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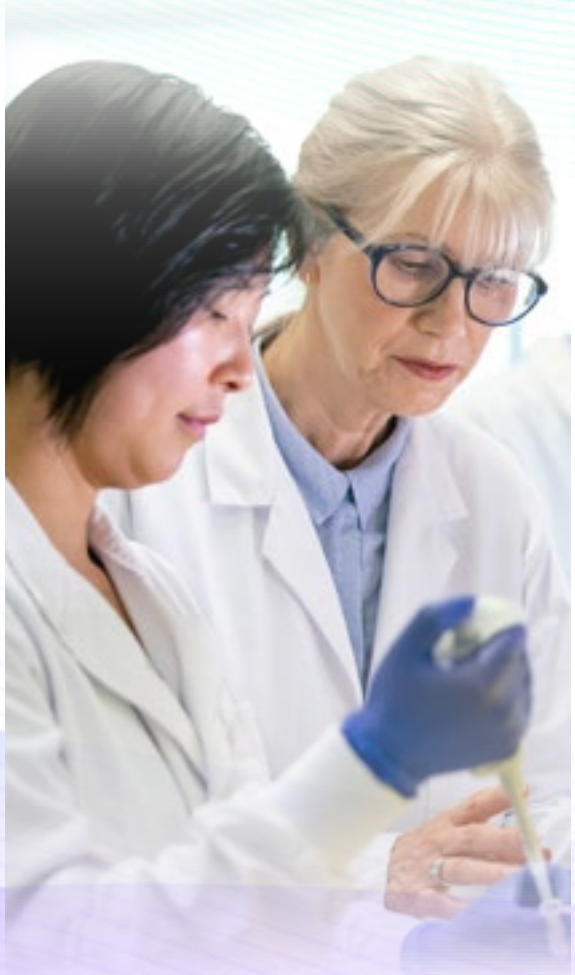
The State of Women in Academic Medicine 2023-2024

PROGRESSING TOWARD EQUITY




Association of
American Medical Colleges

The State of Women in Academic Medicine 2023-2024

PROGRESSING TOWARD EQUITY

AUTHORS

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ACKNOWLEDGMENTS

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The AAMC (Association of American Medical Colleges) is a nonprofit association dedicated to improving the health of people everywhere through medical education, health care, medical research, and community collaborations. Its members are all 159 U.S. medical schools accredited by the Liaison Committee on Medical Education; 13 accredited Canadian medical schools; nearly 500 academic health systems and teaching hospitals, including Department of Veterans Affairs medical centers; and more than 70 academic societies. Through these institutions and organizations, the AAMC leads and serves America's medical schools, academic health systems and teaching hospitals, and the millions of individuals across academic medicine, including more than 201,000 full-time faculty members, 97,000 medical students, 158,000 resident physicians, and 60,000 graduate students and postdoctoral researchers in the biomedical sciences. Following a 2022 merger, the Alliance of Academic Health Centers International broadened participation in the AAMC by 70 international academic health centers throughout five regional offices across the globe. Learn more at aamc.org.

Note: This publication was updated in November 2024 to correct key data in figure 21.

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Executive Summary

Since 1983, the AAMC has published a national snapshot of women learners, faculty, and administrative leaders in academic medicine. Through this report and others, we have closely monitored and documented women's representational — and cultural — progress for decades. While steady, this progress continues to be incremental and slow, reflecting only small changes in women's representation and inclusion in academic medicine from year to year.

This year's report shows that we have made notable progress in a few areas over the past 10 years, which tells us that the investments institutions have made through Women in Medicine and Science (WIMS) and Diversity, Equity, and Inclusion (DEI) offices to support gender equity are making an impact. The data in this report illustrate the significant increase in women's representation across key career milestones within academic medicine, but also highlights the institutional structures and climate issues that require further attention if we are to continue progress toward gender equity and organizational excellence broadly.

Key findings in this report show that:

- As of 2023, women were the majority of applicants, matriculants, and graduates at U.S. medical schools.
- The percentage of women residents in a number of surgical subspecialties has grown since 2018.
- Overall, women represented 45% of all full-time faculty and 51% of full-time faculty under the age of 50.
- From 2013 to 2023, the percentage of women who were full professors rose from 21% to 29%.
- From 2013 to 2023, the percentage of women department chairs rose from 15% to 25%.
- As of 2023, women represented 27% of U.S. medical school deans and 25% of academic health system leaders.
- While salary equity is improving, women continued to be paid less than men, especially women with MD degrees in clinical science departments.
- Nearly 1 in 3 women experienced gender harassment by colleagues in the medical school workplace.

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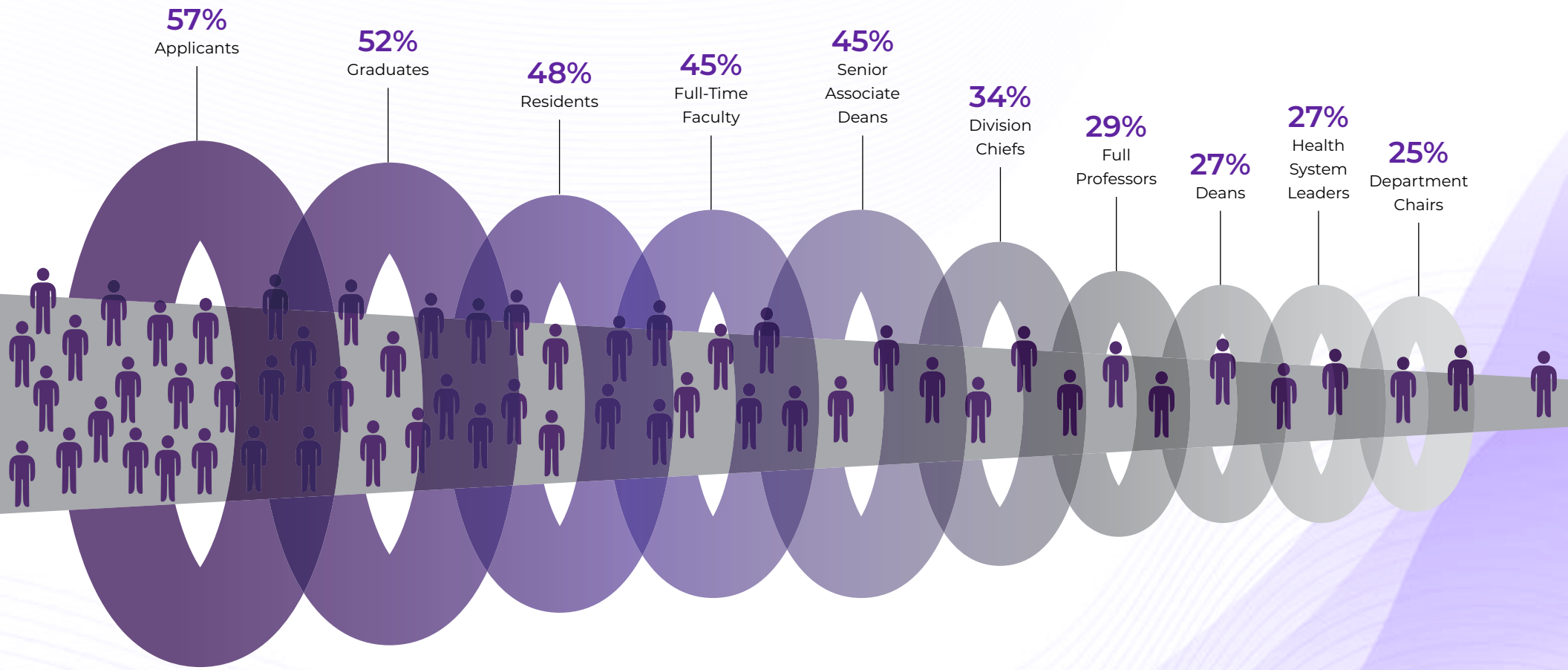
Figure ES-1. Representation of Women in Academic Medicine, 2023-2024



While academic medicine is making progress, we should not be overly positive about the results or interpret them as a reason to lessen our efforts. The progress shown in this report is noteworthy, but so are the representational gaps and climate issues marginalized groups still face. Institutions can use the data in this report to identify areas of opportunity to foster greater equity and create actionable plans to improve the academic medicine learning environment and workplace.

EXECUTIVE SUMMARY

Note: Graduate and resident counts reflect 2022-2023 data.

Introduction

Since 1983, the AAMC has published a national snapshot of women learners, faculty, and administrative leaders in academic medicine. Through this report and others, we have closely monitored and documented women's representational — and cultural — progress for decades. While steady, this progress continues to be incremental and slow, reflecting only small changes in women's representation and inclusion in academic medicine from year to year. We can better understand this incremental progress through the lenses of the many structural, institutional, and cultural barriers to the advancement of marginalized groups in academic medicine.

Research clearly states that increased diversity benefits academic medicine in multiple ways. Studies have shown women to have better patient care outcomes, score higher on leadership assessments, provide more service to their institutions, mentor more learners and faculty, and contribute substantially to the overall success of their organizations.[1-4] Now that over half of graduating medical students and nearly half of full-time faculty are women, it is clear that lack of representation is not the sole reason for slow progress toward gender equity. Rather, equity for marginalized groups in academic medicine has been slow due to the structural biases and inequities in our systems and individual biases. Researchers and gender equity experts have compellingly described these barriers and inequities in detail for decades, so they do not need to be reproduced in full here, but they bear repeating, considering the robust cadre of talented women entering academic medicine. We know women in academic medicine:

- Are promoted more slowly.[5,6]
- Are rewarded less often with promotable tasks.[7-9]
- Are paid less for similar work.[10-12]
- Have higher burnout rates.[13,14]
- Are evaluated less favorably.[15-17]
- Have their abilities and expertise doubted more frequently.[18]
- Experience sexual harassment at greater rates.[19]
- Experience bullying and bias at greater rates.[20]
- Receive fewer leadership opportunities.[21,22]
- Operate in inflexible and isolated work environments.[23,24]
- Receive less sponsorship and access to larger leadership networks.[25]

In addition to these known barriers, academic medicine, and our society broadly, has experienced unparalleled challenges over the past few years, resulting in an unpredictable and rapidly changing environment. The multiple and confounding factors of the COVID-19 pandemic and threats to equity, diversity, and inclusion work challenge our community's efforts to make progress toward gender equity. Now, four years after the start of the pandemic, racial justice reckonings, and the subsequent backlash to both, it is imperative we examine the impact these events have had on women and other marginalized genders in academic medicine and then both intentionally and courageously plan to create a more equitable future.

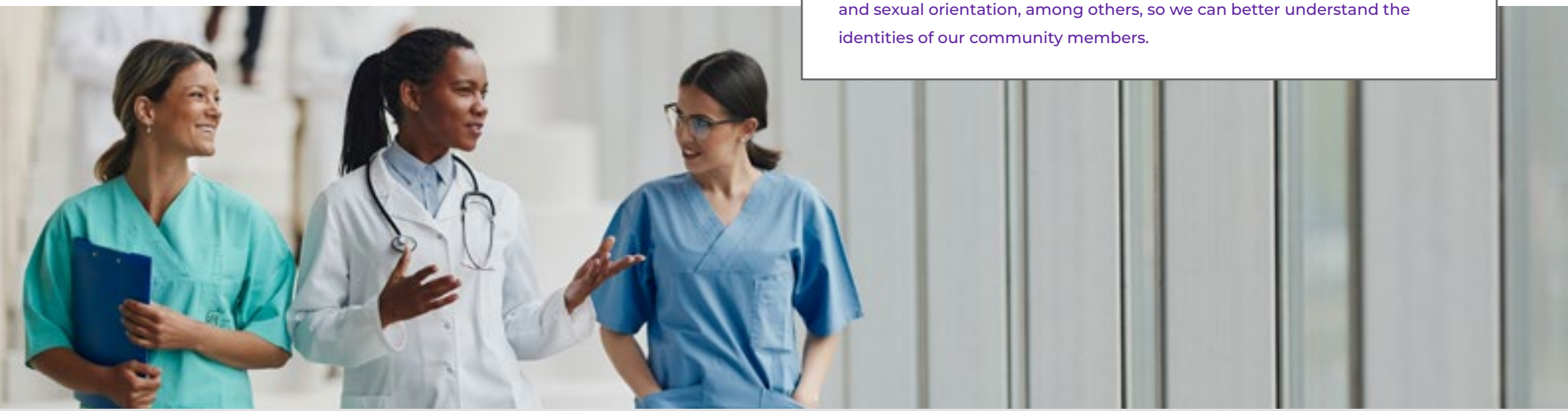
What's New in This Report?

In every iteration of *The State of Women in Academic Medicine* report, we seek to improve our survey questions and analysis to provide actionable data for readers. This year, we have made several improvements to the report to give readers a more complete and holistic picture of the state of women in academic medicine. The enhancements you'll find in this report include new data regarding:

- Endowed leaders and professors by gender.
- Decanal leaders by gender and race/ethnicity.
- Health system leaders by gender and race/ethnicity.
- Updated salary equity and sexual harassment data from previous reports.
- Detailed information directly from WIMS leaders regarding the successes and priorities of their offices.

A special note about gender in this report:

In every iteration of *The State of Women in Academic Medicine* report, we seek to improve our data collection, including the expansion of individual demographics. In this year's AAMC Women in Medicine and Science (WIMS) Benchmarking Survey, we chose to include additional gender option responses beyond the binaries of "man" and "woman." Unfortunately, when additional gender identities were reported, the numbers were too small to include in the analysis for confidentiality reasons. Additionally, many responding institutions only collect binary sex at the institutional level and cannot report genders outside these categories. Thus, due to threshold counts around confidentiality, as well as low numbers, in most cases we were unable to report on gender identities other than "women" and "men." We encourage institutions and leaders who are responsible for data collection to be intentional about expanding their categories for gender, race/ethnicity, and sexual orientation, among others, so we can better understand the identities of our community members.



Methodology

This report uses various AAMC and external datasets to illustrate the workforce trends of women in academic medicine and science. In combination, the data present a more complete snapshot of the state of women at key junctures in their careers as learners, faculty, and leaders.

The following AAMC data collections were used to enhance the description of the academic medicine learning environment and workplace:

- Faculty Roster.
- Faculty Salary Survey.
- FACTS Tables.
- GME Track®.
- Standpoint™ Faculty Engagement Survey.
- Student Records System.

As the AAMC collects data at different times throughout the year, some data are available only from academic year 2022-2023, such as data on medical school graduates and residents, while other data is available from academic year 2023-2024, such as data on applicants and matriculants. Additionally, most calculations for this report exclude instances in which individuals were missing gender, race/ethnicity, or age data.

Data from the WIMS Benchmarking Survey was also included in this report. The survey was distributed by email to designated institutional representatives of the AAMC Group on Women in Medicine and Science (GWIMS) and representatives of the AAMC Group on Faculty Affairs (GFA) at the 157 U.S. medical schools accredited by the Liaison Committee on Medical Education. The survey opened Sept. 12, 2023, and closed Nov. 14, 2023, and members were encouraged to partner with other leaders at their schools to complete the survey. In total, 91 medical schools completed the survey, yielding a response rate of 58%.

Lastly, this report also includes data from the National Science Foundation Survey of Graduate Students and Postdoctorates in Science and Engineering.

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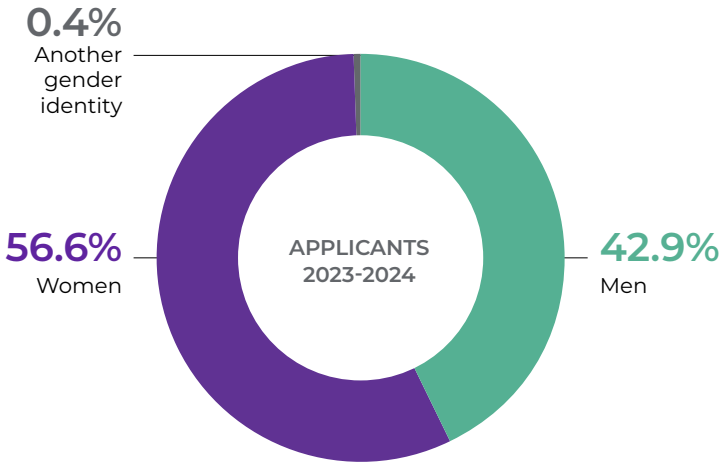
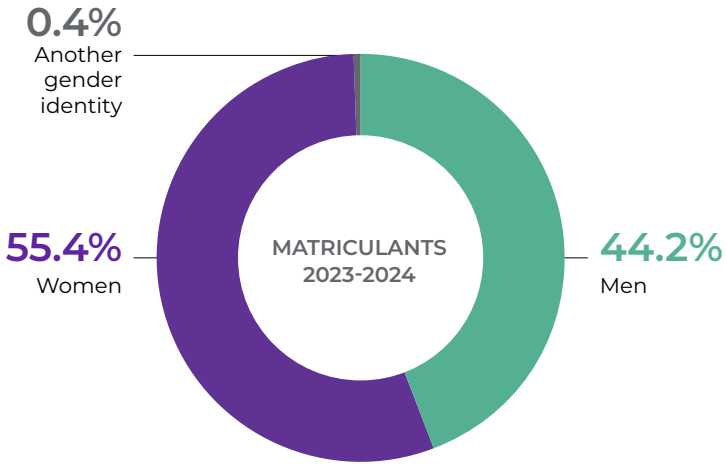
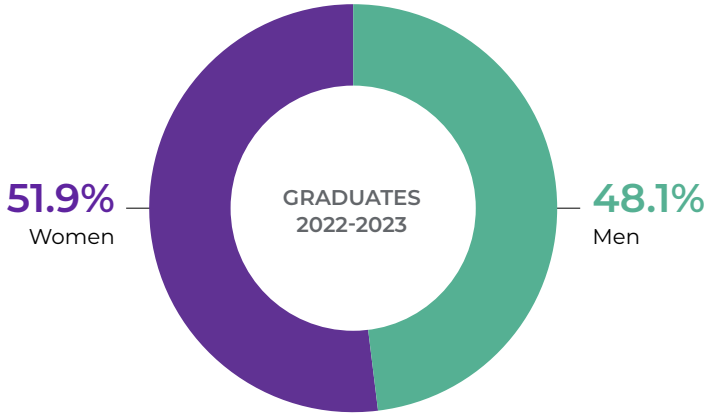
Results

LEARNERS

Figure 1. U.S. Medical School Applicants, Matriculants, and Graduates by Gender, Academic Year 2022-2023 and 2023-2024







KEY TAKEAWAY

In 2023, women constituted more than 50% of U.S. medical school applicants, matriculants, and graduates.

Source: Table A-7.2: Applicants, First-Time Applicants, Acceptees, and Matriculants to U.S. Medical Schools by Gender, 2014-15 through 2023-24, and Table B-2.2: Total Graduates by U.S. Medical School and Gender, 2018-2019 through 2022-2023.

Note: Each academic year includes applicants and matriculants who applied to enter medical school in the fall of the given year. For example, academic year 2023-2024 represents the applicants and matriculants who applied to enter medical school during the 2023 application cycle. Applicants, matriculants, and graduates who declined to report their gender are not reflected. Graduate counts represent data from the most recent academic year, 2022-2023, per data available as of Jan. 21, 2024.

