

## ***Proposal to Establish the Institute of Health Policy, Management and Evaluation at the University of Toronto***

### **1. Context and Rationale**

The Canadian health care system faces major challenges to create financial sustainability, establish an evidence base for clinical and policy decisions, translate research findings into practice, improve the quality and safety of care, and design a delivery system that offers more integrated care experiences across the continuum of providers. These challenges require research and partnerships with clinicians, policy makers, and system leaders. The critical information for decisions cannot be developed within any one academic discipline, but must be the product of collaborations of researchers and decision makers who bring a range of expertise and experience to bear on these complex and critical issues.

The current Department of Health Policy, Management and Evaluation (HPME) brings together leading researchers from a wide variety of disciplines and professions to develop knowledge and translate innovative ideas into evidence-informed practices and policies that improve the planning, delivery and outcomes of health care. Located in the Faculty of Medicine (FOM), HPME has the largest concentration of researchers in health care and health services research and clinical epidemiology in Canada (***see Appendix 1***). Through its graduate educational programs and practitioner education initiatives, HPME has for many years also been involved in developing Canada's future health care leaders, educators and scientists.

The Department's success can be attributed to the talent and diversity of its faculty members, the high calibre of its students, and its strong history of collaboration, partnership and outreach that have allowed it to leverage its resources to achieve significant impact in academic circles and in the health care system. The Department has extensive collaborations and partnerships with policy-makers, health care providers, consumers and health care organizations across a continuum of acute, chronic, primary, and long-term care, in addition to its collaborations within the University. These connections are provincial, national and international in their scope. The Department has been innovative in its teaching and research programs and, as such, has made significant contributions to knowledge, practice and policy in the health care and delivery system.

This proposal outlines the rationale and structure for transforming HPME from a Department to an Extra-Departmental Unit: A (EDU:A). Consultations with stakeholders on and off campus, including affiliated institutes and government ministries, have strongly encouraged the evolution of the Department into the Institute of Health Policy, Management and Evaluation (the Institute) (***see Appendix 2 for the consultative strategy***). Such a structure reflects our current transdisciplinary and collaborative activities, and will allow HPME to further develop and formalize the collaborations and partnerships it presently holds within the University of Toronto and outside the institution with the larger health and community care sector. The EDU:A

structure will allow the maintenance of the Department's affiliation to the Faculty of Medicine, deemed highly important by all stakeholders, while facilitating the achievement of its vision of "*leadership in innovative thinking in health policy, management and evaluation*". Additionally, the Institute will enable a closer academic integration with the Dalla Lana School of Public Health, particularly in the concentrations of public health policy and health systems administration.

## **2. Vision and Mission**

The Institute will be committed to a vision of inter-professional and transdisciplinary research and education in the areas of (a) clinical epidemiology and health care research (CEHCR) and (b) health services and policy research (HSR). CEHCR focuses on improving health through research involving patients and the health care system. It is a bridge science that integrates clinical knowledge with epidemiological methods to establish an evidence base for clinical decisions. Through it, it becomes possible to translate the results of effectiveness and efficiency research into clinical practice (for instance, practice guidelines), health policies (for instance, performance indicators) and reimbursement policies (for instance, formulary decision making regarding drug and medical device funding). HSR is the multidisciplinary field of scientific investigation that "examines how people get access to health care, how much care costs, and what happens to patients as a result of this care. The main goals of health services research are to identify the most effective ways to organize, manage, finance and deliver high quality care, reduce medical errors and improve patient safety" (AHRQ, 2002).

While the goal of a high quality, sustainable healthcare system is widely supported, the means to attain this end elude easy solutions. Maintaining a system that delivers safe, efficient, effective and accessible patient centered care to all Canadians requires a concentrated effort to develop and integrate the work of economists, social scientists, political scientists, clinical epidemiologists, clinicians and others. This knowledge needs to be shared with clinical, organizational and system leaders through education and collaboration so that solutions based on this understanding can inform the design of a more effective healthcare delivery system. An example of an institutional structure that has recently been established to address these types of issues is the new Centre of Health Care Delivery Science developed within the existing Dartmouth University's Institute for Health Policy and Clinical Practice. The aim of the new Centre is to help design new models of health care delivery which will achieve better health at lower cost. No comparable centre currently exists in Canada, but HPME in the University of Toronto is an academic centre with the resources and vision to achieve this mission.

Current HPME faculty and students share with other units and disciplines in the Faculty of Medicine an interest in health care and clinical practice, but the unique focus of the proposed Institute will be on employing a wide range of scientific methods to advance research on the organization, delivery and improvement of health care and to educate Canada's future health care leaders, educators and scientists. Research in the Institute will range across the continuum of care, including primary care, acute care,

rehabilitation, long term care, home and community care and public health. It will draw on disciplines and professions to be found throughout the University and it will examine issues from system (macro) to organizational (meso) and individual levels (micro). Educational programs will focus on clinical epidemiology and health care research, health services research and health informatics and administration and will include programs for health leaders, managers and researchers.

The Department has established an academic culture that highly values and promotes transdisciplinary research and education. This emphasis is reflected in the array of backgrounds, methods, and research foci within the department – a range that spans, for example, qualitative social sciences to quantitative clinical epidemiological methods. HPME has also served as a very effective environment within which experts in these disciplines meet and collaborate. Current HPME students and faculty are involved in many linkages with units both within and beyond the University of Toronto. An Institute will facilitate and formalize the development of these collaborations and linkages by creating a strong core of people committed organizationally to multidisciplinary endeavors with dynamic transdisciplinary collaborations and a focus on evidence-informed practices which will improve the planning, delivery and outcomes of health care. The Institute of Health Policy, Management and Evaluation will be founded upon the principle that strong and relevant research in this field is necessarily the product of informed debate and exchange of ideas across disciplines, professions, sectors, agencies and institutions.

HPME's composition and structure have been integral to its success. The Department has historically had a relatively small number of full time faculty geographically located at the University and a large number of cross-appointed, adjunct, and status-only faculty located in other Departments, hospitals, research institutions, and other centres throughout the University and the field of practice, representing a large talent pool from which to draw expert teachers and supervisors. Similarly, the student body has included students pursuing graduate studies immediately after an undergraduate degree as well as clinicians and professionals with many years of experience who are returning to studies as more mature learners to acquire advanced management or research skills. Strong leadership, careful management, and a commitment to building the best possible educational opportunities have established programs that are tailored to the needs of our learners. The size and efficiency of the Department has resulted in processes that are highly effective in establishing priorities and can adapt expeditiously to changing events.

The Institute will continue to coordinate and contribute to the health services and health care research and educational activities that are evident across the University of Toronto and its affiliated research institutes. The proposed Institute will be able to reach beyond its Departmental bounds to provide an academic centre within the University that will enable the Institute, and the University, to play a broader and more integral role in shaping the health care delivery system.

### 3. Education Mandate

The Institute will continue to set the standard for education in clinical epidemiology and health care research, health services research and health administration. Currently, HPME is the principal graduate training program at the University of Toronto for clinical and health services research, health administration, and health informatics and has been a key institution in developing Canada's future health leaders and researchers. Since its inception in 1985, the Department's research and professional stream programs have rapidly expanded, attracting both national and international students, with a current cohort of about 300 students. ***(See Appendix 3 for a summary of the educational programs offered through HPME; see Appendix 4 for examples of student achievements)***. The majority of HPME's doctoral graduates are employed in universities, research institutes, and/or in policy making roles. As thought leaders, their work and its outcomes are crucial to developing solutions to the challenges facing our health care system and internationally.

Many of the Department's graduates have been employed by universities that are setting up new programs in health services research (Dalhousie University, McMaster University, York University, Ryerson University) and by universities outside Ontario (for instance, University of Victoria, University of Alberta, University of North Carolina, Memorial University, Sydney University). Other graduates are situated in research institutes, including the Institute for Clinical Evaluative Sciences and the Canadian Institute for Health Information, and in research units within University of Toronto affiliated teaching hospitals. In its capacity as a major training centre, HPME has had an essential role in building capacity in health policy, management, clinical epidemiology, health technology assessment, and health services research locally, throughout Canada and abroad. The Institute will continue to innovate to lead the field in creating new clinically and policy relevant science as well as translating this knowledge for tomorrow's health care professionals and educational leaders. The Institute will offer new opportunities and advantages for innovation and recognition as the nations' premier research and educational institute.

HPME has over 60 years experience in the delivery of professional masters education. The Department currently offers a professional two-year master's program in health administration that targets students who aspire to leadership roles in health services management and policy – regionally, nationally and globally. The program has 50 adjunct faculty members who act as guest lecturers, tutors and preceptors in the program. Their involvement offers students a crucial window on the impact of policy on system design and its outcomes.

In 2005, the MHS in Health Administration received an 8 year accreditation award, one of only a handful of programs (and the only Canadian program) to have achieved this status. Graduates of this program have become high-profile leaders in Canada's health system; for instance, they include the President and CEO of the Hospital for Sick Children, Mount Sinai Hospital, Toronto Rehabilitation Institute, Halton Healthcare Services, Hamilton Health Sciences Corporation, The Toronto Central LHIN, the Rick Hansen Foundation, Ovarian Cancer Canada, and St. Elizabeth Health Care.

In 2009, the Department welcomed its first class of Masters in Health Informatics (MHI) students. A joint program with the University of Toronto's Faculty of Information, this new program is intended to provide graduates with the knowledge and skills necessary to integrate clinical expertise with information and communication technologies in order to solve problems, drive change in health care systems and improve health outcomes.

Adding a dimension to its degree programs, HPME participates in ten collaborative graduate programs. Collaborative programs emerge from cooperation between two or more graduate units (department, centres or institutes). The collective experience of the participating graduate units provides the student with a broader base from which to explore a novel transdisciplinary area or some special development in a particular discipline. Examples of current collaborative programs in which HPME students participate include: Bioethics; Cardiovascular Sciences; Health Care Technology and Place (HCTP); and, Dynamics of Global Change.

