



Tufts
UNIVERSITY
School of Medicine

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PUBLIC HEALTH PROGRAMS

An education you can put to work

Tufts
UNIVERSITY
School of Medicine



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// INDIVIDUAL. COMMUNITY. WORLD.

Public Health at Tufts

The world has changed dramatically since Tufts launched its first public health degree programs more than 20 years ago. New technologies have given us insights into the nature of disease and the links between the health of individuals and our society, animal populations, food supply, and environment. Infectious diseases once confined to remote parts of the globe now move about freely; in addition, chronic diseases, which historically burdened only developed nations, have become commonplace in developing countries. Other recent challenges — from acts of terrorism to the health care system crisis — underscore the need for highly trained public health professionals who understand the interwoven nature of health and society. In addition, new communication technologies, now integrated into all aspects of public health and health care, create new opportunities to improve the health status of populations.



Public health can be viewed as three concentric circles encompassing individual, community, and world. The health status of individuals is embedded within families, schools, workplaces, and communities, as well as the government policies and cultural context that affect us all.

—Aviva Must, PhD
Dean, Tufts University Public Health and Professional Degree Programs

Tufts University provides an ideal environment to study public health. *Public Health at Tufts* encompasses not only the School of Medicine programs described in this catalogue but also all of the related public health research and advocacy going on throughout the university. Tufts' global perspective and commitment to active citizenship and interdisciplinary scholarship translate into a rich intellectual milieu in which to engage in critical thinking. Our students are deeply interested in this complex, population-based approach to health and graduate with a profound commitment to active citizenship. They go on to successful careers in public health, medicine, business, law, communication, international policy, and government, among other fields.

With small classes and a strong sense of community, our programs foster critical thinking, vigorous debate, and robust interactions among students. Our faculty brings experience from fields as diverse as engineering, nutrition, law, health care, medicine, behavioral sciences, occupational health, business, and of course, public health. We work with scores of practicing public health professionals who take active roles as field preceptors and adjunct professors. All of them give students the individualized attention they need to put their degrees to work.

Our partners in public health education, service, and research include faculty at all the schools of Tufts. Through relationships with institutions around the globe, our students work in local communities and rural settings worldwide, experiencing firsthand the public health challenges many people face every day.

Regardless of where in the world they go, or which of our many public health degrees they pursue, Tufts graduates consistently emerge as leaders in their chosen fields. With a deep sense of their roles as active citizens and the interdisciplinary training that is the hallmark of a Tufts education, our students go on to make the world a healthier and better place.



Master of Public Health

Improving lives, building social justice

<http://go.tufts.edu/mph>

Public health is a form of applied social justice. It's about making sure the benefits that modern times have brought us—wealth, knowledge, technology—are translated into better health status not just for the few, the rich, and the powerful, but for everybody.

— Anthony Schlaff, MD, MPH

Anthony Schlaff, MD, MPH
Director, MPH Program
Professor of Public Health and
Community Medicine

Paul Hattis, MD, JD, MPH
Associate Director and Pathway Advisor,
MPH Program
Assistant Professor of Public Health
and Community Medicine

A master's in public health offers broad knowledge applicable to a wide range of careers—from working with people in communities, conducting research, and administering in hospitals to lobbying for policy change and advocating for human rights. Our program is designed to meet the career goals of each student. Advisors get to know and work closely with students, helping them map out individual paths for the future. Small classes also encourage discussion among students and faculty, who are deeply engaged in current public health issues.

Many of our students are already out working in health-related fields. Tufts' MPH program is designed to meet not only the needs of full-time students, but also of people with jobs. Many classes are offered in the late afternoon or evening, and students can take up to five years to earn their degrees. Full-time students can finish in as little as three semesters.

PUBLIC HEALTH, HUMANITARIAN VALUES

The Tufts MPH program is Council for Education in Public Health (CEPH) accredited and addresses public health through a multidisciplinary, humanitarian lens. Our students gain a broad, deep understanding of how the connections among individuals, institutions, communities, and the world are essential for reducing poverty, improving health care infrastructures, and mitigating health disparities.

At Tufts, students receive a sound education in the foundations of public health: epidemiology, biostatistics, environmental health, social and behavioral science, health services, and public health policy. Students choose from a range of academic concentrations and combine classroom insights with real-world experiences through the Applied Learning Experience (ALE) (see page 8).

A RANGE OF OPTIONS AND PATHS

The MPH program takes full advantage of the resources available throughout Tufts and the greater Boston community, including the Tufts University School of Medicine and the Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy, Northeastern University School of Law, and the communication program at nearby Emerson College.

Several combined-degree pathways also expand the MPH program's offerings and allow a student to pursue an MPH while also earning a medical, veterinary medicine, law, Master of Science in nutrition, Master of Science in biomedical sciences, or bachelor's degree.

Learn more:

For more information on degree requirements, please visit <http://go.tufts.edu/mph>

THE MPH COMBINED-DEGREE PATHWAYS INCLUDE:

- MS-Nutrition/MPH
- MD/MPH
- DVM/MPH
- JD/MPH
- Bachelor's/MPH
- MS-Biomedical Sciences/MPH

DEGREE REQUIREMENTS

- Thirteen (13) credits are required for the MPH degree.
- All MPH candidates are required to take seven (7) credits of core and required courses.
- Other requirements depend on the pathway and concentration a student takes.
- Additional requirements vary by pathway and concentration.



