



UNIVERSITY OF TORONTO
DALLA LANA SCHOOL OF PUBLIC HEALTH

**The Dalla Lana School of Public Health
Curriculum Renewal Taskforce (CRTF)
Interim Report**

***Phase 1:
Situational Assessment of the MPH Programs***

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1. Executive Summary

Within the last 15 years, the landscape of public health and public health education has changed dramatically. Responding to the increased demand for public health human resources, there has been a virtual explosion of new public health programs and schools in Canada in the last 10 years. The Dalla Lana School of Public Health (DLSPH), with its roots tracing back to the School of Hygiene established at the University of Toronto in 1925, was the first institution in Canada to offer comprehensive training for public health professionals and researchers. The DLSPH is now reviewing its Masters of Public Health (MPH) program to ensure that its curriculum and overall educational experience prepares our graduates to adapt and excel in their discipline-specific fields in order to effectively tackle the public health issues of today and the future.

The MPH Curriculum Renewal Taskforce (CRTF), established October 2011, has been charged with the responsibility to review the MPH curriculum and reports to the DLSPH Graduate Curriculum Committee (GCC). Over the last 8 months, the CRTF has engaged in fruitful discussions and debate to identify strengths and opportunities for change in the MPH program. These discussions have been extremely useful in affirming certain aspects of the program, while also challenging our assumptions. In addition to setting a firm vision and mission of the MPH program, the CRTF engaged in activities to review similar programs within Canada, drafted a set of core competencies (applicable to all fields), surveyed alumni and faculty on their assessment of the MPH curriculum and spoke with key informants who have employed our graduates. The data collected and conclusions made reflect the current state of the School's MPH program, and outline gaps in the core curriculum content while recognizing its strengths that continue to attract the highest caliber of students.

Four recommendations are being made by the CRTF

1. The University of Toronto, Dalla Lana School of Public Health MPH *brand* is strongly discipline-specific. Based on the results of the environmental scan and findings to date, it is strongly recommend that our MPH niche remain intact as an 18 – 24 month discipline-specific program.
2. The Vision and Mission statements for the MPH should be adopted together with the Goals and Objectives.
3. The 30 core competencies that have been developed should be adopted. This list was drafted utilizing key sources (key competencies developed by the Association of Schools of Public Health (ASPH) in the United States and the Public Health Agency of Canada (PHAC)) and focused and iterative process.
4. Given our current circumstances, moving towards the Council on Education of Public Health (CEPH) accreditation is not recommended at this time.

This report also outlines the second phase of the curriculum renewal exercise, scheduled to begin in the Fall of 2012 and to include:

1. In-depth consultation with DLSPH faculty and students, for specific feedback to inform the development of strategies for implementation of these recommendations.
2. Develop specific strategies to address the identified gaps, including issues surrounding practica. Given resource implications and other challenges, there will be a need to differentiate between short- and long-term strategies.

3. Find creative means to offer excellent graduate programs efficiently by exploring alternative modes of delivery (e.g. distance, web-based), creative packaging of course materials (e.g. 0.25FCE or modules), and longitudinal learning modalities (home room concept).
4. Finalize discipline-specific competencies for all fields in the MPH program and develop strategies to address discipline-specific gaps in curriculum.
5. Capitalize on disciplinary strengths and foster the most efficient, effective and integrated delivery of DLSPH curriculum by adopting a curriculum (course) development and approval process that ensures and promotes cross-disciplinary collaboration.
6. Explore opportunities to support educational scholarship to advance the field of public health education, with regards to MPH training. Recognize the accomplishments of innovative curricular and teaching methods development and explore potential partnerships with other organizations engaged in public health educational research (e.g. Wilson Centre; Public Health Research, Education and Development).
7. Develop and nurture existing partnerships in education across the University of Toronto and with institutional partners to deliver outstanding education that reflects and considers all stakeholder considerations and anticipates the future of public health.
8. Submit final report with recommendations and an implementation plan including mechanisms for measuring outcomes, to the DLSPH Graduate Curriculum Committee and other School committees as appropriate.

2. Introduction

The Dalla Lana School of Public Health (DLSPH) initiated a review and renewal of its Masters of Public Health (MPH) graduate curriculum in September 2011 as a consequence of its External Review (January 2011) and its potential interest in seeking accreditation. This curriculum review is being conducted by the Curriculum Renewal Taskforce (CRTF) under the auspices of the DLSPH Graduate Curriculum Committee (GCC) to examine the core curriculum of the MPH program and its relationship with the discipline-specific fields.

The CRTF is chaired by the Associate Director/Graduate Coordinator and includes the Program Directors from the 5 MPH program fields (i.e. Community Nutrition, Epidemiology, Family and Community Medicine, Occupational and Environmental Health and Social and Behavioural Health Sciences – Health Promotion), Graduate Affairs Administrator, Practicum Placement Officer (a recent alumna), a current MPH student and various other curriculum experts from the DLSPH. The CRTF membership can be found in Appendix 1.

This curriculum renewal exercise consists of two phases. Phase 1 is a situational assessment of the overall curriculum of the MPH program and its individual fields. To guide the committee, the Terms of Reference was drafted, revised and approved by the CRTF and the DLSPH GCC, as well as a set of Curriculum Assumptions and Principles developed by the CRTF. From this, a series of activities were undertaken by the CRTF from September 2011 - June 2012 to gather information. This data and the deliberations of the CRTF, including preliminary recommendations, are presented in this report.

Phase 2 will consist of in-depth consultation with DLSPH faculty and students and specific discussions with key faculty from other programs in the School (e.g. Master of Science, Master of Science in Community Health and PhD). At the conclusion of this phase, the CRTF will develop final recommendations and an implementation plan including mechanisms for measuring outcomes. This final report will be presented to the DLSPH GCC and other School committees as appropriate.

3. Background

3.1. Overview of Master in Public Health Degree Program

Formerly known as the Department of Public Health Sciences, the Dalla Lana School of Public Health at the University of Toronto continues to be at the forefront of graduate education in public health since the beginning of the 20th century. As its largest program, the MPH (formerly known as the MHS program) is designed to prepare practitioners, educators and researchers for careers in public health. Its purpose is to provide advanced training to practitioners entering the field, to experienced professionals wishing to enhance their public health expertise, and to those wishing to pursue doctoral training and a career in public health research.

Offered in five distinct fields/disciplines (Community Nutrition, Epidemiology, Family and Community Medicine, Health Promotion - Social and Behavioural Health Sciences, Occupational and Environmental Health), this program is one of the few in Canada that offers a specialist MPH degree. Each field/discipline has identified educational objectives to be met through completion of the MPH degree. A brief overview of each field/discipline is found in Appendix 2.

3.2. Overview of MPH Practicum

The practicum component of the program is a key part of MPH students' learning process, providing them with a supervised experience in an approved practice and/or research setting while:

- applying the knowledge and skills learned in courses;
- developing practical skills in public health and specific to their discipline;
- achieving competencies best learned through work experiences;
- exploring potential career opportunities and/or further education beyond their MPH program;
- preparing students, as necessary, for doctoral studies

The activities undertaken during the practicum depend on the field/discipline, the needs of the sponsoring agency/organization, and the student's own learning objectives and interests, all of which occur under the supervision of a practicum placement supervisor/faculty. MPH students are required to take a minimum of 1.0FCE in practica. However in practice, the majority of students take at least 2.0 FCE (one 16 week practicum) and many opt to take 2 placements (typically one 16 week and one 12 week practica).

The practicum component varies between the MPH program fields, largely reflecting the distinct nature of our disciplines (fields). It also enables programs with some flexibility to design a learning experience that caters to a student's individual interests and educational goals. These differences include the number of credits in practica, types of projects or activities undertaken and methods of evaluation. An overview of the practicum component by field can be found in Appendix 3.

With the increase in the number of MPH programs across Canada and the expansion plans of DLSPH, one of the immediate challenges will be the rising numbers of MPH students from across Canada seeking practica. This, together with, decreases in research funding, governmental budget cuts and the like, will place an enormous burden on securing practicum placements. This reality provides DLSPH with the

opportunity to re-evaluate the MPH practicum component and explore innovative ways to effectively maintain this critical aspect of the program.

4. Terms of Reference

The following Terms of Reference were developed and passed by the DLSPH GCC.

1. Identify the public health human resource needs locally and nationally and the roles presently filled by our MPH graduates.
2. Review other Canadian and selected US MPH programs. Consider options for models, delivery modes, and accreditation.
3. Develop a clear MPH Mission statement, core goals and objectives, generally and for each field.
4. Review CEPH, PHAC and other existing MPH competencies, and articulate outcome-based, specific competencies for the DLSPH MPH broadly (common, core) and for each field, specifically.
5. Map the current curriculum (both core and field-specific) to the competencies. Consider the development of common core curriculum across programs. Assess the integration of practice-based skills and knowledge within the program. Make recommendations regarding revisions to courses, including content, method of delivery, etc.
6. Consider the options of adding new fields (GH, PHP, etc.) or other cross-cutting themes to the MPH program.
7. Evaluate and, as appropriate, make recommendations for revisions to the practicum program.
8. Consider the relationship between the MPH and other DLSPH programs (MSc-Biostatistics, MScCH, PhD, and the Preventive Medicine and Public Health Residency Program).
9. Develop an implementation plan, including mechanisms for measuring and maintaining outcomes.

The CRTF will consult widely with stakeholders (including alumni, employers, local PH units, current students, etc.) and regularly report back to the DLSPH Graduate Curriculum Committee, with a draft report/recommendations by Fall 2012.

5. Approach to MPH Curriculum Renewal

A number of activities were undertaken from September 2011 - June 2012 in response to the Terms of Reference developed by the CRTF. These include:

- conducting an environmental scan of the MPH degrees across Canada and the United States
- developing a vision and mission statement for the MPH degree, as well as overall goals and objectives;
- developing of a clear set of MPH core competencies;
- conducting a Faculty and Alumni Survey to identify gaps in the curriculum based on the MPH core competencies;
- conducting Key Informant interviews of public health officials across Canada; and
- reviewing the current practicum.

