# DEPARTMENT OF COMMUNITY AND PREVENTIVE MEDICINE

The Department, in its graduate education and research programs, emphasizes the epidemiology of disease and disability, the planning and evaluation of health services, and the development of interventions to prevent disease and disability.

The teaching program includes courses in the medical school curriculum (described below) and courses leading to a Ph.D. in health services research or a Master of Public Health degree, available both to physicians and others. The Department also participates actively in the Health and Society Program in the College. The Department's research activities embrace a wide variety of topics, including measurement of disease in populations, evaluation of public health programs, international health, medical outcome studies, technology evaluation, causes of morbidity and mortality, legal and ethical issues in health care, competition and planning in health systems, geriatric care and policy, and others. The disciplines represented in the Department include medicine, epidemiology, sociology, law, economics, history, anthropology, and public policy analysis, among others.

## REQUIRED COURSES

Medical student teaching by the Department involves a major role in the Mastering of Medical Information course in Year One. This course introduces the student to the collection and use of information that patients will require, such as: "What is my disease and how common is it? What are my chances? What caused my disease? Is there an effective treatment? Where do I get good medical care? How do I pay for it?" To answer these questions, the Mastering of Medical Information course teaches principles of epidemiology, evidence-based medicine, health economics, health services research, and preventive medicine. Principles of these disciplines are incorporated into a variety of laboratory and problem-based learning sessions, and integrated with the concurrent Introduction to Clinical Medicine course, and with other courses throughout the medical curriculum.

Another major teaching role of the Department is in several of the curricular themes that will be woven into all four years of instruction. The Department faculty has leadership roles in the Preventive and Social Medicine, Health Economics, Nutrition, and Diversity themes. Faculty members are responsible for assuring that educational objectives are carved out in those parts of the curriculum where the thematic topic is most relevant to the subject being taught. This unique feature of the curriculum assures that these important subjects are learned as integral parts of their medical knowledge.

## ELECTIVES

An elective program is offered throughout the school year, on an individual basis, in which students may undertake study or investigative projects in such subjects as preventive medicine, public health, community health, epidemiology, and health care evaluation and planning. Biostatistical, epidemiologic, survey, data processing, and computer methodologies are used where relevant.

## RESEARCH OPPORTUNITIES

Students are encouraged to pursue any of the following areas of research interest with individual faculty members: medical sociology, medical decision analysis, health policy, public health program evaluation, cost/benefit and cost/effectiveness studies, preventive cardiology, epidemiologic studies, health care financing, legal issues in health care, and gerontology

## DOCTORAL AND POSTDOCTORAL PROGRAMS IN HEALTH SERVICES RESEARCH

The doctoral program is provided to students through three different "tracks": general health services research, public policy, and economics. For persons trained in medicine, the postdoctoral program emphasizes the acquisition of research skills to produce competence in health services research. For postdoctoral students with doctoral training in the social sciences, the program emphasizes the unique features of the U.S. health care system and the specialized methods of health services research. Please refer to the *Official Bulletin: Graduate Studies* for additional information about the doctoral and postdoctoral programs.

## MASTER OF PUBLIC HEALTH

A two-year program of formal courses and independent study (see the description under Community and Preventive Medicine in the *Official Bulletin: Graduate Studies* for details). The Master of Public Health degree program is approved by the Council on Education in Public Health. It can be integrated into the medical curriculum.

## DIVISION OF CLINICAL PRACTICE EVALUATION

The former freestanding Division of Health Services within the School of Medicine and Dentistry has been incorporated into the Department of Community and Preventive Medicine as one of its divisions. Faculty include individuals with interests in decision-making and management of clinical care systems. Division faculty actively participate in components of the Department's course for first-year medical students. The Division also offers an elective experience for multidisciplinary groups of students as part of the nationally sponsored Community-Based Quality Improvement Education for Health Professions effort.

# Courses Offered by the Department of Community and Preventive Medicine

**410. Introduction to Data Management and Data Analysis using SAS**

This course presents a thorough introduction to the SAS system for data management, statistical analysis, and reporting. Students should gain an appreciation of what SAS can do and a solid understanding of how to use it in their work. Spring.

