

**PROGRAM PROPOSAL:
BScPA - Bachelor of Science Physician Assistant
Department of Family and Community Medicine
Faculty of Medicine, University of Toronto**

March 2009

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Executive Summary

This is a proposal for a Bachelor of Science Physician Assistant degree (BScPA) as a full-time professional, second-entry undergraduate degree program to be based in the Department of Family and Community Medicine (DFCM) in the Faculty of Medicine at the University of Toronto (U of T). The BScPA will be a University of Toronto degree that will be delivered in collaboration with the Northern Ontario School of Medicine (NOSM) and The Michener Institute for Applied Health Sciences (Michener), which are both distinguished, healthcare-focused, educational institutions. The three institutions will contribute in the development, administration and delivery of the U of T education program. A Memorandum of Understanding (MOU) has been developed to this effect.

PROGRAM OVERVIEW

The BScPA program will offer students a balance in academic and clinical orientation, extensive access to healthcare relevant resources and a curriculum delivery model that maximizes rural training and geographic accessibility throughout Ontario. The aim of the program is to equip graduates with the competencies necessary to establish the foundation for a sustainable Canadian Physician Assistant profession based on principles of:

1. Social accountability (including increasing access to healthcare in underserved and rural communities)
2. Professionalism (including establishing the identity of PAs in a variety of healthcare settings, particularly in primary care)
3. Interprofessional Collaboration (including collaborative patient-centred practice)
4. Critical thinking and Life-long learning (including enhancing the effectiveness of services provided by physicians)

The full-time distance and distributed learning program will require the completion of 6 consecutive semesters over 24 months. Expected total enrolment the first year will be 22 students with an anticipated increase to a maximum of 42 students per cohort by the second intake year. This novel program will likely attract a diverse group of candidates from across the province. The BScPA is intended for professionals with prior experience in a health related field and with commitment to contributing to healthcare in underserved and rural communities.

PA OVERVIEW

A Physician Assistant (PA) is a mid-level health care professional who is a physician extender. PAs are authorized through Delegation of Controlled Acts and other procedures to provide a broad range of medical and surgical services under the supervision of licensed physicians. A Certified PA is a graduate of an accredited PA education program and has passed the National Competency Exam.

FUNDING

The MOHLTC has committed one-time start-up funding to support the BScPA degree at U of T, in addition support for clinical placement costs. The Ministry of Training, Colleges and Universities has agreed the funding model will match that provided to the other PA program in

the province (3 BIUs per 1.5 FTE). The tuition rate has also been agreed upon by MTCU to align this program with the other provincial PA program.

APPROPRIATENESS

The Faculty of Medicine is directed by various aspects of the changing landscape, which includes the “Changing Dynamic for Knowledge and Education”.¹ The embrace of new technologies to support and deliver innovative curriculum, including web-based, complex audio-visual and simulations is in keeping with the PA program proposal which is designed to align with the modern technologies of the generation.

The BScPA program aligns with a major objective of the Faculty of Medicine Academic Plan 2004-2010 to “advance our scientific and professional training platform for the 21st century. The Faculty will: a) strategically *leverage newly created programs*...and new collaborative programs; b) *capitalize on* national attention and capacity-building needs of areas such as Public Health and bioinformatics and our expanding role in global health; and c) *exploit emerging competencies* in knowledge translation, innovative simulation tools, and inter-professional education, to name a few. We shall prioritize the programs that will best prepare future leaders in research and education, consistent with the Faculty’s vision statement¹.”

This program is in complement to U of T’s Undergraduate Medical Education priority strategy of promoting generalism and primary care as a career path for trainees, as a socially accountable strategy of contributing to a sustainable healthcare system². Through clinical placements focusing on primary care and generalist medicine, students will be able to address specific learning needs and areas of interest using a competency –based academic curriculum to demonstrate their proficiencies as a PA.

Program Overview (Description and Rationale)

The main purpose of the program is to educate students in a professional degree program so that they may be eligible to become Canadian Certified Physician Assistants and work in Ontario. Physician Assistant students will complete a generalist-focused education in order to be prepared to work as a PA in most clinical environments under physician supervision, in underserved areas and rural communities.

The proposed program is a second entry, 24- month undergraduate BScPA. It is a professional degree in the field of Physician Assistant (PA). It is the intent that the BScPA program receives accreditation by the Conjoint Committee for Accreditation (CCA) of the Canadian Medical Association (CMA). Graduates of the accredited program will be eligible for Canadian PA Certification with PACC (Physician Assistant Certification Council), an independent Council of the Canadian Association of Physician Assistants (CAPA).

The 24-month program can be divided into Year 1 (*Academic*) and Year 2 (*Clinical*). The pre-clinical Year 1 is academically focused. The program introduces students to theoretical and

¹ Faculty of Medicine Academic Plan <http://www.facmed.utoronto.ca/Assets/about/2010plan.pdf?method=1>

² University of Toronto, 2005. *Generalism Task Force Report*, Undergraduate Medical Education Program.

practical knowledge of generalist medicine. Through independent, small and large group learning, simulations and experiential courses, the program expands on and strengthens PA core competencies. Year 2 is clinically focused. A competency-based academic curriculum drives the clinical training portion of the program. Through clinical placements focused on primary care and generalist medicine, students have the opportunity to develop into proficient PAs and to explore areas of interest.

The program employs technology and proven principles of distance education. Much of the didactic learning is primarily independent. The majority of Year 1 takes place in the student's community, with teaching and learning occurring by way of the Internet and other computer-based educational resources. Throughout the two-year program, students are required to gather together in central locations for evaluation as well as group learning, including simulations and clinical skills development.

