



**Strategic plan for the
University of Waterloo
School of Public Health and Health Systems**

Aspire. Inspire. Transform.

November 1, 2011

Executive Summary

The Department of Health Studies and Gerontology at the University of Waterloo has been transformed into a **dynamic and distinctive School of Public Health and Health Systems**. The Department had a 34 year history of excellence and innovation. It was the first transdisciplinary department in Canada dedicated to health promotion and disease prevention, the first to offer a PhD in gerontology and one of the first in Canada to offer a Masters in Public Health. Other institutions took notice of our success and attempted to duplicate it. By creating an exciting array of new objectives, structures, products, and services the new School will once again position the University of Waterloo and the Faculty of Applied Health Sciences as a national and global innovator. It is designed to address emerging public challenges and establish a new standard of performance and impact.

Mission. The mission of the School of Public Health and Health Systems is to advance learning, knowledge, practice and capacity in the fields of public health and health systems through strategic partnerships and excellence in teaching, research, and service.

Goal. Our goal is to be recognized by students, peers, and other stakeholders as Canada's most innovative and influential school of public health and health systems.

Objectives. Objectives are aligned with UW's Sixth Decade Plan, as well as those of the local, provincial, national and international public health and health systems communities. Our objectives address seven broad areas:

- enhancing collaborative, productive partnerships with public health organizations and leaders;
- enhancing graduate teaching and training to produce the leaders of today and tomorrow;
- improving undergraduate teaching and training;
- advancing the amount, relevance, creativity, and impact of our research;
- improving our ability to rapidly transform policies, practices, structures and tools for health and health systems;
- internationalization of our influences and impact;
- enhancing our resource base.

Specific objectives for the period 2011 to 2017 include creating new linkages with key external agencies by developing innovative practice and service unit, and joint faculty positions; facilitating new connections with external partners, alumni and friends of the university; creating new development and contract funding opportunities; increasing our total graduate enrolment from 150 FTEs to 255 FTEs; increasing first year graduate intake targets from 73 to 136; increasing total undergraduate enrolment from 408 FTEs to 505 FTEs; increasing our first year undergraduate intake targets from 110 FTEs to 149 FTEs; ensuring every student at the graduate and undergraduate level participates in either a research or inquiry based learning project; improving rates of student success and retention; increasing the international student population in our undergraduate programs from a current rate of <1% of FTEs to 12% of FTEs; increasing the international graduate student population; establishing new undergraduate program agreements with international institutions; increasing the proportion of students and faculty who win major external research and teaching awards; increasing the per capita number and amount of faculty led research grants (especially tri-council funding), raising funds for a state of the art teaching and research facility, innovative projects with the potential to rapidly transform health producing and enabling policies, tools, and practices; scholarships for outstanding students, bursaries for international student and faculty exchanges, research and practice chairs/professorships, and the creation of a mobile international support unit.

Scope. The focus of the School is on *CIHR pillars 3 (health services) and 4 (population and public health)*, with only modest research and training directed at pillars 1 (biomedical science) and 2 (clinical sciences). Significant emphasis will be on public and population health, defined as "the science and art of preventing disease, prolonging life and promoting health through the organized efforts and informed choices of society, organizations, communities and individuals" (Winslow, 2002). It is distinguished from other health professions and fields by (1) its emphasis on health enhancement and the prevention of disease and injury; (2) its emphasis on health at the level of communities and populations rather than individuals; (3) a concern for reducing inequalities in opportunities for health and health status; and (4) the development and application of interventions that aim to alter collective factors and conditions (social, economic, political, cultural, educational, environmental, and geographic), structures, processes, policies, and programs particularly as they intersect with intra person determinants (e.g., genetics, biological responses, cognitive and emotional responses).