HPME is also involved in teaching in the undergraduate medical education program. Most recently, the Leadership Education and Development Scholarship Program (LEAD) program has been launched in the undergraduate medical education program for medical students. This program is an initiative of the Faculty of Medicine (with HPME as the lead faculty), the Rotman School of Business and the School of Public Policy and Governance. This program is targeted at medical students who have an interest in adding training in management and leadership to their MD program. The first LEAD participants are being selected for entry in 2011-12.

In addition, HPME is involved in continuing education activities. The Physician Leadership Program and the Clinical Epidemiology Institute are annual Departmental offerings that consistently are over-subscribed. This year the Department also collaborated with the Centre for Effective Practice for the first Clinical Practice Guidelines Institute. The Toronto Health Economics and Technology Assessment (THETA) group offers an annual Knowledge Translation day, which last year, with the support of the Ontario Ministry of Health and Long Term Care, offered a one day session on "knowledge translation to policy: wound care and cardiovascular research" which attracted policy makers, funders, healthcare service planners and providers, researchers and consumers.

It is anticipated that the current Departmental structure of educational offerings will be reflected in the Institute of Health Policy, Management and Evaluation. The Institute will continue to offer MSc/PhD degrees, with PhD specializations available in Health Policy; Health Services Organization and Management; Health Services Outcomes and Evaluation; eHealth Innovation and Information Management; and Clinical Epidemiology and Health Care Research. The Institute will offer professional degree programs including the MHS and MHI. The Institute will also maintain its involvement in undergraduate medical education, collaborative programs, practitioner training and continuing education. The Institute's students will continue to be represented by a student council; a structure equivalent to the current HPME-GSU.

Not only will an Institute ensure the continued success of the existing educational programs, but it will serve as a catalyst for the development of new educational initiatives born from the partnerships developed and fostered within the Institute. One initiative with the DLSPH that will facilitate the development of programs with a focus on public health policy is the CIHR Strategic Training Program in Public Health Policy. This Training Program is part of CIHR's Strategic Training Initiative in Health Research (STIHR) and has received funding from the CIHR Institutes of Population and Public Health, Health Services and Policy Research and Child and Youth Health. Lead faculty are from the DLSPH and faculty from HPME are advisory to the Principal Investigators. The Chair of HPME is a member of the External Advisory Committee. The program serves as a mechanism to develop course specific training in public health.

In addition, two new doctoral specializations, one in health economics and the other in patient safety and health quality, will benefit from enhanced collaborations available within an Institute. A new initiative linked to a professional doctoral degree in Health Leadership (possibly a DrPH or DrSc), involving national and international partners, could flourish in an Institute. In a time of increased competition for resources and students, the ability to further foster the collaboration and partnerships that will result from an Institute will create exciting new opportunities for learning, provide greater access to courses and faculty, and are of increasing interest to talented students who are looking for programs that will optimize their investment in learning.

#### **4. Research Mandate**

The current Department received more than \$7.3 million in research funding in 2009. Its funding for research has grown over the years, with its total budget almost tripling from 2000 to 2009. The Department is recognized as a leader in research that contributes to health care system efficiency, effectiveness, and sustainability. The Department's research covers all three domains of health care – clinical, organizational and policy – and plays an important knowledge translation role by making complex issues accessible to decision-makers and the public. A unique feature of HPME's research program is its transdisciplinary nature, with research teams drawn from departments and units across and beyond the University (*see Appendix 5 for the Department's Strategic Plan*). It is proposed that the primary research foci in the new Institute will remain as health services research (HSR) and Clinical Epidemiology and Health Care Research (CEHCR). It is further proposed that the Institute will build on current departmental strengths related to collaboration and inter-professional and transdisciplinary linkages. A key to the strength of HPME's research program is its ability to partner with a broad range of stakeholders. Examples of the types of initiatives that the new Institute will be seeking to develop and expand upon are three current collaborations:

- The Toronto Health Economics and Technology Assessment Collaborative (THETA);

- Health System Performance Research Network (HSPRN)
- Institute for Clinical Evaluative Sciences satellite (ICES@UofT)

Established in 2007, THETA is a multidisciplinary research collaborative that supports effective health policy through research, training and the provision of decision support to the Medical Advisory Secretariat in the MOHLTC and the Ontario Health Technology Assessment which is an advisory committee to government. In addition, its role is to enhance capacity in HTA through the graduate programs at the University of Toronto. Partners comprise HPME (co-lead), the Leslie Dan Faculty of Pharmacy (co-lead), Cancer Care Ontario and the University Health Network.

The Health System Performance Research Network (HSPRN) is a multi-university and institution collaborative focused on measuring system performance across the hospital, complex continuing care, long term care and home/community care sectors. Scientists and graduate students affiliated with this network come from a variety of universities and organizations including the University of Toronto (with HPME as lead organization), University of North Carolina at Chapel Hill, the Toronto Rehabilitation Institute, the Ottawa Hospital Research Institute, the University of Waterloo, the Centre for Addiction and Mental Health and the Institute for Clinical and Evaluative Sciences.

The Institute of Clinical Evaluative Sciences satellite (ICES@UofT), an initiative spearheaded by HPME, has been established to facilitate easier access to the ICES databases for both faculty and students. Contributing members include HPME, the Lawrence S. Bloomberg Faculty of Nursing, the Faculty of Pharmacy, the Hospital for Sick Children, Women's College Hospital, the Toronto Rehabilitation Institute, the Centre for Addiction and Mental Health, the Ontario Agency for Health Protection and Promotion and the Ontario Health Quality Council.

Support for the Institute will also be sought through federal funding agencies. HPME's transdisciplinary initiatives have currently resulted in a number of Canadian Institutes of Health (CIHR) research grants, collaborations that will continue to be important to, and sought after, by the Institute. Two current examples of such grants are:

- Health Technology and Place 2 (HCTP2)
- Community Care and Health Human Resources (CCHHR)

HCTP2 is an international, interdisciplinary research and training collaborative exploring the ways in which technology has reshaped the health care landscape. HCTP2 has a particular focus on health technology assessment and thereby complements the research programs lead by THETA. At the University of Toronto, partners include HPME, and the Faculties of Applied Science & Engineering and Pharmacy.

CCHHR's research agenda addresses the need for better evidence concerning two key elements affecting, and being affected by, the shift of care between hospitals and home/community. Both have been identified as of high priority, nationally and internationally. Partners include researchers from McMaster University, the Michener Institute of Applied Health Sciences, Ryerson University and University of Ontario Institute of Technology.

One particular area of collaboration with the DLSPH that will receive renewed attention with the establishment of the Institute is research in the area of public health policy. Adalsteinn Brown has just been appointed to the DLSPH as the Inaugural Chair in Public Health Policy. Dr. Brown was in a tenure stream position in HPME where he was the principal investigator for the Hospital Report Research Collaborative, developing scorecards for acute care, emergency department care, chronic care, rehabilitation and mental health care in hospitals across Ontario. Dr. Brown has strong research connections with HPME which will facilitate new research endeavours within the realm of public health policy.

It is anticipated that faculty within the Institute will be highly competitive for external career awards from major health services and clinical funding agencies, intensifying the tradition within HPME of faculty members being successful in obtaining investigator awards and funded chairs from entities such as the CIHR Institute for Health Services and Policy Research and the Canadian Health Services Research Foundation. In addition, numerous Clinical Epidemiology and Health Care Research faculty members, whose primary graduate appointment is with HPME, have been successful at obtaining career awards, including several Canada Research Chairs, achievements which will be facilitated by the establishment of the Institute.

It is the intention of the Institute to take an increasingly central role in coordinating and facilitating the health services, policy and health care research activities conducted across Toronto and Ontario. For instance, HPME took the lead role in facilitating the establishment of the ICES@UofT site. This initiative and similar initiatives that will find a natural home within an Institute will have important implications for the continuing success of the work of health care and health services researchers and graduate students.

## **5. Partnerships**

The establishment of critical partnerships and linkages has been of fundamental importance to the success of HPME and these partnerships and linkages will continue to be central to the success of the Institute. Within the University of Toronto, there has been a long history of collaboration between HPME and the Faculties of Nursing, Pharmacy and Information and the Dalla Lana School of Public Health. It is proposed that representatives of these faculties/schools should be formally recognized as “cognate departments” and be invited to participate in the Institute’s initial Executive Committee.

Within the Faculty of Medicine, HPME has had a strong history of collaboration with other departments, including Medicine, Surgery, Family and Community Medicine, Psychiatry, Radiation Oncology, the Graduate Department of Rehabilitation Science, and others. It is also recognized that there are many other departments and centres within the University of Toronto (DLSPH, School of Public Policy and Governance, Rotman, Engineering, Centre for Bioethics) that have, and will continue to have, strong research and educational partnerships with the Institute. These partnerships will be actively



developed and will provide additional opportunities to design and deliver collaborative education and research programs that will foster the goals and mandate of the Institute.

Partnerships with research agencies (for example, Cancer Care Ontario, Centre for Global eHealth Innovation and the Institute of Clinical Evaluative Sciences) and hospital-based research institutes have been particularly salutary for training CEHCR students. Such students are typically based at a University of Toronto affiliated teaching hospital but receive their primary academic training within HPME. This model has led to a unique and highly competitive graduate training program where clinician scientists teach and supervise the next generation of researchers. It is anticipated that the Institute will strengthen these partnerships as the hospitals continue to establish areas of research expertise.

Partnerships with HPME are not only through institutional connections. As outlined in the discussion of the Institute's faculty below, there is a network of over 300 faculty who are actively engaged, at varying levels, in the educational and research mission of the Department. Many of these individuals hold their primary academic appointments in HPME and many are leading health care managers and researchers recognized internationally.

Partnerships such as the ones illustrated reflect the growth both nationally and internationally of transdisciplinary graduate and research programs, and the demand for multiple competencies and diversified knowledge both in the workforce and in the research environment (AUCC, 2007; CAGS, 2006). As previously discussed, Dartmouth has recently established the Centre for Health Care Delivery Science to facilitate research on new models for health care delivery. The move to an EDU:A will similarly position HPME and the University of Toronto by providing a more clearly defined focus for this type of collaborative research .