In the wake of several public health crises, (Walkerton, West Nile Virus, Avian Flu and SARS), the importance of establishing a robust public health system was recognized. A key component in developing

this national public health strategy is capacity building, as noted in the SARS report chaired by Dr. David Naylor (2003). The response from the higher education sector was the proliferation of Masters of Public Health (MPH) and related public health programs across the country (from 5 to approximately 17 in the course of two decades). To better understand the national landscape and determine the niche filled by our MPH program, the CRTF conducted an environmental scan of MPH degrees across Canada. An online search was carried out and data in the following areas were compiled from university websites, to facilitate review and comparison:

- General vs. specialized degree
- Areas of concentration
- Duration of degree
- Thesis vs. course-based
- Total credits (i.e. # in required core courses, # in required specialized courses, # required in practica, # in electives)
- Practicum duration
- PhD program offered
- Admission requirements
- Financial support

The committee reviewed and developed overall core competencies for the MPH program by consulting several public health competency lists developed in Canada, Europe and the United States. In 2004, the Association of Schools of Public Health (ASPH) in the United States, initiated the development of the MPH Core Competency Model for students upon graduation. This final set consists of 119 competencies under five domains and seven interdisciplinary/cross-cutting competencies. In Canada, the 2005 Federal/ Provincial/ Territorial Joint Task Group on Public Health Human Resources recommended that the Public Health Agency of Canada (PHAC) develop a set of core competencies, for individuals with post-secondary training in public health. This final set consists of 36 competencies under seven categories. These two lists were used as a platform to develop over-arching core competencies for the DLSPH MPH program

While the CRTF found both sets useful and relevant, many of the individual competencies were deemed too general and in other cases, too specific. In the end, the decision was made to combine these two sets into one list which was reviewed by CRTF using a focused and iterative process, involving knowledgeable discussion and debate, to ensure its suitability to the overall MPH degree program, as well as the individual fields.

Based on these courses, an initial list of core competencies was combined. A sub-committee of CRTF members worked to synthesize the list (i.e. eliminate overlapping competencies and merge those that were similar in nature). MPH Program Directors mapped out their discipline-specific competencies against the revised list of MPH core competencies using three categories: Completely, Somewhat and Not at All. Where appropriate, they also matched specific MPH core competencies with discipline-specific courses. In this manner, gaps in the overall MPH curriculum were identified.

The review of the MPH curriculum also involved three separate surveys/interviews, each from the perspective of three distinct groups: faculty, alumni and employer.

The Faculty Survey was conducted to determine the gaps and strengths in the current MPH curriculum based on the core competencies. With the help of the MPH Program Directors and selected faculty within each respective discipline, the list of core competencies was mapped against the current discipline – specific MPH curriculum to determine the variance between the two.

Imperative to the success of our MPH program is the awareness of where graduates are being employed and what are their roles within their various organizations; this information will be helpful in assessing the public health human resource needs in the short- and long-term. To explore these issues, the CRTF developed an Alumni Survey to meet these objectives, in addition to collecting information on the graduate's satisfaction with their MPH/MHSc degree, interest in continuing education, and the proportion who have engaged in further formal education.

A brief online search of alumni surveys from other graduate departments was conducted and the findings were used as a starting point in the development of the CRTF's Alumni Survey. Through discussion and iterative review, the CRTF decided on a final set of questions to include in the online survey. The survey also included the list of core competencies to determine to what extent the alumni believed they obtained these competencies while in the program and to what extent the competencies were relevant in their current employment. The findings from the Alumni Survey, in combination with the Faculty Survey, helped to refine the list of core competencies.

The online Alumni Survey was developed through consultation with CRTF members and approved in December 2011. An email was sent to all MHSc/ MPH graduates from 2004 to 2011 with email addresses collected from the 2010 External Review and/or the Alumni Relations Office at the Faculty of Medicine. The list was reviewed by faculty and staff for completion. A total of two reminder emails were sent to non-respondents by late January 2012. In the end, a total of 436 emails were successfully sent.

To determine public health resource needs in Canada and obtain a cursory vision of the future of public health in Canada, the CRTF also undertook key informant interviews with a number of significant public health officials across Canada. The interviewees were recommended by the members of the CRTF committee, with the intent to speak to 2 - 3 public health officials among 4 of the 5 field/discipline (Health Promotion, Community Nutrition, Occupational and Environmental Health, Epidemiology) and also with high ranking general public health practitioners across the country. Family and Community Medicine was not included in this exercise. A total of 13 semi-structured interviews were conducted. The interview questions can be found in Appendix 4.

6. Environmental Scan of MPH Programs in Canada

The majority of MPH degrees in Canada are 18 - 24 months in duration and all include a practicum (typically 12 – 16 weeks duration). Some of the programs offer generalist public health training (e.g. UBC, Manitoba, Memorial, and Waterloo), covering a varying range and depth of disciplines and fields of public health. Other programs (e.g. University of Toronto, University of Saskatchewan, University of Alberta) offer more specialized training in specific public health disciplines. These programs vary in the relative distribution of core public health content versus specialized discipline- specific content (see Table 1).

Table 1. Breakdown of curriculum (%) for selected MPH specialized training programs in Canada

University/Program	% Req'd core	% Discip. Specific	% Practicum	% Elective ¹
University of Alberta/MPH				
Epidemiology	40	26	14	20
Global Health	40	20	14	26
Health Policy and Management	35	29	12	24
Applied Biostatistics	40	27	13	20
Environmental & Occupational Health	40	27	13	20
Health Promotion	36	29	21	14
Simon Fraser University/MPH				
Environmental & Occupational Health	52 ²	36	²	12
Global Health	52 ²	36	²	12
Population Health	52 ²	36	²	12
University of Victoria/MPH				
Indigenous People's Health	43	21	29 ³	7
Public Health Informatics	43	21	29 ³	7
Public Health Nursing	43	21	29 ³	7
Social Policy	43	21	29 ³	7
University of Saskatchewan/MPH				
Biostatistics	54	⁵	13	33 ⁴
Epidemiology	54	⁵	13	33 ⁴
Environmental Health Sciences	54	⁵	13	33 ⁴
Health Services Administration	54	⁵	13	33 ⁴
Social & Behavioural Sciences	54	⁵	13	33 ⁴
University of Toronto/MPH				
Community Nutrition	5	50	35	10
Epidemiology	5	40	20 – 35 ⁶	35 – 20 ⁶
Family and Community Medicine	5	40	10 – 25 ⁶	45 – 30 ⁶
Health Promotion	5	30	20 – 35 ⁶	45 – 30 ⁶
Occupational & Environmental Health	5	70	20	5

Notes

¹ Electives or non-discipline specific courses

² Includes both required core, practicum and capstone/thesis

³ Includes required practicum and capstone project

⁴ This is the total number of credits for students with no clinical health sciences qualifications

⁵ Electives related to area of interest

⁶ This could include a second practicum equivalent to 1.5FCE or 15% of 10.0 FCE

The DLSPH MPH program appears to have the least **common core** public health content. This is somewhat misleading as some of the discipline-specific required courses are shared amongst many of the fields (e.g. a Public Health Policy course is a requirement for 4 of the 5 fields). Further, based on our Alumni Survey and faculty review of the MPH curriculum as described above, many of the core public health competencies are embedded in our discipline-specific programs. Nevertheless, our programs have a significant focus on disciplinary training, including the practicum. As the public health landscape has changed quickly over the past few years, it is important to continue to reflect on the position of the University of Toronto's DLSPH within the broader public health landscape as well as the public health education landscape and to stay at the forefront of emerging developments and key areas in public health.

7. Curriculum Planning Assumptions and Principles

In accordance with the DLSPH core values outlined in the DLSPH Strategic Plan 2012 - 2015 (excellence, equity and social justice, ethics and integrity, sustainability and accountability and responsiveness), the revised MPH curriculum will be grounded in the following assumptions and principles:

Assumptions

- Education programs are student-centred and built upon adult education principles.
- All students will develop and demonstrate core public health competencies, discipline-specific competencies and interdisciplinary competencies.
- Research and practice are co-dependent.
- Diverse perspectives are valued.
- Collaboration is encouraged.

Principles

Effective public health practitioners and researchers:

- Think critically and creatively.
- Consider the health of communities and populations.
- Address the social, political, cultural, economic and environmental determinants of health, disease and disability, in addition to the biological and physiological determinants.
- Assess and contribute to diverse bodies of evidence which inform policies, programs, interventions and approaches.

8. MPH Vision, Mission, Goals and Objectives

Vision: *To be leaders in the advancement of public health through research, education and practice.*

Mission: *MPH graduates build on a foundation of disciplinary, interdisciplinary, and core public health expertise to enhance the health of individuals and populations.*

The goals and objectives of the DLSPH MPH program curriculum are to:

1. Develop practitioners who are the graduates/employees of choice within the public health workforce.
 - Curricula prepare graduates to be discipline-specific public health specialists.

- Curricula integrate core public health and inter-professional expertise with discipline-specific expertise.
 - Curricula prepare graduates to anticipate and address the needs of multiple stakeholders including, employers, researchers, policy makers, community leaders and members, and professional organizations.
2. Prepare professionals for leadership roles in public health.
 - Graduates assume leadership positions in practice and /or research.
 - Curricula integrate and promote sharing of previous life and work experiences.
 - Innovative educational approaches and partnerships support access to MPH programs for working professionals.
 3. Prepare graduates for practice/community-based and academic research involvement.
 - MPH graduates demonstrate discipline-appropriate knowledge of, and skills in the research process, including qualitative and quantitative research methods.
 - MPH graduates effectively interpret research and will evaluate and synthesize evidence related to public health issues.
 - MPH graduates wishing to pursue doctoral studies are well prepared to do so.
 4. Foster innovative approaches to promoting health and researching and addressing public health issues.
 - MPH graduates think broadly, critically and creatively.
 - MPH graduates work collaboratively in interdisciplinary teams to capture diverse perspectives and consider multiple possibilities.