The new School is being explicitly designed to produce leaders and research capable of transforming human systems (policies, programs, services, processes and structures) related to health (and health care). The health systems component emphasizes the dynamic interrelationships of variables at multiple levels (e.g., from cells to society) while also attempting to understand the impact of systems on health and health care over time. A systems orientation is useful for making implicit assumptions about complex phenomena explicit, developing interventions that account for dynamic interactions and conducting simulation models to generate "alternative futures" (allowing decision makers to simulate the impact of various policy decisions and how they play out over time before actually putting them into practice). While students will be introduced to aspects of formal systems theory and systems science, our use of the expression "health systems" is intended to represent a set of perspectives and broad principles rather than strict adherence to a specific theory, existing body of literature, or discipline. A systems orientation makes the School of Public Health and Health Systems unique in Canada, and enables us to join a leading edge group of universities around the world concerned with systems approaches to public health and for integrating and improving health care policies and services.

Opportunities. The School will enable more rapid response to a number of emerging opportunities and challenges in Canada and around the world including: an increased demand for highly skilled, graduate trained, evidence informed professionals capable of improving public health and health care in systematic, transformational ways; the health and health care challenges associated with an aging population; building public health and health system capacity; and functional public, private and non-profit partnerships that create commercial innovations in socially and environmentally responsible ways. The demand for additional human resource capacity is especially acute given the proportion of the current public health and health systems workforce on the verge of retirement, the increasing desire of adults to remain in health related careers, and existing health professionals need to advance their knowledge, skills and effectiveness. In the wake of unsustainable growth in health care costs, and public health threats such as growing rates of chronic disease, inequalities in health, water and food borne illness, the new School is a response to recommendations in many recent national commissions to create more public health capacity, and facilitate health care integration and efficiency.

Distinctiveness and operation. The proposed School is distinctive from the Department of Health Studies and Gerontology, as well as other Canadian Schools in several ways.

First, our School is focusing on *the development of capacity, tools, processes and structures (e.g., governance, policy, mass communication, community mobilization, surveillance, and evaluation) to reorganize, integrate and shape the complex systems and organizations which facilitate or undermine*

population health and the integrated, efficient delivery of health care. In addition to classical public health methodologies (e.g., epidemiology, determinants of health), every student will have foundational knowledge about how health systems are organized, as well as how and why it is important to understand health (and health care) as a system.

Second, unlike other schools that spend inordinate resources on describing problems, we are **focusing training and research on solving significant local, provincial/state, national and international challenges in public health and health systems.** The problem areas have been chosen to (i) reflect the School's current strengths, (ii) the potential to link and create synergy with other UW departments and research centres/institutes, (iii) feedback from strategic external partners about their primary needs, (iv) the ability to distinguish ourselves from and complement activities in other departments and universities, and (v) potential opportunities to leverage new resources. Specifically, we intend to build critical mass related to:

- chronic disease prevention and management;
- health and aging;
- health care integration and efficiency;
- food and water safety, security and governance;
- reducing health inequalities; and
- health and the environment.

Third, we will cultivate much **stronger direct links to regional, national and international public health and health system leaders** to help us select and maintain our attention on the largest, most relevant problems and challenges. These partners will ensure our research products are practical, relevant, efficient, and rapidly integrated into policy and practice. They will ensure our graduates have advanced knowledge, skills, and experience that are practical and relevant to the present and future.

Forth, the curriculum is being redesigned to **emphasize more “hands on” problem based learning.** Students will participate in placements in applied practice/policy settings, a research centre or both.

Fifth, the school will create a limited number of **“service or practice centres”** related to challenges such as program/policy planning and evaluation, health communication, knowledge integration and visualization. These centres will as serve as a platform for training students, provide services to community agencies and partners (creating further connectivity between the school and external partners), and include a state of the art facility for showcasing tools and products developed by UW students, staff, and faculty. We propose to create joint faculty appointments with external partners that will further facilitate research and training relevance as well as rapid employment of our graduates and research.

A sixth distinguishing feature is that we our **training programs will be more accessible, responsive, relevant and attractive** by emphasizing **on-line learning, continuing education** and cooperative education. The School will explore mechanisms such as **fast tracking, joint degree programs, concentrated summer schools and custom designed professional training, executive programs, more continuous admission cycles, domestic and international practicum placements.**

Seventh, the new School will **foster greater integration, trans-disciplinary thinking, and improved resource efficiency by having faculty members and students affiliate with one or more existing or new research centres,** institutes or research clusters. In addition to supporting existing centres related to

chronic disease prevention, water, and healthy and aging, we will foster new transdisciplinary research and service clusters (in collaboration with other academic units) in each of our areas of focus.