The program is guided by the following underlying principles:

- The curriculum is built on a foundation of academic and clinical excellence and health human resources relevance in keeping with the development of the PA profession in Ontario and in Canada, including the national Occupational Competency Profile (OCP)
- Information Technology will be used in the delivery of the distance education model of the program curriculum. This will ensure maximum access to the program by all students regardless of their geographic location in Ontario.
- By educating PA students in their own communities and encouraging and supporting clinical experiences in rural and underserved areas, the program will play a role in the subsequent increase in access to healthcare for Ontarians as PAs are added to the interprofessional healthcare team.

PA Profession Background:

A PA is a mid-level health care professional who is considered to be a physician extender. PAs are authorized through Delegation of Controlled Acts and other procedures to provide a broad range of medical and surgical services under the supervision of licensed physicians. To become a Certified PA, one must successfully complete an accredited PA program and successfully complete the National Competency Exam.

PAs have played a role in providing health care to the Canadian Military in one form or another for at least 50 years, with a recent estimate of approximately 130 Canadian military trained PAs in practice³. As of January 2009, Manitoba is the only province in Canada to have legislation in place (as of 1999) to regulate PAs. Known as "Clinical Assistants", there are 46 CAs currently in practice in Manitoba⁴. The US has incorporated PAs in its healthcare systems since the 1960's, and the current number of practicing PAs in the US has risen to approximately 70,000⁵. Worldwide, there are practising PAs or developing PA programs in at least 20 countries⁶.

³ Hooker, MacDonald & Patterson, 2003

⁴ Pope, 2008

⁵ American Academy of Physician Assistants, 2008

⁶ Begg, 2008

The Province of Ontario suffers from a shortage of health care professionals⁷. As of August 2008, it is estimated that 850,000 Ontarians do not have a family doctor.⁸ The president of the Ontario Medical Association cites the usefulness of a team based medical care which includes non-physician health care workers as part of the solution to alleviate the service gap.⁹

In order to address the Health Human Resources crisis, in May 2006, the MOHLTC announced a variety of targeted initiatives as part of its HealthForce Ontario strategy. Those initiatives included the implementation of the Physician Assistant as a new member of the health care workforce.

Given that the use of PAs in Canada is in its infancy, evidence for the impact of their use on the healthcare system is limited to the HealthForce Ontario Pilot and Demonstration projects that began in 2007. These projects have put PAs in various clinical positions in Ontario. Early evaluation has demonstrated shorter wait times, shorter time in the ER and fewer numbers of patients leaving without being seen by a health care provider. Teams that included PAs report increased satisfaction with team function and team communications, as well as increased efficiency in patient care.¹⁰

In the last several years, there have been progressive acts to incorporate PA education into Canada's public healthcare system. In May, 2003, the Canadian Medical Association (CMA), also responsible for accreditation of PA education programs, approved the PA profession as a designated health care profession.¹¹ In September 2008, the University of Manitoba began a Masters-level PA program and McMaster University began a Bachelor of Health Science, Physician Assistant (BScPA) program (accreditation will be considered in 2010).

Pedagogical and other Academic Matters, including Expected Benefits of the Proposed Program

This program is in complement to the University of Toronto's Undergraduate Medical Education priority strategy of promoting generalism and primary care as a career path for trainees, as a socially accountable strategy of contributing to a sustainable healthcare system¹². Through clinical placements focusing on primary care and generalist medicine, students will be able to address specific learning needs and areas of interest using a competency –based academic curriculum to demonstrate their proficiencies as a PA.

The professional PA profile is likely to be derived from within the diverse group of applicants each with their own healthcare backgrounds, while training within a standard curriculum. In creating the professional identity within the students, the PA education program will be instrumental in establishing the PA professional profile for the country. The role of the PA in civilian practice is emerging and developing, so the additional challenge within the generalist education of the program will be to ensure that graduates are well prepared to practice in a

⁷World Health Organization, 2006

⁸ Ontario Medical Association, 2008 Available from: <http://www.oma.org/media/news/pr080826.asp>

⁹ D'Amato, 2008

¹⁰ HealthForce Ontario. Introducing Physician Assistants in Ontario. December 2008 Report.

¹¹ Dukes, 2008

¹² University of Toronto, 2005. *Generalism Task Force Report*, Undergraduate Medical Education Program.

variety of healthcare settings in Ontario, and accepted by physician supervisors and allied health teams.

PA education traditionally follows the medical model. This PA professional degree program will expand and strengthen the theoretical and practical knowledge of medicine relevant to key competencies in the Physician Assistant profile. Distance and distributed learning opportunities allow for a diverse student population to participate. This innovative model also provides a framework for independent, small and large group learning, as well as self-study at a learner's own pace so that each learner can meet their own needs and yet complete the program with a set of standard competencies. The program developers will utilize current pedagogy in healthcare education during curriculum design. Curriculum delivery will employ various state-of-the art e-learning tools and initiatives including on-line courses and modules with on-line assignments, portfolios and case logs, videoconferencing, live and recorded video streaming, live and video simulations and other experiential learning opportunities. The unique distance model for program delivery is adapted from the University of North Dakota's successful PA program.

It is proposed that students participate in interprofessional education sessions with other students across disciplines within the Faculty of Medicine at UofT and NOSM, and with allied health students at Michener. While some interprofessional course interactions may occur on-line, PA students will be able to interact with the students of other disciplines in face-to-face group activities while during the residential components of the program.

Projected Student Demand

The first cohort of PA students in the US occurred in the late 1960s. Today there are more than 140 schools in the US providing PA education programs, with a national enrolment of approximately 6,000 students annually¹³.

The experience at the University of Manitoba and McMaster University in 2008 strongly indicates that the program can expect several hundreds of applicants for the proposed January 2010 start date.

The limit for admission to the first year of the PA program is currently 22 students for January 2010 entry. In screening applicants, the Admissions committee will consider all available information. Each application is to be considered on its own merit, consistent with the University of Toronto statement on "Policies and Principles for Admission to the University of Toronto".¹⁴ Preference will not be specially given to individuals enrolled in programs at the University of Toronto.