**412. Survey Research**

Associate Professor Dye

This course presents students with an overview of the role of survey methods and tools in the research process, with a particular focus on survey research applications in health care research and epidemiology. The course incorporates an integrated perspective that includes a qualitative approach to conducting appropriate and accurate survey research. Spring.

**413. Field Epidemiology**

Assistant Professor Knox

Through a series of didactic lectures, examination of case studies, and hands-on field work and data analysis, this course explores the application of traditional epidemiologic methods to public health practice. Issues, problems, and methodology relevant to the following topics are covered to provide an in-depth understanding of how epidemiology is the diagnostic discipline of public health: outreach and cluster investigations; public health surveillance; community intervention trials; outcomes research; risk assessment; screening; cost benefit analysis; and informing public health policies. Emphasis is placed on how partnerships between universities and health agencies can promote community-wide health promotion and disease prevention. Prerequisite: Introduction to Epidemiology or permission of instructor. Fall.

**415. Principles of Epidemiology**

Professor Pearson, Assistant Professors Moss and Kouides

This course provides an introduction to epidemiologic concepts of disease and interventions to ameliorate them. The course discusses population-based aspects of disease, morbidity and morality statistics, basic study designs (cross-sectional, case-control, cohort, and clinical trials), and the use of epidemiologic data to draw conclusions about disease causation. At the end of the course, students should have a broad view of denominator-based medicine and be prepared for higher level courses in epidemiologic methods. Fall.

**416. Epidemiologic Methods**

Prerequisites: PM 415 and one semester of graduate-level statistics or by permission of the instructor

Assistant Professor Moss

This course provides an in-depth coverage of the quantitative and methodologic issues associated with population-based epidemiologic research. Issues specific to study design, conduct, and analysis are emphasized. Topics covered include: issues in study design, topics in measurement, methods of data collection, methods in environmental and occupational health research, confounding and effect-modification, and analytic techniques. Spring.

**417. Molecular Epidemiology**

Assistant Professor Knox

Using the same paradigm as traditional epidemiology, this course explores the opportunities for the use of increasingly powerful biologic markers of exposure, disease, or susceptibility to provide high-resolution answers in relation to the causes of disease. The course focuses on the practice of molecular epidemiology, as an interdisciplinary science, and the use of biologic markers to advance our knowledge about health and disease among groups of people in a manner that is appropriate for inference to larger populations. Spring.

**418. Epidemiologic Transition in Translation**

Prerequisite: one semester of epidemiology

Professor Barker

In this course, students review epidemiologic research on selected chronic diseases (the legacy of the "epidemiologic transition") and critically examine implications and applications of the findings from these studies, (i.e., their public health and medical care "translation"). Examples of topics covered include stroke, breast cancer, childhood asthma, Alzheimer's disease. The course affords an opportunity both to review principles of epidemiology and to become aware of how society—locally as well as nationally—responds to epidemiologic knowledge about chronic disease. Fall.

**420. Politics and Policy in the U.S. Health Care System**
Professors Brown and Kunitz

Provides an understanding of the principal health institutions and their behavior. Readings are used to explore selected topics of importance for national health policy and local decision making. Contemporary health politics and policy are examined in terms of the influence of political and economic forces on the health care system and the particular historical development of health services in the United States. Fall.

**421. Introduction to the U.S. Health Care System**
Associate Professor Zwanziger

This course overviews the U.S. health care system. It describes the major components such as hospitals, physicians, managed care plans, and long-term care institutions; finance and reimbursement processes such as DRGs and RBRVS; and system outcomes such as quality and access. The course is a comprehensive summary, allowing the student to place more detailed studies in context. Alternate years. Fall.

**426. Social and Behavioral Medicine**
Assistant Professor Chin
Research Assistant Professor Ossip-Klein

The course focuses on 1) the application of behavioral, sociological, and anthropological science approaches to the etiology, prevention, treatment, and management of physical disease and illness; and 2) the identification of relationships among behavioral, sociological, anthropological, and biological factors in health. Students become familiar with current theoretical and methodological issues in social and behavioral medicine, develop an understanding of evidence-based health promotion/disease prevention interventions in different content areas, consider cross-cultural perspectives, and develop critical thinking skills necessary to evaluate the research literature in these areas. Fall.