Eighth, unlike other schools of public health which focus on child and maternal health, we are placing special **emphasis on health systems and public health for aging populations**. Despite dropping “gerontology” from our unit’s name, our commitment to health and aging is being enhanced through new training programs, faculty, and research infrastructure.

Finally, the School is providing products to **prepare students for two general trajectories: (1) a career as an evidence informed health professional; or (2) a career as practice and policy based researcher and academic**. It will offer bachelors, masters and doctoral training in both trajectories.

Academic programs. The School continues to offer all programs from the Department of Health Studies and Gerontology, including a **BSc in Health Studies** (honours and regular, minors in informatics or gerontology; pre-health professions option); a distance based **MPH**; thesis based **MSc and PhD programs in health studies and gerontology (population health specialization)**; and participate in joint **doctoral degrees in Aging, Health and Wellbeing, as well as a joint program in Work and Health**. The School is preparing proposals to add new programs and degrees in three phases over the next six years. Phase one will involve new professional, **distance based masters programs in health evaluation and a distance based master of health informatics (for health professionals)**.

The School is proposing to broaden its potential “market appeal” by introducing two new bachelors programs in phase two of its expansion. A **Bachelor of Public Health (BPH)** would be designed for entry after two years of university study and appeal to students who, through the course of their studies, have become interested in a career in population and public health (as opposed to a career in clinical health care). Students with an interest in clinical health care or research oriented graduate school would continue to pursue our existing BSc in Health Studies (possibly re-named as Health Sciences). The School also intends to develop a small **Bachelor of Health Promotion (BHP)** program designed for students that have strong backgrounds in social science and humanities rather than natural science and are interested in health promotion related careers. Phase two will also include the introduction of Canada’s first English language **Doctorate of Public Health (DrPH)**. Unlike research intensive PhDs, DrPH’s provide advanced professional training, particularly for the rapidly growing number of individuals who have an MPH. Phase two will also include the creation of some new streams and **joint degree options** for students in the masters of public health program. For example, in addition to a general MPH, and a special stream in the socio-behavioural aspects of public health, we intend to create **a new environmental stream**. To complement our other on-line masters program, we will also explore the creation of special streams in **public health informatics**. Finally, we will explore the creation of joint degrees between the Faculty of **Environment and the School**, a joint **MPH/MSW** with Renison University, or a joint degree in management science and an MPH.

Phase three of the School’s academic expansion will involve the creation of additional research oriented graduate training. For example, we will increase the number of **streams in our research oriented MSc programs to include health informatics research, environmental health, as well as research to improve health program and policy evaluation**. They would be parallel to the aforementioned professional degree options. It may also include **new graduate degrees in areas such as knowledge exchange and translation for health, health systems planning, and health and aging**.

Rather than create a ubiquitous, unfocused global health degree (as has been done at a couple of other Canadian institutions), we will integrate global and international health into all programs. This will be done by developing new courses, **integrating a more global perspective into existing curriculum**,

creating international exchanges, as well as developing new international partnership agreements for research and training. The net result will be greater appeal to international students and the production of graduates with specific knowledge and skills in areas such as population intervention, health informatics, health evaluation, and health care system design, that also have knowledge and experience relevant to solve health challenges (e.g. chronic disease prevention, healthy aging, food and water security and safety, etc.) in a domestic and international context.

Potential partnerships and linkages. The new School aspires to create new opportunities and linkages for sister departments, schools, and research centres within the Faculty of Applied Health Sciences and across campus. We aspire to expand existing and create new joint ventures in areas such as water and food safety and security, environmental aspects of health, work and health, leisure and health, and knowledge exchange. We aspire to create linkages with campus partners in areas such as health informatics (Computer Science), evaluation (SiG), digital media (Arts), health statistics (Statistics and Actuarial Science), the environment (Geography, Planning), social work and social development (Renison).