¹³ American Association of Physician Assistants, 2008

¹⁴ University of Toronto. (1991). Available from: <http://www.utoronto.ca/govcncl/pap/policies/admit.html>

Impact on the Department's and Division's Program of Study, including Impact on Other Divisions

The program proposal is aligned with the Strategic Plan¹⁵ of the Department of Family and Community Medicine (DFCM). The department's vision, "Excellence in research, education and innovative clinical practice to advance high quality patient-centered care" encompasses the establishment of the education of PAs as the newest member of the healthcare team in Ontario. The department's core values of "Commitment to innovation and academic and clinical excellence", "Promotion of social justice, equity and diversity" and "Multidisciplinary and interprofessional collaboration and effective partnerships" are directly applicable to the establishment of the new BScPA degree.

DFCM has agreed to house the PA program with recognition that the majority of the current Family Medicine Teaching Units are at full capacity and will have the right to decline to participate in offering clinical placements to PA students.

By using the calendar year (January to December) for the program delivery, it is possible that the pressures for clinical placements as well as faculty teaching responsibilities may be offset. For example, the novice PA students will have their first clinical block rotation starting in January of Year 2. By comparison, novice postgraduate medicine residents typically start in July and undergraduate medicine clerkship novices start clerkship rotations in October. As such, at any given point in time over the year, there will only be one novice group of trainees, be it from postgraduate or undergraduate medicine or physician assistant programs. While the summer months are often challenging times to schedule clinical placements, the program minimizes the impact with only one 4-week clinical block during the summer, utilizing the remaining summer weeks for residential teaching, evaluation and much deserved vacation time for students and for faculty.

Within the University of Toronto, the resources from within the Division of Anatomy (Dr. Michael Wiley, Anatomy Division Chair) as well as from the Network of Excellence in Simulation for Clinical Teaching & Learning (Dr. Vicki LeBlanc, Director) have expressed support and intent on collaboration. The program will utilize these services at various intervals, generally off-set to the peak demand times. For technology support, The Discovery Commons is engaged and eager to begin to assist and support in the development of the program in unique, innovative and effective ways (i.e. webcasting, online seminars, online course software and interactions, etc).

Student support services exist at UofT for students with personal issues or in crisis, in need of financial assistance, for personal and career development etc. PA program students will be able to access the services regardless of the student's geographic location.

The PA program, as an undergraduate degree program, is not likely to compete with the applicant pool for the Master of Nursing - Nurse Practitioner (MN-NP) program at UofT. Nurses who already have a bachelor degree are more likely to apply to graduate programs, like the MN, for career ladder. The requirements for entry into the programs are also significantly different. The MN-NP programs offered by the Faculty of Nursing have both Adult or Child streams. In

¹⁵Department of Family and Community Medicine Strategic Plan 2009-2013. "Primary Connections: Linking Academic Excellence to High Quality Patient-Centred Care."

contrast the PA program has a more general, primary-care focus for under-served areas and rural communities. There may be opportunities for students in the MN-NP and PA program to participate in interprofessional, collaborative educational sessions (IPE) but this issue is still to be explored by the respective faculties.

Uof T, NOSM and Michener will share the accountability for delivery of the BScPA program – including clinical placement, and establishing distance and distributed learning curriculum to maximize geography and not to be limited by physical capacity of one single training space.

Consultation with other affected divisions

Experience internationally in the development of PA education programs suggests that “strong verification and documentation of need for additional health care professionals can be of great value in garnering support and resources needed to establish a viable PA program.”¹⁶ As the establishment of a PA program is occurring simultaneously with the provincial government’s initiative to introduce practicing PAs into the health care system, it is reasonable to establish positive working relations with associated healthcare professions within the institution and in the communities at large.

The Faculty of Medicine has engaged in consultations with University senior academic administrators in the Council of Health Science Dean, the Lawrence S. Bloomberg Faculty of Nursing, and the University of Toronto Scarborough Paramedicine program.

Consultation with the Lawrence S. Bloomberg Faculty of Nursing included discussion with the Dean, Associate Dean and Undergraduate Program Chair. Positive aspects of collaboration are expected, for both student interprofessional experiences and opportunities for Nursing and PA faculty interaction. It was noted that graduates of any of the U of T nursing programs (undergraduate or graduate level) would not be in direct competition for employment in primary care as this is a focus of the PA program only.

Consultation occurred with the University of Toronto Scarborough Paramedicine Joint Program with Centennial College included discussion with the Vice-Dean, and Program Supervisor. They noted that the BScPA program will be a welcome opportunity for Paramedicine graduates and professionals.

External stakeholders have been involved in the development of this program including the Canadian Medical Association and the Canadian Association of Physician Assistants. The Faculty of Medicine has received extensive and continuing support from PA Educators in Canada as well as in the US, including individual PA Program Directors and from the Physician Assistant Education Association (PAEA).

Consultation with rural communities and potential preceptors and additional clinical training sites for PA students is ongoing. For example, the ROMP (Rural Ontario Medical Program)

¹⁶ Association of Physician Assistant Programs. November 2004. “Physician Assistant Programs: A Guide for International Program Development”. Available from:
<http://www.paeonline.org/index.php?ht=a/GetDocumentAction/i/3536>

Spring Workshop in March 2009 will serve to promote interest in the PA program and to generate potential clinical placement sites for students in the rural and underserved communities of southern Ontario. NOSM will play an active role in marketing the program to their affiliated communities to promote interest for potential applicants as well as communities and potential preceptors from the northern and rural sectors in Ontario.

Appropriateness of the name and designation of the new program

Undergraduate level:

In Ontario, the McMaster University PA program is offered at the level of a second-entry bachelor degree. The curriculum is modified from their undergraduate medical school content, fit within 24 months, and geared towards the competencies expected for a PA.

The University of Manitoba's PA program is established at a masters level, which makes it the only graduate level PA program in Canada. The curriculum for the Manitoba program is similar to the traditional medical model of PA education with an additional research project component.

