

The MD/MBA Program at Yale

Educating the Physician Leaders of Tomorrow



A Message from the Director

The Yale program promotes clinical relevance and credibility, while fostering managerial and administrative excellence. By pursuing a rigorous management science curriculum, the students develop leadership skills and gain an understanding of the motivation and mechanics at play in the current management of medicine. By practicing medicine, one can continue to understand the changing roles and dynamics of medical care delivery. Yale's program is unique in combining the innovative SOM curriculum with the world-renowned Yale system of medical education. Contemporaneously, the medical students are exposed to physician and non-physician leaders in healthcare policy, finance, education, and administration.

Sincerely,
Howard P. Forman, MD, MBA
*Associate Professor of Diagnostic Radiology and Management
Vice Chair, Diagnostic Radiology; Lecturer, Economics
Director, MD/MBA Program*

Program Description

The joint MD/MBA degree program in Medicine and Management at Yale University develops physician-managers capable of pursuing careers that balance clinical care with managing change in a tumultuous healthcare environment. The Yale School of Medicine brings its innovative curriculum, emphasizing individual responsibility in a team atmosphere; the Yale School of Management brings strengths in management across the private, public, and nonprofit sectors.

This joint degree combines the four-year Medical Doctor degree with the Master of Business Administration. The joint degree program requires five years of study, with simultaneous award of the Doctor of Medicine and the

Master of Business Administration at the conclusion of the five-year period. A joint degree student will pay tuition to the School of Medicine for three and one-half years and to the School of Management for one full academic year plus an additional semester. While enrolling in courses and paying tuition in one school in any given semester, students must provide the registrar of the other school with a photocopy of their course registration form and to advise both registrars of any course changes.

Applying

Admissions decisions are made independently by the School of Medicine and the School of Management. Students may apply to both schools at the same time, or they may apply to the School of Management during their second year at the School of Medicine, or to the School of Medicine during their first year at the School of Management. Applicants who apply simultaneously should indicate that they are doing so on each application. Students are encouraged to meet with the MD/MBA program director prior to beginning the application process.

Students who are already enrolled in one of the programs should inform both programs of their intention to apply to become a joint degree student. Students who are enrolled in the School of Management and wish to apply to the Medical School should meet with the Dean of Student Affairs at the School of Management. Students who are enrolled in the School of Medicine and wish to apply to the School of Management should meet with the Associate Dean for Student Affairs at the School of Medicine. Following admission to the individual program, each student should request joint degree status by completing a form which requires signatures of the Associate Dean for Student Affairs at the School of Medicine and the Dean of Student Affairs at the School of Management.

Curriculum/Tuition

This table displays the distribution of study and tuition over the five years in which the student is enrolled in the MD/MBA Program.

Year 1	School of Medicine Curriculum	School of Medicine Tuition
Year 2	School of Medicine Curriculum	School of Medicine Tuition
Year 3	School of Medicine Curriculum <i>(All clerkships are completed in the 15-month period between the end of 2nd year and the start of 4th year.)</i>	School of Medicine Tuition
Year 4	School of Management Curriculum	School of Management Tuition
Year 5/Fall Semester	Integrated	School of Management Tuition
Year 5/Spring Semester	Integrated <i>(The thesis and other graduation requirements are completed in this year. Sufficient time is allocated for residency interviews.)</i>	School of Medicine Tuition

In addition to standard course requirements for Yale School of Medicine and Yale School of Management, all MD/MBA students are required to attend 16 lectures of the Healthcare Leadership Course (MGT 699).

Healthcare Leadership Teaching and Research Faculty

Michael Apkon MD, PhD, MBA

Associate Professor and Vice Chair, Pediatrics;
Medical Director, Yale University/Yale New Haven Hospital
Clinical Development Fund

Elizabeth Bradley PhD

Associate Professor of Epidemiology and Public Health,
Yale University

Linda Degutis PhD

Associate Professor of Surgery, Section of Emergency
Medicine; Assistant Clinical Professor, School of Nursing;
Associate Professor of Epidemiology and Public Health

Howard P. Forman MD, MBA

Associate Professor of Diagnostic Radiology and
Management; Vice Chair, Diagnostic Radiology;
Lecturer, Economics; Director, MD/MBA Program



Dr. Forman in the Emergency Room Radiology Reading Area.

