



Northern Ontario
School of Medicine

Overview of the Four Year Undergraduate Medical Education Program at the Northern Ontario School of Medicine

Northwest Campus

Lakehead
UNIVERSITY

955 Oliver Road

Thunder Bay, Ontario

P7B 5E1

Northeast Campus

 **Laurentian University**
Université **Laurentienne**

935 Ramsey Lake Road

Sudbury, Ontario

P3E 2C6

Written by: Dr. Marie Matte, PhD
Director, Undergraduate Medical Education Programs, Northern Ontario
School of Medicine, June 2010

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Introduction to Health Care in Northern Ontario

Geographically, Northern Ontario is considered vast in that it encompasses almost 400,000 square miles. Despite its large geographical size however, Northern Ontario has a relatively small population (840,000). Sixty percent of the population lives in rural and remote communities. Thirty percent of the Northern Ontario population lives in the two larger urban centres of Thunder Bay (120,000) and Sudbury (150,000) located over 700 miles apart. The remainder of the population lives in small urban, large rural or small rural communities. As mining, forestry and tourism are the major local industries in both urban and rural Northern Ontario, there are fluctuations in the economy; and, unemployment rates are usually higher than in the remainder of Ontario and Canada.

Consistent with the national consensus, there is a diversity of communities and cultures in Northern Ontario, most notably Aboriginal and francophone peoples. Specific disparities in health care among these populations are well documented in the literature. Morbidity and mortality rates for these populations in Northern Ontario are generally higher than the rest of the province and the nation.

Consistent with national and international findings, Northern Ontario has a chronic shortage of doctors and other health care providers particularly primary care physicians practicing in rural and remote areas. In Canada overall, 21.1% of the population live in rural and remote areas served by only 9.4% of the nation's doctors (2.4% of the specialists and 16% of the family physicians). In the

province of Ontario, 14% of the family physicians and 2.5% of the specialists practice in rural areas covering 20% of the population (these figures include the urban areas of Northern Ontario).

There does not appear to be one single solution to the rural medical workforce shortfall in Canada. A review of the relevant literature reveals improvement in the distribution of physicians to rural areas comes through a series of linked initiatives, each of which has an incremental effect. Together they add up to substantial change. One key series of initiatives which has been shown to be effective involves rural-based medical education.

Studies conducted in a number of different countries have shown that there are three factors most strongly associated with medical school and health care program graduates entering rural practice. They are (1) a rural background (2) positive clinical and educational experiences in rural settings as part of undergraduate medical education and (3) targeted training for rural practice at the postgraduate level. There is further evidence to support the fact that academic involvement teaching, learning and research activities are both retention and recruitment factors for physicians.

Introduction to the Northern Ontario School of Medicine (NOSM)

The Northern Ontario School of Medicine (NOSM), was established in 2002 as Canada's newest medical school in over 30 years. NOSM functions as the Faculty of Medicine of two Northern Ontario universities - Laurentian University, in Sudbury, Ontario and Lakehead University, in Thunder Bay, Ontario. These university centers are located 700 miles (1,000 kilometers) apart. The school was established with an explicit social accountability mandate to provide innovative undergraduate and postgraduate medical education programs that meet the needs of the students and the health care needs of the people of Northern Ontario. Consistent with this social accountability mandate, with administrative campuses in Thunder Bay and Sudbury, the school has over 70 established teaching and research sites distributed across northeastern and northwestern Ontario. These sites include large and small urban communities, Aboriginal communities, Francophone communities, and small and large rural/remote communities.

A medical school like no other, Northern Ontario School of Medicine has a strong emphasis on the special features of Northern Ontario. These features include; a diversity of cultures, including Aboriginal and Francophone populations; a focus on teaching and learning in remote, Aboriginal, small town rural, large rural, small urban and large urban regional health care centres; a focus on specific disease, injury and health status patterns each with specific clinical challenges; a wide range of challenging health service delivery models which emphasize supporting local health care and interdisciplinary teamwork;

and the personal and professional challenges, rewards and satisfactions of medical practice in northern and rural environments.

