UNIVERSITY OF TORONTO
DALLA LANA SCHOOL OF PUBLIC HEALTH

# Self-Study for External Review of the Dalla Lana School of Public Health

**December 1, 2010**

**http://www.phs.utoronto.ca/**

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# Section 1: Background

## A. Historical Overview

The University of Toronto (UofT) has a rich tradition of preparing leaders in public health practice and research. The first generation of the School emerged in 1925-27 during the public health movement that led to the Rockefeller Foundation supporting three new public health schools at Harvard, Johns Hopkins and the School of Hygiene at the University of Toronto.

The School of Hygiene was the first institution in Canada to offer comprehensive training for public health researchers and professionals, originally largely through Diploma programs. Until 1975, the School of Hygiene remained the major focus of public health and academic training in English-speaking Canada. In 1975, the School of Hygiene was disbanded, with most of the faculty transferred to the Faculty of Medicine to a new Division of Community Health with three departments: Behavioural Science, Preventive Medicine & Biostatistics and Health Administration, together with a semi-autonomous Occupational & Environmental Health Unit.

In 1978, the Division of Community Health established the Master of Health Science (MHSc) degree with four fields: Community Health & Epidemiology, Health Administration, Health Promotion, and Occupational & Environmental Health to replace former Diploma programs offered by the School of Hygiene. Subsequently, an MSc/PhD program was also introduced.

In 1997 the Department of Health Administration became a separate graduate unit and in 2001 was renamed the Department of Health Policy, Management & Evaluation (HPME). In 1997, the Department of Preventive Medicine & Biostatistics (which now included the Occupational & Environmental Health Unit) merged with the Department of Behavioural Science to create the Department of Public Health Sciences.

## B. Establishment of the Dalla Lana School of Public Health (DLSPH)

The launch of the School of Public Health followed consultation with key stakeholders on- and off-campus, including affiliated institutions and government ministries, who unanimously identified a School of Public Health as necessary to integrate academic public health at the University of Toronto with the needs of public health practice at the regional, provincial, national and global level. It was envisaged that the School would provide a dynamic academic centre within the University to better coordinate its substantial existing strengths and to add the distinctive value of a dedicated academic public health centre. Further, it would align with the renewal of public health post Walkerton (an emergency caused by the breakdown of water safety monitoring in the district of Walkerton) and SARS in Ontario, in Canada and globally. Working with public health organizations, the School was expected to shape professional and interprofessional public health policy and practice.

A proposal to establish a School of Public Health was approved by the University of Toronto Governing Council in 2007. The Department of Public Health Sciences formed the core of the new DLSPH. Following the departure of the long-time Chair of the Department of Public Health Sciences, departmental leadership was held by two interim Chairs (2006-2008) until 2008 when the inaugural Director of the School of Public Health was named. The search committee had successfully recruited Professor Jack Mandel (previously Chair of the Department of Epidemiology at Emory University). Shortly thereafter, the University of Toronto received a landmark donation from Paul and Alessandra

Dalla Lana to name the School of Public Health. The Dalla Lana School of Public Health was officially launched on April 30, 2008. The recent Dalla Lana donation has allowed for the recruitment of three endowed chair positions (see page 18) as well as the provision of 24 awards for the support of professional masters students.

In 2009, the MHSc program, offered since 1978, was renamed Master of Public Health (MPH), the internationally recognized public health degree. In the summer of 2010, Dr. Mandel left the School for personal reasons. The current Interim Director of the School, Professor Louise Lemieux-Charles is also Chair of the Department of Health Policy, Management and Evaluation.

## Organizational Divisions

The DLSPH is currently organized into five divisions [see insert] with two new divisions under development. These divisions are discipline-based groupings that provide structure to the School. (They are, however, informal with no constitutional authority or budget.) The School has also inherited the legacy of being a national leader in preparing physicians for Royal College Fellowships in Community and Occupational Medicine and medical graduates with strong public health competencies as well as providing Continuing Professional Development for public health professionals through, for example, summer institutes and schools.

**DLSPH: Divisions**

- Biostatistics
- Epidemiology
- Social & Behavioural Science
- Interdisciplinary
- Occupational & Environmental Health

## Faculty [Section 2]

The DLSPH currently (July 2010) has 23 tenured/tenure stream faculty, 28 contractually-limited term appointed (CLTA) faculty, 178 status-only faculty, 14 adjunct faculty and 73 faculty cross-appointed from other departments in the University. Faculty members have varied backgrounds spanning humanities, social and behavioural sciences, physical and life sciences.

## Degree & Other Educational Programs [Section 3]

The new School has 385 graduate students and offers both masters and doctoral programs. The **doctoral** training program (PhD) aims to prepare students for independent research and academic careers in the Public Health disciplines. There are currently three fields of study in the PhD program: Biostatistics; Epidemiology; and Social & Behavioural Health Sciences. At the Masters level, the School offers the **Master of Public Health** (MPH), formerly the MHSc, the **Master of Science (Biostatistics)** and the **Master of Science in Community Health** (MScCH).

- The **Master of Public Health** (MPH) degree is a 10 credit degree program designed to prepare public health practitioners, educators and researchers for careers in public health. The MPH program is offered in Epidemiology, Community Nutrition, Occupational and Environmental Health, Health Promotion, and Family and Community Medicine. The Community Nutrition field is offered in collaboration with the Department of Nutritional Sciences and the Family and Community Medicine field is offered in collaboration with the Department of Family and Community Medicine.

- The **Master of Science (Biostatistics)** is a five credit degree program that involves the development and application of statistical methodology to further understanding of data arising in public health, the health sciences and biology.

- The **Master of Science in Community Health** (MScCH) is a five credit degree program that is geared to applicants with very specific career development goals that are relevant to practicing health professionals. Five specializations are currently offered: Addictions and Mental Health; Family and Community Medicine; Health Practitioner Teacher Education; Occupational Health Care; and Wound Prevention and Care. The Family and Community Medicine and Health Practitioner Teacher Education specializations are offered in collaboration with the Department of Family and Community Medicine.

The DLSPH is also the academic home for the Community Medicine Specialty Training Program and the two-year Occupational Medicine Subspecialty program of the Royal College of Physicians and Surgeons. In addition, the School is engaged in the Undergraduate Medical program (M.D.) through the Determinants of Community Health course (DOCH) which runs through the first three years of the MD curriculum. There are approximately 250 students in each year of the MD program.

Faculty at the DLSPH are also actively engaged in teaching undergraduate courses in the Faculty of Arts & Science and are exploring teaching other courses which would include introductory courses in public health and epidemiology.

### Research & Scholarship [Section 4]

Research and scholarship are foundational to public health practice and education. A primary goal of the DLSPH is to become a 'go-to' site of knowledge, expertise and critical thinking in public health at the national and international level. The School has made significant progress toward positioning itself as a leading locus of knowledge production in public health sciences. In 2008/09, total research funding in the DLSPH was in excess of $30 million. Twelve research themes were identified by the 85 faculty that provided information on their research. In the last 5 years 411 projects have been initiated or completed with total funding of $132,510,012. The establishment of critical partnership and linkages is of fundamental importance for the development and sustained excellence of research and scholarship within DLSPH.

### Linkages & Partnerships [Section 5]

There has been a long history of collaboration and partnership between Public Health, the Faculties of Nursing and Dentistry and the Department of HPME. These partners were actively involved in the development of the proposal for the establishment of a School of Public Health at the University of Toronto. A major strength of the DLSPH lies in the large complement of faculty who are employed by key collaborating institutions such as Ontario Agency for Health Protection and Promotion, Institute of Work and Health, Cancer Care Ontario, Institute of Clinical Evaluation Sciences, and in many of the affiliated hospitals in the Greater Toronto Area (GTA). The majority of these individuals hold primary academic appointments in the DLSPH, giving them a formal link to the University. Faculty are also affiliated with or work closely with key public health agencies in the Greater Toronto Area, including Toronto Public Health (TPH) particularly in training Community Medicine specialists, MPH epidemiology students and public health oriented doctoral students. The faculty play an important role in shaping and developing the provincial public health capacity in both practice and research.

## C. The Governance Model

The DLSPH is presently located within the Faculty of Medicine and is expected to either become a school with interdivisional oversight (a committee of Deans) or a single department Faculty.

Prior to the founding of the DLSPH, the Department of Public Health Sciences was governed by a Chair. An Associate Chair was appointed to assist the Chair. The role of the Associate Chair was to oversee, at a high level, the educational mandate of the department – to provide leadership in program development and in setting academic policy. This included leading curriculum renewal processes – both planning and implementation. The Associate Chair was also responsible for appointments of faculty within the School of Graduate Studies (SGS) and chairing the departmental Curriculum Committee. The Graduate Coordinator was the faculty member responsible for academic and student matters from admission through to graduation, ensuring that the programs adhered to the SGS and departmental policies and procedures and, with the assistance of a team of graduate administrators, the day to day operation of the graduate department. Within each program, for each specialization, a designated Program Director had responsibility for developing program specific requirements, selecting students for admission, monitoring and facilitating student progress and student counseling.

In the founding of the School and with the advent of a new Director, a divisional structure was created and the positions of Program Director were eliminated. The positions of Associate Director Education and Associate Director, Research were created. Within the Divisions, responsibility for each of the programs became that of the Division Head (epidemiology and biostatistics) or that of those individuals who had formerly been program directors and were now designated *program leads* with reporting lines to the Division Head. Until the Constitution is approved, the Director continues to report to the Provost for academic matters though all curriculum changes continue to go through the Faculty of Medicine`s Faculty Council for approval before going through the different levels of university governance. The Director also reports to the Dean of Medicine for operational administrative matters and the Faculty of Medicine provides administrative support in the areas of human resources, finance and development.

## Leadership, Management, and Administration

The Director is supported by an Executive committee composed of the Division Heads and Associate Directors and it meets on a monthly basis. Each Division is responsible for reviewing admissions and addressing issues specific to its Division through both a faculty and admissions committee. At the School level, a Curriculum Committee chaired until recently by the Associate Director, Education and supported by the Graduate Affairs Administrator in the Graduate Office reviews proposed changes to the curriculum and establishes educational policies and procedures. Its membership includes representation from the Divisions and students. Until recently, faculty meetings have been held on a quarterly basis and/or twice a year and the Director met once per year with students in town hall meetings.

Resources allocated to the School include a base budget and revenues and recoveries from increased graduate enrolment, faculty salary recoveries from research contracts and research awards. The Dalla Lana endowment has supported the hiring of three new faculty research chairs as well as student support. The School budget is administered centrally and as noted above, there are no monies allocated to the Divisions. There is a 15 administrative staff complement which supports the mission of the School. This includes a Business Manager responsible for the financial and administrative functions of the School. One year ago four staff members were decentralized to provide support to the divisions.

A majority of the activity over the past two years has been devoted to the recruitment of new faculty and endowed chairs. These positions either replaced recent retirements and/or were supported by the Dalla Lana endowment. To date there have been six new hires including three in the Dalla Lana Chair positions of Public Health Policy, Disease Control and Global Health. Two positions remain unfilled (Biostatistics, Occupational and Environmental Health).

## D. Strengths & Challenges

### *Strengths*

In 2005, the Department of Public Health Sciences, Faculty of Nursing and Department of Health Policy, Management and Evaluation moved to a newly renovated building located at 155 College Street, known as the Health Sciences Building. The new facilities have provided each party with an increase in space both for teaching and its research activities.

A major strength of the School is the contribution made to its educational and research mission by many status only, cross-appointed and adjunct faculty. This is exemplified by the fact that the head of the Division of Epidemiology is a former status only faculty member, now seconded for a major part of her time to the School from Cancer Care Ontario.

### *Challenges*

Since the development of the School there has not been the structure nor the opportunity to develop an overarching vision. Much of the effort has been expended on the recruitment of new faculty and endowed chairs and administrative processes. There are multiple interests in the field of public health which are evident through the disciplines and areas of focus present in the school, these will need to be reflected in the development of a mission and vision for the School and its future direction. At the operational level, the divisional structure is in the process of being revised. The responsibilities of the Division Heads and of the Associate Director(s) need to be clearly articulated. In addition, a formal role for the new Graduate Coordinator, responsible for the leadership of the education programs is now under development. The role of Graduate Coordinator within the University of Toronto is usually held by a senior faculty member within the School of Graduate Studies.

# SECTION 2: FACULTY & RESOURCES

## A. OVERVIEW OF FACULTY

The School has among the largest concentration of academic population and public health researchers in Canada. Given the interdisciplinary nature of public health, faculty have varied backgrounds spanning humanities, social and behavioral sciences, physical and life sciences. As of July 2010 the DLSPH had 316 faculty. A complete list of all faculty, including academic rank, primary divisional affiliation and SGS appointment status is provided in Appendix 1. The CVs of faculty are available in electronic form (USB-stick).

| Faculty Category | Number |
|---|---|
| Tenure / Tenure Stream | 23 |
| Contract – Term Appointment (CLTA) | 28 |
| Status-Only | 178 |
| Adjunct | 14 |
| Cross Appointed | 73 |

Of the 316 faculty engaged at the Dalla Lana School of Public Health, 55 faculty can be described as core, that is they hold their primary appointment in the DLSPH and are tenured/tenure stream, CLTA,or others who are heavily involved in the education mission of the School. Table 1 describes these faculty members by division, rank and appointment status. Table 2 identifies these core faculty and provides a synopsis of the number of courses taught by each, their supervisory responsibilities and any additional academic administrative roles undertaken. The data is based on the annual 2009-10 Activity Report submitted by each faculty member in April 2010. In addition to these core faculty, there are a number of other ***core*** faculty, who are cross appointed to DLSPH – their primary appointments are in the Departments of Nutritional Science or Family and Community Medicine. These are the ***core*** faculty associated with Community Nutrition specialization of the MPH (Ann Fox, Melanie Morris, Valerie Tarasuk) or the Family & Community Medicine specializations of the MPH and the MScCH. These individuals include Helen Batty, Curtis Handford, Savithiri Ratnapalan, Peter Selby and Philip Ellison.

| TABLE 1: Core Faculty by Division, Rank and Appointment Status | | | | | |
|---|---|---|---|---|---|
| | | Tenure | Tenure Stream | CLTA | Other |
| **Biostatistics** | **Professor** | 4 | | | |
| | **Associate Professor** | 2 | | | |
| | **Assistant Professor** | | | | |
| | **Other** | | | | 1 |
| | | | | | |
| **Epidemiology** | **Professor** | 2 | | 5 | |
| | **Associate Professor** | 1 | 1 | 3 | |
| | **Assistant Professor** | | 3 | 2 | |
| | **Other** | | | | |
| | | | | | |
| **Occupational &** | **Professor** | | | 1 | |
| **Environmental** | **Associate Professor** | 1 | | 3 | |
| **Health** | **Assistant Professor** | | | 3 | |
| | **Other** | | | 1 | |
| | | | | | |
| **Social &** | **Professor** | 4 | | 2 | 1 |
| **Behavioural** | **Associate Professor** | 3 | | 2 | 1 |
| **Health Sciences** | **Assistant Professor** | | 2 | 3 | |
| | **Other** | | | | |
| | | | | | |
| **Other** | **Professor** | | | 1 | |
| (Global Health | **Associate Professor** | | | 2 | |
| & Interdisciplinary) | **Assistant Professor** | | | 1 | |
| | **Other** | | | | 1 |
| **TOTAL** | | 17 | 6 | 28 | 4 |

| TABLE 2: Core Faculty Teaching, Supervisory and Academic Administrative Roles 2009-10 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TEACHING | | | | SUPERVISION | | | | | OTHER |
| Last Name | First Name | Academic Status | Academic Ranking | Instructor | Crs Director | Co-instructor | Guest Lecturer | Primary Supervisor | Co-primary supervisor | Thesis cttee | Examining Cttee | Practicum supervisor | |
| **BIOSTATISTICS** | | | | | | | | | | | | | |
| Corey | Paul | TENURE | Professor | 2 | 3 | 0 | 1 | 0 | 1 | 2 | 1 | 1 | Assoc. Dir. Education |
| Escobar | Michael | TENURE | Professor | 2 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | |
| Lou | Wendy | TENURE | Professor | 0 | 1 | 0 | 0 | 5 | 0 | 6 | 1 | 1 | Division Director |
| Stafford | Jamie | TENURE | Professor | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | Chair, Stats (Faculty Arts&Sci) |
| Kustra | Rafal | TENURE | Associate Professor | 1 | 0 | 1 | 0 | 3 | 1 | 1 | 0 | 0 | |
| Sun | Lei | TENURE | Associate Professor | 0 | 2 | 0 | 0 | 2 | 4 | 0 | 1 | 1 | |
| Thorpe | Kevin | Senior RA | Senior-RA | 0 | 2 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | |
| **EPIDEMIOLOGY** | | | | | | | | | | | | | |
| Badley | Elizabeth | TENURE | Professor | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 1 | |
| Young | Kue | TENURE | Professor | 0 | 2 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | |
| Cole | Donald | TENURE | Associate Professor | 0 | 2 | 2 | 0 | 1 | 3 | 4 | 1 | 0 | Collab.Prog Global Health |
| Fisman | David | TENSTR | Associate Professor | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 2 | 3 | |
| Bondy | Susan | TENSTR | Assistant Professor | 0 | 3 | 0 | 0 | 1 | 1 | 9 | 0 | 0 | |
| Gagnon | France | TENSTR | Assistant Professor | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | |
| Gesink | Dionne | TENSTR | Assistant Professor | 0 | 0 | 3 | 0 | 0 | 2 | 4 | 1 | 3 | |
| Kreiger | Nancy | CLTA | Professor | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | Division Director |
| Mustard | Cameron | CLTA | Professor | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | |
| Narod | Steven | CLTA | Professor | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | |
| Remis | Robert | CLTA | Professor | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | |
| Cohen | Joanna | CLTA | Associate Professor | 0 | 2 | 0 | 3 | 3 | 1 | 4 | 1 | 0 | |
| Millson | Margaret | CLTA | Associate Professor | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 3 | |

| | | | | TEACHING | | | | SUPERVISION | | | | | OTHER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Last Name | First Name | Academic Status | Academic Ranking | Instructor | Crs Director | Co-instructor | Guest Lecturer | Primary Supervisor | Co-primary supervisor | Thesis cttee | Examining Cttee | Practicum supervisor | |
| Scott | Fran | CLTA | Associate Professor | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Program Director CMRP |
| Hall | Elizabeth | CLTA | Assistant Professor | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Kaufman | Pamela | CLTA | Assistant Professor | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Ferrence | Roberta | STATUS | Professor | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | |
| **INTERDISCIPLINARY** | | | | | | | | | | | | | |
| Harvey | Bart | CLTA | Associate Professor | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | Division Director |
| **OCCUPATIONAL & ENVIRONMENTAL HEALTH** | | | | | | | | | | | | | |
| Scott | James | TENURE | Associate Professor | 1 | 0 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | |
| Holness | Linn | CLTA | Professor | 0 | 1 | 0 | 1 | 1 | 0 | 3 | 1 | 1 | Division Director |
| Hosein | Roland | CLTA | Associate Professor | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sass-Kortsak | Andrea | CLTA | Associate Professor | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | Vice-Dean (FOM) & Interim Grad Coordinator |
| Silverman | Frances | CLTA | Associate Professor | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | |
| Bozek | Paul | CLTA | Assistant Professor | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | |
| House | Ron | CLTA | Assistant Professor | 0 | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | |
| Ceolin | Lissa | CLTA | Adjunct | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | Program lead MPH |
| **SOCIAL & BEHAVIOURAL HEALTH SCIENCES** | | | | | | | | | | | | | |
| Birn | Anne-Emanuelle | TENURE | Professor | 1 | 0 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | |
| Calzavara | Liviana | TENURE | Professor | 0 | 1 | 0 | 1 | 6 | 0 | 5 | 0 | 0 | |
| Eakin | Joan | TENURE | Professor | 1 | 0 | 1 | 1 | 6 | 0 | 1 | 3 | 0 | |
| Ferris | Lorraine | TENURE | Professor | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 0 | 0 | Assoc. Vice Provost |
| Robertson | Ann | TENURE | Professor | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | |
| Einstein | Gillian | TENURE | Associate Professor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2009-10 sabbatical leave |

| | | | | TEACHING | | | | SUPERVISION | | | | | OTHER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Last Name | First Name | Academic Status | Academic Ranking | Instructor | Crs Director | Co-instructor | Guest Lecturer | Primary Supervisor | Co-primary supervisor | Thesis cttee | Examining Cttee | Practicum supervisor | |
| McDonough | Peggy | TENURE | Associate Professor | 2 | 0 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | |
| Poland | Blake | TENURE | Associate Professor | 2 | 0 | 0 | 0 | 3 | 1 | 2 | 0 | 0 | |
| Daar | Abdullah | CLTA | Professor | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Goodstadt | Michael | CLTA | Professor | 1 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 12 | Program Lead MPH |
| Abuelaish | Izzeldin | CLTA | Associate Professor | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Jackson | Suzanne | CLTA | Assistant Professor | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 7 | |
| Myers | Ted | CLTA | Professor | 0 | 1 | 0 | 1 | 5 | 2 | 0 | 1 | 0 | Division Director |
| Schwartz | Robert | CLTA | Associate Professor | 0 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | |
| Thorsteinsdottir | Halla | CLTA | Associate Professor | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Ahmad | Farah | CLTA | Assistant Professor | 2 | 0 | 2 | 3 | 0 | 1 | 1 | 0 | 2 | |
| Forman | Lisa | CLTA | Assistant Professor | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | |
| Jackson | Suzanne | CLTA | Assistant Professor | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 7 | |
| Keelan | Jennifer | CLTA | Assistant Professor | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | |
| Norman | Cameron | CLTA | Assistant Professor | 2 | 0 | 1 | 4 | 0 | 1 | 3 | 0 | 0 | |
| Pakes | Barry | Adjunct | Adjunct | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | |

### TABLE 3: DLSPH Teaching by Courses Offered, 2009 – 2010

| Course Code | Division | Course Title | Instructor 1 | Instructor 2 | Instructor 3 | Other Instructors | Enrolment 2009 -10 |
|---|---|---|---|---|---|---|---|
| CHL 5004H | PHS | Intro to Public Health | Joanna Cohen | Fran Scott | | | 138 |
| CHL 5101H | SBHS | Social Theory and Health | Peggy McDonough | | | | 11 |
| CHL 5102H | SBHS | Social and Political Forces in Health Care | Ann Robertson | | | | 9 |
| CHL 5109H | SBHS | Gender and Health | Janice DuMont | R. Mason | | | 13 |
| CHL 5110H | SBHS | Theory and Practice of Program Evaluation | Ted Myers | | | | 35 |
| CHL 5115H | SBHS | Qualitative Analysis & Interpretation | Joan Eakin | | | | 9 |
| CHL 5117H | SBHS | A Global Perspective on the Health of Women and Children | Akwatu Khenti | Catherine Chalin | | | 18 |
| CHL 5118H | SBHS | International Health, Human Rights and Peace-Building | Akwatu Khenti | Catherine Chalin | | | 11 |
| CHL 5120H | SBHS | Population Health Perspectives on Mental Health and Addictions | Not offered | | | | 12 |
| CHL 5121H | SBHS | Genomics, Bioethics and Public Policy | Halla Thorsteinsdottir | Abdallah Daar | | | 5 |
| CHL 5122H | SBHS | Qualitative Research Practice | Ellen MacEachen | Joan Eakin | | | 10 |
| CHL 5201H | BIO | Intro to Biostatistics I | Kevin Thorpe | Nathan Taback | Eleanor Boyle | | 38 |
| CHL 5202H | BIO | Biostatistics II | Kevin Thorpe | Rafal Kustra | | | 33 |
| CHL 5203H | BIO | Public Health Research Methods | Liviana Calzavara | Monique Gignac | Hayley Hamilton | Robert Mann, P. O'Campo | 52 |
| CHL 5204H | BIO | Survey Methods in the Health Sciences II | Sue Bondy | | | | 9 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CHL 5207Y | BIO | Lab in Statistical Design and Analysis | Tony Panzarella | Derek Stephens | | | 10 |
| CHL 5208Y | BIO | Lab in Statistical Design & Analysis | Tony Panzarella | Derek Stephens | | | 2 |
| CHL 5209H | BIO | Survival Analysis | Sandra Gardner | | | | 26 |
| CHL 5210H | BIO | Categorical Data Analysis | Lei Sun | Laurent Briollais | | | 26 |
| CHL 5220H | BIO | Community Health Appraisals Methods I (CHAM I) | Vicki Kirsh | Jason Pole | | | 45 |
| CHL 5221H | BIO | Community Health Appraisals Methods II (CHAM II) | Blake Poland | Ann Fox | | | 49 |
| CHL 5223H | BIO | Applied Bayesian Methods | Michael Escobar | | | | 11 |
| CHL 5224H | BIO | Statistical Genetics | Lei Sun | Wei Xu | | | 17 |
| CHL 5225H | BIO | Advanced Statistical Methods for Clinical Trials | Andrew Willan | Joseph Beyene | M. Pintile | Janet Raboud, Kevin Thorpe | 9 |
| CHL 5250H | BIO | Biostatistics Seminar | Wendy Lou | Paul Corey | | | 15 |
| CHL 5300H | PHP | Issues in Transdisciplinary Research and the Health of Marginalized Populations | Jenn Keelan | Robert Schwartz | | | 53 |
| CHL 5308H | PHP | Tools and Approaches for Public Health Policy Analysis and Evaluation | Joanna Cohen | Robert Schwartz | | | 18 |
| CHL 5401H | EPI | Intro to Epidemiology | Elizabeth Hall | | | | 37 |
| CHL 5402H | EPI | Epidemiological Methods II | Elizabeth Badley | | | | 31 |
| CHL 5403H | EPI | Epidemiology of Non-Communicable Diseases | Kue Young | | | | 10 |
| CHL 5404H | EPI | Research Methods in Epidemiology I | Dionne Gesink | Gail Eyssen | | | 5 |
| CHL 5405H | EPI | Health Trends and Surveillance | Ian Johnson | | | | 29 |
| CHL 5406H | EPI | Quantitative Methods for Biomedical Research | Sue Bondy | Malcolm Binns | | | 7 |
| CHL 5408H | EPI | Research Methods II | Elizabeth Badley | Julia Knight | | | 5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CHL 5409H | EPI | Cancer Epidemiology | Eric Holowaty | Anna Chiarelli | | | 10 |
| CHL 5410H | EPI | Occupational Epidemiology | Ron House | | | | 10 |
| CHL 5411H | EPI | International Health | Barry Pakes | | | | 19 |
| CHL 5412H | EPI | Communicable Disease Epidemiology, Prevention and Control: Principles | Margaret Millson | Robert Remis | | | 13 |
| CHL 5415H | EPI | Communicable Disease Epidemiology, Prevention and Control: Practice | Elizabeth Rea | | | | 9 |
| CHL 5416H | EPI | Environmental Epidemiology | Donald Cole | S. Harris | S. Gower | L. Vanderlinden | 6 |
| CHL 5417H | EPI | Tobacco and Health: From Cells to Society | Roberta Ferrence | Scott Leatherdale | | | 6 |
| CHL 5418H | EPI | Scientific Overviews in Epidemiology | Laura Rosella | Ian Johnson | | | 32 |
| CHL 5420H | EPI | Global Health Research Methods | Donald Cole | Lisa Butler | | | 3 |
| CHL 5421H | EPI | Aboriginal Health | Kue Young | | | | 10 |
| CHL 5423H | EPI | Doctoral Seminar Series in Epidemiology | Nancy Kreiger | Robert Mann | | | 10 |
| CHL 5430H | EPI | Fundamentals of Genetic Epidemiology | France Gagnon | | | | 3 |
| CHL 5601H | INTER | Teaching Evidence Based Family Medicine in Clinical Setting | W. Rosser | C. Holmes | | | 7 |
| CHL 5602H | INTER | Working with Families in Family Medicine | J. Whittingham | T. Windrim | Stephen Holzapfel | | 4 |
| CHL 5603Y | INTER | Social, Political and Scientific Issues in Family Medicine | Curtis Handford | | | | 15 |
| CHL 5604H | INTER | Human development in Family Medicine | William Watson | T. Windrim | R. Frankford | | 2 |
| CHL 5605H | INTER | Research Issues in Family Medicine/Primary Care | N. Pimlott | Rahim Moineddin | | | 1 |
| CHL 5609H | INTER | Continuing Education for the Health Professionals I | Savithiri Ratnapalan | | | | 10 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CHL 5630Y | INTER | Wound Prevention and Care | Gary Sibbald | | | | 5 |
| CHL 5700H | GH | Global Public Health | Suzanne Jackson | | | | 23 |
| CHL 5701H | GH | Collaborative Program in Global Health Seminar | Donald Cole | | | | 19 |
| CHL 5801H | SBHS | Health Promotion | Farah Ahmad | | | | 33 |
| CHL 5803H | SBHS | Health Promotion Strategies | Michael Goodstadt | | | | 32 |
| CHL 5804H | SBHS | Health Behaviour Change | Cameron Norman | | | | 22 |
| CHL 5805H | SBHS | Critical Issues in Health Promotion | Michael Goodstadt | | | | 21 |
| CHL 5806H | SBHS | Health Promotion Field Research | Suzanne Jackson | Michael Goodstadt | | | 12 |
| CHL 5902H | OEH | Advanced Occupational Hygiene | Roland Hosein | | | | 10 |
| CHL 5903H | OEH | Environmental Health | Roland Hosein | | | | 12 |
| CHL 5904H | OEH | Occupational Health and Safety–Legal and Social Context | Linn Holness | | | | 16 |
| CHL 5907H | OEH | Physical Agents II - Radiation | David Gorman | | | | 11 |
| CHL 5910H | OEH | Occupational and Environmental Hygiene I | Paul Bozek | | | | 14 |
| CHL 5911H | OEH | Occupational and Environmental Hygiene II | Paul Bozek | | | | 10 |
| CHL 5912H | OEH | Industrial Toxicology | Grazyna Kalabis | | | | 9 |
| CHL 5914H | OEH | Physical Agents I - Industrial Noise and Vibration | James Purdham | | | | 10 |
| CHL 5915H | OEH | Control of Occupational Hazards | Andrea Sass-Kortsak | Paul Bozek | | | 12 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CHL 5917H | OEH | Concepts in Safety Management | Lisa Ceolin | | | | 12 |
| CHL 5918H | OEH | Biological Hazards in the Workplace Community | James Scott | | | | 10 |
| CHL 7001H | SBHS | Advanced Topics in Social Theory and Health: Feminist Perspectives on the Body | Peggy McDonough | | | | 4 |
| CHL 7001H | SBHS | Systems Science Perspectives in Public Health | Cameron Norman | | | | 4 |
| CHL 7001H | SBHS | Building Community Resilience | Blake Poland | | | | 14 |
| CHL 7001H | GH | Health as an Engine for the Journey of Peace | Izzeldin Abuelaish | | | | 5 |
| CHL 7001H | BIO | Statistical Data Mining in Health Sciences | Rafal Kustra | | | | 3 |
| CHL 7001H | OEH | Applied Ergonomics | Paul White | | | | 9 |

There are approximately seventy-five graduate courses that are offered on a regular basis and students also have access to reading courses. Table 3 lists the courses offered in 2009-2010 including instructor(s) and enrolment numbers. The number of students in each course varies considerably. (Appendix 2 provides a history of enrolment data for courses offered since 2005-06). All courses are evaluated by the students for the purpose of providing feedback to the instructors. These evaluations are also used by the School for merit pay related to process through the ranks (PTR) as well as tenure and promotion decisions. This data is not publically available but the courses offered by DLPSH are generally very highly rated by the students.

The above faculty are complemented by a much larger group of cross-appointed, status and adjunct faculty who are also engaged, at varying levels, in the educational and research mission of the Department. Appendix 1 is a complete list of all faculty involved with the School. The status-only faculty are employed by the research institutes in the affiliated hospitals, in other key collaborating research institutions, such as Cancer Care Ontario (CCO), and the Institute of Work and Health (IWH), other Universities and all 3 levels of government (municipal, provincial and federal). (See Table 4) Many of these individuals hold primary academic appointments in the DLSPH, giving them a formal link to the University that is mutually beneficial. It is important to emphasize the significant contribution being made by status faculty who are vital to the educational activities. Status faculty teach courses (or parts thereof), supervise and mentor graduate students, provide much needed funding and research work space, and participate in graduate department administration. The cross-appointed faculty comes from other departments/units from across the University. Within the Faculty of Medicine, this includes the departments of Family and Community Medicine, Nutritional Sciences, Medicine, Paediatrics, and Psychiatry. More broadly, other cross appointees hold their primary appointments in the Faculties of Nursing, Applied Sciences & Engineering, Law, Arts and Sciences (departments of Statistics, Sociology, Geography) and the Ontario Institute of Studies in Education (OISE-UT)

Collaborative research, both contract and peer review, is conducted jointly with colleagues from these organizations, the Ministry of Health and Long- Term Care, and the Public Health Agency of Canada. Examples include joint work on the competencies for public health epidemiologists, and the Centre for Urban Health initiatives [see Section 5 Research].

It is envisaged that these faculty will have an enhanced role in the mission of the School. In particular, there is an expectation that policy regarding the nature of appointments for non-medical status faculty will evolve in the very near future. This would clarify the extent of their role, and particularly their obligations to the School, within affiliation agreements between the University and the affiliate institutions where they are employed. Where appropriate, there is an expectation that members of the leadership of the School, or designates, will play key roles in the hiring of individuals who ultimately seek a cross, or status, appointment in the School.

| TABLE 4: Home Institutions of Status Faculty | | |
|---|---|---|
| | **Institution** | **Number** |
| **Affiliated Hospitals** | University Hospital Network (PMH, TGH, TWH)[1] | **12** |
| | Centre for Addiction and Mental Health (CAMH) | **11** |
| | Hospital for Sick Children (HSC) | **11** |
| | St. Michael's | **9** |
| | Mt. Sinai Hospital (Samuel Lunenfeld RI) | **9** |
| | Women's College Hospital | **3** |
| | Others | **7** |
| **Total** | | **62** |
| **Research Organizations** | Cancer Care Ontario (CCO) | **13** |
| | Institute for Work and Health (IWH) | **13** |
| | Institute for Clinical Evaluative Sciences (ICES) | **2** |
| | Canadian Institute for Health Information (CIHI) | **1** |
| | Ontario Institute for Health Research (OIHR) | **1** |
| **Total** | | **30** |
| **Government** | Federal (Health Canada, PHAC, Environment Canada) | **6** |
| | Provincial (8 OAHPP, 3 MOHLTC, 1 MOE, 1 MOL) | **13** |
| | Local – Toronto Public Health | **8** |
| **Total** | | **27** |
| **Other Universities** | University of Western Ontario | **6** |
| | McMaster University | **3** |
| | Ryerson University | **3** |
| | York University | **2** |
| | Others (4 provincial, 5 national, 3 international) | **12** |
| **Total** | | **26** |
| **Other** | Foundations, centres | **33** |
| | | |
| **Total** | | **178** |

A number of faculty are either in endowed Chair positions or have successfully competed for research chairs or career awards. These include:

**Canada Research Chair**

| | |
|---|---|
| Anne-Emanuelle Birn | International health |
| John Cunningham | Brief interventions in addictive behaviours |
| France Gagnon | Genetic epidemiology |
| Wendy Lou | Statistical methods of health care |
| Steven Narod | Breast Cancer |
| Andrew Patterson | Genetics of complex diseases |

**Endowed Chairs**

| | |
|---|---|
| Adalsteinn Brown | Newly appointed, November 2010, Dalla Lana Chair in Public Health Policy |
| Prabhat Jha | Newly appointed, November 2010, Dalla Lana Chair in Disease Control |
| James Orbinski | Newly appointed, November 2010, Dalla Lana Chair in Global Health |
| Jurgen Rehm | Chair in Addiction Policy |
| Kue Young | TransCanada Pipelines Ltd Chair in Aboriginal Health |

**Career Scientist Awards**

| | |
|---|---|
| Jennifer Keelan | Assistant Professor |

**Professorships**

| | |
|---|---|
| Izzeldin Abuelaish | Michael and Amira Dan Professorship in Global Health |

## B. FUTURE CHALLENGES

Renewal and expansion of these faculty numbers will involve the replacement of all retiring faculty and growth in areas deemed necessary to the mission of the School, particularly Public Health Policy. Growth in other areas such as Biostatistics, Epidemiology, Occupational and Environmental Health, or Social and Behavioural Health Sciences, would be aligned with both the strategic mission, and revenue streams, of the School. Joint appointments with other faculties at the University of Toronto, and institutions affiliated with the School, are expected to increase.

The relationship between the School and the Department of Health Policy, Management and Evaluation (HPME) will have to be re-envisioned.

# Section 3: Education

## A. Facts & Figures

| Degree Program | # student (fall headcount) | |
|---|---|---|
| | 2005-06 | 2009-10 |
| PhD | 95 | 100 |
| MPH | 111 (+ 44 p/t) | 139 (+30 p/t) |
| MSc | 19 (+ 5 p/t) | 12 (+ 5 p/t) |
| MScCH | n/a | 5 (+ 41 p/t) |

## B. Degree Programs

## Doctoral Degree Program (PhD)

### Overview

The PhD degree in the DLSPH educates and trains the next generation of educators and scientists who will lead the development of new knowledge to advance public health in Canada and around the globe. Currently, the degree is offered in three fields or specializations: Biostatistics, Epidemiology, and Social and Behavioural Health Sciences. Consideration is also being given to adding Occupational and Environmental Health and Public Health Policy to the suite of PhD specializations in the School.

**PhD Specializations**

- Biostatistics
- Epidemiology
- Social & Behavioral Health Sciences

### Objectives

The objective of the PhD program is to develop independent scientific leaders and educators:

- in the understanding of disease occurrence, causation, and prevention;
- in the effort to understand, address and reduce health inequities and improve the well-being of individuals, communities and societies; and
- in the development and application of statistical methods for advanced data analysis, especially as related to the biomedical, social science and public health fields;

Graduates of the program are trained to work as independent researchers and are expected to assume major leadership and supervisory roles in academia including universities, teaching hospitals, and public research institutes; in government and other health agencies; and in the medical and pharmaceutical industry.

### Competencies

Graduates from the DLSPH doctoral program gain general competencies in:

- critically evaluating scientific literature;
- identifying gaps, framing new research problems;
- applying appropriate methodological tools, theoretical and conceptual understanding to address health problems;
- understanding ethical implications of public health research;
- appreciating the policy implications of public health research;
- analyzing data, and understanding how to link scientific questions and complex quantitative and qualitative methods; and
- advancing knowledge in the field of public health.

Specific competencies exist in the specializations within the PhD program. These are:

| PhD Specialization | Specific Competencies |
|---|---|
| **Biostatistics** | Developing new statistical methodology and discovery of mathematical statistical properties using cutting edge mathematical statistical methods, and proficiency in the use of common and advanced statistical packages and the development of new statistical algorithms. |
| **Epidemiology** | Having a solid grounding in observational and experimental research methods, and in the biological and/or social sciences; developing methods appropriate for answering specific research questions; using available data and/or collecting new data, as required; implementing methodologically sound research studies for addressing specific research questions; conducting data analysis and publishing research findings in the scientific peer-reviewed literature; and understanding the public health impact of research findings in particular, and of epidemiologic research more broadly. |
| **Social & Behavioural Health Sciences** | Having a sound grounding in theoretical constructs relating to social theory and health behaviour and behaviour change, and apply these and appropriate research methods to understanding of multi-level determinants and mechanisms including individual, group, community, institutional and societal level inter-relations, structures and processes that underlay health/well-being, illness, injury and disability. Using the World Health Organization's (WHO's) definitions of health and health promotion as a foundation, we examine public health problems and interventions. |

### Admission Requirements

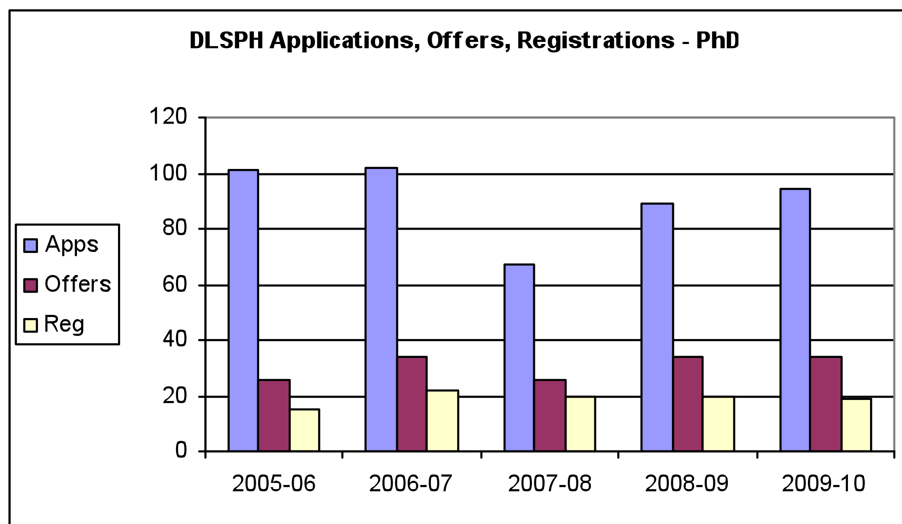
Successful applicants will hold a master's degree in a relevant field (e.g., depending upon the field of study - biostatistics, biology, epidemiology, sociology, behavioural science, psychology); have training in quantitative or qualitative research methods; and have research experience demonstrated by the completion of a master's thesis, a supervised research practicum, or other research experience that includes independent contributions to scientific literature.

They will have an A- or greater average in the final year of the highest degree (or in the last 5.0 full course equivalents completed at a senior level); will have practical experience and expertise in using standard statistical software packages; and will have research interests that align with at least one member of the faculty with PhD supervisory privileges.

### APPLICATIONS

Over the past five years, the number of applicants to the PhD program has been strong at over 90, with the exception of 2007-8, with an unexpected dip to 67 (see Figure below). The quality of the applicant pool remains high, with the program admitting approximately 20 new students per year over the past 4 years. Setting aside the anomalous 2007-08 data, acceptance rates have ranged from 56% to 65%, with possibly a decreasing trend. This may be as a result of increasing competition from other universities. In addition, we are aware that some applicants are declining offers of acceptance because they are getting better funded offers elsewhere in both Canada and the United States.

***Data for the 2010-11 admission cycle, though incomplete, indicate an increased number of applicants (139), offers (41) and registrations (30) (i.e., number entering September 2010).***




| | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|
| **Offer rate (%)** | 26% | 33% | 39% | 38% | 36% |
| **Acceptance rate (%)** | 58% | 65% | 77% | 59% | 56% |

## PROGRAM DESCRIPTION

- In ***Biostatistics***, students receive a deep and broad experience in all aspects of data analysis, mathematical statistics, classical and modern methods in linear and non-linear models, survival analysis, and may choose from a collection of more specialized topics such as Bayesian methods, statistical methods applied to genetics, and computer intensive techniques. Faculty research areas include Bayesian methods, bioinformatics, computational biology, clinical trials methodology, cost-effectiveness analysis, health system monitoring and evaluation, hierarchical modeling, longitudinal data analysis, meta-analysis, microarray analysis, optimal experimental design, statistical methods for observational studies, statistical genetics, spatial and temporal models, statistics for neuroimaging data, and survival analysis.

- In ***Epidemiology*** the research foci include the epidemiology of cancers, musculoskeletal diseases, HIV/AIDS, and other infectious and chronic diseases; with an emphasis on genetic, individual, lifestyle, infectious and environmental factors affecting human health. This program aims to develop excellent epidemiologists who are able to work, teach and conduct research on contributors to health; disease, disability and death; and effective measures of prevention.

- The ***Social and Behavioural Health Sciences*** field is unique in Canada. For the entire last quarter of the 20th century until the present it has been the only graduate program of its kind in Canada. Although in more recent years graduate training in the social science of health is available in other universities, this program remains unique, particularly by virtue of its location within the health sciences but firmly grounded in the theoretical knowledge of parent social science disciplines. The program is inherently multi- and cross- disciplinary, both in terms of its students' backgrounds and in terms of the disciplines upon which the curriculum draws upon. The field has two possible foci, the Health and Behavioural Sciences (HBS) focuses on research methods and theories to understand individuals, behaviour and the social context in relation to health, illness and health care. Research aims to understand health issues from a single, multi-level or systems-based perspective, or to study interventions to modify health behaviour both of individuals and groups. The focus in Social Sciences and Health (SSH) is on the application of social science theory and methodology to research on health, illness and health care. The emphasis is on critical theory, more qualitative approaches to understanding health issues and contribution to the development of interventions.

### COURSES

Students in the PhD program acquire their skills and learning through a combination of course work and independent research. While specific course requirements vary across specialization, all PhD students must have some exposure to the five pillars of public health education. This exposure is gained through the required core course CHL 5004H Introduction to Public Health, and through other required methodological and substantive courses. Specific course requirements for each specialization are provided below.

| PhD REQUIRED COURSES | | |
|---|---|---|
| | | **CREDIT** |
| **BIOSTATISTICS** | | |
| **CHL5004H** | Introduction to Public Health | **0.5** |
| **CHL5208Y** | Advanced Laboratory in Statistical Design and Analysis | **1.0** |
| **CHL5210H** | Categorical Data Analysis | **0.5** |
| **CHL5250H** | Biostatistics Seminar | **0.5** |
| | Plus one of the following: | |
| **CHL5209H** | Survival analysis I | **0.5** |
| **STA2209H** | Lifetime Data Modeling | **0.5** |
| | | |
| **EPIDEMIOLOGY** | | |
| **CHL5004H** | Introduction to Public Health | **0.5** |
| **CHL5404H** | Research Methods in Epidemiology I | **0.5** |
| **CHL5406H** | Quantitative Methods in Biomedical Research | **0.5** |
| **CHL5408H** | Research Methods II | **0.5** |
| **CHL5423H** | Doctoral Seminar for Epidemiology | **0.5** |
| **CHL5424H** | Advanced Quantitative Methods in Epidemiology | **0.5** |
| | | |
| **SOCIAL AND BEHAVIOURAL HEALTH SCIENCES** | | |
| **Required Courses for SSH: 3.5 FCE** | | |
| **CHL5004H** | Introduction to Public Health Sciences | **0.5** |
| **CHL5101H** | Social Theory and Health | **0.5** |
| **CHL5102** | Social and Political Forces in Health and Health Care | **0.5** |
| **2 Methods courses** | | **1.0** |
| **2 Electives** | | **1.0** |
| | | |
| **Required Courses for HBS: 3.0 FCE** | | |
| **CHL5004H** | Introduction to Public Health Sciences | **0.5** |
| **CHL5804H** | Health and Behaviour Change | **0.5** |
| **2 Methods courses (one required quantitative)** | | **1.0** |
| **1 CHL7000H (reading course) related to thesis topic** | | **0.5** |
| **1 Elective** | | **0.5** |

Students also are expected to take elective courses. Students are best served if their elective courses form part of a coherent package of experience. In this light, students are encouraged to choose elective courses that relate to the theme of their dissertation, or electives that fill identifiable gaps in their overall training and experience. Students typically take 3.0-4.0 full course equivalents (FCE), where a one-term course is worth 0.5 FCE. Students in the PhD program who have received their master's degrees in the DLSPH will be assisted in designing a program of study that acknowledges the students' advanced standing. Typical elective courses for each specialization are listed in Appendix 3.

