



Yale SCHOOL OF MEDICINE

FACTS AND FIGURES 2021-22
medicine.yale.edu/facts



Overview and History

Brief Chronology

1701 Yale College founded

1810 Medical Institution of Yale College chartered

1833 The State Hospital, precursor to New Haven Hospital, opens

1839 MD student thesis requirement formalized

1857 First African American student graduates

1915 Department of Public Health established

1916 First women students admitted

1923 Yale School of Nursing established

1924 Yale School of Medicine relocates to Sterling Hall of Medicine

1941 The Yale Medical Library is dedicated

1945 New Haven Hospital merges with Grace Hospital, becoming Grace-New Haven Community Hospital

1965 Yale School of Medicine and Grace-New Haven Community Hospital revise their affiliation, creating Yale New Haven Hospital

1970 Physician Associate Program founded

1974 Yale Cancer Center established

1991 Boyer Center for Molecular Medicine completed

1993 Yale New Haven Children's Hospital opens

2003 The Anlyan Center for Medical Research & Education at Yale is completed

2007 Amistad Street Building opens

2007 Yale West Campus acquired

2009 Smilow Cancer Hospital at Yale New Haven opens

2010–11 Yale School of Medicine celebrates its bicentennial

2012 YNHH acquires the Hospital of Saint Raphael

2018 Physician Assistant online program launches

Yale School of Medicine is one of the world's leading centers for biomedical research, advanced clinical care, and medical education. It ranks eighth among medical schools receiving funds from the National Institutes of Health (NIH) and sixth in NIH dollars per faculty member. More than 1,600 Yale physicians provide care to patients from across the region and around the world. The Yale system of medical education, with its emphasis on critical thinking and independent student research, has produced leaders in every field of academic medicine.

The sixth-oldest medical school in the United States, it was chartered by the Connecticut General Assembly in 1810 as the Medical Institution of Yale College, located first on Grove Street, then at 150 York Street. Since 1924, it has occupied Sterling Hall of Medicine at 333 Cedar Street and surrounding buildings. It has awarded 9,394 medical degrees since 1814. There are 5,632 living alumni with MD degrees, 5,439 with MPH degrees, and 1,440 alumni of the Physician Associate Program with the PA-C certificate or MMSc degree, and 84 alumni of the Physician Assistant Online Program.



Yale School of Medicine educates and nurtures creative leaders in medicine and science.

All data in Facts & Figures as of 6/30/21 unless otherwise noted.

Education

Students by Degree

Program

MD Program¹

MD	358
MD/PhD	151
MD/MHS	19
MD/MBA	13
MD/MPH	3
MD/JD	2

MMSc (PA-C)

Physician Associate Program	116
Physician Assistant Online Program	155

MPH 595

PhD 415

Total 1,827

MD Program Details

CLASS OF 2025 PROFILE

Applicants	6,236
Class size	104
Female students	52
Male students	52
Declined to specify ²	N/A
Acceptance rate	4.7%
URiM ³	28%
Median cumulative GPA	3.9
MCAT median	520
MCAT median of sections	130
Faculty-to-student ratio	4.8 to 1

Finances

2021–22 tuition	\$66,160
2021 average debt for those with debt	\$122,944

Medical Library

Volumes	368,000+
Journals	23,000+
Online books, biomedical	41,000+

After two years of gathering virtually, students convened outdoors and in person for Match Day 2022.

The School of Medicine educates future leaders in medicine, public health, and biomedical science. The MD program follows a unique educational philosophy, the Yale system of medical education, established in the 1920s. No course grades or class rankings are given in the first two years, examinations are limited, and students are expected to engage in independent investigation. Since 1839, medical students have written a thesis based on original research, reflecting that the scientific process of investigation, attentive observation, interpretation of data, and critical evaluation of literature are fundamental to the practice of medicine.

Many medical students take a tuition-free fifth year to pursue additional study. Some conduct in-depth research or explore clinical electives and subinternships. A significant number are awarded fifth-year research fellowships and earn the MHS degree.

Each year, approximately 20 students enroll in the school's MD-PhD Program, one of the original Medical Scientist Training Programs established and funded by the NIH. Graduate students in the Combined Program in the Biomedical and Biological Sciences earn a PhD degree through the Faculty of Arts and Sciences. The School of Medicine also offers joint degree programs with other professional schools including Public Health, Law, Management, Engineering, and Divinity.