The education and training programs of NOSM spans the life cycle of a physician practicing in Northern Ontario. Beginning with elementary and high school programs, students are encouraged to aspire to medicine and gain entry to local universities for continuing their studies. Selection into the NOSM undergraduate medical education program favors those applicants who have lived and studied in Northern Ontario, i.e. those who are likely to thrive in the challenging northern rural learning environments. To continue the learning cycle, NOSM assists with Continuing Health Professional Education (CHPE) for physicians in Northern Ontario through a vigorous professional development calendar. A number of graduate studies programs offered by distance learning allow rural physicians to undertake higher university studies and career progression without leaving their towns or practices.

The Northern Ontario School of Medicine recognizes research as a critical component of undergraduate and postgraduate medical education. NOSM research initiatives developed in partnership with Northern Ontario communities are internationally recognized and supported by competitive, peer-reviewed funding awarded on the basis of scientific excellence. Research programs at NOSM target areas that have a direct relevance to the improvement of health outcomes and health care delivery to the diverse cultures of Northern Ontario, thus reflective of the school's mandate to be socially accountable to the populations of Northern Ontario. Research areas include: biomedical,

educational, clinical, public health, population health, epidemiological, psychological and social sciences and health services research.

NOSM employs a Distributed Community Engaged Learning (DCEL) model of education. With students distributed across the North, communities play a vital role in program development and in welcoming and supporting students. Through this community engagement, students at NOSM are provided with opportunities to meet their learning needs in any number of Northern Ontario communities. In this way, students feel part of the community and develop a particular understanding of living and working in a rural setting. In addition, while in the community, interdisciplinary co-operation becomes an important feature of all activities and learning. This includes medical students learning with nursing and other health professional students, as well as postgraduate training and research which emphasize the collaborative approach to the practice of medicine.

Undergraduate Medical Education (UME) Program Philosophy and Overview

Introduction

The NOSM UME curriculum blueprint provides a framework which outlines the learning objectives, the educational methods, and curriculum content, as well as a system of formative and summative assessments of student performance. An expert team skilled in medical education, curriculum development, instructional design, and health information resources collaborated in the development of the curriculum. Much of the curriculum draws on materials available from established medical schools, both national and international. In addition, the NOSM medical program includes a rural and northern value-added component, developed through the contribution of local physicians, university faculty, Aboriginal groups, health professionals, and members of communities across Northern Ontario. Student input on a variety of curriculum committees and work groups has provided valuable insight as well.

The curriculum of the Northern Ontario School of Medicine is grounded in its social accountability mandate. This mandate is the foundation of the school and the reason for its creation. The curriculum content is organized around five Themes (courses). All five themes run throughout the four years of the undergraduate medical education program. They are:

- Theme 1 – Northern and Rural Health
- Theme 2 – Personal and Professional Aspects of Medical Practice
- Theme 3 – Social and Population Health

- Theme 4 – Foundations of Medicine
- Theme 5 – Clinical Skills in Health Care.

The five Themes are enhanced by a focus on the seven competencies described in CanMed 2005, which are Medical Expert, Collaborator, Manager, Health Advocate, Scholar, Professional, and Communicator. In addition, a series of curricular “threads” run through the five Themes. They are Aboriginal health, interprofessional education and work, health effects of social problems, WSIB concepts/curriculum, dementia project, gender issues, and CMPA (Canadian Medical Protective Association). In this way, undergraduate medical students undertake a holistic, integrated, and cohesive curriculum which is designed to reflect the social accountability mandate of the school.

Our Curriculum: A Philosophy and an Approach

In 2005, the NOSM Academic Council has identified six key academic principles which serve to guide the development and delivery of all NOSM academic programs, including research. These principles are:

Interprofessionalism: A team approach encompassing partnership, participation, collaboration, coordination and shared decision-making with other members of the health care team is essential in the complex world of health care.

Integration: Coordination, participation, partnership and interaction are crucial in creating meaningful learning experiences for students, residents, faculty and staff.

Community Oriented: NOSM students will integrate into and learn in most communities throughout Northern Ontario. This will lead to a pragmatic understanding of the dynamics of the north and create meaningful partnerships between northern communities and NOSM.