9. MPH Core Competencies

The 30 overarching core competencies recommended by this Taskforce represent the fundamental MPH curriculum at DLSPH. Individual fields (i.e. Community Nutrition, Epidemiology, Family and Community Medicine, Health Promotion and Occupational and Environmental Health) must include these overall core competencies and will have additional discipline-specific competencies.

These core competencies developed by the CRTF are organized using the 7 PHAC categories and are

Leadership, Professionalism and Ethics

- 1) Apply evidence-informed principles to critical evaluation and decision-making in public health.
- 2) Embrace a definition of public health that captures the unique characteristics of the field (e.g., population-focused, community-oriented, prevention-motivated and rooted in social justice) and how these contribute to professional practice.
- 3) Develop strategies to motivate others for collaborative problem solving, decision-making, and evaluation.
- 4) Utilize public health ethics to manage self, others, information and resources.

Communication and Knowledge Translation

- 5) Interpret, communicate information and write for professional, nonprofessional and community audiences.
- 6) Use current technology to communicate effectively.

Partnerships, Advocacy, Collaboration

- 7) Appreciate the importance of working collaboratively with diverse communities and constituencies (e.g. researchers, practitioners, agencies and organizations).
- 8) Appreciate the strengths and contributions of various public health disciplines and how to collaborate with them to solve public health problems.
- 9) Use skills such as team building, negotiation, conflict management and group facilitation to build partnerships.

Assessment, Analysis and Evaluation

- 10) Appreciate the nature of evidence and be able to judge the quality of research.
- 11) Demonstrate knowledge of the range of research methodologies and designs and their appropriate applications.
- 12) Design, plan and list the steps towards implementing quantitative research.
- 13) Design, plan and list the steps towards implementing qualitative research.
- 14) Apply and interpret statistical analyses found in public health studies.
- 15) Analyze and interpret quantitative data.
- 16) Analyze and interpret qualitative data.
- 17) Evaluate an action, policy or program.

Policy, Program planning and Implementation

- 18) Analyze the effects of political, social and economic policies on public health systems at the local, provincial, national and international levels.
- 19) Identify goals, measurable objectives, related activities, and expected outcomes for public health programs.
- 20) Address the challenges of implementation of a policy or program and/or take appropriate action to address specific public health issues.
- 21) Demonstrate an ability to set and follow priorities, and to maximize outcomes based on available resources.
- 22) Demonstrate knowledge of the policy process for improving the health status of populations.
- 23) Apply the principles of program planning, development, budgeting, management and evaluation in organizational and/ or community initiatives.

Diversity, Culture, Inclusiveness

- 24) Advocate for and develop public health programs and strategies responsive to the diverse cultural values and traditions of the communities being served.
- 25) Recognize how the determinants of health (biological, social, cultural, economic and physical) influence the health and well-being of specific population groups.
- 26) Apply culturally- relevant and appropriate approaches with people from diverse cultural, socioeconomic and educational backgrounds, and persons of all ages, genders, health status, sexual orientations and abilities.

General Public Health Sciences Knowledge

- 27) Describe the role of social, behavioural and community factors in both the onset and solution of public health problems.
- 28) Demonstrate knowledge about environmental factors including biological, physical and chemical factors that affect the health of a community.
- 29) Demonstrate knowledge of the role of human biology in the development and implementation of disease prevention, control, or management programs.
- 30) Demonstrate knowledge of Canada's public health systems (e.g. federal, provincial, and local).

The CRTF fully recognize that developments in the field of public health, relevancy of this competency set and faculty acceptance and use will dictate the shelf life of these competencies. On-going dialogue and revisiting of these competencies will ensure the list remains appropriate, timely and forward-thinking.

9.1. Identified Gaps

Based on a review by key program faculty, the alumni survey and CRTF deliberations, seven competencies were identified as significant gaps in the current curriculum (i.e. core competencies 3, 6, 9, 17, 21, 23, 30; see Appendix 4 for detail). The CRTF discussed possible options for addressing these gaps:

Competency 3: *Develop strategies to motivate others for collaborative problem solving, decision-making and evaluation.*

Proposed recommendations include:

- Develop case-based public health course (real cases)
- redesign Scientific Overviews (CHL 5418H) to include this material for all fields
 - Work with SGS Graduate Professional Skills (GPS) Program to offer a workshop(s) or incorporate into this course. GPS also provides other workshops which may be helpful (e.g. Connecting Leadership to Practice, How to Facilitate and Coordinate a Group, Managing Projects, Understanding Group Dynamics)

Competency 6: *Use current technology to communicate effectively.*

- The focus should be on the *communication* and less on the *use of technology* alone
- This should be embedded or demonstrated throughout courses. This requires faculty have and be up-to-date on the latest technology
- The best solution may be to develop an online workshop for students with support available. Assignments in courses could require students to use a certain technology at which point they can access an online workshop

Competency 9: *Use skills such as team building, negotiation, conflict management and group facilitation to build partnerships.*

These are applied skills and difficult to teach in a classroom setting. Possible approaches include:

- a cross-disciplinary “public health problems” course offered after the second term; 0.5FCE (a second core course)
- A module spread across all divisions (no credit)
- A case based course, 0.25FCE, perhaps with plenary sessions and mixed tutorials
- Work with SGS Graduate Professional Skills (GPS) Program to offer a workshop(s) on these skills

Competency 17: *Evaluate an action, policy or program.*

Competency 21: *Demonstrate an ability to set and follow priorities, and to maximize outcomes based on available resources.*

Competency 23: *Apply the principles of program planning, development, budgeting, management and evaluation in organizational and/or community initiatives.*

- These three competencies are linked and should be considered together.
- A program evaluation course (CHL 5110H) is currently offered. Consideration should be given to reviewing this course to ensure that it is meeting the needs of the students in all fields.
- A course in project planning/ project management may be a good addition. Many of our students could use these skills in their careers
- The London School Hygiene and Tropical Medicine (www.lshtm.ac.uk) has a course that some of our students have taken.

Competency 30: *Demonstrate knowledge of Canada's public health systems (e.g. federal, provincial, and local).*

- HPME offers a full course (HAD5010/5011, formerly for professional stream)
- Build this into an existing course as a module
- Include abbreviated material into CHL5004
- Develop online lectures/modules (this was the most popular option), consider using pre-existing material from other schools

10. MHSc/ MPH Alumni Survey

A total of 436 alumni were contacted by email, of which 54.8% responded to the survey. Although there was good representation across the program fields/disciplines, due to the small size of the Family and Community Medicine (FCM) program and the low response rate, the FCM results were excluded. The majority of respondents graduated after 2008 and had studied full-time at the DLSPH. Upon entering the MPH degree, almost 60% had one year or less of experience since their previous degree. For detailed results, please refer to Appendix 5.

From a pre-specified list, respondents were asked to indicate which sector they were currently employed in. Almost 90% of respondents were employed at the time of the survey. Across programs, 50 (18.4%) alumni indicated working in provincial government, 40 (14.8%) alumni worked with a health care provider/ health professional and/or primary care and 32 (11.8%) alumni were employed by non-government organizations (NGOs). By program field, the majority of OEH alumni were employed by the private sector or consulted. The largest number of epidemiology alumni worked in the provincial government; health promotion alumni listed health care provider/ health professional/ primary care and NGOs the most frequently. Community Nutrition alumni were also more likely to indicate working for a health care provider/ health professional/ primary care and the provincial government.

Across programs, over 76% of respondents believed they were adequately prepared for employment by the MHSc/ MPH degree. Over 98% of respondents indicated that their current employment was closely related/ somewhat related to their degree.

Of alumni who have engaged in further formal education (n = 58), over 30% have enrolled in a doctoral program and 22% have enrolled in medical school. Over 80% of all respondents have inquired about continuing education opportunities within the past 12 months, with the intention of improving their knowledge, skills and/or competencies.

The results indicate that a majority of alumni are satisfied with the education they received from the MPH degree. However, they identified competencies which were not covered by their programs and recommended improvements. These areas are included in the gap analysis discussed in Section 9.1 above. There is definite interest in continuing education possibilities that could be offered by the DLSPH, which would keep alumni engaged and in touch with the School.

11. Key Informant Interviews

DLSPH has a long-standing reputation of offering sought-after degrees and attracting the highest caliber of students. Many disciplines within the School were noted as representing the “gold standard” of MPH programs in Canada. DLSPH graduates are highly employable and notably competitive. Further, experience with our graduates within the workforce often exceeds employer/agency expectations. Most noteworthy are the highlighted skills acquired within each discipline:

- the analytical skills of epidemiology graduates;
- the broad and creative thinking of health promotion graduates;
- the technical skills of the occupational and environmental health graduates;
- the evidenced-based knowledge and management skills of the community nutrition graduates.

In order to remain competitive and continue to set the highest standards possible, key informants stated that the MPH program should enhance and expand its curriculum in order to meet the growing demands placed on new graduates entering the workforce. To achieve workplace success, it is argued that Professional Practice and Leadership Competencies must be integrated in and/or added to the MPH curriculum. Project management, administration, team-building, workplace adaptability, leadership and engagement (as examples) were noted as necessary skills that our graduates should have in order to maintain their competitive edge, and to stay current with the adoptive competencies across the public health fields/disciplines.

Our graduates are some of the most sought-after because they are both trained in discipline-specific knowledge and are similarly encouraged to be broad, critical, and innovative thinkers. Further curriculum enhancement in the areas of evidence-based decision making, knowledge synthesis, program evaluation, healthy public policy, and understanding government must be considered. In addition, it is imperative that the School 1) ensures numeracy and methodology competencies across disciplines, and 2) provides more opportunities for students to develop advanced data analysis techniques.