“ A public health education is like an umbrella: the handle of the umbrella is the foundation or training we share. As public health professionals, we then branch off into different specialties — policy management, environmental health, epidemiology, and communication; yet these interconnected specialties create the all-encompassing, dynamic field of public health. Our goal is to protect and shelter the population from harm at the local, national, and international levels. ”

— Earlene Avalon, MPH, PhD

// Giving Voice to Better Health Outcomes

Earlene Avalon, MPH, PhD ('01)

Director of Nursing Diversity Initiatives
Children's Hospital Boston

When people of color seek health care, they often prefer to go to providers within their communities from similar cultural or ethnic backgrounds who understand their unique needs. Yet, according to Earlene Avalon (MPH, '01), director of Nursing Diversity Initiatives at Children's Hospital Boston, there is a stark shortage of diverse health care providers—an issue that significantly contributes to the disparities seen in health care.

“Because of cultural and language barriers, people of color suffer more often from poor health outcomes, largely due to a lack of access to educational and financial resources. These barriers can get in the way of understanding the mechanisms of our health care system. Expanding the number of doctors and nurses of color improves the cultural competence of all staff, thereby improving health care delivery,” she says.

Children's Hospital's Nursing Diversity Initiatives program strives to increase the racial and ethnic diversity of the hospital's nursing staff. Avalon encourages and mentors hospital employees—including entry-level administrators, clinical assistants, custodians, and cafeteria workers—to pursue nursing degrees. She says her goal is “to level the playing field by ensuring that individuals receive the mentoring and academic advice they need to enter college-level nursing programs.”

Growing up in Boston's ethnically diverse community of Dorchester, Avalon saw firsthand how language, education, and economic barriers, along with cultural differences, can negatively impact health outcomes for people of color. While earning her degree at Tufts, she worked at Boston's Latin American Health Institute, where it became clear that “oftentimes individuals whose lives were most affected by certain policies were not sitting at the table when those policies were created. By living and working with a diverse community, I hope to empower individuals to bring their voices into the decision-making room.”

Tufts' Boston campus offered an ideal place for Avalon to pursue this goal. “While getting my MPH, I was working in the Latino and Black communities less than a mile from campus. One of the many strengths of Tufts' MPH program is its urban setting, especially if you are interested in changing policy, working in communities, and improving the lives of others,” she says.

CORE COURSE SUBJECTS

- Epidemiology
- Biostatistics
- Health Services Administration and Policy
- Environmental and Occupational Health
- Health Behavior and Health Communication

CURRICULUM

CEPH, the national body that accredits the Tufts MPH program, mandates five core courses that all MPH students must take. All core courses are offered spring, summer, and fall, and at least one section of each core course is offered during the evening at least once each year on the Boston campus.

GENERAL REQUIREMENTS

In addition to core courses, all MPH students must take two additional courses — one in management and one in methods. Students with no background in biology must also take a half-credit biology course.

ELECTIVES

In addition to electives offered within concentrations, students may choose “free electives” from within the program or from an approved list from across the university. In most cases, core, required, Applied Learning Experience (ALE), and concentration requirements add up to 10 to 11 course credits, leaving a student two to three credits for a range of full- or half-credit elective courses they may take.

Learn more:

For more information and a listing of core and general requirements and elective courses, please visit <http://go.tufts.edu/mph>

APPLIED LEARNING EXPERIENCE (ALE)

A self-designed field study completed in the student’s last term, the ALE is a vital and exciting component of the MPH degree. The ALE helps students integrate what they have learned and apply their knowledge to real public health problems. It is also the vehicle by which faculty judge that students are ready for careers as independent public health professionals.

For students, the ALE is often a bridge to their first jobs and the highlight of their programs of study. In fact, students often note the ALE as the most important course in the MPH program.

By combining fieldwork with a capstone project, the ALE fulfills CEPH’s requirement for field and capstone experiences.

Navigating the Health Care Maze

Amy Lischko, DSc, MSPH

Associate Professor
Public Health and Community Medicine



An MPH from Tufts gives students an analytic framework, a solid research background, powerful strategy tools, and an in-depth understanding of the health care system. Our students learn to implement change that is historically and empirically based.

—Amy Lischko, DSc, MSPH

Amy Lischko understands the ins and outs of Washington’s hottest topic—health care reform. As a health care policy consultant to private organizations and several U.S. states, Lischko helps states implement the Patient Protection and Affordable Care Act and other health-related policies.

Like any social policy issue, health care reform has no “one size fits all” solution. “There are many stakeholders and a lot of money is involved. Health care policy is incredibly sensitive and complex,” Lischko says.

Having worked in Massachusetts government for 15 years, Lischko understands that complexity well. As the director of health care policy under Governor Mitt Romney, she helped develop the Massachusetts health care insurance reform law of 2006.

As an associate professor at Tufts, Lischko conducts health care policy research and leads students through the tangled maze of health care in the United States: “what the system looks like, how to navigate it, who the constituents are, who policy makers have to engage. My goal is to expose students to different perspectives and show them how to insert themselves into the system so they can make a difference,” she says.



Master of Public Health Concentrations

Concentrations give students focus around particular content areas as they gain the skills they need for public health careers. Except for students in the MD, DVM, and JD/MPH pathways, all MPH students must take one of the five concentrations described below. Concentrations require between three and five credits. Along with required courses, the concentrations offer at least four credits of elective offerings from an approved list of courses from across the university.

CONCENTRATIONS GIVE STUDENTS FOCUS AROUND PARTICULAR CONTENT AREAS:

- Epidemiology/Biostatistics Concentration
- Health Services Management and Policy Concentration
- Nutrition Concentration
- Health Communication Concentration
- Global Health Concentration

EPIDEMIOLOGY/BIOSTATISTICS CONCENTRATION

The Epidemiology and Biostatistics concentration prepares students for collecting, analyzing, and interpreting data — critical components of many public health careers. Students develop a foundation in underlying theory, with emphasis on applying epidemiologic and biostatistical methods to public health policy and practice.