Figure 2. U.S. Medical School Applicants and Graduates by Gender, Academic Years 2000-2001 Through 2023-2024

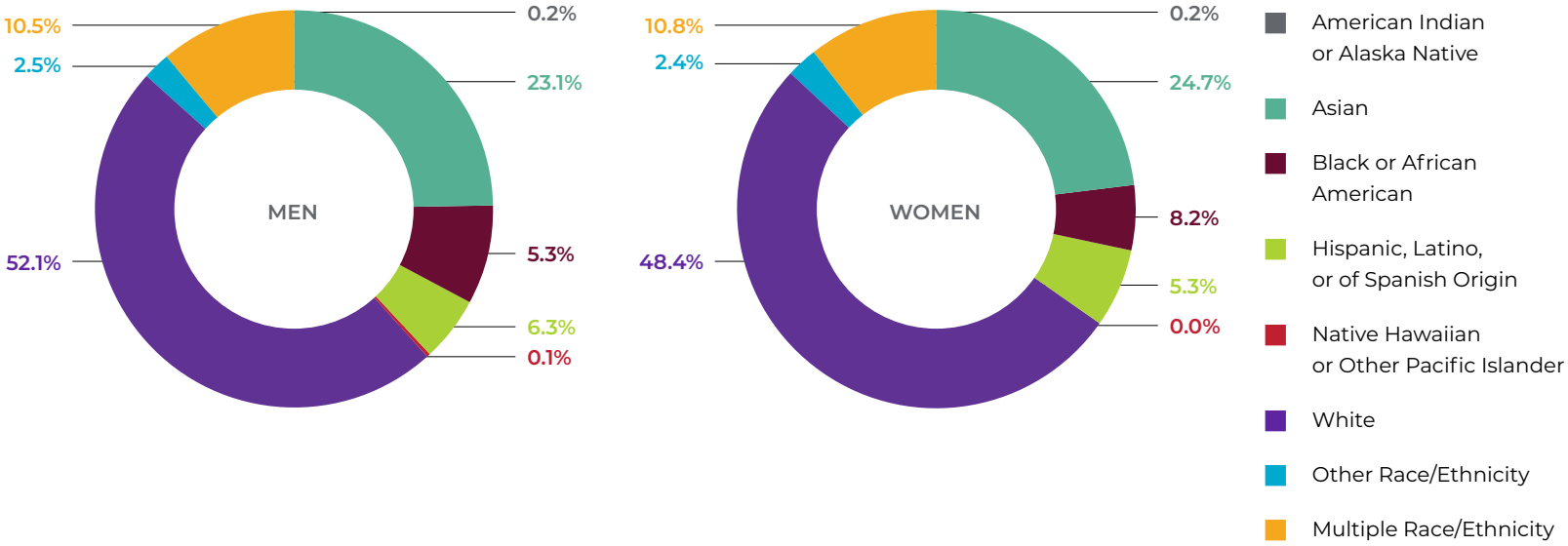
KEY TAKEAWAY

Women became the majority of medical school applicants in the 2018-2019 academic year and the proportion of women applicants has continued to grow since that time. Women became the majority of medical school graduates in 2020-2021.

Source: AAMC FACTS Data Chart 2, Applicants to U.S. Medical Schools by Gender 1980-1981 Through 2023-2024, as of Nov. 6, 2023, and AAMC FACTS Data Chart 5, Graduates to U.S. Medical Schools by Gender, 1980-1981 Through 2022-2023, as of July 25, 2023.

Note: Applicants and graduates who declined to report their gender are not reflected. Graduate counts represent data from the most recent academic year, 2022-2023.

Figure 3. U.S. MD-Granting Medical School Graduates by Gender and Race/Ethnicity (Alone), 2022-2023



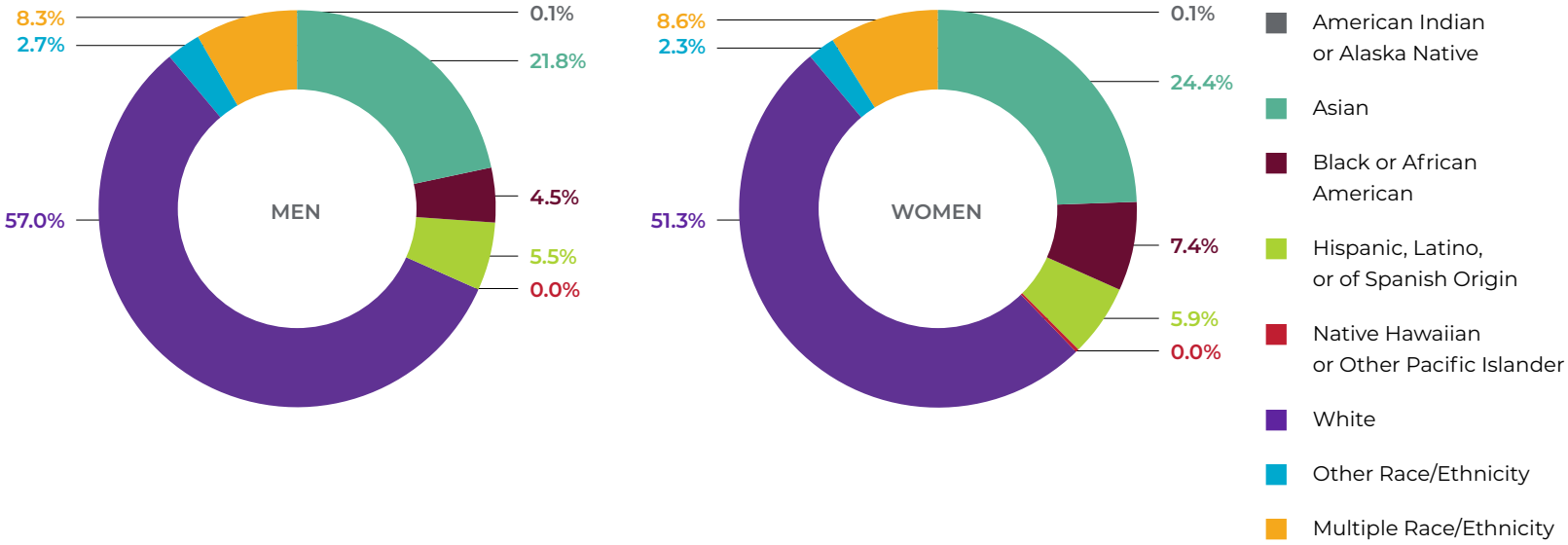
KEY TAKEAWAY

Twenty-seven percent of women graduates identified with a race/ethnicity considered underrepresented in medicine, compared with 25% of men graduates.

Source: AAMC FACTS Table B-4, Total U.S. MD-Granting Medical School Graduates by Race/Ethnicity (Alone) and Gender 2018-2019 Through 2022-2023.

Note: Graduate counts represent data from the most recent academic year, 2022-2023. Race/ethnicity data are displayed "Alone." "Alone" indicates those students who selected only one race/ethnicity category. The "Multiple Race/Ethnicity" category includes those students who selected more than one race/ethnicity category. In this figure, "underrepresented in medicine" includes individuals who were American Indian or Alaska Native; Asian; Black or African American; Hispanic, Latino, or of Spanish Origin; Native Hawaiian or Other Pacific Islander; of multiple races/ethnicities; or of other races/ethnicities. For the purposes of this report, "Non-U.S. Citizen and Nonpermanent Residents" and individuals with "Unknown Race/Ethnicity" were not included in the calculations.

Figure 4. Residents by Gender and Race/Ethnicity, 2022-2023



KEY TAKEAWAY

Twenty-four percent of women residents identified with a race/ethnicity considered underrepresented in medicine, compared with 21% of men residents.

Source: GME Track® as of August 2023.

Note: Resident training statuses are collected as of Dec. 31 each year. Therefore, residents in Figure 4 were active in training as of Dec. 31, 2022. In this figure, "underrepresented in medicine" includes individuals who were American Indian or Alaska Native; Asian; Black or African American; Hispanic, Latino, or of Spanish origin; Native Hawaiian or Other Pacific Islander; of multiple races/ethnicities; or of other races/ethnicities. Non-U.S. Citizens, nonpermanent residents, and individuals with unknown gender or race/ethnicity were removed from total counts.

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Table 1. Percentage of Women Residents by Specialty and Subspecialties, 2018-2019 and 2022-2023

Resident Specialty and Subspecialty	2018-2019	2022-2023	% Difference
Allergy and Immunology	74%	65%	-9%
Anesthesiology and Subspecialties	35%	36%	1%
Child Neurology	68%	70%	2%
Colon and Rectal Surgery	43%	51%	8%
Dermatology and Subspecialties	60%	61%	1%
Emergency Medicine and Subspecialties	36%	42%	6%
Family Medicine and Subspecialties	53%	55%	2%
Hospice and Palliative Medicine	66%	63%	-3%
Internal Medicine and Subspecialties	41%	43%	2%
Medical Biochemical Genetics	60%	55%	-5%
Medical Genetics and Genomics	66%	69%	3%
Molecular Genetic Pathology (Multidisciplinary)	45%	52%	7%
Neurological Surgery and Subspecialties	17%	24%	7%
Neurology and Subspecialties	45%	48%	3%
Nuclear Medicine	42%	38%	-4%
Obstetrics and Gynecology and Subspecialties	82%	86%	4%
Ophthalmology and Subspecialties	40%	41%	1%
Orthopaedic Surgery and Subspecialties	16%	21%	5%
Otolaryngology and Subspecialties	36%	42%	6%
Pain Medicine (Multidisciplinary)	24%	24%	0%
Pathology and Subspecialties	51%	53%	2%
Pediatrics and Subspecialties	71%	72%	1%
Physical Medicine and Rehabilitation and Subspecialties	39%	35%	-4%
Plastic Surgery and Subspecialties	40%	45%	5%
Preventive Medicine and Subspecialties	51%	56%	5%
Psychiatry and Subspecialties	51%	52%	1%
Radiation Oncology	30%	34%	4%
Radiology and Subspecialties	26%	27%	1%
Sleep Medicine	49%	44%	-5%
Surgery and Subspecialties	41%	47%	6%
Thoracic Surgery and Subspecialties	24%	33%	9%
Transitional Year	37%	37%	0%
Urology	28%	33%	5%

Red highlights indicate a decrease of 5% or more
Green highlights indicate an increase of 5% or more

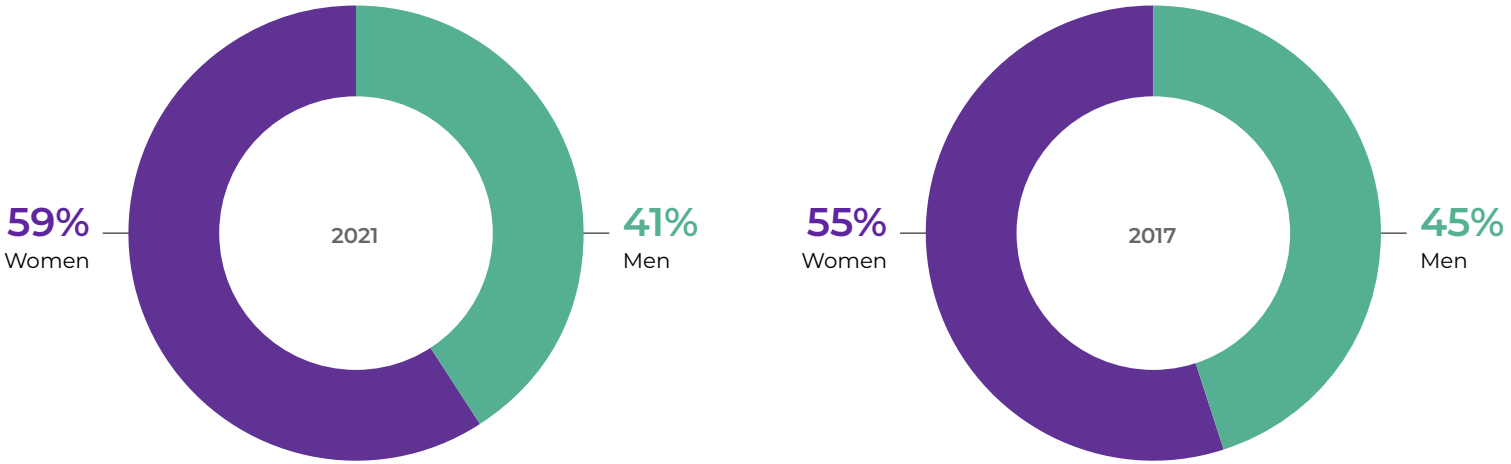
KEY TAKEAWAY

Between academic years 2018-2019 and 2022-2023, Emergency Medicine, Otolayrngology, and a number of surgical specialties and subspecialties saw an increase of five percentage points or more of women residents.

Source: GME Track® as of August 2023.

Note: Resident training statuses are collected as of Dec.31 each year. For example, residents counted in academic year 2022-2023 were active in training as of Dec. 31, 2022. Residents whose gender was unknown were removed from total counts.

Figure 5. Scientific Trainees: Biological, Biomedical, and Clinical Sciences Graduate Students Enrolled in Doctorate Programs by Gender, 2017 and 2021



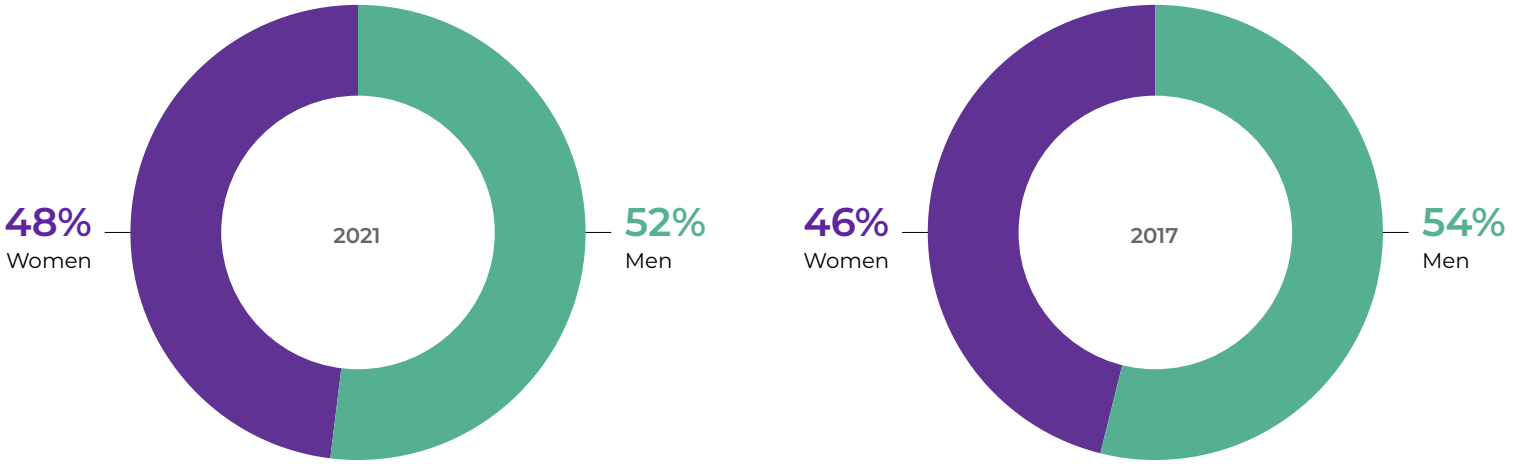
KEY TAKEAWAY

The percentage of women graduate students in biological, biomedical, and clinical sciences doctoral programs rose from 55% to 59% between 2017 and 2021.

Source: National Science Foundation Survey of Graduate Students and Postdoctorates in Science and Engineering, 2017-2021.

Note: Data reflect graduate students enrolled in doctorate programs at doctorate-granting institutions in the fields of biological and medical sciences. See endnotes for fields included in "biological and biomedical sciences" and "clinical sciences."

Figure 6. Scientific Trainees: Biological, Biomedical, and Clinical Sciences Postdoctorate Appointees in Doctorate Programs by Gender, 2017 and 2021



KEY TAKEAWAY

The percentage of women in postdoctoral appointments in biological, biomedical, and clinical sciences rose from 46% to 48% between 2017 and 2021.

Source: National Science Foundation Survey of Graduate Students and Postdoctorates in Science and Engineering, 2017-2021.

Note: Data reflect postdoctorates enrolled in doctorate or postdoctorate/nondegree programs at doctorate-granting institutions in the fields of biological, biomedical, and clinical sciences. See endnotes for fields included in "biological and biomedical sciences" and "clinical sciences."

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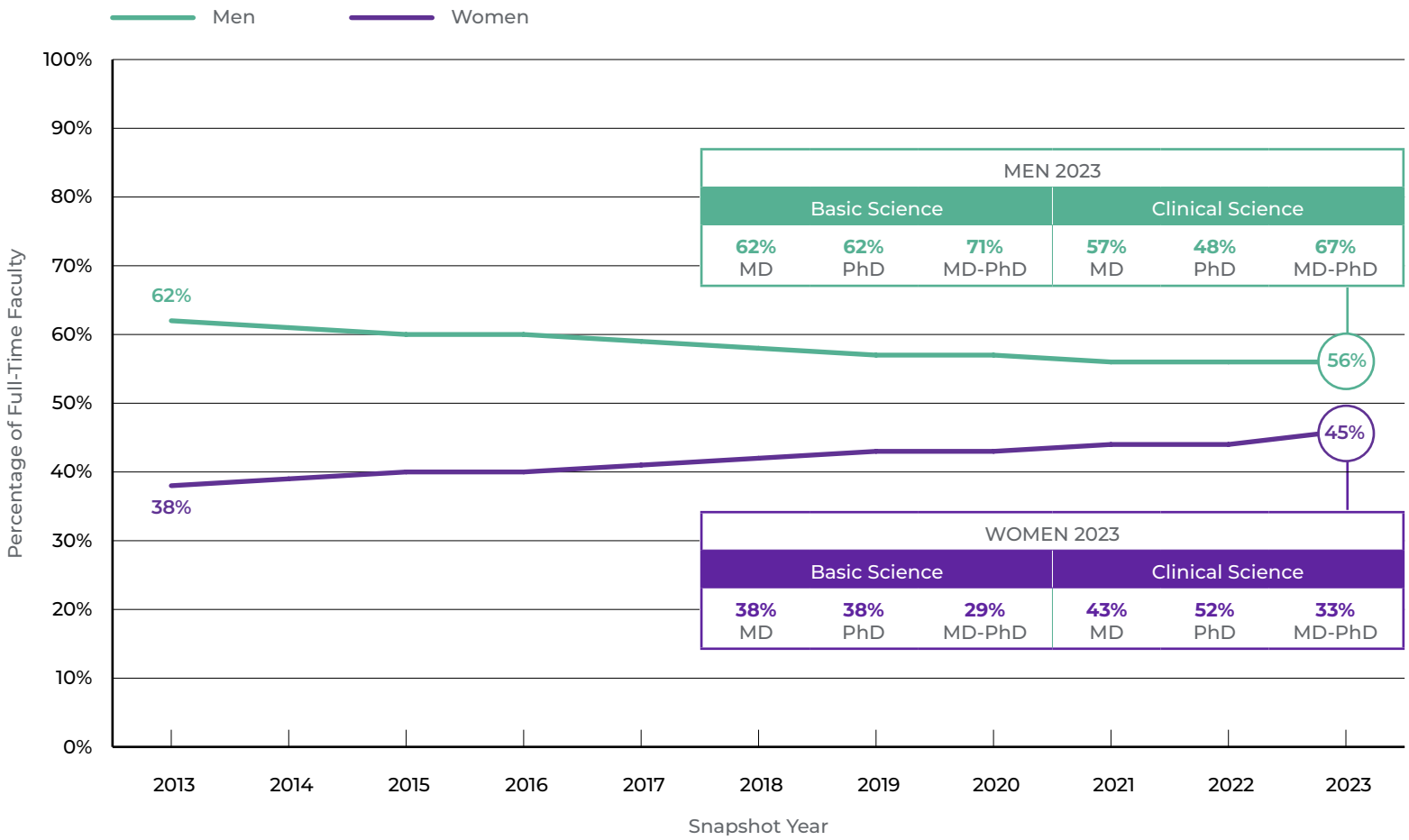
Results

FACULTY

Figure 7. Percentage of Full-Time U.S. Medical School Faculty by Gender, 2013-2023



KEY TAKEAWAY

The percentage of full-time faculty who were women rose from 38% in 2013 to 45% in 2023.

Source: AAMC Faculty Roster, Dec. 31, 2023 snapshot. Data represent Dec. 31 snapshots for each year presented. U.S. Medical School Faculty Trends: Counts of Faculty by Gender. https://www.aamc.org/data-reports/faculty-institutions/data/us-medical-school-faculty-trends-counts

Note: This figure excludes faculty with missing gender data.

Figure 8. Part-Time Faculty by Gender, 2023

KEY TAKEAWAY

Approximately the same proportions of men and women had part-time faculty appointments.

Source: AAMC 2023 WIMS Benchmarking Survey. Data reflected faculty counts as of July 1, 2023 (n=84 institutions; n=28,262 part-time faculty for whom gender was reported).
Note: Part-time faculty were defined as those faculty who were not considered to be full-time for LCME reporting purposes, were paid by the institution, and were not considered volunteer faculty.

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Figure 9. Volunteer Faculty by Gender, 2023

KEY TAKEAWAY

A majority (61%) of volunteer faculty were men.

Source: AAMC 2023 WIMS Benchmarking Survey. Data reflected faculty counts as of July 1, 2023 (n=72 institutions; n=85,513 volunteer faculty for whom gender was reported).
Note: Volunteer faculty were defined as any faculty that were not classified as full- or part-time faculty by the institution.