To ensure our graduates are best prepared for future advancement within both workforce and research arenas, the DLSPH must remain current in teaching and practice, but also continue to have a pulse on the future of public health. Most noteworthy are areas surrounding emerging technologies, social marketing, environmental sustainability, population level interventions, fiscal responsibility, and cross-sectorial partnerships.

Finally, the DLSPH’s MPH currently does not offer an educational stream specific to the mid-career professionals. Although many professionals successfully complete an MPH degree, the required course schedules, modes of instruction, and existing timelines, restrict many excellent candidates from choosing DLSPH. As the public health workforce continues to insist upon mid-career level training, and as growing numbers of professionals seek to expand their own scholarship, the School is poised to be an epicenter for expanded education. It is highly recommended that the DLSPH explore ways to further attract and accommodate mid-career professionals.

12. Accreditation

The issue of accreditation has been the topic of much discussion. The External Reviewers in January 2011 were specifically asked to comment on the School's state of readiness for accreditation and identify areas where the current MPH program meet accreditation standards and other areas needing development.

The CRTF discussed accreditation extensively. It would require a particular minimum set of MPH program fields that do not necessarily fit the University of Toronto context. For example, we do not have a MPH in Health Policy/Health Service Management as required by CEPH accreditation standards. Rather, this area is covered by the Institute of Health Policy and Management in the MHS in Health Administration. Similarly, our Biostatistics program is a Master of Science (thesis or course work option) not an MPH. CEPH accreditation imposes a relatively rigid mix for minimum faculty complement (core faculty) which would limit the DLSPH's ability to respond to Canadian public health human resource demands. Lastly, preparing for CEPH accreditation is labour-intensive and costly. Therefore, moving towards accreditation is not recommended at this time. However, the CEPH accreditation standards should continue to be used as a guide to ensure that our program remains on par with the best US programs while recognizing the Canadian context and strengths of our disciplinary-based MPH program.

13. Phase 1 Overall Recommendation and Next Steps

Based on the findings of Phase 1 of the curriculum renewal process, we recommend the following:

1. The University of Toronto, Dalla Lana School of Public Health MPH *brand* is strongly discipline-specific. Based on the results of the environmental scan and findings to date, it is strongly recommend that our MPH niche remain intact as an 18 – 24 month discipline-specific program.
2. The Vision and Mission statements for the MPH should be adopted together with the Goals and Objectives.
3. The 30 overarching core competencies that have been developed should be adopted. This list was drafted utilizing key sources (key competencies developed by the Association of Schools of Public Health (ASPH) in the United States and the Public Health Agency of Canada (PHAC)) and focused and iterative process.
4. Given our current circumstances, moving towards the Council on Education of Public Health (CEPH) accreditation is not recommended at this time.

As Phase 2, CRTF recommends the following next steps for the 2012 – 2013 academic year:

1. In-depth consultation with DLSPH faculty and students, for specific feedback to inform the development of strategies for implementation of these recommendations.
2. Develop specific strategies to address the identified gaps, including issues surrounding practica. Given resource implications and other challenges, there will be a need to differentiate between short- and long-term strategies.

3. Find creative means to offer excellent graduate programs efficiently by exploring alternative modes of delivery (e.g. distance, web-based), creative packaging of course materials (e.g. 0.25FCE or modules), and longitudinal learning modalities (home room concept).
4. Finalize discipline-specific competencies for all fields in the MPH program and develop strategies to address discipline-specific gaps in curriculum.
5. Capitalize on disciplinary strengths and foster the most efficient, effective and integrated delivery of DLSPH curriculum by adopting a curriculum (course) development and approval process that ensures and promotes cross-disciplinary collaboration.
6. Explore opportunities to support educational scholarship to advance the field of public health education, with regards to MPH training. Recognize the accomplishments of innovative curricular and teaching methods development and explore potential partnerships with other organizations engaged in public health educational research (e.g. Wilson Centre; Public Health Research, Education and Development).
7. Develop and nurture existing partnerships in education across the University of Toronto and with institutional partners to deliver outstanding education that reflects and considers all stakeholder considerations and anticipates the future of public health.
8. Submit final report with recommendations and an implementation plan including mechanisms for measuring outcomes, to the DLSPH Graduate Curriculum Committee and other School committees as appropriate.

Appendix 1. List of Committee Members

Susan Bondy, MPH Program Director, Epidemiology
Paul Bozek, Occupational and Environmental Health
Adalsteinn Brown, Public Health Policy Representative
Lissa Ceolin, MPH Program Co-Director, Occupational and Environmental Health
Jill Charnaw-Burger, Practicum Placement Coordinator (Interim)
Julie Foisy, Practicum Placement Coordinator (on maternity leave)
Ann Fox, MPH Program Co-Director, Community Nutrition
Michael Goodstadt, MPH Program Director, Health Promotion (former, as of August 2012)
Curtis Handford, MPH Program Director, Family and Community Medicine
Suzanne Jackson, Global Health Representative
Charlotte Lombardo, MPH Program Director, Health Promotion (effective July 2012)
Wendy Lou, MSc Program Director, Biostatistics
Melanie Morris, MPH Program Co-Director, Community Nutrition
Andrea Sass-Kortsak, Graduate Coordinator (Chair)
Fran Scott, Preventative Medicine and Public Health Residency Program Director
Bernice Yanful, MPH Student Representative
Rachel Zulla, Graduate Affairs Administrator

Appendix 2. Summary of Fields within the MPH Program

Community Nutrition

The MPH Program in Community Nutrition prepares students to be critically reflective practitioners with the knowledge and skills to work in a variety of community health roles throughout their careers.

MPH students will:

- develop intellectual capacities that enable them to critically analyze information and solve problems creatively;
- develop ethical capacities so as to be aware of and respond appropriately to ethical aspects of practice;
- develop the competence required for entry level dietetic practice (professional practice, assessment, planning, implementation, evaluation and communication);
- understand the scope and conceptual basis underlying advanced community nutrition practice and will develop their capacities, knowledge and skills to work as partners in interdisciplinary community health teams in a variety of work settings;
- develop expertise according to their own unique interests and needs; and
- develop the capacity to assess and find ways to satisfy life-long learning needs

Epidemiology

The MPH in Epidemiology provides a solid foundation in epidemiological methods, an understanding of the breadth of community health and opportunities for applied experiential learning in epidemiologic practice, research and policy. The objective of the program is to provide students with a base of knowledge and skills in epidemiological methods and public health that will enable them to pursue careers in evidence-based public health practice or applied epidemiological research.

Graduates will:

- be able to work as part of a research group or in public health practice;
- be able to describe trends and patterns of disease incidence and prevalence, disease burden, factors affecting health status, and major etiologic and prognostic factors;
- understand the strengths and weaknesses of major methodological and analytical techniques;
- exhibit practical skills, including the ability to develop an epidemiological question, refine the question in light of the literature and community situation, design an appropriate study to answer the question, collect relevant data, analyze these data using commonly available statistical software, and interpret the findings relative to the literature and the community/organizational context;
- be able to prepare a paper for peer-reviewed publication, and present epidemiological information;
- demonstrate knowledge of public health principles and practice; and
- be able to read, understand, and critically appraise the scientific literature, and understand the effectiveness of core public health interventions

Family and Community Medicine

The Family and Community Medicine field is intended for licensed and regulated primary care clinicians who are keen in strengthening their skills as a clinician by assessing and evaluating their practices as patient populations. With the solid grounding in public health principles, family physicians and other primary care practitioners with this discipline-specific MPH will possess the knowledge and skills that can be employed in future professional work related to public health.

Graduates will:

- assess the health status/social determinants of health/health needs of their practice population (including vulnerable populations) as well as the broader community and address/strategize interventions targeting these needs and issues of inequity;
- improve evidence-based chronic disease management to minimize complications from chronic disease;
- consider the spectrum of individual to population-based interventions and for the wide range of models of care- (solo v. team-based, clinic v. home-based);
- understand the required characteristics of effective screening strategies;
- access and articulates the evidence base behind recommended clinician-driven primary prevention strategies (such as...immunization, smoking cessation, physical activity);
- access and articulate the evidence-base behind recommended screening strategies;
- understand research methods and employ the knowledge to critically appraise research;
- advocate for policy changes relevant to primary care in order to reduce inequities and promote health/prevent disease and injury in the population;
- understand how Canada's health system is organized and how it compares to other countries;
- demonstrate that above skills are portable (i.e. global health work);
- teach the above competencies to family medicine residents/other learners;
- play a leadership role in their professional practice environments; and
- be leaders in best practices in primary care, including technology, and resources to primary care colleagues and public health officials.

Social and Behavioural Health Sciences - Health Promotion

This MPH degree takes an explicitly social science perspective in addressing issues related to the health of individuals, communities and populations. In particular, this program gives special attention to identifying, understanding and addressing the societal and personal determinants of health. Attention is given to 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. Sufficient training in research methods is provided to enable students to pursue doctoral studies and careers in health promotion/public health research.

Graduates will:

- possess a critical understanding of the range of theoretical approaches, methods and strategies required for responding to health-related issues;
- be able to develop, implement and evaluate health promotion interventions at individual, community and societal levels;
- be able to assess the health needs of individuals and communities grounded in a thorough understanding of the social and political determinants of health and illness;
- be able to critically appraise and use statistics, health surveys and epidemiological data in program planning, evaluation and research;
- be able to work effectively across disciplines, across sectors and with members of the public;
- be able to work as part of a research, policy or practice group; and
- possess an understanding of the role of public policy in addressing public health issues in Canada and internationally.

Occupational and Environmental Health

The MPH degree in the field of Occupational and Environmental Health (OEH) is offered with two options: a professional training option in occupational hygiene, and a research training option in occupational or environmental health.