The school aspires to create *new partnerships with public, private and non-profit sector agencies including regional health departments and health integration networks, Ministries of Health, public agencies, non-profit organizations, and leading edge companies*. We hope to build upon existing agreements with the Canadian Cancer Society, the Agfa Corporation, and others towards the creation of *joint faculty members, visiting scientists, entrepreneurs in residence, staff exchanges, joint research and evaluation agendas*, etc. The School will pursue new reciprocal agreements with universities and colleges (e.g., the University of Guelph) to share complementary resources, collaborate on projects and exchange students.

Organization and accountability. On September 1, 2011 the School of Public Health and Health Systems replaced the Department of Health Studies and Gerontology as one of the three academic units within the Faculty of Applied Health Sciences. Collegial leadership within the School will come from a director, three associate directors, as well as faculty member caucuses and standing committees. In order to provide research and training infrastructure in the most efficient way possible, and to facilitate interdepartmental and cross faculty collaboration, the School will develop a series of internal MOUs to support, affiliate with and create a limited number of research (new and existing) and practice centres. A handful of new collaborations are expected to emerge, but the goal is to facilitate collaboration and improve resource efficiency.

Resources. As of September 1, the new School had *21 FTE regular faculty positions*, one FTE faculty position bridged to a retirement in 2012, and two definite term appointments. Collectively, this group has the necessary breadth of expertise required to maintain existing programs and start development of the proposed new programs and research themes. Existing resources also include *4.5 FTE staff* and designated space and equipment in Burt Mathews Hall, and the Lyle Hallman Institute for Health Promotion. While the School has the necessary breadth of expertise, it lacks sufficient critical mass and capacity to fully implement the proposed expansions. The shared revenue generated from projected enrolment increases (in both domestic and international students) will enable us to *add nine regular full time faculty positions, and one new full time staff* position over the next four years.

The innovative and solution oriented nature of the School is also expected to attract new partnership opportunities. Over the aim over the next five years is to *add up to five new research chairs*, post doctoral positions, visiting scientists and practitioners/policy developers.

Our goal is to further enhance research and training capacity by seeking external agencies to *jointly fund “professional practice faculty positions”*. Faculty in these positions would spend a portion of their time working for UW and a portion working for/at the external agency. These are the public health equivalent of clinical faculty positions that are common in medicine. These joint professional faculty positions would provide us with important credibility, linkages to strategic partners, and capacity that will help lower student to faculty ratios. It is anticipated that external agencies would provide a portion of the salary with the remainder coming from the University of Waterloo. In return for their investment, external agencies might receive 30 to 40% of the person’s service time, as well as return on the 30 to 40% of time they spend on research directly related to the sponsoring agencies challenges. The remaining 30% would be dedicated to teaching, graduate supervision, and mentorship of students.

We are interested in enhancing the involvement of leaders in public health practice at the regional, provincial and national level. For example, rather than spend money on temporary sessional instructors, we aspire to *create stable, long term working partnerships with more practice leaders who are able to contribute to our teaching, graduate supervision, and continuing education*. We are exploring options that range from paid part time *“clinical faculty positions”*, *to adjunct appointments, full and part time staff/faculty exchanges, and designated practicum supervisors*.

The School will also facilitate an increase in the number of faculty members who seek external funding awards. The relief money provided will be used to fund definite term appointments, and contract staff.

The School of Public Health and Health System is actively seeking permission and funds (through grants and donations) to construct *a new, high profile, state of the art building* with 63,000 square feet. The new structure would include classrooms, public lecture halls, *a high security data warehouse, a state of the art data visualization centre, public meeting rooms, as well as offices for faculty, staff, students, and staff from partner organizations*.

Conclusion. The new School of Public Health and Health Systems has been designed to improve the health of populations by training professionals and researchers who can anticipate and transform social, geographic, political, legal and economic structures, policies, and systems. The School will raise the bar on both the quality and quantity of public health and health systems research in Canada, making Canada and UW the place to go for solutions to local, provincial, national and global problems. It will set new standards for closer functional linkages between the university and public, non-profit and private sector partners. It will provide a platform to showcase, promote and commercialize leading edge products and ideas.

We *aspire* to find solutions to the world’s most important public health and health system challenges; we seek to inspire other leaders and organizations to join us in generating and implementing solutions in a manner that positively transforms the health and prosperity of people in communities, provinces/states, and nations.