



Testimony of:

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Associated Medical Schools of New York (AMSNY)

At a Joint Budget Hearing of

The New York State Assembly/Senate Committees on Health

&

The New York State Senate Committee on Finance &

The New York State Assembly Committee on Ways and Means

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Legislative Office Building

Albany, New York

Good afternoon Chairwomen Kruger and Weinstein, Chairmen Rivera and Gottfried and other distinguished members of the State Legislature. Thank you for this opportunity to testify on the Executive proposed budget for State Fiscal Year (SFY) 2020-21.

My name is Jo Wiederhorn, President & CEO of the Associated Medical Schools of New York (AMSNY), the consortium of the 17 public and private medical schools in New York State. AMSNY works in partnership with its members to advance biomedical research, diversity in medical school and the physician workforce and high quality and cost-efficient care.

In an article in the Journal of the American Medical Association, Stephen Schroeder and colleagues referred to academic medicine as a `public trust', ...”because it is entrusted by society with the responsibility to undertake several important social missions toward improving the health of the public, including education, patient care and research.” New York State’s medical schools take this trust very seriously by: 1) producing the future physician workforce; 2) promoting biomedical research and strengthening local economies; and 3) improving the physical and economic health of the communities we serve.

I come before you today, because the Governor’s State Fiscal Year 2020-21 proposed budget ELIMINATES funding for AMSNY’S highly successful Diversity in Medicine Programs (Please see outcomes data attached to this document).

The Need for Increased Diversity in the Physician Workforce

AMSNY strongly believes in the importance of a multifaceted strategy to meet the growing demand for primary care and specialty physicians, while simultaneously tackling the current need to decrease access issues in underserved areas. AMSNY’s Diversity in Medicine program was developed with these two objectives in mind.

In the coming years, the number of people who will need healthcare services will not decline; in fact, with the aging of the baby boom generation, the need for access to quality care will only increase. To meet this demand, enrollment in New York State’s medical schools increased 19% between 2006 and 2016. We now educate more than 11,100 students each year – a number that has begun to grow significantly with the opening of New York State’s 17th medical school in the summer of 2019 and with two additional medical schools in Elmira and Poughkeepsie in the planning stages.

However, changing demographics demand more than increasing class sizes or opening new schools; it also demands training a more diverse workforce.

The evidence is increasingly incontrovertible that a diverse workforce will improve the nation's health disparities and, as such, the nation's health (Jackson, 2014). Doctors who speak their patients' languages and understand the larger context of culture, gender, religious beliefs, sexual orientation and socioeconomic conditions are better equipped to address the needs of specific populations and the health disparities among them.

Previous studies demonstrate that physicians from racial or ethnic backgrounds underrepresented in medicine are more likely to practice primary care and practice in underserved areas while treating a larger number of minority patients, irrespective of income. Furthermore, when given a choice, racial and ethnic minority patients are more likely to select physicians who share their racial and ethnic backgrounds and report greater satisfaction and having received higher quality care (Kington, 2001).

A recent study in Oakland, California randomly assigned Black male patients to Black or non-Black medical doctors (Alsan, 2019). The findings demonstrate that individuals who met with racially concordant doctors were more likely to select preventive care services, particularly invasive services (Alsan, 2019). Those who were treated by racially concordant physicians were 49% more likely to consent to diabetes screening and 71% more likely to allow cholesterol screening (Alsan, 2019). These same patients were more likely to raise issues and seek advice from black doctors. This and similar studies suggest that Black doctors could reduce the Black-White male gap in cardiovascular mortality by 19%.

As such, increasing the number of students from underrepresented¹ in medicine populations (URIMs) in New York State is vital for the state's health.

AMSNY's Diversity in Medicine Program

While URIM make up 31% of the New York State population, they account for approximately 17% of the state's medical students and approximately 12% of physicians practicing in the state.