The objective of the professional option is to prepare Occupational Hygiene professionals to anticipate, identify and assess the potential risks to health posed by hazardous materials, agents and situations in the occupational environment, to evaluate exposures to these hazards, and to develop and manage effective control strategies for them. Upon completion of the program, graduates will be able to:

- demonstrate a knowledge of those principles in the physical and biological sciences necessary for developing competence in the theoretical and practical aspects of occupational hygiene;
- display a thorough understanding of all aspects of occupational hygiene practice;
- describe the effects of exposure to workplace hazards and methods used in hazard analysis and risk assessment;
- explain the influence of workplace hazards on the general environment and the role of the hygienist in environmental protection;
- demonstrate a knowledge of ergonomics, occupational safety, accident prevention, and, occupational health and safety considerations of labour relations;
- demonstrate the critical skills required in the review of scientific literature, and a knowledge of research methods, including epidemiological and statistical techniques as they apply to occupational health; and
- communicate effectively with labour, management, the public and other members of the scientific community

The objective of the MPH Occupational and Environmental Health research option is to provide training to students who wish to pursue a research career in occupational and/or environmental health.

Appendix 3. Summary of Program Practica

Community Nutrition

Students who wish to qualify for registration with a provincial dietetics regulatory body must complete three practica: two-12 week practica (3.0 FCE) in a community setting and one 6 week practicum (0.5 FCE) in a clinical setting. Practica are completed during the summer following year one and the winter of year two. Students who are Registered Dietitians are required to complete one 8 week practicum (1.0 FCE).

Faculty collaborate with students to identify specific learning needs, review options for practicum settings and aid students in finding appropriate field advisors. Some examples of practica sites include public health departments, community health centres, not-for-profit agencies, the food industry, government, commodity agencies, hospital outpatient settings and other ambulatory care agencies.

Epidemiology

The minimum of one practicum placement will be completed by all students that must include, as a main component, the epidemiological and statistical analysis of primary or secondary data. A significant component of interpretation of epidemiological data is also required. Students then have the option to take additional practicum offerings to reach or go beyond the total number of course credits required for the program. The maximum number of practicum credits a student can take during the degree is 3.5 credits. Students may take practice-based placements and research-based practica in various combinations (e.g., two independent practice based or research practica, or one of each).

Family and Community Medicine

There is one required practicum in the MPH (FCM) field. This requires a minimum of 300 hrs and is under the supervision of a student-identified field supervisor, subject to approval by the Program Director. The practicum work must be new to the learner and can be focused in one of several different areas: teaching, research, creative professional activity or leadership and administration. There are co-requisite courses for each of the above areas. Students are encouraged to focus their practicum enough so that there is the potential for dissemination of their work via presentation or publication. There is the opportunity to extend the duration of the required practicum or to start an entirely different optional practicum.

Health Promotion

Students are required to undertake a 12 week full-time (or equivalent 420 hours) practicum in their 1st year; this usually occurs in the Spring/Summer term. Most students also complete a practicum in the Winter term of their 2nd year, although this is not compulsory. The purpose of the practicum is to enable students to develop “hands on” experience in health promotion, and to apply the theory and analytic skills acquired in the academic portion of their degree program. Practicum activities will depend on the nature of the practicum setting, the on-going projects and needs of the practicum agency/organization, and the student’s learning objectives.

Occupational and Environmental Health

Students in the Occupational Hygiene Professional stream are required to take a single 16 week practicum in the spring/summer term of the first year. Students are placed in a variety of settings including the industrial sector (e.g. manufacturing, petrochemical, pharmaceutical, mining) , service/public sector (e.g. municipal, provincial, federal governments, colleges/universities, hospitals), in a corporate health and safety environment.

Appendix 4. Results incorporating faculty input and alumni input on MPH core competencies

(double click to open results)

Note: Faculty responses were obtained by each program stream and may or may not have included all program faculty.
 Note: Alumni responses were obtained through the DLSPH Alumni Survey. The numbers shown here represent the % who stated that a particular competency is extremely/ quite a bit relevant in their current position.

Note: Please see end of document for methods on coding.

#	Specific Competency	OEH- faculty	OEH- alumni	Epidemiology- faculty	Epi- alumni	Health Promotion- faculty	HP- alumni	Community Nutrition- faculty	CN- Alumni	**Family and Community Medicine
1	Apply evidence-informed principles to critical evaluation and decision-making in public health.	CHL5930H, CHL523H (partial GAP)	62.75	CHL5402H; CHL5405H; CHL5418H; yes emphasis on outcome evaluation and quantitative evidence in discussion	73.03	CHL5801H	59.62	NFS 1223H - Critical Assessment of Approaches, Group presentation; Final paper; Practice - projects typically require this.	78.57	CHL5605H, CHL5602H, CHL5613H, CHL5623H, CHL5601H, CHL5603H
2	Embrace a definition of public health that captures the unique characteristics of the field (e.g., population-focused, community-oriented, prevention-oriented and rooted in social justice) and how these contribute to professional practice.	GAP	25.49	confident this is modeled; not on "purpose"	44.44	CHL5801H	65.38	NFS 1208H - students develop a definition of Community Nutrition/Health practice	78.57	CHL5605H, CHL5602H, CHL5613H, CHL5623H; partial GAP; CHL5601H, CHL5603H
3	Develop strategies to motivate others for collaborative problem solving, decision-making, and evaluation.	represented throughout the program	77.55	GAP	63.74	well represented (community dev)	66.67	NFS 1211H - Community project, Group work throughout program.	71.43	CHL5605H, CHL5613H, CHL5623H; partial GAP; CHL5601H, CHL5603H
4	Utilize public health ethics to manage self, others, information and resources.	partial representation in the program	49.02	CHL5401H; CHL5402H; CHL5403H	45.05	CHL5150H	45.28	NFS 1208H - Jurisprudence assignment; Prep for CDO exam tutorial; NFS 1209H - prep; practice guidelines	64.29	CHL5605H, CHL5613H, CHL5623H, CHL5601H; partial GAP; CHL5602H
5	Interpret, communicate information and write for professional, nonprofessional and community audiences.	well represented; CHL5917H; CHL5918H; CHL5901H	90.2	CHL5426H; CHL5202H; CHL5402H; CHL5405H; CHL5418H; CHL6030Y	95.05	CHL5801 (health communication - elective)	83.02	NFS 1211H - Communication module	81.48	CHL5605H, CHL5613H, CHL5623H, CHL5601H; partial GAP; CHL5602H
6	Use current technology to communicate effectively.	GAP	66.67	CHL5402H; CHL5405H; CHL5418H	69.23	GAP	67.26	NFS 1211H; throughout the program	71.43	CHL5613H, CHL5623H, CHL5605H; partial GAP; CHL5601H, CHL5603H
7	Appreciate the importance of working collaboratively with diverse communities and constituencies (e.g. researchers, practitioners, agencies and organizations).	represented throughout the program	54.9	GAP	76.92	CHL5801, CHL5150 - Well represented in other courses.	86.68	CHL5223H (Participatory Action component); NFS 1223H (Critical evaluation); NFS 1211H (Program planning)	71.43	CHL5605H, CHL5602H, CHL5613H, CHL5623H, CHL5601H
8	Appreciate the strengths and contributions of various public health disciplines and how to collaborate with them to solve public health problems.	CHL5204H	27.45	GAP	53.85	CHL5904H	56.6	Practice (clinical & community based); NSF 1211H project; CHL5204H; electives	60.71	CHL5605H, CHL5602H; partial GAP; CHL5613H, CHL5623H
9	Use skills such as team building, negotiation, conflict management and group facilitation to build partnerships.	partial GAP	34.31	GAP	71.63	GAP	77.36	GAP ABGA NFS 1211H - Adult Ed module; NFS 1208H & NFS 1209H - Some work around giving & receiving constructive & balanced feedback; students evaluate each other	25	CHL5605H, CHL5613H, CHL5623H; partial GAP; CHL5601H, CHL5603H
10	Appreciate the nature of evidence and be able to judge the quality of research.	CHL5430H; CHL5902H	66.67	CHL5426H; CHL5402H; CHL5405H; CHL5418H	89.13	CHL5113H (appreciate evidence) includes module on evaluating the quality of qualitative research	80.77	CHL5220H; CHL5221H; NFS 1221H; NFS 120H; NFS 1484H	71.43	CHL5605H, CHL5602H, CHL5623H, CHL5601H; partial GAP; CHL5613H, CHL5603H
11	Demonstrate knowledge of the range of research methodologies and designs and their appropriate applications.	CHL5430H; CHL5220H	45.1	CHL5401H; CHL5405H; CHL5402H; CHL5202H; CHL5405H; CHL5418H	65.22	CHL5150H - CHAM I; CHAM II	76.92	CHL5220H; CHL5221H	50	CHL5605H, CHL5602H; partial GAP; CHL5613H, CHL5623H, CHL5601H, CHL5603H

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Appendix 5. Alumni Survey Detailed Results

The overall response rate for the survey was 54.8% with a good representation across the fields (**Table 1**). Due to the small size graduates in the Family and Community Medicine (FCM) field (n = 9), these responses were removed from the following report.

Table 2 shows the number of respondents by the year of graduation from the MHSc/ MPH. The majority of respondents graduated in 2008 or later.

Over 88% of the respondents studied full-time while at the Dalla Lana School of Public Health (**Table 3**). Epidemiology had a highest percentage of part-time students than the overall average while Health Promotion had a highest percentage of full-time students.

The number of years between graduation from their previous degree and beginning the MHSc/ MPH degree is shown in **Table 4**. The majority of students entering the degree program have 1 year or less experience between the previous degree and the MHSc/MPH = (56.8%) with the highest proportion among the Community Nutrition students (65.5%). Almost 17% of Health Promotion students have over 8 years between their previous degree and the MHSc/ MPH.