HEALTH SERVICES MANAGEMENT AND POLICY CONCENTRATION

The Health Services Management and Policy concentration is designed for students interested in planning, regulating, financing, organizing, or delivering health services. It prepares

students for careers in government, health care organizations, and a variety of public health settings. With an emphasis on policy analysis and evaluation research, this concentration promotes an understanding of public health as a practice that functions alongside a complex health care system and within a changing policy context.

NUTRITION CONCENTRATION

Offered in cooperation with Tufts' Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy, the Nutrition concentration introduces students to the applied research skills needed in nutrition assessment, program design, and the evaluation of nutrition interventions. Students explore the relationships among nutrients and food intake

patterns; dietary assessment tools and qualitative information surveys; population and community-based nutrition interventions and evaluations; epidemiologic studies on nutrition and health; and the relationship among population consumption patterns, nutrition, and health. This concentration's focus on both national and international nutrition policy provides a rich complement of perspectives and skills that prepares students for future leadership positions.

HEALTH COMMUNICATION CONCENTRATION

The Health Communication concentration provides students with a solid foundation in the science, theory, and practice of effective health communication in a population-based environment. Students learn to develop, deliver, and evaluate health communication campaigns, and disseminate information to a range of audiences. The concentration takes advantage of Tufts' Master of Science in Health Communication program, a collaboration of Emerson College and Tufts University School of Medicine.

GLOBAL HEALTH CONCENTRATION

Designed for those interested in studying, identifying, and solving public health problems in a global environment, this concentration provides students with interdisciplinary skills to practice in international settings. Students learn to recognize the biomedical, social, economic, and other factors that affect health and to identify, design, monitor, and implement interventions that address health disparities. The Global Health concentration takes full advantage of the great breadth of global health-related courses and scholarship at Tufts University, which values active citizenship and internationalism.

Learn more:

For more information on the MPH concentrations, please visit

<http://go.tufts.edu/mph>

GENERALIST TRACK

The generalist track is available for students earning another degree (MD, JD, DVM, or MS-Nutrition) and/or students who already have significant practice experience in health and human services. Students design an individualized course of study with faculty in place of a concentration.

Learn more:

For more information about generalist track eligibility and requirements, please visit

http://go.tufts.edu/mph_generalisttrack

GRADUATES AT WORK

Careers our MPH students have pursued:

- **Public Health Epidemiologist**
New York City Department of Health
- **Director**
Human Subjects Administration,
Harvard School of Public Health
- **Health Promotion Disease Prevention Coordinator**
Edith Nourse Rogers Memorial
VA Hospital
- **Biostatistician**
New England Research Institute (NERI)
- **Community Health Analyst**
Health Imperatives
- **Assistant Professor**
Tufts University School of Medicine

Master of Public Health Combined-Degree Pathways

Combined degrees for broad, blended careers

http://go.tufts.edu/mph_pathways

MS-Nutrition/MPH

MD/MPH

DVM/MPH

JD/MPH

Bachelor's/MPH

MS-Biomedical Sciences/MPH

Known for its interdisciplinary fields of study, Tufts University is recognized worldwide for its combined-degree programs. In fact, the MD/MPH is Tufts' flagship MPH program and was the first program in the country to allow both degrees to be earned in four years. It is now one of six Tufts MPH combined degrees.

Combined-degree programs are rigorous, but at Tufts, we provide maximum synergy between disciplines and blend, when possible, requirements of both degrees. Because the educational experience in combined programs equals more than the sum of their parts, Tufts students graduate with much more than just two degrees; they gain a rich, in-depth education that prepares them for careers in any number of fields.

MS-NUTRITION/MPH

http://go.tufts.edu/msnutrition_mph

The combined MS-Nutrition/MPH degree program taps the resources of Tufts' Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy and the MPH program at Tufts University School of Medicine — both well known for successful cross-disciplinary programs. This pathway provides more in-depth nutrition course work, especially in the science of nutrition, than does the MPH Nutrition concentration.



“
Our program stands alone in the depth it provides in the science of nutrition and in the breadth of training in public health; it is the only combined degree of its kind.
”

—Aviva Must, PhD

Working closely with advisors, students who choose the MS-Nutrition/MPH pathway create individualized programs of study according to their career goals. Within the MPH program, students choose from any of the MPH concentrations or the Generalist Track (see page 11). Options for the Nutrition component of the combined degree include Nutritional Epidemiology; Clinical Nutrition; Biochemical and Molecular Nutrition; Agriculture, Food, and the Environment; Nutrition Communication; and Food Policy and Applied Nutrition. The MS-Nutrition/MPH pathway allows a student to combine any two foci — one *program* in Nutrition and one *concentration* in Public Health.

MD/MPH

<http://go.tufts.edu/mdmph>

Graduates of Tufts' signature MD/MPH explore careers in community medicine, conduct epidemiological research, direct government agencies and NGOs, and advocate for health care and humanitarian rights around the world. Developed especially with the combined degree in mind, this pathway's public health curriculum is tightly integrated with course work at the medical school. This integration allows most students to complete both the MPH and the MD in the same four years. The pathway provides the integral basics of public health practice without compromising the rigorous study involved in earning a medical degree.

In the first two years, students take public health core and required courses in place of the weekly pre-clinical field or research selectives pursued by others in the medical program. Students also participate in monthly evening seminars designed to integrate public health and clinical training. Special four-week blocks are reserved for elective MPH courses in the spring of the third and fourth years. MD/MPH candidates also participate in an eight-week summer field experience between their first and second years and complete the public health ALE in the fourth year.

