboration and networking with other LEGs

Note: Goals are for all LEGs combined, and reflect the overall academic activity of the LEGs Initiative. Individual LEGs are not expected to address all goals; some goals may not be appropriate for all LEGs. Each LEG will determine its own set of goals and priorities.

Participants also prioritized each domain and goal; overall, the highest priority domain was the medical education domain, followed by the administrative domain. However, these priorities were not unanimous. LEG feedback also included concerns that evaluation would increase their administrative burden, and that they shouldn't be compared to one another, as each LEG was so different from the next.

Towards an Implementation Plan

The evaluation framework is intended to enable evaluation at both the individual LEG level and at the AFP Level (aggregate). Indicators can be tracked at both levels to monitor change over time.

As NOAMA and partners move toward developing an evaluation implementation plan, the evaluation framework offers a set of guiding principles and options for staging implementation. The framework document also describes issues that will affect evaluation planning and implementation.[8]

Guiding Principles

Allow 3-5 years to prepare for evaluation. The LEGs model is still developing; it is too early for a formal evaluation. As it takes time to establish reporting and data collection systems, this should be the focus of efforts for the near future.

Align indicators with other data requirements. To the extent possible, evaluation should make use of data already being collected (e.g. NOAMA annual reports, academic promotion criteria, and NOSM evaluations) to minimize additional data collection and reporting requirements for the LEGs.

The evaluation framework must be flexible. The diversity of members, activities, and desired outcomes among the LEGs is problematic for establishing a common set of evaluation criteria. The evaluation plan should recognize these differences and support LEG decision-making in determining the applicable evaluation criteria.

The evaluation framework must be dynamic. The LEGs Initiative is evolving quickly, and the evaluation framework will need to evolve as well. Ongoing review and adaptation of the framework should be part of the evaluation plan.

Include preconditions as explanatory indicators. LEGs operate under variable conditions of resources and constraints. Preconditions identified in the PLM should be also measured to aid in interpreting data.

***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 quantitative measures, using qualitative methods.

Key Issues and Challenges for Evaluation

A number of issues were identified that affect LEG implementation and could hinder evaluation efforts.

1. Need for all NOSM staff to understand the LEGs Initiative. NOAMA and the LEGs are key partners in delivering NOSM programs, and the LEGs Initiative represents significant change in responsibility for clinical teaching from individual preceptors to organizations. Limited awareness about the LEGs among some NOSM staff hindered effective communication. NOSM leadership needs to ensure that all staff understand the importance of supporting the LEGs.

2. Need to resolve systems issues. LEGs gave examples of how NOSM systems and procedures had not adapted to the new organizations, creating barriers to information, increasing the administrative load on the LEGs, and drawing resources away from other activities. NOSM, NOAMA, and LEG representatives should collaborate to identify solutions to these issues.

3. Incomplete awareness of/support for the "academic culture" mandate of the AFP. There is a tension between LEGs that want the LEG mandate to remain narrowly focused on clinical teaching, and those that are embracing the other academic activities. The initial focus of the LEGs Initiative on clinical teaching may have contributed to a misunderstanding of the scope of the AFP mandate.

4. Limited engagement of clinical faculty with NOSM outside of Sudbury and Thunder Bay. Participants in interviews and feedback sessions were not always aware of services and opportunities offered by NOSM, for example, that the NOSM Office of Continuing Education and Professional Development could provide accreditation for LEG activities. NOSM and NOAMA should continue to work on connecting LEGs with NOSM faculty resources.

5. Scope of academic activity to be evaluated. As the academic activities of clinical faculty are not funded entirely by the LEG, an ongoing question for many LEGs was the relevance of reporting on activities that are not LEG funded. Some participants requested that NOSM-funded activities also be paid through the LEG, to better enable accounting for all academic activity. LEGs need a clear decision about monitoring LEG-funded vs. all academic activity.

6. Need to move from paper-based reporting to an electronic database. LEGs now submit annual reports to NOAMA on paper. Many of the same data items have been included as indicators in the evaluation framework. An online reporting system, with direct download into an electronic database, would facilitate data analysis.