Although the majority of the PA education programs in the US are currently at the Masters level, this was not always the case. The initial programs were at the post-secondary diploma or certificate and then undergraduate degree level. As the profession established itself, the qualifications required for clinicians, educators, researchers and professional leaders followed the global trend in the credentialing of professional education.

A second-entry undergraduate degree of this nature is considered to be a professional degree. Although a rigorous academic experience, the professional degree of BScPA is, in general, intended to be a terminal degree. However, in addition to some graduate level programs in certain disciplines, there are likely Physician Assistant professional masters degree programs in the US (focusing on administration and education for PAs which may, in fact, recognize the BScPA as an appropriate entry level credential.

Title of Degree:

The designation of Bachelor of Science Physician Assistant is akin to the designations of other health professional undergraduate degrees; specifically noted are the BScN (Bachelor of Science in Nursing), offered through the Lawrence S. Bloomberg Faculty of Nursing or BScPharm (Bachelor of Science in Pharmacy), offered through the Leslie Dan Faculty of Pharmacy.

The McMaster University Physician Assistant Education Program is located within the Faculty of Health Sciences, along with their schools of Medicine, Nursing, and Rehab Sciences, and a variety of undergraduate, graduate and diploma programs. They have designated their degree to be a Bachelor of Health Sciences (Physician Assistant), which reflects the configurations within their institution.

Accountability

The program will be reviewed as per the University of Toronto *Policy for Assessment of Academic Programs and Units*. Accountability measurements include performance and satisfaction levels of stakeholders, costs, and productivity measurements of contribution made to the delivery of health care. The program will provide annual status reports through the program's Medical and Program Directors.

Program Description and Requirements, Course Titles, and Faculty Members

Glossary of Terms:

“Distance” refers to time when the students are not required to be in “class”, and expected to complete curriculum components at home, or wherever they choose to be.

“Residential” refers to time in which students are expected to be at the central teaching location (likely to vary sites between University of Toronto, Michener and NOSM) for face-to-face curriculum components, including simulations.

“Evaluation” refers to specific weeks in the program for summative evaluations, including OSCEs (Objective Structured Clinical Exams). These are to be conducted at the central location (i.e. contiguous with the Residential weeks). Evaluations, whether written or simulation/practical, will be based on the competency requirements of the national Occupational Competency Profile.

“Courses” in Semesters 1, 2 and 3 of Year 1 are all delivered in a variety of distance formats, complemented by face to face experiences in the Residential weeks that also include simulation.

“Longitudinal Clinical Experience” describes the 120 hours required over the Year 1 semesters when the PA students observe a variety of clinical care settings to complement the knowledge acquisition and integration of the rest of the curriculum.

“Block” refers to the 9 designated clinical rotations required in Year 2.

“Clinical 1” and “Clinical 2” are the designations used to distinguish the 2 portions of clinical blocks in which each student will participate – north and south. For example, a student who completes Clinical 1 through NOSM affiliated, rural and northern Ontario communities will complete Clinical 2 through University of Toronto and Michener affiliated, urban, suburban and rural communities in southwestern Ontario.

“Vacation”/ “Reading Week” / “Other” refers to unscheduled time in the program, either for self-study as in the institution's “Reading Week” or program-wide scheduled “Vacation” time.

Program Description:

The BScPA is presented over six consecutive semesters, as a full-time undergraduate professional degree program. The 24-month program schedule is delivered according to the calendar year from January to December.

The January start date allows potential candidates time to complete any prerequisites requirements in the preceding Summer or Fall. Initial graduates of the program would be expected to be pursuing employment from within a limited number of available positions (since employment requires a supervising physician, likely to be coordinated with the MOHLTC as PAs are not yet regulated health professionals).

The program will integrate skills development through simulation-based learning and clinical education. A variety of distributed learning models (e.g., print based, on-line) will be explored to ensure access to province-wide learners and reduce relocation requirements of students. The program is designed to integrate interprofessional education and simulated clinical preparation analogous to the educational model in place for the University of Toronto and Michener joint programs for Medical Radiation Sciences.

The 24-month schedule is presented in the “Program at a Glance” (Appendix A).

1st year (3 semesters) is academically focused:

- Completion of 15 courses in total, in addition to 120 hours of longitudinal clinical experience.
- 14 weeks are designated for residential weeks to include orientation to clinical topics, seminars and simulated clinical learning experiences. Location of the residential weeks will depend on student locations, curricular needs and availability of specific resources
- 3 separate weeks are designated for summative evaluation of students over the course of Year 1.

2nd year (3 semesters) is clinically focused:

- Completion of 9 blocks of clinical rotations, for a total of 38 weeks of direct clinical contact. (22 weeks for Clinical 1 and 16 weeks for Clinical 2). Although rotations are indicated in blocks, the focus is on completion of competencies. These may be completed within a minimal number of site locations.
- 6 weeks are designated for residential weeks to include orientation to clinical topics, seminars and simulated clinical learning experiences. Location of the residential weeks will depend on student locations, curricular needs and availability of specific resources.
- 3 separate weeks are designated for summative evaluation of students over the course of year 2.

Clinical placements will be arranged within Year 2 of the program to provide students with the experiences they reasonably require to achieve competency as a PA. All students will be required to complete clinical portion of Year 2 in both northern and southern sites. Every effort will be made to minimize the student travel requirements within each of ‘Clinical 1’ and ‘Clinical 2’ time periods, without compromising the suitability of the clinical environment for the student.

Clinical training sites will be accredited in advance of placements as part of the responsibilities of the Clinical Coordinators for the program. The accreditation will include internal processes such as completion of a checklist to ensure appropriateness of facility for learning as well as completion of preceptor training on teaching expectations with respect to the supervision and evaluation of PA students.