***Comprehensive or Qualifying Examination:*** The comprehensive or qualifying examination is generally taken after the student has completed the required courses. It is comprised of methodological and

substantive components that vary with the specialization. Students are expected to sit for the comprehensive examination by the end of their first year, and must have passed the examination no later than the end of the second year.

- The **Biostatistics** comprehensive examination is composed of three parts: Foundation (mostly mathematical statistics), Methodology (applied statistics) and Data Analysis. The first two parts consist of five-hour in-class written examinations, and the third part is a one-week take-home exam that requires a final report.
- The **Epidemiology** comprehensive examination also consists of three parts: certification of completion of the tutorial for the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS)*; a written in-class examination that tests competence in the concepts, principles, data sources, and content of epidemiology, and the ability to apply these concepts and principles critically; and the preparation of a systematic literature review designed to assess the ability to develop and to conduct a systematic review of the literature in an area of the student's choosing.
- In the **Social and Behavioural Health Sciences**, the comprehensive examination provides for flexibility in approach depending on the stream of study. In a 25-50 page paper, accompanied by an oral examination the student is expect to critically examine methods and theoretical issues relevant to the general field of their dissertation research. Students are expected to identify core theoretical and conceptual approaches that could frame their research problem, and to locate themselves and their thesis orientation in relation to such fields.

***Student Seminars:*** Students in the PhD program are expected to attend (and present) at seminars and other gatherings of colleagues. For example:

- The **Biostatistics** seminar series is a weekly event that brings together students, faculty, researchers and practitioners who are interested in biostatistics methodology and its applications. The objectives of the seminar series include: i.) introducing various research topics in biostatistics that are not taught through regular courses at DLSPH, ii.) presenting recent methodological advancements, and iii) providing research exchange opportunities among peers. All first-year biostatistics graduate students are required to attend the seminar series as part of a required course, and must submit three research reports based on topics presented over the fall and winter terms. Students are encouraged to work with the seminar presenters while preparing their research reports. The seminars are given by external speakers (including international speakers), UofT faculty members, and senior PhD students. Presentation slides are available to all registered seminar attendees through the seminar website, including archived presentations from past years. A list of seminar topics can be found at http://www.sph.utoronto.ca/lou/course/chl5250/Course.asp
- The **Epidemiology** Doctoral/Divisional seminar series comprises biweekly presentations by faculty and doctoral students, with an emphasis on work in progress. First and second year doctoral students are required to register for the course; faculty, upper year PhD students, and MPH students are strongly encouraged to attend. A list of this academic year's seminar schedule can be found at http://www.sph.utoronto.ca/EpiSeminarSeries.asp

### Timelines

PhD students are required to submit annual activity reports. The reports are reviewed with the student by the supervisor, and further reviewed by the program director. The program director (and the supervisor) meet with any student whose progress is deemed unsatisfactory, to develop a plan for improved progress.

Full-time students are expected to complete the PhD in four to five years. (Flexible-time students may take longer, but not more than eight years.)

- Year 1: Take required courses, prepare for comprehensive examination, submit applications for external funding
- Year 2: Take elective courses, complete comprehensive or qualifying examination, prepare research proposal and obtain approval for dissertation topic, obtain approval of the Research Ethics Board (as needed).
- Years 3-4: Collect and analyze data; take any coursework that would enhance the thesis research.
- Years 4-5: Write and defend dissertation, apply for post-docs and jobs.

***Flexible-Time PhD Program:*** Students may be admitted to the Flexible-Time PhD program, which is intended for practicing professionals who generally have to maintain employment related to their intended field of study. The admission and degree requirements for the Flexible-Time program are identical to those listed above for the full-time program; however, students have up to 8 years (compared to 6 years for full-time) to complete their program. They are required to register full-time for the first 4 years of their program (and pay full-time fees). Thereafter, they may register part-time, with reduced fees. An individualized plan of study and research activities is negotiated at initial registration and updated annually. Flexible-time students are not eligible for university-based student support. That is, they are not considered part of the *funded cohort* and therefore not eligible for the guaranteed minimum stipend. Students are not permitted to transfer from the Flexible-Time program to the full-time program. Approximately 10 to 15% of the PhD students are enrolled in the Flexible-Time program.

### Student Financial Support

In 2000, the University of Toronto became the first Canadian institution to introduce a guaranteed minimum level of funding for all eligible doctoral stream graduate students (those in the '*funded cohort*'). Currently, the university-wide minimum support level is $15,000 plus tuition and fees, for a minimum of five years of doctoral stream study. Based on tuition and fees for 2010-11, this represents $22,750 for domestic students and $32,200 for international students.

The DLSPH has a Funding Policy which has been in effect since 2005 (see Appendix 4). The ***funded cohort*** is defined as all full-time students, both domestic and international, in years 1 to 5 of the PhD program, in good standing. Sources of funding include internal and external awards (scholarships, fellowships) and stipends from supervisor's grants (all classified as T4-A income). Research Assistantships, Teaching Assistantships and other funds ***arising from employment*** are not part of the funding package. Since 2006, the funding package (awards, fellowships, bursaries, student stipends), for registered students has been fully tax exempt (Professional/Clinical earnings are excluded).

The School spends approximately $100,000.00 per year to fund TA positions for higher enrolment master's level courses. Table 5 provides information on the average funding per student from 2005-06 to 2009-10, indicating the source. DLSPH doctoral students have been increasingly successful in

garnering external competitive awards – provincially and nationally, with 51% of stipends deriving from external awards in 2005-06, increasing to 62% in 2009-10. While students have been competitive, the U of T is focused on continuing to develop strategies to maintain and, in fact, increase this competitive edge.

**TABLE 5: Financial Support for PhD Students**

| | $ Amount of Support From | | | | | Students Funded | |
|---|---|---|---|---|---|---|---|
| **Year** | **External Scholarship** | **Univ Scholarship** | **RAs** | **Other*** | **Total** | **# (%)** | **Av $** |
| **2005-06** | 820,114 | 598,112 | 127,391 | 34,415 | 1,580,032 | 76 (94%) | 20,790 |
| **2006-07** | 838,045 | 693,005 | 77,000 | 27,959 | 1,636,008 | 75 (73%) | 21,813 |
| **2007-08** | 1,137,822 | 580,621 | 205,400 | 35,040 | 1,958,883 | 81 (95%) | 24,184 |
| **2008-09** | 1,131,190 | 663,889 | 197,001 | 45,861 | 2,037,941 | 87 (98%) | 23,425 |
| **2009-10** | 1,212,951 | 624,184 | 76,750 | 46,724 | 1,960,609 | 82 (94%) | 23,910 |

Note:
Percentage of student in the funded cohort receiving funds excludes Flex-time students who are outside of funded cohort.
Other* = Internal bursaries.
Source of data: ROSI (Repository of Student Information), GradSIS (Graduate Student Information), and Enrolment Cube.

The primary source of funding is external competitive studentship grants. Table 6 provides a summary of the principal sources of major, external competitive studentship awards including, but not limited to the Canadian Institutes of Health Research (CIHR), Social Science and Humanities Research Council (SSHRC) and Ontario Graduate Scholarships (OGS). For example, in 2008-09, 45% of full-time PhD students held external awards from the agencies noted in the table below.

**TABLE 6: External Awards from Agencies held by PhD Students in 2008/09**

| Agency | No. of Students |
|---|---|
| **CIHR** | 20 |
| **SSHRC** | 10 |
| **NSERC**[1] | 1 |
| **OGS** | 6 |
| **OGSST**[2] | 5 |
| **Other** | 2 |
| **Total** | 44 |

1. Natural Sciences & Engineering Research Council
2. Ontario Graduate Scholarships in Science and Technology

***Student - Supervisor Agreement:*** Students and their supervisors are required to jointly complete an annual Student – Supervisor Agreement Form, on a Faculty of Medicine web-based agreement and

financial tracking system (Graduate Student Information System - GradSIS). The form articulates, in detail, the department's funding policies, including the annual minimum stipend and the duration of the guarantee (typically five years for PhD). The student's funding package is itemized including the source(s) of the funds. All university-based student awards (scholarships, bursaries, including OGS, CIHR, SSHRC, etc) are managed and paid through a university-wide system, which is linked to the Faculty of Medicine's GradSIS system, enabling effective monitoring and tracking of student funding. In addition, the agreement form outlines student and supervisor responsibilities, and relevant University policies and procedures, including Research Ethics, Safety, Sexual Harassment and Intellectual Property. In this manner, the DLSPH has some assurance that both students and supervisors are informed of these important policies and procedures. The need for early discussion of intellectual property issues is also highlighted (see Appendix 5).

#### OUTCOMES

***Enrolment, Withdrawals & Graduation:*** Since the Fall of 2005, enrolment in the PhD program has increased slightly (Table 7). The relative size of the three specializations has changed, with growth in the Social & Behavioural Health Sciences and reductions in Biostatistics and Epidemiology, likely as a consequence of the fluctuations in faculty complement.

**TABLE 7: PhD Enrolment by Specialization (Fall, headcount)**

| | Fall 2005 | Fall 2006 | Fall 2007 | Fall 2008 | Fall 2009 |
|---|---|---|---|---|---|
| **Biostatistics** | 21 | 22 | 18 | 16 | 13 |
| **Epidemiology** | 35 | 30 | 34 | 31 | 24 |
| **Social & Behavioural Health Science** | 39 | 47 | 51 | 58 | 63 |
| **Total** | **95** | **99** | **103** | **105** | **100** |

The total enrolment data (Table 8) reflects enrolments over the full academic year (Fall, Spring and Summer terms), which are slightly higher than the Fall headcounts, as shown in Table 7).

**TABLE 8: PhD Total Enrolment, Withdrawals & Graduations by Year**

| Year[1] | New Enrolment | Total Enrolment [2] | # Female (%)[3] | # Visa (%)[4] | Total Withdrawals [5] | Total Graduations [6] |
|---|---|---|---|---|---|---|
| **2003-04** | 21 | 92 | 66 (71.7%) | 2 (2.2%) | 2 | 10 |
| **2004-05** | 22 | 95 | 65 (68.4%) | 3 (3.2%) | 2 | 6 |
| **2005-06** | 15 | 106 | 74 (69.8%) | 2 (1.9%) | 1 | 17 |
| **2006-07** | 25 | 109 | 76 (69.7%) | 1 (0.9%) | 5 | 15 |
| **2007-08** | 20 | 108 | 77 (71.3%) | 1 (0.9%) | 4 | 12 |
| **2008-09** | 20 | 111 | 75 (67.6%) | 1 (0.9%) | 2 | 4 |
| **2009-10** | 20 | 105 | 74 (70.5%) | 2 (1.9%) | 11 | 17 |

[1] Academic year starting September 1 with three entry points: (Sept, Jan. and May).

[2] All students registered in the program in that academic year continuing and new (for continuing, use numbers reported November 1).

[3] Number of female students and (%).
[4] Number of visa (international) students and (%).
[5] All students who withdrew within that year.
[6] All students who completed the program within that year.

Given the length of the PhD program, data are provided for new enrolments over the past 7 years. (Table 8). Over the past 5 years, approximately 75% of the PhD students are female and the vast majority are domestic (Canadian citizens or landed immigrants), with only 1 to 3 % being international students. Withdrawals do occur – typically one or two per year. However, since 2005-06, the withdrawals have occurred earlier in the program. The exceptionally high number of withdrawals in 2009-10 (n=11) reflects the fact that the DLSPH expended efforts to identify lapsed students and formalized their withdrawal. New PhD enrolments have remained relatively constant, at around 20 over the past years.

***Though incomplete, data from 2010-11 fall registration indicate a substantial increase in New Enrolment to 30.***

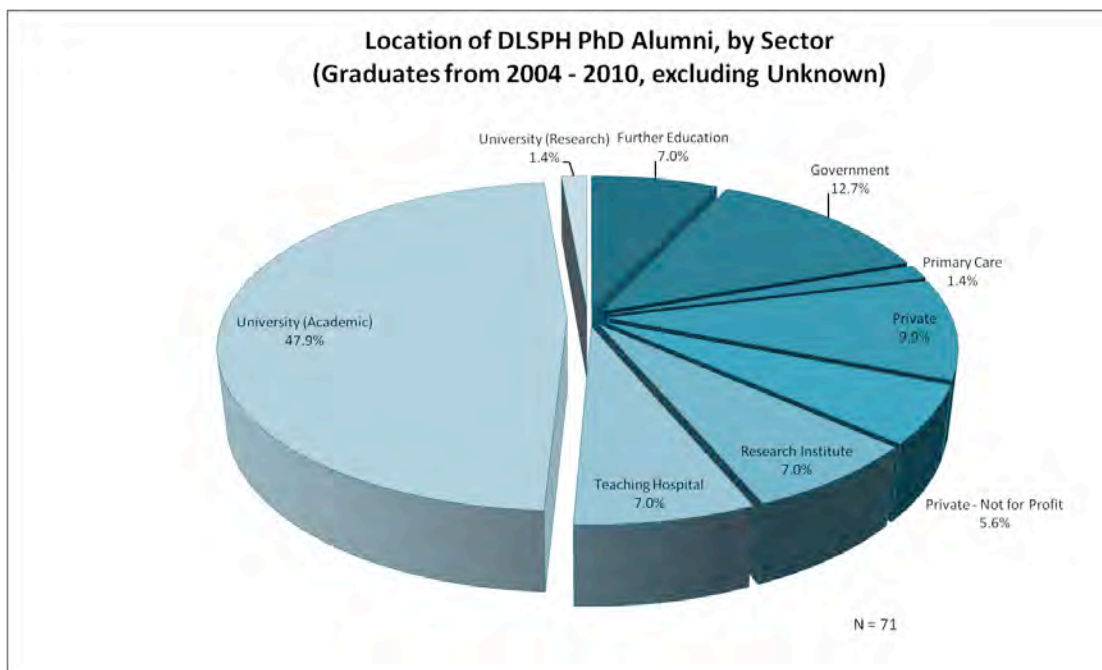
***Time to Degree Completion:*** Over the past 7 years (2003/4 – 2009/10), the mean and median times to degree completion (TTC) are provided in Table 9. The introduction of guaranteed funding for all PhD students in the funded cohort, together with much closer, annual monitoring of student progress is expected to improve time to completion over the coming years. It should also be noted that the flexible time program can adversely impact TTC data, as these students have up to 8 years to complete their degree programs. For the PhD Epidemiology, the mean and median TTC is reduced to 6.4 and 6.5 years, respectively, when the 5 graduates of the flexible-time program are excluded. Excluding the 3 graduates of the flexible-time S&BH program, the mean TTC is reduced to 6.2 years, the median remains unchanged.

**TABLE 9: Mean (range) and Median Times-to-Completion of PhD Program**

| Field | Mean (range) | Median |
|---|---|---|
| PhD, Biostatistics (n=15) | 5.6 (3.0-9.0) | 5.7 |
| PhD, Epidemiology (n=29) | 6.7 (3.7-9.3) | 7.0 |
| PhD, Social & Behavioural Health Science (n=34) | 6.4 (4.0-9.7) | 6.3 |

***Career Paths for Graduates:*** The graduates of the PhD program (2005-2009), together with their thesis title and supervisor are listed in Appendix 6. Graduates are highly sought after. Nearly one half of the alumni are successful in obtaining faculty positions at Universities, locally, nationally and

internationally. One quarter of alumni are in academic posts outside of Canada (mostly in the United States).




Among graduates, 33% are working in the private sector, 60% in academia (university and teaching hospitals), and 7% in government. Most of those employed in *Teaching Hospitals* and *Research Institutions* are working as research scientists (principal investigators). The majority of alumni in *Government* are engaged with either the Ontario Ministry of Health and Long Term Care, or the Public Health Agency of Canada, though two in this category are working in the US – one at CDC, the other at NCI. Graduates working in the *Private Sector*, are either working in the pharmaceutical industry or as private consultants. Those alumni classified as *Further Education* are more recent graduates with post doctoral fellowship positions.

### STRENGTHS & CHALLENGES

#### *Strengths*

- BREADTH OF PROGRAM OFFERINGS: One of the principal strengths of the DLSPH and its PhD program is its truly multi-, inter- and trans-disciplinary nature. Incoming students have incredibly diverse backgrounds, from the basic, physical and life sciences to the social and behavioural sciences. To ensure that they have a common grounding in the core principles and issues of public health, students are required to take a core Public Health course in the first two weeks of their program. The course features key public health researchers and practitioners, many of national and international stature, who bring a range of disciplinary perspectives. The intense eight-day format fosters collegial relationships among students across all fields and programs.

- FACULTY: The expertise of our core and status faculty reflects the breadth of public health. As Canada's largest University, U of T has an incredible wealth of expertise, providing a tremendous resource to the DLSPH programs. The DLSPH is closely linked with the Department of HPME as well as other strong ties with other graduate units, within the Faculty of Medicine

and more broadly throughout the university – many Faculty are cross-appointed to the DLSPH, thereby enriching interdisciplinary activities.

- TORONTO/GTA LOCATION: Our location in Toronto constitutes another major strength, providing a large complement of over 200 scientists who are employed in key collaborating institutions, such as Cancer Care Ontario, Institute of Work and Health, OAHPP, Institute of Clinical Evaluative Sciences, and all of the fully affiliated hospitals. These scientists hold primary, status-only academic appointments in the DLSPH and they and their institutions are vital to the teaching and research enterprise of the DLSPH. They provide a diversity and richness of academic opportunities and ideas, and enable the DLSPH to maintain the size, strength and depth of its programs.

### *Challenges*

- TIME TO DEGREE COMPLETION: The University and the DLSP has been concerned about the time to degree completion, particularly in PhD programs. In the past 4.5 years, we have been tracking student progress more carefully using annual reports and meetings. In addition, since 2005, all PhD students in the funded cohort receive funding. It is anticipated that we should see a reduction in times to degree completion over the next few years.

- GRADUATE STUDENT FUNDING: Graduate student funding continues to be a significant challenge for the PhD program at the DLSPH. The guaranteed funding package for PhD students is approximately $22,750 per annum. While this represents a major improvement in funding over the past decade and is at par with some of our competitors locally, it is not always competitive with our comparator institutions nationally and internationally. We will need to find mechanisms to compete at this level and attract the very best and brightest students.

- BARRIERS TO ADMITTING INTERNATIONAL STUDENTS: The DLSPH could attract excellent international students and such students would be vital to maintaining a vibrant and world-class doctoral program in Public Health. Unfortunately, there are several barriers to admitting a cadre of international doctoral students. The Ontario Government does not provide funding to universities for international students. In addition, international students pay twice the tuition of domestic students and this additional tuition must be included in the minimum stipend, and finally, international students are ineligible for many graduate awards and scholarships. As a consequence, each international student admitted poses a significant additional cost to the DLSPH – a major disincentive. This is an ongoing concern which has been receiving the attention of university officials at the highest levels.

- RELIANCE ON STATUS FACULTY: The benefits and vital importance of the status-only faculty to the doctoral program have been noted above. However, the reliance on status-only faculty can also be considered as a challenge because this is a less stable resource. Our experience to date suggests the status only faculty actively engaged in the PhD program are, in fact, relatively stable. However, this needs careful monitoring.

## Master of Public Health (MPH) Program

### Overview

The Master of Public Health (MPH) degree is designed to prepare practitioners, educators and researchers for careers in public health. The purpose of the MPH Program (formerly the MHSc program) is to provide advanced training to practitioners entering the field, to experienced professionals wishing to enhance their health expertise, and to those wishing to pursue doctoral training and a career in research. The MPH specializations offered in the DLSPH are Community Nutrition, Epidemiology, Family and Community Medicine, Health Promotion (social and behavioural health sciences), and Occupational and Environmental Health. Consideration is also being given to adding Biostatistics and Public Health Policy to the suite of MPH specializations in the School. The DLSPH does not offer a generalist MPH.

**MPH Specializations**

- Community Nutrition
- Epidemiology
- Family & Community Medicine
- Health Promotion (Social & Behavioural Health Sciences)
- Occupational & Environmental Health

### Objectives

The objective of the MPH program is to prepare students for leadership roles in public health at local, national, and international levels.

### Competencies

Graduates of the MPH program will:

- incorporate population health and social determinants approaches in their public health research and practice;
- explore, analyse and interpret public health issues, including trends and patterns of disease incidence and prevalence, disease burden, factors affecting health status, and major etiologic and prognostic factors;
- demonstrate the ability to critically analyze information and creatively solve problems;
- exhibit practical skills, including the ability to frame questions, refine them in light of the literature and community situation, design an appropriate study to answer the question, collect and analyze relevant data, and interpret the findings relative to the literature and the community/ organizational context;
- collaborate and communicate effectively;
- approach public health issues from a critical perspective;
- plan, implement, and evaluate public health programs and interventions;
- understand the role of policy in public health;
- advocate for public health enhancement on behalf of stakeholders, communities, populations;
- identify and address ethical considerations in their research and practice;
- develop capacity, knowledge, and skills to work as partners in interdisciplinary health teams in a variety of work settings;
- demonstrate public health expertise and leadership within their disciplines and areas of research and practice.

Two of the specializations have certification requirements.

- In the Community Nutrition specialization, students develop the competence required for entry-level dietetic practice. While the professional and educational competencies are currently being revised (www.pdep.ca), current competency areas as outlined by Dietitians of Canada include: Professional Practice; Assessment; Planning; Implementation; Evaluation; and Communication.

- In the Occupational and Environmental Health specialization, students develop the competence required for the theoretical, technical and practical aspects of occupational hygiene, sufficient for the students to pass professional examinations offered by the Canadian Registration Board of Occupational Hygiene and/or the American Board of Industrial Hygiene. This competence includes knowledge of physical and biological sciences; understanding workplace hazards and risk assessment; having knowledge of ergonomics, occupational safety, accident prevention, and, occupational health and safety considerations of labour relations.

A more detailed description of objectives and competencies for each specialization is provided in Appendix 7.

### Admission Requirements

Minimum admission criteria to the MPH program are:

- A four-year undergraduate degree relevant to the MPH area of specialization;
- Minimum B (75%) standing in the fourth year of study;
- Demonstrated proficiency in English language;
- Demonstrated interest in Public Health;
- An undergraduate course in statistics; and
- Relevant practical experience and demonstrated interest in the area of specialization.

In addition to the general MPH admission criteria, Community Nutrition requires an undergraduate degree with specialization in nutritional sciences, and accredited by Dietitians of Canada or equivalent. Applicants to advanced standing must have a minimum of five years experience working as a dietitian in a related field. In addition to the general MPH admission criteria, the Family and Community Medicine specialization requires licensed and regulated primary care clinicians (or equivalent) in Canada.