7. Need for technical assistance. LEGs will need more hands-on support to prepare for evaluation. NOAMA should consider creating a Program Officer position to support the LEGs with reporting and evaluation.

References

1. Northern Ontario Academic Medical Association. (2012). *About Us*. NOAMA website. Available: http://www.noama.ca/site/about-us/.
2. Strasser RP, Lanphear JH, McCready WG et al. (2009). Canada's new medical school: The Northern Ontario School of Medicine: Social accountability through distributed community engaged learning. *Academic Medicine* 84(10).
3. Topps M, Strasser R. (2010). When a community hospital becomes an academic health centre. *Canadian Journal of Rural Medicine* 15(1): 19-25.
4. Strasser R, Hogenbirk JC, Minore B et al. (2013). Transforming health professional education through social accountability: Canada's Northern Ontario School of Medicine. *Med Teach* 35(6): 490-496.
5. Northern Ontario Academic Medicine Association. (2011). *NOAMA - 2009-2010 Annual Report*.
6. Northern Ontario School of Medicine. (2014). *Faculty by rank*. August 14, 2014 update. Available: http://www.nosm.ca/csdfaculty/.
7. Sherman JE and Warry W. (2014). *Development of an Evaluation Framework for the Local Education Groups (LEGs) Initiative: Interviews with LEG Leads*. Research Report, Prepared for the Northern Ontario Academic Medicine Association (NOAMA). Centre for Rural and Northern Health Research, Sudbury.
8. Sherman JE and Warry W. (2014). *Monitoring and Evaluation Framework for the Local Education Groups (LEGs) Initiative*. Prepared for the Northern Ontario Academic Medicine Association (NOAMA). Centre for Rural and Northern Health Research, Laurentian University, Sudbury.

Appendix A: Program Logic Model

For more information, or to request copies of the research report or Evaluation Framework, contact:

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PROGRAM LOGIC MODEL – 12 December 2014

REVISED PROGRAM LOGIC MODEL FOR LEGs EVALUATION

Note: Not all domains or indicators will be relevant to all LEGs

<table>
<tr><th colspan="6">A. Medical Education & Program Development</th></tr>
<tr><th>Goals</th><th>Preconditions</th><th>Strategies</th><th>Activities (Processes)</th><th>Outputs</th><th>Outcomes</th></tr>
<tr><td rowspan="3">A1. Deliver the NOSM curriculum (base academic activities) effectively and consistently</td><td>Stability in available preceptors, and availability of back-up

LEG control over/input into scheduling</td><td>Develop LEG system to ensure coverage if individual preceptor's schedule changes</td><td>Learner activities are delivered as scheduled</td><td># / % of learner activities that are rescheduled (NOSM Scheduling)

Difference between scheduled and delivered weeks of clinical teaching: (UG, PG, Electives)</td><td rowspan="3">Learner satisfaction

Learner achievement

Demand for placements

NOSM reputation</td></tr>
<tr><td rowspan="2">Effective administrative support

Effective communication & collaboration between NOSM, LEG Administrator

LEGs have ability to track evaluation due dates and submissions (access to information in One45)</td><td>LEG monitors completion of learner evaluations (confirmation of clinical teaching)</td><td>Provide timely feedback to learners</td><td>% of evaluations completed by due date</td></tr>
<tr><td>Documentation of base academic activities other than clinical teaching</td><td>Deliver activities per plan (Annual Report Submission, part B)</td><td># Journal club meetings held