GRADUATES AT WORK

Careers our MS-Nutrition/MPH students have pursued:

- ▀ **Nutrition Specialist**
Porter Novelli Public Relations
- ▀ **Senior Clinical Research Associate**
Quintiles, Inc.
- ▀ **Nutrition Epidemiologist**
Centers for Disease Control and Prevention
- ▀ **Assistant Director of Health and Nutrition**
Tri-Cap Head Start
- ▀ **Program Coordinator for Nutrition**
International Food Information Council
- ▀ **Associate Director**
Project Healthy Children

GRADUATES AT WORK

Careers our MD/MPH students have pursued:

- ▀ **Commissioner of Health**
Onondaga County Health Department
- ▀ **Medical Director**
New York City Department of Mental Health and Hygiene
- ▀ **Medical Epidemiologist**
Centers for Disease Control and Prevention
- ▀ **Academic Hospitalist**
Baystate Medical Center
- ▀ **Community Pediatrician**
Children's Hospital Boston

// Calling the Shots

Andrew Klevos, MPH ('09)

CDC Quarantine Public Health Officer,
Miami

When the swine flu scare hit in 2009, Andrew Klevos (MPH '09) was on the front lines. As a quarantine public health officer for the Centers for Disease Control (CDC) in Boston, Klevos responded 24/7 to diverted cruise ships and airplanes coming into New England with potential swine flu cases. He and colleagues performed triage by deciding if ships were safe to dock, calling for helicopters, and interviewing passengers upon landing.

Attending Tufts during this time, Klevos says the experience gave him plenty of material to talk about in class. “I could be in class and an hour later I was out on the tarmac meeting planes and managing emergencies,” he says. “Once a possible communicable disease is reported, quarantine officers have to kick into action immediately.”

Klevos worked as a quarantine officer in Boston for three years and now holds a similar position at CDC in Miami. He says his job is “all about public health. I am helping to prevent communicable diseases from threatening the public, whether those diseases are entering the country by land, sea, or air.”

Interested in health care since age 15, Klevos trained as an EMT and considered going to medical school. But then he traveled to India, where he worked in the slums of Bombay and a medical clinic for runaway teens in New Delhi; he not only treated sick and injured children but also taught them about preventative health measures, such as hand washing. “These experiences showed me the real value of reaching out to populations and the impact that large-scale public health programs can have,” he says.

Klevos believes his MPH from Tufts empowered him “to be the ‘expert’ in population-based health care. As a quarantine officer, I am out there working with people who look to me to call the shots—to understand, to inform, and to lead.”



“ Tufts gave me a whole new set of tools for looking at health care systemically, through a broad lens. ”

— Andrew Klevos, MPH

Growing Healthy Kids

Virginia Chomitz, MS, PhD

Assistant Professor of Public Health
and Community Medicine



A degree in public health offers a profound way to make a difference in the world. It's authentic, far-reaching, multidisciplinary. You can't get siloed in this line of work.

—Virginia Chomitz, MS, PhD

Like First Lady Michelle Obama, Virginia Chomitz, MS, PhD, knows that healthy eating and physical activity are the keys to combating childhood obesity. Chomitz's life's work has centered around building sustainable, community-based partnerships to promote healthy weight among children. "I want to support access to healthy food and physical activity in settings where kids live and play. Healthy choices must be easy choices," she says.

Chomitz brings more than 20 years' experience to the classroom as a researcher, instructor, and senior scientist at the Institute for Community Health; she conducts interdisciplinary studies and develops innovative approaches to promoting healthy lifestyles. Her interests range from investigating the relationship between fitness and academic achievement to addressing racial disparities in weight status and promoting healthy weight in dental care settings.

In the 1990s, Chomitz helped create Healthy Living Cambridge, a community-based program designed to increase physical activity in school, promote consumption of healthy and locally grown foods in school lunches, develop student health and fitness progress reports, and create school nutrition policies. To support this work, Chomitz received a U.S. Department of Agriculture grant to develop Growing Healthy, a collaboration of schools and community organizations in Cambridge and Somerville, Massachusetts.

Chomitz points out that her work fits well with Let's Move!, Michele Obama's campaign to end childhood obesity. "Every sector—individuals, families, schools, health care professionals, community organizations, and policy-makers—is welcome and needed at the table to promote healthy eating and active living."

DVM/MPH

<http://go.tufts.edu/dvmmph>

In conjunction with the Tufts Cummings School of Veterinary Medicine, the DVM/MPH program provides an excellent foundation for students interested in pursuing public health positions in government, research, international health, private industry, and academia. This combined-degree pathway emphasizes human and animal diseases, accuracy in research, and rigorous application of statistical methods.

Developed especially with the combined degree in mind, this pathway's public health curriculum is tightly integrated with course work at Tufts' Cummings School of Veterinary Medicine. This integration allows most students to complete both the MPH and DVM in the same four years. The pathway provides the integral basics of public health practice without compromising the rigorous study involved in earning a veterinary degree.

In the first two years, students take public health core and required courses in place of the weekly pre-clinical field or research electives pursued by others in the veterinary program. Students also participate in monthly evening seminars designed to integrate public health and clinical training. Electives are offered on both the Boston and Grafton campuses and can be taken any time over the four years. DVM/MPH candidates also participate in an eight-week summer field experience between their first and second years and complete the public health ALE either in the summer between second and third year or in the fourth year.

JD/MPH

<http://go.tufts.edu/jdmph>

Public health threats such as HIV, tobacco, domestic violence, contaminated drinking water, and bioterrorism require complex interdisciplinary solutions. A public health expert with a law degree or a lawyer with an MPH degree is especially well-equipped to meet these challenges.

A collaboration between Tufts' public health programs and the Northeastern University School of Law, the JD/MPH combined-degree pathway emphasizes the relationship between public policy and public health. Both schools have long traditions of responding

GRADUATES AT WORK

Careers our DVM/MPH students have pursued:

- **Executive Director**
Consortium for Conservation Medicine, EcoHealth Alliance
- **Veterinary Corps Officer**
U.S. Army, Veterinary Corps
- **Veterinarian**
Relief Work, City Vet Care

We teach our students to be effective advocates in two senses—as lawyers and as strong proponents of public health. Many of us on the faculty at both Tufts and Northeastern are on the front lines of advocacy for programs we care about.