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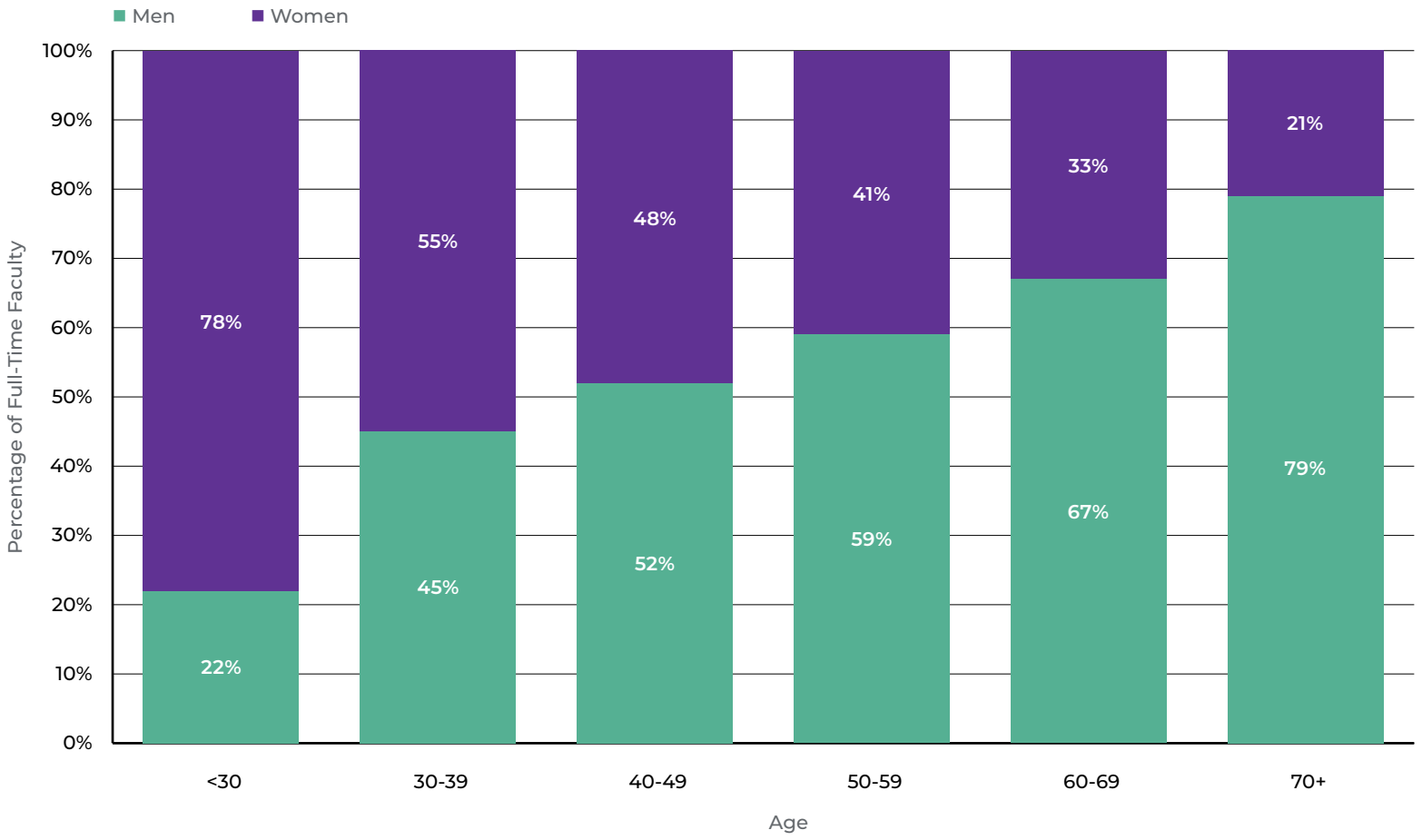
Figure 10. Full-Time Faculty by Gender and Age, 2023



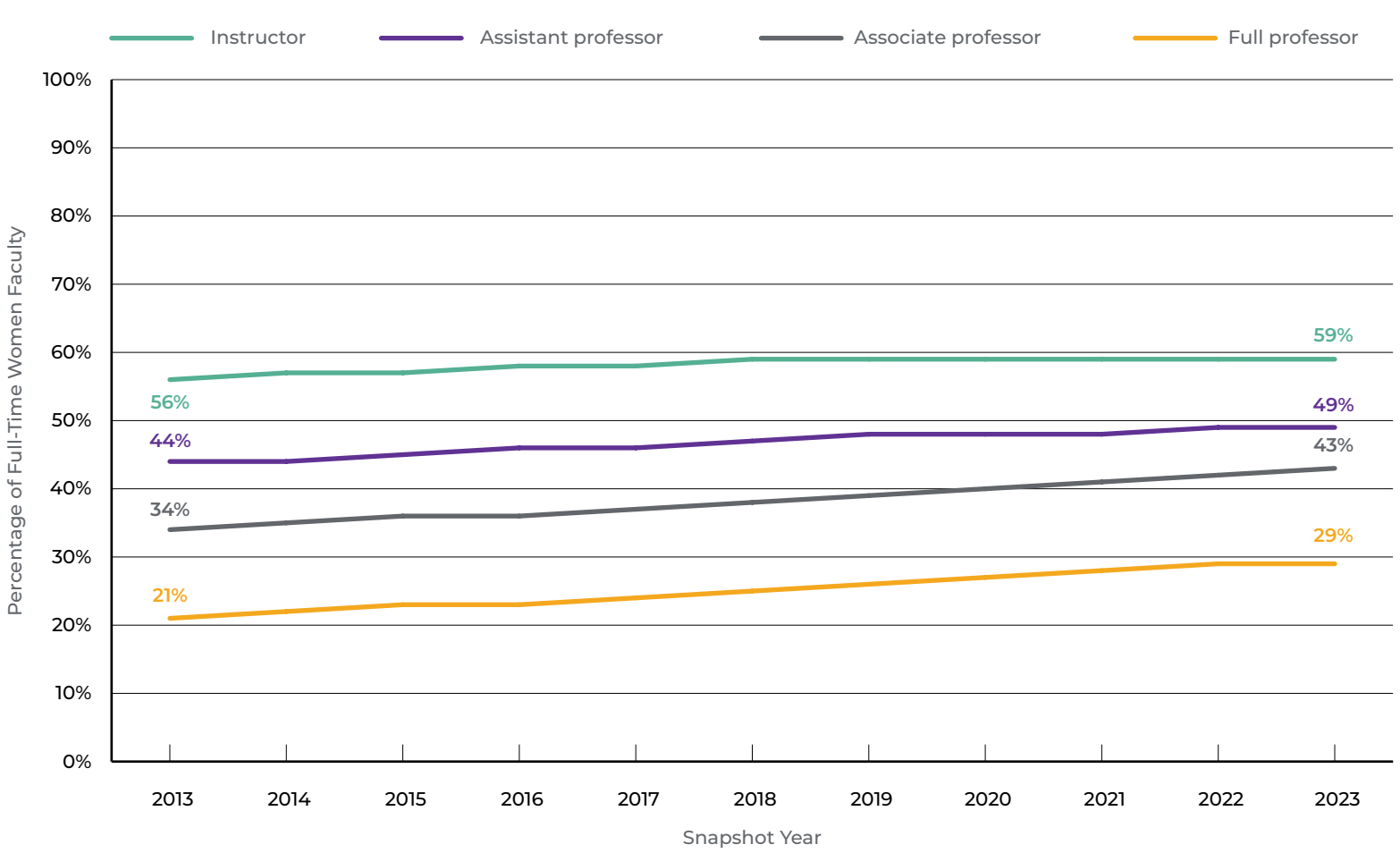
KEY TAKEAWAY

Women constituted 51% of full-time faculty under the age of 50.

Source: AAMC Faculty Roster, Dec. 31, 2023, snapshot. U.S. Medical School Faculty Tables: Supplemental Table F. Faculty by Gender, Rank, and Age Group. https://www.aamc.org/data-reports/faculty-institutions/report/faculty-roster-us-medical-school-faculty

Note: This figure excludes 122 faculty with missing gender data and 3,736 faculty with missing or out of range birth years.

Figure 11. Full-Time Women Faculty as a Percentage of Each Rank, 2013-2023

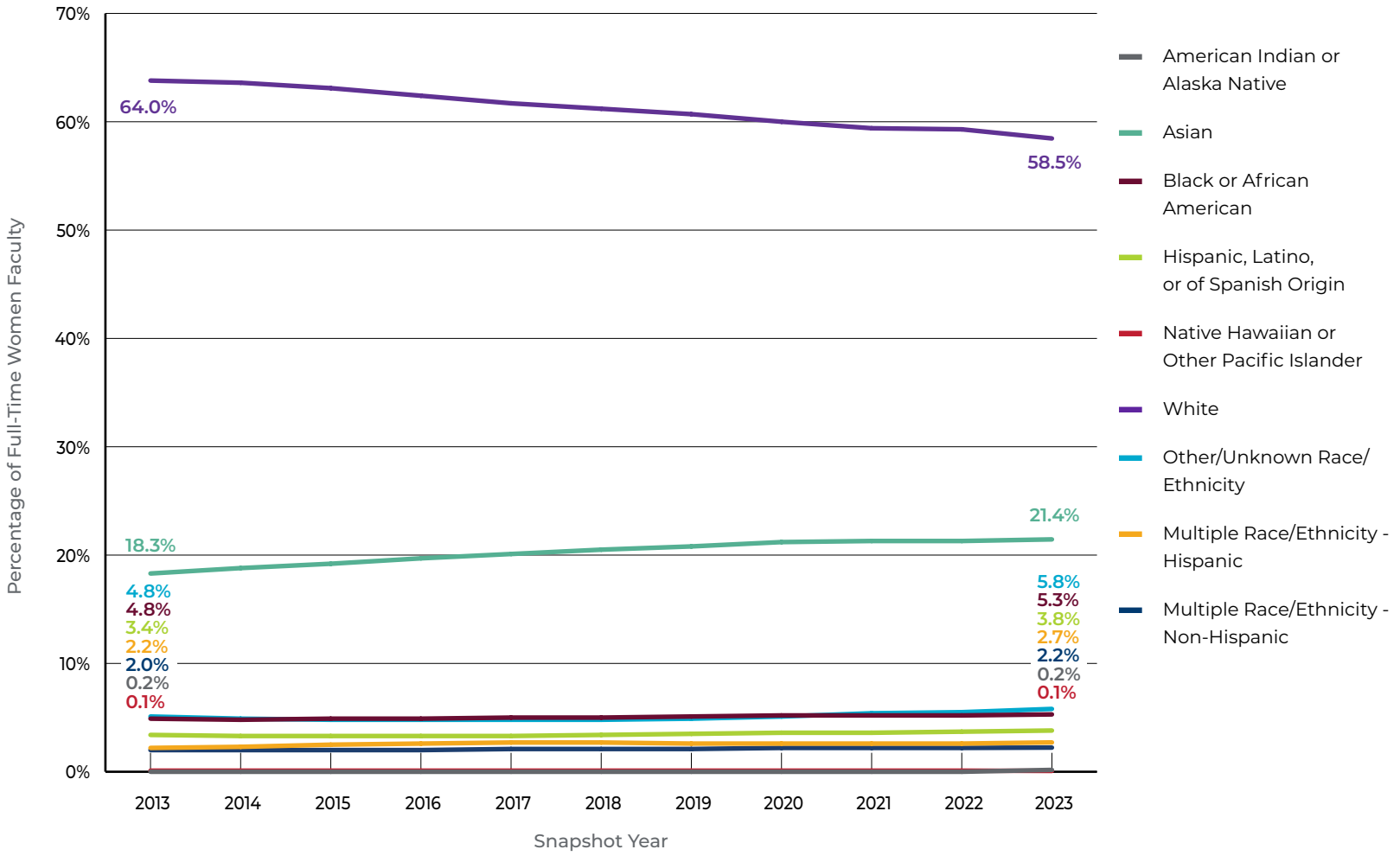


KEY TAKEAWAY

The percentage of women at each rank has grown since 2013. For example, in 2013, 34% of full-time associate professors were women and 43% were in 2023.

Source: AAMC Faculty Roster, Dec. 31, 2023, snapshot. Data represent Dec. 31 snapshots for each year presented. U.S. Medical School Faculty Trends: Women Faculty by Rank. https://www.aamc.org/data-reports/faculty-institutions/data/us-medical-school-faculty-trends-percentages

Figure 12. Full-Time Women Faculty by Race/Ethnicity, 2013-2023

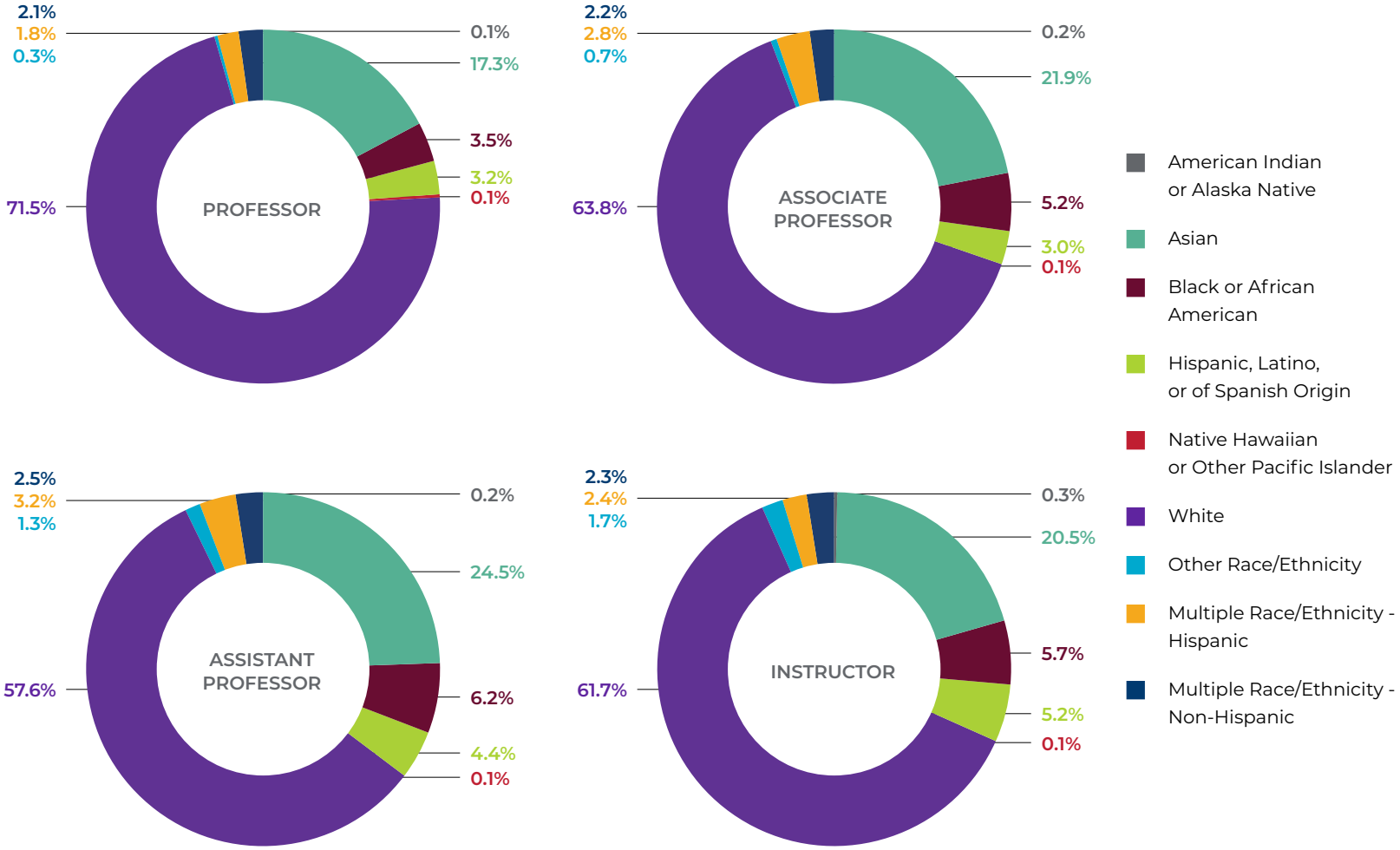


KEY TAKEAWAY

The percentage of women faculty who identified with a race/ethnicity considered underrepresented in medicine rose approximately two percentage points between 2013 and 2023.

Sources:
U.S. Medical School Faculty Tables: Table 11. Faculty by Gender, Race/Ethnicity, and Rank, 2013. https://systems.aamc.org/famous/
U.S. Medical School Faculty Tables: Table 11. Faculty by Gender, Race/Ethnicity, and Rank, 2023. https://www.aamc.org/data-reports/faculty-institutions/report/faculty-roster-us-medical-school-faculty
AAMC Faculty Roster, Dec. 31, 2023, snapshot. Data represent Dec. 31 snapshots for each year presented. U.S. Medical School Faculty Tables: Trends of Women Faculty by Race/Ethnicity. https://www.aamc.org/data-reports/faculty-institutions/data/us-medical-school-faculty-trends-percentages
Note: In this figure, "underrepresented in medicine" includes faculty who were American Indian or Alaska Native; Asian; Black or African American; Hispanic, Latino, or of Spanish Origin; Native Hawaiian or Other Pacific Islander; of multiple races/ethnicities; or of other races/ethnicities.

Figure 13. Full-Time Women Faculty by Rank and Race/Ethnicity, 2023



KEY TAKEAWAY

Larger percentages of women at the assistant professor and instructor ranks identified with a race or ethnicity considered underrepresented in medicine than faculty at more senior ranks.

Source: AAMC Faculty Roster, Dec. 31, 2023, snapshot. U.S. Medical School Faculty Tables: Table 11. Faculty by Gender, Race/Ethnicity, and Rank. https://www.aamc.org/data-reports/faculty-institutions/report/faculty-roster-us-medical-school-faculty

Note: These figures exclude 4,285 faculty with missing race/ethnicity data. In this figure, "underrepresented in medicine" includes faculty who were American Indian or Alaska Native; Asian; Black or African American; Hispanic, Latino, or of Spanish Origin; Native Hawaiian or Other Pacific Islander; of multiple races/ethnicities; or of other races/ethnicities.

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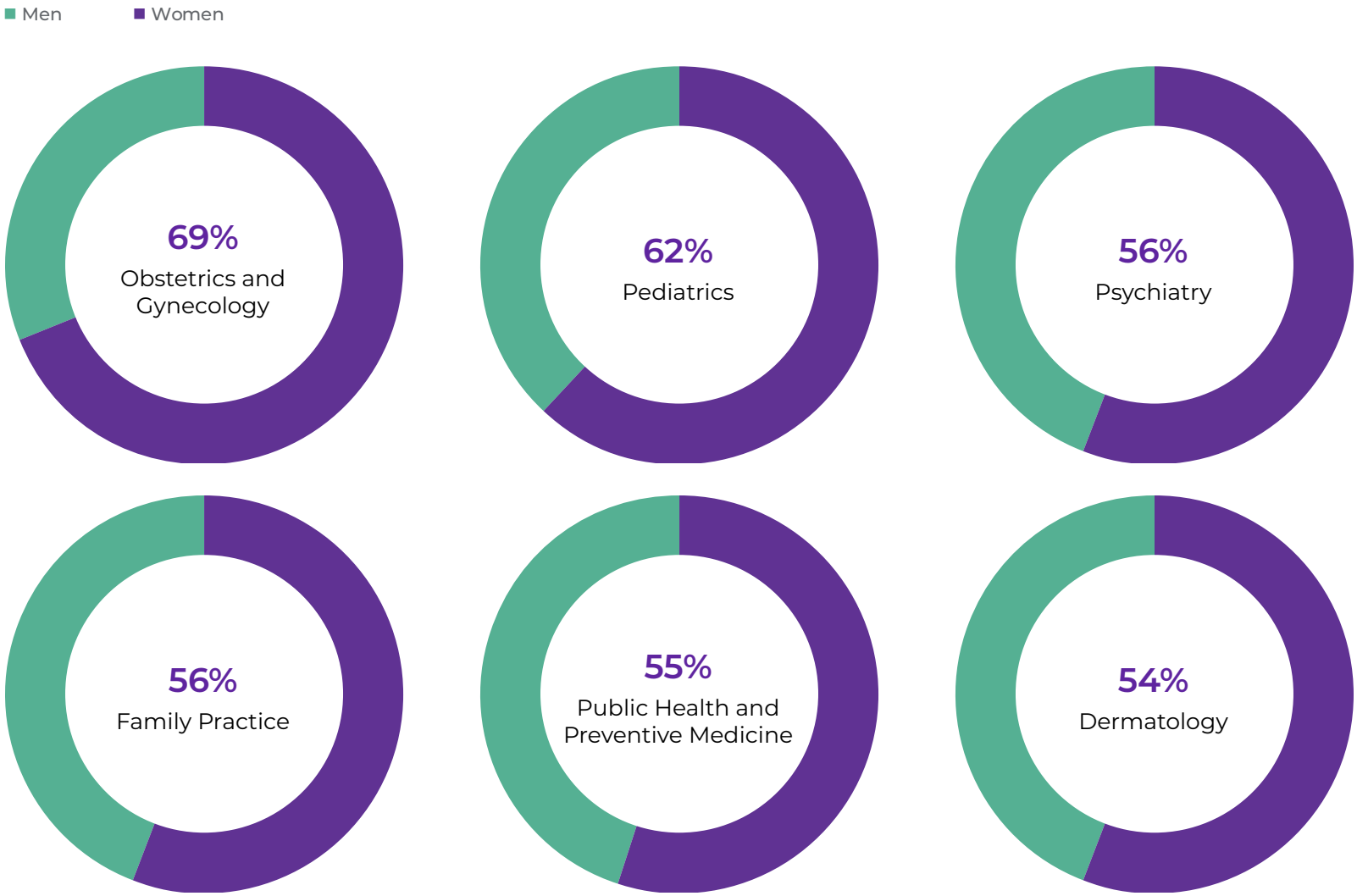
Figure 14. Departments With the Largest Proportion of Full-Time Women Faculty, 2023



KEY TAKEAWAY

While women's representation overall has increased, the departments with the largest percentage of women faculty in 2023 were the same as the departments identified in 2018.