Distributed Community Engaged Learning: This is an instructional model which allows widely distributed humans and instructional resources to be utilized, independent of time and place in community partners with NOSM across the north.

Generalism: This is a broad, holistic view and approach to activities, values and knowledge in education, organization, and patient care activities.

Diversity: Valuing and recognizing the richness and diversity of all cultures of Northern Ontario. It recognizes the importance of this diversity to our lives and our learning.

NOSM's learning approach is patient-centered, focusing on people in their home/family/community context, through case-based learning. This Community Based Medical Education program has students learning not only in larger regional hospitals but also in smaller community hospitals, health service agencies, family practices and various community settings.

In keeping with these six academic principles, the innovative undergraduate program at NOSM involves students learning in small groups, much of the time in distributed community-engaged learning (DCEL) sites supported by broadband communication information technology. The curriculum

is clinically driven, while ensuring students gain a strong grounding in core knowledge and skills including the basic sciences.

The Distributed Community Engaged Learning (DCEL) model involves active community engagement. Through this engagement, undergraduate and postgraduate students are provided with opportunities to meet their learning needs in any number of Northern Ontario communities. This community engagement, consistent with the school's social accountability mandate, has a specific focus on collaborative relationships with Aboriginal communities and organizations, francophone communities and organizations, rural and remote communities, as well as the larger urban centers of Northern Ontario. Relationships with the various communities and organizations are fostered through the Aboriginal Reference Group, the Francophone Reference Group, Local NOSM Groups, and a wide network of formal affiliation agreements, and memoranda of understanding.

Phase 1 – Year1 and Year 2

The four year undergraduate medical education (UME) program at NOSM is divided into three Phases. They are Phase 1 – Year 1 and Year 2, Phase 2 – Year 3, and Phase 3 – Year 4 of the program. Phase 1 of the NOSM UME curriculum provides students with the academic and clinical foundation for Phase 2, the Comprehensive Community Clerkship (CCC). The CCC then establishes a “clinical bridge” to Phase 3 of the UME program.

In Phase 1, the curriculum is divided into eleven Case-Based Modules (CBM). The first six CBM (CBM 101 – CBM 106) occur in Year 1 and the remaining five CBM (CBM 107 – CBM 111) occur in Year 2 of the program. CBM 101 is four weeks in duration, while all remaining Modules are six weeks in length. Information about the curriculum associated with each CBM is available online to faculty, staff, and students. The curriculum is provided in increments to the students as needed for their learning activities. This material, along with other scheduled learning activities and content information, guides student learning throughout Phase 1. All learning activities designed for each specific CBM have a body system emphasis as outlined in the figure below.

Figure 1: Phase 1 Case-based Modules

Case-based Module (CBM)	Body System Focus
CBM 101	Review/Introduction
CBM 102	Gastrointestinal System
CBM 103	Cardiovascular/Respiratory Systems
CBM 104	Central Nervous System /Peripheral Nervous System
CBM 105	Musculoskeletal System
CBM 106*	Endocrine System
CBM 107	Reproductive System
CBM 108*	Renal System
CBM 109	Haematology/Immunology
CBM 110*	Mental Health and Cognitive Impairment
CBM 111	End of Life Issues

*these Case-based Modules include a mandatory Integrated Community Experience (immersion experience) away from the Laurentian and Lakehead campuses.

In years 1 and 2 there are five distinct types of learning opportunities at the School of Medicine; large group sessions, small group facilitated sessions, structured clinical skills sessions, laboratory sessions and Community and Interprofessional Learning.

Large Group Sessions

Module Coordination Sessions (MCS)

Each week begins with a one-hour facilitated session during which students are encouraged to raise any concerns about the instructional content of the learning process. The session provides an opportunity for dialogue between students and faculty.

Whole Group Sessions (WGS)

These sessions are usually three hours in length and are scheduled once a week. In a Whole Group Session (WGS), the class is instructed as a whole by faculty of the School. The learning objectives for each WGS are derived mainly

from Theme 4 content. The instructional format includes traditional lectures, demonstrations, and large group tutorial activities. These sessions are simultaneously video-conferenced between campus locations.