—Marcia M. Boumil, MS, JD, LLM

GRADUATES AT WORK

Careers our JD/MPH students have pursued:

- **Staff Attorney**
Massachusetts House of Representatives
- **General Counsel**
Health Policy Advisor for a Massachusetts State Senator
- **Associate Counsel**
Office of Counsel to the Inspector General, United States Department of Health and Human Services

to the needs of their urban communities and offering exposure to faculty with extensive applied and research experience. Northeastern has the only Cooperative Legal Education program in the nation. All law students must complete four co-ops in different legal settings to graduate; students in the JD/MPH combined-degree pathway must complete at least one co-op related to public health.

BACHELOR'S/MPH

http://go.tufts.edu/bachelor_mph

Undergraduates admitted to the Bachelor's/MPH pathway can take roughly one third of the requirements (four credits) toward the MPH degree during their junior and senior years in college. Students can then complete the MPH within 15 months of completing their bachelor's degrees at approximately two thirds the usual cost of the degree. Students may select any of the MPH concentrations. With careful planning and faculty guidance starting in the junior year, students can pursue a well-crafted program of study in a shorter time period. This program is open to all Tufts University undergraduates.

MS-BIOMEDICAL SCIENCES/MPH

<http://tufts.edu/med/education/mbs>

The Master of Science in Biomedical Sciences (MBS) helps build students' biomedical sciences background while strengthening their credentials for medical school. The combined MS-Biomedical Sciences/MPH pathway allows MBS candidates to explore public health as well. Students complete their MPH requirements during their second year of MBS studies and choose among the five MPH concentrations: Epidemiology/Biostatistics; Health Services Management and Policy; Nutrition; and Health Communication. Pursuing the Global Health concentration in this pathway requires special permission because of the challenges of scheduling that occur with this particular option.



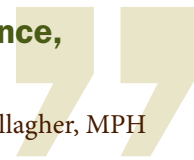
Master of Science in Health Communication

Informing, motivating, empowering

<http://go.tufts.edu/healthcommunication>



We graduate students who will practice effective health communication and, through their skills and experience, make a difference in the world.



— Susan Scavo Gallagher, MPH

Health literacy can drive policy, influence access to quality health care, and affect patient outcomes. With the explosion of health-related websites and social media tools, clinicians, policy-makers, and public health professionals must be well versed in effective health communication across a wide range of media and audiences.

The explosion of new media, including social media, blogs, mHealth (mobile device applications), and online consumer health, has become an important aspect of health communication strategy. The use of new media expands reach, fosters consumer engagement,

Susan Scavo Gallagher, MPH
Director, MS-Health
Communication Program
Assistant Professor of Public Health
and Community Medicine

Forging New Ground in Health Communication

Susan Koch-Weser, ScM, ScD

Assistant Professor of Public Health and Community Medicine



This is an exciting time for students who want to work in health communication. You can go in so many directions, especially in this era of Facebook, Twitter, and mobile technologies. It's truly the Wild West!

— Susan Koch-Weser, ScM, ScD



For Susan Koch-Weser, ScM, ScD, going green and getting healthy go hand in hand. Koch-Weser is working with other faculty at the Gerald R. and Dorothy J. Friedman School of Nutrition Science and Policy on a social marketing campaign designed to connect healthy eating with a healthy environment. Funded by a National Institute of Health grant, Koch-Weser is evaluating a messaging strategy designed to help children understand that minimally processed, less-packaged foods, such as fruits and vegetables, are better for you *and* better for the earth.

“My work involves understanding and addressing communication inequalities: why some groups of people are better able to access, process, and act on health information than others,” she says. Koch-Weser is particularly interested in health information dissemination, especially for people with limited health literacy. “There is so much information out there, but there are also many barriers. Sometimes people don’t perceive the information, or it seems irrelevant to their lives, or the channels of dissemination are wrong. Health communicators need research that will inform best practices,” she says.

Koch-Weser focuses on both research and practice in her courses on health behavior and health communication and survey research methods. “My role is to present research in a way that is relevant to our students, who are going out into the world to practice. A clear strength of Tufts is that we prepare our students to be on the front lines of health communication, promoting good health on an individual level, a policy level, and everything in between.”

increases access to science-based health messages, and leverages audience networks to facilitate information sharing. With the ability to create interactive communication campaigns and enhance public engagement, new media have become an essential element of any health communication strategy.

Tufts is at the forefront of this emerging area of health communication. Whereas other programs offer at most one course, our Master of Science in Health Communication program offers four courses, including social media for public health, online consumer health, web strategies for health communication, and technology for health communication.

Overall, our program provides the leading-edge skills and strategies students need to communicate effectively in a world of rapidly evolving health care information and ever-changing technology. Offered in collaboration with Boston's Emerson College, our curriculum teaches the theory and practice of communication along with basic concepts underlying medicine, epidemiology, and public health practice. With a strong emphasis on applied learning, the program requires students to define and execute applied learning projects aligned with their interests and to demonstrate a mastery of the knowledge, theory, and skills gained in the program.

Our program attracts recent college graduates and working professionals from a range of disciplines. Graduates assume roles in federal agencies, hospitals, health departments, biotechnology and pharmaceutical companies, publishing firms, foundations, and educational institutions.

DEGREE REQUIREMENTS

The degree requires 10.5 credits to graduate, including eight and a half required credits and two to four electives. While full-time students can complete the program in two years, part-time students may take up to five years. All required courses are offered during the evening, and electives may be offered during the day or evening.