### **5.1 HPME Institute and DLSPH Partnership**

HPME and the Dalla Lana School of Public Health have shared a long history of collaboration and cooperation. With the establishment of the Institute, there will be expanded opportunities to integrate education and research activities with a focus on public health policy. Several initiatives have been investigated and these include:

- a. HPME currently has joint degree programs with Social Work and Nursing. A joint MHSC-MPH is a possible new initiative that would focus on public health professionals who want management training.
- b. Similar to the Clinical Epidemiology Continuing Education Professional development Program, there may well be interest from public health professionals in a multi-day continuing education initiative that would draw on the resources and skills of both the DLSPH and HPME
- c. Students in the DLSPH currently have limited access to health management and leadership training. For those students who are not interested in a joint

- program, adding additional courses that focus on public health management issues will strengthen their programs. Similarly, current HPME course offerings do not include easy access to courses with a public health focus. By developing the partnerships between the DLSPH and HPME, students will have a wider range of courses to draw upon.
- d. A new initiative to develop a professional doctorate degree in Health Leadership (either a DrSc or DrPH) will be strengthened by drawing on the resources of both the Institute and the DLSPH.
  - e. The inaugural Chair of Public Health Policy has many connections with HPME; as he is developing his research agenda new initiatives will be created to bridge health policy and public health policy.
  - f. The new Institute's letterhead will refer to both Medicine and the DLSPH.

## **6. Governance Model for the Institute of Health Policy, Management and Evaluation**

It is proposed that the Institute be established as an Extra-Departmental Unit (EDU) (Type A) reporting to an Executive Committee composed of the Deans of Medicine (Chair), Nursing and Pharmacy and the Director of the DLSPH. In addition, 3 more senior academic administrators will be recruited from cognate Departments and Schools, to serve on the Executive with time-limited appointments of up to 3 years. The Faculty of Medicine has been selected as the lead faculty because of its shared mission of improving the planning, delivery and outcomes of health care. As an EDU:A, the Institute will have the authority to:

- a. make primary, tenure and tenure stream faculty appointments
- b. make teaching staff appointments, including cross-appointments
- c. administer graduate degree programs, including student funding
- d. admit students directly to graduate degree programs
- e. administer research programs
- f. hold responsibility for Institute budget

The Faculty of Medicine will continue to provide academic and research administrative services including the services of the Office of Research, the Office of Human Resources, Finance Services, Space and Facilities Management and Administrative and Academic Information Technology.

### **6.1 Director**

The current Chair of HPME will complete her term in 2012. In accordance with the University's *Policy for Assessment and Review of Academic Programs and Units*, an external review of the Department will be completed during 2011. This review will

be used as the basis for a selection of a Director of the Institute. This Director will also be appointed as Graduate Chair/Director of the Graduate Program in Health Policy, Management and Evaluation, as outlined in the School of Graduate Studies Constitution.

The Director will be responsible for policy and administrative and financial operations of the Institute, and there will be a dual reporting relationship to the Director of the DLSPH (once appointed) and the Dean of the Faculty of Medicine and the Institute's budget will continue to be monitored through the FOM. The Director will sit on the Executive Committee of the DLSPH and continue membership on the All Chair Committee of the FOM. The Director will administer an operating budget from the ongoing divisional budget and external grant sources. The Director will work with the oversight of the Executive Committee, composed of cognate Faculties and Departments linked to the Institute through its joint graduate programs (Nursing, Engineering, Information) as well as seek advice from an Advisory Panel composed of internal and external stakeholders.

Review of the Director and the Institute will be undertaken in line with the University's *Policy on Appointment of Academic Administrators: Section II (The Office of Director of an Academic Centre or Institute)*. This external review is undertaken by the Dean of Medicine at fixed intervals. The review procedures are defined by the Dean of Medicine and approved by the Vice-President and Provost as being consistent with University wide standards. Continuation of the Institute and appointment or re-appointment of the Director will be dependent on the results of this periodic review.

## **6.2 Senior Administrative Committee**

Management of the Institute will be guided by the University's *Task Force on Openness, Transparency and Consultation in Departmental Decision Making*. The Director will establish a Senior Administrative Committee including the graduate coordinator and representation from the academic programs (minimally representation from both research and professional stream programs) and from the research programs (minimally representation from the clinical and health services sectors). The Senior Administrative Committee will provide leadership consistent with the Institute's academic and research mandates.

The Senior Administrative Committee will assist the Director with academic and research planning, administrative functions including fiduciary responsibilities, and staff and faculty complement decisions. The Committee will work in conjunction with appropriate committees of faculty, staff, students and stakeholders. Examples of such committees are program specific external Advisory Committees, Curriculum and Awards Committees and program specific review committees.

### **6.3 Advisory Panel**

The Advisory Panel will build on the critical partnerships and linkages that have been of fundamental importance to the success of HPME. Representatives from the entire range of stakeholders, including representatives from the Council of Health Sciences, School of Public Policy, Faculty of Law, Health Law Program and external stakeholders including research agencies, funders, policy makers, and healthcare service planners and providers, will provide a sounding board as the Institute develops its strategic plan and implements its education and research mandates.

## **7. Institute Structure**

In 2008/2009, HPME undertook a planning process to reflect on its accomplishments and to establish its priority directions for coming years. The planning process resulted in a Strategic Plan that identified six foci/concentrations around which programs of research and education were to be organized. These six concentrations will serve as an organizational structure for the Institute. They will become the launching pad for organizing and advancing the Institute's academic mission as well as for interfacing with key stakeholders and partners. They will be an important focus for research and for assembling teams to attract large scale grants. Benchmarks will be established to monitor the effectiveness, relevance and impact of activities relevant to the strategic concentrations. Strategic foci undoubtedly change over time but these six will initially be used to organize the work of the newly established Institute.

The six strategic concentrations (with a short description) are:

### **Clinical Evaluation and Effectiveness and Health Care Research**

Over 140 HPME faculty are clinician scientists who are internationally recognized leaders in research that establishes evidence-based clinical practice, evaluates health care interventions in real-world settings, and improves decision making at individual and policy levels. Current research interests include observational data analysis, clinical trials, clinical decision making, clinical measurement, applied quantitative methods, and clinical practice guideline development.

### **Health Policy and System Performance – including Public Health**

The health policy and system performance focus seeks to build capacity in policy analysis among researchers with a health service orientation and related methodological and conceptual expertise. The concentration draws on a range of disciplines, including political science, health economics, sociology of health and illness, science and technology studies and health care ethics, to consider the design and governance of health care systems locally, nationally and globally. This concentration will be integrated closely with the education and research programs of the DLSPH.

## **Health Economics and Health Technology Assessment**

The University of Toronto, and HPME in particular, are home to an unparalleled number of researchers in decision sciences, health economics and health technology assessment in Canada. The aim is to be an internationally preeminent research and educational centre that attracts the best students and faculty and is the “go to” place for decision makers seeking academic input on a broad range of health economics and technology assessment.

## **Quality and Patient Safety**

HPME has a strong and growing cohort of faculty members with research and teaching interests in quality of care and patient safety. There is also growing interest in patient safety in a number of other departments with the Faculty of Medicine (Medicine, Pediatrics, Anesthesia, Surgery) and other faculties, including Nursing, Engineering and Pharmacy. The new Centre for Patient Safety will raise the profile of this area significantly.

## **E-Health and Health Informatics**

E-Health and health informatics are becoming more prominent and important in the field, and are now gaining increasing support for funding and research, and for implementation in the health care field. This concentration can be seen as a support and enabler for quality of care, patient safety, system performance, and knowledge translation and exchange. HPME has a growing cohort of faculty with research and teaching interests in this area with strong linkages to other departments, faculties, and institutions (for instance, Family and Community Medicine, Nursing, Pharmacy, Engineering, Information, UHN).

## **Leadership, Organization and Knowledge Translation and Exchange**

The leadership, organization and knowledge translation and exchange concentration draws on the disciplines of organization and management science, sociology and organizational psychology. The theories and methods from these disciplines are used by faculty and students to examine meso- and macro-level organization issues, system level structure and performance and the uptake and application of research evidence in practice and decision making at all levels of the health care system.

## **8. Resources**

### **8.1 Faculty**

As noted above, the current Department is the largest department of its kind in English speaking Canada. Its core faculty complement is 17 FTEs, all of whom have

teaching, tenure or tenure stream appointments. In addition, there are about 200 faculty members whose primary graduate appointment is in the Graduate Department of HPME. Many of these faculty members have clinical appointments in the Faculty of Medicine but are active participants in the Department's teaching and research programs. Another 75 adjunct faculty contribute to the Professional Master's Program in Health Administration, the Master's in Health Informatics and Executive Education programs.

Including all cross-appointed, status and adjunct faculty, HPME has a network of over 300 faculty who are actively engaged, at varying levels, in the educational and research mission of the Department. (A list of all faculty is provided on the website ([www.hpme.utoronto.ca](http://www.hpme.utoronto.ca)) with links to their research/teaching activities). It is anticipated that this network of relationships will continue, and be enhanced, in the Institute. Over the next decade, faculty renewal will be a priority for HPME with a significant number of faculty members potentially retiring. This natural renewal process will enable the Institute to recruit to new and emerging research areas. The increased visibility of an EDU:A will also play a key role in being able to attract high-calibre, world class individuals.

Priorities for the Institute will be to ensure that the strong inter-relationships and partnerships the current Department has developed with other academic units in the University, Research Institutes and Units and the hospital and health care sector are maintained and enhanced. Reflecting current trends within the University, the Institute will be looking at increasing its number of joint appointments with other faculties within the University of Toronto and other institutions affiliated with the University.