Source: AAMC Faculty Roster, Dec. 31, 2023, snapshot. U.S. Medical School Faculty Tables: Table 13. Faculty by Gender, Rank, Department. https://www.aamc.org/data-reports/faculty-institutions/report/faculty-roster-us-medical-school-faculty

Note: This figure excludes 122 faculty with missing gender data. This analysis included basic science and clinical departments only; "Other" departments were excluded.

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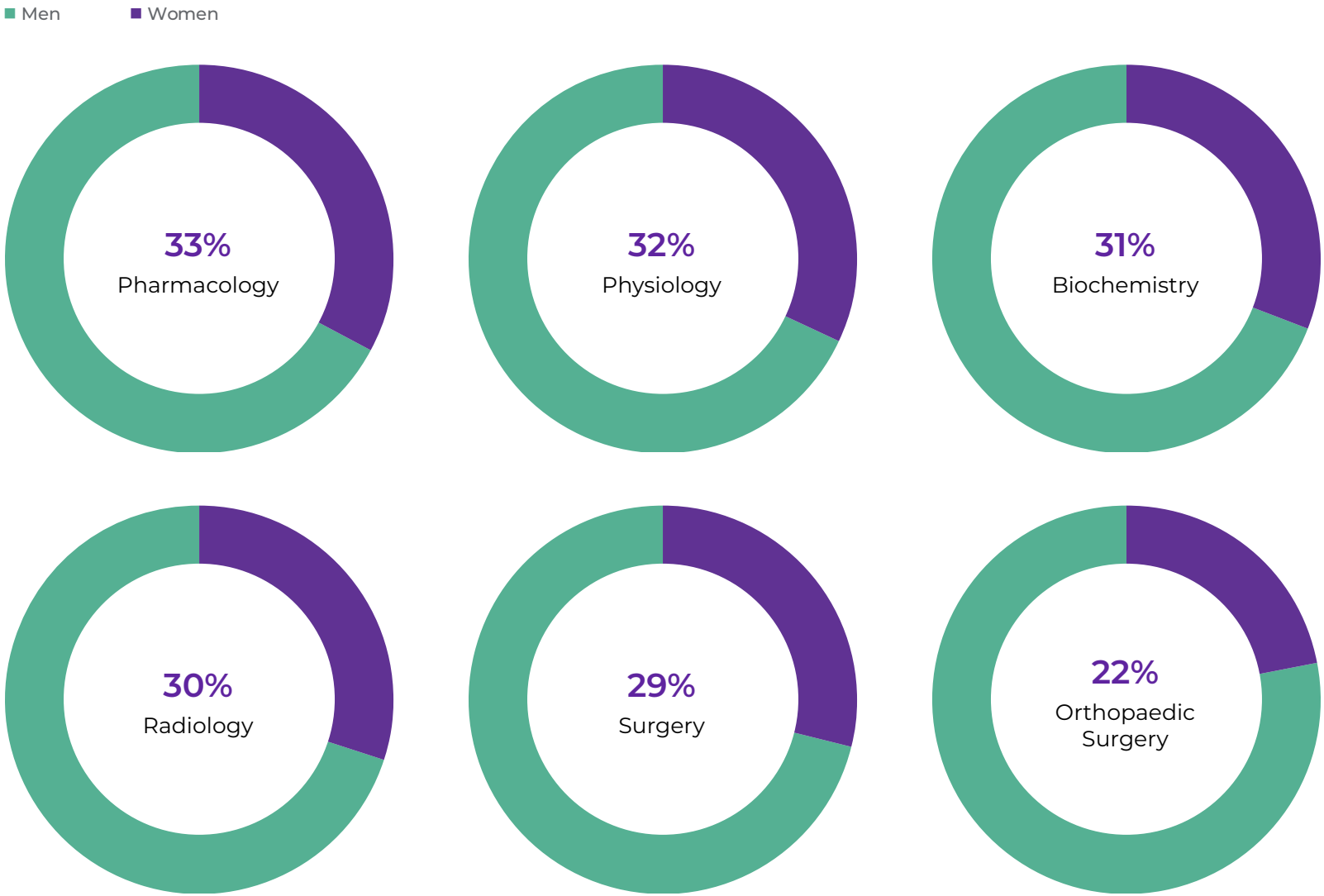
Figure 15. Departments With the Smallest Proportion of Full-Time Women Faculty, 2023



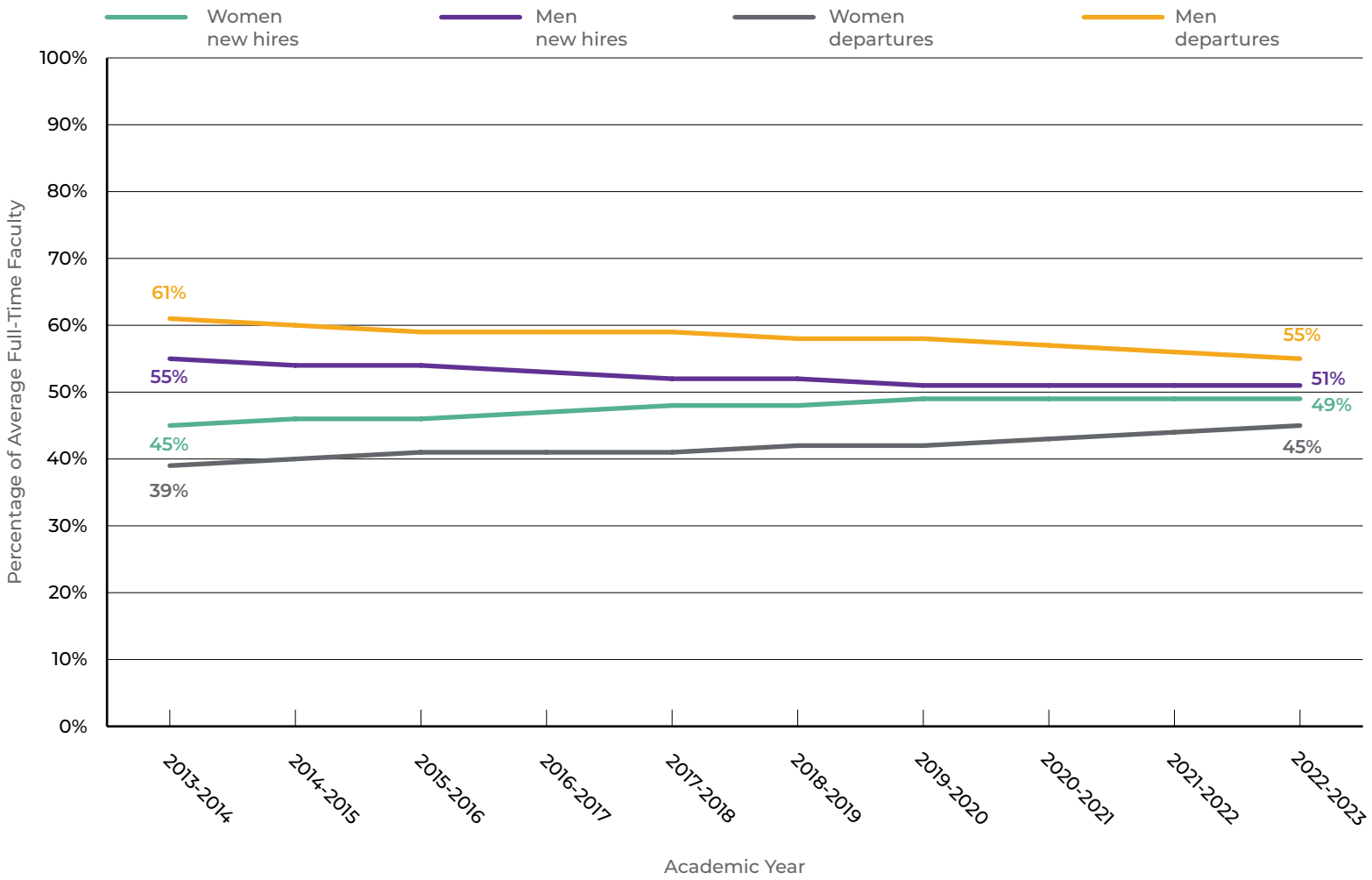
KEY TAKEAWAY

While women's representation has increased overall, the departments with the smallest percentage of women faculty in 2023 were the same as the departments identified in 2018.

Source: AAMC Faculty Roster, Dec. 31, 2023, snapshot. U.S. Medical School Faculty Tables: Table 13. Faculty by Gender, Rank, Department. https://www.aamc.org/data-reports/faculty-institutions/report/faculty-roster-us-medical-school-faculty

Note: This figure excludes 122 faculty with missing gender data. This analysis included basic science and clinical departments only; "Other" departments were excluded.

Figure 16. Average Full-Time Faculty New Hires and Departures by Gender, Academic Years 2013-2014 Through 2022-2023



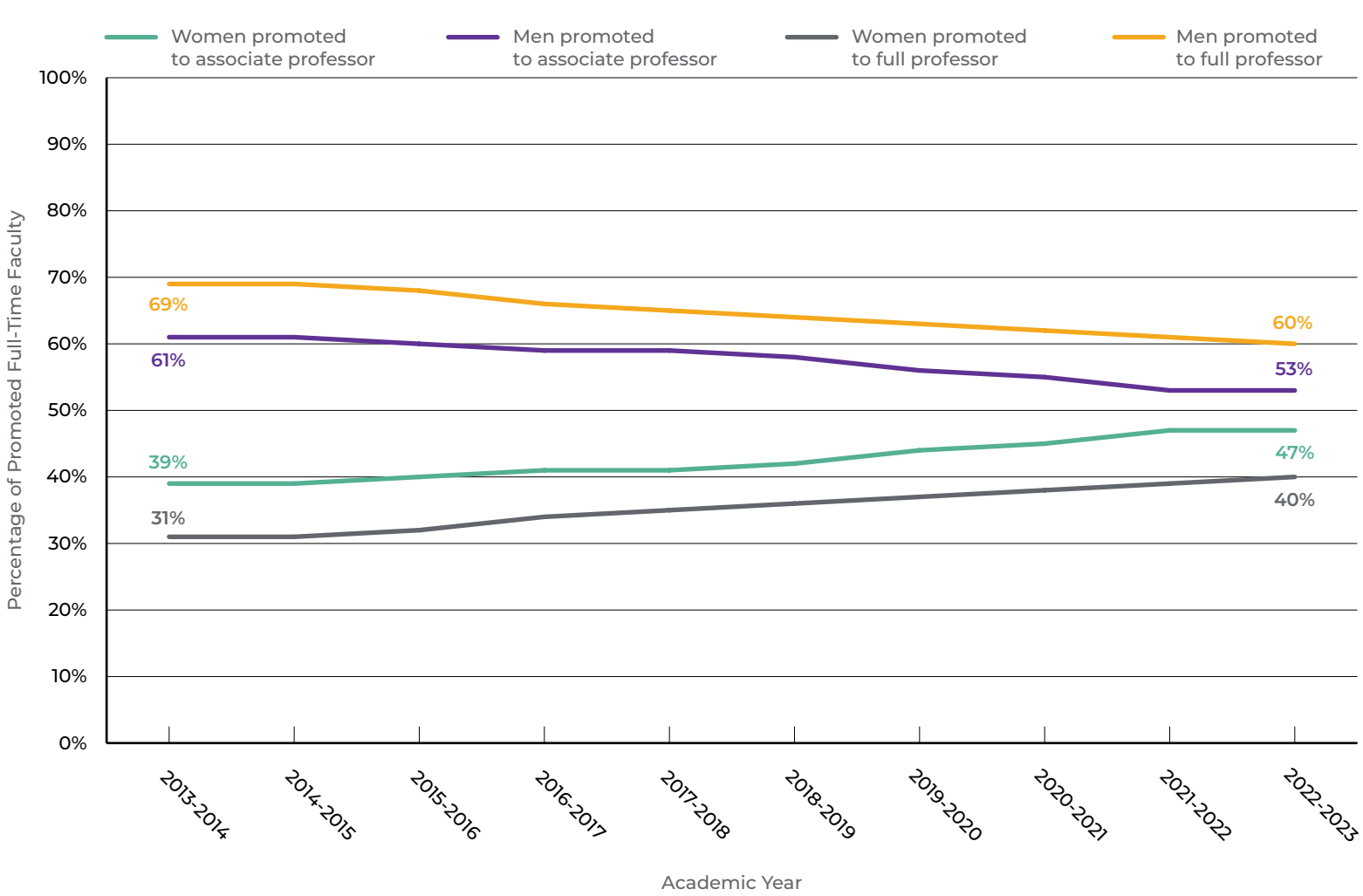
KEY TAKEAWAY

Since 2019-2020, the percentage of average new hires per year who were women has remained unchanged; however, the percentage of average departures who were women per year increased by three percentage points as of 2022-2023.

Source: AAMC Faculty Roster, Dec. 31, 2023, snapshot. U.S. Medical School Faculty Tables: Supplemental Table A. Average Full-Time Faculty New Hires and Departures by Medical School and Gender. https://www.aamc.org/data-reports/faculty-institutions/report/faculty-roster-us-medical-school-faculty

Note: Each reporting year displays the percentage of full-time faculty new hires and departures based on the average number of hires/departures over the previous four academic years. This figure excludes faculty with missing gender data.

Figure 17. Average Full-Time Faculty Promotions by Rank and Gender, Academic Years 2013-2014 Through 2022-2023



KEY TAKEAWAY

Between 2013-2014 and 2022-2023, the percentage of average full-time women faculty promoted to both associate and full professor per year increased by eight and nine percentage points, respectively.

Source: AAMC Faculty Roster, Dec. 31, 2023, snapshot. U.S. Medical School Faculty Tables: Supplemental Table B. Average Full-Time Faculty Promotions by Medical School, Rank, and Gender. https://www.aamc.org/data-reports/faculty-institutions/report/faculty-roster-us-medical-school-faculty

Note: Each reporting year displays the percentage of promoted faculty who were women, based on the average number of promotions over the previous four academic years. This figure excludes faculty with missing gender data.

Figure 18. Seven-Year and 10-Year Promotion Outcomes for Full-Time, First-Time Assistant and Associate Professors in Academic Year 2011-2012

KEY TAKEAWAY

Among cohorts of both first-time assistant and associate professors starting in 2011-2012, men and women were promoted at nearly the same rates after seven years. However, among associate professors in basic science departments, a larger percentage of women than men left academic medicine without having been promoted within seven years of becoming an associate professor.

Source: AAMC Faculty Roster, Nov. 30, 2023, snapshot.
Note: This figure excludes 14 faculty with missing gender data. Percentages may not sum to 100% due to rounding.

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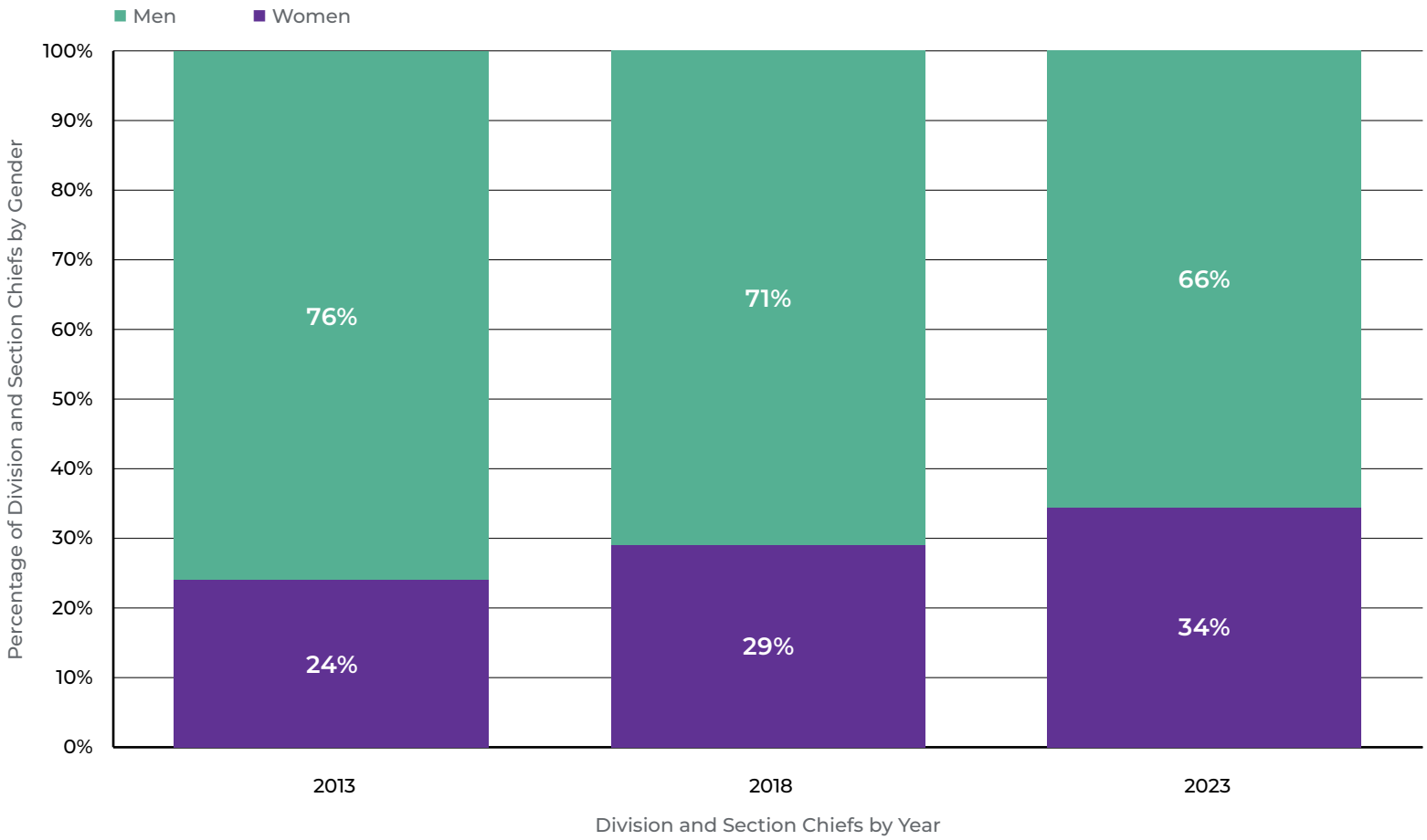
Figure 19. Division and Section Chiefs by Gender, 2013, 2018, and 2023



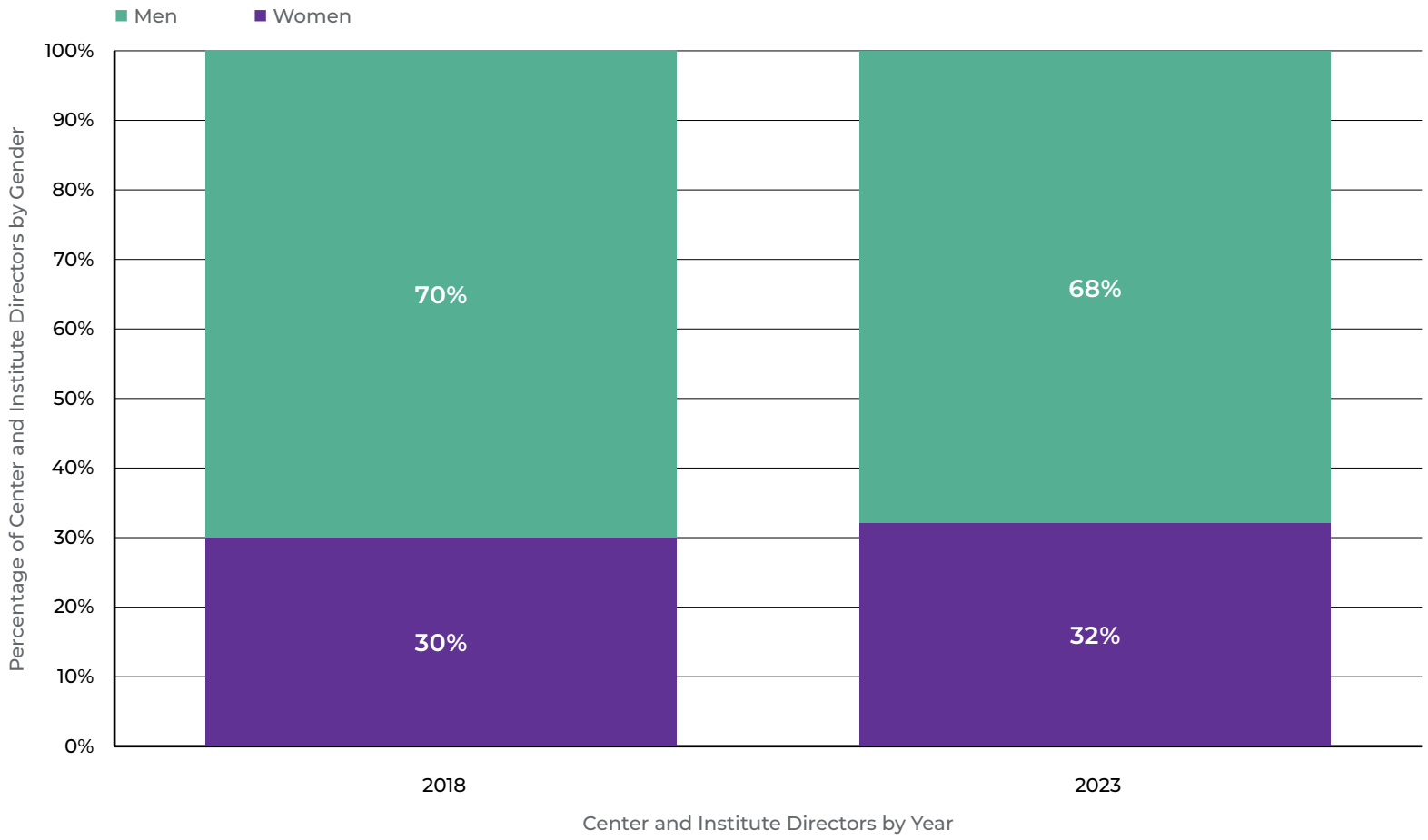
KEY TAKEAWAY

The percentage of women who were division or section chiefs rose from 24% in 2013 to 34% in 2023.