Table 1. Degree program respondents by program

	Total Completed (n)	Total Emailed* (n)
OEH	52	86
EPI	95	189
HP	54	130
CN	29	72
FCM	9	30
TOTAL	239	507

*Does not take into account invalid email addresses

Table 2. Year of graduation from MHSc/ MPH degree

	Total (n)
2003	1
2004	17
2005	20
2006	22
2007	17
2008	31
2009	40
2010	39
2011	43
TOTAL	230

Table 3. Number of students in full-time versus part-time status while in the MHSc/MPH, by program (%)

	OEH	EPI	HP	CN	Total
Full-time	46 (88.5)	80 (84.2)	52 (96.3)	24 (85.7)	202 (88.2)
Part-time	6 (11.5)	15 (15.8)	2 (3.7)	4 (14.3)	27 (11.8)

Table 4. Number of years between previous degree graduation and start of MHSc/ MPH, by program (%)

# of Years	OEH	EPI	HP	CN	Total
≤ 1 yr	30 (58.8)	54 (56.8)	27 (50.0)	19 (65.5)	130 (56.8)
1 yr < x < 4 yr	14 (27.5)	28 (29.5)	16 (29.6)	5 (17.2)	63 (27.5)
4 yr < x < 8 yr	2 (3.9))	5 (5.3)	2 (3.7)	3 (10.3)	12 (5.2)
> 8 yrs	5 (9.8)	8 (8.4)	9 (16.7)	2 (6.9)	24 (10.5)
Totals	51 (100)	95 (100)	54 (100)	29 (100)	229 (100)

The majority of alumni (87%) are currently employed (**Table 5**). A higher proportion of Health Promotion (20%) and Community Nutrition (17%) students than the overall average (13%) are not currently employed. We do not have data on what the unemployed alumni are currently doing.

Table 5. Number of respondents currently employed (%)

	OEH	EPI	HP	CN	Total
Yes	49 (94.2)	84 (88.4)	43 (79.6)	24 (82.8)	200 (87.0)
No	3 (5.8)	11 (11.6)	11 (20.4)	5 (17.2)	30 (13.0)
Total	52 (100)	95 (100)	54 (100)	29 (100)	230 (100)

Table 6 displays the sector in which the alumni are currently employed. Respondents could check all that apply.

Table 6. Sector where alumni are currently employed, by program (n)

	OEH	EPI	HP	CN	Total
Health care provider / health professional/ primary care	4	14	13	9	40
University or College faculty	3	4	2	0	9
University or College staff	3	4	8	1	16

Federal Government Ministry, Department or Agency	1	13	5	2	21
Provincial Government Ministry, Department or Agency	9	31	4	6	50
Local Public Health Unit, Regional Health Authority or Local Health Integration Network	1	15	5	5	26
Non-Government Organization (NGO, e.g., not for-profit association, charitable foundation, or other NGO)	2	14	12	4	32
Private (e.g., pharmaceutical, biotech, other industrial or commercial firm)	12	3	0	3	18
Consulting	12	1	3	5	21
United Nations Agency or World Health Organization	0	1	2	0	3
Self-employed	0	1	0	1	2
Post MHSc/ MPH education	1	3	2	1	7
Other	9	3	12	2	26

Table 7 shows the proportion of alumni who felt adequately prepared for their current employment. Across programs, over 76% believed they were adequately prepared by the degree. A higher proportion of Epidemiology alumni (11%) than the overall average (9%) did not believe they were adequately prepared for their current employment by the degree. Across programs, over 98% of alumni specified that their current employment was closely related/ somewhat related to their degree (**Table 8**).

Table 7. Number of respondent's feeling adequately prepared by the degree (%)

	OEH	EPI	HP	CN	Total
Yes	44 (84.6)	69 (72.6)	39 (72.2)	24 (82.8)	176 (76.5)
No	3 (5.77)	11 (11.6)	5 (9.3)	2 (6.9)	21 (9.1)
Don't know	5 (9.6)	6 (6.32)	5 (9.3)	1 (3.5)	17 (7.4)
Decline to answer	0	9 (9.5)	5 (9.3)	2 (6.9)	16 (7.0)

Table 8. Degree to which the respondent's current employment is related to their degree (n, (%))

	OEH	EPI	HP	CN	Total
Closely Related	42 (85.7)	61 (72.6)	24 (55.8)	18 (75.0)	145 (72.5)
Somewhat Related	6 (12.2)	22 (26.2)	19 (44.2)	5 (20.8)	52 (26.0)
Not related at all	1 (2.0)	1 (1.2)	0	1 (4.2)	3 (1.5)
Don't know	0	0	0	0	0
Decline to answer	0	0	0	0	0

Of the alumni who have engaged in further formal education after completing the MHSc/ MPH, over 30% across all fields have enrolled in a PhD program with the highest proportion stemming from the Health Promotion program (**Table 9**). Over 30% of epidemiology alumni engaging in further education have enrolled in medical school. Epidemiology and Health Promotion alumni were more likely to have engaged in further education than OEH or Community Nutrition.

Table 9. Proportion of respondents who have engaged in further formal education by degree and program (n=58)

	OEH	EPI	HP	CN	Total
Doctorate	2 (33.3)	6 (26.1)	9 (37.5)	1 (20.0)	18 (31.0)
MA or MSc	0	0	1 (4.2)	0	1 (1.7)
Medical School	1 (16.7)	7 (30.4)	4 (16.7)	1 (20.0)	13 (22.4)
Residency	0	3 (13.0)	1 (4.2)	0	4 (6.9)
Law school	1 (16.7)	0	0	0	1 (1.7)
Other*	2 (33.3)	7 (30.4)	9 (37.5)	3 (60.0)	21 (36.2)
Total	6 (10.3)	23 (39.7)	24 (41.4)	5 (8.6)	58

* “Other” text responses included “Certificate”, “Online skills training”, etc.

Across the programs, over 80% of alumni have looked into courses, programs, workshops or seminars in the past 12 months with the intention of improving their knowledge, skills or competencies (**Table 10**). A lower proportion of epidemiology alumni have looked into continuing education compared to other programs.

Over 60% of alumni are involved in some manner with their discipline-specific professional association (**Table 11**). A majority of Health Promotion alumni are not members of their professional association (45%) or are not aware of a professional association for their discipline (23%).

Table 10. Number of respondents interested in continuing education possibilities (%)

	OEH	EPI	HP	CN	Total (%)
Yes	46 (88.5)	71 (74.7)	45 (83.3)	26 (89.7)	188 (81.7)
No	6 (11.5)	22 (23.2)	9 (16.7)	3 (10.3)	40 (17.4)
Decline to answer	0	2 (2.1)	0	0	2 (0.9)

Table 11. Number of respondents involved in a discipline-specific professional association (%)

	OEH	EPI	HP	CN	Total
Yes, held/ have held an executive role	2 (3.8)	7 (7.4)	2 (3.8)	4 (13.8)	15 (6.6)
Yes, active member	10 (19.2)	16 (16.8)	3 (5.7)	7 (24.1)	36 (15.7)
Yes, member	24 (46.2)	36 (37.9)	12 (22.6)	16 (55.2)	88 (38.4)
No	14 (26.9)	34 (35.8)	24 (45.3)	2 (6.9)	74 (32.3)
I am not aware of a prof assc for my disc	2 (3.9)	2 (2.1)	12 (22.6)	0	16 (7.0)

Survey Response Rate

- Number of emails sent out Dec 16 2011: 507
- Number of bounce backs/ invalid emails: 71
- Reminder email sent to those who had not completed the survey : January 16 2012
- Completed surveys as of Jan 30 2012: 239 (of 436 successful emails sent)= 54.8% response rate

Survey Questions

- 1) What Master's degree did you most recently graduate with, from the Dalla Lana School of Public Health (formerly the Dept. of Public Health Sciences)?
- 2) What program field did you graduate from?
- 3) What year did you graduate?
- 4) Were you a full-time or part-time student?
- 5) When you were first admitted to the MPH/ MHSc, how many years had it been since you graduated from your previous degree?
- 6) Where do you presently work (organization name, city, and country)?
- 7) What is your job title?
- 8) In what sector(s) do you presently work? Check all that apply.

Sector	
Health care provider / health professional/ primary care	
University or College faculty	
University or College staff	
Federal Government Ministry, Department or Agency	
Provincial Government Ministry, Department or Agency	
Local Public Health Unit, Regional Health Authority or Local Health Integration Network	
Non-Government Organization (NGO, e.g., not for-profit association, charitable foundation, or other NGO)	
Private (e.g., pharmaceutical, biotech, other industrial or commercial firm)	
Consulting	
United Nations Agency or World Health Organization	
Self-employed	
Post MHSc/ MPH education	
Other: Please describe: _____	
None	

- 9) Please indicate your major responsibilities and activities in your present paid position(s), in terms of approximate percentage of time allocated to each responsibility. Please let total equal 100% equivalent to full-time employment.

Responsibility	Percent time (total 100%)
Clinical service (Hospital and Community based)	
Applied practice or program development/ delivery	
Investigator-initiated research or academic research	
Agency mandated research, surveillance, program evaluation	
Management, senior administration	
Education and staff training	
Other – related to public health: please describe: _____	
Other – not related to public health- please describe: _____	

- 10) Since graduating, how many different (paid) employers/ organizations have you worked with?

- How closely is your current employment related to your degree? Would you say it is:
- Do you feel the MHS/ MPH degree adequately prepared you for your current employment?
- Please comment:
- Since graduating, have you engaged in further formal education?
- If yes, what type:
- In the last 12 months, have you looked for any information concerning courses, programs, workshops, seminars or other activities you could have taken with the intention to improve your knowledge, skills or competencies?
- Are you actively involved in a professional association for individuals in your discipline? (e.g. CSEB, Nutrition? OEH? HP? Etc....)
- Would you be interested in being involved in the Dalla Lana School of Public Health's curriculum renewal process as it evolves? This could include responding to more surveys, participating in focus groups and generally providing input. If you would like to participate or be updated on the curriculum renewal process, please include your email address and full name.