## **8.2 Budget**

### **8.2.1 Revenues**

Existing revenues within HPME include the base budget, recoveries and research overhead. Recoveries include faculty secondments, joint appointments and career scientist awards. Base budget revenue is linked to graduate enrolment, research overhead and endowments. *(See Appendix 6 for projections for these sources of revenue reflecting a stable, modest increase over the period of the projection.)* Additional sources of revenue, for instance, enhanced opportunities for fund raising, will be identified as the Institute evolves.

### **8.2.3 Expenditures**

Existing expenditures for HPME include faculty and administrative salaries, infrastructure and a building mortgage for space at 155 College Street. Infrastructure expenses include equipment, maintenance, supplies and general

services. These expenditures are not anticipated to change with the establishment of the Institute.

As the Institute's budget will continue to be monitored through the FOM, all revenues and costs associated with the Institute will be part of the budget of the Faculty of Medicine and will be subject to the budgetary procedures of that Faculty. The administrative complement of the Institute will be part of the complement of the Faculty of Medicine (including academic information technology and space and facilities management), and all administrative staff matters will be dealt with through the Faculty's human resource function.

### ***List of Appendices***

Appendix 1 -Faculty Listing

Appendix 2 -Consultative Strategy

Appendix 3 - Profile of Educational Programs (including Collaborative Programs and Executive Education)

Appendix 4 - Student Achievements (titles of dissertations)

Appendix 5- Sharpening Our Focus: Advancing Evidence Informed Health Policy, Management and Evaluation HPME Strategic Plan 2009 to 2012.

Appendix 6 - Sources of Revenue: HPME Enrolment

## Appendix 1

### HPME Faculty Listing

Department of Health Policy, Management and Evaluation – status-only, cross and adjunct appointments

#### HPME Adjunct Appointment and SGS appointments

LAST NAME	FIRST NAME	STATUS	SGS APPTS.
Alleyne	Joel	Adjunct	none
Alston	Valerie	Adjunct	None
Ashbury	Fred D.	Adjunct	Associate
Banack	Janine	Adjunct	None
Baranek	Pat	Adjunct	Associate
Berinstein	Corrine	Adjunct	None
Boehm	Leslie	Adjunct	Associate
Booth	Richard G.	Adjunct	Associate
Brown	Adalsteinn	Adjunct	Associate
Bryant	Sally	Adjunct	Associate
Catford	Peter	Adjunct	Associate
Church	John	Adjunct	HSR
Catz	Marianna	Adjunct	none
Closson	Tom	Adjunct	None
Cooper-Gray	Nancy	Adjunct	None
Crawford	Robert	Adjunct	None
Decter	Michael	Adjunct	None
Devitt	Robert	Adjunct	None
Dudgeon	Scott W.	Adjunct	None
Fonberg	Eric	Adjunct	None
Gamble	Brian	Adjunct	None
Gilbert	Julie	Adjunct	Associate
Glouberman	Shalom S.	Adjunct	Associate
Goldhar	Jodeme	Adjunct	none
Grauer	Shannon	Adjunct	Associate
Greengarten	Moshe	Adjunct	None
Guerriere	Michael	Adjunct	Associate
Haddad	Mary Jo	Adjunct	none
Harrison	Laurie A.	Adjunct	none
Helyar	Christopher	Adjunct	None
Hillmer	Michael	Adjunct	None
Klassen	Wolfgang	Adjunct	None
Kraetschmer	Nancy M.	Adjunct	Associate
Kwolek	Sue	Adjunct	None



Ladak	Nizar	Adjunct	Associate
Lehoux	Pascale	Adjunct	Associate
Lindsay	Patrice	Adjunct	Associate
Lozon	Jeffrey	Adjunct	None
MacIntosh-Murray	Anu	Adjunct	Associate
Maetzel	Andreas	Adjunct	None
Major-McEwen	Barbara	Adjunct	none
Malach	Faith	Adjunct	Associate
Markel	Frank	Adjunct	Associate
Martin	Murray	Adjunct	None
Mickevicius	Vytas	Adjunct	None
Moeser	Diana	Adjunct	None
Moffat	Malcolm	Adjunct	None
Moore	Lynn	Adjunct	Associate
Murray	Michael	Adjunct	Associate
Musing	Emily	Adjunct	none
Nauenberg	Eric	Adjunct	Associate
Paech	Gail	Adjunct	None
Pink	George	Adjunct	Associate
Pulcins	Indra	Adjunct	none
Quigley	Maureen	Adjunct	None
Rachlis	Michael	Adjunct	None
Rackow	Valerie	Adjunct	None
Rochon	Mark	Adjunct	None
Sapsford	Ronald	Adjunct	None
Saskin	Refik	Adjunct	None
Schraa	Ellen	Adjunct	Associate
Sharkey	Shirlee	Adjunct	None
Sharpe	Gilbert	Adjunct	None
Singh	Karen	Adjunct	none
Slater	Barbara	Adjunct	none
Stacey	Sid	Adjunct	None
Stationwala	Altaf	Adjunct	none
Stevens	Polly	Adjunct	Associate
Stuart	Neil	Adjunct	None
Szende	Andrew	Adjunct	None
Szold	John	Adjunct	Associate
Thompson	Mary	Adjunct	None
Tremblay	Kenneth	Adjunct	None
Walker	Neil	Adjunct	None
Weinkauff	Darrel	Adjunct	None
Wilbee	Alexandra	Adjunct	none

Willison	Donad J.	Adjunct	Associate
Wojtak	Anne	Adjunct	none
Zagorski	Brandon M.	Adjunct	none
Zuckerberg	Joaquin	Adjunct	Associate

### HPME Clinical Epidemiology Program – Cross with SGS rank

LAST NAME	FIRST NAME	Teaching Stream	Rank	SGS APPTS.
Alibhai	Shabbir	Clin-Epi	Assistant	Associate
Allen	Upton	Clin-Epi	Professor	Associate
Alter	David	Clin-Epi	Assistant	Associate
Angle	Pamela	Clin-Epi	Associate	Associate
Astebro	Thomas B.	Clin-Epi	Associate	Associate
Austin	Peter	Clin-Epi	Associate	Associate
Barbera	Lisa	Clin-Epi	Assistant	Associate
Baxter	Nancy	Clin-Epi	Assistant	Associate
Bayoumi	Ahmed	Clin-Epi	Associate	Full
Beaton	Dorcas	Clin-Epi	Assistant	Full
Bell	Chaim	Clin-Epi	Associate	Associate
Benseler	Susan	Clin-Epi	Assistant	Associate
Beyene	Joseph	Clin-Epi	Associate	Associate
Bezjak	Andrea	Clin-Epi	Associate	Associate
Birken	Catherine	Clin-Epi	Assistant	Associate
Bombardier	Claire	Clin-Epi	Professor	Full
Booth	Gillian	Clin-Epi	Assistant	Associate
Cassidy	David	Clin-Epi	Assistant	Associate
Charach	Alice	Clin-Epi	Assistant	Associate
Cheung	Angela	Clin-Epi	Professor	Full
Cina	Claudio	Clin-Epi	Professor	Associate
Corey	Mary	Clin-Epi	Professor	Full
Cote	Pierre	Clin-Epi	Professor	Professor
Davis	Aileen	Clin-Epi	Professor	Professor
Dell	Sharon	Clin-Epi	Associate	Associate
Detsky	Allan	Clin-Epi	Professor	Professor
Dick	Paul	Clin-Epi	Assistant	Associate
Donnelly	Sandra	Clin-Epi	Professor	Professor
Easson	Alexandra	Clin-Epi	Assistant	Associate
Etchells	Edward	Clin-Epi	Associate	Associate
Fehlings	Darcy	Clin-Epi	Associate	Associate
Feig	Denice	Clin-Epi	Associate	Associate
Feldman	Brian	Clin-Epi	Professor	Professor

Fortin	Paul	Clin-Epi	Professor	Professor
Fowler	Rob	Clin-Epi	Associate	Associate
Fremes	Stephen	Clin-Epi	Professor	Professor
Gerson	Andrea Sara	Clin-Epi	Assistant	Associate
Glazier	Richard	Clin-Epi	Associate	Professor
Gnam	William	Clin-Epi	Assistant	Associate
Goodwin	Pamela	Clin-Epi	Professor	Professor
Guttman	Astrid	Clin-Epi	Associate	Associate
Hawker	Gillian	Clin-Epi	Associate	Professor
Hodgson	David C.	Clin-Epi	Associate	Associate
Hogg-Johnson	Sheilah	Clin-Epi	Associate	Professor
Holroyd-Leduc	Jayna	Clin-Epi	Associate	Professor
Howard	Andrew	Clin-Epi	Associate	Associate
Hudak	Pamela L.	Clin-Epi	Assistant	Associate
Hux	Jan	Clin-Epi	Assistant	Associate
Hwang	Stephen W.	Clin-Epi	Associate	Associate
Ivanov	Joan	Clin-Epi	Assistant	Associate
Jadad	Alex	Clin-Epi	Professor	Professor
Jaglal	Susan	Clin-Epi	Associate	Professor
Jamal	Abida (Sophie)	Clin-Epi	Associate	Associate
Jassal	Sarbjit Vanita	Clin-Epi	Associate	Associate
Juurlink	David N.	Clin-Epi	Associate	Associate
Kapral	Moira	Clin-Epi	Associate	Associate
Karkouti	Keyvan	Clin-Epi	Associate	Associate
Kennedy	Erin Diane	Clin-Epi	Assistant	Associate
Khan	Kamran	Clin-Epi	Assistant	Associate
Ko	Dennis	Clin-Epi	Assistant	Associate
Krahn	Murray	Clin-Epi	Professor	Full
Kreder	Hans	Clin-Epi	Associate	Associate
Kreder	Hans	Clin-Epi	Assistant	Associate
Kreiger	Nancy	Clin-Epi	Assistant	Associate
Kulkarni	Abhaya	Clin-Epi	Associate	Associate
Kurdyak	Paul	Clin-Epi	Assistant	Associate
Laupacis	Andreas	Clin-Epi	Professor	Full
Law	Calvin	Clin-Epi	Associate	Associate
Lehoux	Pascale	Clin-Epi	Assistant	Associate
Levinson	Wendy	Clin-Epi	Professor	Full
Lin	Elizabeth	Clin-Epi	Associate	Associate
Loblaw	Andrew	Clin-Epi	Assistant	Associate
Logan	Alexander	Clin-Epi	Professor	Associate
Lok	Charmaine E.	Clin-Epi	Associate	Associate
Loutfy	Mona	Clin-Epi	Associate	Associate