Small Group Sessions

Case-Based Learning (CBL)

Each week students meet with a facilitator in groups of no more than eight for a two-hour session. Through a model of guided discovery, which is designed to support self-directed research, students consider a complex case that directs the learning for the module. Prepared learning objectives guide student learning during CBL sessions. The learning objectives for each CBL are derived mainly from Theme 1, 2, and 3 curricular content. Students are able to explore curricular content in the context of a specific Northern Ontario community by examining the rewards and challenges inherent to the delivery of health care in remote and rural Northern Ontario communities, population health issues, health outcome issues, Aboriginal and francophone cultural issues relating to health care, and professional issues surrounding clinical encounters with diverse populations.

Topic-Oriented Sessions (TOS)

Facilitators include a wide variety of health care professionals. These two-hour facilitated sessions occur twice weekly. The TOS focus is on an individual patient, which students have met through the module case. Aboriginal and francophone patients, physicians, and health care providers are featured in many TOS cases throughout Phase 1. The learning objectives for each WGS are

derived mainly from Theme 4 content. Using a problem-based learning format, students identify learning issues, develop a strategy to acquire the necessary knowledge and share the knowledge gained through independent research. As the week progresses, information is revealed about the patient until the specific learning objectives related to these sessions and discovered by the group have been fully explored by the students.

Structured Clinical Skills (SCS) Sessions

These weekly three-hour sessions focus on instruction and practice in patient/doctor communication, interview skills, and physical examination skills. Students meet in small groups of four with a clinical instructor and practice their interviewing and examination skills with standardized patients. Standardized patients include representation from all age groups, sexes, and cultures, as well as representatives from Aboriginals and Francophones. The objective for these sessions is to explore the knowledge, skills and attitudes defined by Theme 5 of the curriculum. Students are provided with opportunities to interview standardized.

Laboratory Sessions (LAB)

These three-hour sessions occur four times in every six-week module. Each LAB session, students initially meet as an entire group for a WGS session. Students are then required to meet in small groups to focus and work through case studies based on learning objectives outlined and explained in the WGS session. The learning objectives for each LAB are derived mainly from Theme 4 and Theme 5 content. For each module, the LAB sessions focus on four sets of

learning objectives related to anatomy and histology, pathology, diagnostic imaging and clinical/diagnostic skills.

Community and Interprofessional Learning (CIL)

Each week there is one three-hour session dedicated to providing students with a wide range of community-based clinical experiences. Observing and interacting with patients under the guidance of a facilitator, students visit patients in their homes, in hospitals, long-term care centers, doctors' offices, pharmacies, rehab centers, nursing homes, or other health service providers or organizations. These experiences involve the content of all of the five themes and provide a focus for interprofessional learning.

Distributed Tutorial Sessions (DTS)

A Distributed Tutorial Session (DTS) is a session developed by a faculty member related to specific learning objectives. It is conducted via electronic means either synchronously or asynchronously. A DTS is analogous to the weekly Whole Group Session (WGS) for on campus modules but incorporates instructional methods appropriate to distributed or distance education models. The learning objectives for each DTS are derived mainly from Theme 4 content. The DTS is implemented in the Integrated Community Experience Modules CBM 106, 108 and 110.

Phase 1: Year 1 Typical Weekly Schedule (On Campus)

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
MCS Overview of Phase 1 Assessment	CIL Hospital Orientation	WGS Disease Processes	SCS Introduction to the Medical Interview	LAB Group 1 & 2 Orientation
CBL The Patient Perspective				
Learner Affairs Session bring lunch	Lunch	Lunch	Lunch	Lunch
TOS Audra Simons (1)	Personal Study	Personal Study	TOS Audra Simons (2)	Personal Study
Personal Study			Personal Study	

Phase 1: Year 2 Typical Weekly Schedule (On Campus)