Source: AAMC 2023 WIMS Benchmarking Survey and AAMC State of Women in Medicine reports from 2013-2014 and 2018-2019. Data from the AAMC 2023 WIMS Benchmarking Survey reflected counts as of July 1, 2023 (n=71 institutions).

Note: Includes interim, acting, and permanent roles.

Figure 20. Center and Institute Directors by Gender, 2018 and 2023



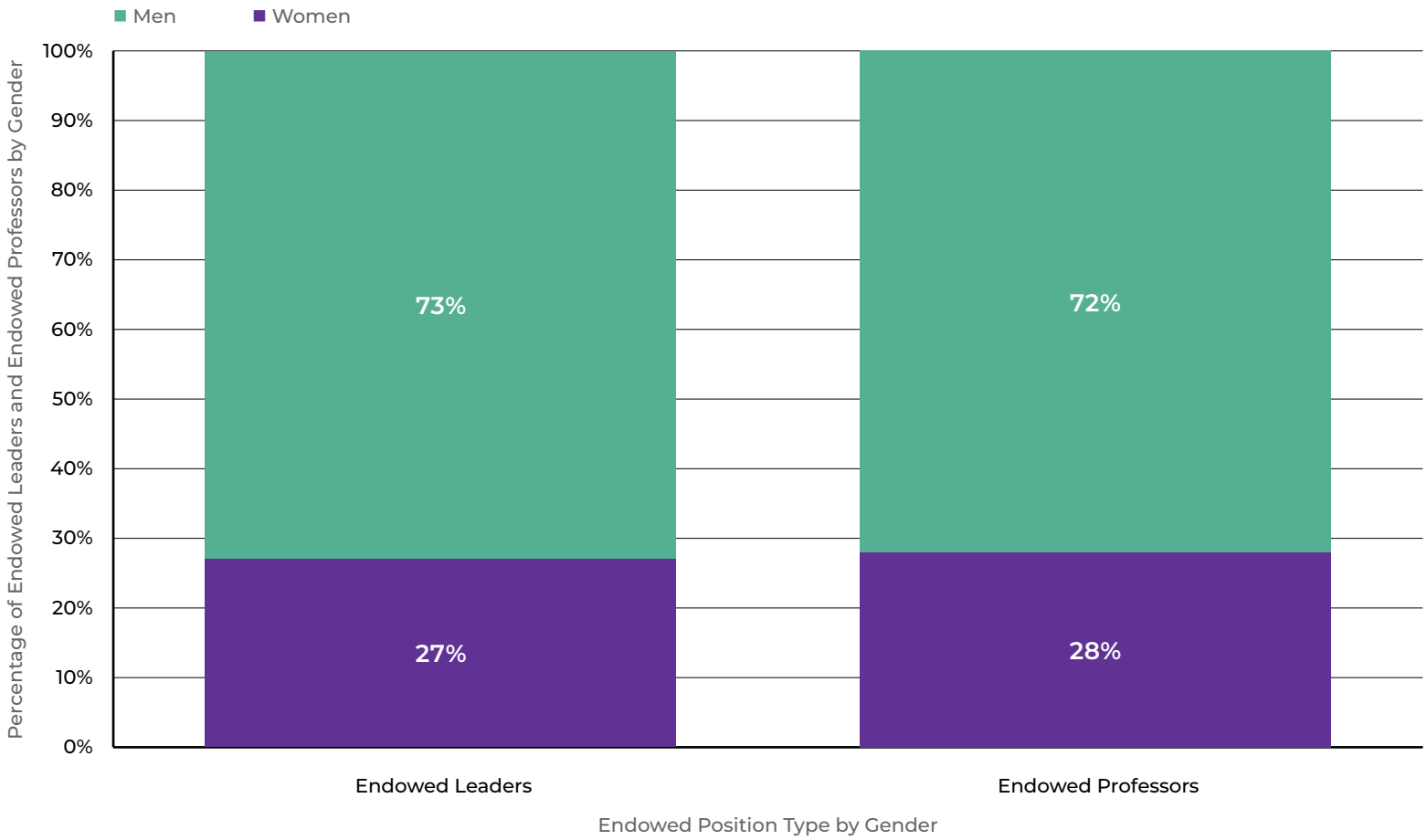
KEY TAKEAWAY

Women's representation among center and institute directors increased from 30% in 2018 to 32% in 2023.

Source: AAMC 2023 WIMS Benchmarking Survey and AAMC State of Women in Medicine report from 2018-2019. Data from the AAMC 2023 WIMS Benchmarking Survey reflected counts as of July 1, 2023 (n=73 institutions).

Note: These data were not collected before 2018.

Figure 21. Endowed Leaders and Endowed Professors by Gender, 2023

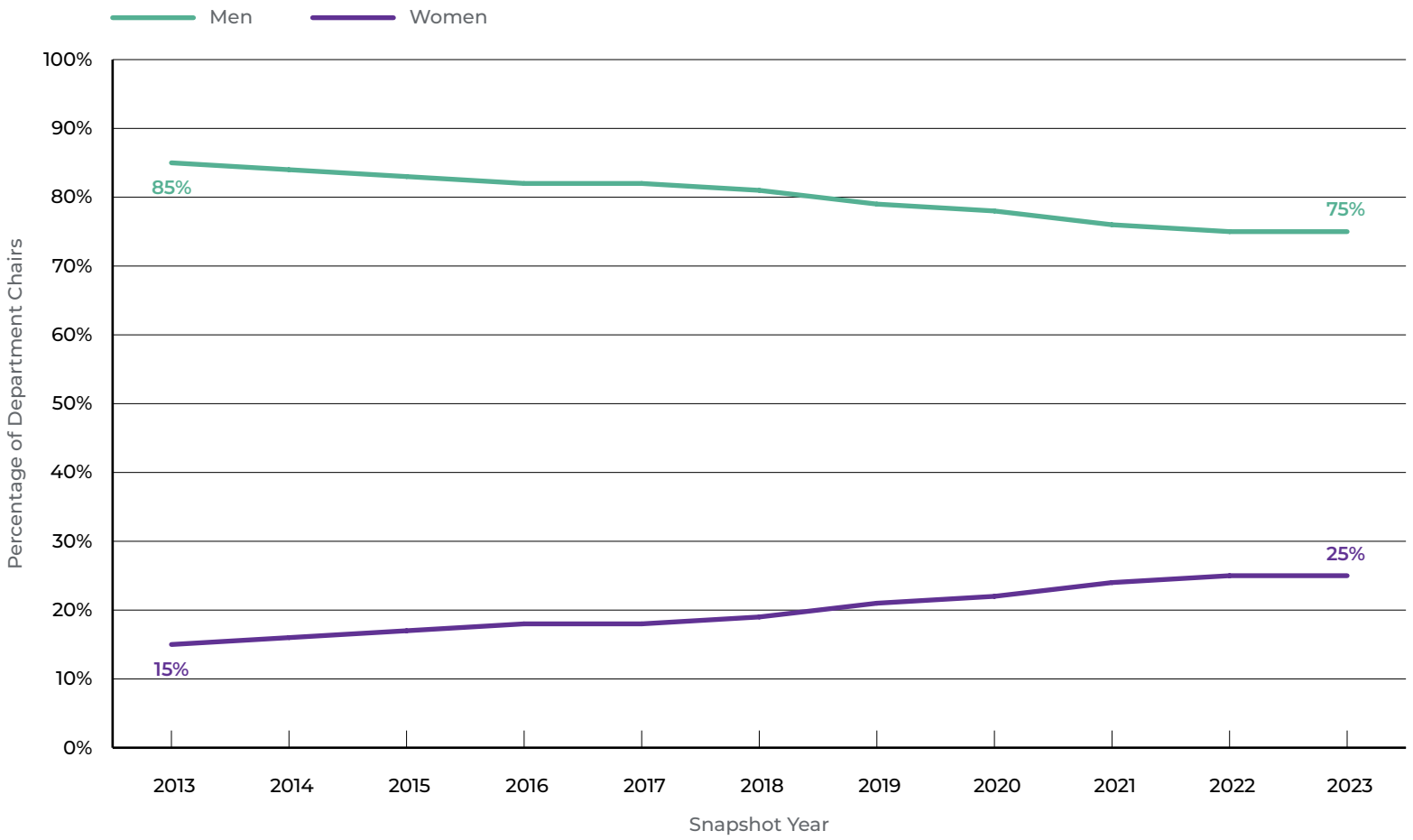


KEY TAKEAWAY

Women held fewer than one-third of the endowed leader or professor positions. On average, men were awarded $375,000 annually for leadership roles and $412,000 annually for professorships. Women, on average, were awarded $122,000 annually for leadership roles and $194,000 annually for professorships.

Source: AAMC 2023 WIMS Benchmarking Survey. Data reflected counts as of July 1, 2023 (59 institutions provided counts of endowed positions; 40 institutions provided financial information). Dollar amounts were rounded to the nearest thousand.

Figure 22. Percentage of Department Chairs by Gender, 2013-2023



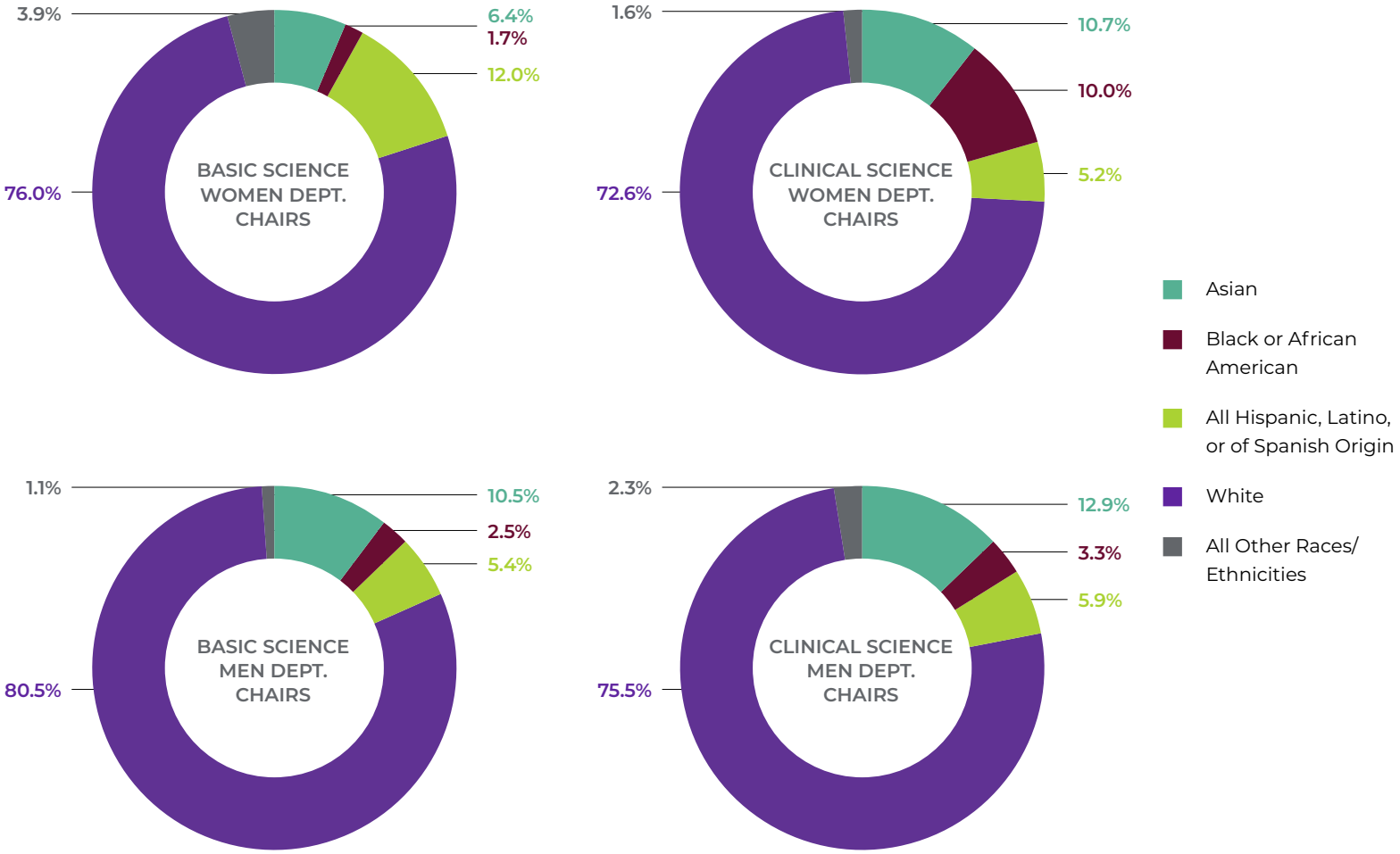
KEY TAKEAWAY

The percentage of women serving as department chairs rose from 15% in 2013 to 25% in 2023.

Source: AAMC Faculty Roster, Dec. 31, 2023, snapshot. Data represent Dec. 31 snapshots for each year presented. U.S. Medical School Faculty Tables: Trends of Department Chairs by Chair Type and Gender. https://www.aamc.org/data-reports/faculty-institutions/interactive-data/us-medical-school-chairs-trends

Note: This figure includes permanent chairs, co-chairs, interim chairs, and acting chairs. It excludes 21 department chairs with missing gender data.

Figure 23. Department Chairs by Gender, Race/Ethnicity, and Department Type, 2023



KEY TAKEAWAY

While a large majority of both women and men department chairs identified as White, a larger percentage of women department chairs identified with a race/ethnicity considered underrepresented in medicine when compared with men.

Source: AAMC Faculty Roster, Dec. 31, 2023, snapshot. U.S. Medical School Faculty Tables: Supplemental Table C: Department Chairs by Department, Gender, and Race/Ethnicity. https://www.aamc.org/data-reports/faculty-institutions/report/faculty-roster-us-medical-school-faculty

Note: This figure excludes one department chair with missing gender data and 42 department chairs with missing race/ethnicity data. The "All Hispanic, Latino, or of Spanish Origin" breakout included all chairs who were reported as Hispanic, Latino, or of Spanish Origin alone or in combination with another race/ethnicity. The "All Other Races/Ethnicities" breakout included chairs who were reported as American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, or other race/ethnicity and chairs who were reported as having more than one race/ethnicity (but who were not Hispanic). In this figure, "underrepresented in medicine" includes chairs who were American Indian or Alaska Native; Asian; Black or African American; Hispanic, Latino, or of Spanish Origin; Native Hawaiian or Other Pacific Islander; of multiple races/ethnicities; or of other races/ethnicities..

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Table 2. Percentage of Women Faculty and Department Chairs by Department, 2023

	Department	Women as a Percentage of All Full-Time Faculty	Women as a Percentage of Full Professors	Women as a Percentage of Department Chairs
BASIC SCIENCES	Anatomy	38%	32%	43%
	Biochemistry	31%	24%	28%
	Microbiology	37%	27%	27%
	Pathology (Basic Science)	43%	33%	38%
	Pharmacology	34%	24%	27%
	Physiology	32%	24%	24%
	Other Basic Sciences	42%	32%	29%
CLINICAL SCIENCES	Anesthesiology	37%	23%	18%
	Dermatology	54%	37%	39%
	Emergency Medicine	39%	23%	15%
	Family Practice	56%	43%	33%
	Internal Medicine	43%	28%	21%
	Neurology	44%	28%	18%
	Obstetrics and Gynecology	69%	47%	38%
	Ophthalmology	43%	27%	19%
	Orthopaedic Surgery	22%	12%	10%
	Otolaryngology	37%	19%	10%
	Pathology (Clinical)	45%	35%	31%
	Pediatrics	62%	42%	41%
	Physical Medicine and Rehabilitation	50%	33%	25%
	Psychiatry	56%	38%	34%
	Public Health and Preventive Medicine	55%	44%	52%
	Radiology	30%	24%	21%
	Surgery	29%	15%	8%
	Other Clinical Sciences	41%	31%	23%

Red highlights indicate departments in which the percentage of women department chairs is below the national average of 25%

KEY TAKEAWAY

The department with the greatest difference between women's representation within faculty and among department chairs was Obstetrics and Gynecology. While 69% of full-time faculty in Obstetrics and Gynecology were women, only 38% of Obstetrics and Gynecology department chairs were women.

Source: AAMC Faculty Roster, Dec. 31, 2023, snapshot. U.S. Medical School Faculty Tables: Supplemental Table C: Department Chairs by Department, Gender, and Race/Ethnicity; U.S. Medical School Faculty Tables: Table 13. Faculty by Gender, Rank, and Department. https://www.aamc.org/data-reports/faculty-institutions/report/faculty-roster-us-medical-school-faculty

Note: This figure excludes 122 faculty and one chair with missing gender data.