MacArthur	Colin	Clin-Epi	Professor	Full
Macfarlane	Dianne	Clin-Epi	Assistant	Associate
Maguire	Jonathan	Clin-Epi	Assistant	Associate
Mamdani	Muhammad	Clin-Epi	Professor	Full
McCrinkle	Brian	Clin-Epi	Associate	Full
McGowan	Thomas B.	Clin-Epi	Associate	Associate
McGeer	Allison	Clin-Epi	Associate	Professor
McLeod	Robin	Clin-Epi	Associate	Professor
Mitchell	Leslie .	Clin-Epi	Assistant	Associate
Mohamed	Nizar	Clin-Epi	Associate	Associate
Moore	Aideen	Clin-Epi	Associate	Associate
Morrison	Laurie	Clin-Epi	Professor	Associate
Murphy	Kellie	Clin-Epi	Associate	Full
Naglie	Gary	Clin-Epi	Professor	Associate
Naimark	David	Clin-Epi	Associate	Associate
Nam	Robert	Clin-Epi	Associate	Associate
Nathan	Paul Craig	Clin-Epi	Professor	Associate
Nathens	Avery	Clin-Epi	Professor	Associate
O'Connor	Paul	Clin-Epi	Assistant	Associate
Oliver	Matthew	Clin-Epi	Associate	Associate
Palda	Valerie	Clin-Epi	Associate	Associate
Parkin	Patricia C.	Clin-Epi	Assistant	Associate
Paszat	Lawrence	Clin-Epi	Associate	Associate
Pron	Gaylene	Clin-Epi	Assistant	Associate
Quan	Mary Lynn	Clin-Epi	Assistant	Associate
Rabeneck	Linda	Clin-Epi	Professor	Associate
Rakovitch	Eileen	Clin-Epi	Assistant	Associate
Ray	Joel	Clin-Epi	Associate	Associate
Redelmeier	Donald	Clin-Epi	Professor	Full
Ringash	Jolie	Clin-Epi	Associate	Associate
Rochon	Paula	Clin-Epi	Professor	Full
Saposnik	Gustavo	Clin-Epi	Associate	Associate
Sawka	Carol	Clin-Epi	Professor	Associate
Schull	Michael	Clin-Epi	Associate	Associate
Scolnik	Dennis	Clin-Epi	Associate	Associate
Secker	Barbara	Clin-Epi	Assistant	Associate
Shah	Prakeshkumar	Clin-Epi	Associate	Associate
Singer	Lianne Gail	Clin-Epi	Assistant	Associate
Stanbrook	Mathew	Clin-Epi	Assistant	Associate
Steinhart	Hilary	Clin-Epi	Associate	Associate
Straus	Sharon	Clin-Epi	Professor	Associate
Subbarao	Padmaja	Clin-Epi	Assistant	Associate
Sung	Lillian	Clin-Epi	Associate	Full
Tannock	Ian	Clin-Epi	Assistant	Associate

Tinmouth	Jill	Clin-Epi	Assistant	Associate
To	Teresa	Clin-Epi	Professor	Professor
Tomlinson	George	Clin-Epi	Associate	Professor
Tomomicezko	George	Clin-Epi	Associate	Associate
Tu	Jack	Clin-Epi	Professor	Professor
Upshur	Ross	Clin-Epi	HSR	Full
Urbach	David	Clin-Epi	Associate	Associate
Wales	Paul	Clin-Epi	Associate	Associate
Walmsley	Sharon	Clin-Epi	Professor	Associate
Wei	Alice C.	Clin-Epi	Assistant	Associate
Whythe	Hilary	Clin-Epi	Associate	Associate
Windrim	Rory	Clin-Epi	Associate	Associate
Wong	Rebecca	Clin-Epi	Associate	Associate
Wright	James G.	Clin-Epi	Professor	Full
Wright	Frances	Clin-Epi	Assoc	Associate
Yeung	Latifa	Clin-Epi	Lecturer	expired
Young	Nancy	Clin-Epi	Associate	Associate
Shah	Vibhuti	Clin-Epi	Assistant	Associate
Shah	Baiju	Clin-Epi	Assistant	Associate
Chan	Ann-Wen	Clin-Epi	Assistant	Associate
Coburn	Natalie G.	Clin-Epi	Assistant	Associate
Cohen	Eyal	Clin-Epi	Assistant	Associate
Cook	Rebecca	Clin-Epi	Professor	Full
Doria	Andrea S.	Clin-Epi	Associate	Associate
Goering	Paula	Clin-Epi	Associate	Full
Lee	Douglas	Clin-Epi	Assistant	Associate
Lipscombe	Lorraine	Clin-Epi	Assistant	Associate
Pace	Kenneth	Clin-Epi	Associate	Associate
Shehata	Nadine	Clin-Epi	Assistant	Associate
Bull	Shelley	Clin-Epi	Professor	Associate
Pritchard	Kathleen	Clin-Epi	Professor	Associate
Zwarenstein	Merrick	Clin-Epi	Professor	Full
Berger	Howard	Clin-Epi	Assistant	Associate
Craven	Beverley	Clin-Epi	Assistant	Associate

**HPME Health Services Research & Health Informatics Program:  
Cross Appointment with SGS rank**

Aleman	Dionne, M.	HSR	Assistant	Associate
Bhattacharya	Onil	HSR	Assistant	Associate
Bierman	Arlene	HSR	Associate	Associate
Boon	Heather	HSR	Associate	Full

Carter	Michael	HSR	Professor	Full
Dewa	Carolyn S.	HSR	Associate	Associate
Dhalla	Irfan	HSR	Lecturer	Associate
Flood	Colleen	HSR	Professor	Full
Gagliardi	Anna	HSR	Assistant	Associate
Goel	Vivek	HSR	Professor	Professor
Golden	Brian	HSR	Professor	None
Grunfeld	Eva	HSR	Professor	Full
Landry	Michel D.	HSR	Assistant	Associate
Nagle	Lynn	HSR	Assistant	Associate
O'Grady	Laura	HSR	Assistant	Associate
Parshuram	Christopher	HSR	Associate	Associate
Reeves	Scott	HSR	Associate	Associate
Shojania	Kaveh G.	HSR	Associate	Associate
Tombak	Mihkel	HSR	Professor	
Wagner	Laura M	HSR	Assistant	Associate
Webster	Fiona	HSR	Assistant	Associate
Wiljer	David	HSR	Assistant	Associate
Trbovich	Patricia	MHI	Assistant	Associate
Urowitz	Sara	MHI	Assistant	Associate

### Status-only

<b>LAST NAME</b>	<b>FIRST NAME</b>	<b>Teaching Stream</b>	<b>Rank</b>	<b>SGS APPTS.</b>
Bronskill	Susan	Clin-Epi	Assistant	Associate
Fisman	David	Clin-Epi	Associate	Associate
Jackevicius	Cynthia	Clin-Epi	Assistant	Associate
Kiss	Alexander	Clin-Epi	Assistant	Associate
Sale	Joanna	Clin-Epi	Assistant	Associate
Seto	Winnie Tak Wo	Clin-Epi	Assistant	Associate
Ungar	Wendy	Clin-Epi	Associate	Full
Baumann	Andrea	Clin-Epi	Full	None
Llewellyn-Thomas	Hilary	Clin-Epi	Associate	Associate
Rath	Darlyne	Clin-Epi	Assistant	Associate
Burton	Nadya	HSR	Assistant	Associate
Cafazzo	Joe A.	HSR	Assistant	Associate

Chan	Benjamin	HSR	Assistant	Associate
Eysenbach	Gunther	HSR	Associate	Associate
Gamble	Brenda	HSR	Assistant	Associate
Gibson	Jennifer	HSR	Assistant	Associate
Guerriere	Denise	HSR	Assistant	Associate
Hall	Ruth	HSR	Assistant	None
Philippon	Donald	HSR	Assistant	Associate
Spalding	Karen	HSR	Assistant	Associate
Sridharan	Sanjeev	HSR	Associate	Associate
Stukel	Therese A	HSR	Professor	Full
Sullivan	Terry	HSR	Associate	Associate
Matlow	Anne	HSR	Assistant	Associate
Ammendolia	Carlo	HSR	Assistant	Associate
Ashbury	Frederick D.	HSR	Assistant	Associate
Guttman	Mark	HSR	Associate	Associate
Kuper	Ayelet	HSR	Assistant	Associate
Marshall	Debra	HSR	Associate.	Associate
McCull	Mary Ann	Clin-Epi	Professor	Associate
Otley	Anthony	HSR	Associate	Associate
Pain	Clare	HSR	Assistant	Associate
Parker	Dianne	HSR	Associate	Associate
Paterson	Michael	HSR	Assistant	Associate
Roos	Leslie L.	HSR	Associate	Associate
Sawka	Anna	HSR	Assistant	Associate
Starfield (Holtzman)	Barbara	HSR	Assistant	Associate
Tremblay	Mark Stephen	HSR	Assistant	Associate
Verma	Sunil	HSR	Assistant	Associate
Zhang	Kaining	HSR	Assistant	Associate.

## Appendix 2

### Consultative Strategy:

#### Steps involved in preparation of HPME Draft EDU-A document

1. Information on different types of EDUs was requested/received from SGS
2. Advantages/disadvantages re the Department evolving into an EDU-A was discussed at a series of Faculty and Curriculum Committee meetings beginning in April 21, 2010.
3. Draft EDU-A documents were requested/received from DLSPH
4. Discussions with existing EDU-As were undertaken
5. Idea of EDU-A was introduced/discussed at a HPME Student Town Hall
6. Idea of EDU-A including advantages and disadvantages was discussed at an MHSc External Advisory Committee (membership provided below including those who were in attendance).
7. Drafting committee was struck (membership provided below) and draft document prepared.
8. Drafting committee reviewed and provided comments; document revised on basis of comments
9. New draft produced and circulated for comments to core HPME faculty, CEHCR (Clin Epi) Executive Committee, HPME-Graduate Student Union (GSU)
10. Draft revised on basis of received comments
11. New draft submitted to Faculty of Medicine.

