

INTERDISCIPLINARY

programs

MASTER OF PUBLIC HEALTH PROGRAM

THE MASTER OF PUBLIC HEALTH (MPH) DEGREE IS THE most widely recognized professional credential for leadership in public health. The program emphasizes active, student-directed learning, problem solving, and the acquisition of skills essential to the practice of public health. The program is organized around seven career-oriented concentrations; in addition to the common core curriculum, each concentration offers specialty electives and a selection of areas of interest, allowing students to explore in depth one or more spheres of particular relevance to their career goals. The concentrations and areas of interest also enable students in the interdisciplinary MPH program to establish a second “home” in one of the school’s academic departments, such as Health Policy and Management or Maternal and Child Health.

Coming from all parts of the world, MPH students bring to the program a wide variety of backgrounds and experiences. The majority of these students are midcareer professionals preparing for advancement in their organizations or for transition into new fields. Most

hold a professional degree in medicine, nursing, veterinary medicine, or law. Some hold a doctoral degree in a field related to public health, such as biology, behavioral sciences, or other natural and social sciences. Individuals with a master’s degree in a field closely related to public health and at least three years of relevant work experience can also be admitted to the program.

Students enrolled in MD, DMD, or DDS programs (and some law students already holding an advanced degree) and who have a career interest in public health and/or preventive medicine are eligible to apply for admission to the MPH program. These students undertake the MPH program while on leave of absence between the third and fourth year of medical or dental school. They receive the MPH degree upon successful completion of both programs and conferral of the doctoral degree. The MPH program serves as a required academic year for residency training in preventive medicine, aerospace medicine, or occupational and environmental medicine.



COURSES OF INSTRUCTION

Please note that the courses listed are subject to change. Complete course descriptions are available at <http://www.hsph.harvard.edu/registrar/courses>.

Ethical Basis of the Practice of Public Health

Practice of Health Care Management

Introduction to the Practice of International Health

Practice of Occupational Health

Practice of Family and Community Health

Practice of Quantitative Methods

Summer MPH Practicum and Culminating Experience

Field Study, Experience

RELATED OFFERINGS

MOH program, see page 16.

Occupational and Environmental Medicine Residency, see page 17.

Summer Program in Clinical Effectiveness, see page 60.

Summer Session for Public Health Studies, see page 61.

MPH students are required to complete a minimum of 40 course credits and must fulfill core requirements in the fundamental public health disciplines. These requirements include an interdisciplinary course on the ethical basis of the practice of public health, the practice course for the chosen concentration, one course in biostatistics, one course in epidemiology, one course in environmental health, one course in health and social behavior, and 2.5 to 5 credits in management courses relevant to the chosen concentration. Requirements and concentration guidelines are available from the MPH office. Within one of the seven concentrations, applicants choose a second tier of recommended or required courses. Beyond the program and concentration requirements, students are encouraged to consult with faculty advisers to choose elective courses best suited to their needs.

MPH candidates may complete the requirements for the degree on a full-time or part-time basis (or may change from one status to the other). Full-time students normally complete the program in two semesters (September through May). Part-time students complete the requirements for the degree over a period of two or three years. Students in the quantitative methods or clinical effectiveness concentrations may apply for the summer MPH program, which can be completed by taking courses in three consecutive enrollments in the Summer Session for Public Health Studies. Students wishing to apply for the summer MPH in quantitative methods or clinical effectiveness must observe the same admissions deadlines as all MPH degree applicants.

Concentration goals and areas of interest are described below:

Clinical effectiveness Concerned with identifying the most appropriate, ethical, and cost-effective means of providing health care through prevention, early detection, or treatment, the concentration is designed to provide the analytic and quantitative training necessary to evaluate clinical practices.

Major areas of professional interest for concentrators include clinical epidemiology and biostatistics, cost-effectiveness analysis, medical decision analysis, health services research, quality improvement in health care, and measurement of health-related quality of life. The concentration is limited to clinicians enrolled initially in the Summer Program in Clinical Effectiveness.

Physicians are prepared for clinical research responsibilities and for leadership roles in evaluating and improving all aspects of health care delivery. Along

with the broad perspective the program offers on general aspects of public health, this training provides a basis for identifying the health policy implications and public health benefits of the results of clinical investigations.

Family and community health This concentration focuses on the promotion of health and the prevention of disease in populations by preparing health professionals with leadership skills in public health. Courses emphasize strategies for establishing health objectives, data collection and analysis, the management of fiscal and manpower resources, consultation, communication, advocacy, and policy formation in the public sector. Beyond the MPH core requirements, students are encouraged to develop expertise in a focus area geared to their professional interests. Areas of interest include maternal and child health, women and health, mental health and substance abuse, community health, and health promotion and disease prevention.