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
1- Apply evidence-informed principles to critical evaluation and decision-making in public health.	Extremely/ Quite a bit	36 70.59	67 71.28	33 62.26	19 65.52	155 68.3	32 62.75	67 73.63	31 59.62	22 78.57	152 68.5
	Moderately/ Slightly	13 25.49	27 28.72	18 33.96	10 34.48	68 30.0	15 29.41	18 19.78	16 30.77	6 21.43	55 24.8
	Not at all	2 3.92	0 0.00	2 3.77	0 0.00	4 1.8	4 7.84	6 6.59	5 9.62	0 0.00	15 6.8
2- Utilize a definition of public health that captures the unique characteristics of the field and how these contribute to professional practice. (e.g., population-focused, community-oriented, prevention-motivated and rooted in	Extremely/ Quite a bit	14 27.45	47 50.00	40 75.47	21 72.41	122 53.7	13 25.49	40 44.44	34 65.38	22 78.57	109 49.3
	Moderately/ Slightly	32 62.75	43 45.74	11 20.75	8 27.59	94 41.4	30 58.82	43 47.78	12 23.08	6 21.43	91 41.2
	Not at all	5 9.80	4 4.26	2 3.77	0 0.00	11 4.8	8 15.69	7 7.78	6 11.54	0 0.00	21 9.5

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
social justice)											
3- Develop strategies to motivate others for collaborative problem solving, decision-making, and evaluation.	Extremely/ Quite a bit	20 39.22	26 27.66	20 37.74	16 55.17	82 36.1	37 72.55	58 63.74	34 66.67	20 71.43	149 67.4
	Moderately/ Slightly	27 52.94	55 58.51	30 56.60	13 44.83	125 55.1	12 23.53	31 34.07	16 31.37	8 28.57	67 30.3
	Not at all	4 7.84	13 13.83	3 5.66	0 0.00	20 8.8	2 3.92	2 2.20	1 1.96	0 0.00	5 2.3
4- Utilize public health ethics to manage self, others, information and resources.	Extremely/ Quite a bit	17 33.33	26 27.96	18 33.33	14 50.00	75 33.2	25 49.02	41 45.05	24 45.28	18 64.29	108 48.4
	Moderately/ Slightly	30 58.82	58 62.37	31 57.41	11 39.29	130 57.5	22 43.14	46 50.55	25 47.17	8 28.57	101 45.3
	Not at all	4 7.84	9 9.68	5 9.26	3 10.71	21 9.3	4 7.84	4 4.40	4 7.55	2 7.14	14 6.3
5- Interpret, communicate	Extremely/ Quite a bit	34	60	33	24	151	46	88	44	22	200

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
information and write for professional, nonprofessional and community audiences.	Quite a bit	66.67	63.16	61.11	82.76	65.9	90.20	95.65	83.02	81.48	89.7
	Moderately/ Slightly	15 29.41	33 34.74	18 33.33	5 17.24	71 31.0	5 9.80	4 4.35	9 16.98	5 18.52	23 10.3
	Not at all	2 3.92	2 2.11	3 5.56	0 0.00	7 3.1	0	0	0	0	
6- Use current technology to communicate effectively.	Extremely/ Quite a bit	17 33.33	29 30.53	7 12.96	13 44.83	66 28.8	34 66.67	63 69.23	33 62.26	20 71.43	150 67.3
	Moderately/ Slightly	28 54.90	57 60.00	27 50.00	15 51.72	127 55.5	16 31.37	28 30.77	20 37.74	8 28.57	72 32.3
	Not at all	6 11.76	9 9.47	20 37.04	1 3.45	36 15.7	1 1.96	0 0.00	0 0.00	0 0.00	1 0.4
7- Appreciate the importance of working	Extremely/ Quite a bit	17	38	38	20	113	28	70	47	20	165

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
collaboratively with diverse communities and constituencies (e.g. researchers, practitioners, agencies and organizations).		33.33	40.43	70.37	68.97	49.6	54.90	76.92	88.68	71.43	74.0
	Moderately/ Slightly	31	51	16	9	107	20	21	6	8	55
	Not at all	60.78	54.26	29.63	31.03	46.9	39.22	23.08	11.32	28.57	24.7
		3	5	0	0	8	3	0	0	0	3
		5.88	5.32	0.00	0.00	3.5	5.88	0.00	0.00	0.00	1.3
8- Appreciate the strengths and contributions of various public health disciplines and how to collaborate with them to solve public health problems.	Extremely/ Quite a bit	15	24	21	10	70	14	49	30	17	110
		29.41	25.53	38.89	34.48	30.7	27.45	53.85	56.60	60.71	49.3
	Moderately/ Slightly	32	66	30	19	147	31	39	19	10	99
		62.75	70.21	55.56	65.52	64.5	60.78	42.86	35.85	35.71	44.4
	Not at all	4	4	3	0	11	6	3	4	1	14
		7.84	4.26	5.56	0.00	4.8	11.76	3.30	7.55	3.57	6.3
9- Use skills such as team building, negotiation, conflict management and group facilitation to	Extremely/ Quite a bit	14	20	11	17	62	43	67	41	21	172
		27.45	21.28	20.37	58.62	27.2	84.31	73.63	77.36	75.00	77.1
	Moderately/ Slightly	32	59	33	11	135	8	22	12	7	49

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
DLSPH OVERALL COMPETENCIES											
build partnerships.		62.75	62.77	61.11	37.93	59.2	15.69	24.18	22.64	25.00	22.0
	Not at all	5 9.80	15 15.96	10 18.52	1 3.45	31 13.6	0 0.00	2 2.20	0 0.00	0 0.00	2 0.9
10- Appreciate the nature of evidence and be able to judge the quality of research.	Extremely/ Quite a bit	38 74.51	87 91.58	35 66.04	22 75.86	182 79.8	34 66.67	82 89.13	42 80.77	20 71.43	178 79.8
	Moderately/ Slightly	12 23.53	8 8.42	17 32.08	7 24.14	44 19.3	17 33.33	9 9.78	8 15.38	8 28.57	42 18.8
	Not at all	1 1.96	0 0.00	1 1.89	0 0.00	2 0.9	0 0.00	1 1.09	2 3.85	0 0.00	3 1.3
11- Demonstrate knowledge of the range of research methodologies and designs and their appropriate applications.	Extremely/ Quite a bit	35 68.63	75 78.95	32 60.38	18 62.07	160 70.2	23 45.10	60 65.22	40 76.92	14 50.00	137 61.4
	Moderately/ Slightly	16 31.37	20 21.05	21 39.62	10 34.48	67 29.4	25 49.02	29 31.52	11 21.15	14 50.00	79 35.4
	Not at all	0	0	0	1	1	3	3	1	0	7

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
		0.00	0.00	0.00	3.45	0.4	5.88	3.26	1.92	0.00	3.1
12- Design, plan and list the steps towards implementing quantitative research.	Extremely/ Quite a bit	20 39.22	66 69.47	16 30.19	9 31.03	111 48.7	15 29.41	54 58.70	22 42.31	9 32.14	100 44.8
	Moderately/ Slightly	29 56.86	29 30.53	34 64.15	19 65.52	111 48.7	24 47.06	31 33.70	25 48.08	11 39.29	91 40.8
	Not at all	2 3.92	0 0.00	3 5.66	1 3.45	6 2.6	12 23.53	7 7.61	5 9.62	8 28.57	32 14.3
13- Design, plan and list the steps towards implementing qualitative research.	Extremely/ Quite a bit	18 35.29	15 15.79	33 62.26	11 37.93	77 33.8	11 21.57	16 17.39	30 57.69	6 21.43	63 28.3
	Moderately/ Slightly	32 62.75	56 58.95	20 37.74	17 58.62	125 54.8	29 56.86	56 60.87	17 32.69	16 57.14	118 52.9
	Not at all	1 1.96	24 25.26	0 0.00	1 3.45	26	11 21.57	20 21.74	5 9.62	6 21.43	42

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
						11.4					18.8
14- Apply and interpret statistical analyses found in public health studies.	Extremely/ Quite a bit	25 49.02	69 72.63	9 16.98	13 44.83	116 50.9	11 21.57	70 76.09	26 50.00	12 42.86	119 53.4
	Moderately/ Slightly	25 49.02	26 27.37	40 75.47	16 55.17	107 46.9	34 66.67	20 21.74	20 38.46	13 46.43	87 39.0
	Not at all	1 1.96	0 0.00	4 7.55	0 0.00	5 2.2	6 11.76	2 2.17	6 11.54	3 10.71	17 7.6
15- Analyze and interpret quantitative data.	Extremely/ Quite a bit	36 72.00	74 77.89	8 15.09	8 27.59	126 55.5	34 66.67	77 83.70	26 50.00	10 35.71	147 65.9
	Moderately/ Slightly	13 26.00	21 22.11	41 77.36	21 72.41	96 42.3	16 31.37	13 14.13	20 38.46	14 50.00	63 28.3
	Not at all	1 2.00	0 0.00	4 7.55	0 0.00	5 2.2	1 1.96	2 2.17	6 11.54	4 14.29	13 5.8
16- Analyze and interpret	Extremely/	27	12	29	10	78	30	15	30	10	85