Table 3. Administrative Faculty and Staff Leaders by Gender, Race/Ethnicity, and Decanal Rank, 2023

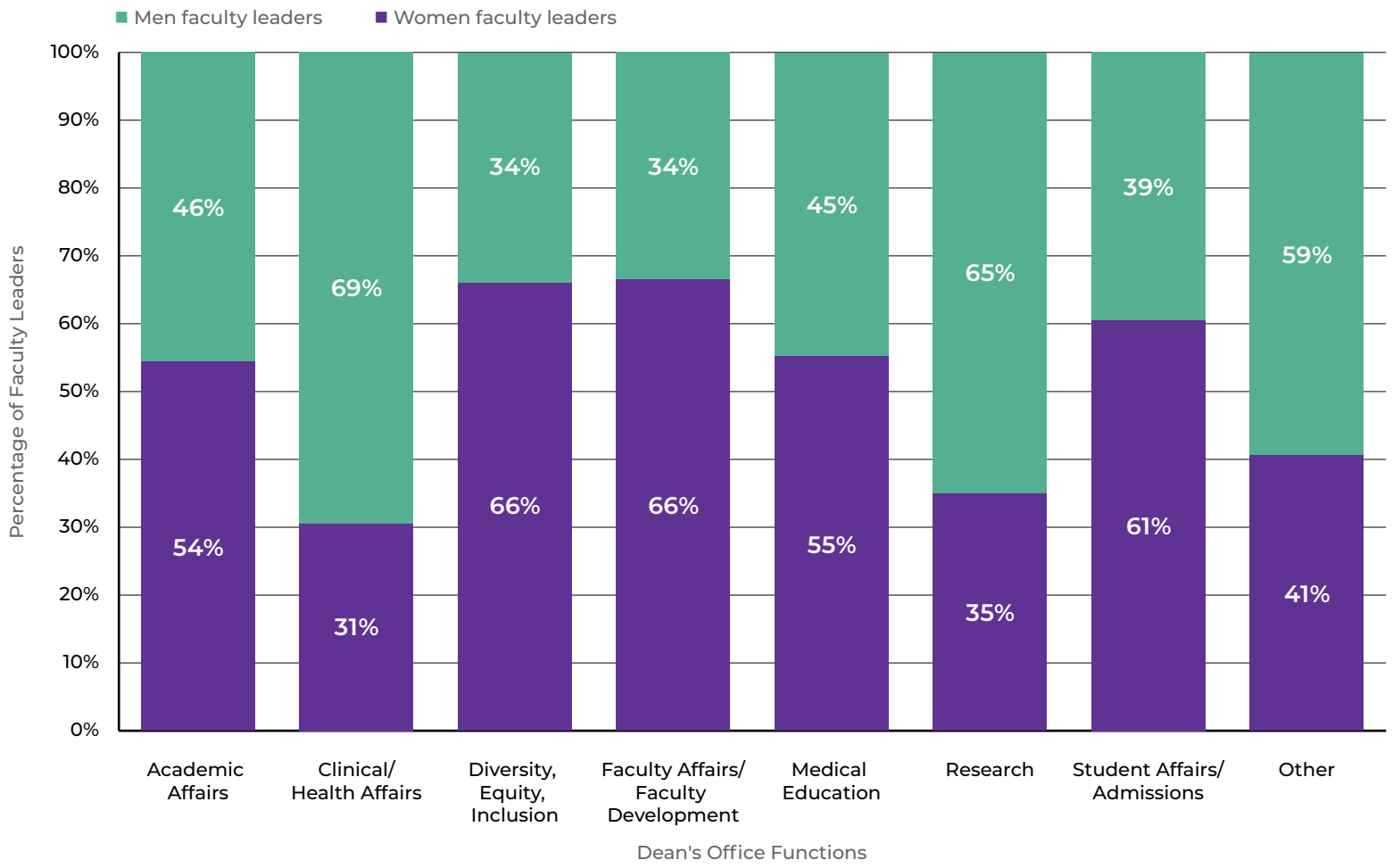
	Senior Associate Dean Women (45%)	Senior Associate Dean Men (55%)	Associate Dean Women (77%)	Associate Dean Men (49%)	Assistant Dean Women (57%)	Assistant Dean Men (43%)
American Indian or Alaska Native	0.6%	0.0%	0.2%	0.0%	0.0%	0.4%
Asian	7.5%	4.7%	7.9%	11.5%	14.5%	10.5%
Black or African American	12.6%	8.4%	15.5%	9.5%	12.0%	9.1%
Hispanic, Latino, or of Spanish Origin	5.7%	5.1%	5.9%	5.1%	6.0%	6.5%
Native Hawaiian or Other Pacific Islander	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
White	68.4%	80.9%	67.6%	71.5%	65.0%	70.7%
Multiple Race/ Ethnicity-Hispanic	2.9%	0.5%	0.7%	0.3%	0.5%	1.1%
Multiple Race/ Ethnicity-Non-Hispanic	1.7%	0.0%	0.2%	0.3%	0.0%	0.0%
Other Race/Ethnicity	0.6%	0.5%	2.0%	1.8%	1.9%	1.8%

KEY TAKEAWAY

At each decanal rank, a larger percentage of women than men identified with a race/ethnicity other than White.

Source: AAMC 2023 WIMS Benchmarking Survey. Data reflected leadership counts as of July 1, 2023 (n=77 institutions).
Note: 2023 data includes interim, acting, and permanent roles.

Figure 24. Administrative Faculty Leaders by Gender and Office, 2023

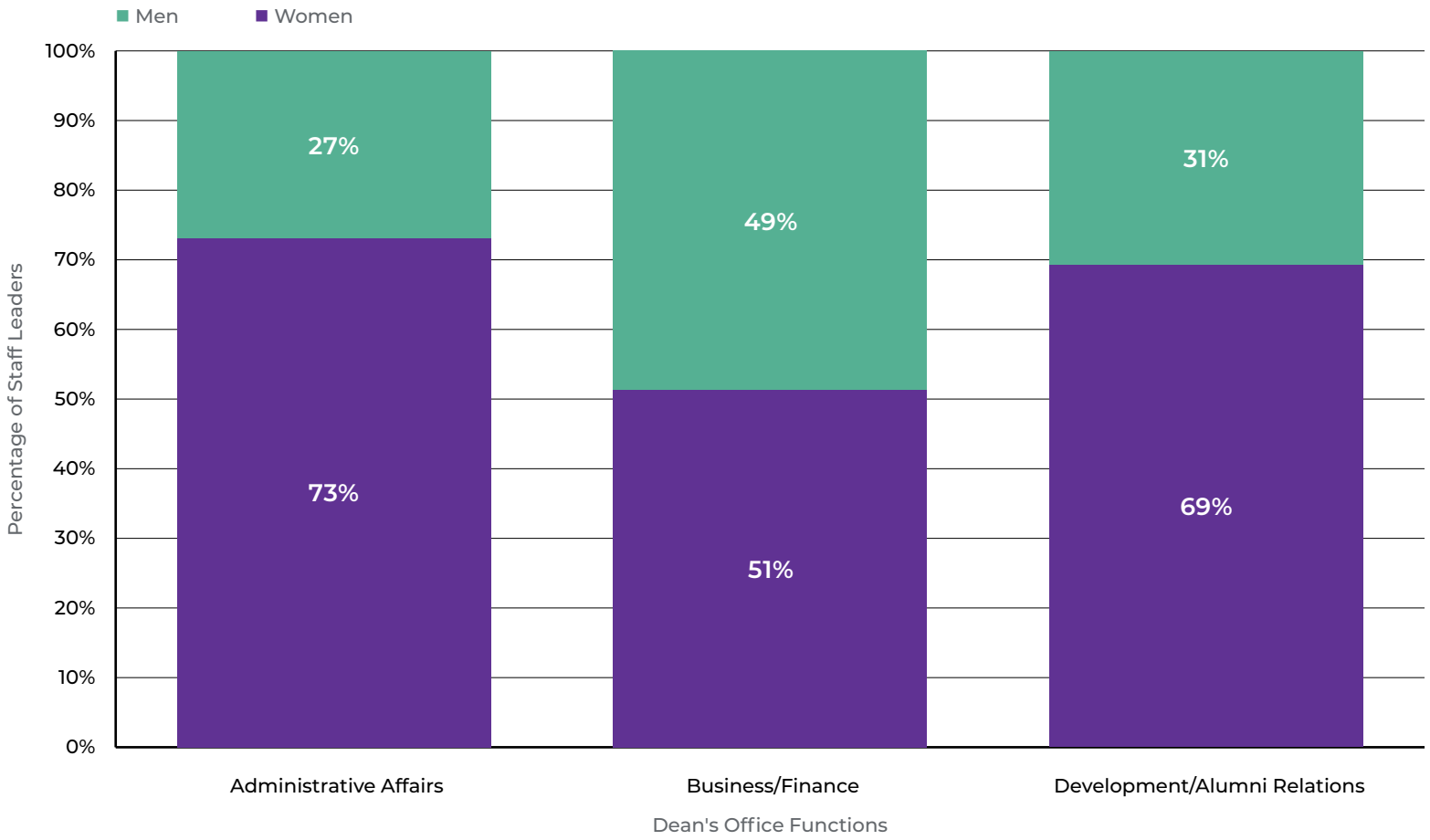


KEY TAKEAWAY

Women represented approximately one-third of leaders in research and clinical affairs but represented two-thirds of leaders in diversity and faculty affairs.

Source: AAMC 2023 WIMS Benchmarking Survey. Data reflected counts as of July 1, 2023 (n=80 institutions).
Note: Administrative Affairs, Business Affairs, and Development/Alumni Relations have been removed due to small sample sizes.

Figure 25. Administrative Staff Leaders by Gender and Office, 2023



KEY TAKEAWAY

Women represented a large majority of staff leaders in administrative affairs and development/ alumni relations offices.

Source: AAMC 2023 WIMS Benchmarking Survey. Data reflected counts as of July 1, 2023 (n=69 institutions).

Note: Academic Affairs; Clinical/Health Affairs; Diversity, Equity, and Inclusion; Faculty Affairs/Development; Medical Education; Research Affairs; and Student Affairs/Admissions have been removed due to small sample sizes.

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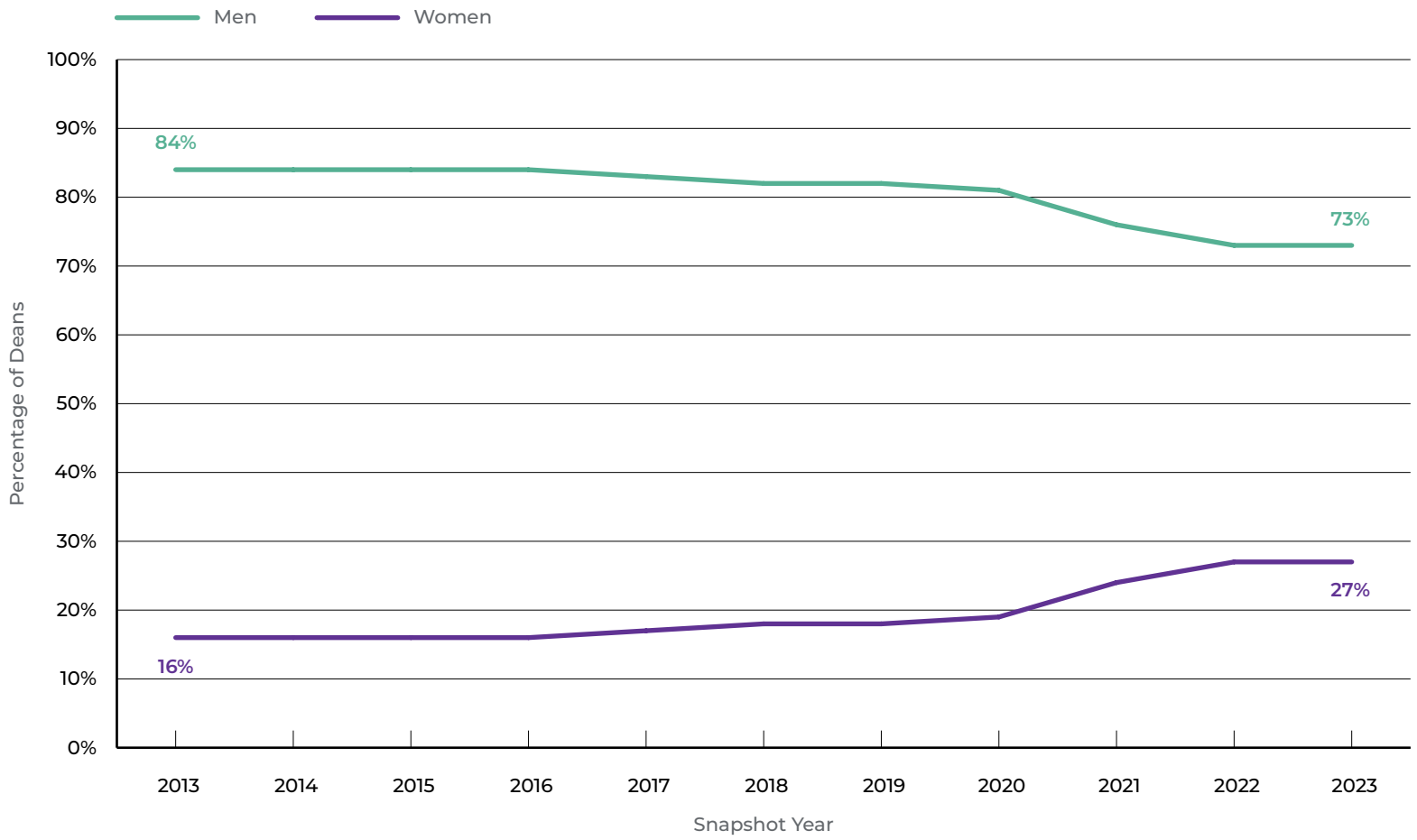
Figure 26. Percentage of Medical School Deans by Gender, 2013-2023



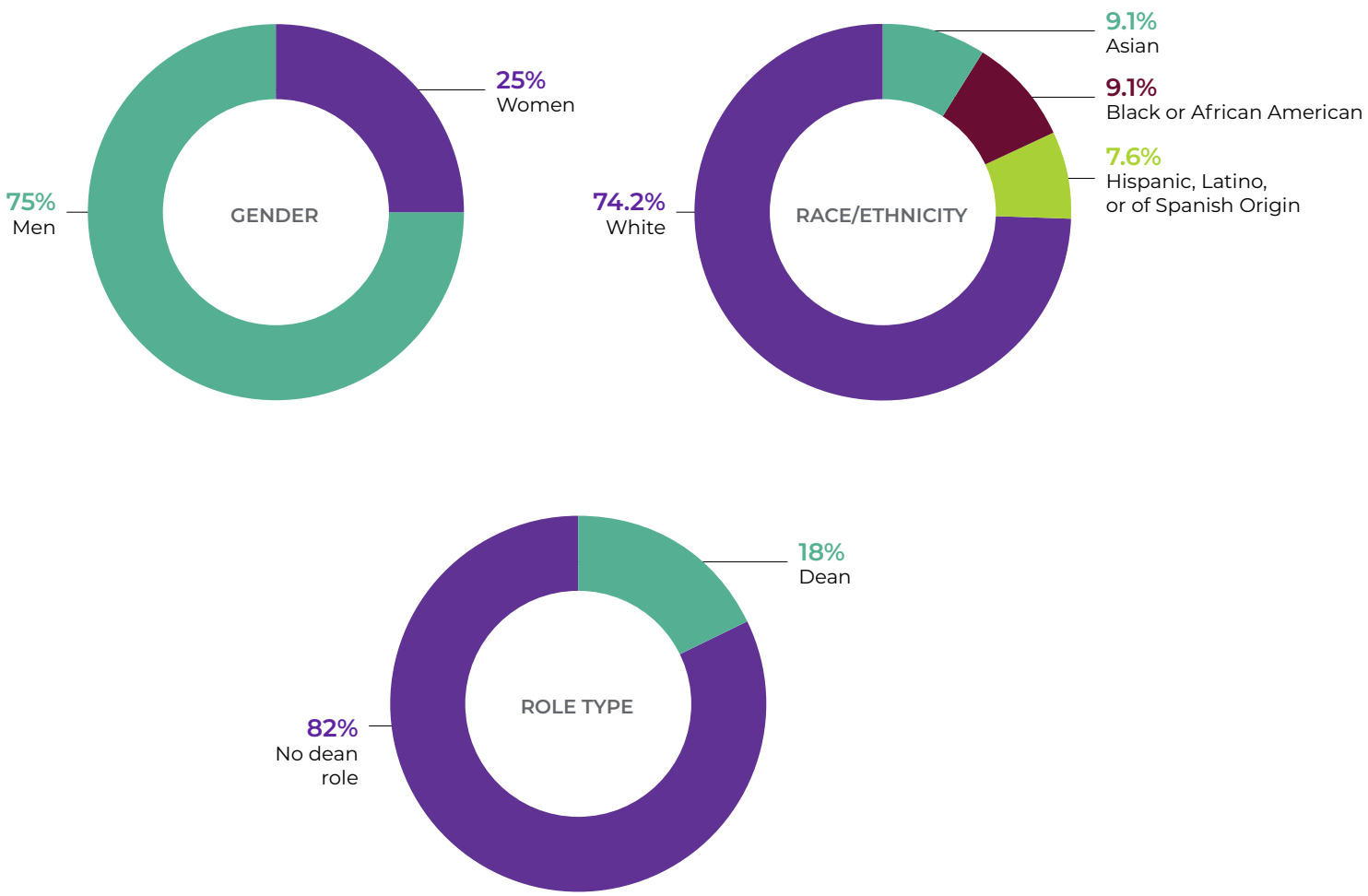
KEY TAKEAWAY

Women represented 27% of medical school deans in 2023, compared with 16% in 2013. The proportion of women deans increased five percentage points from 2020 to 2021.

Source: AAMC Council of Deans data as of January 2024. Data represent Dec. 31 snapshots for each year presented. U.S. Medical School Faculty Tables: Trends of Medical School Deans by Dean Type and Gender. https://www.aamc.org/data-reports/faculty-institutions/data/us-medical-school-deans-trends-type-and-gender

Note: This figure includes permanent deans, interim deans, and acting deans.

Figure 27. Health System Leadership by Gender, Race/Ethnicity, and Role Type, 2023



KEY TAKEAWAY

Approximately 25% of health system leaders were women and 26% of health system leaders identified with a race or ethnicity other than White.

Source: AAMC 2023 WIMS Benchmarking Survey. Data reflected counts as of July 1, 2023 (75 institutions provided gender data, 66 institutions provided race/ethnicity data, and 76 institutions provided role-based data).

Note: Health system leadership was defined as being the top leader of a medical school's primary affiliated health system (e.g., "CEO," "President"). A medical school's primary affiliated health system was defined as the system at which the majority (at least 50%) of the physicians practice and see patients.