**428. Health Services Research Seminar and Workshop Series**

A noncredit course required of all doctoral and postdoctoral students. Faculty and students present a variety of topics for discussion. Fall and Spring.

**429. Introduction to SAS for Windows**
Prerequisites: BST 463 or equivalent, knowledge of MS Windows
Joseph Guido

This six-week course is an introduction to the SAS System for Windows. The focus is on data management and statistical analysis using SAS. The student gains an understanding of SAS as a research tool by completing a research project of his or her own design. Spring.

**433. Epidemiology and Public Health of Aging**
Professor Barker

The 20th-century demographic transition to an aging society is a universal phenomenon with profound implications for present and future disease patterns and health services. The first half of this course provides students with a working knowledge of major epidemiologic studies of disease and disability associated with the epidemiologic studies of disease and disability associated with the aging population and of the application of contemporary public health and medical care strategies to these emerging patterns. Concepts covered include compression of morbidity, functional status assessment, active life expectancy, essential roles of public health. In the second part of the course, epidemiologic and public health approaches to aging are applied to case studies, (including local examples) of selected major disabling conditions including influenza, cardiovascular disease, musculoskeletal disease, mental health, tobacco, hypertension, and other risk factors. Student evaluation is based upon several written assignments and presentations during the course and a final paper. Fall.

**436. Health Policy**
Prerequisites: Statistics and Microeconomic Theory
Professor Phelps

Analysis of factors that affect supply and demand in the market for medical care: risk, insurance, externalities, and regulation. Spring.

**438. Practical Skills in Grant Writing**
Professor Pearson

This course is intended to provide the student interested in a career in the life sciences with practical skills related to procuring external support for research. The course content includes a variety of didactic lectures on grant-related topics, discussion sessions with the opportunity to examine grants that others have written, examination of tools and resources available to assist in grant writing, and the opportunity to write a grant for support of the student's own research project and have it critiqued. At the end of the course, the enrollee should be able to write a research grant. Spring.

**439. Seminar in Health and Health Care of the Elderly**
Assistant Professors Mukamel, Friedman

The course seeks to provide a basic multidisciplinary perspective on the health and health care of the elderly and, through seminar presenters from a wide variety of institutions, departments, and programs, stimulate students' interest in the interaction of the variety of institutions and programs that deliver health care services to the aged. The focus is exclusively on persons 65 and older, with special attention to specific diseases and conditions prevalent in the elderly, and mechanisms and organizations that provide their health care and social services. Examples of seminar topics: Living at Home with Chronic Illness and Disability, Employment and Re-

tirement, Legal and Ethical Issues in End-of-Life Decisions, and Successful Aging. Spring.

**440. Legal Issues in Health Care**
Prerequisite: PM 420 or by permission of the instructor
Assistant Professor Trafton

Topics include the legal basis for government involvement in health care; the rights of patients and providers, including principles that have developed for the protection of specific patient groups (i.e., infants, children, and those who lack capacity); and the legal aspects of health-care financing and regulation. Fall.

**441. Conducting Research with Older Persons: Methods & Applications**
Assistant Professor Friedman

The course familiarizes students with unique and prevalent issues, problems, difficulties, and challenges of conducting health services research with elderly persons, and provides students with approaches and tools to address these issues and problems in order to successfully conceptualize, plan, carry out, and conclude research with the aged. The course focuses almost exclusively on persons age 65 and older, with special attention paid to the old-old (age 85 and over), people with cognitive impairment, and residents of nursing homes. Spring.

**442. Nutritional Epidemiology**
Prerequisites: introductory course in epidemiology and statistics
Assistant Professor Fernandez

The course is designed to give students the tools to critically review the nutritional epidemiologic literature and to conduct epidemiologic studies of diet, nutrition, and disease. Concepts on nutritional epidemiology are applied to nutrition and nutrition-related disorders prevalent in the United States and around the globe (e.g., descriptive epidemiology of breast feeding, new national and international growth curves, examples of the role of diet in cancer prevention). The main, but not exclusive, focus is on maternal and child health issues. Spring.