Learn more:

For more information on course requirements and electives, please visit <http://go.tufts.edu/healthcommunication>



THROUGHOUT THE PROGRAM, STUDENTS LEARN TO:

- develop, deliver, and evaluate health promotion and disease prevention programs and campaigns
- disseminate health information to diverse audiences through multiple channels
- create, formulate, and implement health policy initiatives
- integrate new media and health literacy into health communication strategies

GRADUATES AT WORK

Careers our MS-Health Communication students have pursued:

- **Marketing Communications Specialist**
Inflexion
- **Senior Writer**
Brigham and Women's Hospital
- **Communication and Outreach Coordinator**
Kelly Government Solutions,
National Cancer Institute
- **Project Manager**
Prenatal and Cervical Cancer
Diagnostics, Hologic
- **Senior Account Executive**
Ogilvy PR Worldwide
- **Public Health Educator**
Maine Comprehensive Cancer
Control Program



There are so many things you can do with a degree in health communication. From medical writing to policy making, there are countless ways you can apply these skills.

—Sara Rattigan, MS

// Playing it Safe

Sara Rattigan, MS ('09)

Health Communication Specialist
and Outreach Coordinator,
Massachusetts Department of Public Health

Sara Rattigan (MS, '09) knows that good communication at work keeps people safe. As an outreach coordinator at the Massachusetts Department of Public Health, Rattigan focuses on preventing workplace injuries through the department's Occupational Health Surveillance program. "We go out in the field, investigate safety issues, make recommendations, and raise awareness," she says.

Rattigan primarily educates working teens (and those who work with teens), many of whom are employed in industries with high risk of injury, such as fast food restaurants, supermarkets, and retail. She recently participated in a leadership academy for teens, where she taught participants about hazards in the workplace, child labor laws, and young workers' rights.

Currently, she is also beginning to implement a fall prevention campaign targeted at Massachusetts construction workers; the campaign aims to improve communication between supervisors and their workers. According to Rattigan, "a culture of safety really stems from the top. Supervisors need to communicate more effectively with staff in order to prevent falls. So we are creating a range of print and other media pieces to facilitate that conversation."

Rattigan calls her work "very exciting" and her MS-HCOM degree invaluable. "Every day, I weave the skills I learned at Tufts into my job." Her degree taught her to be particularly mindful of health literacy—ensuring that audiences can understand the health information they receive. "Health literacy is critical to improved health outcomes. You don't help anyone if you put out materials that people either don't notice, or worse, don't understand. It's important to think about the kind of media you use, whom you are targeting, and the vulnerabilities and cultural differences within the populations you are trying to reach," she says. "Good communication around health-related topics can save money, provide resources, limit health disparities, and keep people safe."



Master of Science in Pain Research, Education, and Policy

Setting the standard in pain education

http://go.tufts.edu/prep_program

Pain is the leading reason why people seek health care. Yet, there is insufficient research on and treatment of pain worldwide. In large part this shortfall reflects a need for improving pain-related education. At PREP, we graduate a diversity of experts who go on to advance knowledge and train others in a range of clinical and public health settings.

— Daniel Carr, MD, DABPM, FFPMANZCA (Hon.)

Daniel Carr, MD, DABPM,
FFPMANZCA (Hon.)
Director, MS-PREP Program
Professor of Public Health
and Community Medicine

Pain is one of the most complex, challenging problems clinicians face. Acute, chronic, and cancer-related pain not only cause physical suffering but can also be psychologically and emotionally debilitating. Many health care providers feel inadequately prepared to assess and manage pain but know that if they could do so optimally, they would improve the quality of life for their patients.

From a public health perspective, chronic pain places a significant burden on the health care system. More than 20 percent of the population suffers from chronic pain, and in the past 10 years, access to pain management has emerged as a fundamental human right advocated by the United Nations and the World Health Organization.

The first and still the only multidisciplinary postgraduate pain curriculum of its kind in the United States, the Pain Research, Education, and Policy (PREP) program at Tufts offers a diverse curriculum that addresses a range of pain-related issues. Topics include the ethical and sociocultural aspects of pain, palliative care, end-of-life concerns, public policy, legislative issues, communication, research methods, and advocacy, along with clinical issues and the neurochemistry and neuroanatomy of pain. Because pain can present in many different situations, our students come from a broad cross-section of professions. Doctors, nurses, dentists, hospice workers, occupational therapists, physical therapists, pharmacists, acupuncturists, and others seek to learn the intricacies of chronic pain at our program and bring a wealth of varied experience to the classroom. Our faculty members are also multidisciplinary, holding medical (including osteopathic), nursing, dental, pharmacy, and doctoral degrees.

PREP offers three interdisciplinary, postgraduate pain education programs, giving students flexible options for earning pain-related degrees: the Master of Science in Pain Research, Education, and Policy; the Certificate of Advanced Study in Pain Topics; and the Joint Program in Pain Management with the New England School of Acupuncture. Other joint programs are now under development.