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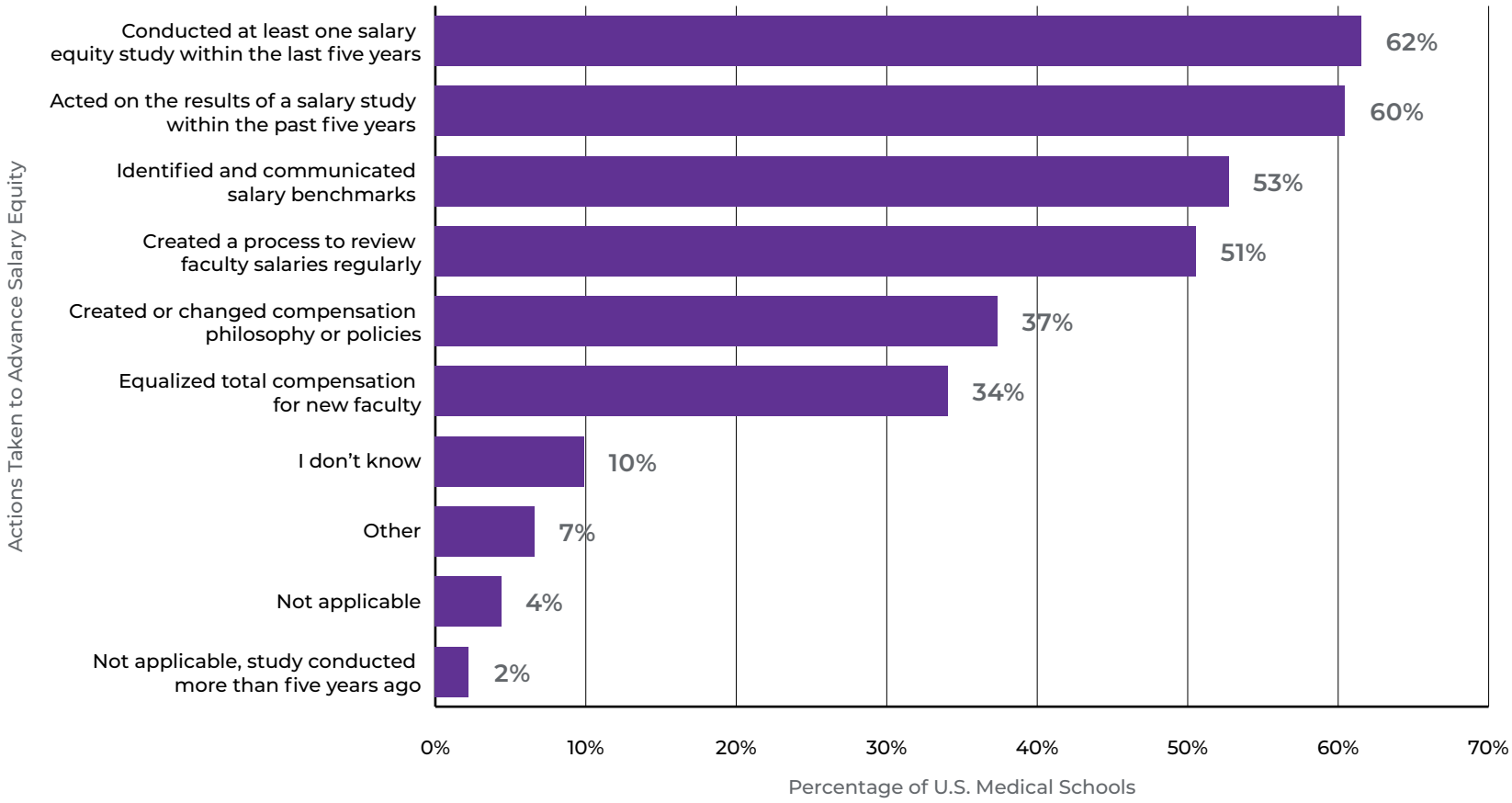
Figure 28. Actions Taken by U.S. Medical Schools to Advance Salary Equity, 2023

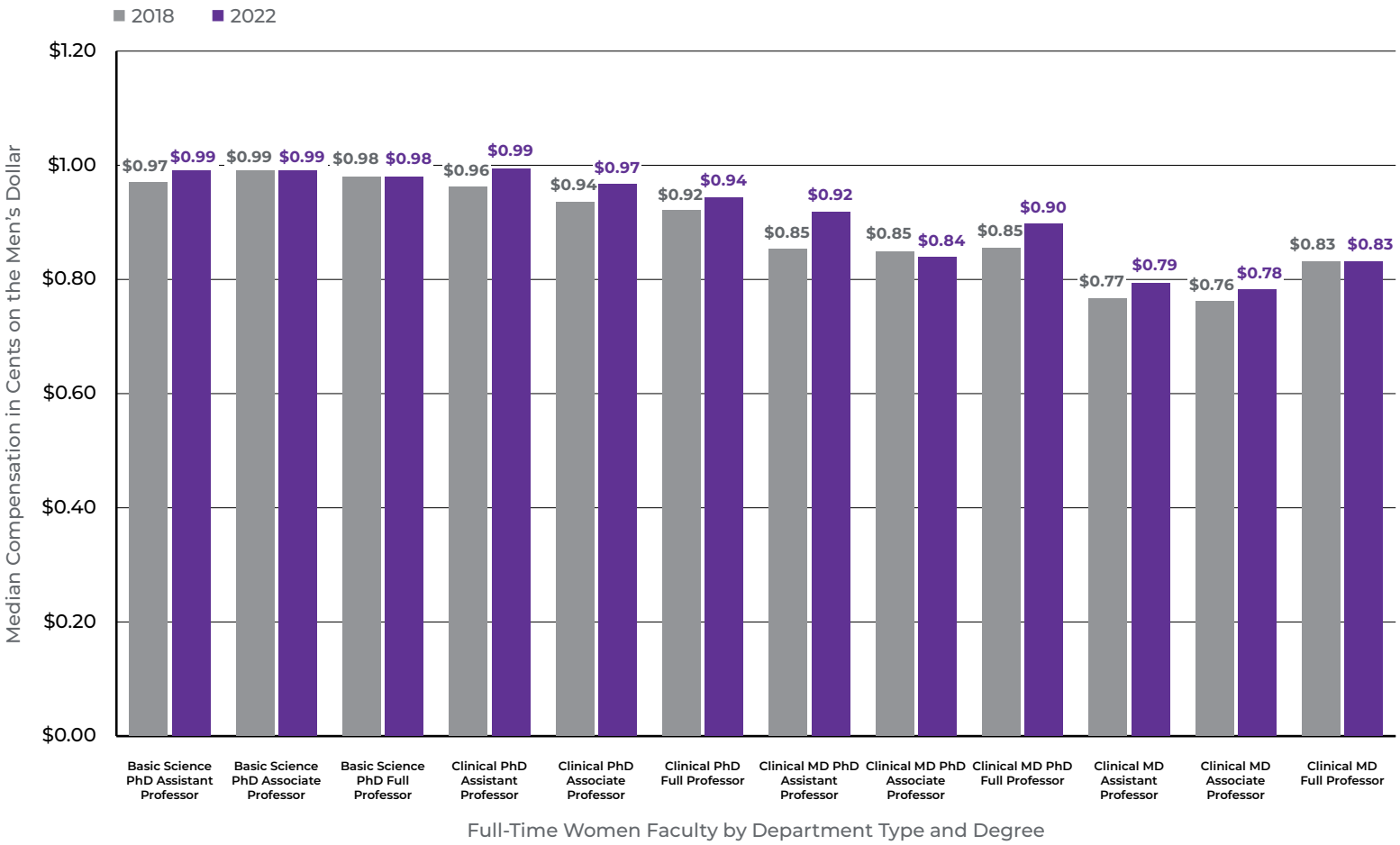


KEY TAKEAWAY

Approximately 60% of respondents reported that their medical school conducted and acted on the results of a salary equity study in the last five years.

Source: AAMC 2023 WIMS Benchmarking Survey. Data reflected responses as of July 1, 2023 (n=88 institutions).

Figure 29. Median Compensation in Cents on the Dollar for Women Faculty Compared With Men by Department Type, Degree, and Rank, FY 2018 and FY 2022

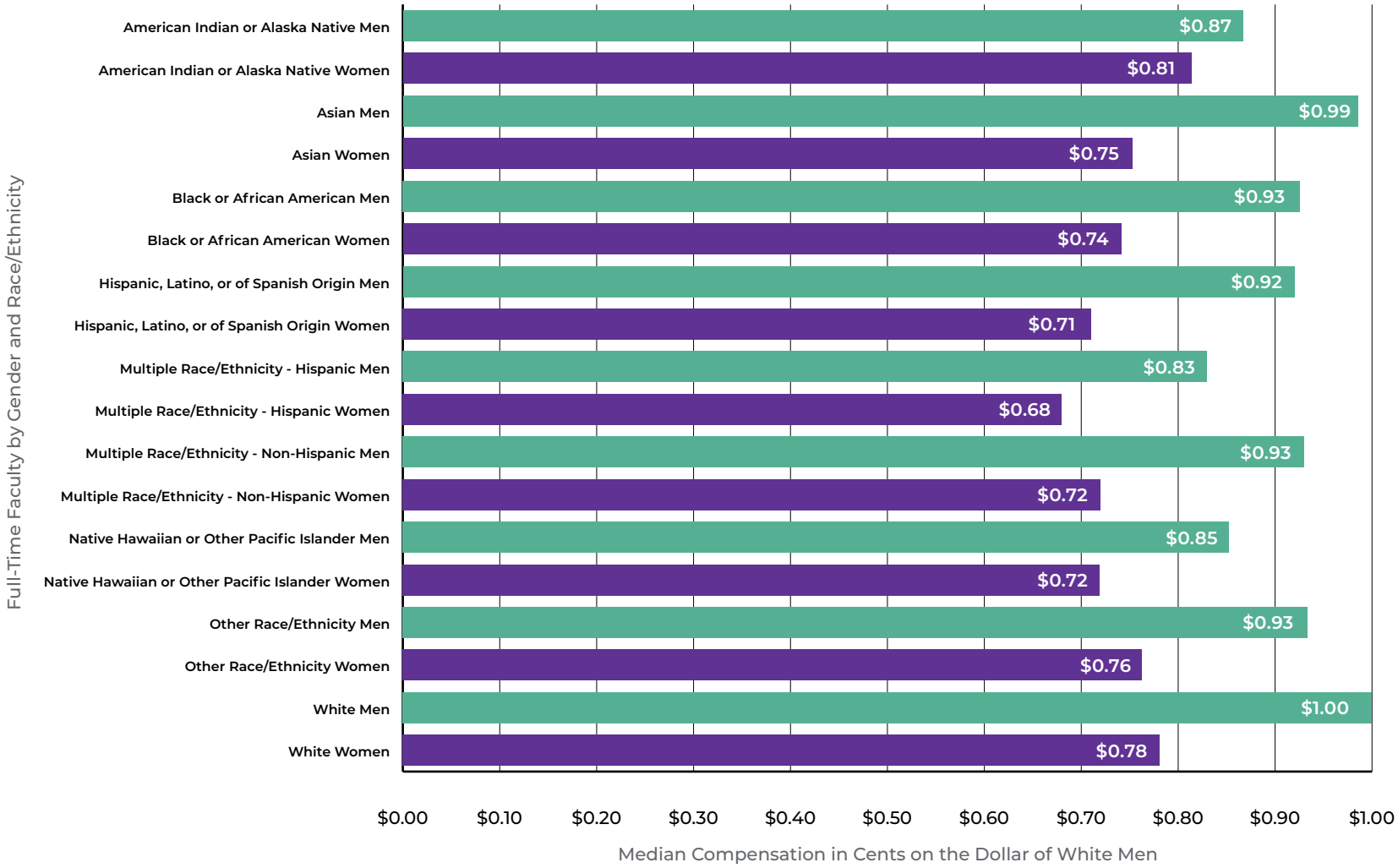


KEY TAKEAWAY

From FY 2018 to FY 2022, median compensation in cents on the dollar for women increased in all cases except among associate professors and full professors in the basic sciences with PhD or other doctoral degrees, associate professors with MD and PhD degrees in the clinical sciences, and full professors with MD degrees in the clinical sciences.

Source: FY 2018 AAMC Faculty Salary Survey, FY 2022 AAMC Faculty Salary Survey.

Figure 30. Median Compensation in Cents on the Dollar for Faculty in Clinical Departments/ Specialties With an MD or Equivalent Degree at the Assistant, Associate, and Full Professor Ranks by Gender and Race/Ethnicity Compared With White Men, FY 2022

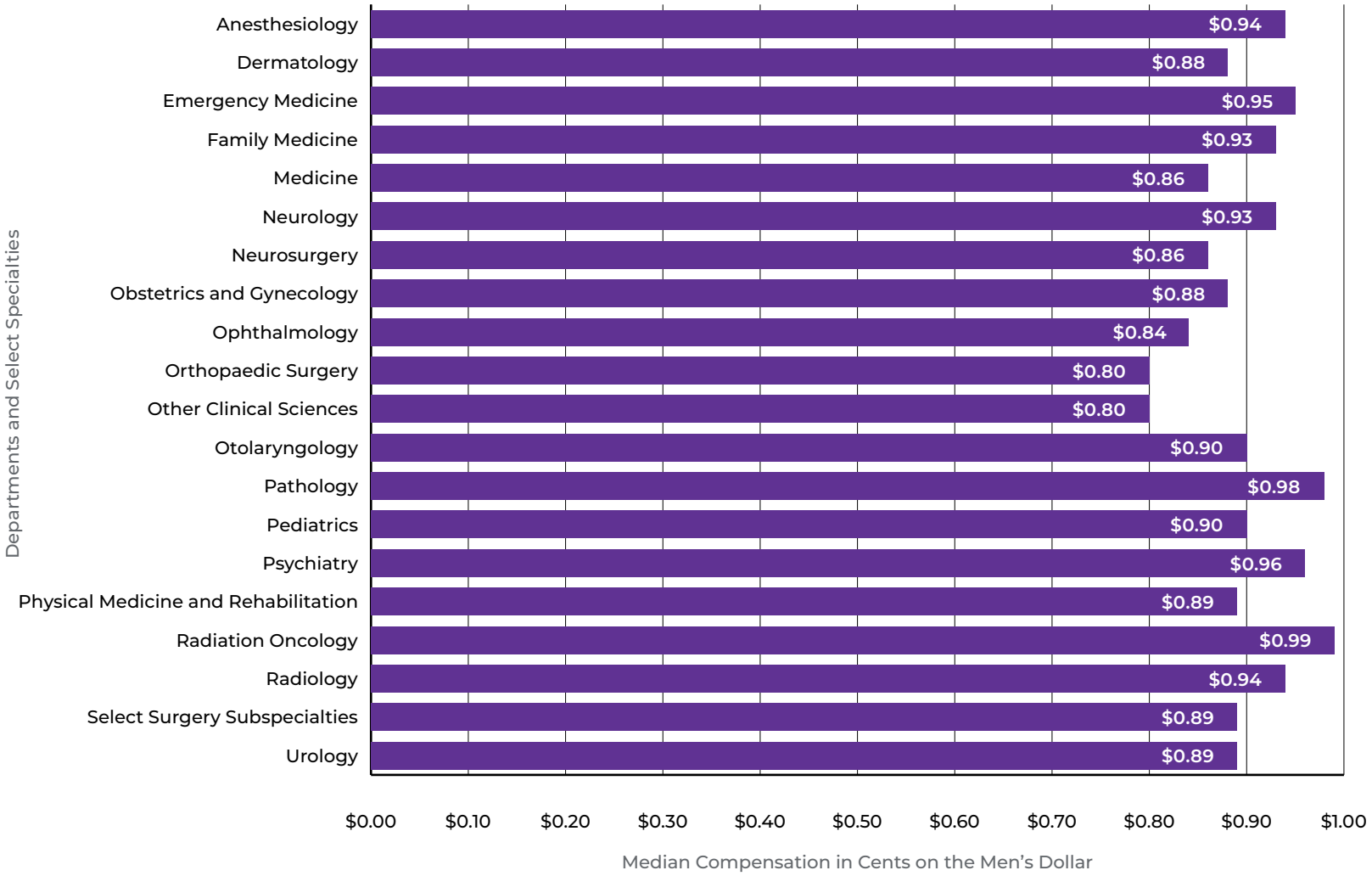


KEY TAKEAWAY

When looking at MD faculty across professorial ranks in the clinical sciences, men were paid more than women of the same race and ethnicity.

Source: FY 2022 AAMC Faculty Salary Survey.
Note: Professorial ranks in this analysis included faculty at the assistant, associate, and full professor ranks.

Figure 31. Median Compensation in Cents on the Dollar for Women Faculty Compared With Men at the Assistant Professor Rank With an MD or Equivalent Degree by Select Specialties, FY 2022

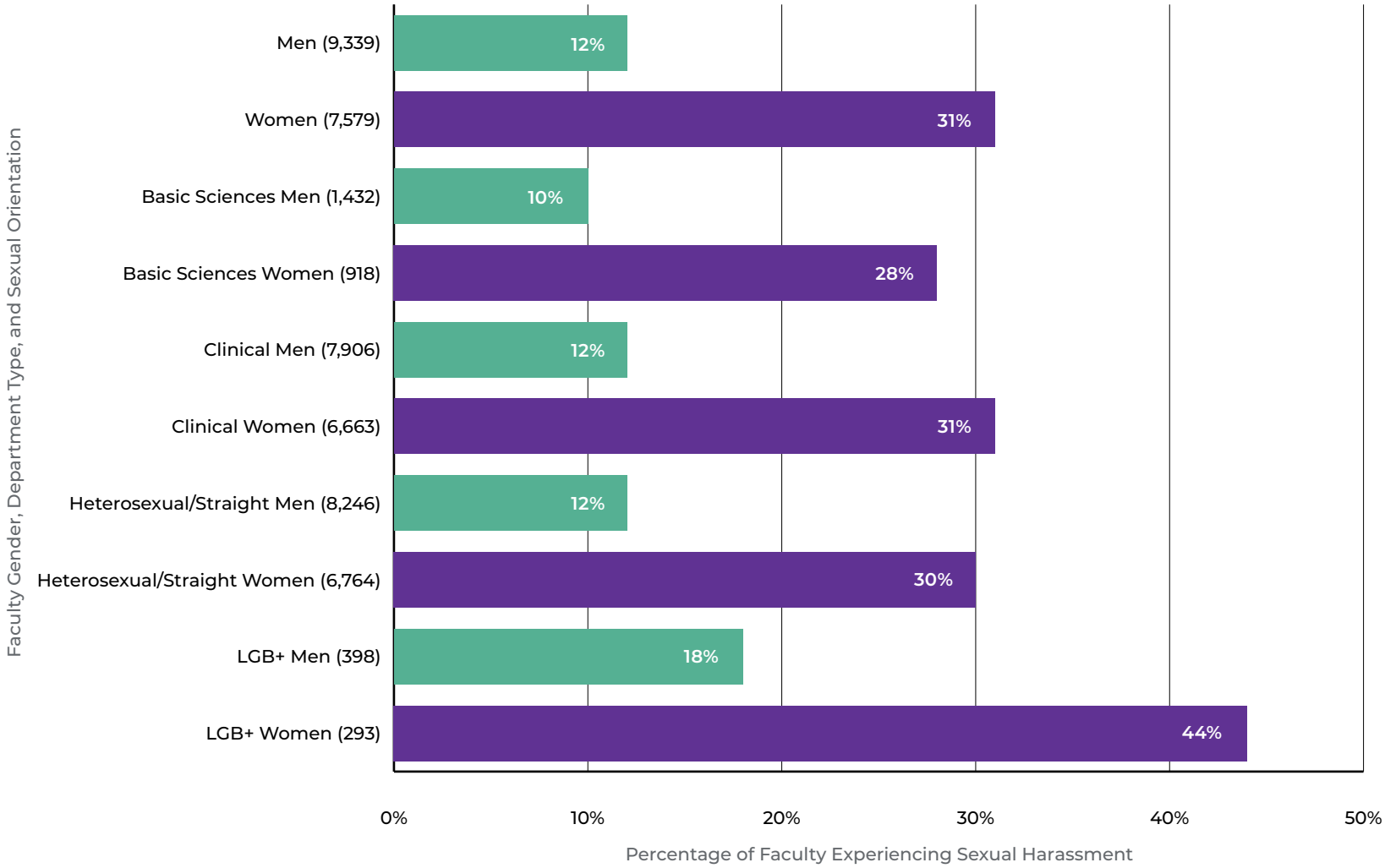


KEY TAKEAWAY

Among select clinical specialties, assistant professor women with MD or equivalent degrees saw the most equitable salaries within departments of radiation oncology, at $0.99 on the dollar, and the least equitable salaries within departments of orthopaedic surgery and other clinical sciences, at $0.80 on the dollar, compared with men.

Source: FY 2022 AAMC Faculty Salary Survey.

Figure 32. Faculty Experiencing Sexual Harassment in the Past 12 Months by Gender, Department Type, and Sexual Orientation



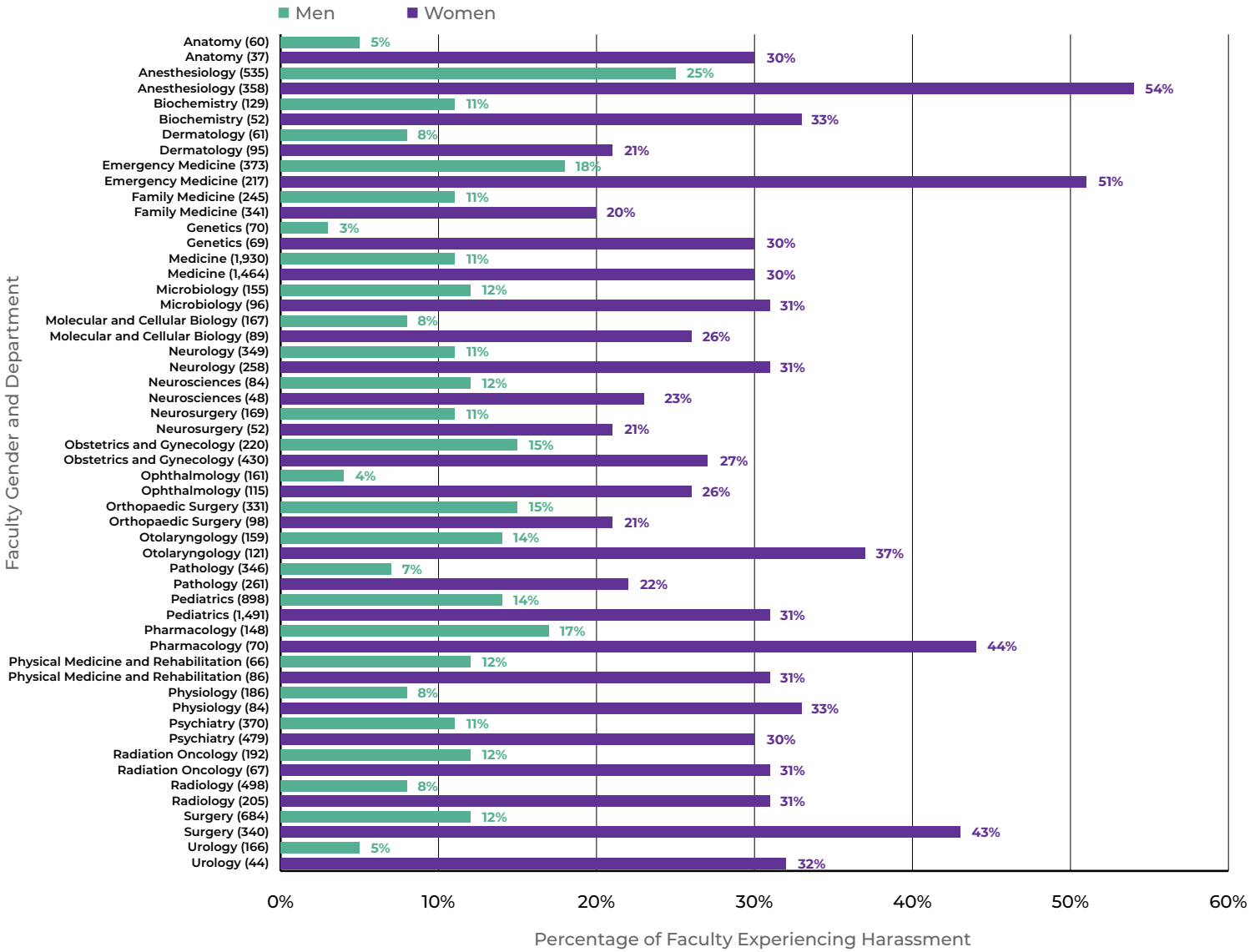
KEY TAKEAWAY

Slightly less than one-third of women reported experiencing at least one incident of gender harassment in the past 12 months, compared with 12% of men.