Paul Genecin MD

Executive Director, Yale Health Plan/Yale University
Health Services

Myron Genel MD

Professor of Pediatrics; Associate Dean, Government
and Community Affairs

Cary P. Gross MD

Assistant Professor of Internal Medicine,
Yale School of Medicine

Edward Kaplan PhD

William N. and Marie A. Beach Professor of
Management Sciences & Professor of Public Health

Jerome Kassirer MD

Professor of Internal Medicine; former Editor,
New England Journal of Medicine

Harlan Krumholz MD

Professor of Internal Medicine and Public Health;
Director, The Robert Wood Johnson Clinical Scholar's
Program, Yale University

David Leffell MD

Professor of Dermatology and Surgery; Senior Associate
Dean, Clinical Activities and Social Planning

Theodore Marmor PhD

Professor of Public Policy and Management
& Professor of Political Science

Sharon Oster PhD

Frederic D. Wolfe Professor of Management and
Entrepreneurship & Faculty Director of the Partnership on
Nonprofit Ventures

Stephen Rimar MD, MBA

Clinical Associate Professor of Anaesthesiology, Yale School
of Medicine; Executive Vice President, Clinical Affairs,
The Brooklyn Hospital Center

Stephanie Spangler MD

Professor of Obstetrics and Gynecology;
Deputy Provost, Yale University

Arthur J. Swersey PhD

Professor of Operations Research

Dick R. Wittink PhD

George Rogers Clark Professor of Management
and Marketing

Scott A. Berkowitz, MD, MBA

Yale School of Medicine and Yale School of Management, 2003
B.S., Yale University, 1998

*Currently completing a Residency in Internal Medicine at Johns Hopkins
Hospital*

*"The combined MD/MBA program at Yale seeks to provide a truly inte-
grated experience; coursework is combined with a healthcare leadership
seminar series to further expose students to the diverse ways in which
physicians can contribute to the broader field of medicine."*

Congressional Health Policy Fellow, US Senate Health, Education, Labor
and Pensions Committee, Washington, D.C.

American Medical Association Government Relations Internship
Program (GRIP)

Co-President, American
Medical Association
(AMA) – Medical Student
Section at Yale



Sample of Recent Faculty Publications:

Apkon:

- “Decision Analysis and Clinical Uncertainty.” *Current Opinion in Pediatrics* (in press).
- “Impact of an Electronic Information System on Physician Workflow and Data Collection in the Intensive Care Unit.” *Intensive Care Medicine* 27:122-30, 2001.

Forman:

- Gross, C. P., B. Soffer, P. B. Bach, R. Rajkumar, H. P. Forman. “State Expenditures for Tobacco Control Programs and the Tobacco Settlement.” *NEJM* 347: 1080-86, 2002.
- Larson, D. S., M. Chandler, H. P. Forman. “MD/MBA Programs in the United States: Evidence of a Change in Healthcare Leadership.” *Academic Medicine* 78: 335-41, 2003.
- Saketkhuo, D. S., J. S. Sunshine, A. M. Covey, H. P. Forman. “2002 Findings from a Help Wanted Index of Job Advertisements: Is the Job-Market Shortage for Diagnostic Radiologists Easing?” *AJR* (in press).
- Sunshine, J. S., R. Lewis, B. Schepps, H. P. Forman. “Data from a Professional Society Placement Service as a Measure of the Employment Market for Physicians.” *Radiology* 224: 193-98, 2002.
- Yoon, L.S., A. H. Haims, J. A. Brink, R. Rabinovici, H. P. Forman. “Evaluation of an Emergency Radiology Quality Assurance Program at a Level One Trauma Center: Abdominal and Pelvic CT Studies.” *Radiology* 224: 42-46, 2002.

David B. Larson, MD, MBA

Yale School of Medicine and Yale School of Management, 2002
B.S., Brigham Young University, 1997

Currently completing a Residency in Diagnostic Radiology at the University of Colorado Health Sciences Center

Internship completed in Pediatrics, University of Colorado Health Sciences Center

“A graduate from the Yale MD/MBA program is as well prepared to lead healthcare system change as any individual at this early stage of training. In addition to world-class management and medical education, the program provides several avenues to bring these often-divergent fields together, through the healthcare leadership seminar, affiliation with the RWJF Clinical Scholars program, and practice in the field application course to name a few.”