MASTER OF SCIENCE IN PAIN RESEARCH, EDUCATION, AND POLICY

The Master of Science in Pain Research, Education, and Policy (MS-PREP) grew out of a decades-long urgency that health care providers and other practitioners felt to understand and treat pain. In 1999, anesthesiologist/internist and current director of the program Daniel Carr, MD, and medical sociologist Kathryn Lasch, PhD, launched PREP in order to address these issues. Their diversity of perspectives is still reflected in the curriculum today and is further enhanced by our world-renowned faculty — scientists and clinicians who have devoted their careers to studying and alleviating pain

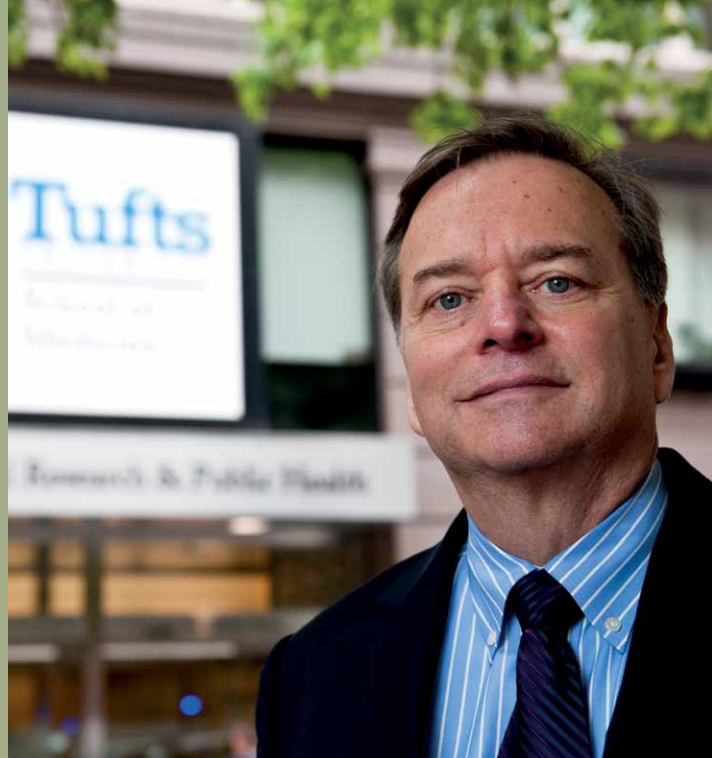
MS-PREP STUDENTS STUDY AN ARRAY OF TOPICS, INCLUDING:

- neuroanatomy and neurochemistry of pain
- neuropharmacology of analgesics
- clinical pain problems
- ethical and sociocultural aspects of pain
- palliative care and end-of-life issues
- public policy, legislative, and forensic issues
- methods of institutional change
- psychological approaches to the evaluation and treatment of pain
- pain management in diverse populations
- complementary therapies for pain (e.g., acupuncture)

Gaining Perspective on Pain

Daniel Carr, MD, DABPM, FFPMANZCA (Hon.)

Director, MS-PREP Program
Professor of Public Health
and Community Medicine



There is a tremendous unmet need with regard to pain education. Understanding the biological, psychological, and social aspects of pain can help reduce the risk that patients will become chronically disabled.

— Daniel Carr, MD, DABPM, FFPMANZCA (Hon.)



For Daniel Carr, MD, DABPM, FFPMANZCA (Hon.), treating pain is not just about helping patients feel better, it is about addressing a basic human right. “Treating pain ties into the powerful notion of human rights in health care. If you can reduce a person’s suffering via medication or technology, you are ethically obligated to do so,” he says.

Carr, and the program he co-founded, are known internationally for their contributions to pain research, education, evidence-based pain medicine, and the social and political aspects of pain relief. In May, 2011, Carr received the Elizabeth Narcessian Award for Outstanding Educational Achievements in the Field of Pain from the American Pain Society.

“Chronic pain places a large burden on the health care system and is linked to other conditions that tax the system, such as cancer, diabetes, HIV, and depression,” he explains. “Treating and preventing cancer-related, chronic, and acute pain are all important public health issues.”

According to Carr, “PREP fills an important gap in the current and evolving models of health care reform,” and helps address the need for health care professionals and policy makers to be knowledgeable about pain research and treatment.

“Our students are clinicians, entrepreneurs, nurses, dentists, chiropractors, acupuncturists, and contributors to health policy; our graduates serve as Army nurses in Iraq, conduct pain research, become doctors, and pursue PhDs. At PREP, we graduate special people who go on to address public health concerns, impact society, and make a difference,” Carr says.

in all its forms. MS-PREP faculty re-examined the curriculum in 2006 following publication of a model pain curriculum prepared by an interdisciplinary task force on professional education of the International Association for the Study of Pain (IASP). In every respect, the MS-PREP curriculum benefits from the rich resources at Tufts and meets or exceeds IASP's model curriculum.

PROGRAM GOALS

RESEARCH

Pain research ranges from the molecular level to health care delivery models; our faculty members have studied all levels. At Tufts, we take a public health approach to research, studying state-of-the-art methods for measuring pain severity, the burden of suffering in populations, and the comparative effectiveness of analgesic therapies. Tufts researchers also examine methods for evaluating the cultural, socioeconomic, and social factors involved in pain management.

EDUCATION

Students gain extensive knowledge around every aspect of pain and pain management. They acquire expertise in the neurobiology, pharmacology, clinical management, psychology, sociology, economics, and politics of pain — and emerge from the program as skillful educators. Our graduates can communicate confidently with patients, families, health professionals, and the general public on a wide variety of pain-related topics.

POLICY

The complex world of public policy includes implementing and sustaining the results of research and education. With an MS-PREP, our graduates can become effective agents for change by working on behalf of pain sufferers who often lack an advocacy voice. Our students earn the authority and credentials necessary to influence and craft policy at the organizational, state, and federal levels.

STUDENTS AT PREP:

- develop interdisciplinary knowledge about all aspects of pain and pain management
- form a deep understanding of the multi-dimensional public health burden of pain
- graduate prepared to improve public health by promoting the fundamental right to be free from pain

// Pain: Not Just a Symptom

Ewan McNicol, RPh, MS ('02)

Clinical Pharmacist,
Tufts Medical Center

Assistant Professor, Anesthesiology,
Tufts University School of Medicine

When Ewan McNicol (MS, '02) was a full-time hospital pharmacist taking care of patients in settings as diverse as postoperative care and pediatric oncology units, he answered countless questions from physicians, nurses, and patients, many of them related to pain. “The unifying theme was that people—patients and clinicians, myself included—simply didn’t know that much about pain management. Pain was (and still is) poorly taught in schools and inadequately managed by health care professionals,” he recalls.