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
MCS Digital Professionalism	SCS Female Antenatal History/ Documentation	WGS Introduction to Medical Genetics	CIL	Personal Study
CBL Genetic Screening and Testing				
Learner Affairs Session	Lunch	Lunch	Lunch	Lunch
Personal Study	Personal Study	LAB Male and Female Catheterization	Personal Study	Personal Study
TOS Cassandra Lamb		Personal Study	TOS Cassandra Lamb	

Integrated Community Experiences (ICE) in Phase 1

There are three mandatory six-week Integrated Community Experiences (ICE) modules in Phase 1. They are CBM 106 ICE (Aboriginal immersion experience) in Year 1, and CBM 108 and CBM 110 (rural/remote immersion experience) in Year 2. It is important to note that all academic learning sessions continue during these ICE experiences.

The Northern Ontario School of Medicine (NOSM) endeavors to support the development of cultural competency in its students, faculty, and staff. Aboriginal and Francophone people make up a substantial proportion of the total population of Northern Ontario, many of whom reside in rural and remote communities. These communities, for the most part, are under-serviced with respect to the delivery of health care. Hence, NOSM decided to design three Phase 1 Integrated Community Experience (ICE) curricular modules that would serve to facilitate a better understanding of Aboriginal and francophone culture, communities, and health care delivery issues and challenges in these communities. These ICE modules were developed through a broad consultative process. The process relied heavily on existing LCME accreditation standards, curriculum resources from other medical schools, and on specifically designed workshops involving both the Aboriginal and francophone communities.

These ICE immersion experiences are designed to provide students with opportunities to learn more about, and experience first hand, the delivery of health care services for people living in Aboriginal, rural, and remote communities of Northern Ontario. It is hoped that these unique learning experiences will foster

new insights about the students' emerging role as a physician, their growth in cultural competent care, and their understanding of issues affecting Aboriginal and francophone people, both in the historical and the contemporary context.

Phase 2 – Year 3 of the NOSM MD Program

Phase 2-Year 3 of the NOSM MD program consists of a mandatory eight month longitudinal clerkship known as the Comprehensive Community Clerkship (CCC). During the CCC, NOSM provides students with clinical experiences away from the campuses of Sudbury and Thunder Bay. Students live and learn as small groups of up to eight learners in one Northern Ontario small urban or large rural communities for the entire eight-month period where they are each assigned to primary care practice settings. The aim of the Phase 2 curriculum is to provide academic and professionally relevant learning opportunities that, through small group sessions and clinical practice, exemplify reflective learning and comprehensive interprofessional care. Furthermore, opportunities to care for patients in a safe and efficient manner are enhanced by the clerkship's prolonged duration, which promotes continuity of care. The students increase their knowledge of medical care through clinical encounters and through the socio-cultural context in which the patient and their family cope and adapt to their health care needs. This social and intellectual process will be encouraged through continuous interaction with community-based Health Care practitioners.

The CCC experience is designed to enhance the NOSM learner's personal and professional development. Additionally, the nature of the course work and the learning-centered environment promotes critical thinking and life long learning skills. The CCC provides opportunities to enhance knowledge, skills, and attitudes conducive to an understanding of medical practice in remote,

rural, and/or underserved communities and contrast that with urban practice. The learner observes the skills and attributes of health professionals in stimulating environments, furthering their consideration of career choices including clinical practice and research.

As in the first two years, the five Themes (courses) continue through the Phase 2 (year 3) clerkship. Additionally, Theme 5 (Clinical Skills) is subdivided in to the disciplines of Child Health, Women's Health, Internal Medicine, Mental Health, Family Medicine, and Surgery. Rather than specific rotations in each of the disciplines, students engage in parallel (as opposed to sequential) exposure to these six areas of medicine. Although the community-based faculty member provides direction for the student in achieving their learning goals, ultimately it is the responsibility of the learner to maintain a high level of motivation and a self-directed approach to their learning. Much of this learning is opportunistic and they are encouraged to engage in, and navigate through, specific learning needs wherever possible. In each community students are provided with opportunities to meet all required learning objectives.