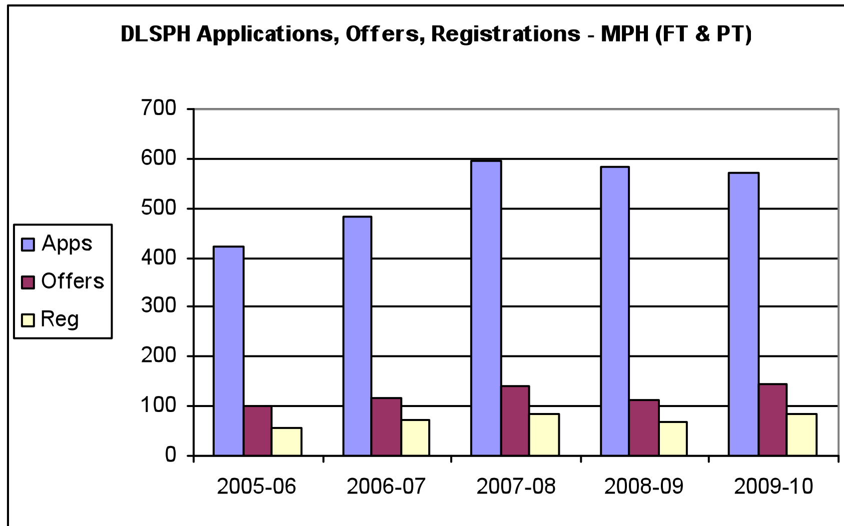
Full-time students usually complete the 10 FCE MPH degree in 20 months [i.e., they are expected to complete it within two (2) years (minimum completion time is 16 months)]. Part-time students may take longer, but not more than four (4) years. Students in Community Nutrition who qualify for advanced standing complete only 5 FCE along with distance-education components.

### Applications

Over the past 5 years the number of applicants to the MPH has increased from 420 to just under 600 (Table 10).

***The demand for this program continues to increase. Data for the 2010-11 admission cycle, though incomplete, indicate an increased number of applicants (778), offers (165) and registrations (96).***

**TABLE 10: Applications, offers, registrations (2005-2009)**




| | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|
| **Offer rate (%)** | 24% | 24% | 24% | 19% | 25% |
| **Acceptance rate (%)** | 57% | 60% | 59% | 62% | 57% |

### PROGRAM DESCRIPTION

The MPH specializations align with the needs of the specific disciplinary groups.

- **Community Nutrition** emphasizes principles of adult education: self-assessment, self-directed learning, critical reflection, as well as the importance of continuous learning.

- **Epidemiology** emphasizes quantitative methods, critical appraisal of evidence, research design and implementation, data analyses and interpretation. It trains epidemiologists to work in practice or research settings, and prepares graduates for PhD work in epidemiology.

- **Family and Community Medicine** trains primary care physicians to identify emerging public health problems, to promote healthy lifestyles, to screen appropriate patients for disease, to advocate for patients and to provide public health initiatives to their patients.

- **Health Promotion** takes a social science perspective in addressing issues related to the health of individuals, communities and populations with special attention to identifying, understanding and addressing the societal and personal determinants of health. There is an emphasis on an array of mutually reinforcing health promotion and public health strategies, including health education and communications, community development, the role of organizational development and change, health advocacy, and the development of health promoting public policy.

- **Occupational and Environmental Health** is offered with two options. The professional occupational hygiene option is focused on the prevention of disease and injury arising from the workplace, through the identification of health hazards, the evaluation or assessment of the extent of risk posed by the hazards, and the elimination or control of the risks. The research

option is focused on training students who wish to pursue a research career in occupational and/or environmental health.

Each of the MPH specialization programs has a different emphasis with respect to the discipline but share common goals in preparing students for a career in public health. Through each of these specializations, students satisfactorily cover the core areas of public health. In addition to these core public health specializations, students are encouraged to consider the global implications of their work. Regardless of the specialization, students earning the MPH degree receive a population health perspective, training in biostatistics and epidemiology, an understanding of health promotion approaches and the social determinants of health, and understanding of public health policy and the Canadian public health system. The DLSPH program prepares graduates for careers in diverse areas of public health research and practice, to promote the health of individuals, communities, and populations. More detail about each specialization is provided in Appendix 7.

MPH students with an interest in Global Health may apply to a Global Health concentration. This initiative brings together students from across all MPH fields to focus on global public health issues from an interdisciplinary perspective through shared courses and seminars. The competencies associated with the Global Health Concentration are to:

- Understand the political economy of global health issues.
- Bring a determinants-of-health and population health perspective to problem analysis, policy development and project design.
- Be cognizant of the linkages between local and global health problems.
- Work within the mandates, roles and approaches of international organizations.
- Build coalitions and work in partnership with the NGO sector and local community organizations.
- Be sensitive to cultural differences and adapt methods to local contexts.
- Apply appropriate ethical approaches to international, country level and local projects.
- Understand broad ethical issues as they relate to equity globally.

Further information on the Global Health concentration is provided in Appendix 7.

### COURSES

The program requirements for the MPH degree include completion of:

- 10 full course equivalents (FCE) including
    - CHL 5004 Introduction to Public Health Sciences;
    - CHL 5300 Public Health Policy (except OEH specialization)
- Introductory course(s) in Epidemiology and Biostatistics; and,
- At minimum, one practicum placement.

Each specialty/field combines foundational public health research and practice course work, with discipline-specific specialization, and research skill and leadership development opportunities.

Students from each specialization begin their study together in the Introduction to Public Health Sciences core course (CHL 5004H), and reconnect with each other throughout the program at various research, leadership, and education events. This interdisciplinary approach to learning enables students to share a common public health perspective while strengthening their core disciplinary focus.

Course work across all fields provides theoretical foundations and skill development for approaching practice, assessing and critically evaluating public health approaches, considering ethical issues in public health practice and developing qualitative and/or quantitative research skills. A few of the specializations enable students to achieve certification in professional bodies, such as the provincial regulatory bodies of dietetics (Community Nutrition) and the Canadian Registration Board of Occupational Hygienists (Occupational and Environmental Health).

There are two emphases possible within the MPH degree: a practice-based and a research-based focus. These two foci are determined by the student's interests and career goals, and run parallel to each other over the two-year course of the degree program, with opportunity for cross-over from one emphasis to the other. For the practice-based focus the development of public health expertise through applied field work and research is considered a key element of the MPH program. All MPH students are required to complete at least one practicum. The practicum component is a key part of students' learning process. It is where students can gain skills in real public health practice settings in their specialized area, with the support of the university faculty as well as a field supervisor. It is a place where the theories and concepts taught in students' coursework bump up against application in practice. In general, the practica are designed to provide the students with an opportunity to apply and synthesize the theories, knowledge, concepts, principles and methods learned in their courses; and develop additional professional and/or research skills appropriate to their areas of interest. The kind of activities undertaken during the practicum depends on the specialization, the needs of the agency/organization sponsoring the practicum, and the student's own learning objectives and interests. Such activities include: undertaking a project (or part of a project) on behalf of the sponsoring agency/organization; or, participating in the ongoing business of the agency/organization.

The faculty have strong linkages with practitioners and researchers who supervise and provide mentorship for students. With faculty support, students identify learning needs, develop learning plans to guide their practicum experiences and report on their experiences during and after the placements. Feedback from students suggests that practica are extremely valuable opportunities to network, develop professional skills and experience new sectors of the health system. Students wishing to develop research skills may pursue research oriented practicum experiences. Students with a strong research focus will generally obtain their practicum experiences in academic research settings. Students in all specializations may take additional practicum placements beyond the one required, and also may construct a linked sequence of practicum placements - the capstone project - equivalent to a master's thesis. Specific course requirements within each MPH specialization can be found in Appendix 8 and the abbreviated course outlines are available in electronic format on the provided USB-stick.

### OUTCOMES

***Enrolment, Withdrawal & Graduations:*** The number of students enrolled full time in the MPH program has increased steadily in the past 5 years (Table 11). The most significant growth has occurred in the Health Promotion specialization. The Family and Community Medicine specialization is very small, largely because most students in this area prefer the MScCH option.

**TABLE 11: Full time + Part time Enrolment (Headcount)**

| Public Health Sciences Enrolment | Fall 2005 (FT + PT) | Fall 2006 (FT + PT) | Fall 2007 (FT + PT) | Fall 2008 (FT + PT) | Fall 2009 (FT + PT) |
|---|---|---|---|---|---|
| **Community Nutrition** | 19 + 6 | 21 + 2 | 21 + 6 | 16 + 3 | 18 + 2 |
| **Epidemiology** | 40 +13 | 36 + 17 | 42 + 19 | 50 + 15 | 50 + 11 |
| **Family and Community Medicine** | 7 + 12 | 5 + 9 | 8 + 14 | 2 + 2 | 1 + 2 |
| **Health Promotion** | 25 +8 | 27 + 7 | 31 + 8 | 41 + 8 | 48 + 9 |
| **Occupational & Environmental Health** | 20 + 5 | 21 + 6 | 23 + 6 | 20 + 4 | 22 + 6 |
| **Total** | **111 + 44** | **110 + 41** | **125 + 53** | **129 + 32** | **139 + 30** |

There is a significant cadre of part time students, though the numbers have been declining over the past 2 years. Part time students tend to be those who are employed (typically in public health) and who wish to upgrade their credentials.

The total enrolment data (Tables 12 and 13, for full-time and part-time students, respectively) reflects enrolments over the full academic year (fall, spring and summer terms), which are slightly higher than the fall headcounts, as shown in Table 11.

| TABLE 12: MPH Total Enrolment, Transfers, Withdrawals & Graduations by Year (FULL TIME) | | | | | | |
|---|---|---|---|---|---|---|
| Year[1] | New Enrolment | Total Enrolment [2] | # Female (%)[3] | # Visa (%) [4] | Total Withdrawals [5] | Total Graduations [6] |
| 2003-04 | 47 | 93 | 78 (83.9%) | 7 (7.5%) | 0 | 39 |
| 2004-05 | 63 | 116 | 98 (84.5%) | 9 (7.8%) | 2 | 42 |
| 2005-06 | 43 | 112 | 97 (86.6%) | 6 (5.4%) | 3 | 56 |
| 2006-07 | 56 | 111 | 91 (82.0%) | 7 (6.3%) | 0 | 49 |
| 2007-08 | 62 | 126 | 104 (82.5%) | 6 (4.8%) | 0 | 43 |
| 2008-09 | 60 | 130 | 108 (83.1%) | 1 (0.8%) | 1 | 62 |
| 2009-10 | 77 | 141 | 119 (84.4%) | 2 (1.4%) | 1 | 57 |

| TABLE 13: MPH Total Enrolment, Transfers, Withdrawals & Graduations by Year (PART TIME) | | | | | | |
|---|---|---|---|---|---|---|
| Year[1] | New Enrolment | Total Enrolment [2] | # Female (%) [3] | # Visa (%) [4] | Total Withdrawals [5] | Total Graduations [6] |
| 2003-04 | 11 | 46 | 36 (78.3%) | 0 | 1 | 13 |
| 2004-05 | 12 | 47 | 39 (83.0%) | 0 | 1 | 7 |
| 2005-06 | 17 | 52 | 42 (80.8%) | 0 | 1 | 16 |
| 2006-07 | 20 | 49 | 41 (83.7%) | 0 | 2 | 10 |
| 2007-08 | 19 | 53 | 42 (79.2%) | 0 | 1 | 13 |
| 2008-09 | 10 | 35 | 27 (77.1%) | 0 | 1 | 7 |
| 2009-10 | 7 | 36 | 28 (77.8%) | 0 | 0 | 9 |

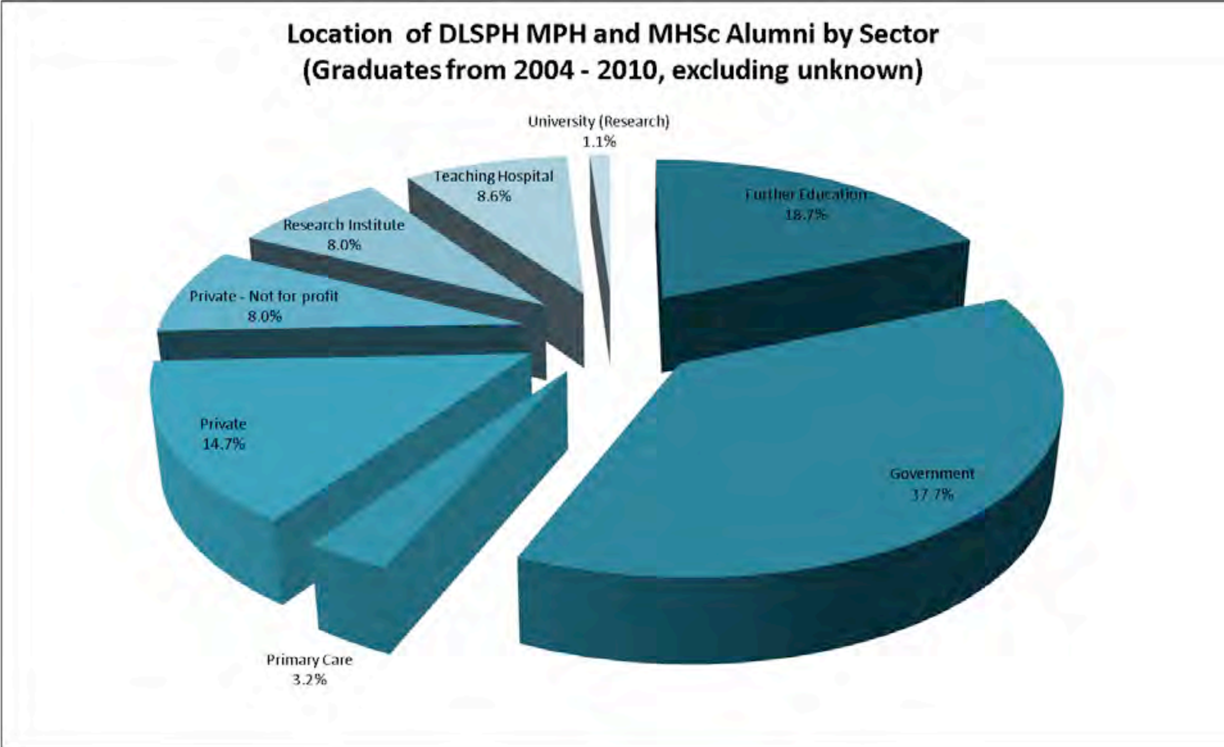
1 Academic year starting September 1 with three entry points: (Sept, Jan. and May).
2 All students registered in the program in that academic year continuing and new (for continuing, use numbers reported November 1).
3 Number of female students and (%).
4 Number of visa (international) students and (%).
5 All students who withdrew within that year.
6 All students who completed the program within that year.

As with the PhD program, the vast majority of the MPH students are female and Canadian citizens (or landed immigrants). The withdrawal rate is extremely low.

***Time to Degree Completion:*** The mean and median times to degree completion (TTC), over the past seven years (2003/4 - 2009/10) are provided in Table 14. Students are undertaking their programs, largely in a cohort, resulting in efficient completion rates, even for part-time students.

| TABLE 14: Mean (range) and Median Times to Completion of M.H.Sc./M.P.H. | | |
|---|---|---|
| **Specialization** | **Mean (range)** | **Median** |
| **Community Nutrition** | | |
| Full-time (n=46) | 1.7 (1.3-2.7) | 1.7 |
| Part-time (n=24) | 3.4 (2.3-4.0) | 3.7 |
| **Epidemiology** | | |
| Full-time (n=96) | 1.7 (1.0-2.3) | 1.7 |
| Part-time (n=61) | 2.6 (1.3-6.3) | 2.3 |
| **Family and Community Medicine** | | |
| Full-time (n=15) | 2.0 (1.3-2.7) | 2.0 |
| Part-time (n=15) | 3.4 (1.0-5.7) | 3.5 |
| **Health Promotion** | | |
| Full-time (n=51) | 1.9 (1.7-3.3) | 2.0 |
| Part-time (n=42) | 3.1 (2.0-5.3) | 3.0 |
| **Occupational & Environmental Health** | | |
| Full-time (n=62) | 1.4 (1.3-2.0) | 1.3 |
| Part-time (n=8) | 3.0 (2.3-4.3) | 2.8 |

***Career Paths for Graduates:*** Graduates of the MPH have been very highly sought after. Mostly, graduates are able to find good positions immediately after graduation. The chart below provides employment data after graduation, for 374 graduates for whom the information was available. The employment status of 79 graduates was unknown. More than one-third of the graduates find employment in the *Government* sector. This includes positions in local public health units, provincial agencies (Ministries of Health, the Ontario Agency for Health Promotion & Protection) and federal agencies (Health Canada, Public Health Agency of Canada). This is the most common for Epidemiology, Community Nutrition and Health Promotion graduates. Almost one in five of the MPH alumni return to university for further education – including doctoral studies, medical and dental schools. As expected, OEH alumni are more likely to work in *the Private (for profit)* sector and FCM graduates are most likely to be in *Primary care*.




### STRENGTHS & CHALLENGES

#### *Strengths*

- BREADTH AND UNIQUENESS OF SPECIALIZATIONS: The U of T program is unique in its breadth of specializations and 'uniqueness' of some of the programs offered under the MPH program.
  - Currently, the MPH Community Nutrition is the only professional masters program in Canada that is specific to Public Health Nutrition. The University of Guelph and Brescia College at the University of Western Ontario both offer professional masters programs related to dietetics in general but these do not have a public health focus. Memorial University is in the process of developing a public health nutrition masters program.
  - There are no comparable MPH programs in Family and Community Medicine. The University of Western Ontario offers a clinically-oriented Master of Clinical Science degree and a research-oriented PhD in Family Medicine. These are not specifically Public Health degrees.
  - The MPH Health Promotion field differs in significant ways from other HP programs offered in Schools of Public Health across Canada, with respect to its orientation, breadth and depth of course offerings and practicum opportunities. The Universities of Alberta and Waterloo and Dalhousie and Simon Fraser Universities include *health promotion* components in their Master's programs; many do not have a distinct HP program though.
  - The MPH Occupational and Environmental Health field is the oldest and most well established graduate program in occupational hygiene in the country. It is the only

Canadian Masters' degree specializing in occupational hygiene based in a School of Public Health which provides students with a cross-disciplinary appreciation of public health. The program's affiliation with the Occupational Medicine residency program provides unique access to health care practitioner working with the same client population.

### *Challenges*

- RECENT PROLIFERATION OF MPH PROGRAMS ACROSS CANADA: Given the recent proliferation of MPH programs across the country, there may be difficulty finding appropriate practicum placements for students and employment opportunities for graduates. Most of the new programs in Ontario are generalist MPH's and it is hoped that the reputation of our programs and our students, together with our location in the GTA will mitigate this pressure. Nevertheless this situation must be monitored.

- RELIANCE ON STATUS FACULTY: Status and adjunct faculty are essential underpinnings for a professional program. They bring essential components of professional practice to our programs. However, the reliance on these faculty can pose a challenge, particularly because those that support the professional programs often work in organizations that do not have education as a mandate. Therefore this important resource is subject to fiscal realities and may be at risk. Again, this is an issue that needs to be carefully monitored.

- STUDENT FUNDING: Since the introduction of the current funding policy that guarantees a minimum level of support to PhD students, it was not possible to provide a similar guarantee for all our Master's students. It has therefore been difficult to compete with other graduate programs that offer financial incentives at the Mater's level. This is a challenge shared by all of the Master's programs at the DLSPH. A funding model sustainable over the long-term, one that relies on the research funds of individual faculty members, is needed, especially given the recent proliferation of similar programs across Canada.

## • Master of Science (Biostatistics)

### OVERVIEW

At the present time, in the DLSPH, the MSc degree program is offered in one specialization only – Biostatistics. Biostatistics involves the development and application of statistical methodology to further understanding of data arising in public health, and the health and biological sciences more broadly.

### OBJECTIVE

The objective of the MSc program is to prepare students for entry into a PhD program and for a career as a biostatistician to work in universities, government departments, hospitals, pharmaceutical/health corporations and other health agencies such as cancer research units, by providing training in the theory and practice of biostatistics.

### COMPETENCIES

Graduates of the MSc program will learn:

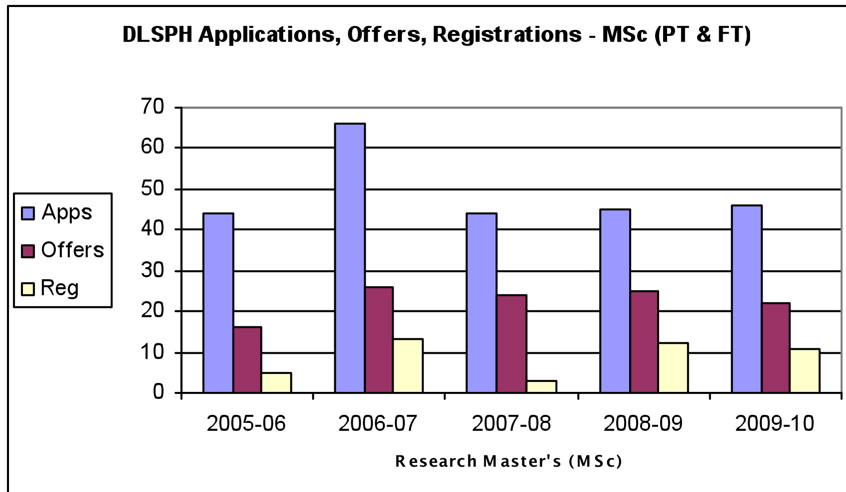
- **Mathematical statistical techniques:** Knowing the mathematical properties of statistical methods and to be able to read the statistical literature to use new statistical methods and to understand the strengths and weaknesses of these new methods.
- **Computational proficiency:** Handling large datasets, solving for numerical results in statistical analyses.
- **The art of data analysis:** Understanding how to link scientific questions and mathematical statistical methods. Translating the scientific questions into mathematical language, and the results of a statistical analysis back to the scientist.

### ADMISSION REQUIREMENTS

In addition to the minimum standard admission requirements of a 4 year undergraduate degree with a minimum B standing in the 4th year and demonstrated proficiency in English language, prerequisite courses in linear algebra, advanced calculus, probability and mathematical statistics are required.

### APPLICATIONS

Over the past 5 years the annual number of applications to the MSc program has varied, though typically around 45. The acceptance rate is also quite variable, and somewhat lower than for other programs at the school. Possible reasons include the lack of funding support, which is often provided in competing programs.




| | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|
| **Offer rate (%)** | 36% | 39% | 55% | 56% | 48% |
| **Acceptance rate (%)** | 31% | 50% | 13% | 48% | 50% |

**PROGRAM DESCRIPTION**

The MSc is a 5.0 full credit equivalent program that can be completed in one year of study. Students may choose between two formats:

1. *A course only version of the MSc*: This option appeals to most students and meets the needs of those who intend to pursue a PhD in biostatistics and those who plan to join the workforce after completing the MSc.

2. *A thesis version of the MSc*: This option appeals to mature students who are already working as biostatisticians, and who have a clearly identified research area they wish to pursue.

In the Division of Biostatistics at the DLSPH, the student receives a deep and broad experience in all aspects of data analysis, mathematical statistics, classical and modern methods in linear and non-linear models, survival analysis, and may choose from a collection of more specialized topics such as Bayesian methods, statistical methods applied to genetics, and computer intensive techniques.