YSM's Physician Associate (PA) Program, one of the oldest PA programs in the country, and its Physician Assistant Online Program train students to become compassionate, high-quality, patient-centered PAs. The online program enables students to become PAs without relocating from their home communities.



¹ Of 546 enrolled students, 60 students are currently on extended study pursuing a joint degree, completing a fully funded year of research, or a combination of research and clinical rotations.

² All members of the Class of 2025 self-identified as female or male.

³ Students who identify as underrepresented in medicine

Basic and Translational Research

Academic Departments

Basic science	10
Clinical	18
Public Health	6
Total	34

Programs & Centers

Active Patents	
U.S.	568
World (55 countries)	1,030
Total	1,598

Yale-Founded Biotech Companies

Faculty⁴	
Teaching (ladder)	2,199
Research	728
Lecturer/Instructor	440
Visiting	43
Emeritus/Retired	165
Voluntary/Adjunct	1,599
Total	5,009

Postgraduate Fellows & Associates

Memberships & Awards⁵	
Association of American Physicians	38
Breakthrough Prize	2
Fields Medal	1
HHMI investigators	7
Kavli Prize	2
Lasker Awards	4
MacArthur Genius Grant	5
National Academy of Engineering	7
National Academy of Medicine	55
National Academy of Sciences	66
Nobel Prize	4
Wolf Prize	2

Faculty with Endowed Professorships

Research Activity	
Number of awards	2,885
Dollar total	\$808.5 million

NIH	
Awards	\$511.7 million
Rank, total grant dollars among medical schools ⁶	8th
Rank, grants per faculty member ⁷	6th
Centers and program grants	24

Laboratory Space (net assignable sq. ft.)	
Medical School	710,444

Research at the medical school covers a broad spectrum, from fundamental studies in the life sciences, including cell biology, genetics, immunobiology, microbial pathogenesis, neuroscience, pharmacology, physiology, biophysics and biochemistry, to translational and clinical studies aimed at improving the diagnosis and treatment of human diseases. Important research collaborations bring together scientists on the medical campus, Science Hill, and the West Campus. The Center for Biomedical Data Science brings together computational expertise from across Yale. Funding for research at YSM has increased from \$539.6 million in 2012 to \$808.5 million in 2021.

The school's core research resources are built around the newest technologies:

- State-of-the-art tools for genomics and proteomics, including whole-genome sequencing and mass spectrometry
- High-resolution imaging and image analysis at every scale, including cryoelectron microscopy, cryoelectron tomography, and the only focused ion beam-scanning electron microscope in the region
- High-throughput screening, including RNAi and chemical screens
- Construction and analysis of animal models of disease

In 2020, YSM established the Office for Health Equity Research to address health disparities and inequities in underserved populations by coordinating and facilitating health equity research and partnerships at the school, across Yale University, and beyond.



Investigators use advanced technologies to unravel the mechanisms of disease.

⁴ Faculty, associates, and fellows data as of 6/30/21.

⁵ Includes faculty across Yale University.

⁶ NIH ranking is for the federal fiscal year ending 9/30/21.

⁷ Per faculty rank averaged over 2020 and 2021.

Clinical Investigation

The National Clinician Scholars Program at Yale was established in 2016 to prepare future clinician leaders to improve health and health care. Graduates of the two-year interprofessional fellowship earn a master of health sciences (MHS) degree.

Yale School of Public Health offers training and conducts research in biostatistics, chronic disease epidemiology, environmental health sciences, epidemiology of microbial diseases, and health policy and administration.

The Investigative Medicine Program awards a PhD degree to holders of MD degrees who pursue training in either laboratory-based or clinically based human investigation.