Rounds presented by LEG members

Expanded academic activities delivered</td></tr>
</table>

APPENDIX A

PROGRAM LOGIC MODEL – 12 December 2014

A. Medical Education & Program Development (continued)					
Goals	**Preconditions**	**Strategies**	**Activities (Processes)**	**Outputs**	**Outcomes**
A2. Increase the number of post-graduate medical education opportunities	Number of physicians meets or exceeds approved / desired complement Targeted funding for new program development	Ensure available funding is sufficient to support time for program development activity	Program Development activities for Rural Northern Ontario Stream, Royal College Specialties, other? (PGY3?)	Approval of programs by NOSM # of residents supervised Accreditation of residency programs	Increase in number of post-graduate learners trained in the North
A3. Offer more learning opportunities to students/residents in the community	Number of physicians meets or exceeds approved / desired complement	Identify learner needs and interests, faculty expertise and interests	Faculty develop and offer new programs and learning opportunities in the community	# of new programs offered in the community # of learners participating in new programs	# of local programs with CEPD accreditation Improved faculty and learner satisfaction
A4. Promote interprofessional learning and care	Support for interprofessional education, providers	Involve interprofessional providers in clinical teaching of medical learners	Medical students/residents learn from interprofessional providers/team	# of interprofessional providers involved in clinical teaching Learner perception of interprofessional practice	Increase in physicians with preference for, competence in interprofessional practice
A5. Increase participation of LEG members in medical education leadership activities	Time, funds to support participation; geographic access	Develop strategy to facilitate faculty participation from distributed sites	Clinical faculty from distributed sites apply for physician leadership positions (incl. Program Director, member of Academic Council, NOSM Governance Committees)	# of faculty applying for physician leadership positions # of faculty serving in physician leadership positions	Increased faculty engagement from distributed sites

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PROGRAM LOGIC MODEL – 12 December 2014

A. Medical Education & Program Development (continued)					
Goals	**Preconditions**	**Strategies**	**Activities (Processes)**	**Outputs**	**Outcomes**
A6. Improve recognition of excellence in clinical teaching	Administrative support	Encourage LEG Leadership/ Administration to take an active role in ensuring excellence is rewarded Improve documentation of excellence	Identify opportunities and facilitate the preparation of award nominations	# nomination packages prepared (provincial, national) # of awards related to clinical teaching	NOSM reputation Peer recognition Increased satisfaction

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B. Professional Development (CME, Faculty Development, Leadership Development)					
Goals	**Preconditions**	**Strategies**	**Activities (Processes)**	**Outputs**	**Outcomes**
B1. Increase the local availability of accredited CME	Number of physicians meets or exceeds approved / desired complement Access to research support services Availability of funding to support time for preparation and delivery of course	Increase the number of CME opportunities developed and led by LEG members	Develop and implement an accredited training course or program	CME accreditation obtained Course delivered Course objectives met New / renewed certifications	Enhanced knowledge/skill in the community Increased recognition of faculty, LEG Increased satisfaction of medical/health community, retention of health professionals
	Funds to support local delivery of courses	Enable LEGs to sponsor delivery of CME locally LEG members identify CME requirements	Sponsorship of CME courses in the community (incl. facilitating NOSM webcast/webinars)	Courses sponsored Attendance at CME course, course objectives met New / renewed certifications Member-identified CME goals are met	

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B Professional Development (CME, Faculty Development, Leadership Development)(continued)					
Goals	**Preconditions**	**Strategies**	**Activities (Processes)**	**Outputs**	**Outcomes**
B2. Increase participation in faculty development (teaching and preceptoring)	Dedicated funding to support participation Availability/accessibility of faculty development events	Provide financial support for and recognition of faculty development	Participation in faculty development events (NOSM, external) Organization of local PD as a LEG Activity	Participation at FD conferences/ Workshops Implementation of PBSD:ED program (or similar) in the community Sponsorship of an accredited FD event in the community	Improvements in teaching/mentoring of learners Faculty promotion
B3. Strengthen mentoring by and for clinical faculty	Experienced clinical faculty with mentoring skills Support for mentoring networks/network infrastructure	Encourage development of mentorship plan, skills Support multiple models of mentorship (local, virtual, distributed network)	Develop a LEG mentorship plan Facilitate participation in virtual/distributed mentoring network	Participation in mentoring training % of members with one or more local mentors % participating in distance mentoring (mentor-mentee, bidirectional)	Retention of clinical preceptors Improvements in precepting skills and abilities Increased learner satisfaction, outcomes
B4. Increase participation in Leadership Development training	Dedicated funding to support participation Opportunities are available/accessible	Provide financial support for, and reward faculty development Encourage LEGs to conduct leadership development activities as a group	Participation in leadership training program (individual, group level) Sponsoring leadership development as a LEG activity	% of members who have participated in a leadership development course # of leadership training sessions organized by LEGs	Increased effectiveness at motivating, delegating Reduced burn-out, turnover