### COURSES

| Required courses (4.0 FCE) | | |
|---|---|---|
| CHL5004H | Introduction to Public Health Sciences | (0.5) |
| CHL5207Y | Laboratory in Statistical Design | (1.0) |
| CHL5210H | Categorical Data Analysis | (0.5) |
| STA2112H | Mathematical Statistics I | (0.5) |
| STA2212H | Mathematical Statistics II | (0.5) |
| CHL5250H | Biostatistics Seminar | (0.5) |
| | **Plus one of the following** | |
| CHL5209H | Survival Analysis I | (0.5) |
| STA2209H | Lifetime Data Modeling | (0.5) |

In addition, students are required to undertake two electives (1.0 FCE) from the following options: CHL5201H Introduction to Biostatistics II (0.5) CHL5204H Survey Methods in Health Sciences II (0.5) CHL5222H Longitudinal Data Analysis (0.5) CHL5223H Applied Bayesian Methods (0.5) CHL5224H Statistical Genetics (0.5) CHL5225H Advanced Statistical Methods for Clinical Trials (0.5) CHL5401H Introduction to Epidemiology (0.5) CHL5402H Epidemiologic Methods II (0.5) STA2101H Methods of Applied Statistics I (0.5) CHL7001H Statistical Methods for Genomics and Bioinformatics (0.5) CHL7001H Statistical Methods in Data Mining (0.5) CHL7001H Spatial Modeling (0.5) CHL7002H Simulation Methods (0.5).

The required two term course, CHL 5207 Laboratory in Statistical Design, includes one two hour lecture and four hours practical work per week. The classroom time is spent on introducing the student to applied statistical issues in research. The practicum is meant to provide the student with hands-on experience with design and analysis issues encountered by applied statisticians in the workforce, typically at surrounding hospitals or research institutes. This also provides opportunities for research assistantships. The Biostatistics seminars, given mainly by faculty members and guest speakers, are intended to provide students with an opportunity to learn, or have some exposure to, a variety of current advanced statistical methods used in health sciences research.

### OUTCOMES

For many years, the MSc program was actually offered with several specializations – Biostatistics, Epidemiology, Occupational & Environmental Health and Social & Behavioural Health Sciences. Effective September 2004, the MSc programs were merged with their MHSc counterparts of the same name, for a variety of reasons. There was no corresponding MHSc (later to become the MPH) for Biostatistics and therefore the MSc degree was retained for the Biostatistics specialization only. The data provided in the tables below, include the last of the MSc students in the S&BHS and Epi specializations.

***Enrolment, Withdrawal and Graduations:*** Over the past five years, the number of students enrolled in the MSc has initially declined, reflecting the merging of the three fields into the MHSc (MPH). Enrolment in the Biostatistics specialization is now increasing, with a corresponding increase in part time students.

TABLE 15: MSc Biostats Full time + Part time Enrolment (Headcount)

| | Fall 2005 FT + PT | Fall 2006 FP + PT | Fall 2007 FT + PT | Fall 2008 FT + PT | Fall 2009 FT + PT |
|---|---|---|---|---|---|
| S & B Health Science | 2 + 2 | 0 + 2 | 0 | 0 | 0 |
| Biostatistics | 5 + 1 | 12 + 3 | 3 + 1 | 9 + 4 | 12 + 5 |
| Epidemiology | 8 + 1 | 0 | 2 + 0 | 0 | 0 |
| **Total** | **15 + 4** | **12 + 5** | **5 + 1** | **9 + 4** | **12 + 5** |

The total enrolment data (Tables 16 and 17), for full- and part-time students, respectively, reflect enrolments over the full academic year (fall, spring and summer terms), which are slightly higher than the fall headcounts as shown in Table 15, above.

As with the other programs in the School, the majority of students are female, though in Biostatistics there are proportionately more males. Although enrolment numbers are small, there are proportionately slightly more international students in the MSc. Withdrawal rates are low.

TABLE 16: Master's Total Enrolment, Transfers, Withdrawals & Graduations by Year (FULL TIME)

| Year[1] | New Enrolment[2] | Total Enrolment [3] | # Female (%) [4] | # Visa (%) [5] | Total Transfers | Total Withdrawals [6] | Total Graduations [7] |
|---|---|---|---|---|---|---|---|
| 2003-04 | 17 | 58 | 45 (77.6%) | 1 (1.7%) | 0 | 0 | 18 |
| 2004-05 | 5 | 42 | 32 (76.2%) | 0 (0.0%) | 0 | 2 | 14 |
| 2005-06 | 4 | 19 | 14 (73.7%) | 0 (0.0%) | 0 | 0 | 31 |
| 2006-07 | 11 | 15 | 8 (53.3%) | 3 (20.0%) | 0 | 0 | 6 |
| 2007-08 | 3 | 5 | 4 (80.0%) | 0 (0.0%) | 0 | 1 | 12 |
| 2008-09 | 8 | 8 | 4 (50.0%) | 0 (0.0%) | 0 | 2 | 2 |
| 2009-10 | 10 | 12 | 6 (50.0%) | 4 (33.3%) | 0 | 0 | 6 |

[1] Academic year starting September 1 with three entry points: (Sept, Jan. and May).
[2] Sum of intake for each entry point of a given academic year.
[3] All students registered in the program in that academic year continuing and new (for continuing, use numbers reported November 1).
[4] Number of female students and (%).
[5] Number of visa students and (%).
[6] All students who withdrew within that year.
[7] All students who completed the program within that year.

| TABLE 17: Master's Total Enrolment, Transfers, Withdrawals & Graduations by Year (PART TIME) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Year[1] | New Enrolment[2] | Total Enrolment [3] | # Female (%) [4] | # Visa (%) [5] | Total Transfers | Total Withdrawals [6] | Total Graduations [7] |
| **2003-04** | 1 | 10 | 7 (70.0%) | 0 | 0 | 1 | 2 |
| **2004-05** | 0 | 8 | 5 (62.5%) | 0 | 0 | 1 | 5 |
| **2005-06** | 1 | 5 | 3 (60.0%) | 0 | 0 | 0 | 0 |
| **2006-07** | 2 | 6 | 4 (66.7%) | 0 | 0 | 2 | 2 |
| **2007-08** | 0 | 1 | 1 (100.0%) | 0 | 0 | 0 | 1 |
| **2008-09** | 5 | 6 | 4 (66.7%) | 0 | 0 | 0 | 0 |
| **2009-10** | 2 | 5 | 4 (80.0%) | 0 | 0 | 1 | 2 |

[1] Academic year starting September 1 with three entry points: (Sept, Jan. and May).
[2] Sum of intake for each entry point of a given academic year.
[3] All students registered in the program in that academic year continuing and new (for continuing, use numbers reported November 1).
[4] Number of female students and (%).
[5] Number of visa students and (%).
[6] All students who withdrew within that year.
[7] All students who completed the program within that year.

| TABLE 18: Mean (range) and Median Times to Completion of MSc program in Years | | |
|---|---|---|
| **Biostatistics** | **Mean (range)** | **Median** |
| Full-time (n=37) | 1.2 (0.7-5.0) | 1.0 |
| Part-time (n=6) | 2.3 (1.3-5.3) | 1.5 |

***Time to Degree Completion:*** The mean and median times to completion for the MSc students over the past 7 years are just over 1 year. Even part time students complete their programs efficiently.

***Career Paths for Graduates:*** Graduates of the MSc in Biostatistics have been very highly sought in universities, research hospitals, and various government organizations and in the private sector such as the pharmaceutical industry. Most graduates find suitable positions immediately after completion of the program. More than one-fourth of graduates continue pursuing further education, typically in a doctoral degree in Biostatistics. Less than one-third of graduates find employment in the private sector. The majority join research groups at teaching hospitals (e.g., University Health Network, SickKids), research institutes (e.g., Samuel Lunenfeld), and government organizations and agencies (e.g., Cancer Care Ontario, Institute for Clinical Evaluative Sciences, Ontario Agency for Health Promotion & Protection).

### STRENGTHS & CHALLENGES

#### *Strengths*

The MSc in Biostatistics is unique in its dual focus on statistical methodology and practical training. Students benefit from the rigorous methodological course work and from the faculty-supervised research practicum – together they prepare the students to be fully engaged in various research environments upon graduation. The program is able to draw on a particularly rich and diverse biostatistics faculty, which includes numerous members from local, internationally renowned research institutions and teaching hospitals.

#### *Challenges*

Since the introduction of the current funding policy that guarantees a minimum level of support to PhD students, it was not possible to provide a similar guarantee for all our Master's students. It has therefore been difficult to compete with other graduate programs that offer financial incentives at the Mater's level. This is a challenge shared by all of the Master's programs at the DLSPH. A funding model sustainable over the long-term, one that relies on the research funds of individual faculty members, is needed, especially given the recent proliferation of similar programs across Canada.

## Master of Science in Community Health (MScCH)

### Overview

The Master of Science in Community Health (MScCH) program is the DLSPH's most recently-implemented degree program, having been approved and admitting its first students in 2007. It differs from the School's other degrees in its emphasis, content, intended audience and method of delivery. A 5.0 credit program, the MScCH is geared to applicants with very specific academic career development goals that are relevant to practicing health professionals. In addition, this program was developed with a Type 1 Graduate Diploma Option consisting of 3.5 FCEs, as a specified subset of the required courses. Five specializations are currently offered: Addictions and Mental Health; Family and Community Medicine; Health Practitioner Teacher Education; Occupational Health Care and Wound Prevention and Care. The Health Practitioner Teacher Education field is seen to be broadly generic and applicable to all health professions, while the other specializations represent specific areas of professional practice.

### Objectives

Objectives of the program are:

- To provide experienced health practitioners, whether they work in either academic or community settings (or both), with the skills to become effective clinical/public health leaders and teachers in their specific professional discipline.
- To further extend the continuum of higher education opportunities for health professionals to exceed the current traditional continuing education. It emphasizes critical, analytic, interpretive and scholarly skills.
- To develop professional models for improved interprofessional team practice and education spanning clinical, community and public health domains of practice.

The detailed objectives for each specialization are provided in Appendix 9.

The program largely offers a flexible, time-efficient, classroom-based, modular programmatic delivery model. It uses existing facilities and current faculty within the Dalla Lana School of Public Health and Faculty of Medicine.

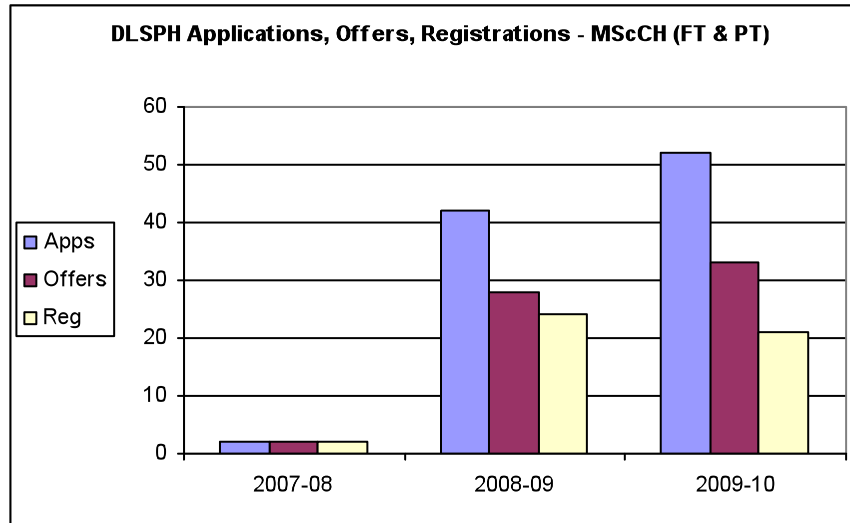
### Admission Requirements

The MScCH is a graduate-level, professional degree program, which is intended for and limited to established health professionals who wish to enhance their professional knowledge and skills, while being able to remain employed/in practice. Admission to the FCM stream requires appropriate licensure in a regulated health profession (or equivalent) and a valid license to practice in Canada or in the applicant's home jurisdiction. This program is not intended to assist applicants in becoming licensed health practitioners in Canada.

Applicants who have demonstrated interest and ability in scholarly work throughout their health professional training will be given preference. Applicants must also have a demonstrated proficiency in the English language.

### APPLICANTS

When the program opened in 2007, students were initially enrolled in the MHSc, and then transferred to the MScCH. Therefore, the data for 2007-8 in the Figure below are incomplete.




| | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|
| **Offer rate (%)** | 100% | 67% | 63% |
| **Acceptance rate (%)** | 100% | 86% | 64% |

### PROGRAM DESCRIPTION

The MScCH was designed to enable a choice of program completion options. The MScCH may be completed within 12 consecutive months (full time), or students can take up to 5 years to complete the degree on a part-time basis. A full time student would need to commit to a minimum of 8-14 weeks, full-time, on-campus class attendance plus 160-320 practicum hours of supervised and evaluated field work.

The MScCH degree requires the completion of 5.0 full course credit equivalents (FCE) including at least one supervised, 160-hour, field placement/practicum in which learners are expected to apply their new skills and record and reflect upon their experiences. All students will complete the introductory public health course plus one additional "core" course, with the majority also completing one or more graduate courses addressing the theories and strategies of effective teaching. Field specific required courses, electives and one or two supervised field placements or practica round out the program. An OCGS-defined Type 1 Diploma option will consist of 3.5 FCEs, as a specified subset of each fields's courses. There is no thesis requirement. The detailed requirements for each specialization are provided in Appendix 9.

Many of the courses in the program combine a total of 26-39 hours of intensive "on campus" classroom activities, accompanied by an extended "off campus" study period. Other courses may run in the more traditional longitudinal 13-week semester format. In addition, one course (CHL5601) is offered on-line. The practicum may run concurrently with the formal course work.

The program was introduced with four initial specializations: Health Practitioner Teacher Education (HPTE); Family and Community Medicine (FCM); Wound Prevention and Care (WPC) and Public Health Nutrition (PHN). In 2009, two additional fields were approved: Addictions and Mental Health, and Occupational Health Care. More recently, the PHN field became an advanced standing option in the MPH, making the MScCH PHN field not necessary.

### Outcomes

The number of students enrolled in the program has increased, with expected emphasis on part time enrollment. Though the data are incomplete this trend has continued for the 2010-11 entry cycle.

It is too early in the history of the MScCH to consider time to completion trends or other year-over-year data. However, we would note that the program has had 16 full-time and 25 part-time students graduate to date.

| | Fall 2008 FT + PT | Fall 2009 FT + PT |
|---|---|---|
| **Addictions & Mental Health** | NA | 1 + 1 |
| **Family & Community Medicine** | 0 + 7 | 1 + 11 |
| **Health Practitioner Education** | 5 + 16 | 1 + 21 |
| **Public Health Nutrition** | 4 + 5 | 0 + 3 |
| **Wound Care** | 0 + 2 | 2 + 5 |
| | | |
| **Total** | 9+30 | 5+41 |

Special Features of this Professional Masters Degree

- Health professional practice orientation
- Emphasis on basic theory as foundation
- Learn useful skills and strategies
- Critical appraisal education and clinical literature
- Familiarity with research project issues
- Experience from individual field work practice
- Accessible for distance and part- time
- Classroom materials presented face-to-face
- Educational Technology as a Resource
- Academic Skills enhancement in Presentation/Writing
- Best Practice Faculty Development design

The design of the courses is also quite innovative within a program structure designed to accommodate the needs of working professionals. Several of the courses in this program are delivered in intensive several days concurrent “on campus” classroom modules totaling 26-39 contact hours per course. In “off campus” pre and post study periods students complete readings and research assignments. Other courses include one entirely web based course and service learning practice.

Many health professionals are required to participate in regular, formal Continuing Education to maintain their license to practice. Students in the MScCH program have the opportunity to receive partial credit in specified introductory graduate courses for work previously completed in specified matched Faculty of Medicine Continuing Education (CE) courses taught by the same graduate faculty as in the MScCH program. In all cases, the students are required to complete additional work beyond the CE requirements in order to receive the graduate course credit.

## C. Other Educational Activities

This section provides an overview of other educational activities that are part of the DLSPH program offerings. These activities include:

i. Two Royal College of Physicians and Surgeons Specialty Training Programs in Community Medicine and Occupational Medicine

ii. The Undergraduate Medical Education Program in Public Health – *Determinants of Community Health* (course core and elective curriculum)

iii. Diploma in Industrial Health

iv. Undergraduate Arts & Science Programs

## Royal College of Physicians and Surgeons Specialty Training Programs In Community and Occupational Medicine

### Community Medicine Residency Program

The Community Medicine Residency Program (CMRP) at UofT is the oldest and largest in Canada. It was originally housed in the Department of Preventive Medicine & Biostatistics within the Faculty of Medicine (FoM), then in the Department of Public Health Sciences and moved along with PHS into the DLSPH.

Although the Royal College requires residency programs to be located within Faculties of Medicine, it is felt that the DLSPH as an EDU-A is best situated to house the program. As the DLSPH transitions to independent Faculty status, a formal Memorandum of Understanding between the DLSPH and the FoM will be necessary to ensure that the program meets the Royal College accreditation standards. This will include a dual reporting relationship of the Director of the Program to the FoM, through the Vice Dean Postgraduate Medical Education and to the Director of the DLSPH. The program currently is fully approved by the Royal College. The program has 100% pass rate for residents setting the Royal College exam.

**Objectives, learning outcomes, competencies:** To produce Royal College certified physicians who have the competencies to diagnose and treat populations as well as individuals to maintain and improve health. The Community Medicine Residency Program is a five-year specialty training program which has five components:

| YEAR | # CM Residents |
|---|---|
| 2010-2011 | 35 |
| 2009-2010 | 34 |
| 2008-2009 | 34 |
| 2007-2008 | 30 |
| 2006-2007 | 26 |

- Clinical training – 2 years provided by Department of Family & Community Medicine (DFCM) to lead to Certification from the College of Family Physicians of Canada.
- Graduate training: - MPH program in epidemiology or equivalent (16-21 months)

- Field Rotations (15 months core rotations at affiliated sites (local public health agencies, OAHPP, MOHLTC, PHAC). Rotations include Communicable Disease (3 months), Environmental Health (3 months), Planning Policy and Chronic Disease (3 months) and Senior Management (6 months).
- Academic half days every Friday morning
- Leadership: chief resident etc

**Admission requirements, admission policies/procedures:** The program currently has 35 residents spanning the five years. 31 are active and 4 are on personal or parental leave. Of the 35 we have 21 Canadian medical graduates (CMG) direct entry, 3 international medical graduates (IMG) direct entry, 3 IMG assessed through the independent Centre for the Evaluation of Health Professionals Educated Abroad entry, 2 transfers, 3 re-entry (1 Ontario, 2 Nova Scotia). Applicants apply through four routes only:

1. Canadian Medical Graduates apply directly from medical school through Canadian Resident Matching Service (CaRMs) (usually 15-20 applicants for 4 positions)

2. International medical graduates apply through CaRMs after completing evaluating exams (usually >100 applicants for 1 position)

3. Transfer applicants apply from UofT or other Ontario post graduate program (usually 2-3 for 1-2 positions)

4. Re-entry applicants apply if licensed in Ontario with 12 months minimum practice experience (few applicants for 0-1 positions)

All applicants must provide a personal letter, 2-5 reference letters and all post secondary education transcripts (expect minimum B+ in Statistics).

**Program Innovation or Creativity:** The CMRP has significantly increased the number of residents in the past five years to meet the needs of public health renewal, as well as applicant interest. In addition, the program has unique partnerships with:

- The Northern Ontario School of Medicine (NOSM): The UofT CMRP has supported the development of the NOSM CMRP through a number of activities e.g., Program directors sit on each others committees; Toronto Public Health provides Communicable Disease rotation for NOSM residents; UofT residents provided resident input for NOSM prior to their first residents starting; UofT Program Director has mentored the NOSM Program Director; The NOSM residents and faculty participate in the Friday morning rounds by distance. In addition, often residents from Queen's, and Ottawa also benefit from the UofT rounds.

- Barrie, Ontario (Simcoe Muskoka district): The UofT program developed a Distributed Medical Education site with the Department of Family and Community Medicine to provide one slot for a resident to be trained at the Royal Victoria Hospital in Barrie for Family Medicine (FM). As part of this arrangement the Simcoe Muskoka Health Unit provides a one month public health rotation for all FM residents. This program may need to be on hold for 2011 as the RVH construction is behind schedule.

- Government of Nova Scotia: The UofT program partnered with PHAC to support a re-entry resident who will return service in Nova Scotia. The resident has completed her MPH through

distance and most of her core rotations in Nova Scotia and will set the exams in the spring of 2011. A second resident will start in October 2010 with a direct arrangement with Nova Scotia.

- Personal and Program Learning Plans and Portfolios: The program has developed paper-based learning plans for each resident to plan and track their achievement and demonstration of competency (Royal College, program and personal); and for the program to ensure that there are sufficient learning and assessment opportunities to meet Royal College standards.

**Future innovations:**

- Joint certification pediatrics/occupational medicine with community medicine
- Proposed development of a DLSPH MPH focused specifically on CM residents (general and global health in addition to Epidemiology): A number of residents pursue graduate training elsewhere due to interest in global health or desire for a more general MPH than the MPH offered at DLSPH. This MD MPH could be developed in collaboration with UME.

**Comparable programs in Canada:** 12 other CMRP in Canada: None in Atlantic Canada, 4 in Quebec (McGill, UoM, Sherbrooke, Laval), 4 other Ontario (McMaster, Queen's, Ottawa, NOSM) 1 Manitoba, 2 Alberta (Calgary and UoA, 1 UBC.

**Outcomes/ Graduate's Employment/Career Paths:** The CMRP housed in the School has produced most of the specialists practicing in Canada today including the current Chief Public Health Officer for Canada, the CEO of the OAHPP, the previous Chief Medical Officers of Health for Ontario and the current Medical Officer of Health for Toronto. Other graduates are in positions of Medical Officers of Health in local public health units, Associate Chief MOH (Ontario), Academic Consultants (OAHPP), and senior administrators in other provincial heath agencies (e.g., CCO).

### Occupational Medicine Residency Program

The Occupational Medicine residency program at the University started to admit residents in 1994. Initially Occupational Medicine was a five year specialty program but, in 2006 it became a two year subspecialty program. This is a small postgraduate program with only one position per year.

Currently entry into the program occurs after successfully completing three years of core internal medicine training. However the Royal College Committee on Specialties has recently supported a proposal for a second route of entry through Community Medicine. Final approval of this route of entry is pending and is anticipated in 2011. This will allow residents trained in Community Medicine to be eligible to do subsequent training in the subspecialty of Occupational Medicine.

The Occupational Medicine residency program was last reviewed externally (by the Royal College) in 2007 and it was granted full approval with no significant weaknesses being identified. At that time, there were six residents in the specialty program. The next external review is scheduled for 2013. As well, an internal review (by the University of Toronto) was carried out in June, 2010 to facilitate preparation for the 2013 review.

**Objectives / Learning Outcomes / Competencies:** The Objectives of Training and Specialty Training Requirements in Occupational Medicine of the Royal College of Physicians and Surgeons of Canada provide a detailed description of the objectives of training in CanMEDS format. The objectives for each CanMEDS is included in the Appendix 10.

**Admission Requirements:** At present admission occurs in the Canadian Residency Match Year 4 match after successful completion of three years of core internal medicine training. The admissions process includes a review of the candidate's performance to date in residency training, a personal letter, three letters of references and an interview. There is a selection subcommittee of the Occupational Medicine Residency Committee comprised of academic faculty and a resident already in the Occupational Medicine program. In the future, after the anticipated approval of a new route of entry through Community Medicine, applicants who have successfully completed residency training in Community Medicine will also be considered for training spots in the subspecialty of Occupational Medicine with the selection involving a similar process. It is anticipated that previous training in Community Medicine may co-count for up to one year of training in Occupational Medicine.