By the Numbers	
RWJ Scholars since 1974	187
NCSP Scholars since 2016	43
PhDs awarded by Investigative Medicine Program since 2003	54
YCCI Scholars trained since 2006	161

Clinical investigation at Yale bridges the gap between the basic and translational sciences and the practice of medicine. Research is focused on the factors that affect health and illness in populations, the evaluation of therapeutic interventions, and the assessment of health outcomes based on analysis of large data sets. The School of Medicine sponsors a wide range of clinical trials, with more than 2,122 active trials in 2021, over 11,000 “Help Us Discover” unique volunteers enrolled (see yalestudies.org), and 29,887 active subjects. The school offers superb training for clinical investigators in a number of settings, including the Yale Center for Clinical Investigation, the National Clinician Scholars Program at Yale (the evolution of the Robert Wood Johnson Foundation Clinical Scholars Program), the Yale School of Public Health, and the Investigative Medicine Program, along with discipline-specific training initiatives in selected departments.

The Yale Center for Clinical Investigation facilitates the training of clinical and translational scientists and provides infrastructure for innovative and collaborative research directed at improving patient care. It funds up to 20 YCCI Scholars yearly and supports investigators in the areas of biostatistics, bioinformatics, study design, core technologies, regulatory review, patient recruitment, and community-based research.

At Yale, thousands of patients and healthy volunteers participate in clinical trials to test treatments and improve health.



Patient Care

Patient Care Overview

Income \$1.23 billion

Yale Medicine

Patient encounters 2.6 million

Physicians

Full-time 1,532

Part-time 163

Allied Providers 841

Clinical fellows 423

Medical residents 916

Yale New Haven Hospital⁸

Patient discharges 82,446

Emergency visits⁹ 130,353

Outpatient encounters

(including ED) 2.2 million

Total licensed beds 1,541

More than 1,600 Yale physicians provide primary and specialty care for patients through Yale Medicine. The practice delivers advanced care in more than 100 specialties and subspecialties, and has centers of excellence in such fields as cancer, cardiac care, minimally invasive surgery, and organ transplantation. Yale physicians have made many historical contributions, including the first use of cancer chemotherapy, the first artificial heart pump, and the first insulin infusion pump for diabetes. Today they use such groundbreaking advances as DNA sequencing technology to diagnose suspected genetic diseases. Yale Medicine is a major referral center for Connecticut and New England, and treats patients from throughout the world.



Yale Medicine physicians provide world class care in a wide range of specialties.

⁸ Yale New Haven Hospital data as of 9/30/21; includes the Children's Hospital, Psychiatric Hospital, Smilow Cancer Hospital, and the former Hospital of Saint Raphael, which was acquired by YNHH on 9/12/12. Licensed beds include bassinets.

⁹ Number of patients treated and released from the ED. This does not include those ED visitors who were admitted.

Medical Center

Medical Center Institutions

Yale School of Medicine
Yale Medicine
Yale School of Public Health
Yale School of Nursing
Yale New Haven Health,
which consists of:

- Bridgeport Hospital
- Greenwich Hospital
- Lawrence + Memorial Hospital
- Northeast Medical Group
- Westerly Hospital
- Yale New Haven Hospital, including the Saint Raphael Campus
- Yale New Haven Children's Hospital
- Yale New Haven Psychiatric Hospital
- Smilow Cancer Hospital at Yale New Haven

Yale Health
Connecticut Mental Health Center
John B. Pierce Laboratory

Contact

FIND A YALE DOCTOR
yalemedicine.org
(877) YALEMDS
(877) 925-3637

YSM ADMISSIONS
medicine.yale.edu/
admissions
(203) 785-2696

YSM NEWS
medicine.yale.edu

MEDIA INQUIRIES
communications.yale.edu/
about-opac
(203) 432-1345

YALE DIRECTORY
directory.yale.edu
(203) 432-4771

YNHH DIRECTORY
(203) 688-4242

MAKE A GIFT
yale.edu/givemedicine
Roopashree Narasimhaiah
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Facts and Figures

For copies, call (203) 785-5824, email facts.med@yale.edu, or contact us at 50 Division Street, 2 Science Park, Floor 2, New Haven, CT 06511