The program prepares students for positions in diverse public health and nonprofit settings, including federal, state, and

local government; advocacy groups; voluntary health organizations; and community-based primary care settings. Posts filled by program graduates include state health director; medical director of programs for child, adolescent, or women's health; health policy analyst; and health educator. Others have gone on to academic positions.

Health care management This concentration explores the growing role of managed care in the health care enterprise. Beyond the MPH core requirements students choose either a management or a policy area of interest; they then select from clusters of courses to gain depth in their chosen area.

Graduates assume leadership positions in health care organizations that provide direct care (such as hospitals, group practices, and home health agencies), those that pay for and/or organize health care (such as governments, health insurers, and health maintenance organizations), and those that supply direct-care providers (such as pharmaceutical companies and biotechnology firms). Program graduates fill many roles—from consultants and staff analysts, to middle-management and executive positions.

International health This concentration enables students to work toward health improvement by taking account of demographic and epidemiologic changes; the organization of health care and evolving patterns of health care demand; new scientific knowl-



M A R I A *Trent*

MASTER OF PUBLIC HEALTH STUDENT

Maria Trent came to Boston in the fall of 1998 as a fellow in adolescent medicine at Children's Hospital, Boston.

She had previously earned a BA in psychology from Yale University and an MD from the University of North Carolina, Chapel Hill, and completed her pediatric residency at the Children's National Medical Center in Washington, DC. She turned to public health as a way to become engaged in policy issues and research.

Trent's primary field of interest is young women's reproductive health. As part of her fellowship at Children's,

Trent is studying an endocrine disorder called polycystic ovary syndrome and its effects on the quality of life of adolescent girls. She became interested in the topic after caring for patients in her clinical work.

"There were no studies on adolescent girls and how it affects their life," she says. "I'm hoping my work will be a springboard to help young women who have [the syndrome]."

Looking forward, Trent would like to combine academic practice with a career as a clinical researcher and advocate for young people.

edge and technology; and the roles of professionals in policy, law, communications, and advocacy. It also assists them in finding new ways to strengthen national and institutional capacities for health policy making and management. The international health concentration has several areas of professional interest, including international health policy and management; population, reproduction, and child health; infectious disease epidemiology; research and evaluation methods; health promotion; and humanitarian studies. The last area focuses on population support during war, civil conflicts, or disaster and features a three-month summer field placement.

The program is intended to prepare health professionals for leadership roles in the practice of international health, with a special emphasis on the health problems of populations in developing countries. Graduates of the program work in national ministries of health, international organizations, donor aid agencies, private voluntary organizations, research and academic institutions, and the private sector.

Law and public health The course of study introduces lawyers to the science of public health, provides them with skills in analysis of public health problems, and allows them to design a curriculum that will meet their particular interests. Beyond the MPH core requirements lawyers are encouraged to develop an area of interest by choosing among clusters of recommended courses in such fields as health care delivery or environmental health.

The concentration is designed to train leaders in the field of public health law. Graduates are prepared for positions in a variety of settings, including work in a health law or environmental section of a law firm; positions in local, state, and federal government; or posts in academia.

Occupational and environmental health This concentration focuses on workplace and environmental hazards, the physiologic and biomechanical aspects of work, the risks posed by the interaction of genetic and environmental factors, and a practical approach to solving health problems in various work and com-

MASTER OF PUBLIC HEALTH IN INTERNATIONAL HEALTH FOR PHYSICIANS

HSPH is planning to establish an MPH program in international health for physicians from less-developed countries, especially those who have completed their clinical training and have practiced for at least three years in a specialty or in public health. This MPH program will be partly residential and will take two years (including two summer sessions) to complete. The objective is to allow the physicians in the program to retain their full-time employment. Courses will be offered at HSPH each summer during a five-week session, followed by structured distance-learning experiences and a yearlong practicum.

Though the schedule is still tentative, the first students in this program are currently expected to matriculate in July 2002, which would require that applications be received by December 15, 2001.

For more information, please consult the HSPH Web site at <http://www.hsph.harvard.edu>.

CONTACT INFORMATION

For more information about the MPH program or the summer MPH in quantitative methods or clinical effectiveness, please contact Roberta Gianfortoni, director for professional education, Office for Professional Education, 677 Huntington Avenue, Boston, MA 02115.