Program Analyst, Agency for Healthcare Research and Quality (AHRQ), National Healthcare Quality Report
Healthcare Management Education Researcher, Yale University School of Medicine, Department of Diagnostic Radiology
Preventive Medicine Researcher, Yale-Griffin Prevention Research Center
Research Assistant, Yale University School of Medicine, Department of Orthopedics

Gross:

- Bekelman, J. E., Y. Li, C. P. Gross. “Scope and Impact of Financial Conflicts of Interest in Biomedical Research: A Systematic Review.” *JAMA* 289: 454-65, 2003.
- Gross, C. P., G. F. Anderson, N. R. Powe. “The Relation between NIH Funding and Burden of Disease.” *NEJM* 340(24):1881-87, 1999.
- Gross, C.P., A. R. Gupta, H. M. Krumholz. “Disclosure of Financial Competing Interests in Randomised, Controlled Trials: Cross-Sectional Review.” *BMJ* 326:526-27, 2003.
- Gross, C. P., B. Soffer, P. B. Back, R. Rajkumar, H. Forman. “State Expenditures for Tobacco Control Programs and the Tobacco Settlement” *NEJM* 347: 1080-86, 2002.
- Gross, C. P., C. A. Steiner, E. B. Bass, N. R. Powe. “Relation between Prepublication Release of Clinical Trial Results and the Practice of Carotid Endarterectomy.” *JAMA* 284: 2886-93, 2000.

Kaplan:

- “Israel’s Ban on Use of Ethiopians’ Blood: How Many Infectious Donations were Prevented?” *The Lancet* 1998.
- Brookmeyer, R., E. Kaplan. “Snapshot Estimators of Recent HIV Incidence Rates.” *Operations Research* 1999.
- Craft, D., L. Wein, E. Kaplan. “Emergency Response to a Smallpox Attack: The Case for Mass Vaccination.” *Proceedings of the National Academy of Sciences* 2002.
- Johri, M., E. Kaplan. “Treatment on Demand: An Operational Model.” *Health Care Management Science* 2000.
- Satten, G., E. Kaplan. “Repeat Screening for HIV: When to Test and Why.” *Journal of AIDS* 2000.

Krumholz:

- “Disclosure of Financial Competing Interests in Randomised Controlled Trials: Cross-Sectional Review.” *BMJ* 326(7388):526-27, 2003.
- “Racial Differences in the Use of Cardiac Catheterization after Acute Myocardial Infraction.” *NEJM* 344(19):1443-49, 2001.
- “Representation of the Elderly, Women, and Minorities in Heart Failure Clinical Trials.” *Archives of Internal Medicine* 162:1682-88, 2002.
- “The Roles of Senior Management in Quality Improvement Efforts: What are the Key Components?” *Journal of Healthcare Management* 48(1):15-28, 2003.

Wittink:

- Wittink, R. R., L. Fraenkel, S. Bogardus. “Risk-attitude and Patient Treatment Preferences.” *Lupus* 12:370-76, 2003.
- Wittink, R. R., L. Fraenkel, S. Bogardus. “Understanding Patient Preferences for the Treatment of Lupus Nephritis with Adaptive Conjoint Analysis.” *Medical Care* 39:1203-16, 2001.



Dr. Michael Apkon, Vice Chair of Pediatrics at the School of Medicine and a recent graduate of the School of Management, leads a discussion in MGT 691 on his approach to planning and implementing new clinical initiatives for the health system.

Residency Matches for the Class of 2003

- Scott Berkowitz** Johns Hopkins Hospital, Internal Medicine
- Mary-Ann Etiebet** Cornell University, Internal Medicine/Primary Care
- John Koo** Johns Hopkins Hospital, Ophthalmology
- Vivek Murthy** Brigham and Women's Hospital, Internal Medicine/Primary Care
- Daniel Saketkhoo** University of Pennsylvania, Radiology

Residency Matches for the Class of 2002

- Aaron Covey** Yale University, Orthopedic Surgery
- David Larson** University of Colorado Health Sciences Center, Diagnostic Radiology
- Michael Scherling** Massachusetts General Hospital, Brigham and Women's Hospital, Beth Israel Deaconess Hospital and Children's Hospital, Dermatology

Recent Summer Internships Completed by Our Students

- Agency for Healthcare Research and Quality (AHRQ), Rockville, Maryland
- American Medical Association Government Relations Internship Program, Washington, D.C.
- Congressional Budget Office, US Congress, Washington, D.C.
- Department of Health and Human Services, Washington, D.C. (J. Eisenberg, Director of the Agency for Healthcare Research & Quality)
- Doctors of the World, New York
- United States Senate Health, Education, Labor and Pensions Committee, Washington, D.C. (Senator Edward M. Kennedy)
- University of California at San Francisco, Osher Center for Integrative Medicine

Vivek H. Murthy, MD, MBA
 Yale School of Medicine and Yale School of Management, 2003
 B.A., Harvard University, 1997

Currently completing a Residency in Internal Medicine and Primary Care at Brigham and Women's Hospital

Vivek hopes to expand the understanding of complementary/alternative medicine (CAM) while developing methods of integrating CAM and conventional medicine. His interests also include healthcare policy and international health.