Table 1 presents the Program Curriculum by breakdown of broad categories, as defined by the PAEA. The breakdown is comparable to other programs as listed in the “2002-03 Annual Report on Physician Assistant Educational Programs” in the US¹⁷. The calculations below use an estimated minimum standard of 35 hr/week for students in clinical activities.

Table 2 presents a breakdown of the various components of the program by time and composition.

Table 1: Overall Program Curriculum by Category			
Category	Year	Estimated Hours per Year	Total Hours in Program
Basic Science	1	312	312
	2	0	
Clinical Medicine	1	312	468
	2	156 (Distance Courses)	
Patient Assessment	1	234	444
	2	210 (6 weeks Residential time)	
Supervised Clinical Instruction	1	120 (Longitudinal Clinical Experience)	1540
	2	1330 (38 weeks of Clinical Rotations) 90 (6 weeks Residential time simulations)	

¹⁷ In 2002-03, the average PA Program curriculum in the US spent 400.5 hours on Basic Science, 358.9 hours Clinical Medicine, 147.3 hours on Patient Assessment and 45 weeks for supervised clinical instruction (PAEA, 2004).

TABLE 2: Overall Program Breakdown by Semester Composition

Year	Semester #	Semester Season	Distance	Residential	Evaluation	Other	Total weeks
1	1	Winter	8 weeks	4 weeks	1 week	1 reading week	14
1	2	Spring/Summer	11 weeks	3 weeks	1 week	1 reading week	16
1	3	Fall	10 weeks	7 weeks	1 week	4 vacation weeks	22
2	4	Winter	14 weeks	2 weeks	1 week	-	17
2	5	Spring/Summer	8 weeks	3 weeks	1 week	-	12
2	6	Fall	16 weeks	1 weeks	1 week	1 reading week 4 vacation weeks	23
TOTALS	6 semesters	-	67 weeks distance	20 weeks residential	6 weeks evaluation	11 weeks unscheduled	104 WEEKS TOTAL
Time contribution to overall program	100%	-	64%	19%	6%	11%	100%

Program Degree Level Expectations (DLE):

The program's DLE, as outlined in Appendix C, are based on the Ontario Physician Assistant Competency Profile and describe the national competency standards currently under development. Using a competency based curriculum model for assessment, the DLE will be used as a guide in the program review process.

Various stakeholders have been consulted at the provincial and national levels to assist in the evolution of the Occupational Competency Profile, Core Competencies and Scope of Practice for PAs in Canada. A revised national competency document for entry-level PAs is expected to be finalized by January 2010. As these components continue to develop and mature, they will actively be incorporated into the program's degree level expectations.

Program Requirements:

- Full time status
 - The structure of the program requires that all students be registered in the program on a full-time basis
 - Attendance at all Residential and Evaluation components of the program and participation in all Distance components are mandatory
 - Selective and elective options will be available in the clinical training opportunities in both Year 1 (Longitudinal Clinical Experience) and in Year 2 (9 Blocks of Clinical Rotations)
 - Employment while enrolled in the full-time professional degree program is strongly discouraged

Rationale: The curriculum is very rigorous with significant time commitments. Part-time enrolment is not possible given the education structure of the program.

- Advanced Standing/Transfer

- The structure of the program requires that all students complete the entire 24 month curriculum from the beginning
 - There is no provision for advanced standing or transfer into the program
 - Prior Learning Assessments will not be considered to grant credits towards the BScPA
- Rationale: There is fair evidence from the US experience¹⁸ to require all PA students, regardless of education background and professional experiences, to complete the PA education program in its entirety.*

- Application for Deferred Registration

- Deferred registrations will normally not be granted in the Program. Deferred registration may be granted only under exceptional circumstances.
- Rationale: Applicants who request deferral in order to complete their undergraduate degree will be discouraged as the decision to complete one's undergraduate degree should be considered prior to application to becoming a PA.*

- Admission Requirements:

The goal of the admissions requirements to the BScPA is the selection of individuals who will enable the program to accomplish its mission to graduate socially accountable and professionally competent Physician Assistants who are well suited to practice in rural and underserved communities in Ontario, and to assist in the growth and development of the Physician Assistant profession in Canada.

The targeted recruitment of prospective students from rural and underserved communities will be achieved via mass marketing and community engagement with partners in the North and in small communities. A goal, as the program matures, is to encourage Aboriginal and Francophone applicants and to develop clinical networks within these communities of practice to support traditionally under-served communities. An advisory group may be convened to design the strategies to meet this goal in the first five years of the program. The submitted budget proposal includes curriculum development to address these needs.

The program admissions process requires that both cognitive (GPA, course prerequisites) and non-cognitive (assessed via Multiple Mini Interviews) competencies be assessed to determine eligibility for admission into the program.

Personal

- Canadian citizen or permanent resident
- Rationale: The investment in the training of PA professionals through this program is intended to build and grow the PA profession in Canada.*
- Reside in Ontario for the duration of the program
- Rationale: The training for the Physician Assistant profession in this program is practical and experiential. Students will be required to attend clinical placements*

¹⁸ Fowkes et al., 1996

throughout their training in various clinical settings in Ontario in order to realize their role as a PA within the Ontario healthcare system.

Academic

- Minimum 10 full-courses or equivalent academic credits at a recognized university
Rationale: Credits from previous courses/credits may need to be applied to complete this second-entry undergraduate degree. Some of the specific course requirements may be only available to some applicants at a second-year undergraduate level, so completing the equivalent of 2 years of undergraduate education allows for a more reasonable assessment of academic abilities of applicants than only one year equivalent.

- average GPA of at least 3.0 on the OMSAS (Ontario Medical Schools Application Service) 4.0 scale

Rationale: Setting the minimum criteria at 3.0 on the OMSAS 4.0 scale is a cut-off benchmark for applicants, however, the expected competition for positions will likely mean a significantly higher GPA would increase chances for admissions. The 3.0 minimum is similar to other program requirements, although for accepted applicants in the US, the national average overall undergraduate GPA was 3.43 and average undergraduate science GPA was 3.35 for PA programs in 2007-08²⁵.