Since 1985, AMSNY has supported an array of pipeline programs across the state that expand the pool of URIM students choosing careers in health and medicine. These programs provide academic enrichment and support to students from educationally and/or economically underserved backgrounds. These programs provide vital opportunities that a majority of participants would not have had due to cultural and financial barriers.

¹ "Underrepresented in medicine means those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population." AAMC's Executive Council, June 2003

Proposed Elimination of the Diversity in Medicine Program

The New York State Senate and Assembly have been long time supporters of these programs. When necessary, the Legislature rejected the Executive's proposed health workforce "pools" and ensured a line item appropriation for the programs. When possible, the Legislature restored cuts proposed by the Executive Budget. Despite the Legislature's efforts, however, the Diversity in Medicine program was reduced by 22.5% in the enacted FY 2017-18 budget, resulting in a lower level of funding that was maintained in the SFY 2018-19 budget. This cut forced AMSNY to reduce the number of students in the program and to discontinue funding one program in its entirety.

The SFY 2020-21 Executive budget eliminates all funding for these programs. We are urging the Legislature and the Governor to restore these important programs in the enacted SFY 2020-21 budget.

Core Diversity Programs

AMSNY oversees six core programs as part of its Diversity in Medicine grant that provide underrepresented students a pathway to medical school, including a post baccalaureate program at the Jacobs School of Medicine & Biomedical Sciences, University at Buffalo and three Master's degree post baccalaureate programs at SUNY Upstate, the Renaissance School of Medicine at Stony Brook University and New York Medical College. These programs are unique – students must apply to a New York State medical school and be interviewed by the schools' admissions' committees. If the admissions committee believes the student would be a good addition to the school, provided they receive additional academic enrichment, the committee will recommend them to one of the four post-bac programs. If, upon completion of the post-baccalaureate program, the student meets the program and the referring school's requirements, they will automatically be accepted into the referring medical school.

As the attachment demonstrates, 93% of students who participate in AMSNY's post-baccalaureate program at the University at Buffalo enter medical school and 85% graduate. At the Master's degree post-baccalaureate programs at SUNY Upstate, Stony Brook and New York Medical College, 94% of the students enter medical school.

The other core programs are offered along the educational continuum, including support for an academic learning center at CUNY College of Medicine (CUNY) – a seven-year BS/MD program that students enter directly from high school – and a program at the City College of New York that links junior and senior baccalaureate students with NIH-funded researchers to prepare them for careers in medicine or the basic sciences.

Attached to this testimony are graphical analyses that demonstrate the success of our programs and the impact the proposed elimination of funding will have on the diversity of physicians in New York State.

For SFY 2020-21, we are urging that funding for these important programs be restored.

DOH Scholarship in Medicine Program

The Cost of Applying to Medical School

The first step in the journey to medical school is preparing for and taking the Medical College Admission Test (MCAT). The MCAT is the standardized multiple choice exam required by almost all U.S. and Canadian medical schools for admission. A 2017 qualitative study of URIM students about the medical school admissions process cited the application process itself as the most challenging part, calling it “overwhelming, difficult and expensive” (Hadinger, 2017).

“When I was an undergraduate at Northeastern University, I felt really disadvantaged. I had no idea how to apply [to medical school]. I didn’t even know about the MCAT until my second year.”

Robertha Barnes
MD Candidate, Class of 2021
SUNY Upstate Medical University

About half of the examinees between 2015 and 2017 reported taking courses to prepare for the MCAT exam, with 42% of examinees taking commercial preparation courses. The price for a professional, in-person MCAT prep program is between \$2,274 and \$2,699.

Once students take the MCAT the financial barriers continue to multiply. Application costs alone can be a significant deterrent. Medical school applicants are recommended to budget \$5,000 to \$15,000 for the application process alone (USNEWS). The American Medical College Application Service (AMCAS) is a centralized medical school application portal. The primary application fee is \$160 to send materials to a single medical school and \$39 for each additional school. Students are typically encouraged to apply to a minimum of 10 schools to maximize their chances of acceptance.