#### Drafting Committee

Rhonda Cockerill (committee coordinator)  
Ahmed Bayoumi (CEHCR Program Director)  
Whitney Berta (HSR Program Director)  
Tina Smith (MHSc Program Director)  
Ross Baker (faculty)  
Tony Culyer (faculty)  
Renata Axler (HPME-GSU president)  
Ekaterina Gapanenko (MHSc student representative)

#### External Advisory Committee \*members present during discussion of the concept.

* Mr. Robert Devitt, Chair	President and CEO, Toronto East General Hospital
*Dr. Keith Rose	EVP & Chief Medical Executive, Sunnybrook Health Sciences
Mr. Tom Closson	President, Ontario Hospital Association
*Ms. Shirley Sharkey	President and CEO, St. Elizabeth Health Care
*Ms. Marion Walsh	President and CEO, Bridgepoint Health
*Ms. Vasanthi Srinivasan	ADM (Acting), Health System Strategy Division Ministry of Health and Long Term Care
*Mr. Moshe Greengarten	Associate Director, Hay Health Care Consulting Group



Elisabeth Ross  
Ms. Mimi Lowi-Young  
\*Mr. Jim Irving  
Dr. Catherine Zahn  
Linda McGillis Hall

CEO, Ovarian Cancer Canada  
CEO, Central West LHIN  
National Executive Business Director, Johnson & Johnson  
President and CEO, Centre for Addiction and Mental Health  
Professor and Associate Dean of Research & External Relations  
Lawrence S. Bloomberg Faculty of Nursing, UofT

## Appendix 3

### Profile of Educational Programs (including Collaborative Programs) WebLinks

#### Research Degree Programs

- [Clinical Epidemiology & Health Care Research \(MSc/PhD\)](#)
- [Health Services Research \(MSc/PhD\)](#)

#### Professional Degree Programs

- [Health Administration \(MHSc\)](#)
- [Health Informatics Degree \(MHI\)](#)
- [Management of Innovation \(MMI\)](#)
- [Combined Programs](#)
  - [Nursing/Health Administration \(MN/MHSc\)](#)
  - [Health Administration/Social Work \(MHSc/MSW\)](#)

#### Collaborative Programs

- [Aging, Palliative and Supportive Care Across the Life Course](#)
- [Bioethics](#)
- [Cardiovascular Sciences](#)
- [Dynamics of Global Change](#)
- [Global Health](#)
- [Health Care, Technology and Place](#)
- [Health Services and Policy Research](#)
- [International Relations](#)
- [Women's Health](#)

## Appendix 4

### Student Achievements (titles of dissertations)

#### MSc Thesis Topics - 2005 to date

Clinical Epidemiology & HCR- MSc	Student Name	Supervisor	Year
Influence of Length of Time to Diagnosis and Treatment on the Survival of Children with Acute Lymphoblastic Leukemia and Hodgkin disease: A Population-based Study	Jillian Margaret Baker	Teresa To	2010
Recombinant HBsAg Vaccine in Persons with HIV: Is Seroconversion Sufficient for Long-term Protection?	Jeff Earl Powis	Sharon Walmsley	2010
A Hierarchical Analysis of Trial of Labour in Ontario: Do Women, Doctors or Hospitals Choose?	Michelle Wise	Geoff Anderson	2010
Inhaled Hypertonic Saline (7%) Improves the Lung Clearance Index in CF Paediatric Patients with FEV1% predicted greater than or less than 80%	Reshma Amin	Mary Corey	2009
Risk of Acute Complications of Diabetes Among People with Schizophrenia in Ontario	Taryn Becker	Janet Hux	2009
Function and Health Status Outcomes Following Soft Reconstruction for Limb Preservation in Extremity Soft Tissue Sarcoma	Kristen Davidge	Aileen David	2009
A tailored Knowledge Translation Strategy to Increase Compliance with Guideline Recommendations for Preoperative Bowel Preparation	Cagla Eskicioglu	Robin McLeod	2009
Hemorrhage During Warfarin Therapy Associated with Co-trimoxazole and Other Urinary Tract Anti- infectives	Hadas Daisy Fischer	Andreas Laupacis	2009
Long-Term Outcomes in Young Adult Survivors	Shawn Samuel	David	2009

of Colorectal Cancer: A Population-based Study	Forbes	Urbach	
Selective Serotonin Reuptake Inhibitors and Breast Cancer Mortality in Women Receiving Tamoxifen	Catherine Kelly	Lawrence Paszat	2009
Injury and Neighborhood Marginalization: Does it Matter Where you Live?	Patricia Lee	David Urbach	2009
Vitamin D Deficiency as a Nutritional Child Health Determinant	Jonathon L. Maguire	Patricia Parkin	2009
The Ontario Structures of Care in Colorectal Cancer Surgery Study (OSCRC): Assessing Hospital Level Variation and Impact on Short Term Patient Outcomes	Rahima Nenshi	David Urbach	2009
The Nerve of Osteoarthritis Pain: Neuropathic Pain Symptoms in a Community Knee OA Cohort	Jacqueline Regan Hochman	Gillian Hawker	2009
The Epidemiology of Surgical Site Infections	Nick Daneman	Donald Redelmeier	2008
Norfloxacin for Hepatopulmonary Syndrome: A Pilot Study of a Rare Disease	Samir Gupta	Ahmed Bayoumi	2008
Time-to-alarm for Intravenous Infusion Pumps: Implications and Safety for Critically Ill Patients	Roy Ilan	Ed Etchells	2008
Predictors of Cardiovascular Events and Death in Paediatric Renal Transplant Recipients	Susan Mathew Koshy	Alexandar G. Logan	2008
Multidisciplinary Cancer Conferences: Exploring Obstacles and Facilitators to their Establishment and Function	Nicole Look Hong	Lawrence Paszat	2008
Concerns, Desires and Expectations of Surgery for Adolescent Idiopathic Scoliosis: A Comparison of Patients', Parents' and Surgeons' Perspectives	Unni Gopalakrishnan Narayanan	James Wright	2008

Pre- and Perinatal Morbidity in Children with Tourette Syndrome and Attention Deficit Hyperactivity Disorder: A Case Control Study	Tamara Pringsheim	Paul O'Connor	2008
Processes of Care after Colorectal Cancer Surgery in Ontario	Jensen Tan	David Hodgson/ Calvin Law	2008
The Impact of Patient, Physician and Centre Factors on Successful Treatment with Peritoneal Dialysis in Individuals with End-stage Kidney Disease in Ontario: A Population-based Retrospective Cohort Study	Mala Chidambaram	Andreas Laupacis	2007
Surgical Management of Locally Advanced Colorectal Cancer: A Population-based Study	Anand Govindarajan	David Hodgson	2007
Exercise Consultation: Can it Increase Activity Levels and Improve Metabolic Markers in Obese Adolescents? A Pilot Study	Melanie Henderson	Janet Hux	2007
Time to Treatment for New Rheumatoid Arthritis Patients in a Major Metropolitan City	Shahin Jamal	Claire Bombardier	2007
Do Doctors Follow the Provincial and National Guidelines for the Management of Low Grade Cervical Smear Abnormalities? A Retrospective Population-Based Cohort Study	Rachel Kupets	Vivek Goel	2007
Development and Validation of a Model to Predict Creatinine Clearance in Critically Ill Paediatric Patients	Tak-Wo Winnie Seto	Elaine Wang	2007
Local Anesthesia (Topical Amethocaine Gel 4%) for Intramuscular Injection in Term Neonates: A Randomized Controlled Trial	Vibhuti Shah	Arne Ohlsson	2007
Critical Events during out-of-hospital Air-medical Patient Transport in Ontario: A Retrospective Study	Jeffrey Singh	Michael Schull	2007
The Measurement of Change in Symptoms after Paracentesis of Symptomatic Malignant Ascites	Alexandra Easson	Andrea Bezjak	2006

A Systematic Review and Meta-Analysis of Low-Dose Dopamine for Renal Dysfunction and a Simulation Study to Evaluate the Ratio of Means as a New Method for Analyzing Continuous Variables in Meta-Analyses	Jan Friedrich	Joseph Beyene	2006
Long-Term Life Expectancy for after Acute Myocardial Infarction and Heart Failure Patients after Hospitalization in Ontario, Canada	Dennis Ko	Jack V. Tu	2006
Descriptive Evaluation of the Section 8 Process for Interferon Treatment of Patients with Chronic Hepatitis C in Ontario Defense	Kenneth Locke	Allan Detsky	2006
Health Services for Gastroesophageal Reflux Disease: Evaluating the Use of Antireflux Surgery in Ontario	Steven Lopushinsky	David Urbach	2006
The Effect of In Utero Tobacco Exposure on the Fetal Hypothalamic-Pituitary-Adrenal Axis	Sarah McDonald	Arne Ohlsson	2006
Tracking Outcomes from First Episode Psychosis in Ontario - A Descriptive Multicentre Study Examining the Outcomes and Predictors of Outcome in Four First Episode Psychosis Programs	Natasja Menezes	Elizabeth Lin	2006
The Impact of Therapeutic Modality on Outcomes Following Repair of Ruptured Intracranial Aneurysms: An Administrative Data Analysis	Cian J. O'Kelly	David Urbach	2006
Clinicians' Decisions to Use and Misuse Long-Acting Nitrates in the Management of Acute Coronary Syndromes	Yashesh Patel	Allan Detsky	2006
Influence of Satellite Dialysis Units on Utilization and Modality Selection	Suma Prakash	Janet Hux	2006
Socioeconomic Status and Health Outcomes amongst Ontario Infants with Complex Chronic Conditions: A Retrospective Cohort Study	Chengning Wang	Paul Dick	2006