Phone: 617-432-0090

Fax: 617-432-3365

E-mail: rgianfor@hsph.harvard.edu

Web: <http://www.hsph.harvard.edu/mph>



community settings. The concentration features three areas of interest: occupational/environmental medicine, occupational health, and environmental health.

The program is designed for physicians and other professionals who intend to practice occupational/environmental medicine or to hold responsible positions in occupational and/or environmental policy and management. The occupational/environmental medicine area is intended for physicians who wish to satisfy the requirements of the American Board of Preventive Medicine for certification in occupational and environmental medicine. The requirements for the master of occupational health (MOH) degree are similar to those of the MPH in occupational medicine; physicians may elect either degree. This concentration also fulfills the first-year requirements of the two-year Occupational and Environmental Medicine Residency.

Quantitative methods The concentration emphasizes study design, data analysis, and the application of quantitative methods to decision making and to research in public health. Beyond the MPH core requirements concentrators must take an additional 2.5 credits of introductory epidemiology and 7.5 credits in intermediate/advanced biostatistics, epidemiology, or decision sciences and an approved *d* period practice course. At HSPH and elsewhere within the university, concentrators may choose from advanced

quantitative courses that include biostatistics, epidemiology, decision sciences, demography, needs assessment, and evaluation. An area of interest in decision science is offered as an option.

The program is geared toward public health work in which quantitative methods are central. It is designed for both midcareer health professionals and those in the early stages of their careers. Program graduates commonly supervise population-based health research in government, health care institutions, and private industry. Many graduates practice in academic medicine.

DIVISION OF BIOLOGICAL SCIENCES

The Division of Biological Sciences is an umbrella organization encompassing the HSPH Departments of Cancer Cell Biology, Immunology and Infectious Diseases, Nutrition, and Environmental Health. In most of these departments, two doctoral degrees are offered: the doctor of philosophy (PhD) and the doctor of science (SD). The PhD programs generally center on laboratory-based investigation in the biological sciences, whereas the SD programs emphasize epidemiological analysis. The PhD program is administered by the Division of Biological Sciences.

DOCTOR OF PHILOSOPHY IN BIOLOGICAL SCIENCES IN PUBLIC HEALTH

Students wishing to study cellular and molecular biology or physiology as it pertains to major problems in public health should apply to the PhD Program in Biological Sciences in Public Health (BPH). This program offers the PhD degree through Harvard University's Graduate School of Arts and Sciences.

The BPH program offers a firm foundation in the basic biomedical sciences, as well as in epidemiology and biostatistics. The program also features interdisciplinary training, with students taking courses in several different departments to meet their individual requirements. All students complete core course requirements in biochemistry, cell biology, genetics, microbiology, and physiology and elective courses during their first two years of study. Elective courses cover principles of toxicology, introductory cancer biology, genetic toxicology, cell response to mutagens

and carcinogens, human physiology, advanced respiratory physiology, advanced topics in physiology, immunology and immunology of infectious diseases, cellular and molecular biology of parasites, and the science of human nutrition.

Participating HSPH departments offer PhD programs in the following areas:

- cancer cell biology (radiobiology; toxicology)
- environmental health (physiology)
- immunology and infectious diseases (immunology and molecular biology of parasitic and other infections)
- nutrition (biochemistry; cardiovascular biology)

These programs are described in the departmental sections of this catalog.

COURSES OF INSTRUCTION

Please note that courses listed are subject to change. Complete course descriptions are available at <http://www.hsph.harvard.edu/registrar/courses>.

Interface of Biology and Public Health: Core Knowledge for the 21st Century

Biological Sciences Seminars
Pathophysiology of Human Disease

Membrane Trafficking

Frontiers of Cardiovascular Biology

Independent Study, Laboratory Rotations

CONTACT INFORMATION

For application materials and information about admission to the PhD Program in Biological Sciences in Public Health (program 8500), please contact the Graduate School of Arts and Sciences Admissions Office, Harvard University, 8 Garden Street, Cambridge, MA 02138. Phone: 617-495-5315

The deadline for application to the PhD program is December 14, 2001.

Applicants who have specific questions about the PhD program may contact Ruth Kenworthy, administrator, Division of Biological Sciences, 655 Huntington Avenue, Boston, MA 02115.

Phone: 617-432-4470

Fax: 617-432-0433

E-mail: rkenwort@hsph.harvard.edu

www.hsph.harvard.edu

Web: <http://www.hsph.harvard.edu/Academics/dbs/bph/index.html>



A E I S H A Robb

DOCTORAL STUDENT, DIVISION OF BIOLOGICAL SCIENCES

Jamaican native Aeisha Robb received her AB/AM in biology from Harvard University in 1998. She conducted her research in Professor Marianne Wessling-Resnick's laboratory in the HSPH Department of Nutrition, where she is currently studying cellular iron metabolism. Robb states, "I like HSPH because I can apply my research in a public health context. This is one of the few programs where, although you are in the lab answering biology questions, you are also exposed to disease-related research and public health issues."