- Minimum one course credit in:

- Human Anatomy
- Chemistry
- Physiology

Rationale: These courses have been suggested as valuable pre-requisites for new PA programs under development outside of the US¹⁹. More recently, they also represent the top 3 pre-requisites for all US PA programs.²⁰

- Computer and Internet skills

Rationale: the program is designed as a distance education program, with much of the program delivery occurring over the internet or with computer-based technologies

- English Language proficiency (if applicant's first language was not English)

Rationale: Test/Qualifications and Scores that are acceptable proof of English facility for applicants are set by the Undergraduate Admissions policies of the University of Toronto²¹.

Clinical

- At least one year health care professional experience as a Regulated Health Professional²² (i.e. RN, Medical Radiation Technologist, etc) or other health professional as listed (Paramedic/Emergency Medical Attendant, Dental Assistant, Podiatrist, Diagnostic Sonographer, Social Worker, Veterinarian, Medical Assistants

¹⁹ PAEA, 2004

²⁰ PAEA, 2008

²¹ Available at: http://www.adm.utoronto.ca/adm/adm_other_req/adm_english_facility.htm

²² Listing of recognized Self Governing Health Professions can be found in Schedule 1 of the *Regulated Professions Act, 1991*

and Medical Technicians), including a minimum of 12 months of DIRECT patient contact

Rationale: This rigorous PA education program and the PA profession, as it is starting out, will benefit from the experience and expertise of people who were previously health professionals in other disciplines. The history of the development of the PA profession internationally demonstrates the use of previously trained health care personnel as a pool for PA candidates.²³

Preferred Criteria

- Ontario residents
- Demonstrated commitment to contribute to healthcare in underserved and rural communities (as determined by the Admissions Committee)

Rationale: The program is partially supported by the MOHLTC for the health care benefit of residents in Ontario, particularly those in areas with limited access to health care. Selecting Ontario residents supports the goal of providing additional health care options to Ontarians. The actual weighting of the various components of the applicants file will be determined during the admissions process (by the Admissions Committee) in order to ensure equitable and diverse representation. Items relating to academic achievement, clinical experience, geographic location/commitment to rural and northern communities will be thoughtfully considered.

Application Process

- Application through central provincial admissions organizational structure (Ontario Universities' Application Centre/OUAC)
- Supplementary application form submitted directly to the Admissions Committee
- Selected applicants will be invited to an MMI (Multiple Mini Interview) candidate interview

Course Titles

Table 3 outlines the Model Route for the program, listing courses by semester with details of course hours. The 24-month Program at a Glance can be found in Appendix A. An alphabetical listing of the course descriptions can be found in Appendix B.

²³ Over the past 20 or so years, students enrolling in US PA education programs had previous health care experiences ranging from 29 months (the lowest reported yearly average in 2005) to 56 months (the highest reported yearly average in 1992). (PAEA, 2007)

TABLE 3:
MODEL ROUTE - BScPA: Physician Assistant Professional Degree Program

YEAR 1

Cohort: Winter 2010 intake				# of Semesters: 6	
Semester		Course Title		Course Hours per week	Total Hours
Winter 2010					
Start	End				
Jan	Apr		Introduction to the Physician Assistant Role	3	39
			Anatomy	6	78
			Physiology and Pathobiology I	3	39
			Clinical Skills I	6	78
			Foundations of Interprofessional Collaboration	3	39
			Longitudinal Clinical Experience	4	40
				Semester Hours:	313
Summer 2010					
Start	End				
May	Aug		Diagnostic Techniques and Procedures I	3	39
			Medical Microbiology	3	39
			Clinical Skills II	3	39
			Pharmacology I	6	78
			Physiology and Pathobiology II	3	39
			Longitudinal Clinical Experience	4	40
				Semester Hours:	274
Fall 2010					
Start	End				
Sept	Dec		Clinical Skills III	3	39
			Adult Medicine	8	104
			Behavioural Medicine	4	52
			Diagnostic Techniques and Procedures II	3	39
			Pharmacology II	3	39
			Longitudinal Clinical Experience	4	40
				Semester Hours:	313
TOTAL Year 1 HOURS				1731	

YEAR 2

Cohort: Winter 2010 intake				# of Semesters: 6	
Semester		Course Title		Course Hours per week	Total Hours
Winter 2011					
Start	End				
<i>Jan</i>	<i>Apr</i>		Clinical 1 (= Blocks 1, 2, Introduction to Specialties, Block 3)	35	525
			Health Promotion and Education I	3	39
			Pediatric Medicine I	1	13
				Semester Hours:	577
Summer 2011					
Start	End				
<i>May</i>	<i>Aug</i>		Clinical 1 continues (=Block 4, 5, orientation to Clinical 2, Block 6)	35	525
			Health Promotion and Education II	3	39
			Pediatric Medicine II	1	13
				Semester Hours:	577
Fall 2011					
Start	End				
<i>Sept</i>	<i>Dec</i>		Clinical 2 (=Block 7, 8, 9 and Final Evaluation)	35	525
			Medical Ethics	3	39
			Evidence Based Medicine	1	13
				Semester Hours:	577
TOTAL Year 2 HOURS				1731	
TOTAL PROGRAM HOURS				2631	

Faculty Members

The faculty structure for a Physician Assistant education program is well established by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) in the US.²⁴ This structure includes the following:

- Program Director
- Medical Director
- Academic Coordinator(s) oversee the Academic, pre-clinical Year 1
- Clinical Coordinator(s) oversee the Clinical Year 2.
- Teaching faculty

Due to the nature of the geographic locations of the three partnering institutions and the expectation of geographic dispersion of the PA students across the province, the program will have an Academic Coordinator in the north and one in the south, and the same for the Clinical Coordinators. Geographic locations of Clinical Coordinators will aid in availability for preceptor training as well as monitoring of students while they are in their clinical year.