Cost of Attendance

Ten years ago, a national study found that more than 75% of medical school students came from the top 40% highest earning households. The cost of medical school has been escalating at double the rate of inflation ([Adashi, 2010](#)). A reexamination of medical school demographics nine years later found the number had barely changed – more than three quarters of American medical students are still from predominantly high-income and, typically, White households ([Youngclaus and Roskovensky, 2018](#)).

Most students require loans and scholarships to attend medical school, but this is disproportionately true for URIM students. These students on average receive six percent of the cost of medical education from their families compared to 20% for non-URIM students. They are also more likely to begin medical school with higher pre-medical school debt (i.e. debt related to their undergraduate education). In 2015, 35.8% of White matriculants had pre-medical school debt compared to 46.2% for American Indians, 46.3% for Latinos, and 62.1% for African Americans ([AAMC Diversity Facts and Figures](#)). A URIM student without scholarships can expect to graduate with \$250,000 or more in federal loans. With accruing interest, which can be as high as seven percent, these same individuals may pay up two to three times their original loan amount ([AAMC Diversity Facts and Figures](#)).

“There are many hidden costs to medical school. Tuition alone is very expensive but there is also licensing exam and preparation, commuting costs and more impacting the ability of students to study.”

Rosa Lee, MD
Associate Dean of Curriculum and Assessment
CUNY School of Medicine

In SFY 2017-18, AMSNY received a \$500,000 investment from New York State to launch the Diversity in Medicine scholarship program to help address the gap in physician diversity. The scholarship — indexed to the average cost of SUNY medical school tuition — helps students from backgrounds underrepresented in medicine by reducing the financial barriers to medical school enrollment.

Since SFY 2017-18 AMSNY has awarded scholarships annually to 10 students who have completed one of the Diversity in Medicine post-baccalaureate programs. In return, the scholarship awardees commit to working for at least two years in underserved areas in New York State. This commitment extends to a maximum of four years of service for four years of scholarship funding.

We urge the Legislature to continue funding the Diversity in Medicine Scholarship Program and enable an expansion to include a second cohort of students (\$500,000 for each cohort of 10 students = \$1 million).

Other DOH Programs

New York State Stem Cell Program (NYSTEM)

In 2007, New York State committed \$600 million to stem cell research, among the largest government-financed stem cell programs in the country (it is now second only to California's Institute for Regenerative Medicine (CIRM)). New York State's objective was to develop a stem cell research community that could investigate the potential of stem cell technology to alleviate disease and improve human health. Of nearly equal importance was the goal of economic development – the investment in research and facilities that would create jobs and fuel the economy. NYSTEM has proven itself a highly effective, successful program, supporting innovative basic and translational stem cell research. In addition, funding from NYSTEM has been used to create and expand stem cell research infrastructure spanning the entire state and has enabled institutions to recruit and develop a world-class scientific workforce.

Since its inception, the Empire State Stem Cell Board has released 22 Requests for Applications (RFAs), awarded more than \$400 million and supported more than 750 full-time jobs. This has resulted in significant intellectual property, with more than 50 patent applications and several prominent well-funded startup companies launched in New York State.

Why should we continue to invest in NYSTEM?

There is an acute need to maintain predictable funding for the NYSTEM program. In addition to the aforementioned successes, treatments and potential cures are yet to be fully realized from New York State's significant investment in stem cell science. Continued funding and the authorization of new RFAs this year will:

- Prevent the delay of groundbreaking research and the potential for next generation treatments and cures
- Prevent New York State from losing its world-class scientific talent
- Reaffirm New York State's commitment to stem cell science and, more broadly, to scientific research and innovation

We urge the legislature to provide full funding for the New York State Stem Cell Program (NYSTEM) at \$44.8 million in FY 2020-21. In addition, we urge the State to authorize new Requests for Applications in 2020.