> The Royal College of Physicians and Surgeons of Canada defines Occupational Medicine as a medical discipline that deals both clinically and administratively with the health needs of individuals and groups with respect to their working environment and includes the recognition, evaluation, control, management and prevention of occupationally-related diseases and injuries.

**Program Description:** There is currently one resident enrolled in the program and he is the first to enter the new two year subspecialty stream. Previously all of the 12 residents who completed the five year specialty program successfully passed the Royal College examination to become Fellows of the Royal College of Physicians and Surgeons of Canada (FRCPC) in Occupational Medicine. In the new two year subspecialty program, the first year of the program is primarily a didactic year with residents spending one academic year at the DLSPH, completing a Diploma in Industrial Health (DIH) or Master's Degree (MScCH) in the Occupational Health Care field. This provides core training in areas relevant to the practice of Occupational Medicine such as toxicology, epidemiology, occupational hygiene and

organization and management of occupational health services. The remaining time is spent doing a combination of training in clinical areas relevant to Occupational Medicine such as clinical toxicology, dermatology, respirology and musculoskeletal problems as well as placements in industry and government (Ministry of Labour and the Workplace Safety and Insurance Board).

**Program Innovation or Creativity:** This is one of only two Royal College Occupational Medicine residency programs currently accredited in Canada. The program provides a combination of clinical rotations, didactic course work and industry and government placements coupled with an academic half day back curriculum, Occupational Medicine didactic rounds, and book club to allow comprehensive training in all facets of Occupational Medicine. The Program Director, Ron House is the past president and a current member of the national Occupational Medicine Specialty Committee which has been working with the Royal College to develop a new route of entry from Community Medicine for subspecialist training in Occupational Medicine. This program innovation will allow a reintegration of Community Medicine and Occupational Medicine and should stimulate interest in Occupational Medicine training.

**Comparable Programs in Canada:** The only other Occupational Medicine residency program in Canada is at the University of Alberta. L'Université de Montréal has also applied to the Royal College for accreditation of a training program in the subspecialty of Occupational Medicine and the accreditation process (which has been going on for more than a year) is nearing completion. It is anticipated that there will be three accredited training program in Occupational Medicine across the country in 2011.

**Outcomes/ Graduates' Employment / Career Paths:** Most graduates (12 physicians having completed the 5-year specialty program) engage in a mixture of practice activities such as consulting work at several companies as well as the Workplace Safety and Insurance Board and other sites. Some also do consulting work for the insurance sector, in particular in relation to assessment of long-term disability and return to work. We encourage graduates of the residency program to take part in academic activities in the residency program (such as participation in the half day back didactic sessions and industry placements) and to incorporate these into their practice mix. Six of our former trainees are currently participating in some aspect of the residency program.

Our graduates are also starting to assume leadership positions in Occupational Medicine. One of our graduates, Dr. Roohi Qureshi, is the Assistant Program Director for the Residency program and the current and past presidents of our national specialty society, The Occupational Medicine Specialists of Canada, are former trainees in our residency program. Our program has only been producing graduates since the late 1990's and our eldest graduates are only in their early 40's. It is anticipated that leadership positions in Occupational Medicine in Canada will increasingly be held by graduates of our program.

## Undergraduate Medical Education – Courses in Public Health

Public health competencies are core components of the undergraduate medical curriculum as described in the undergraduate medical education (UME) program at UofT objectives, Faculty of Medicine Vision, Accreditation standards and Medical Council licensing requirements.

***Objectives, Learning Outcomes, Competencies:*** UME depends on the DLSPH for a number of core and elective public health components. Determinants of Community Health (DOCH) is the overall public health course with four (4) aspects currently:

- DOCH1 is half a day per week over the full first year and covers basic sciences of community health along with tutorials and experiential field visits to schools, home care and community based health promotion agencies. There are 250 students in this course.
- DOCH2 is half a day per week over the full second year and introduces the basic principles of community based research with each student completing an independent research project with a community health agency. There are approximately 230 students in this course.
- DOCH3 – Transition to Clerkship (TTC) is currently a 3 week block course at the beginning of the clerkship year with focus on the manager role as well as key concepts in Evidence-Based Medicine, Complementary and Alternative Medicine, public health and death certification. There are approximately 224 students in this course.
- DOCH4 is a one week block course held five times over the final year. It reviews and integrates health system, EBM, patient safety, CAM, aboriginal health, occupational health and complex care in the community. DOCH 4 will be fully integrated into the new UME course Transition to Residency which will start in 2012. There are approximately 224 students in this course (one fifth of the class in each block).

In addition to DOCH, the DLSPH provides support for medical student electives in public health from U of T and other Canadian as well as international medical schools and provides faculty back up for the student run Public Health Interest Group. The DLSPH provides the UME faculty lead for the Canadian Public Health Education Network. Finally there has been initial discussion about the development of an MD-MPH stream. [For more information refer to the Faculty of Medicine self study posted on the Dean's web site http://www.facmed.utoronto.ca/Assets/FacMed+Digital+Assets/Leadership/FacReview/Self+Study.pdf?method=1.

The DOCH course is renowned in Canada and beyond for its extensive coverage of public health curriculum. U of T has more hours of curriculum in public health than any other Canadian medical school. The experiential learning in first year as well as the independent research project completed in the second year are of special note in terms of innovation. The new course Transition to Residency will be an additional opportunity to integrate DOCH curriculum into final year student learning and preparation for their career choice. The expansion of the undergraduate medical program to the University of Toronto at Mississauga (UTM) campus will provide opportunities to enhance links with Peel Public Health and the local community based agencies and care providers for DOCH experiences.

#### STRENGTHS & CHALLENGES:

- The UME student enrolment has grown over the past five years to meet societal need. In addition the UTM expansion requires additional resources for the special needs of the expansion (distance, travel etc). The Association of Faculties of Medicine in Canada (AFMC) Future of Medical Education Report in Canada (2010) confirms the importance of core curriculum in "Prevention and Public Health" (recommendation IV), as well as community based and inter-professional learning.
- The DLSPH is well situated to provide leadership in these areas to support UME excellence in future medical education. However, the DLSPH needs to urgently address the essential issues of faculty recruitment, retention, career development, sustainability and succession planning to ensure the UME public health curriculum needs are met for the long term.

## DIPLOMA IN INDUSTRIAL HEALTH

The Faculty of Medicine Diploma in Industrial Health (DIH) provides postgraduate training in occupational health and safety. The program is designed for physicians/clinicians desiring didactic training in occupational health. It is of particular interest to foreign trained students who may not meet the eligibility requirements of the School of Graduate Studies or physicians desiring a shorter program than the Master's programs. It can be completed full-time (9 months) or part-time (within 5 years of first registration). Required courses include Statistics and Epidemiology (e.g. Community Health Appraisal Methods), Perspectives in Occupational Health and Safety, Advanced Clinical Studies, Occupational Hygiene and Environmental Health and electives to make up 5 full course credits.

## UNDERGRADUATE ARTS & SCIENCE PROGRAMS

The educational offerings at the DLSPH have been predominantly at the graduate level, although some faculty have been involved in undergraduate teaching in courses offered in the Faculty of Arts and Sciences (FAS). Specifically, K. Domnick (retired 2008) taught in the Health Studies Program at University College, B. Harvey teaches in the Human Biology Program and G. Einstein teaches a Health Psychology course in the Department of Psychology. In the Human Biology program, 2 courses have been developed and are being taught:

- "Epidemiology in Health and Disease"
  - Fall 2008: 21 students in HMB442
  - Winter 2010: 33 students in HMB342
  - Winter 2011: 125 students currently registered for HMB342
- "Statistics Applied to Human Biology"
  - Fall 2009: 55 students in HMB325
  - Fall 2010: 84 students in HMB325

There is a growing understanding of the benefits that would accrue from the design and teaching of courses to undergraduates in the FAS in several important ways:

- Engaged and well prepared undergraduates will create an energy adding to the environment at DLSPH;
- Interested undergraduates will seek out faculty who need research assistants and provide hands-on help on projects either as work-study students or as volunteers;
- There will be opportunities for teaching and grading among DLSH graduate students.
- Exposure to public health will attract graduate students to the DLSPH.
- Undergraduate teaching will bring a new revenue stream to the DLSPH.

A Committee has been established, chaired by Professor Paul Corey, to design and develop some possible courses and to work with FAS towards establishing these courses. The committee has proposed 3 courses (0.5 FCE, each)

- PHS200 Introduction to Public Health
- PHS201 Introduction to Public Health Methods
- PHS300 Social and Behavioural Issues in HIV Prevention

The FAS has now approved these courses and it will now be up to the DLSPH to develop a business model and ensure that moving forward on this initiative will be in the best interests (academically and financially) of the School.

## D. Innovations & Initiatives in Education

This section provides an overview of additional innovations and initiatives in education that are part of the DLSPH program offerings. These programs include:

i. Collaborative programs
ii. Strategic Training in Health Research (STIHR) grant programs
iii. Centre for Critical Qualitative Research

### Collaborative Graduate Programs (Non-degree granting programs)

In addition to the research and professional degree programs, the DLSPH participate in unique, non-degree granting, collaborative graduate programs. These innovative programs emerge from cooperation between two or more graduate units, often from across multiple Faculties, providing students with a broader base from which to explore a novel interdisciplinary area or a special development in a particular discipline, to complement their degree studies. A student must be admitted to and enrolled in one of the collaborating graduate units and must fulfill all the requirements for the degree in that home unit, in order to participate in a collaborative program. On successful completion of requirements for the collaborative program, a notation is added to the student's transcript and the student receives a parchment signifying his/her completion.

Currently, the DLSPH participates in 12 Collaborative Programs, across the University. These programs are:

- Aboriginal Health
- Addiction Studies
- Aging, Palliative & Supportive Care across the Life Course
- Bioethics
- Cardiovascular Sciences
- Community Development
- Environment and Health
- Global Health
- Health Care, Technology & Place
- Health Services & Policy Research
- Women & Gender Studies
- Women's Health

A brief description of a selection of these collaborative programs is presented in Appendix 11. A brief description of the Doctoral Collaborative Program in Global Health is presented below.

## COLLABORATIVE DOCTORAL PROGRAM IN GLOBAL HEALTH (CPGH)

**FACTS & FIGURES: Current Student Numbers by Department/Faculty**

- Dalla Lana School of Public Health: 9
- Department of Anthropology, Faculty of Arts & Science: 1
- Department of Health Policy, Management and Evaluation, Faculty of Medicine: 2
- Graduate Department of Rehabilitation Science, Faculty of Medicine: 2
- Lawrence S. Bloomberg Faculty of Nursing: 1

The Collaborative Doctoral Program in Global Health (CPGH) is sponsored by the DLSPH in the Faculty of Medicine. The Program is a special designation within existing doctoral programs. The Collaborative Program views 'global health' in an integrative manner, and focuses on the relationships among local, regional, national, and international forces and factors that influence health and on the development of effective interventions and policies that will address or shape these. The objectives of the program are:

- To enable students to develop an understanding of global health in terms of the interaction of global, national, regional, and local forces, processes, and conditions;
- To ground training in disciplinary perspectives and engage in transdisciplinary efforts through concrete collaborative global health research projects;
- To offer mentorship opportunities by committed and experienced faculty with a diversity of theoretical, operational and methodological perspectives on global health; and,
- To grapple with complex health-related policymaking by the range of international, national, and local actors in a wide range of sectors that shape policies and carry out activities that affect health.

The program is available to PhD students in the following departments and faculties:

- Programs across the Dalla Lana School of Public Health
- Faculty of Medicine (Health Policy Management and Evaluation and Graduate Department of Rehabilitation Science)
- Lawrence S. Bloomberg Faculty of Medicine
- Leslie Dan Faculty of Pharmacy
- Faculty of Law
- Faculty of Arts and Science (Departments of Anthropology and Political Science).

Five centres (Centre for International Health, Centre for Global Health Research, Joint Centre for Bioethics, Munk School of Global Affairs and Centre for Health Services Sciences) are supporting units of the collaborative program.

The Program integrates methods and insights from the scholarly arenas of the participating partners. It provides a vibrant intellectual community for doctoral students and research faculty to interact and learn from one another. Students are encouraged to think critically about dominant paradigms and to integrate academic research skills in an applied community or policy setting. Graduates of the program will have the skills to work effectively with trans-disciplinary, international teams. The

Collaborative Program views 'global health' in an integrative manner. It focuses on the relationships among local, regional, national, and international forces and factors that influence health and on the development of effective interventions and policies that will address or shape these.

**Program Requirements**

Formal requirements include:

- Completion of core course: *NUR1083H-Comparative Politics of Health and Health Policy in a Globalizing World*
- One additional course relevant to global health offered by a department other than the home department. There are currently more than 40 approved courses at participating departments, faculties and centres.
- Participation in CHL5701H (a half-credit global health research seminar series) for 3 terms (the equivalent of 1.5 academic years)
- Writing and defending a thesis on an issue related to global health, to be approved by both the home unit and the Collaborative PhD Program committee. Either the supervisor or a committee member must be a member of the collaborative program.

Students participating in CPGH will still be required to complete all requirements of their home department to complete their doctoral studies.

## Strategic Training in Health Research (STIHR) Grants

The Strategic Training Initiative in Health Research (STIHR) was implemented by the Canadian Institutes of Health Research (CIHR) as a way for Canada to increase its competitiveness internationally in attracting new, bright, creative research talent and to ensure innovation and excellence in the next generation of Canadian health research training programs. Through the STIHR, individual training programs receive funding primarily targeted towards supporting research trainees through stipends. Funding for these training programs is provided by CIHR and its partners in the government, voluntary and private sectors. The DLSPH has two STIHR grants:

- Public Health Policy
- Genetic Epidemiology

### Public Health Policy

Public health is the science and art of preventing disease, prolonging life and promoting health through organized efforts of society. **Public health policy**, the backbone of public health, is policy related to public health issues. Public health policy includes a wide array of legislative and regulatory interventions, administrative practices, financing and funding decisions, and various forms of soft law (e.g., guidelines and informal processes) operating at the international, federal, provincial and municipal levels and in settings that are cross-cutting (e.g., worksites) in ways that are both cross-jurisdictional and cross-sectoral.

The goal of the CIHR Strategic Training Program in Public Health Policy is to provide an internationally competitive and exemplary training program in public health policy that fosters synergies and cross-disciplinary learning, has the capacity to engage in current events and contributes to the development, refinement, and evaluation of policies to address society's pressing and emerging public health priorities related, for example, to the prevention of chronic diseases and containment of infectious diseases. It will also create infrastructure that is sustainable in the long-term. The Program is cross-disciplinary, bringing together a broad range of disciplines, substantive foci, and theoretical and

methodological underpinnings (both quantitative and qualitative), that synergistically build an engaged community of practice of students and faculty focused on public health policy. The Program aims to contribute to the creation of the next generation of public health policy research leaders and creative agents for change, able to address the major health issues and challenges facing humanity locally, nationally and internationally (e.g., should quarantine be used to control a communicable disease outbreak, should taxes be raised to reduce the consumption of alcohol, should legislation be introduced banning the use of cell phones while driving?).

This is a 6-year, $1.8M Canadian Institutes of Health Research (CIHR) Strategic Training Initiative in Health Research (STIHR) applied for and received in 2009 by a cross-disciplinary group of 27 University of Toronto faculty members. The first group of trainees in this STIHR will completed their first year in the program in August 2010. The second group of trainees includes 27 fellows studying at the master's, PhD and post-doctoral levels.

Applicants must meet entry requirements of the home graduate unit. In addition, decisions about admissions are based upon the deliberations of a review committee that assesses candidates' letter of admission, academic achievements, relevant professional activities, and proposed statement of interest.

All participants are required to:

- satisfy requirements of the home department
- complete a thesis or practicum in the area of public health policy
- complete CHL5300H (Public Health Policy) and CHL5308H (Tools and Approaches for Public Health Policy Analysis and Evaluation) or one or more alternative courses deemed to equivalent
- actively participate in the Public Health Policy Rounds Series until all program requirements completed
- actively participate in the program's "lunch and learn" sessions (for at least one year)
- actively participate in the program's annual summer institute (for at least one year)

Each student is assigned a public health policy mentor with a sustained track record and prior supervisory experience. The mentor plays a key role in ensuring the quality of the student's experience and training.

The Co-Program Directors are Professors Joanna Cohen and Robert Schwartz. The Program Directors are supported by an Executive Committee and Program Advisory Committee. A Program Manager assists in planning and implementation.

### Genetic Epidemiology

CIHR Strategic Training for Advanced Genetic Epidemiology - CIHR STAGE (Strategic Training for Advanced Genetic Epidemiology) is Canada's first and only formal training program in Genetic Epidemiology, and one of few in the world. The program offers a new training and career development opportunity designed to cross-trains graduate students and post-doctoral trainees at the interface of genetics and population health science i.e., in genetic epidemiology and statistical genetics. The overall goal is to increase research capacity in a discipline facing a massive shortage of qualified individuals to ultimately improve prevention and management of common diseases through genetic epidemiologic research. CIHR STAGE, hosted at the Dalla Lana School of Public Health, offers a uniquely rich training environment that builds on established graduate programs of the Divisions of Epidemiology and Biostatistics, the Department of Statistics, and the resources from established

partnering institutions. Together, trainees will integrate these population health science disciplines and gain additional knowledge in genetics and related biological sciences. To achieve true integration, the program features an innovative training model that provides a myriad of formal, informal and interactive learning opportunities. For example, co-mentorship by faculty from the three contributing and complementary disciplines of genetic epidemiology (i.e. epidemiology, biostatistics/statistics and biomedical sciences); a curriculum incorporating core, integrative and cross-disciplinary courses, and leadership training; cross-disciplinary practica in industry, government or institutional research labs; internships, exchanges and networking at the local, national and international levels; and participation at several cross-training seminar series and National research videoconferences.

The program welcomes Master's or Doctoral students in Biostatistics, Epidemiology or Statistics at the University of Toronto; Postdoctoral fellows from relevant disciplines; and faculty transitioning into the field of genetic epidemiology. Program graduates will be thoroughly prepared to lead and contribute to creative science in common disease research, and pursue positions in academic or research institutions, and in the public or private sectors worldwide.

## Centre for Critical Qualitative Research (CQ)

The Dalla Lana School of Public Health is founding co- host (with the Lawrence Bloomberg Faculty of Nursing) of the Centre for Critical Qualitative Research (known as CQ). Built on an initiative started in the early 1990's by Dr. Joan Eakin of the Social and Behavioural Health Sciences Division, CQ is a teaching and research hub focused on the teaching and practice of qualitative research methodology. The Centre is an intellectual 'home' and resource for qualitative researchers in the health research community at the U of T, its affiliated research institutes, and in other research settings in Canada and internationally.

The goals of CQ are:

- To build local, national and international capacity in critical, theoretically-informed qualitative health research, scholarship and teaching
- To provide superior graduate education in qualitative research methodology
- To promote innovation, knowledge development, and critical reflection at the leading edge of the field of qualitative methodology
- To be a 'go-to' site of expertise in the particular challenges of practicing and teaching qualitative research in the health field
- To anchor, connect, challenge and inspire qualitative researchers across health-related disciplines and institutional units

The Centre specializes in the teaching and practice of qualitative methodology specifically in the health sciences and health research field, where there are particular challenges and opportunities for these forms of research.

CQ engages in a number of education–related activities including:

- Development and co-ordination of a methodology course series called the *Essentials of Qualitative Research*, an educational initiative that is internationally unique, certainly in the health sciences. The series consists of coordinated, sequential and comprehensive set of courses, ranging from introductory through advanced analysis. Accommodating both research oriented Master's students and doctoral level students, the series is taken by students across

the health sciences and other university units. The courses are also taken by post-doctoral fellows and visiting scholars seeking to develop their methodological skills in this area. CQ offers a 'Certificate' of advanced training in qualitative methodology to those who take three or more of the core courses.

- A Seminar series held monthly, attended by faculty and students (averaging 30-and 40 persons per seminar) and posts podcasts of the seminars on the Centre's freely accessed website www.ccqhr.utoronto.ca
- Visiting Scholars and post-doctoral training opportunities for those seeking to learn how to teach qualitative research, and those seeking methodological advancement.
- Development of a series of teaching videos on key topics in qualitative research for use in CQ sponsored courses and to be made available to the public for free through the website.
- Introductory and practice-oriented short workshops for researchers and their research staff in the broader health research community.

## Global Health Education Institute

The Global Health Education Institute (GHEI) is an exciting new initiative which fills a long-recognized gap in the training of health professionals who are interested in making an impact in the global health scene. It adds to informal mentoring by providing a structured, evidence-based, and carefully designed curriculum in a small group format – an approach to global health education unique to this program and to UofT. The University of Toronto is home to one of the largest concentrations of Global Health leaders in the world.

The GHEI Certificate Program is a continuing education initiative which provides interested post-graduate medical trainees (residents) with knowledge and skills relevant to the practice of global health. The program objectives are aligned with CanMEDS objectives, emphasizing an understanding of global determinants of health, technical skills, advocacy, management and leadership, interdisciplinary collaboration and public health medical expertise. The program is taught by leading University of Toronto global health faculty and practitioners who also have established international global health partners. Graduates of the program join a growing community of professionals dedicated to using more innovative and effective methods to address the needs of marginalized populations at home, and under-served populations abroad

Curriculum

Core Modules

- The Context of Global Health
- Global Health Governance and Infrastructure
- Ethics, Rights and law
- Fundamentals of Public Health Practice
- Primary Care
- Preparing yourself for Global Health fieldwork
- Post-travel debriefing
- Cross Cultural Communication
- Infectious Diseases in the Developing World
- Innovative Health Service Delivery Models in Global Health
- Innovation and Technology in Global Health

Elective Modules

- The Environment and Health
- Program Planning and Capacity Building
- Research in the Developing World
- Complex Humanitarian Emergencies
- Health and Human Rights
- Global Reproductive Health
- Teaching in International Settings
- Nutrition and Food Security
- Special Populations
- Global Mental Health
- Surgical Skills and Anaesthesia for Global Health
- Focus on Child Health
- Health Economics
- Leadership in Global Health

The program welcomed its inaugural class in September 2009.

## E. Student Experience and Feedback

### Canadian Graduate and Professional Student Survey

One source of quantitative data on the student experience is the Canadian Graduate and Professional Student Survey (CGPSS) which measures student academic satisfaction. Below are condensed 2007 results for the DLSPH. The results are presented separately for doctoral programs (MSc/PhD) and the professional master's program (MHSc/MPH). This survey was completed by 60% of PhD students (n=59), 53% of MSc students (n=10) and 52% of the MPH students (n=80) from the DLSPH. The data from the next survey (2010) is not yet available.