<b>Health Services Research - MSc</b>	<b>Student Name</b>	<b>Supervisor</b>	<b>Year</b>
Balancing Risk-taking and Safety Among Patients, Families, and Clinicians During Transitions in Care from Brain Injury	Angelina Lenton Andreoli	Ross Baker	2010
Peace Through Health: Theory and Practice of the International Pediatric Emergency Medicine Elective (IPEME)	Zachary Charles David Kuehner	Rhonda Cockerill	2010
Describing and Assessing the Views of Transplant Professionals in Ontario about Directed Organ Donations from Deceased Donors: A Qualitative Study	Kelley Andrew Ross	Barbara Secker	2010
Social Capital and the Health Services Utilization of Immigrants in Canada	Deborah Samek	Audrey Laporte	2010
Development of the Diabetes Complication Surveillance System (DCSS)	Shuo Wang	Sandra Donnelly	2010
Factors Affecting the Implementation of Complex and Evolving Techniques: A multiple case study of Intensity-modulated Radiation Therapy (IMRT) in Ontario	Katarzyna Bak	Mark Dobrow	2009
Promoting Action on Research Implementation in Health Services (PARiHS) Framework: Application to the Fracture Fighters Program	Vinita Bansod	Susan Jaglal	2009
Health Technology Assessment of Thiopurine Methyltransferase Testing for Guiding 6-Mercaptopurine Doses in Pediatric Patients with Acute Lymphoblastic Leukemia	Jennifer Renee Donnan	Wendy Ungar	2009
The Impact of E-Health Adoption and Investment on Health Outcomes: A Study using Secondary Analysis	Nancy Gill	Kevin Leonard	2009
An Economic Evaluation of HIV-associated Facial Lipoatrophy Treatments: A Cost-Utility Analysis	Sirianong Peyasantiwong	Peter Coyte	2009
Initial Flare Symptoms Resulting from Use of LHRH Agonist in Metastatic Prostate Cancer: Systematic Review and Economic Evaluation	Yeesha Poon	Eric Nauenberg	2009
A Comparison of the Costs of Sentinel Lymph Node Biopsy and of Axillary Lymph Node Dissection in the Management of Early-stage Breast Cancer in Ontario	Bryan John Wells	Peter Coyte	2009
A Systematic Review of Teleradiology for Remote Neurosurgical Evaluation of Patients in Facilities Without Neurosurgery Specialists	Dinsie B. Williams	Andreas Laupacis	2009

Adverse Drug Reactions in the Emergency Department Population in Ontario: Analysis of National Ambulatory Care Reporting System and Discharge Abstract Database 2003-2007	Chen Wu	Walter Wodchis	2009
The Influence of Age and Sector on the Occupational Therapists Labour Market in Ontario	Robyn Hastie	Raisa Deber	2009
Physicians Practicing in Ontario Long-term Care Homes: Characteristics and Variation in Antipsychotic Prescribing Rates	Jonathan Lam	Susan Bronskill	2009
Cost-effectiveness Analysis of Capecitabine and Folfox for the Adjuvant Treatment of Stage III Colon Cancer: Which is the More Cost-Effective Option in Ontario?	Margo Orchard	Jan Barnsley	2009
Adoption of a Clinical Innovation "Best Practices for Concurrent Mental Health and Substance Use Disorders" in Ontario, a One-year Follow up	Tamara Lynn Kennedy-Macdonald	Rhonda Cockerill	2008
Socio-Economic Factors Related to Asthama Control and Health-Related Quality of Life in Children	Shannon Cope	Wendy Ungar	2007
An Evaluation of The Adoption and Diffusion of Surgical Innovations in Ontario Hospitals	Nathalie Danjoux	David Urbach/ Kevin Leonard	2007
Tools for Electronic Surveillance of Testicular Cancer (TEST): Understanding Patient Perspectives on Access to Electronic Medical Record (EMR)-Based Technology in a Cancer Follow-up Context	Ryan Groll	Michael Jewett/ Kevin Leonard	2007
Obesity and Health Service Utilization in Canada	Meghan McMahon	Audrey Laporte	2007
Pathology Report to Cancer Registries: The Evaluation of an Electronic Reporting System	Aaron Pollett	Kevin Leonard	2007
The Financial Impact of Hospital-Acquired Methicillin-Resistant Staphylococcus Aureus: An Incremental Cost and Cost-Effectiveness Analysis	Sue Lim	Audrey Laporte	2006
Performance Evaluation in Home and Community Care	Julie Polisena	Audrey Laporte	2006
Health As A Bridge to Peace: CISEPO as a Case Study	Dennis Scolnik	Paul Williams	2006
Validating an Occupational Therapist's Assessment in a Pre-Diagnostic Clinic: A Strategy to Improve Access to Arthritis Care	Susanna Wing-Shan Tam	Peter Coyte	2006



**PhD Thesis Topics - 2004 to date**

<b>Clinical Epidemiology &amp; HCR - PhD</b>	<b>Student Name</b>	<b>Supervisor</b>	<b>Year</b>
Predictors of Hospitalization among Cystic Fibrosis Patients in Ontario	Anne Louise Stephenson	Janet Hux	2010
An Investigation of the Associations among Recovery, Key Illness Characteristics, and Bone Mineral Density in Women with a History of Anorexia Nervosa	Esther J. Waugh	Gillian Hawker	2009
The Impact of Depression on Outcomes Following Acute Myocardial Infarction	Paul Kurdyak	Paula Goering	2009
Peritoneal Dialysis & Hemodialysis: The Association between Choice and Mortality	Robert Quinn	Andreas Laupacis/ Janet Hux	2009
Assessment of Operative Strategies to Improve Coronary Bypass Graft Patency	Nimesh Desai	Allan Detsky	2008
The Association Between the Ownership Status of Ontario's Long-term Care Homes and the Quality of Resident Care	Michael Powell Hillmer	Paula Rochon	2008
The Quality of Surgical Care for Radical Cystectomy in Ontario from 1992 to 2004	Girish Kulkarni	Andreas Laupacis/ Janet Hux	2008
Disability in the Context of HIV: Building a Foundation for an Instrument to Describe Disability Experienced by Adults Living with HIV	Kelly O'Brien	Ahmed Bayoumi	2008
Development, Evaluation and Application of a Pediatric Ulcerative Colitis Activity Index (PUCAI)	Dan Turner	A. Hillary Steinhart	2008
Identifying the Optimal Treatment Among Common Non-Surgical Neck Pain Treatments	Gabrielle van der Velde	Sheilah Hogg-Johnson	2008
Investigating Physician Bias as a Possible Explanation for Gender Disparity in the Utilization of Knee Arthroplasty Surgery	Cornelia Margret Borkhoff	James Wright	2007
The Diagnosis, Prognosis and Treatment of the Severe Acute Respiratory Syndrome (SARS): A Retrospective Cohort Study of the Toronto SARS Outbreak	Matthew Paul Muller	Allison McGeer	2007

Cognitive Function in Cancer Patients After Chemotherapy	Janette Lorraine Vardy	Ian Tannock	2007
Non-Randomized Studies: An Evaluation of Search Strategies, Taxonomy and Comparative Effectiveness with Randomized Trials in the Field of Low-Back Pain	Andrea Dompier Furlan	Claire Bombardier	2006

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<b>Health Policy - PhD</b>	<b>Student Name</b>	<b>Supervisor</b>	<b>Year</b>
Homecare or Long-term Care? The Balance of Care in Urban and Rural Northwestern Ontario	Kerry Helen Kuluski	Paul Williams	2010
Governing Immunization in Canada	Catherine Ling Mah	Raisa Deber	2009
Primary Care Reform: A Case Study of Ontario	Monica Aggarwal	Paul Williams	2009
Behaviour in a Canadian Multi-payer, Multi-provider Health Care Market: The Case of the Physiotherapy Market in Ontario	Paul Holyoke	Raisa Deber	2009
Do Regional Models Matter? Resource Allocation to Home Care in the Canadian Provinces of Prince Edward Island, Nova Scotia and New Brunswick	Patricia Ann Conrad	Raisa Deber	2008
Successful Priority Setting: A Conceptual Framework and an Evaluation Tool	Shannon Sibbald	Douglas Martin	2008
An Examination of Policy Implications for Scope of Services and Geography for Telehealth	Nancy Kraetschmer	Raisa Deber	2007
Where do Nurses Work? Employment Patterns of Ontario Nurses by Sub-Sector, 1993-2003	Mohamad Alameddine	Raisa Deber	2006

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<b>Health Services Organization and Management - PhD</b>	<b>Student Name</b>	<b>Supervisor</b>	<b>Year</b>
Organizational Learning from Near Misses in Health Care	Lianne Patricia Jeffs	Ross Baker	2010
Clinical Practice Guidelines: Sustaining in Organizational Memory	Tazim Virani	Louise Lemieux-	2009

		Charles	
The Role of Technology in Structuring Information Seeking in Health Professionals	Elizabeth Marie Borycki	Louise Lemieux-Charles	2008
Harm From Home Care: A Patient Safety Study Examining Adverse Events in Home Care	Nancy Anne Sears	Louise Lemieux-Charles	2008
Determinants of Self-Perceived Managerial Effectiveness in the Canarian Health Service	Pablo Hernandez-Marrero	Louise Lemieux-Charles	2006