**443. Maternal and Child Health Epidemiology**
Associate Professor Dye

This course provides an overview of current topical and methodological issues in maternal and child health epidemiology. Topics covered include identification of MCH indicators, epidemiological performance and organization of MCH services, analytic techniques in MCH epidemiology, race and ethnicity, maternal, fetal, infant, and child mortality analyses, morbidity in pregnancy and infancy, social determinants of MCH problems, and perinatal regionalization. Students are expected to use the Internet in the conduct of coursework. Guest speakers present practical applications of MCH epidemiology in public health and medicine.

**445. Aging and Public Policy**
Professor B. Jacobs

The content, rationale, and proposals for reform of public programs for the elderly. Programs analyzed include Social Security, Medicare, and Medicaid. Spring.

**449. Writing Workshop**
Pat Braus

Strong writing skills are an asset in public health research, business, and public life. Word usage, effective use of outlines and quotations, transitions, and other components of good writing are addressed. The class is divided into two parts. Writing workshop sessions (total of five) are followed by tutorial sessions with a subgroup of students. Fall.

**450. Management and Evaluation of Health Services Organizations**
Prerequisite: at least one course in epidemiology or by permission of the instructor
Assistant Professor Trafton

This course provides an understanding of executive level management and leadership in non-profit health and human service organizations. In addition, students study organizational context, program design and implementation, and the evaluation of health care services. Students complete two projects: a health and human service not-for-profit agency-based project that will involve an analysis of management and leadership issues, as well as a needs assessment, program evaluation, or quality assurance assessment. Spring.

**454. Global Public Health Informatics**
Associate Professor Dye

This course presents students with an overview of trends in a wide range of global public health indicators and the methodological tools available for addressing the analysis of international health data. The course prepares students to conduct research in international settings and focuses upon the blending of methodologies to achieve research objectives. Further, the course emphasizes Internet tools and modes of communication to facilitate the conduct of global health research. Students are required to do an Internet-based project sequentially conducted throughout the semester in consultation with public health researchers and officials in a variety of international settings. The course emphasizes hands-on, applied analyses of global health issues. Alternate years. Fall.

**458. Qualitative Health Care Research**
Professor Chin

The increasing complexity of health services and their delivery requires the search for new research methods. Qualitative methods, long used in the social sciences, allow access to areas that quantitative methods cannot adequately access such as health beliefs or actual (as opposed to stated) health or health delivery practices. In addition, qualitative methods can function as a

prerequisite to quantitative methods by hypothesis generation or identifying lay terminology for accurate survey development. This course covers standard qualitative methodologies through readings from the literature and discussion. Spring.

**470. Public Health and the Environment**

The objective of this course is to present an overview of public health issues that are associated with the environment. Areas of emphasis include: the evolution of environmental health from its roots in communicable diseases; current environmental health issues; epidemiology of occupational hazards and their relevance to public health; environmental health policy and regulation; and the prevention and control of environmental hazards. Spring.

**479. Health, Medicine, and Social Reform**

Professor Brown

Pursuit of the theme of public health and medical reform by leading writers committed, from different positions along the political spectrum, to the social and economic reorganization of modern society. Alternate years. Spring.

**480. Changing Concepts of Health and Illness**

Professor Brown

Historical account of the way disease has been conceptually understood in the Western tradition. Emphasizes the scientific, epidemiological, philosophic, social, cultural, and professional forces that have shaped the development of ideas. Alternate years. Spring.

**482. Clinical Evaluative Sciences**

Prerequisite: one semester of statistics or epidemiology

This course covers the types of study design and settings available for original observations about clinical interventions and practice patterns. It focuses on the use of patient populations and databases as laboratories for the generation of new knowledge and information. Ways to improve the outcome and efficiency of personal health services through evaluating their effectiveness, quality, appropriateness, and cost are explored. The material covered introduces the methods, databases, and settings available for such studies. Fall.

**483. Economics, Policy, and the Health Care System**

Prerequisites: microeconomic theory and a knowledge of the U.S. health care system

Associate Professor Zwanziger

The study of how three major parties in the health care system—insurers, hospitals, and physicians—interact and how the nature of these interactions affects the system's overall economic performance. Alternate years. Spring.