Empire Clinical Research Investigator Program

In 2000, New York State established the Empire Clinical Research Investigator Program (ECRIP) in order to support physicians in training fellowships, as well as infrastructure costs necessary for

clinical research. ECRIP awards have helped better position New York's medical schools and teaching hospitals as international leaders in biomedicine—attracting the brightest medical students and physician trainees and improving the state's competitive position for federal research dollars. Since its implementation 2000, over 910 project abstracts have been submitted for funding with 586 awarded to 66 teaching hospitals, totaling more than \$100 million in funding.

The SFY 2020-21 Executive budget proposes to eliminate ECRIP in its entirety. AMSNY urges the Legislature to fund ECRIP at \$3.445 million to continue the success of this program.

Closing

Thank you for the opportunity to testify today and for your continued support of medical education. I welcome any questions you may have.

Respectfully submitted:

Jo Wiederhorn

The Associated Medical Schools of New York (AMSNY) is the consortium of the 17 public and private medical schools in the state. The organization's mission is to promote high quality and cost-efficient health care by ensuring that the NYS medical schools can provide outstanding medical education, care and research.

AMSNY Member Institutions

- Albany Medical College
- Albert Einstein College of Medicine of Yeshiva University
- CUNY School of Medicine
- Columbia University Vagelos College of Physicians & Surgeons
- Icahn School of Medicine at Mt. Sinai Medical Center
- Jacobs School of Medicine & Biomedical Sciences, University at Buffalo, SUNY
- New York Institute of Technology College of Osteopathic Medicine
- New York Medical College
- New York University Grossman School of Medicine
- New York University Long Island School of Medicine
- SUNY Downstate Medical Center
- SUNY Upstate Medical University
- Stony Brook University School of Medicine
- Touro College of Osteopathic Medicine
- University of Rochester School of Medicine & Dentistry
- Weill Cornell Medicine
- Zucker School of Medicine at Hofstra/Northwell

Associated Medical Schools of New York Diversity in Medicine Program 2018 – 2019 Program Outcomes Data

Post-Baccalaureate Program

School	Percent of students who completed program and matriculated into medical school
Jacobs School of Medicine & Biomedical Sciences, the University at Buffalo, SUNY	91%

Post-Baccalaureate Masters Degree Programs

School	Program Degree	Percent of students who completed program and matriculated into medical school
New York Medical College	Masters of Science (MS) Degree in Interdisciplinary Medical Sciences	100%
Renaissance School of Medicine at Stony Brook University	Masters of Science (MS) Degree in Physiology and Biophysics	100%
SUNY Upstate Medical University	Masters of Science (MS) Degree in Medical Technology	100%

Post-Baccalaureate Student Demographics	Black/ African American		Hispanic/ Latino	
	Male	Female	Male	Female
	18%	33%	27%	21%

Other Diversity in Medicine Pipeline Programs

School	Program	Outcomes (percent of participating students)
CUNY School of Medicine	Learning Resource Center	<ul style="list-style-type: none"> ➤ 98% of students who participated in the Pre-Matriculation Program would recommend the program to incoming classes ➤ 96% rated peer tutoring effective ➤ 97% rated academic workshops effective
City College of New York	Pathways to Careers in Medicine and Research	<ul style="list-style-type: none"> ➤ 100% presented their research at a scientific conference



AMSNY's Diversity in Medicine Program
is supported through the
New York State Department of Health



DIVERSITY IN MEDICINE

AMSNY supports programs across the educational continuum to expand the pool of students choosing careers in medicine and other health professions. The programs are supported through a grant from the State Department of Health, with additional financial assistance from the medical schools. In 2019, the AMSNY Diversity in Medicine Program was recognized by *Insight into Diversity* with the Inspiring Programs in STEM Award.

POST-BACCALAUREATE & MASTER'S DEGREE PROGRAMS

The programs provide coursework, financial assistance, mentoring and comprehensive support services to students recommended by participating medical schools. Students are referred by holistic admissions processes and offered conditional acceptance to medical school.