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C. Scholarship, Research & Innovation (SRI)					
Goals	**Preconditions**	**Strategies**	**Activities (Processes)**	**Outputs**	**Outcomes**
C1. Develop research capacity	Funds for research staff, professional development, or contracting	Increase level of in-house research support, expertise and grantsmanship and/or Identify external research partners/ collaborators	Hire of research director, research support staff, and/or agreement established with external research partners Participation in research–focused professional development activities (e.g. grantsmanship training)	Research director, research support staff hired Partnerships/ collaborations established with external researchers Research proposals developed	Improved rate of successful grant applications (PI, co-applicant, collaborator)
C2. Develop and participate in LEG research networks (practice-based research networks)	Access to network support funds Access to research support services	Encourage research collaboration among LEGs	Participation in a research collaboration with other LEGs	Meetings of (potential) network partners held # grants awarded or shared by multiple LEGs	Increase in KTE between LEG members Research conducted at larger scale, greater potential impact Additional research funding obtained as a result of collaboration

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C. Scholarship, Research & Innovation (SRI) (continued)					
Goals	**Preconditions**	**Strategies**	**Activities (Processes)**	**Outputs**	**Outcomes**
C3. Increase in regional research collaboration (pan-Northern, collaboration of Sudbury/Thunder Bay researchers with LEGs)	Policy and financial support for a development of a "distributed research" model Resources to develop and sustain researcher / KTE networks	Develop a vision of "distributed research" for Northern Ontario, including bench-to-bedside clinical/ translational research Recognize the value and status of community-based collaborative research and the research collaborator role	Participation in the development of a distributed research model, networks and initiatives Participation in collaborative research	Participation in/contribution to the development of a model Number of multisite research projects the LEG is involved with Number of researchers and collaborators involved in multisite projects	Increased exposure to and involvement of clinical faculty in large-scale research Progress toward social accountability in Research Domain
C4. Increase in documented clinical innovation / quality improvement activity	Number of physicians meets or exceeds approved / desired complement Provide funding for clinical innovation	Emphasize importance of KTE for clinical innovation grants	Develop applications for innovation fund grants, include KTE component Document/collect data on change resulting from innovation	# of Innovation Grants Received # of Projects Completed Results of project shared with other LEGs (report, presentation)	Improved quality of care, services, health status, patient satisfaction, medical education Results of innovation disseminated (# of publications, presentations) Innovation is recognized beyond NOSM (recognition, awards, replication of innovation, patents / IP protection)

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C. Scholarship, Research & Innovation (SRI) (continued)					
Goals	**Preconditions**	**Strategies**	**Activities (Processes)**	**Outputs**	**Outcomes**
C5. Conduct community-engaged scholarship (CES)	Number of physicians meets or exceeds approved / desired complement Policy support for CES, including recognition of CES activity in faculty promotion	Generate policy support and reward structure for non-traditional research activity	Engage with community to understand scholarship/ research needs and priorities Conduct research and other scholarly activities in partnership with community groups	Community consultations, needs assessment activities CES activities and processes (documented) Applied research products (innovative programs, policies, training materials) Community dissemination products (community forums/presentations, local media reports websites)	Achievement of community-defined goals, outcomes Increases in community capacity Sustainability of program/ Improvements KTE, publications, presentations,
C6. Increase amount of externally funded research being conducted by clinical faculty	Number of physicians meets or exceeds approved/desired complement Access to research support services	Develop a LEG research plan and/or research support structure Maximize use of resources at NOSM and area universities, and/or participate in research/grants writing professional development	Prepare and submit fundable research grant applications (other than NOAMA/AFP Innovation grants)	# of submissions, # of grants awarded Value of grants awarded	Increased aggregate value of research grants Increased number of publications, presentations Awards and recognition for research
			Implementation and completion of research projects	# Research projects (ongoing, completed)	