**484. Medical Decision and Cost-Effectiveness Research**

Prerequisite: one semester of statistics

Students are introduced to the concepts underlying the quantitative analysis of medical decisions. They are provided with the basis to understand decision and cost-effectiveness analyses which appear in the clinical and health services research literature, as well as to be able to set up and perform such analyses themselves. Spring.

**494. Special Topics in Preventive Medicine**

Topic to be arranged

Special studies and investigative projects can be arranged with individual members of the Department in the areas of medical care research, medical economics, medical sociology, health care administration and policy, and epidemiology.

# Faculty of the Department of Community and Preventive Medicine

**Thomas A. Pearson** . . . *Professor of Community and Preventive Medicine and Chair* and Medicine. B.A. Johns Hopkins, 1973; M.D 1976; M.P.H. 1976; Ph.D. 1983.

### Professors

**William H. Barker,** and Medicine. A.B. Princeton, 1962; M.D. Johns Hopkins, 1966.

**Robert L. Berg,** Emeritus. B.S. Harvard, 1940; M.D. 1943.

**Theodore M. Brown,** and Medical Humanities and *Professor of History*. B.S. City College of New York, 1963; M.A. Princeton, 1965; Ph.D. 1968.

**Stephen J. Kunitz,** Emeritus. B.A. Yale, 1960; M.D. Rochester, 1964; M.A. Yale, 1968; Ph.D. 1970.

**Charles E. Phelps,** and *Political Science,* and Economics. B.A. Ponoma, 1965; M.B.A. University of Chicago, 1968; Ph.D. 1973.

### Clinical Professor

**Arthur J. Moss,** and *Medicine.* B.A. Yale, 1953; M.D. Harvard, 1957.

### Associate Professors

**Timothy Dye.** B.A. Syracuse, 1985; M.P.A., 1987; M.A., 1987; M.Sc. SUNY (Buffalo), 1987; Ph.D., 1993.

**Karl D. Kieburtz,** and *Neurology*. B.A. Amherst, 1980; M.P.H. Rochester, 1985; M.D. 1985.

**Jonathan D. Klein,** and *Pediatrics.* B.A. Brandeis, 1979; M.P.H. Harvard, 1984; M.D. New Jersey Medical, 1984.

**James G. Zimmer,** Emeritus, and Associate Professor of Medicine. B.A. Cornell, 1953; M.D. Yale, 1957; D.T.P.H. London School of Hygiene and Tropical Medicine, 1966.

**Jack Zwanziger.** B.S. McGill, 1967; Ph.D. Cornell, 1972; M.B.A. McGill, 1978; Ph.D. RAND Graduate School, 1987.

### Clinical Associate Professor

**Andrew S. Doniger,** and *Pediatrics*. B.A. Amherst, 1977; M.D. SUNY (Buffalo), 1977; M.P.H. University of California (Berkeley), 1981.

### Research Associate Professor

**Deborah J. Ossip-Klein,** and Psychology and Oncology. B.A. University of Miami (Florida), 1975; M.S. Pittsburgh, 1977; Ph.D. 1981.

### Assistant Professors

**Kevin Fiscella.** B.A. Antioch, 1976; M.D. Medical College of Virginia, 1980; M.P.H. Rochester, 1996.

**Bruce Friedman.** B.A. SUNY (Binghamton), 1974; M.P.H. Michigan, 1981; Ph.D. Minnesota, 1998.

**Nancy G. Hildreth,** part-time. B.A. Connecticut, 1971; M.P.H. Yale, 1978; M.Ph. 1979; Ph.D. 1981.

**Robert G. Holloway,** and *Neurology*. B.S. Connecticut, 1985; M.D. 1989; M.P.H. Rochester, 1997.

**David H. Klein.** B.S. Rensselaer, 1970; M.B.A. University of Chicago, 1972.

**Kerry Knox.** B.S. Northwestern, 1978; M.A., 1985; Ph.D., 1989.

**Ruth W. Kouides,** and *Medicine.* B.A. Hamilton, 1983; M.D. SUNY (Upstate), 1987; M.P.H. Rochester, 1994.

**Mark E. Moss,** and Dental Research and Clinical Dentistry. D.D.S. Marquette, 1984; M.S. Wisconsin, 1991; Ph.D. North Carolina, 1994.