94%

of students who completed the Master's Degree programs have entered medical school

(DATA FROM 2008-2019)

MASTER'S DEGREE PROGRAMS

MS in Interdisciplinary Medical Sciences
New York Medical College

MS in Physiology and Biophysics
Renaissance School of Medicine at Stony Brook University

MS in Medical Technology
SUNY Upstate Medical University

"The UB Post-Baccalaureate Program has given me access to new heights and a scaffolding to stand upon and pursue medicine without second-guessing myself."

Karole Collier

Medical Student, Jacobs School of Medicine and Biomedical Sciences at the University at Buffalo
Alumna, AMSNY Post-Baccalaureate Program

AMSNY POST-BACCALAUREATE PROGRAM

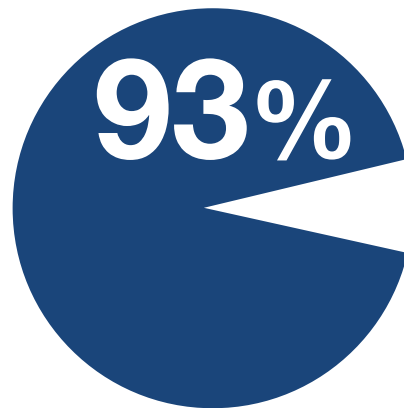
Jacobs School of Medicine & Biomedical Sciences,
University at Buffalo, SUNY

520 students have participated since the program's creation in 1991
(DATA FROM 1991-2019)

"If I didn't have this opportunity, I probably wouldn't be a doctor today. About 90% of my patients are Hispanic. For them to come and see me is a big relief. I speak their language. I know their culture."

Dr. Jaime Nieto

Chief of Neurologic Surgery, New York-Presbyterian/Queens Hospital
Alumnus, AMSNY Post-Baccalaureate Program



of students who entered the Post-Baccalaureate Program entered medical school

86% of students who matriculated into medical school graduated

71% of MD graduates went into primary care residencies

59% stayed in New York for residencies

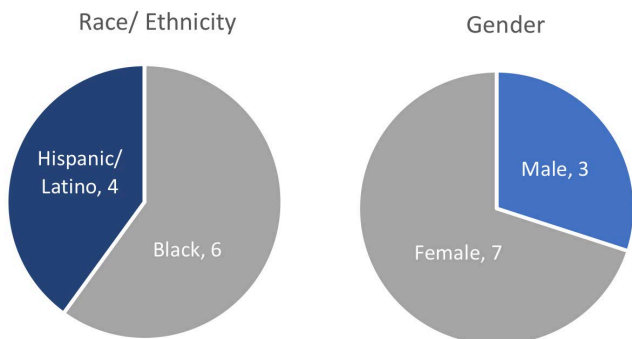
(DATA FROM 1991-2019)

DIVERSITY IN MEDICINE

DIVERSITY IN MEDICINE SCHOLARSHIP PROGRAM

Started in 2017-2018, this scholarship program aims to address the gap in physician diversity. The full tuition scholarship helps medical students from backgrounds underrepresented in medicine by eliminating the financial barrier to medical school enrollment.

- ➔ 10 initial scholarship recipients, 40 students when fully funded
- ➔ Students from medical schools throughout New York State
- ➔ Scholarship pegged to SUNY tuition
- ➔ Up to 4 year service commitment in an underserved area of NYS



The AMSNY Diversity in Medicine Scholarship has given me the opportunity to successfully go through medical school with less of a financial burden, but it has also given me much more than that. I hope that my successes will open up doors for those with similar backgrounds who aspire to serve New York State's beautiful multicultural population.

Sebastian Placide
 Medical Student, Albert Einstein College of Medicine
 Alumnus, AMSNY Post-Baccalaureate Program
 Three-Year Scholarship Recipient

In addition to the post-baccalaureate programs, AMSNY's Diversity in Medicine initiative targets students in college.