Last summer Robb did an internship at the Tropical Metabolism Research Institute at the University of the West Indies in Kingston, Jamaica, conducting research that the institute hopes to use in its study of malnutrition. "That kind of work is the type of thing I might want to do in the future," she says.

CONTACT INFORMATION

For more information on the Division of Public Health Practice or the programs sponsored by the division, please contact Betty Johnson, assistant director for curriculum development and training, the Division of Public Health Practice, 1552 Tremont Street, Boston, MA 02120. Phone: 617-496-8064 Fax: 617-495-8543

For more information about research and training in molecular epidemiology, please contact Karl T. Kelsey, MD, MOH, Departments of Cancer Cell Biology and Environmental Health, 665 Huntington Avenue, Boston, MA 02115. Phone: 617-432-3313 Fax: 617-432-0107 E-mail: kelsey@hsph.harvard.edu

For more information about courses related to women, gender, and health, please contact Meridith Eastman, Department of Maternal and Child Health, 677 Huntington Avenue, Boston, MA 02115. Phone: 617-432-1080 Fax: 617-432-3755 E-mail: meastman@hsph.harvard.edu

DIVISION OF PUBLIC HEALTH PRACTICE

The Division of Public Health Practice serves as a conduit between the work of HSPH academic departments, governmental and corporate agencies, and the community. The mission of the division encompasses education, research, and service. Through education the division ensures that its students graduate with the core competencies of public health, including assessment, policy formulation, and quality assurance, and with the vision to become effective public health leaders. Through research the division advances current methods of collaborative inquiry to evaluate questions raised in community-based public health practice, as well as to address the broader policy issues concerning the health effects of social inequality. Through service the division enhances the health of underserved communities by fostering collaborative efforts between HSPH faculty, staff, and students and community-based organizations, health departments, health care providers, and public schools to develop and implement sustainable innovative strategies.

Programs included under the umbrella of the division are the Minority Postdoctoral Fellowship Program, the Office of Government and Community Programs, the Preventive Medicine Program, the Program for Health Care Negotiation and Conflict Resolution, the Program to Eliminate Health Disparities, and the Violence Prevention Program.

OTHER INTERDISCIPLINARY PROGRAMS

INTERDISCIPLINARY PROGRAM IN MOLECULAR EPIDEMIOLOGY

Molecular epidemiology, which encompasses a novel approach to the study of disease occurrence, is a focus of attention in several of the school's departments. Faculty members in the Department of Cancer Cell Biology, for example, use a molecular approach to study constitutional and somatic genetic alterations associated with cancer susceptibility, disease progression, and tumor biology. In the Department of Environmental Health, ongoing research utilizes biomarkers of exposure and exposure-related disease, as well as gene-environment interaction. The Department of Epidemiology is conducting molecular research in disease mechanism, outcome, and susceptibility. Members of the Department of Biostatistics are developing

new methods for understanding molecular and genetic parameters governing disease occurrence. Finally, researchers in the Department of Nutrition are examining whether variation in enzymes that metabolize nutrients alter the relations of diet and disease.

Prospective doctoral students must apply to one of the participating departments, and the degree will be issued from that department. Students are responsible for completion of degree requirements of the home department in addition to the program's core requirements in biology, genetics, exposure assessment, and epidemiology.

PROGRAM IN THE EPIDEMIOLOGY OF INFECTIOUS DISEASE

Education and research on aspects of infectious disease occur in a number of HSPH departments, including the Departments of Environmental Health, Epidemiology, Immunology and Infectious Diseases, Nutrition, and Population and International Health. These departments participate in the Program in the Epidemiology of Infectious Disease, which focuses on population studies incorporating both epidemiologic and laboratory methods. This doctoral program is intended for those students who desire careers in research and teaching in infectious disease. Prospective students must apply to one of the participating departments, and the degree will be issued from that department. Students are responsible for fulfilling the doctoral requirements of the home department in addition to the program's core requirements in biology, quantitative methods, and substantive infectious disease.

Alternatively the Departments of Epidemiology, Immunology and Infectious Diseases, and Population and International Health offer discipline-oriented doctoral or master's degree programs. Please refer to the appropriate sections of this catalog for descriptions of these discipline-centered degree programs.