Assistant Marketing Manager; Finance Associate, UCSF Osher Center for Integrative Medicine
 VISIONS Worldwide, Inc., Co-Founder; Past President, Current Chair of the Board of Trustees
 Swasthya Community Health Partnership, Founding Member; Steering Committee Member
 Reclaiming the Heart of Medicine, Founder and Advisor



Mary-Ann Adiaha-Obong Etiebet, MD, MBA
 Yale School of Medicine and Yale School of Management, 2003
 B.A., Yale University, 1996

Currently completing a Residency in Internal Medicine and Primary Care at Cornell University

"I want to contribute to the design and development of international health programs, and will most likely focus on HIV prevention, care, and support programs in sub-Saharan Africa. My time at the School of Management has driven home the importance of resource management, evaluation tools, and team-building to implement effective and successful healthcare programs."

Intern, Doctors of the World, US
 International Electives:
 National Hospital for Neurology and Neurosurgery, London
 Red Cross Hospital University of Cape Town, Cape Town, SA
 Downs International Research Fellow, South Africa

Student Coordinators

- 2001–2002 David Larson
- 2002–2003 John Koo
- 2003–2004 Alejandro Reti

About Yale School of Medicine

The Yale University School of Medicine is known throughout the world as one of the leading centers for biomedical research, education, and advanced healthcare.

Founded in 1810, the School of Medicine has grown to include every modern medical discipline. Its faculty includes some of the world's most respected scholars in medicine, public health, and biomedical science.

A leader in research, Yale consistently ranks among the handful of leading recipients of research funding from the National Institutes of Health and other organizations supporting the biomedical sciences.

The school's unique curriculum, known as the Yale System, promotes teaching in small seminar, conference, and tutorial settings and requires student self-evaluation, independent thinking, and investigation.

Excerpt taken from the Yale School of Medicine website, info.med.yale.edu/ysm.



Dr. Benjamin Chu, President, New York City Health and Hospitals Corporation, meets with students in MGT 699 to discuss public health issues and policy relative to healthcare access and insurance.

About Yale School of Management

The mission of the Yale School of Management is to educate leaders for business and society. We pride ourselves on preparing men and women to combine rigorous business skills with a broader appreciation for the economic, social, and political factors that shape the global environment. We want to produce leaders who make a difference to their organizations and to their communities. The hallmark of our school is the learning experience we provide.

Excerpt taken from the Yale School of Management website, mba.yale.edu.

John J. Koo, MD, MBA

Yale School of Medicine and Yale School of Management, 2003
B.A., University of California at Berkeley, 1997

Currently completing an Ophthalmology Residency at Johns Hopkins Hospital

Intern, Congressional Budget Office, US Congress, Health and Human Resources Division

Research Associate, Yale School of Medicine, Department of Ophthalmology
Research Associate, University of California at San Francisco, AIDS Program

Marketing Coordinator, Hearing Science, Inc., San Francisco, CA



Michael A. Scherling, MD, MBA

Yale School of Medicine and Yale School of Management, 2002
B.S., Brown University

Currently completing a Dermatology Residency at Harvard (Combined Program at Massachusetts General Hospital, Brigham and Women's Hospital, Beth Israel Deaconess Hospital and Children's Hospital)

Internship completed in Internal Medicine, Brigham and Women's Hospital

"I learned the most effective and respected health policy experts avoid political commentary and instead create agendas rooted in sound evidence from health outcomes research. In a sense, the most effective way to shape health policy is to do health services research."

Research Assistant, Department of Dermatology, Yale University School of Medicine

Research Assistant, Department of Health and Human Services, Agency for Healthcare Research and Quality

Research Assistant, Neuroimaging, Yale Diagnostic Radiology, Section of Nuclear Medicine

Healthcare Leadership Seminar

This biweekly seminar series consists of small group sessions designed to acquaint the students with the many opportunities available for the physician-leader, within academic medicine, private sector medical management, health policy, as well as clinical leadership.

The discussants for these meetings come from a variety of backgrounds. All are role models.