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
qualitative data.	Quite a bit	52.94	12.63	54.72	34.48	34.2	58.82	16.30	57.69	35.71	38.1
	Moderately/ Slightly	22	49	24	19	114	18	56	17	16	107
		43.14	51.58	45.28	65.52	50.0	35.29	60.87	32.69	57.14	48.0
Not at all	2	34	0	0	36	3	21	5	2	31	
	3.92	35.79	0.00	0.00	15.8	5.88	22.83	9.62	7.14	13.9	
17- Evaluate an action, policy or program.	Extremely/ Quite a bit	21	26	29	16	92	41	40	33	15	129
		41.18	27.66	54.72	57.14	40.7	80.39	43.96	63.46	55.56	58.4
	Moderately/ Slightly	26	54	23	12	115	9	37	18	10	74
Not at all	50.98	57.45	43.40	42.86	50.9	17.65	40.66	34.62	37.04	33.5	
	4	14	1	0	19	1	14	1	2	18	
18- Analyze the effects of political, social and economic policies on public health systems at	Extremely/ Quite a bit	7.84	14.89	1.89	0.00	8.4	1.96	15.38	1.92	7.41	8.1
		11	17	23	12	63	12	31	26	13	82
	Moderately/	22.00	17.89	45.10	42.86	28.1	24.00	33.33	52.00	48.15	37.3
		34	71	28	16	149	28	48	22	12	110

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
the local, provincial, national and international levels.	Slightly	68.00	74.74	54.90	57.14	66.5	56.00	51.61	44.00	44.44	50.0
	Not at all	5 10.00	7 7.37	0 0.00	0 0.00	12 5.3	10 20.00	14 15.05	2 4.00	2 7.41	28 12.7
19- Identify goals, measurable objectives, related activities, and expected outcomes for public health programs.											
	Extremely/ Quite a bit	15 30.00	19 20.00	29 56.86	21 75.00	84 37.5	18 36.00	34 36.56	31 62.00	18 66.67	101 45.9
	Moderately/ Slightly	31 62.00	68 71.58	21 41.18	6 21.43	126 56.3	23 46.00	43 46.24	15 30.00	8 29.63	89 40.5
	Not at all	4 8.00	8 8.42	1 1.96	1 3.57	14 6.3	9 18.00	16 17.20	4 8.00	1 3.70	30 13.6
20- Address the challenges of Implementation of a policy or program and/or take appropriate action to address											
	Extremely/ Quite a bit	11 22.92	11 11.70	20 39.22	13 46.43	55 24.9	23 47.92	30 32.61	34 68.00	11 40.74	98 45.2
	Moderately/ Slightly	33	65	30	14	142	24	47	12	12	95

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
specific public health issues.		68.75	69.15	58.82	50.00	64.3	50.00	51.09	24.00	44.44	43.8
	Not at all	4	18	1	1	24	1	15	4	4	24
		8.33	19.15	1.96	3.57	10.9	2.08	16.30	8.00	14.81	11.1
21- Demonstrate an ability to set and follow priorities, and to maximize outcomes based on available resources.	Extremely/ Quite a bit	14	15	9	16	54	35	49	30	18	132
		28.57	15.79	17.65	57.14	24.2	71.43	52.69	60.00	66.67	60.3
	Moderately/ Slightly	30	63	36	12	141	13	38	18	6	75
	61.22	66.32	70.59	42.86	63.2	26.53	40.86	36.00	22.22	34.2	
	Not at all	5	17	6	0	28	1	6	2	3	12
		10.20	17.89	11.76	0.00	12.6	2.04	6.45	4.00	11.11	5.5
22- Demonstrate knowledge of the policy process for improving the health status of populations.	Extremely/ Quite a bit	10	21	12	12	55	9	35	31	16	91
		21.28	22.11	23.53	42.86	24.9	19.15	37.63	62.00	59.26	41.9
	Moderately/ Slightly	30	63	36	16	145	29	44	17	9	99
	63.83	66.32	70.59	57.14	65.6	61.70	47.31	34.00	33.33	45.6	
	Not at all	7	11	3	0	21	9	14	2	2	27

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
		14.89	11.58	5.88	0.00	9.5	19.15	15.05	4.00	7.41	12.4
23- Apply the principles of program planning, development, budgeting, management and evaluation in organizational and/ or community initiatives.	Extremely/ Quite a bit	8 16.67	10 10.53	13 25.49	17 60.71	48 21.6	16 33.33	33 35.48	31 62.00	17 62.96	97 44.5
	Moderately/ Slightly	26 54.17	50 52.63	33 64.71	11 39.29	120 54.1	27 56.25	40 43.01	14 28.00	7 25.93	88 40.4
	Not at all	14 29.17	35 36.84	5 9.80	0 0.00	54 24.3	5 10.42	20 21.51	5 10.00	3 11.11	33 15.1
24- Advocate for and develop public health programs and strategies responsive to the diverse cultural values and traditions of the communities being served.	Extremely/ Quite a bit	8 16.67	20 21.28	28 54.90	16 55.17	72 32.4	7 14.58	26 28.26	31 62.00	13 46.43	77 35.3
	Moderately/ Slightly	21 43.75	61 64.89	21 41.18	12 41.38	115 51.8	20 41.67	44 47.83	16 32.00	13 46.43	93 42.7
	Not at all	19 39.58	13 13.83	2 3.92	1 3.45	35 15.8	21 43.75	22 23.91	3 6.00	2 7.14	48 22.0

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
25- Recognize how the determinants of health (biological, social, cultural, economic and physical) influence the health and well-being of specific population groups.	Extremely/ Quite a bit	15 31.25	59 62.77	46 90.20	24 82.76	144 64.9	10 20.83	50 54.35	39 78.00	20 71.43	119 54.6
	Moderately/ Slightly	32 66.67	33 35.11	5 9.80	5 17.24	75 33.8	27 56.25	39 42.39	10 20.00	8 28.57	84 38.5
	Not at all	1 2.08	2 2.13	0 0.00	0 0.00	3 1.4	11 22.92	3 3.26	1 2.00	0 0.00	15 6.9
26- Apply culturally-relevant and appropriate approaches with people from diverse cultural, socioeconomic and educational backgrounds, and persons of all ages, genders, health status,	Extremely/ Quite a bit	8 16.67	25 26.60	37 72.55	19 65.52	89 40.1	10 20.83	35 38.04	39 78.00	23 82.14	107 49.1
	Moderately/ Slightly	29 60.42	61 64.89	12 23.53	10 34.48	112 50.5	26 54.17	52 56.52	10 20.00	5 17.86	93 42.7
	Not at all	11 22.92	8 8.51	2 3.92	0 0.00	21 9.5	12 25.00	5 5.43	1 2.00	0 0.00	18 8.3

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
sexual orientations and abilities.											
27- Describe the role of social, behavioural and community factors in both the onset and solution of public health problems.	Extremely/ Quite a bit	9 18.75	40 42.55	40 78.43	18 62.07	107 48.2	9 18.75	39 42.39	34 68.00	14 50.00	96 44.0
	Moderately/ Slightly	33 68.75	52 55.32	11 21.57	11 37.93	107 48.2	27 56.25	45 48.91	14 28.00	12 42.86	98 45.0
	Not at all	6 12.50	2 2.13	0 0.00	0 0.00	8 3.6	12 25.00	8 8.70	2 4.00	2 7.14	24 11.0
28- Demonstrate knowledge about environmental factors including biological, physical and chemical factors that affect the health of a community.	Extremely/ Quite a bit	37 77.08	27 28.72	18 35.29	12 41.38	94 42.3	30 62.50	32 34.78	18 36.73	12 42.86	92 42.4
	Moderately/ Slightly	11 22.92	65 69.15	25 49.02	17 58.62	118 53.2	17 35.42	53 57.61	26 53.06	13 46.43	109 50.2
	Not at all	0 0.00	2 2.13	8 15.69	0 0.00	10 4.5	1 2.08	7 7.61	5 10.20	3 10.71	16 7.4

Appendix 6. Alumni Survey Competency Results

		Extent to which I feel prepared with respect to this competency following my MHSc/ MPH					Degree this competency is relevant in my current position				
DLSPH OVERALL COMPETENCIES		OEH	Epid	HP	CN	Total	OEH	Epid	HP	CN	Total
29- Demonstrate knowledge of the role of human biology in the development and implementation of disease prevention, control, or management programs.	Extremely/ Quite a bit	28 58.33	24 25.53	7 13.73	13 44.83	72 32.4	22 45.83	40 43.48	19 38.00	13 46.43	94 43.1
	Moderately/ Slightly	19 39.58	64 68.09	22 43.14	15 51.72	120 54.1	24 50.00	43 46.74	23 46.00	12 42.86	102 46.8
	Not at all	1 2.08	6 6.38	22 43.14	1 3.45	30 13.5	2 4.17	9 9.78	8 16.00	3 10.71	22 10.1
30- Demonstrate knowledge of Canada’s public health systems (e.g. federal, provincial, local).	Extremely/ Quite a bit	17 35.42	35 37.23	16 31.37	14 48.28	82 36.9	19 39.58	54 58.70	26 52.00	15 53.57	114 52.3
	Moderately/ Slightly	27 56.25	54 57.45	30 58.82	13 44.83	124 55.9	19 39.58	29 31.52	19 38.00	10 35.71	77 35.3
	Not at all	4 8.33	5 5.32	5 9.80	2 6.90	16 7.2	10 20.83	9 9.78	5 10.00	3 10.71	27 12.4

Appendix 7. DLSPH Key Informant Interview Questions

1. To begin, what need is filled in the public health system in Canada (or your part of it) by an MPH-trained graduate?
2. What has been your experience in hiring graduates from the MPH program at U of T?
3. In your experience, what have been the strengths of the graduates from the U of T MPH program?
4. In your experience, what have been the gaps of the graduates from the U of T MPH program?
5. How do our MPH grads compare to graduates from other programs that you have hired? (What are their strengths and what are their gaps?)
6. Where do you see the public health field moving in the future?
7. What kinds of skills do you think we should be developing in our graduates?
8. Are there any other aspects of the MPH program at U of T that you feel we should give attention to as we undertake our future curriculum planning? (Program content; Delivery methods; Scope; Other?)
9. Please comment on other aspects of the MPH program that you feel we should be aware of or think about for future planning.