#### Doctoral and Research Master's Students

It is a point of concern that thee research stream results are lower than the U of T research stream averages on questions related to the intellectual quality of faculty and fellow students. The relationship between faculty and graduate students and the overall quality of graduate level teaching by faculty were alsoless well rated by DLSPH doctoral students than other U of T students.

| Question | Student Category | Excellent % | | Very Good % | | Good % | | Fair/Poor % | |
|---|---|---|---|---|---|---|---|---|---|
| | | DLSPH | UofT | DLSPH | UofT | DLSPH | UofT | DLSPH | UofT |
| The intellectual quality of faculty | MSc/PhD | 28 | 54 | 45 | 36 | 16 | 8 | 12 | 2 |
| The intellectual quality of my fellow students | MSc/PhD | 25 | 31 | 38 | 46 | 25 | 18 | 12 | 5 |
| The relationship between faculty and graduate students | MSc/PhD | 10 | 19 | 22 | 39 | 39 | 27 | 29 | 16 |
| Overall quality of graduate level teaching by faculty | MSc/PhD | 7 | 18 | 29 | 42 | 38 | 27 | 26 | 14 |

Possible factors impacting on these concerns may be partially attributed to the highly distributed nature of the doctoral program with many of students off-campus.

Interestingly, the research experience results for the doctoral stream students presents a more positive impression of this group's academic experience since the results reflect a dynamic and diverse research experience. DLSPH doctoral students rated their research experience considerably higher than the U of T average.

| Research Experience | | | | | | | |
|---|---|---|---|---|---|---|---|
| **How would you rate the quality of support and opportunities you received in these areas?** | **Student Category** | **Yes %** | | **No %** | | **NA** | |
| | | **DLSPH** | **UofT** | **DLSPH** | **UofT** | **DLSPH** | **UofT** |
| Conducting independent research since starting your graduate program | MSc/PhD | 88 | 95 | 4 | 3 | 9 | 3 |
| Training in research methods before beginning your own research | MSc/PhD | 97 | 92 | 0 | 4 | 3 | 4 |
| Faculty guidance in formulating a research topic | MSc/PhD | 97 | 97 | 0 | 1 | 3 | 2 |
| Research collaboration with one or more faculty members | MSc/PhD | 86 | 83 | 5 | 8 | 7 | 9 |
| Collaboration with faculty in writing grant proposals | MSc/PhD | 68 | 57 | 18 | 24 | 16 | 19 |
| Attended national scholarly meetings | MSc/PhD | 83 | 71 | 17 | 29 | | |
| Delivered papers or presented a poster at national scholarly meetings | MSc/PhD | 80 | 70 | 20 | 30 | | |
| Co-authored in refereed journals with your program faculty | MSc/PhD | 81 | 60 | 19 | 43 | | |
| Published as sole or first author in a refereed journal | MSc/PhD | 67 | 56 | 22 | 45 | | |

### Professional Master's

Since this survey was conducted in 2007, the professional master's program at that time was the MHSc. Satisfaction levels regarding the professional master's program consistently reflect high measures, very similar or exceeding the University-wide results.

| Figure : CGPSS, Professional Master's Satisfaction with Program, Quality of Interaction, and Coursework | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Question** | **Student Category** | **Excellent %** | | **Very Good %** | | **Good %** | | **Fair/Poor %** | |
| | | **DLSPH** | **UofT** | **DLSPH** | **UofT** | **DLSPH** | **UofT** | **DLSPH** | **UofT** |
| The intellectual quality of faculty | Prof Mast | 54 | 43 | 33 | 41 | 11 | 13 | 3 | 3 |
| The intellectual quality of my fellow students | Prof Mast | 35 | 25 | 41 | 46 | 23 | 23 | 1 | 7 |
| The relationship between faculty and graduate students | Prof Mast | 29 | 19 | 30 | 40 | 25 | 29 | 16 | 12 |
| Overall quality of graduate level teaching by faculty | Prof Mast | 20 | 18 | 33 | 45 | 32 | 26 | 15 | 11 |

As seen in the table below, DLSPH professional master's students are also highly engaged in research activities throughout their program.

| Professional Master's – Research Experience | | | | | | | |
|---|---|---|---|---|---|---|---|
| **How would you rate the quality of support and opportunities you received in these areas?** | **Student Category** | **Yes %** | | **No %** | | **NA** | |
| | | **DLSPH** | **UofT** | **DLSPH** | **UofT** | **DLSPH** | **UofT** |
| Conducting independent research since starting your graduate program | Prof Mast | 80 | 71 | 0 | 8 | 10 | 21 |
| Training in research methods before beginning your own research | Prof Mast | 90 | 78 | 0 | 5 | 10 | 17 |
| Faculty guidance in formulating a research topic | Prof Mast | 90 | 78 | 0 | 4 | 10 | 18 |
| Research collaboration with one or more faculty members | Prof Mast | 90 | 64 | 0 | 10 | 10 | 26 |
| Collaboration with faculty in writing grant proposals | Prof Mast | 50 | 33 | 20 | 18 | 30 | 49 |

These data are in line with student views, as expressed in the student report, below.

## STUDENT REPORT

The Public Health Students' Association, which represents the student body, was asked to prepare a report for this Self Study document. The report is included below, verbatim.

DALLA LANA SCHOOL OF PUBLIC HEALTH
STUDENT REPORT 2010
Tuesday November 9th, 2010.
Prepared by:
Laura White, PHSA Vice-President
on behalf of the
Dalla Lana School of Public Health Students' Association (PHSA)
Submitted to: Dr. Lemieux-Charles and Dr. Sass-Kortsak

SECTION A: Introduction

The following report outlines the activities, feedback and concerns of students within the Dalla Lana School of Public Health (DLSPH). The intention of this report is to highlight the activities of students within the DLSPH, as well as issues that have been raised and suggested areas for action to address these issues. This report has been prepared by students within the executive and general council of the Public Health Students' Association (PHSA), based on student surveys, feedback and discussions within PHSA meetings, and Town Hall Meetings with students and the DLSPH Director. The comments within this report may not reflect all students, however, the authors of this report have attempted to highlight concerns and feedback from a variety of different sources in an effort to represent the majority of students.

Students have initiated and organized a number of activities and events within the school, positively contributing to the sense of community and quality of the DLSPH. These initiatives are outlined in Section C and indicate the commitment of the DLSPH student population. In Section D, strengths and critical issues within the DLSPH, as identified by students, are outlined, with action areas suggested. Students have indicated that strengths of the DLSPH include the faculty, supportive staff, and the practicum opportunities. However, students have also expressed discontent around: availability of courses, particularly elective courses; class sizes; funding and work opportunities; and communication. The aim of this report is to highlight these concerns and to create a dialogue between students, administration, and faculty about how change can be implemented and supported.

SECTION B: The Public Health Students' Association

The DLSPH consists of Master and PhD Students, entering the program from a variety of different backgrounds. Students fall within one of the following divisions: Biostatistics; Epidemiology; Interdisciplinary, including a variety of programs like Community Nutrition and Family and Community Medicine; Occupational and Environmental Health; and Social and Behavioural Sciences, including the Master program in Health Promotion and the Doctoral programs in Health and Behavioural Science and Social Science and Health.

The Public Health Students' Association (PHSA) represents all full- and part-time graduate students registered within the DLSPH, with all students automatically PHSA members upon registration. The PHSA undertakes actions that are of common interest to its members, including advocating on behalf of students to the administration and faculty surrounding student concerns and issues, planning social and professional development events, and

supporting student initiatives (through assistance with funding, communication, etc). The PHSA Objectives are as follows[1]:

- To represent the members of PHSA on all matters in which representation may be in the interests of the students.
- To promote and maintain communication between the members of PHSA, the personnel of the Dalla Lana School of Public Health, and The University of Toronto.
- To initiate, sponsor, coordinate, and promote social, academic, cultural, and athletic events in which the members of PHSA may be interested, and in general to promote the welfare and interests of the individuals registered in the Dalla Lana School of Public Health at The University of Toronto.

The PHSA is governed by an elected executive council and a general council. The executive council consists of a President, Vice-President, Chairperson, Treasurer, Secretary and Past President. The executive council also includes three representatives that attend U of T Graduate Students Union Meetings, representing the PHSA and acting as a liaison between the PHSA and the GSU. The General Council is made up of representatives of programs and committees. There are a variety of committees within the General Council that address certain issues (e.g.: a social justice committee, a student social events committee, etc).

The PHSA collects feedback from DLSPH students through a variety of different avenues. Program representatives report issues within their program during PHSA meetings that take place at least once per month. Students discuss issues and concerns at the annual Town Hall Meeting with the Director of the DLSPH. Finally, at the end of each year, an on-line survey is sent to students with questions concerning their program(s), the school, satisfaction and concerns, and other issues affecting students.

SECTION C: Student Initiatives

DLSPH Students have initiated and directed a number of initiatives within the school, and at U of T. These initiatives highlight the tremendous leadership, motivation and engagement within the student body, which is a major strength of the DLSPH. The following list outlines the student-initiated events that have taken place from 2008 - 2010. New events are starting each year, while some events have become traditions within the school, with different students taking on the leadership each year.

I. Epidemiology and Health Promotion Retreat

This fall, students within the Health Promotion and Epidemiology programs at the DLSPH came together for the second year in a row to organize and orchestrate the programs' Orientation Retreat at Hart House Farm in Caledon Hills. As was the case last year, this collaborative event brought students and Faculty together for a weekend of team building, knowledge sharing and capacity development at the outset of the academic year. The Retreat succeeded in providing a relaxed environment for incoming MPH students to meet each other as well as second year students from both the Health Promotion and Epidemiology programs. In addition, Faculty from both programs were able to join students at the Farm to provide helpful advice and experienced perspectives to new students as they embark on their educational experience at DLSPH.

Feedback from incoming students within both programs indicates that these sessions were enlightening, supportive, and vital in their transition to the Health Promotion and Epidemiology MPH programs. In addition, second year students found the retreat provided a perfect setting to re-connect with their peers after summer

[1] Objectives found within the PHSA Constitution posted on http://www.phs.utoronto.ca/phssa/documents.html, last modified Nov 21, 2008.

practicum placements and an important opportunity to share their experiences with new students. Plans are already underway for next year's retreat.

II. DLSPH Student Research and Practicum Day

Students, with the support of DLSPH administration, have organized the annual DLSPH Student Research and Practicum Day for the past two years, where both Master and PhD students have the opportunity to showcase their work. Students are able to present research projects that are in-progress or completed, as well as present on their practicum experiences. The event provides an opportunity for students to practice presenting their work, via both visual displays (e.g.: poster presentation) and oral presentations, as well as creates a forum for students to interact with other students and faculty, to learn about projects taking place at the school, and to gain feedback on their own work.

III. Annual Student-Led Conferences on Emerging Issues in Public Health

For the past three years, students within the DLSPH have initiated, organized and led a conference on a selected emerging issue within public health. The topic of the conference has changed each year, with each planning committee selecting the topic, fundraising, finding speakers and organizing a day-long event around the topic. Over the past three years, the planning committee has consisted of students from both Master and PhD levels, and from different programs. All three conferences have brought together students, academics, practitioners, and community members from a variety of different backgrounds, providing a setting for attendees to learn from one another, network and critically engage with the topic. All planning committees have focused on providing a highly accessible conference by offering free admission to all attendees.

In 2008, the first DLSPH Student-Led Conference, entitled "Poverty and Health: Partnership in Action", was designed to stimulate discussion and unpack the relationships between poverty and health, showcasing strong Toronto-based community-campus partnerships. The success of this initial conference was followed by "Research with Pride" in October 2009, which offered the opportunity for students, community members, academics, and allies of the lesbian, gay, bisexual, transgendered, transsexual, two-spirited and queer (LGBTT2Q) communities to come together to discuss health research, with a specific focus on the possibilities of community-based research (CBR). On October 1st, 2010, the Third Annual DLSPH Student-Led Conference took place, with over 170 students, academics, practitioners, artists and community members attending. Entitled "The Art of Public Health", the conference focused on arts-based approaches to public health areas, including research, knowledge translation, evaluation, and community development. The conference included: an opening and closing keynote address; ten workshops; five small-group break-out sessions covering critical issues that emerged throughout the day; and a project gallery, with over 20 art pieces, posters, videos and other media, highlighting initiatives in the field.

First year Master's students have already expressed an interest in organizing the Fourth Annual Student-Led Conference and are discussing conference topics.

IV. World AIDS Day 2009 at the DLSPH

Last December 2009, the Center for International Health facilitated campus-wide World AIDS Day events across the University of Toronto and also held panels during the day at Hart House Farm, which some public health students attended. Within the school of public health, World AIDS Day 2009 was celebrated by handing out free condoms and ribbons in the front lobby of the Health Science Building, and fundraising for HIV research in Canada. In addition to the free condoms and ribbons, there was also an art project sponsored by the Red Cross. Two MPH students, Beth Lowcock (Epidemiology) and Jill Morse (Health Promotion), led the initiative; however, many other

Health Promotion, Epidemiology, and Occupational & Environmental Health Master students volunteered on the day of.

As a result of the interest in HIV/AIDS research expressed during the day, a new initiative called 'Let's Talk AIDS & HIV' (LTAH) was started, in which students organized discussions on HIV/AIDS Research, providing an opportunity for interested faculty and students to come together. For the upcoming World AIDS Day, the new Canadian Institutes of Health Research (CIHR)-sponsored Social Research Center for HIV Prevention at the University of Toronto has started to work with DLSPH students to support more World AIDS Day initiatives. The new partnership with the Center has provided more administrative and institutional support.

V. "Out in the Cold" Event

Last November 20th, 2009, a first year MPH Student in the Health Promotion program organized, with a group of MPH students and undergraduate students, an event called "Out in the Cold", on the U of T Campus. With the support of the PHSA and the Social Justice Committee of the U of T GSU, the purpose of the event was to raise money for three different organizations that addressed different aspects of homelessness in the greater Toronto area, as well as to raise awareness about homelessness in Toronto. Students were sponsored by friends and family to spend the night sleeping outside on the U of T campus. A lecture on housing issues opened the event, and discussions on housing and homelessness took place throughout the night, providing an opportunity for attendees to engage and discuss critical issues in the field. Throughout the course of the evening, about 50 people attended and approximately $2500 was raised. Initiated at the University of Waterloo, this event was the first of its kind at University of Toronto.

VI. Master's Global Health Concentration Survey

At the end of the 2009-2010 academic year, two MPH students within the Global Health Concentration (one in Epidemiology and one in Health Promotion) created a survey to elicit feedback from all students within the concentration. The first for the Master's Global Health Concentration Program, the survey highlighted a number of student concerns about the organization and content of the program, and questioned whether the program is meeting students' expectations. The following key issues were raised:

- Limited funding to support students to pursue overseas practicum placements;
- Despite the presence of excellent faculty and researchers at the DLSPH and U of T, there is a lack of opportunities for students to access them through the program; and
- The program curriculum inadequately equips students with applied research or public health practice skills in global health

These student concerns and survey results were brought to the Global Health Education Advisory Committee, which involves key faculty members in the Global Health division and student representatives from the Masters and Doctoral levels. The faculty members were receptive to the critique, though reflected that inadequate funding and administrative support for the program are a major constraint. Several changes have been implemented, including the establishment of the Global Health Roundtable Series, based on this review process and a stronger relationship with the Centre for International Health.

SECTION D: Student Issues

Feedback from students has been generated through annual student surveys, Town Hall meetings, email requests and PHSA meetings. Through these various avenues of soliciting feedback, a number of issues have been identified among students. The most recently analyzed summary of student feedback is taken from the 2008-2009 PHSA Survey Report, in which a total of 171 out of 320 (53%) students of the Dalla Lana School of Public Health completed the survey. Of the 171 respondents, 164 (90.1%) were full-time students and 17 (9.9%) were part-time students. Of the survey respondents, 4 (2.4%) were in a Thesis-based Masters program, 99 (68.8%) were in a Professional Masters program, and 65 (38.7%) were Doctoral students. In terms of program enrolment, 48% (103/213) of all Masters students, and 61% (65/107) of all Doctoral students are represented in this survey.

The executive summary from this 2008-2009 report is outlined below, with areas for improvement and suggested areas for action following. The list of suggestions is not exhaustive and further discussion between students and administration around areas of action is required.

I. Course Work & Teaching

Overall, students were satisfied with course offerings, the quality of instruction, and the scope and breadth of ideas and materials presented within the School. However, students also indicated areas for improvement, such as the availability of elective courses, scheduling issues (e.g. lack of accessible courses for part-time students, lack of summer/ evening/ web courses, conflicts between classes of interest, challenges with regard to enrolling in classes in other divisions/programs, even when that represents a course requirement for a DLSPH program, etc.), and the need for more methods (statistics in particular) and theory-based courses.

II. Supervision and Mentorship

Most students were satisfied with their supervisor's and committee members' availability to meet. Survey respondents also indicated satisfaction with supervisory enthusiasm and encouragement, expertise in their area of research, and familiarity with program requirements. Some students reported difficulties arranging meetings with their supervisors and committee members, and some also described a lack of program guidelines with respect to comprehensive exams and dissertations. Some Masters students indicated that guidance or mentorship from a faculty member other than their program director would be very helpful, and felt that it would help to take some of the workload off of directors in order to facilitate this form of student support.

III. Funding & Work Opportunities

Students indicated that they face a number of challenges in accessing and securing Teaching Assistant (TA) and Research Assistant (RA) positions, both within and outside the School. Among Doctoral students, there was a sense that a lack of experience as a TA or RA may make them less competitive for faculty positions upon graduation. Many students felt that the School does not communicate position vacancies effectively, and that there is a lack of availability of relevant positions.

Professional Masters, and part-time and international students felt that there should be more opportunities to apply for funding. Some professional students with practicum placements indicated that their stipends were quite low or that they did not receive one at all. Students also felt misled by information provided by the School at the time of application with regard to the availability of stipends for practicum positions.

Some students suggested that there could be improved communication from the School regarding the availability of funding and scholarship opportunities in the form of an online, routinely-updated database; others indicated that support with government scholarships was appreciated and should extend to other scholarships as well.

A few students also mentioned special circumstances, which made it especially difficult to fund their schooling: these include family commitments and their status as part-time students (resulting in ineligibility to apply for funding). These students felt that not enough funding was available to support their education, requiring them to take on many part-time jobs to make ends meet.

Students also felt that there should be more funding available for conferences and other research-related travel to enhance professional development alongside their academic development.

In response to possible changes in TA requirements and funding packages, students recognized the importance of a TA experience. However, students also indicated that securing a TA-ship without increasing graduate funding is not an acceptable resolution to the issue either.

IV. Student Life

Many students were satisfied with the study and meeting space in the School, but felt that access to computer equipment, restricted software (in particular statistical software), printing and photocopying could be improved.

Overall, students were happy with communication regarding School and university-wide policies and events, as well as with non course-related learning opportunities within the School. However, students indicated that there was room for improvement with regards to opportunities for interaction with students and faculty from other programs, inclusion of students in decision-making processes, and overall communication strategies between the administration and students.

Students were generally satisfied with the School's student government (PHSA) and Graduate Student Union, but felt that opportunities for social activism, community service, and social activities could be improved.

V. Website

Although many students considered the new Dalla Lana School of Public Health website an improvement, they suggested several additional changes:

1) Adding an events calendar;
2) Providing listings for funding and TA/RA opportunities;
3) Improving its aesthetic appeal;
4) Including better contact information for administration and faculty.

Students indicated that the most useful parts of the existing website were course listings and information, the faculty database with its multiple search functions, and the quick links bar.

VI. Strengths within the DLSPH, as Identified by Students

- Core courses
    - This sentiment may be changing as preliminary analysis of the 2009-2010 Student Survey indicates that not all students are content with core courses. Approximately 24.7% of Professional Master Students and 30.9% of PhD students rated the relevance of core courses as ‘poor’ or ‘fair’. In terms of overall satisfaction with core courses, approximately 27.2% of Professional Master Students and 28.6% of PhD students indicated ‘poor’ or ‘fair’.
- Instructors – knowledge in the field and research activities
- Connection to practical experiences in class and through practicum
- Faculty mentorship – commitment to students
- Full funding for PhD students

- Support Staff

VII. Key Improvements from 2008, as Identified by Students

- Students were satisfied with the support given to students for scholarship applications
- With greater availability of small kitchen appliances and cleaning supplies, satisfaction with kitchen space increased from 50% last year to 70%.
- Greater satisfaction with computer equipment (~50% rating of good and above compared to ~10% last year).
- Students appreciated the updates to the School website

VIII. Areas of Improvement, as Identified by Students

- Courses
    - Elective courses
        - 52% rated availability 'poor' or 'fair', 36% rated relevant to area of study 'poor' or 'fair'
    - Course availability
        - 29% of students rated availability 'poor' or 'fair' for core courses and 52% rated availability 'poor' or 'fair' for electives
    - Scheduling of elective and core courses
    - Need for more courses on methods and theory

  *Strategies for Action:*

    - Step 1: Consultation with students about particular courses they need and/or would like to take, and scheduling problems. Determine gaps from students' perspectives (e.g. additional courses in statistics, qualitative and quantitative, and health behavioural and social science courses).
    - Step 2: Identify opportunities to turn Independent Reading Courses into Courses, and to establish new Independent Reading Courses.
    - Step 3: Discuss student-identified gaps with faculty and establish new courses with faculty within the DLSPH.
    - Step 4: Create agreement with other faculties at U of T to allow DLSPH students to attend courses within their faculties, to address academic/programmatic gaps and to fulfill explicit DLSPH program requirements to take courses in another faculty or division (e.g.: the Global Health concentration).
- Class sizes
    - Class sizes have been highlighted as a major source of concern among students, within the 2008-2009 survey, 2009-2010 survey and at the 2010 Town Hall Meeting with the previous Director of the DLSPH.
    - In the 2009-2010 survey, 42.0% of Professional Master students rated class sizes as 'poor' or 'fair'.
    - In a survey completed by first year Health Promotion and Epidemiology students in Fall 2009, with a 77.97% response rate, 86.8% of respondents expressed that they were dissatisfied with current class sizes; with the majority of students agreeing that ideal class sizes should range from 15-30 persons depending on the course content.
    - Despite students expressing considerable concern about the increasing class sizes, the Professional Master programs have increased each year.
        - Concern exists over availability of practicum placements and jobs upon graduation with the increasing class sizes.

*Strategies for Action*:

- Step 1: Survey recent DLSPH graduates to determine job market upon graduation:
    - Where they go/what jobs they are getting
    - If graduates are obtaining the jobs and salaries that they want, that they expected to receive upon graduation from the DLSPH
    - If the program they were in at the DLSPH prepared them for the job market
- Step 2: Discuss current students' concerns about availability of practicum placements, consult with DLSPH Practicum Coordinator
- Step 3: Consider options to reduce class sizes:

        - Increase number of tutorials
        - Increase number of sections for core courses
        - Increase number of teaching assistants
        - Offer more courses, particularly elective courses

- <u>Addressing the needs of part-time students</u>

*Strategies for Action*:

- Step 1: Consult with part-time students regarding issues
- Step 2: Consider online courses and increasing summer courses (particularly reading courses)
- Step 3: Consider financial support systems for part-time students

- <u>Guidelines on theses and comprehensive exams for Doctoral students and Committee Members</u>

*Strategies for Action*:

- Step 1: Meet with PhD students to determine issues
- Step 2: Prepare document with guidelines for theses and comprehensive exams
    - Share guidelines with supervisors, committee members and students
- Step 3: Hold meeting with students, supervisors, and committee members to review procedures and guidelines

- <u>Funding and Work Opportunities</u>
    - TA and RA opportunities
        - 15% of students have had at least one TA position, 84% described availability of positions within the school as 'poor' or 'fair'
    - More funding options for Master Students
    - Providing Conference Funding

*Strategies for Action*:

- Step 1: Create more transparency in how awards are decided and disseminated (e.g. post on website, email details to all students)
- Step 2: Create connections with other departments and faculties at U of T to establish TA opportunities
- Step 3: Actively seek out TA opportunities that are relevant to students' backgrounds
- Step 4: Actively communicate TA opportunities to students

- <u>Quality and availability of student workspace</u>
    - 44% of student respondents described as 'poor' or 'fair'

*Strategies for Action:*

- Step1: Identify additional student spaces, e.g. breakout rooms, individual study rooms, shared student offices. Allow students to book rooms for study and group collaboration, etc., and set up a protocol for booking these spaces
- Step 2: Provide additional tables and chairs

- <u>Access to software, copiers and fax machines</u>
    - Majority of students rated 'poor' or 'fair'

*Strategies for Action:*

- Step 1: Repair the printer in the student computer room
- Step 2: Consider placing photocopier and fax machine in the student computer room
- Step 3: Provide information on student reduced fee software
- Step 4: Consider other places where students can access software for free (e.g.: make arrangements with other Computer labs on campus for DLSPH students to use)

- <u>Access to food and beverages</u>
    - 83% rated access as 'poor' or 'fair'

*Strategies for Action:*

- Step 1: Provide information to students on locations for food/beverages, e.g. U of T cafeterias in nearby buildings
- Step 2: Consider possibilities for provision of healthy food and/or beverages within the Health Sciences Building (e.g.: vending machines in Student Lunch Room

➢ <u>More effective communication strategies</u>

*Strategies for Action:*

- Step 1: Create space on website for communication
- Step 2: Identify departmental faculty to take on guidance and support of student leadership and of student initiatives, resulting in integration within and between streams (e.g.: events with both Master and PhD students, PhD SSH and HBS, etc.)