Dr. Reed Tuckson, Senior VP of Consumer Health and Medical Care Advancement at United Health Group, speaking on quality and professional standards with MD/MBA students.

Healthcare Management and Related Electives at the Yale School of Management

MGT 574 Management of Quality. 2 units. This course focuses on the most useful approaches to quality in delivering services and goods, and emphasizes both managerial issues and statistical methods. We will make use of a service quality framework that consists of defining quality, determining customer needs, assessing customer satisfaction, and developing quality measures and standards. Understanding and reducing variability is a fundamental theme. The course will present the basic experimental design principles and show how they can be applied to a wide range of problems, including improving education and evaluating medical treatments. The course builds on the statistical foundations of the data analysis core courses, and integrates concepts from operations, organizational behavior, and marketing. Prerequisite: Data Analysis I and II. (Professor Arthur Swersey)

MGT 611 Policy Modeling. 4 units. Building on earlier coursework in quantitative analysis and statistics, Policy Modeling provides an operational framework for exploring the costs and benefits of public policy decisions. The techniques employed include “back of the envelope” probabilistic models, Markov processes, queuing theory, and linear/

Aaron S. Covey, MD, MBA
Yale School of Medicine and Yale School of Management, 2002
B.S., University of Michigan

Currently completing a Residency in Orthopaedic Surgery and Rehabilitation at Yale-New Haven Hospital

Internship completed in General Surgery at Yale New Haven Hospital

“The MD//MBA program offered me all the tools to succeed as a leader in medicine. I feel well situated as a resident physician at a great institution to further pursue my business interest in public policy and academic administration, wherever they may take me.”

Intern, American Academy of Orthopaedic Surgeons, Washington, D.C. (Orthopedic-related Health Policy)
Doctors of the World, Senakos Refugee Camp, Macedonia (Volunteer)

Daniel Saketkhoo, MD, MBA
Yale School of Medicine and Yale School of Management, 2003
B.S., Stanford University, 1997

Currently completing a Radiology Residency at the University of Pennsylvania

“I have combined what I have learned in both schools to develop an interest in health services research. I hope to use my MBA to help administer a radiology practice or department, and later to develop health policy as it relates to radiology. I definitely plan to practice clinical radiology.”

Summer Research Fellowship,
Yale University School of
Medicine, Bridgeport
Hospital



integer programming. With an eye toward making better decisions, these techniques are applied to a number of important policy problems. Prerequisites: Decision Analysis and Game Theory, Data Analysis and Statistics, or a demonstrated proficiency in quantitative methods. (Professor Edward Kaplan)

MGT 661/LAW 20304 Health Law & Policy. 4 units. This course will provide a general introduction to health law, policy, politics, and economics. Topics will include, among others, access to healthcare, patients' rights, the meaning and effects of “managed care,” the relationship of healthcare to public health, and selected issues in bioethics. Treatment of these issues in foreign healthcare systems will be analyzed to provide perspective on domestic issues. Examination with a limited paper option. (Professor Theodore Marmor)

(continued on next page)

Healthcare Management and Related Electives (cont.)

MGT 691 Field Studies in Healthcare Management. 4 units. This course begins with didactic sessions, using the case approach to learning. The students are then placed, in teams of three to five, in actual healthcare settings where they will have a well-defined, brief, consultation engagement culminating in a deliverable/report. Faculty mentors will advise the students as they work on their project. The final report and the evaluation by the client will determine the grade. Permission of instructor required. (Professor Michael Apkon)

MGT 698 Healthcare Finance and Health Economics. 4 units. The course teaches the students the critical skills in analyzing and working within the healthcare industry. The first portion of the course focuses on the economic and financial drivers of the domestic healthcare system, including private and public financing and delivery models. In the latter portion of the course, the students learn about current issues of importance to this \$1.4 trillion-dollar industry. The course is part didactic/part seminar style, with team projects and presentations as a major component of the grade. Undergraduates enrolled only with the permission of the instructor. (Professor Howard Forman)

MGT 699 Healthcare Leadership Seminar. 4 units. This course, open only to joint degree candidates of the School of Medicine, exposes the students to current leaders in healthcare, with a particular emphasis on those leaders who are, or have been, active clinicians. The students come prepared

to discuss the key elements in the speakers' careers, including their research, when appropriate. This course meets throughout the year, though credit is earned only in the last semester of the joint degree program. (Professor Howard Forman)



For further information, contact MDMBA@yale.edu, or visit our website at <http://www.mba.yale.edu/mdmba>