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<b>Health Services Outcomes and Evaluation - PhD</b>	<b>Student Name</b>	<b>Supervisor</b>	<b>Year</b>
The Development and Usability Evaluation of a Clinical Decision Support Tool for Osteoporosis Disease Management	Monika Kastner	Sharon Straus	2010
Patients' Perceptions of the Primary Care Characteristics in a Model of Interprofessional Patient-centred Collaboration Between Chiropractors and Physicians	Silvano Anthony Mior	Rhonda Cockerill	2010
The Impact of Adverse Events on Outcomes of Hospital Care and Sensitivity of Cost Estimates to Diagnostic Coding Error	Gavin John Wardle	Walter Wodchis	2010
Priority Setting for Expensive Biopharmaceuticals: An Analysis of Six Drug Case Studies	Zahava R.S. Rosenberg-Yunger	Douglas Kenneth Martin	2009
Priority Setting in Community Care Access Centres	Michele Kohli	Peter Coyte	2009
The Labour Supply of Unpaid Caregivers in Canada	Meredith Lilly	Peter Coyte	2008
A Knowledge Translation Intervention to Improve Cholesterol Management in Diabetes in Remote Aboriginal Communities	Onil Kumar Yves Bhattacharyya	Jan Barnsley	2007
Predictors of Treatment Delay in Depressive Disorders in Pakistan	Salim Sadruddin	Paula Goering	2007
Compensation Practices and Determinants of CEO Pay: The Case for Ontario Not-For-Profits Hospitals	Ellen Geesje Schraa	George Pink	2007
Examining the Relationship between Clinical Practice Guidelines and Hospital Efficiency	Moriah Shamian-Ellen	Adalsteinn Brown	2007

When Their Preschooler is Ill: The Experiences of Refugee and Refugee-Claimant Mothers	Ellen Olive Wahoush	Rhonda Cockerill	2007
Priority Settings in Ontario Hospitals	David Reeleder	Douglas Martin	2006

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<b>eHealth Innovation and Information Management-PhD</b>	<b>Student Name</b>	<b>Supervisor</b>	<b>Year</b>
The Ontario Crohn's and Colitis Cohort: Incidence and Outcomes of Childhood-Onset Inflammatory Bowel Disease in Ontario, Canada	Eric Ian Benchimol	Teresa To	2010
Usage and Non-usage Behaviour of eHealth Services Among Chinese Canadians Caring for a Family Member with Dementia	Mei-Lee Teresa Chiu	Gunther Eysenbach	2008
Supporting Recent Immigrants In Their Effort to Access Information On Health and Health-Related Services: The Case Of 211 Toronto	Andrea Cortinois	A. Jadad	2008
Facilitating Patient Self-Care Through Remote Patient Monitoring: Validation, Design, and Evaluation of an Intervention for Nocturnal Hemodialysis	Joseph A. Cafazzo	A. Jadad	2007
The Technological Transformation of Self-Care: A Patient-Driven Adaptation of the Technology Acceptance Model for Use in Evaluation of Patient-Accessible Electronic Medical Records	Warren Winkelman	Kevin Leonard	2006

## Appendix 5

**Sharpening Our Focus: Advancing Evidence Informed Health Policy, Management and Evaluation HPME Strategic Plan 2009 to 2012.**

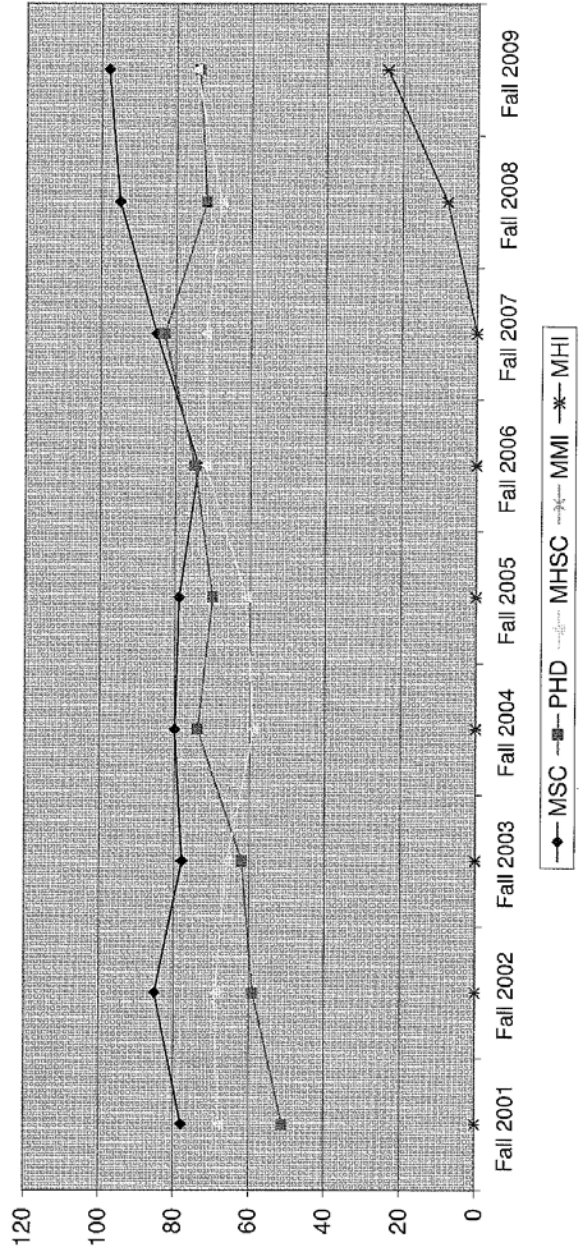
<http://www.hpme.utoronto.ca/about/department/strategic.htm>

## Appendix 6

### Sources of Revenue HPME Enrolment

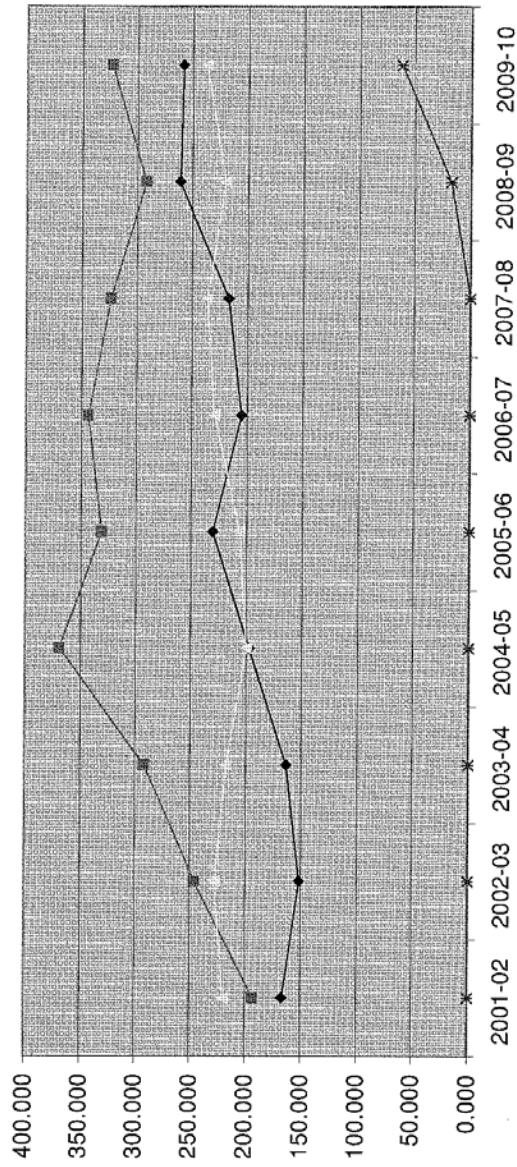
HPME - MHI	ACTUAL	ACTUAL
	2008-09	2009-10
Headcount: Sept-April (incoming class, 8 months)	7.5	17
Headcount: May-Dec (returning class, 8 months)	0	7
Total Fall Headcount	7.5	24
3-term fte	15.00	48
3-term BIU (weight: 1.333 per term)	17.33	61.30
<b>Grant Revenue</b>		
'Gross BIU Revenue (\$5,110/BIU)	\$ 88,551	\$ 313,243
'Less: Formula Fee deduction (\$1,198 / term)	\$ (17,970)	\$ (57,504)
<b>Grant Revenue</b>	<b>\$ 70,581</b>	<b>\$ 255,739</b>
<b>Tuition Revenue</b>		
'Regular Tuition Fee	\$ 7,577	\$ 7,880
'Year 1 tuition (Sept - Aug, 100%)	\$ 56,831	\$ 133,960
'Year 2 tuition (Sept - Dec, 50%)	\$ -	\$ 27,580
<b>Tuition Revenue</b>	<b>\$ 56,831</b>	<b>\$ 161,540</b>
<b>Net Revenue</b>		
Total Grant and Tuition Revenue	\$ 127,412	\$ 417,279
Less: University Fund contribution (10%)	\$ (12,741)	\$ (41,728)
<b>Revenue to Division</b>	<b>\$ 114,671</b>	<b>\$ 375,551</b>
'Less: student aid set-aside (10% x tuition fee)	\$ (5,683)	\$ (16,154)
'Less: UW Cost impact (estimate 15%)	\$ (19,112)	\$ (62,592)
<b>Net Revenue to Division</b>	<b>\$ 89,876</b>	<b>\$ 296,805</b>
Fac of Med overhead charge (25%)	-22,469	-74,201
Dean's startup contribution	22,469	37,101
<b>Net Grant &amp; Tuition Revenue to Program</b>	<b>89,876</b>	<b>259,705</b>

HPME Enrolment (Headcount)



HPME	Fall 2001	Fall 2002	Fall 2003	Fall 2004	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009
MSC	78	85	78	80	79	74	85	95	96
PHD	51	59	62	74	70	75	83	72	74
MHSC	68	68	66	59	61	72	72	68	75
MMI	0	0	0	0	0	0	16	14	19
MHI	0	0	0	0	0	0	0	0	24
Total	197	213	206	213	210	221	256	257	290

### HPME Enrolment (BIU)



HPME	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
MSC	167.037	151.568	163.833	197.423	230.481	205.155	217.018	261.406	256.607
PHD	193.000	245.800	292.000	389.132	330.933	343.666	323.334	292.000	322.739
MHSC	219.679	227.810	217.679	199.950	206.615	229.276	235.941	219.945	237.274
MMI	0.000	0.000	0.000	0.000	0.000	0.000	30.000	43.000	51.000
MHI	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.329	61.318