As the learning is family medicine focused, the students are to identify families early in the year and through informed consent processes, follow them through an illness/wellness continuum. Under the community preceptor's guidance, students examine a range of psychosocial and multicultural contexts in which the family interacts with other members of the health care team and health related organizations and services.

These experiences form the basis of personal research and reflection exercises rich in experiential data that extends beyond the boundaries of clinical medicine. Some of these experiences will enhance the students' clinical practice and may influence their values and beliefs about the way they behave as a physician.

Students are encouraged to take ownership of their learning as they begin to think and act as critically reflective practitioners, an attribute central to safe, and rewarding medical practice. Students are given opportunities to work in partnership with patients and their families, with appropriate supervision and support. To this end, it is anticipated that they will develop, and practice patient and family centered care. Once students are at their sites, they are oriented to the clinics and hospitals in which they will be learning in order to facilitate their integration into the work environment. Introductions are made to the faculty members with whom they will work, and to the health care and administrative staff, to help make them feel like part of the team. It is felt that the social aspects of this experience are important because the learning environment encompasses much more than readings and formal instruction. Students make career and practice location decisions based upon the relationships they develop with physicians and other health professionals while learning in clinical environments. Students learn to care for patients from observing patient-physician interactions and from informal interactions with staff and community members.

There are two distinct types of learning opportunities presented during the Comprehensive Community Clerkship (CCC): explanatory sessions, which

provide didactic instruction specific to the core clinical disciplines; and experiential sessions, which provide clinical experiences in a variety of settings.

Explanatory Sessions

Distributed Tutorial Sessions (DTS)

A Distributed Tutorial Session (DTS) is a session developed by a faculty member related to specific learning objectives. It is conducted via electronic means either synchronously or asynchronously. A DTS is analogous to the weekly Whole Group Session (WGS) for on campus modules but incorporates instructional methods appropriate to distributed or distance education models. The learning objectives for each DTS are derived mainly from Theme 4 content.

Virtual Academic Rounds (VAR)

In these sessions, students meet twice weekly with a facilitator in groups of up to eight for two, three hour sessions. Through a model of guided discovery, students identify learning issues, develop a strategy to acquire the necessary knowledge and share the knowledge gained through independent research by considering cases identified from their clinical experiences in the community. Each session will be divided in two 1.5 hour segments. In the second segment of the session, a case is presented and the objectives are reviewed by the group. The content related to the objectives is then presented and discussed during the first segment of the subsequent session. These sessions explore specific objectives from all five Themes which have been selected to guide discussions related to the student's case presentations.

Experiential Sessions

Primary Care Sessions (PCS)

These sessions, are scheduled for five half-days per week. Students are provided with opportunities to develop and refine their communication and physical examination skills and management approaches under the supervision of experienced clinicians. Students participate in the care of 2 - 4 patients per half day session. Using available resources, including electronic texts and evidence-based materials, students are to conduct independent research regarding their patients. They are expected to utilize their findings as part of the clinical encounter reviews they will be discussing with the supervising clinician. During these discussions, the clinicians will also appraise and help students revise their suggested management plans for the patients they encounter.

Specialty Enhancement Sessions (SES)

These three hour sessions are scheduled twice weekly. They are dedicated to providing students with a wide range of experiences related to the six core disciplines of Family Medicine, Surgery, Internal Medicine, Mental Health, Child Health, and Women's Health. Students will examine patients and assist with the management of their illnesses or conditions under the guidance of a variety of health care professionals. These sessions include participating in surgical assists, specialty clinics, physician's offices and a variety of hospital and community-based programs related to the core clinical disciplines. These experiences explore the content of all of the five themes and provide a focus for interprofessional learning. Throughout the year, students are expected to

complete a total of 60 SES sessions. Of the 60 sessions, 30 sessions are completed in a hospital based program, 20 sessions are completed in a community based program, and the remaining 10 sessions are completed in either a community or hospital based program depending on the learning objectives of the student.