➢ <u>Professional Development</u>

*Strategies for Action:*

- Step 1: Beginner, intermediate and advanced level short-term courses in statistics
- Step 2: Meet and greet events with students and faculty
- Step 3: Seminar series for specific streams or programs, e.g. Master and PhD, health promotion, social science, health behavioural, practicum, qualifying exam, etc.
- Step 4: DLSPH seminar series matching student interests

➢ <u>Social activities for DLSPH</u>

*Strategies for Action:*

Step 1: Plan “Meet and Greet” Events with Students from different streams and programs, and Faculty

- Step 2: Foster opportunities for networking and professional development between MA and PhD students
- Step 3: Consult with Doctoral students to address issues surrounding a generally perceived lack of community and alliance at the PhD level

SECTION E: Conclusion

This report outlines the status of students at the DLSPH. The student activities highlight the incredible student engagement and motivation within the school, with students initiating their own activities and events within the school and on U of T Campus. While students are interested and engaged, there are a number of issues that have been repeatedly raised by students over the past two years.

Concerns were listed above with suggested areas for action. While the strategies are specific to the selected issue, some common issues emerged that are relevant to all areas of improvement:

1. Improve consultation with students to gain a greater understanding of concerns, as well as strategies to address those concerns;
    a. Establish avenues for students to effectively express issues to faculty and administration;
2. Create transparency in the process of issue identification to issue resolution (and share that process with students);
3. Better understanding of the processes for administrative accountability to student concerns.
4. Increased student involvement in DLSPH decisions (hiring process, curriculum decisions, strategic planning, etc),

Students continue to raise the same issues of courses, class sizes, funding opportunities, and communication, and continued discontent may affect student engagement and enrollment. Students have provided ample feedback and expressed areas of desired change. Acknowledging the student voice while involving students in the process of change would represent significantly positive impacts upon the direction of the DLSPH going forward.

# SECTION 4: RESEARCH & SCHOLARSHIP

## A. FACTS & FIGURES

| TOTAL RESEARCH FUNDING (2008/09)<br>$30,024,969 | | ACADEMIC STAFF (2008/09) | |
|---|---|---|---|
| TOTAL NO. OF AWARDS | **328** | ACADEMIC STAFF: | |
| Sources: | | Primary appointments | 192 |
| CIHR | $9,423,442 | - On campus | 39 |
| NSERC | $179,500 | - Off campus | 153 |
| NCIC | $0 | Cross appointments | 116 |
| HEALTH CANADA | $902,835 | Tenured | 18 |
| MOHLTC | $3,232,015 | Tenure-stream | 4 |
| HSFO/C | $194,405 | Career awards | 14 |
| SSHRC | $391,527 | With Research Funds | |
| INDUSTRY | $813,733 | Primary appointments | 77 |
| OTHER SOURCES (1) | $14,887,511 | Cross appointments | Unknown |
| | | STUDENTSHIP AWARDS: | |
| | | Supervised by Primary Appt | 128 |
| | | FELLOWS: | |
| | | Post Doc. And Clin. | 5 |

1 Includes global research budget of the Institute for Clinical Evaluative Sciences, Structural Genomics Consortium, SARS Laboratory, UofT Equipment maintenance grants, clinical trial grants at the Sunnybrook Hospital/University of Toronto Clinic, ORDCF grants, Ontario Genomics Institute grants, undergraduate summer studentship awards, graduate studentship awards for independent study and Health Communication Research Laboratory in the Faculty of Medicine and Federal Indirect Cost Programme.

## B. OVERALL RESEARCH OBJECTIVE & GUIDING PRINCIPLES

The objective driving much of the research agenda is the desire to be at the forefront of public health, population health and health promotion research internationally. This is accomplished by

understanding the determinants of population health, measurement of health status, interventions to enhance health of populations and integration of theoretical, methodological and empirical approaches. Following are the principles that guide the School's research mission:

- The form, content, mode of operation, and leadership of the School's research component will be maintained through broad consultation and participation.
- The research agenda will remain interdisciplinary and collaborative across the university and the community.
- The core disciplines of academic public health research (social and behavioural science, biostatistics, environmental health, epidemiology) will be maintained and strengthened.
- Core Research Themes give depth, focus, integration, identity and collaborative mass and energy to the School's research program.
- The focus of these themes include key public health problems, determinants of health, locus/forms of intervention and change, research methodologies, or other creative and synergistic conceptual categories of public health.
- The criteria for designation of these themes include considerations of capacity for productive combination and ignition of existing expertise and resources, promise of institutional collaboration, relevance to key or emergent matters of public health practice and policy, potential for integrated interdisciplinary innovation, breadth of reach across fields/levels of study.
- Mechanisms, including leadership, management infrastructure, and organizational design help align and link the School's research, education and disciplinary foundations and goals. Included in the infrastructure is the Research Services Unit (RSU) whose mandate is to provide high quality research support to professionals within the Dalla Lana School of Public Health, the Faculty of Medicine, the university at large, and the teaching hospitals. The RSU, situated within the DLSPH, is funded by cost-recovery from the funding of the researchers who utilize it. Currently it is staffed by a director, supported by the former director part time, with additional staff recruited as required for specific projects.

## C. Current Research Themes

The areas of research for faculty who have their primary appointment in the DLSPH are summarized in this section. Twelve research themes were identified [see Table 19] by 85 of the 192 faculty (44%) who responded to a survey. In the last 5 years 411 projects have been initiated or completed with total funding of $132,510,012. A number of faculty have projects in more than one area. [Surveys conducted by Associate Director Research, September-October, 2010. See Appendix 12].

**TABLE 19: DLSPH - Major Research Themes Identified by Faculty**

| RESEARCH THEME | | # PROJECTS APPROVED (off campus) | TOTAL FUNDING IN LAST 5 YEARS (off campus) |
|---|---|---|---|
| i. | ADDICTIONS (SMOKING, ALCOHOL, GAMBLING & ILLICIT DRUGS) | 62 projects (30) | $21,425,693 ($11M ) |
| ii. | CHILD AND ADOLESCENT HEALTH | 8 projects (7) | $1,756,065 ($1.6M) |
| iii. | CHRONIC DISEASE EPIDEMIOLOGY, PREVENTION & SCREENING | 65 projects (45) | $43,340,426( $37M) |
| iv. | GENETIC EPIDEMIOLOGY & STATISTICAL GENETICS | 37 projects (19) | $14,372,822 ($9M) |
| v. | GLOBAL HEALTH | 12 projects (6) | $4,758,452 ($1.3M) |
| vi. | HEALTH PROMOTION, SOCIAL DETERMINANTS OF HEALTH AND SOCIAL EPIDEMIOLOGY | 27 projects (22) | $5,600,999 ($1.2M) |
| vii. | INFECTIOUS DISEASE EPIDEMIOLOGY AND MODELING | 38 projects (13) | $15,555,745($3.3M) |
| viii. | KNOWLEDGE TRANSLATION AND PRACTICE BASED IMPLEMENTATION SCIENCE | 3 projects (3) | $613,498 ($0.613M) |
| ix. | METHODOLOGICAL RESEARCH IN BIOSTATISTICS, DEMOGRAPHY AND EPIDEMIOLOGY | 14 projects (none) | $551,618 (none) |
| x. | OCCUPATIONAL AND ENVIRONMENTAL HEALTH | 71 projects (49) | $16,052,088 ($11M) |
| XI. | PUBLIC HEALTH POLICY | 19 projects (none) | $4,001,400 (none) |
| XII. | WOMEN'S HEALTH | 13 projects | $1,789,030 ($1.4M) |
| *Note: () indicates projects and funding administered off campus* | | | |

## D. Research Units

A number of research units are integral to or affiliated with the School. These enrich the School's research program, while providing an environment where faculty with similar research interests but often different basic training can work collaboratively together, in addition to providing training and employment opportunities for students. Brief summaries of the units are provided here.

- Arthritis Community Research & Evaluation Unit (ACREU), Toronto Western Research Institute, at the University Health Network: ACREU's mission is to ameliorate the adverse impact of arthritis on individuals, their families and in the population, through a comprehensive program of applied health services research concerned with the delivery of care to people with chronic disabling disorders using arthritis as a model. ACREU is a primary source for reliable data on arthritis in Canada. Research includes arthritis and employment, primary care management, access to specialists, joint replacement surgery and rehabilitation service delivery. ACREU has a multi-disciplinary core team of ten research investigators, including the Director, a tenured faculty member of the School.

- Centre for Global Health Research, St Michael's: The mission of the Centre for Global Health Research (CGHR) is to conduct high-quality research that advances global health. Specific emphasis is on avoidance of two large and growing causes of death worldwide: HIV-1 and tobacco. The CGHR was established in 2003 to conduct large-scale epidemiological studies in developing countries. The CGHR is co-sponsored by St. Michael's and the University of Toronto. It has offices in Toronto, New Delhi, Bangalore and Chandigarh. CGHR is also affiliated with the McLaughlin Centre for Molecular Medicine and other partners at the University of Toronto. CGHR has three faculty (including the Director) and 7 research associates in Toronto.

- Centre for Research Expertise in Occupational Disease (CREOD): The centre is a joint research program of the DLSPH and St Michael's. It was launched with the active support of the Research Advisory Council and with funding from the Workplace Safety and Insurance Board. It has four research programs and four cross cutting themes. The four programs are occupational lung disease, occupational skin disease, hand-arm vibration syndrome (HAVS) and biological hazards. The four themes are prevention, early recognition, outcomes and the health care sector. Another component of the CREOD is strong networks within the occupational health and safety research and stakeholder communities. Knowledge translation initiatives are an important component of the Centre's work. Including the Director, 10 faculty members are associated with the centre's research program.

- HIV Social, Behavioural and Epidemiological Studies Unit, DLSPH: The HIV Studies Unit was established in 1994 as an extra-departmental unit in the Faculty of Medicine and was sponsored by the Department of Public Health Sciences (Dalla Lana School of Public Health 2008 –) and the Department of Health Policy, Management, and Evaluation. Within the University and in Canada, the Unit provides a unique focus on community and public health issues, bringing together social and behavioural scientists and epidemiologists. The Unit was the first in Canada to utilize a multidisciplinary approach to address social and behavioural aspects of HIV/AIDS transmission and its determinants, the impacts of the disease, and issues of service delivery. It remains the only known campus-based unit in Canada with a specific focus on HIV/AIDS. The HIV Social Behavioural and Epidemiological Studies Unit provides a rich environment for graduate students to undertake masters and doctoral level education. Many of the graduates associated with the unit have gone on to become educators, researchers and advocates in the

field of HIV/AIDS. The large number of research projects of the Unit offers students and community members opportunities for employment and applied learning. The mission of this Unit is to improve the effectiveness of HIV prevention, interventions, services and policies, and to promote health among infected and affected individuals and communities in Ontario, Canada and internationally. It is sited within the Health Sciences Building, the home of the School. There are eight core faculty members and scientists (including the director and deputy director) and 5 affiliated members in other universities.

- Ontario Tobacco Research Unit (OTRU), DLSPH and Centre for Addiction and Mental Health: OTRU is located in the DLSPH and represents the research component of the Ontario Tobacco Strategy, and is a focal point for an active tobacco control research network in Ontario. OTRU's mandate is to: exercise leadership in the design and conduct of research projects; increase Ontario's capacity to conduct research, monitoring and evaluation; monitor programs and activities conducted under the auspices of the Ontario Tobacco Strategy; provide advice and technical expertise on program evaluation and best practices; analyze and disseminate science-based information for the research and public health communities and strengthen and broaden our provincial, national and international network of researchers, programmers and policymakers. There are 4 faculty members (including the director) and 4 research associates.

- Critical Qualitative Health Research Centre: The Social and Behavioural Sciences Division was the birthplace in the early 1990's of what has subsequently grown into the Center for Critical Qualitative Health Research [www.ccqhr.utoronto.ca]. This Centre is devoted to the advancement of qualitative research methodology, teaching and research practice in the health field. It has funding from several health science departments, and is the intellectual research home for researchers in the major medical sites in the GTA, across Ontario, (and internationally).

- The Research Services Unit: The mission of the Research Services Unit (RSU) is to provide high quality research support to professionals within the Dalla Lana School of Public Health, the Faculty of Medicine, the university at large, and the teaching hospitals. The RSU, situated within the DLSPH, is funded by cost-recovery from the funding of the researchers who utilize it. Currently it is staffed by a director, supported by the former director part time, with additional staff recruited as required for specific projects.

## E. Linkages with Departments within the Faculty of Medicine, other Departments in the University of Toronto, Ontario Government Agencies and Public Health Units

Just over half of the research of the School occurs off site, in other departments and agencies. The predominant agencies are the Ontario Agency for Health Promotion and Protection, Cancer Care Ontario, the Centre for Addiction and Mental Health and the Institute for Work and Health. Predominant among the linkages to teaching hospitals of the Faculty of Medicine are St Michael's, the Samuel Lunenfeld Research Institute of Mount Sinai Hospital, the Toronto Western Research Institute, and Women's College Hospital. Faculty who are based in these agencies, institutes or departments are identified with their affiliation after their title in the summaries of research of faculty in the Research. In each instance, however (with only one exception specifically identified), these faculty have their primary academic appointment in the School. Summaries of the non-hospital agencies follow:

- The Ontario Agency for Health Protection and Promotion (OAHPP) is an arm's-length provincial

government agency dedicated to protecting and promoting the health of all Ontarians and reducing inequities in health. OAHPP links public health practitioners, front-line health workers and researchers to the best scientific intelligence and knowledge from around the world. OAHPP provides scientific and technical support relating to infection prevention and control; surveillance and epidemiology; health promotion, chronic disease and injury prevention; environmental and occupational health; health emergency preparedness; and public health laboratory services to support health providers, the public health system and partner ministries in making informed decisions and taking informed action to improve the health and security of Ontarians.

- Cancer Care Ontario (CCO) is the provincial agency responsible for cancer services, and the Ontario government's cancer advisor. It directs and oversees close funding to hospitals and other cancer care providers to deliver cancer services. It implements provincial cancer prevention and screening programs and works with cancer care professionals and organizations to develop and implement quality improvements and standards. It uses electronic information and technology to support health professionals and patient self-care and to improve the safety, quality, efficiency, accessibility and accountability of cancer services. It plans cancer services to meet current and future patient needs, and works with health care providers in every Local Health Integration Network to improve cancer care for the people they serve. CCO is the home of the Ontario Cancer Registry and the Division of Population Studies & Surveillance, and thus home to a number of our status only faculty. As noted in the Summary Table, 37 million dollars of the 43 million in research dollars for epidemiology, prevention and screening are administered off campus with the majority of faculty located in the Population Studies and Surveillance Unit.

- The Centre for Addiction and Mental Health (CAMH) is Canada's largest mental health and addiction teaching hospital, as well as one of the world's leading research centres in the area of addiction and mental health. CAMH is fully affiliated with the University of Toronto, and is a Pan American Health Organization/World Health Organization Collaborating Centre. CAMH combines clinical care, research, education, policy and health promotion to transform the lives of people affected by mental health and addiction issues. CAMH is the home of the Ontario Tobacco Research Unit, and the base of a number of our faculty, especially many working in Addictions and Public Health Policy.

- The Institute for Work & Health (IWH) is an independent, not-for-profit research organization that operates with support from the Ontario Workplace Safety & Insurance Board. The Institute is one of the top five occupational health and safety research centres in the world. The goal of IWH is to protect and improve the health of working people by providing useful, relevant research driven by two broad goals. The first is to protect healthy workers by studying the prevention of work-related injury and illness including studies of workplace programs, prevention policies and the health of workers at a population level. The second is to improve the health and recovery of injured workers by conducting research on treatment, return to work, disability prevention and management, and compensation policies. Several scientists in the IWH (including its Director) have their primary academic appointment in the School.

## F. Strengths & Challenges

### *Strengths*

- STRONG RESERCH TRADITION: Research in the School is based upon a strong research tradition, extending back to the foundation of the School of Hygiene, and its continuation within the Faculty of Medicine as part of the Division of Community Health.

- TORONTO/GTA LOCATION: The close association of the School with the largest concentration of health science researchers in Canada, and one of the largest in the world, immeasurably increases the opportunity for research.

- BREADTH OF LINKAGES & INTER-DISCIPLINARY RESEARCH: Faculty conducting research also benefit greatly by the formal linkages described above that exist with other departments and agencies and by their research programs and often accumulated data sets, and through the existing combinations of researchers within the Research Units incorporated within, or in association with the School. These linkages are about to be strengthened by the appointment of two new Dalla Lana Chairs, in Chronic Disease and Public Health Policy. There are examples of interdisciplinary research within the department as well as linkages with other departments that are helping to create and sustain broader connections.

### *Challenges*

- INSUFFIENT INTERACTION BETWEEN OFF-SITE AND ON-SITE RESEARCH: The conduct of much of the research of the School off site is however, a weakness. Although doctoral students performing their research supervised by faculty members off site benefit from the interaction with others in these agencies or institutes, the majority of faculty and their students do not, except to the extent they are exposed to the many status only faculty from such groupings attending courses they teach.

- SOME FIELDS WITHOUT A PhD STREAM: For fields with no PhD program, there are limited opportunities to link research with education.

- SMALL NUMBERS OF TENURED/CORE FACULTY IN SOME FIELDS: There are a small number of tenured/core faculty in some fields. Consequently, while the field may be presently productive, it will be put at risk if one or two people leave.

# Section 5: Linkages & Partnerships

## A. Internal Relationships

As discussed throughout the self-study, the establishment of critical partnership and linkages is of fundamental importance for the development and sustained excellence of the DLSPH. Within the Faculty of Medicine, there has been a long history of collaboration and partnership between Public Health and the Department of Health Policy, Management and Evaluation (HPME). Collaborations related to teaching include courses in international health and comparative systems, MScCH students enrolled in the Health Policy course and teaching in the Community Health course (DOCH) offered to undergraduate medical students. In relation to the latter one faculty member has assumed responsibility for teaching the “manager” competency within the UME program. Many HPME faculty collaborate with faculty in the DLSPH on research projects including the Public Health Policy CIHR training grant which had HPME’s formal support and the Centre for Critical Qualitative Health Research in which one faculty member teaches a qualitative research course. The Department of Family and Community Medicine as well as the Department of Nutritional Sciences are closely aligned with the School through their educational programs.

The Director of the DLSPH is a member of the Council of Health Sciences (CHS) which is a formal body at the University of Toronto (UofT) that represents the health science sector and facilitates collaboration and enhancement of health science research and education endeavours. All health professional disciplines and schools are represented on the Council. Through the CHS Chair, the CHS reports directly to the Provost. The goals of the CHS are to advance the national and international reputation of the UofT as the premier university for health science education and research in Canada; advise and report regularly to the Provost, and the Toronto Academic and Health Sciences Network various committees on all matters relevant to the health science sector and its education and research programs; work collectively on common academic issues and their implementation; identify opportunities for common policies / practices and common management support for education and research across the health science sector and; promote inter-professional education across all health professional programs and optimize the resources to do so and; ensure that the health science sector is adequately and appropriately represented at all levels of University governance. Through this body, The Director collaborates with other health science faculties on matters of mutual interest and importance.

## B. External Relationships

### Affiliated Hospitals & Research Institutes

Predominant linkages to teaching hospitals of the Faculty of Medicine include St Michael’s, the Samuel Lunenfeld Research Institute of Mount Sinai Hospital, the Toronto Western Research Institute at the University Health Network and Women’s College Hospital. These relationships are described above.

Status faculty are vital to the educational activities since they teach courses, or parts thereof, supervise and mentor graduate students, providing much needed funding and research work space, and participate in graduate department administration. Within the context of a School of Public Health, it is important to formalize these partnerships, in order that they continue to provide a diversity and richness of academic opportunities and ideas, central to the mission and operation of the School.

## Provincial Education, Health Sector Organizations and Provincial Government

Formal affiliations exist with teaching hospitals as well as the Ontario Agency for Public Health and Protection; however, there are no affiliation agreements which have been developed to formalize relationships with public health units where many of the practica now take place. This is an area which requires further development. In the past, there were public health teaching which received funding for teaching however, these were disbanded in the mid-90's by the government of the day. Provincially there is now a move among provincial public health leadership, local public health units and public health faculty to revisit funding for this activity which would be similar to the policy governing teaching hospitals.

In addition to the UofT agreement with Toronto Public Health/City of Toronto, the DLSPH has formal and informal affiliations with the Greater Toronto Area local public health units (Halton, Peel, Simcoe-Muskoka and Durham) as well as the MOHLTC Public Health Division for placements. These units look to graduates as key hires in the fields of epidemiology, health promotion, nutrition and public health physicians. The CMRP has agreements for resident placements at all of these units.

## Global and International Affiliations

Faculty are engaged in multiple educational and research endeavours in carious parts of the world through partnerships with international organizations (such as World Health Organization, Dignitas, MSF), universities (in countries such as Kenya, Zambia, Colombia, Uruguay, Spain, India, China, Mexico and Brazil) with funding from international funders such as IDRC, CIDA, SSHRC and Fullbright). Such partnerships have enabled faculty to provide educational exchange experiences and build capacity of public health professionals in other parts of the world as well as students at the DLSPH. Because of leadership in education and research in Canada, faculty are invited to consult and advise of a range of topics at international fora. There are two WHO Collaborating Centres linked to the DLSPH – one in Bioethics and one in Health Promotion – in recognition of the leadership of the University of Toronto in both topics.

## SECTION 6: CONCLUDING REMARKS & FUTURE DIRECTIONS

The University of Toronto had a strong foundation from which to launch the Dalla Lana School of Public Health. The former Department of Public Health Sciences was recognized as a leading academic public health resource in Canada and served as a dynamic base for the extensive public health scholarship found in many academic units across the University. We believe the School to be well positioned to become “a leader among the world’s best public teaching and research universities in the discovery, preservation, and sharing of knowledge” (Stepping Up). Its interdisciplinary and networked program as well as an infusion of new resources provides a strong base upon which to build the School.