It is expected that the core faculty (Program Director, Medical Director, Academic and Clinical Coordinators) will share the teaching and administrative responsibilities of the program. Adjunct, sessional or expert faculty (physicians, non-physicians, PAs, or non-PAs) may be recruited and involved at various times in the program as required. Teaching Assistants can be hired to administer course material, assist in simulations and evaluations and research. The actual representation of UofT faculty and NOSM and Michener faculty depends on the successful recruitment of the most appropriate and qualified individuals for the various positions.

Faculty teaching in the Program will fall under the policies and procedures as outlined in the Memorandum of Agreement (MOU) for the three institutions.

The academic rank of the appointment granted to the various PA program faculty will correspond with the academic credentials of the applicant and the expectations of the position, ranging from Lecturer to full Professor. New faculty may be appointed to the Faculty of Medicine with the Department of Family and Community Medicine.

Table 4 identifies the projected FTEs for faculty in the program. The requirements over the first three years in various categories reflect the changing needs for staffing the program as it establishes, including preparing for the professional accreditation process, course development and refinement and initiating the program evaluation process. It is expected that as the PA profession grows in Canada, faculty who are certified PAs will be able to provide clinical care in addition to their teaching and administrative responsibilities, though this cannot be assumed at the outset. The proposed faculty requirements for our program can be seen in comparison to the US statistics²⁵ for 2006-07: the mean number of faculty per program at the time was 10.2, consisting of a Program Director, Medical Director, 4.4 PAs, 1.3 non-PAs and 2.5 other personnel. The majority of the PA program personnel held Master's degrees, were PA's and held an academic rank of Assistant Professor or higher.

²⁴ "The ARC-PA is an independent accrediting body authorized to accredit qualified PA educational programs leading to the professional credential, Physician Assistant PA." (<http://www.arc-pa.org/>)

²⁵ PAEA, 2007

TABLE 4: FACULTY MEMBER REQUIREMENTS

Faculty Position By Profession	Requirements		
	First Intake Year	Second Intake Year	Third Intake Year
Medical Director (Physician)	0.8 FTE	0.8 FTE	0.8 FTE
Program Director (PA)	1.0 FTE	1.0 FTE	0.8 FTE
Academic Teaching Faculty (Physicians)	1.0 FTE	1.0 FTE	1.0 FTE
Physician Assistants	2.0 FTE	1.6 FTE	1.6 FTE
Non-Physician Teaching Faculty	0.4 FTE	1.0 FTE	1.0 FTE
Teaching Assistants	0.6 FTE	1.7 FTE	2.1 FTE
TOTAL Faculty FTE	5.8 FTE	7.1 FTE	7.3 FTE

Program Administration and Delivery

The program will be offered by the University of Toronto, with the collaboration of NOSM and Michener. The expertise and geographical situation of these institutions align in a truly Ontario initiative that is poised for success. The three institutions will contribute in the development, administration and delivery of the education program.

A Memorandum of Understanding with the three of the education institutions has been developed to define the program's development, administration and delivery. The three institutions will assume responsibility for the curriculum, program delivery, professional accreditation, management of the program, academic coordination and identification of potential clinical education venues.

BScPA program committees will have representation and terms of reference as follows:

- Executive Committee (comprised of the Deans/leadership of the partnering institutions) to oversee the governance and strategic direction of the program
- Steering Committee (comprised of representatives from all three institutions and other stakeholders) to advise on policy, planning and implementation matters as well as the future direction and vision for the program
- Management Committee to supervise and oversee academic and administrative affairs related to the program delivery
- Evaluation Committee to address program evaluation and student evaluation matters, including student progression and recommendations to the PA Board of Examiners
- Curriculum Committee to develop, implement and monitor the curriculum, including its on-going integrity
- Admissions and Selection Committee to be responsible for the admissions and selection process for candidates

Responsibility for clinical education will be shared by all three institutions. Year 1 Longitudinal Clinical Experience will be arranged within or close to the home communities of the students, as much as possible. Community Family Physicians and other healthcare professionals will be recruited for the Year 1 practicum (comparable to the preceptor recruitment process for the

Family Medicine Longitudinal Experience for Undergraduate Medical Students). Year 2 Clinical experiences are comprised of 9 block rotations. Although organized by Blocks, the curriculum is one that requires the attainment of competency and not necessarily a time-based rotation in order to fulfill the expectations. Students will be paired to a community with various preceptors, with the expectation that the students should live in or close by the community for the duration of the rotations in that community. The entire cohort will be divided in half between northern Ontario (NOSM affiliated) and Southwestern Ontario (U of T/Michener affiliated) sites, where each student will complete half of their practicum in a NOSM affiliated community and half in a UofT/Michener affiliated community. This will help to ensure students are exposed to a well-rounded clinical experience, including urban, rural, remote, Aboriginal communities, and communities of various sizes. The urban or sub-urban clinical experiences in the U of T affiliated sites may occur through the expansion training sites in Barrie (Royal Victoria Hospital), Oshawa (Lakeridge Health) and Newmarket (Southlake Regional Health Centre). By pairing the students in communities (i.e., 2 PA students in each community), it is projected that the capacity within the province for clinical placements is realistic. The pairing of students serves to enhance the continuity of care experience for each student (as students stay in the community for prolonged periods of time), and facilitates a supportive learning experience for the students themselves (as students have each other for local support).

Professional Development:

Professional development for faculty teaching in the Program and for clinical educators to enhance teaching expertise and Interprofessional Education competencies will be a joint responsibility of the three institutions. Through the University of Toronto's Centre for Faculty Development and Office for Interprofessional Education and the Centre for Learning Innovation at The Michener Institute, as well as through NOSM's Continuing Health Professional Education office, faculty development initiatives will be delivered for the faculty and clinical educators associated with this program. An established working relationship exists between these departments to facilitate expertise in adult teaching, diverse delivery modalities and interprofessional collaboration.