Hospital Care Sessions (HCS)

These hospital-based sessions include in-patient rounds, emergency room and obstetrical care. Students are to participate in the daily care of in-patients as directed by their site coordinating preceptor. Emphasis is given to continuity of care. It is anticipated that the student will have participated in the patient's admission and will subsequently follow the patient in the continuity of care, within the community. Sessions scheduled in the emergency room and obstetrical care units are assigned by the Site Liaison Clinician (SLC) while the students' participation in the care of these patients will be supervised by a supervising physician.

Phase 2 Typical Weekly Schedule

	MON	TUES	WED	THUR	FRI	W/E
8 – 9	HCS	HCS	HCS	HCS	HCS	HCS
9 – 12	DFS	PCS	PCS	VAR - Case 1	SES	
	VAR - Case 1			VAR - Case 2		
12 – 1	BREAK					
1 – 5	PCS	PCS	SES	PCS	Personal Study	HCS
7 – 11		HCS				

Phase 3 – Year 4 of the NOSM MD Program

Phase 3 or Year 4 of the medical program is a progression of the clerkship from the smaller distributed community hospitals throughout Northern Ontario experienced in Phase 2 to an exposure to secondary and tertiary care of patients in the larger urban communities of Sudbury and Thunder Bay. The purpose of this last phase of the undergraduate curriculum is to provide students with in-depth experiences in the various specialties and subspecialties which will lead to fulfilling the graduation requirements of the School. It allows students to observe, participate and care for patients with problems addressed by specialties in various disciplines. It allows students an opportunity to experience a continuum of care which seriously ill patients receive in the North.

Phase 3 also provides students with an opportunity to experience, through core and elective experiences, various specialties which they may choose to pursue as career choices in their postgraduate training. Through core rotations in seven broad specialties, students are provided with a thorough background in women's health, internal medicine, surgery, children's health, mental health, emergency medicine and family medicine. Through electives, students experience medicine in different settings outside the traditional geographic area taught by NOSM. Finally, Phase 3 provides an important background of knowledge which will allow students to graduate and transition into the post graduate phase of medical education.

As with Phase 1 and Phase 2, all five curricular theme courses continue and are assessed throughout the Year 4 clerkship(s) or rotations. Theme Course

5, Clinical Skills in Health Care, is divided into seven rotations of four weeks each: Child Health, Internal Medicine, Women's Health, Surgery, Mental Health, Family Medicine, and Emergency Medicine. In Phase 3, a minimum of twelve weeks of approved elective experiences is required for graduation.

Each of the seven core disciplines in Phase 3 and the Course Themes are led by experienced physicians and academicians who are responsible for the identification of learning objectives, creating methods of delivery and determining assessment methods. Learning is focused on medical specialties in Phase 3 and thus students will usually be assigned to a hospital service unit or team. Orientation to hospitals and services will occur during the first week of the Clerkship rotation.

Phase 3 Typical Weekly Schedule

Monday AM	Tuesday AM	Wednesday AM	Thursday AM	Friday AM
Working Ward Rds & Duties	Working Ward Rds & Duties	Working Ward Rds & Duties	Teaching Ward Rds & Duties	Working Ward Rds & Duties
Spec Clinic/OR	Spec Clinic/OR	Spec Clinic/OR	Spec Clinic/OR	Spec Clinic/OR
Monday PM	Monday PM	Monday PM	Monday PM	Monday PM
Family Med Clinic	Spec Clinic/OR	Didactic/Academic	Spec Clinic/OR	Spec Clinic/OR
Monday Evening	Tuesday Evening	Wednesday Evening	Thursday Evening	Friday Evening
After Hrs ER/ On Call	After Hrs ER/ On Call	After Hrs ER/ On Call	After Hrs ER/ On Call	After Hrs ER/ On Call

Summary

The Northern Ontario School of Medicine (NOSM) has had the opportunity and the obligation to develop and implement an innovative, educationally sound undergraduate medical education program that is aligned with the social accountability mandate of the school. The integrated case-based curriculum that recognizes the social accountability of the school, is learner-centered, and serves to promote patient-centered medical practice through the study of highly contextualized cases that require each student to examine the patient in a holistic and comprehensive manner. This unique program will hopefully serve to address physician mal-distribution in rural and remote areas of not only Northern Ontario, but nationwide.