PATHWAYS TO CAREERS IN MEDICINE AND RESEARCH

City College of New York

Students are mentored by National Institutes of Health (NIH) funded researchers, who help them develop and conduct independent research projects. At the conclusion of the program, research projects are presented locally and nationally.

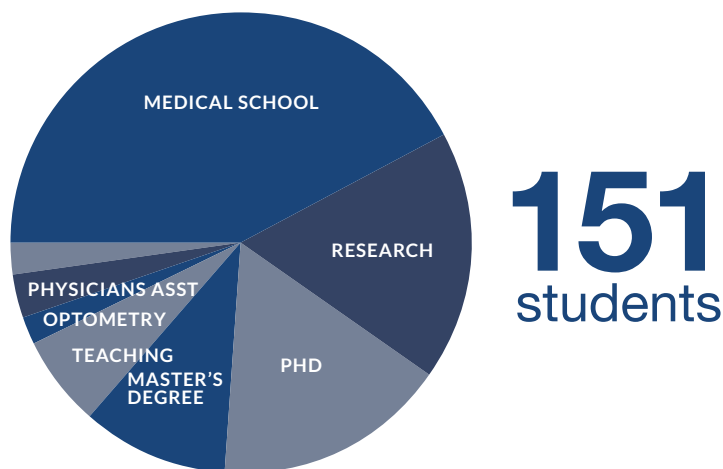
(DATA FROM 2008-2019; TRACKING DATA FROM 59 STUDENTS)

LEARNING RESOURCE CENTER

CUNY School of Medicine

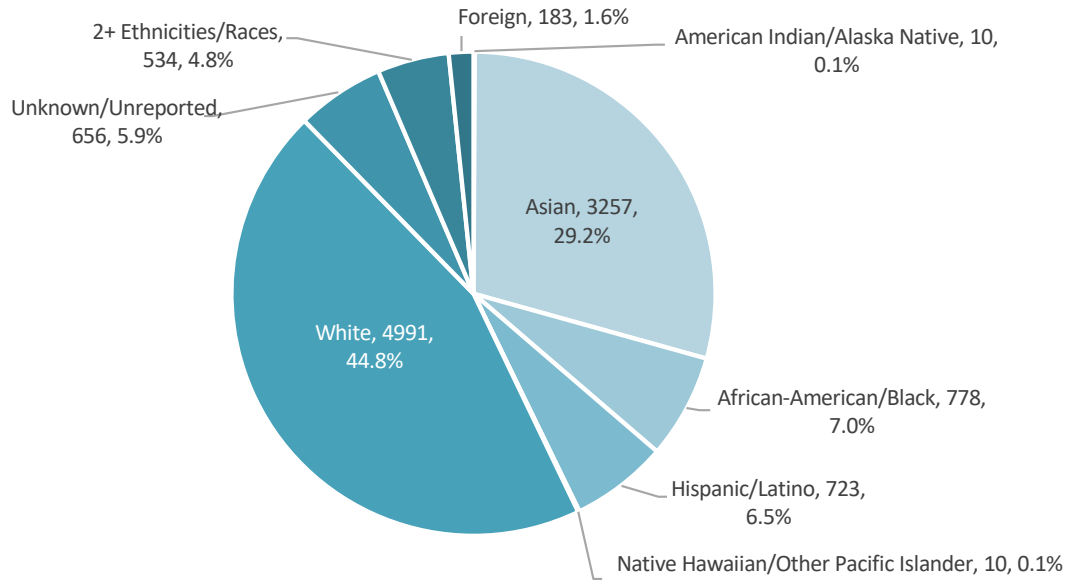
The Learning Resource Center provides academic resources, skills, mentorship and support that assist CUNY medical students in pursuing their joint BS/MD degrees.

of medical students that utilized:

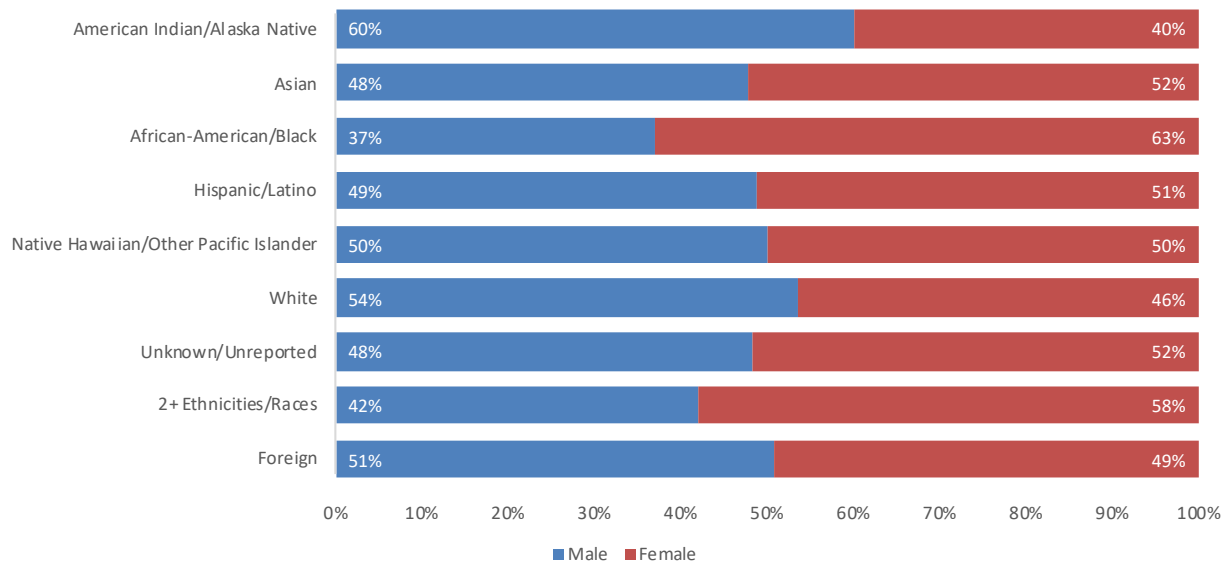


New York State Enrollment Demographics

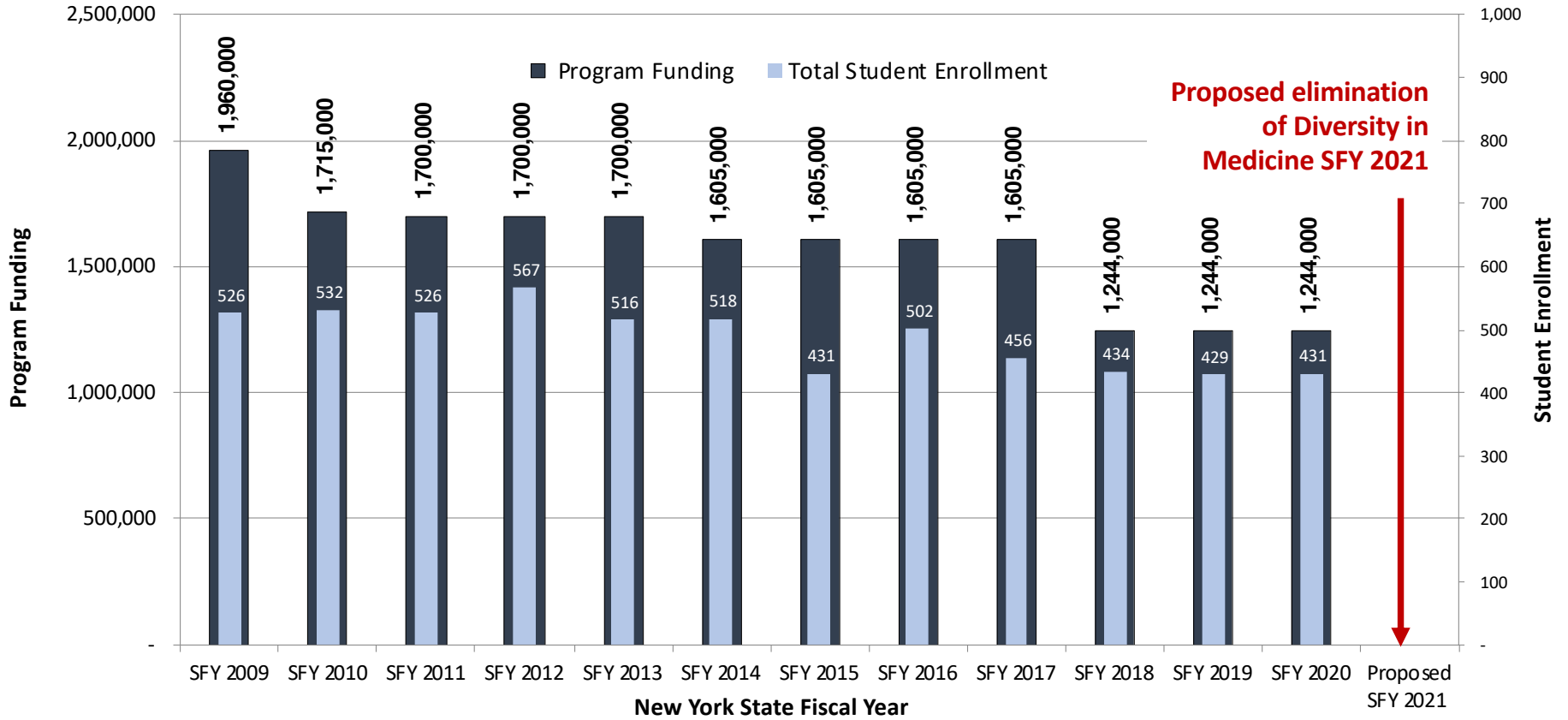
2019-2020 Medical Student Enrollment at All 17 New York State Medical Schools by Race/Ethnicity (n = 11,142)



Male to Female Ratio of Medical Students at All 17 NYS Medical Schools, by Race/Ethnicity, 2019-2020



AMSNY Diversity in Medicine Program Program Funding & Enrollment History, SFY 2009 - Proposed SFY 2021



AMSNY Diversity in Medicine Program

Student Enrollment, SFY 2009 - Proposed SFY 2021

New York State Fiscal Year	Program Funding	Total Student Enrollment	University at Buffalo Post-Baccalaureate	NYMC, Stony Brook & SUNY Upstate Master's Programs	CUNY School of Medicine Learning Center	CCNY Pathways to Careers in Medicine & Research	Staten Island