WOMEN, GENDER, AND HEALTH

Several departments offer courses designed to increase understanding of the health of girls and women throughout the life cycle, with gender and biology understood as determinants of health, disease, and well-being. Faculty members of the interdepartmental working group on women, gender, and health offer an interdepartmental course, and the group maintains a list of HSPH and non-HSPH courses that are relevant to women's health.

INSTITUTES & CENTERS

THE SCHOOL HAS ESTABLISHED SEVERAL institutes and centers to advance research in areas of importance to health. These efforts tend to be multidisciplinary in their approach, bringing together faculty from several HSPH departments and, in some instances, from several Harvard schools. Faculty affiliated with the programs offer courses in their field of interest through the school's academic departments and often provide opportunities for student involvement in research.

Center for Biostatistics in AIDS Research

Director: Stephen Lagakos, MPhil, PhD
Executive director: Janet Andersen, MS, SD
For more information, contact Janet Andersen
Phone: 617-432-2814
Fax: 617-432-2843
E-mail: andersen@sdac.harvard.edu

Center for Health Communication

Director: Jay A. Winsten, PhD
For more information, contact Terri Mendoza
Phone: 617-432-1038
Fax: 617-731-8184
E-mail: tmendoza@hsph.harvard.edu

Center for Quality of Care Research and Education (QCARE)

Director: R. Heather Palmer, MB, BCh, SM
For more information, contact Mary McCann
Phone: 617-432-2027
Fax: 617-432-3199
E-mail: qcare@hsph.harvard.edu

Center for the Prevention of Cardiovascular Disease

For more information, contact Michelle Bell
Phone: 617-432-1778
Fax: 617-432-2980
E-mail: bell@cvtlab.harvard.edu

François-Xavier Bagnoud Center for Health and Human Rights

Director: Stephen P. Marks, diplôme, PhD
For more information, contact Paula Pech
Phone: 617-432-0656
Fax: 617-432-4310
E-mail: fxbcenter@igc.apc.org
Web: <http://www.hri.ca/partners/fxbcenter/>

Harvard AIDS Institute

Chair: Myron (Max) Essex, DVM, PhD
Executive director: Richard Marlink, MD
For more information, contact
Phone: 617-432-4400
Fax: 617-432-4545
E-mail: hai@hsph.harvard.edu
Web: <http://www.hsph.harvard.edu/hai>

Harvard Center for Cancer Prevention

Director: David J. Hunter, MB, BS, MPH, SD
For more information, contact
Phone: 617-432-0038
Fax: 617-432-1722
E-mail: hccp@hsph.harvard.edu

Harvard Center for Children's Health

Web: <http://www.hsph.harvard.edu/children>

Harvard Center for Population and Development Studies

Director: Michael R. Reich, PhD
For more information, contact Winifred M. Fitzgerald
Phone: 617-495-3002
Fax: 617-495-5418
E-mail: wmfitz@hsph.harvard.edu
Web: www.hsph.harvard.edu/hcpds

Harvard Center for Risk Analysis

Acting director: George Gray, PhD
For more information, contact Nkwamzi Sabiti
Phone: 617-432-4497
E-mail: nsabiti@hsph.harvard.edu
Web: <http://www.hcra.harvard.edu>

Harvard Center for Society and Health

Director: Ichiro Kawachi, MD, PhD
For more information, contact Patricia Carter
Phone: 617-432-4870
Fax: 617-432-3123
E-mail: pcarter@hsph.harvard.edu

Harvard Education and Research Center for Occupational Safety and Health

Director: David C. Christiani, MD, SM, MPH
For more information, contact Jean Economos
Phone: 617-432-2422
Fax: 617-432-0219
E-mail: Jeconomom@hohp.harvard.edu
Web: <http://www.hsph.harvard.edu/erc>

Harvard Injury Control Research Center

Director: David Hemenway, PhD
For more information, contact Mary Kate Newell
Phone: 617-432-2123
Fax: 617-432-4494
E-mail: hicrc@hsph.harvard.edu
Web: <http://www.hsph.harvard.edu/hicrc>

John B. Little Center for Radiation Sciences and Environmental Health

Director: John B. Little, MD
For more information, contact Martha Cassin
Phone: 617-432-0054
Fax: 617-432-5236
E-mail: mcassin@hsph.harvard.edu

Kresge Center for Environmental Health

Director: Joseph D. Brain, SM, SM, SD
For more information, contact Tim Sloate
Phone: 617-432-3483
Fax: 617-277-2382
E-mail: tsloate@hsph.harvard.edu