That’s why McNicol decided to get his MS in Pain Research, Education, and Policy (PREP) at Tufts. The second student to graduate from the program, McNicol has seen PREP evolve from humble beginnings to become the leading pain program in the country. “PREP draws faculty and students from many different fields—doctors, nurses, dentists, pharmacists, acupuncturists, physical therapists—and encompasses a range of topics. Pain is truly an interdisciplinary area of study,” he says.

Pain management is also a hot button in Washington. “Opioid abuse is on everyone’s radar, so access has to be carefully controlled. But the flip side is how do we maintain access to pain medications for the people who really need them?”

In fact, access to pain management and the research and policies that influence it are important components of the PREP program and of McNicol’s current work as a clinical pharmacist, assistant professor, and editor for the Pain, Palliative, and Supportive Care Group of the Cochrane Collaboration, an international organization that promotes informed health care decision-making. “Pain can no longer be viewed as just a symptom of disease. We have to understand *why* it occurs, the biological, social, and cultural forces that drive it, and how policy decisions affect treatment outcomes. Pain is truly a public health issue,” he says.



“PREP approaches pain as a public health problem. It’s not just about treating individual patients; it’s about looking at the whole topic of pain from a global perspective.”

—Ewan McNicol, RPh, MS

DEGREE REQUIREMENTS

Students must earn 11 academic credits. The program offers nonmatriculation status, which allows qualified individuals to enroll in classes and earn up to two credits prior to matriculation.

CERTIFICATE OF ADVANCED STUDY IN PAIN TOPICS

To meet health care professionals' increasing demand for high-quality pain education, the PREP program offers a certificate that provides a more targeted, postgraduate line of study in pain research, education, or policy. Certificate students join master's students in the same classes and learn from the same accomplished faculty. Unlike master's students, certificate students choose a specialty and enroll in one of three pathways: Research, Education, or Policy. Should they wish to continue their studies to receive the MS-PREP degree, students can apply credits earned in the certificate program toward matriculation in the master's program.

CERTIFICATE PROGRAM REQUIREMENTS

To earn a certificate, students must complete a total of five academic credits of graduate-level courses.

PREP-AIRED

You can learn more about groundbreaking pain research and other pain-related issues at the program blog PREP-Aired, <http://sites.tufts.edu/prep>.

Recent topics include:

- Pain management in the military
- Treatment of pain in Alzheimer's Disease
- The worldwide under-treatment of pain
- End-of-life pain and comfort in dying
- Emergency room pain management



TUSM-NESA JOINT PROGRAM IN PAIN MANAGEMENT

PREP is the first and only master's level program combining western and eastern approaches to the complex problem of pain. In conjunction with the New England School of Acupuncture (NESA), Tufts has created a joint program that produces sophisticated, broad-minded clinicians who can work effectively in many health care, research, and advocacy settings. Students who complete the joint program earn two separate master's degrees, one from each institution. While some students complete the requirements for both degrees simultaneously, most elect to take their Tufts courses after finishing their NESA course work.

In addition to earning their NESA credits, students enrolled in the joint program earn their Tufts degree with nine credits instead of the 11 required for the stand-alone MS-PREP degree.

Learn more:

For more information on PREP course requirements, the certificate, and the joint program with NESA, please visit http://go.tufts.edu/prep_program

GRADUATES AT WORK

Careers our MS-PREP students have pursued:

- **Physical Therapist**
Bernadette Jaros Physical Therapy
- **Pharmacist**
Cambridge Hospital
- **Nurse Educator**
Brigham and Women's Hospital
- **Field Scientist**
Research and Development,
Endo Pharmaceuticals
- **Owner/Acupuncturist**
White Peony, PC, Acupuncture and
Chinese Herbal Medicine
- **Nursing Director**
Post-anesthesia Care Unit,
Tufts Medical Center
- **Editor**
Pain, Palliative, and Supportive Care
Collaborative Review Group,
Cochrane Collaboration





A WORKING FACULTY

<http://go.tufts.edu/publichealthfaculty>

The truism “a program is as good as its people” best describes *Public Health at Tufts*. Our students are exceptional — and so are the members of our faculty. Our professors are enthusiastic, practicing professionals who are experts in, and often ahead of, the latest discoveries in their fields.



Tapping the resources of Tufts and beyond, the public health programs draw faculty members who are environmental and civil engineers, nutritionists, health administrators, public health practitioners, physicians, nurses, dentists, pain specialists, lawyers, business professionals, accountants, social workers, epidemiologists, writers, and scientists. The faculty includes the health commissioner of a Massachusetts town; the director of emergency services at a major Boston medical center; members of NIH review panels; the producer of award-winning radio broadcasts; the assistant commissioner of a state laboratory; the director of the Massachusetts Office of Elder Health; general counsel at a major Boston hospital; a coordinator of a refugee and immigrant health program; and the vice president of a major health care provider.



SHARED FOCUS

Our faculty is committed to applying their skills and knowledge to current public health problems, including increasing concerns about pain management and the complex social and economic issues involved in managed care. Our instructors involve students in that work and also encourage them to explore their own investigations.



Tufts is a top research university known for its work in the biomedical field. Faculty members explore a broad range and depth of research topics, including emerging and infectious diseases, bioterrorism and emerging disease preparedness, cutting-edge statistical analysis, pain as it relates to end-of-life care, and law in public health, among many others.

ADMISSIONS

With the exception of the combined MD pathways, candidates for all programs must apply online. The online application is available on the School of Medicine web site under Admissions > Public Health Programs > How to Apply.



Learn more:

For more information and to apply, please visit
<http://go.tufts.edu/admissions>