University Hospital Physician Career Enhancement	Einstein College of Medicine Mentoring in Medicine	Icahn School of Medicine at Mount Sinai PREP	NYU MCAT Prep	Columbia STAT & MCAT Prep
SFY 2009	1,960,000	526	16	12	368	23	12	35	19	19	22
SFY 2010	1,715,000	532	22	10	350	25	19	32	22	10	42
SFY 2011	1,700,000	526	16	13	302	30	13	95	10	27	20
SFY 2012	1,700,000	567	16	14	400	20	9	48	10	30	20
SFY 2013	1,700,000	516	18	20	400	23	13	32	10	0	0
SFY 2014	1,605,000	518	22	19	385	24	15	42	11	0	0
SFY 2015	1,605,000	431	24	18	356	20	13	0	0	0	0
SFY 2016	1,605,000	502	19	16	386	25	13	24	19	0	0
SFY 2017	1,605,000	456	20	18	385	20	13	0	0	0	0
SFY 2018	1,244,000	434	20	15	385	13	0	0	1	0	0
SFY 2019	1,244,000	429	21	13	385	10	0	0	0	0	0
SFY 2020	1,244,000	431	17	14	385	15	0	0	0	0	0
Proposed SFY 2021	0	0	0	0	0	0	0	0	0	0	0