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D. Recruitment, Retention, and Community Engagement (May not be appropriate for all LEGs)					
Goals	**Preconditions**	**Strategies**	**Activities (Processes)**	**Outputs**	**Outcomes**
D1. Increase or maintain physician complement at approved level or locally-determined level	Access to / support for recruiter	Promote LEG benefits, opportunities as part of recruitment strategy	LEG participation in physician recruitment	Physician vacancies filled within reasonable time Maintain or increase number of preceptors, clinical placements	Physicians with more time and energy for program development, research, and innovation Increased satisfaction and retention
D2. Retain learners into practice	Staff dedicated to supporting learners	Positive rural/northern learning experience	Enrichment activities, community integration	Increased learner satisfaction Increased learner in interest in / demand for placements with LEG	Learners continue or return to establish practice
D3. Contribute to local partnerships & initiatives to address identified needs of the community	Community partners, understanding of local needs	Encourage community service through contributions of leadership and expertise	Participate in local/regional health initiatives	Chair/committee participation Outcomes, accomplishments of community/regional initiatives	Greater physician and community satisfaction with local health services

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E. LEG Administration					
Goals	**Preconditions**	**Strategies**	**Activities (Processes)**	**Outputs**	**Outcomes**
E1. Improve organization & reduce administrative burden on individual physicians	Sustainable funding Effective administrative support Effective communication & collaboration between NOSM, LEG Administrator	Establish and implement an effective system to track and verify member activity	Implementation of effective system of tracking and verifying member activity	Documentation of member activities Accurate and timely payments for clinical teaching, other remunerated LEG activity Proportion of unreconciled to reconciled teaching payments	Greater satisfaction with clinical teaching Satisfaction with LEG Increase in proportion of eligible physicians who are LEG members Increase in number/proportion of clinical faculty
E2. Ensure effective, fair, and transparent governance	(Additional assistance from NOAMA – Individual LEG web pages?) Governance guidelines Effective administrative and tech support	Improve two-way communication with & among members (e.g. support online / web-based communication platforms	Develop and maintain online LEG platform (website) other communication tools	Online/virtual presence (through NOAMA website or other website) Other online tools (Discussion boards, archive of teaching materials) LEG documents available (governance agreement, board/committee leadership, member list, meeting minutes) Quarterly updates (at a minimum)	Increased awareness of all LEG activity among members Increased interaction among members, with Board Members' satisfaction with LEG, perceptions of fairness, transparency Website serves as accessible platform for knowledge management & organizational memory

E. LEG Administration (continued)					
Goals	**Preconditions**	**Strategies**	**Activities (Processes)**	**Outputs**	**Outcomes**
E3. Ensure effective, fair, and transparent governance (continued from above)	(continued)	Effective delegation and active contribution of members	LEG members actively contribute to management of LEG activity	Activities led by members other than the LEG Lead Establishment of active committees	Members' satisfaction with LEG, perceptions of fairness, transparency Stability and sustainability of LEG membership
E4. Ensure continuity and sustainability of LEG through effective governance	Guidance from NOAMA	Succession planning for LEG Board and documentation of Board, Committee business	Conduct annual meetings and reviews of succession plans,	Board meetings held as planned (per governance agreement) General membership meetings held annually Succession plan developed and kept up-to-date	LEG continues to function effectively
		Develop a knowledge management plan to support institutional memory	Development and implementation of a knowledge management plan	LEG meetings, internal documentation, communications, and reports are documented and archived	

APPENDIX A

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E. LEG Administration (continued)					
Goals	**Preconditions**	**Strategies**	**Activities (Processes)**	**Outputs**	**Outcomes**
E5. Support the development of academic culture	Interest among members Acceptability per Governance agreements	Obtain and allocate resources for professional development, scholarship activities	Track expenditures by type of activity	% of NOAMA funds received spent on - Clinical teaching - Professional development - Scholarship	Increase in overall academic activity of clinical faculty
E6. Engage in peer support, collaboration and networking with other LEGs	Support from NOAMA; possible use of NOAMA website as platform for exchange	Identify effective mechanisms to facilitate networking among LEGs	Lead or participate in LEG peer networking/KTE activities	Participation in LEG Lead meetings Establish/moderate a virtual network or electronic discussion board for LEGs Collaborative activity with other LEG(s) Participation of other LEGs' members in CEPD activity	Indicators of horizontal communication Increased interaction among LEGs (exchange of information/ innovations, problems solving)