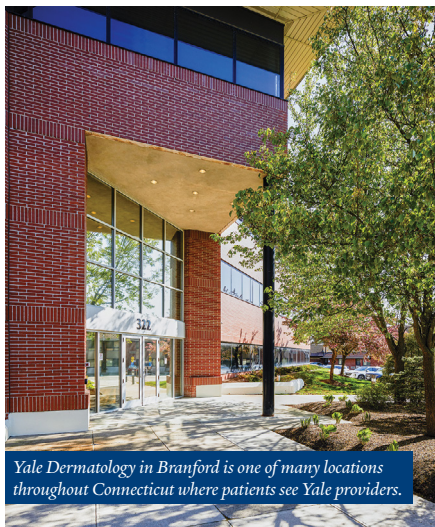
An affiliation agreement between the medical school and Grace-New Haven Hospital in 1965 created Yale New Haven Hospital (YNHH), which expanded in 1993 with the opening of the Children's Hospital, and again in 2000 with the acquisition of the Psychiatric Hospital. The 14-story Smilow Cancer Hospital opened in 2009, and in 2012 YNHH acquired the Hospital of Saint Raphael, adding 533 beds and making it one of the largest hospitals in the United States. The medical campus has grown over the years to include the institutions listed at left.

Four miles away in West Haven, the affiliated VA Connecticut Healthcare System maintains active clinical, research, and education programs in conjunction with many medical school departments.

Extensive maps and directions to medical center destinations are available online at medicine.yale.edu/maps.



The West Putnam Medical Center in Greenwich offers patients easy access to medical services under one roof.



Yale Dermatology in Branford is one of many locations throughout Connecticut where patients see Yale providers.

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yale.edu
/facts

Yale University and New Haven

New Haven Profile

2020 Population 134,023

DISTANCE FROM:

NYC 80 miles

Boston 137 miles

University Profile

Yale totals include YSM

FACULTY

Yale 5,123

YSM 3,410

STAFF

Yale 10,534

YSM 3,808

STUDENTS

Yale 14,567

YSM¹⁰ 1,809

Community Service

A majority of students volunteer, and the COVID-19 pandemic did not diminish that undertaking.

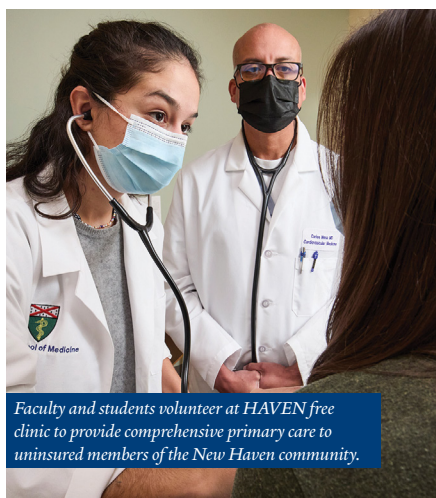
Students significantly bolstered endeavors to support COVID-19 vaccine education and outreach, help reduce social isolation of older adults, support outreach to non-COVID-19 patients, and serve as patient navigators for refugees.

Many ongoing community service projects for which students customarily volunteer include:

- Columbus House
- Downtown Evening Soup Kitchen
- HAVEN (student-run free clinic)
- Health Professionals Recruitment and Exposure Program
- Hill Regional Career High School Anatomy Teaching Program
- Hunger and Homelessness Auction
- Neighborhood Health Project
- Refugee Patient Navigator Program
- Youth Science Enrichment Program

The School of Medicine is located on the main campus of Yale University, one of the world's great institutions of higher learning. With a residential college system modeled after those of Cambridge and Oxford, the undergraduate school is complemented by the Graduate School of Arts and Sciences and 12 professional schools, including Architecture, Art, Divinity, Drama, Engineering and Applied Science, Forestry and Environmental Studies, Law, Management, Music, Nursing, and Medicine, which includes the School of Public Health. In 2007, Yale acquired the 136-acre West Campus in West Haven.

Established in 1638, New Haven was the first planned municipality in America, organized geographically in nine squares, including a picturesque town green. Today, New Haven is a vibrant coastal city located on Long Island Sound between New York and Boston. Cultural opportunities abound, from dance, theater, and music to the treasures of Yale's art and natural history museums.



Faculty and students volunteer at HAVEN free clinic to provide comprehensive primary care to uninsured members of the New Haven community.



New Haven's distinct neighborhoods and vibrant downtown offer many avenues to explore.

¹⁰ Further breakdown can be found on the Education page.

International Activities

Yale Institute for Global Health is a university-wide effort led by the Schools of Medicine, Nursing, and Public Health that serves as the focal point for research, education, and engagement with global partners to improve the health of individuals and populations worldwide.