Examples of professional development currently available at the three institutions:

- coaching and mentoring in the clinical setting
- interprofessional collaboration (conflict management, leadership in a healthcare team)
- giving and receiving constructive feedback
- development of online courses
- interactive webcasting

Specific professional development of initiatives around supervision and evaluation of PA students will occur. Existing resources such as those developed for HealthForce Ontario's PA Demonstration and Pilot projects, as well as well established materials from the US will be adapted to the needs of the local communities, clinicians and educators.

Research into the efficacy and effectiveness of the program and its graduates will be the shared responsibility of the three institutions.

Profession Accreditation Requirements:

It is the intent that the BScPA receive accreditation by the Conjoint Committee for Accreditation (CCA) of the Canadian Medical Association (CMA). Graduates of the accredited program will be eligible for certification with PACC (Physician Assistant Certification Council), an independent Council of the Canadian Association of Physician Assistants (CAPA).

The CCA sets the national education benchmark as the body that accredits the professional education programs for Physician Assistants in Canada. The CCA acknowledges the National Competency Profile as established by CAPA. The requirements for accreditation are fivefold:

1. Student attainment of competencies specified in national profile (7 criteria; 2 critical criteria)
2. Protection of student rights and interests (9 criteria; 2 critical criteria)
3. Adequate resources for effective learning (5 criteria; 2 critical criteria)
4. Infrastructure for integrated learning experience (5 criteria; 2 critical criteria)
5. Program evaluation for continuous quality improvement (4 criteria; 2 critical criteria)

The curriculum committee will be refined to meet the competencies and academic requirements for approval of the program by the respective educational institutions as well as by the national accreditation body as above.

U of T will be the Contact site and Corporate Authority for the purposes of CMA Accreditation, as well as for the purposes of application to the MTCU for program approval and the MOHLTC for supplemental funding for the program.

Employment of PA graduates and the possible inclusion of the PA profession as a regulated health profession are beyond the scope of this program proposal and will be addressed at the government and regulatory body levels.

Mode of Delivery

In accordance with the provincial guidelines for Distance Delivery²⁶, there is a “clear rationale” for distance delivery, arrangements in the schedule to ensure the a “learning community is fostered”, including appropriate intervals for face-to face contact, and accessibility to equipment, curriculum and library resources. Faculty development initiatives have been considered in the program’s budget to provide the appropriate support and guidance for the faculty’s continuing professional development as they participate in this type of curricular model. Technical support for e-learning has also been considered as an ongoing expense in the program’s budget.

A variety of clinical placements will be provided in environments such as emergency departments, family practice clinics, patient education centres, outpatient clinics and wellness centres. The institutions will work together to arrange and supervise the clinical experiences associated with the program under the supervision of a Clinical Coordinator (CC) in the south (U of T or Michener) and a second CC in the north (NOSM). The CCs will be responsible for the identification, recruitment, orientation and support of clinical partners. The CCs will be recruited to plan clinical education for the first cohort of students as students will be participating in Longitudinal Clinical Experiences throughout Year 1. Formal affiliation agreements will be established for each clinical partner, if not already in place, including scope of responsibility,

²⁶ Ontario Council on Graduate Studies. January 2008. OCGS By-Laws and Procedures. Available at: http://ocgs.cou.on.ca/_bin/home/byLaws.cfm

accountability, liability, compensation, etc., as evidenced in established clinical affiliation agreements with the partners.

Methods Used for the Evaluation of Student Progress

Teaching and evaluation methods will vary as not all content is best suited to be delivered nor evaluated by any one process. For example, the content of teaching physical examination skills may be best suited to students preparing in advance by way of accessing on-line and printed materials to review theory and procedures. However, the practicality of this particular topic is best suited to be taught in a face-to-face, live interaction during a residential component of the curriculum. The face-to-face teaching method for this particular topic in small groups will also enable formative feedback and ensure student progress.

The use of both formative and summative evaluations will be considered throughout the program curriculum. For online and distance courses, evaluation of students will be done by assignments, on-line interactions and written exams. Simulations will be utilized for both clinical experiential education as well as evaluation purposes. The use of Objective Structured Clinical Examinations (OSCEs) during each of the six weeks of evaluation throughout the 24-month program will be central to ensuring the progress of the students in integrating the expected competencies. In year 2, during the block rotations, students will be evaluated utilizing ITERS (In-Training Evaluation Reports).

Faculty

The program will have to recruit Physician Assistants to the faculty, as none exist to our knowledge. There are less than 200 certified civilian PAs in all of Canada, some of whom may be interested in an academic position. Additional recruitment as required will likely come from the United States. As outlined above, it is likely that the faculty appointment for the purposes of the PA Professional Degree Program will be distributed amongst all three institutions.

The structure of the faculty makeup for the Program as outlined above is being proposed in order to maximize the teaching and expertise from the available professionals. Although historically physicians were the only teachers in PA education programs in the US, as the PA profession grew, so did the pool of PA educators from which to draw upon. So while we do not have available PA educators as such at this moment, there are several affiliated faculty physicians who have had experience working with and teaching PAs.

Student Matters

For clinical placements, students who partake in unpaid training placements with employers are deemed as “learners” and thus eligible for Workplace Safety and Insurance Board (WSIB) coverage when their placement employer (e.g. hospital) is covered by WSIB. Students may be eligible for private insurance coverage when their placement employer (e.g. private doctor’s office) is not covered by WSIB, through ACE INA Insurance. In this instance, the student, the University and Clinical Coordinator must complete the Work/Education Placement Agreement/Post-Secondary form²⁷.

²⁷ Form is available at: <http://www.edu.gov.on.ca/eng/document/forms/631352.pdf>