**Dana B. Mukamel.** B.S. Tel Aviv University, 1974; M.S. Massachusetts Institute of Technology, 1977; Ph.D. Rochester, 1993.

**Sarah H. Trafton.** A.B. Radcliffe, 1974; J.D. Suffolk, 1978.

### Clinical Assistant Professor

**Nancy M. Bennett,** and *Medicine.* B.A. Sarah Lawrence, 1973; M.D. New York University, 1981.

### Research Assistant Professors

**Jane Hickok.** B.A. Cornell, 1960; M.D., 1964; M.P.H. Rochester, 1984.

**Scott McIntosh**, and Cancer Center. B.S. Iowa State, 1984; M.A. Missouri, 1986; Ph.D. Miami, 1993.

### Adjunct Assistant Professors

**Howard J. Berman.** B.S. Illinois, 1967; M.H.A. University of Michigan, 1969.

**Christopher J. Davis.** B.S. University of Wisconsin, 1974; M.D. 1979; M.B.A. Rochester, 1987; M.P.H. 1990.

### Associates

**Nancy P. Chin,** part-time. B.S. SUNY (Buffalo), 1978; M.A. Rochester, 1989; M.P.H. 1993.

**Cathleen M. Mooney,** part-time. B.S. SUNY (Stony Brook), 1980; M.S. Rochester, 1987.

### Adjunct Senior Instructor

**Patricia Braus.** A.B. Cornell, 1979; M.P.H. Rochester, 1993.

### Researcher

**Robert Lillis.** B.A. John Carroll, 1971.

## Proposed Faculty of the Division of Clinical Practice Evaluation

**Robert J. Panzer** . . . Director of the Division; Associate Professor of Community and Preventive Medicine and *Medicine, and Medical Informatics*. B.A. Harvard, 1971; M.D. Albany, 1977.

### Professor

**Raymond J. Mayewski.** B.S. Pennsylvania State University, 1968; M.D. Temple Medical School, 1972.

### Assistant Professors

**J. Edward Bell.** B.S. Duquesne, 1968; Pharm.D. 1970.

**Leo P. Brideau.** B.S. Georgetown, 1968; M.H.A. Medical College of Virginia, 1980.

**John E. Loughner,** and *Oncology*. B.S. Wayne State, 1970; Pharm.D. 1976.

**Thomas E. O'Brien.** B.S. Brooklyn College of Pharmacy, 1965; Pharm.D. Michigan, 1969; M.S. Long Island City University, 1974.

**Susan Saunders,** (Social Work), and *Psychiatry*, and Nursing. B.A. Kansas, 1964; M.S.W. Missouri, 1970.

### Clinical Senior Instructor

**Gordon L. Moore.** B.A. Oberlin, 1983; M.D. Rochester, 1990.

### Senior Instructors

**Jeff D. Huntress.** B.S. University of Connecticut, 1986; Pharm.D. SUNY (Buffalo), 1994.

**Ann McMican.** B.S. University of Michigan, 1974; M.S. Northeastern, 1983.

### Instructors

**Christine E. Burke.** B.A. Denison, 1973; J.D. New York Law School, 1977.

**Steven I. Goldstein.** B.A. Syracuse, 1969; M.H.A. St. Louis, 1974.

**Michael C. Goonan.** B.S. St. John Fisher, 1975; New York State C.P.A.

**Jeanine Arden Ornt.** B.A. SUNY (Cortland), 1977; J.D. Albany Law School, 1980.

**Peter G. Robinson.** B.A. City College of New York, 1971; M.A. New School for Social Research, 1975; M.P.H. Columbia, 1980.

**Deborah N. Tuttle.** A.A.S. SUNY (Alfred), 1974; B.S.N. Nazareth College, 1979; M.P.S. New School for Social Research, 1986.

**Michael J. Weidner.** B.A. Notre Dame, 1964; M.B.A. Cornell, 1966.