Yale Office of International Affairs offers support to faculty in establishing and maintaining collaborations abroad, drawing on existing relationships on six continents. It maintains an online faculty research database.

Norwegian University of Science and Technology is a partnership that provides support for the exchange of students, fellows, and faculty in such areas as cancer, immunology, neuroscience, and public health.

By the Numbers 2020–21

INTERNATIONAL STUDENTS AT YALE

MD	7.8%
MPH	29%
PhD (Sciences)	30%

YALE STUDENTS/ TRAINEES ABROAD

MD (international sites)	0
MD (domestic sites)	6
MPH ¹¹	N/A
Downs Fellows	7

VISITING MD STUDENTS AT YALE

From other nations	0
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The School of Medicine is an active partner in fulfilling Yale's international goals, which include preparing students for international leadership and service, attracting the most talented students and scholars to Yale from around the world, and positioning Yale as a global university of consequence. Faculty members conduct research abroad, teach, and design courses in global health. Their work runs the gamut from molecular studies at the nanoscale to the analysis of social networks in disease transmission and prevention, to the improvement of health care systems.

PROGRAMS AT YALE INCLUDE:

- **Office of Global Health** facilitates the placement of Yale medical students in global clinical electives at sites in Argentina, Chile, China, Colombia, Dominican Republic, Ghana, Jamaica, South Africa, Thailand, and Uganda, and the U.S. (rural sites in Appalachia and on the Navajo Nation in Arizona as well as in free clinics in New Haven and San Francisco). The office also administers the Visiting International Student Electives Program.
- **Downs International Health Student Travel Fellowship** supports students who undertake health-related research, primarily in low- and middle-income countries.
- **Yale/Stanford—Johnson & Johnson Global Health Scholars** sponsors rotations abroad for Yale house staff and physicians from other institutions, who travel to six sites in Africa and Asia.



International programs allow faculty and students to collaborate with partners around the world to improve health.

¹¹ Due to COVID travel restrictions, some students worked remotely with agencies abroad, some did U.S.-based internships, while others worked abroad in their home countries (unable to return due to COVID travel restrictions).

Finance

Endowment

Yale	\$41.9 billion
YSM	\$3.86 billion

2021 Operating Income

Yale	\$4.6 billion
YSM	\$2.3 billion

2021 Capital Projects

NEW CONSTRUCTION/ ACQUISITIONS

Yale	\$59.4 million
YSM	\$0

RENOVATIONS/ALTERATIONS

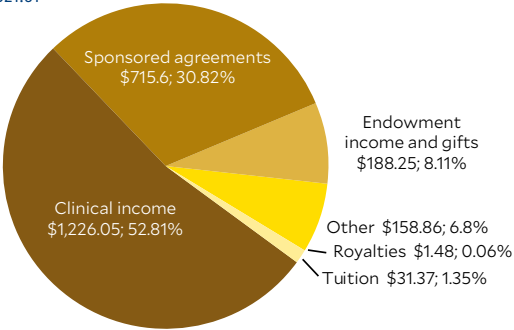
Yale	\$320.9 million
YSM	\$39 million

The School of Medicine had operating income of \$2.3 billion in FY21. A total of \$715.6 million in sponsored research funding was received and spent during the fiscal year.¹² Clinical income totaled \$1.23 billion. The school ranked eighth among medical schools receiving research funding from the NIH in FY21 and sixth in NIH grants per faculty member. Salaries and benefits totaled 64.7% of expenditures.

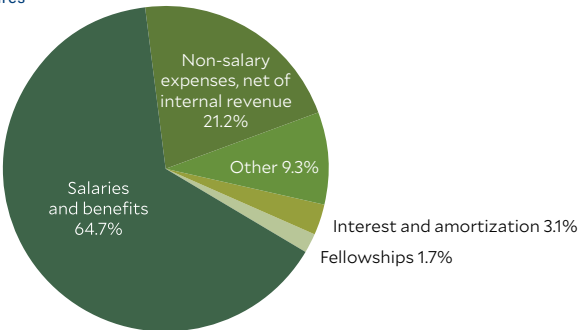
Operating summary for the year ending June 30, 2021 (in millions)

Income

Total : \$2,321.61



Expenditures



¹² Research income does not equal award amounts because research dollars are not always spent in the same period in which they are awarded.