Source: Data are from the AAMC StandPoint Faculty Engagement Survey and were collected between May 2020 and July 2023 from 27 institutions representing 18,797 faculty respondents.

Note: The StandPoint Faculty Engagement Survey defines gender harassment as experiences of at least one of the following unwanted behaviors by another faculty or staff member over the past 12-month period: telling of sexist stories or jokes that were offensive to you; making offensive remarks about your appearance, body, or sexual activities; referring to people of your gender in offensive, insulting, or vulgar terms; putting down or acting in a condescending way toward you because of your gender; or sending offensive messages based on your gender or showing you obscene images.

Figure 33. Faculty Experiencing Sexual Harassment in the Past 12 Months by Gender and Department, 2023



KEY TAKEAWAY

Among both men and women, faculty in departments of Anesthesiology reported experiencing gender harassment at higher rates than any other department.

Source: Data are from the AAMC StandPoint Faculty Engagement Survey and were collected between May 2020 and July 2023 from 27 institutions representing 18,797 faculty respondents.

Note: The StandPoint Faculty Engagement Survey defines gender harassment as experiences of at least one of the following unwanted behaviors by another faculty or staff member over the past 12-month period: telling of sexist stories or jokes that were offensive to you; making offensive remarks about your appearance, body, or sexual activities; referring to people of your gender in offensive, insulting, or vulgar terms; putting down or acting in a condescending way toward you because of your gender; or sending offensive messages based on your gender or showing you obscene images.

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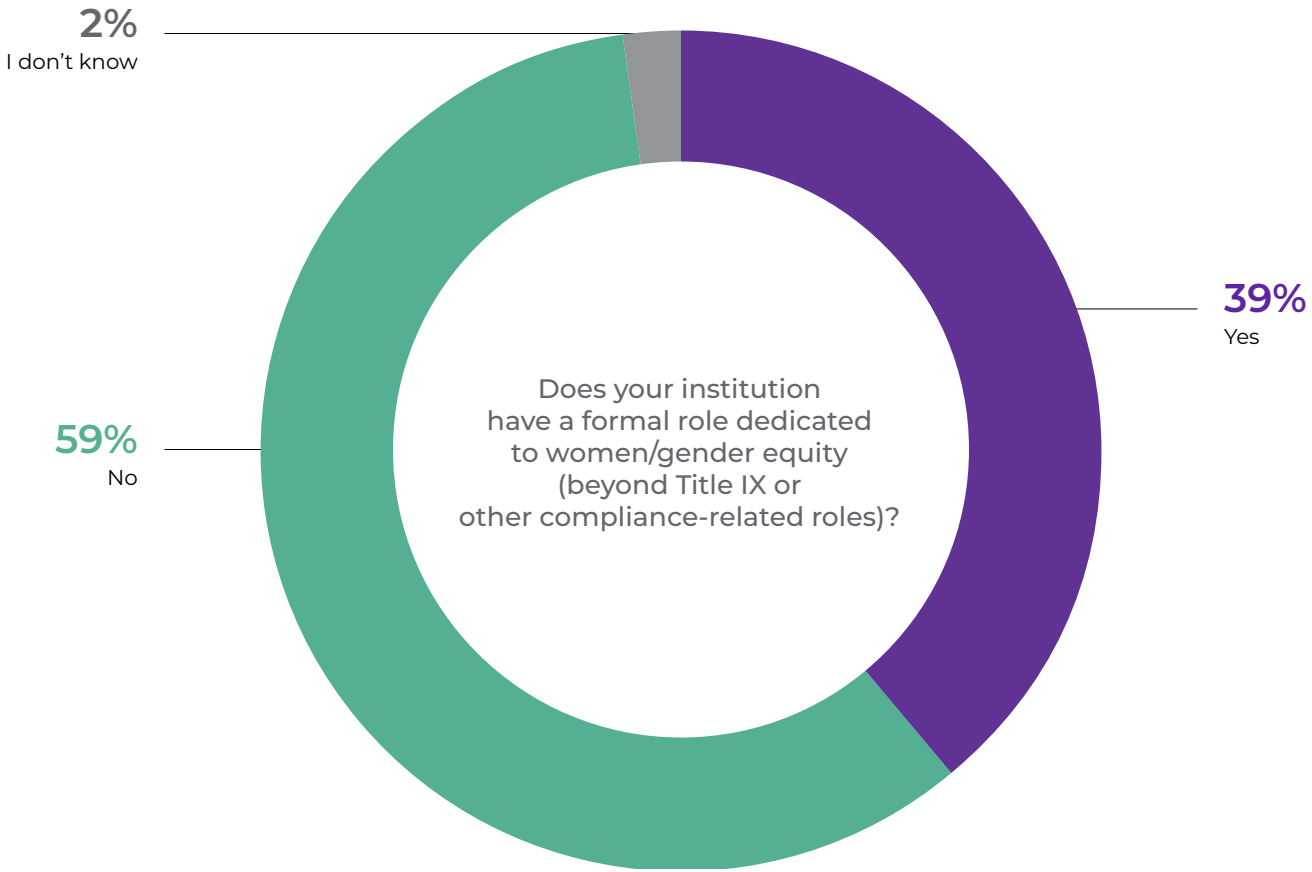
Figure 34. Institutional Roles to Support Women Faculty, 2023



KEY TAKEAWAY

Slightly more than one-third of responding institutions (39%) had a formal role dedicated to women and gender equity.

Source: AAMC 2023 WIMS Benchmarking Survey. Data reflected responses as of July 1, 2023 (n=90 institutions).

Table 4. Institutional Resources to Support Women Faculty, 2023

Institutional Resources Offered to Support Local Women in Medicine and Science (WIMS) Program as of July 1, 2023	% Yes	% No	% Not Applicable
Dedicated effort for leader/chair of local WIMS organization	34%	45%	21%
Financial support for external faculty/leadership development programs (e.g., AAMC Early and Mid-Career Seminar, Executive Leadership in Academic Medicine [ELAM] program)	88%	3%	9%
Financial support for internal faculty/leadership development programs (e.g., mentoring programs, speaker series, networking)	96%	1%	3%
Other gender equity/WIMS institutional resources	35%	26%	39%

KEY TAKEAWAY

While most responding medical schools dedicated resources for women's professional and leadership development, only one-third had established formal efforts to support the leaders of their Women in Medicine and Science organization.

Source: AAMC 2023 WIMS Benchmarking Survey. Data reflected responses as of July 1, 2023 (n=68 institutions).

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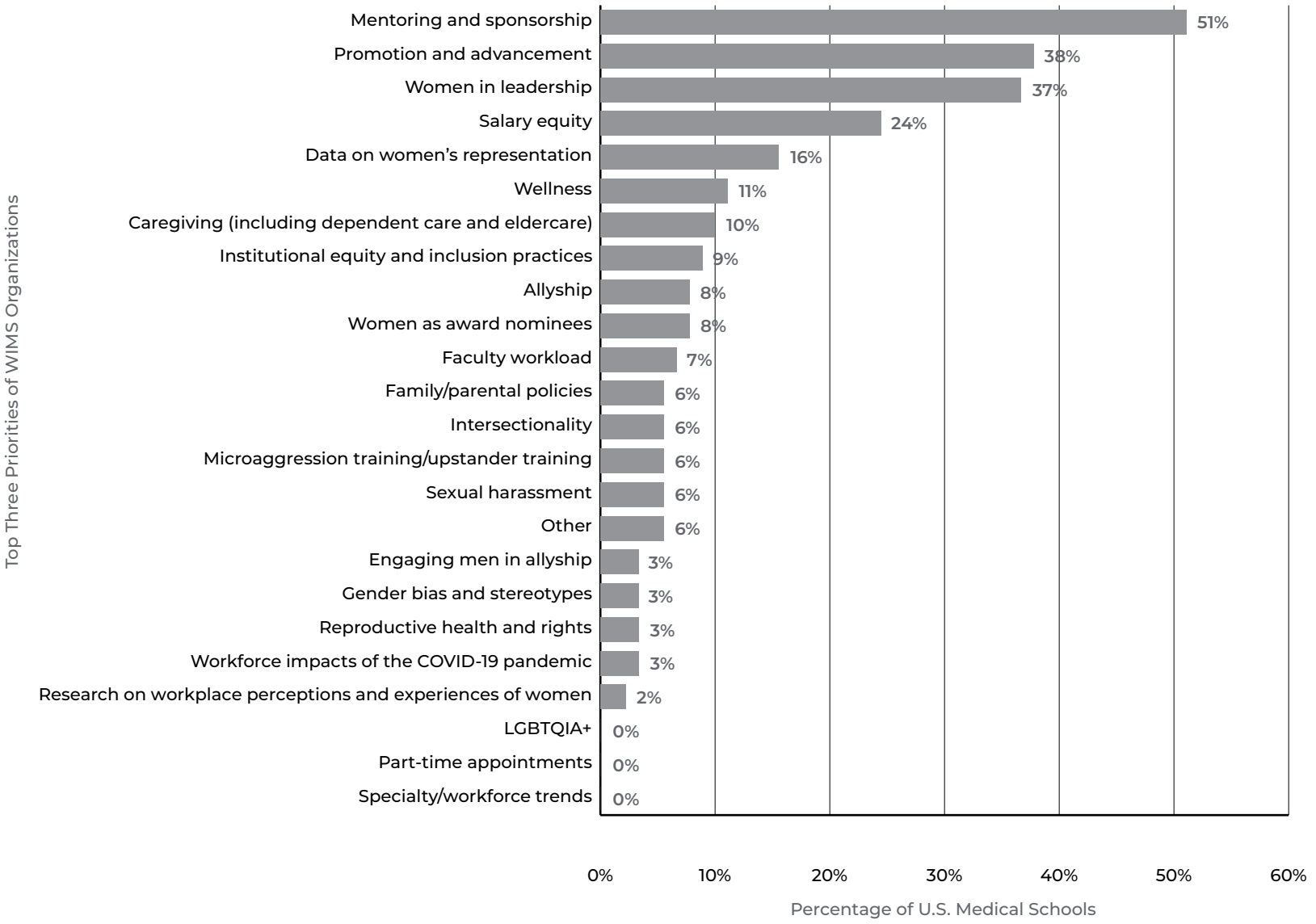
Figure 35. Top Priorities of U.S. Medical School WIMS Organizations, 2023



KEY TAKEAWAY

When asked about the priorities of their local Women in Medicine and Science (WIMS) organizations, 51% identified mentoring and sponsorship as a key issue.

Source: AAMC 2023 WIMS Benchmarking Survey (n=79 institutions).
Note: Respondents were asked to select up to three choices to reflect the top priorities of their WIMS organizations for the next one to two years.

Discussion

These findings provide powerful insight into the progress we have made but also the work we have yet to do to achieve gender equity in academic medicine. More women are occupying key leadership positions, indicating that institutional efforts in this area are starting to work. Yet, we still see low proportions of women in mid-level leadership positions and other roles with power and authority, such as division chiefs and endowed positions, and there have been only modest improvements to pay equity and the workplace climate for marginalized groups. To build on this recent progress and accelerate our efforts toward gender equity, we must address a few key areas.

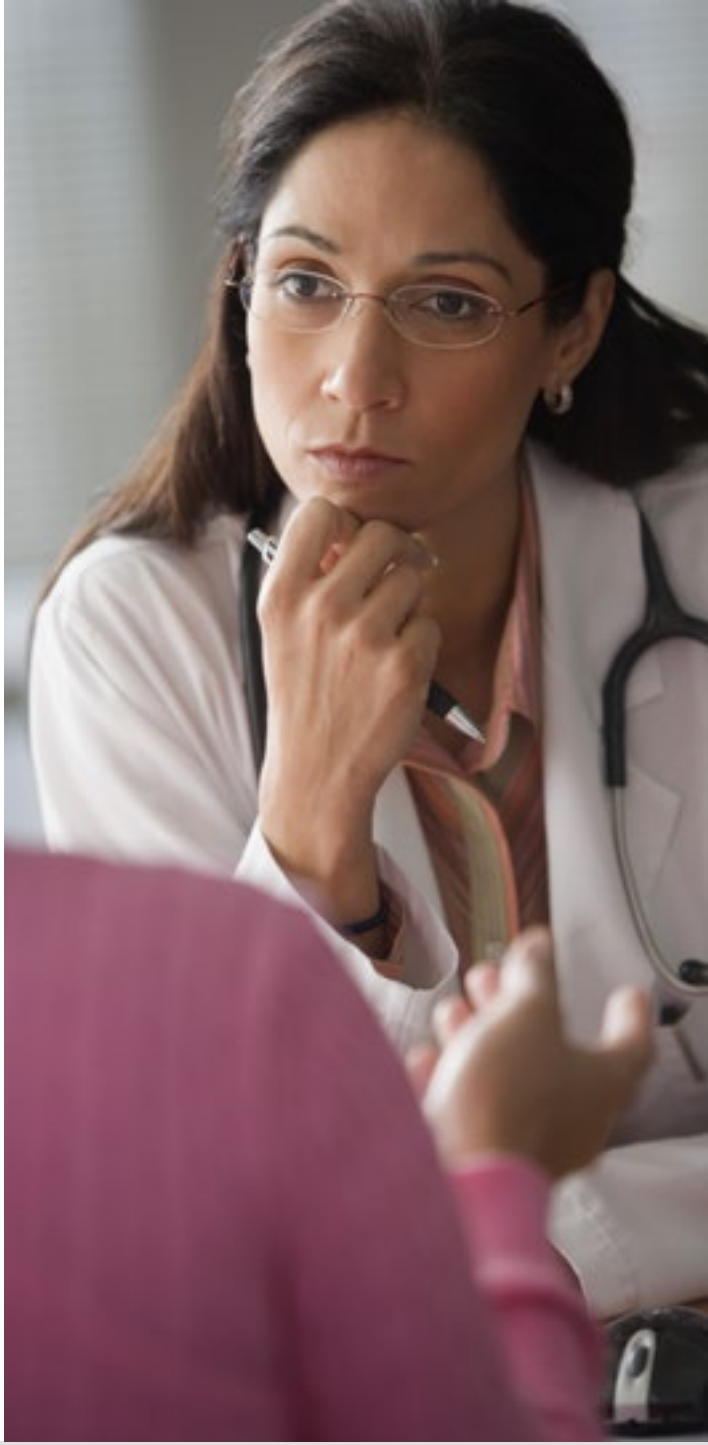
Learners

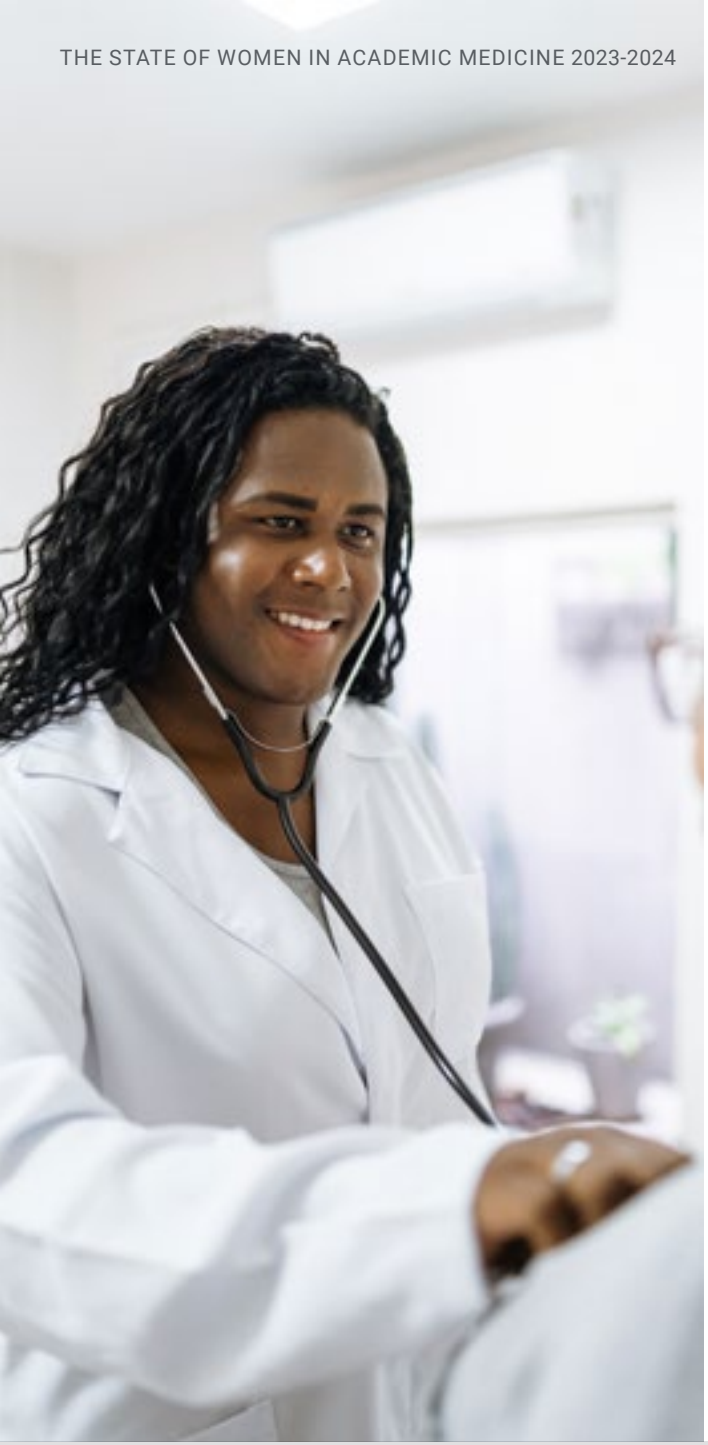
Analyzing the demographic composition of learners has helped us understand the diversity trends of faculty and leadership for decades. While women have represented over half of medical school applicants since 2018, years prior showed unsteady progress. In the past few years, a majority of medical school graduates and biomedical science graduate students have been women, solidifying women's robust future presence in medicine and science. We should celebrate this progress, and we must continue to support institutions in their efforts to recruit and graduate diverse student bodies so that the providers, educators, and leaders of tomorrow more accurately reflect the demographics of the nation.

Another indicator of progress toward gender equity that we should continue to monitor is the diversity within medical specialties. In this report, we see improvement in the percentages of women entering specialties that have had historically low percentages of women, such as surgery and emergency medicine. These increases may suggest that faculty leaders are providing better mentorship for learners around specialty choice, helping learners find specialties that align with their professional goals and interests instead of relying on gendered or biased interpretations of specialty "fit." Faculty, leaders, and those responsible for mentoring learners should begin conversations about specialty choice early in undergraduate medical education and provide learners with specific information about professional topics such as career development, workplace biases, and salary equity, among others. Overall, we must continue efforts to bring historically marginalized individuals into medicine to have an impact on faculty diversity.

Faculty

The pandemic had a significant impact on women in the U.S. workforce, and examining the pandemic's impact on women in academic medicine was an important goal of this report. Studies have shown that approximately four million women left the U.S. workforce between 2020 and 2022.[26] The percentage of full-time women faculty in academic medicine was fairly flat between 2020 and 2022, yet we did see an increase in the percentage of women faculty in 2023. This could signal that the pandemic had less of an impact on full-time women faculty in academic medicine than on women in other industries. The picture for part-time faculty, who likely had greater shifts in their workloads, is less clear. Interestingly, both men and women continue to work





part-time, and a slightly higher proportion of men had part-time appointments in 2023 compared to women, a change from 2018. This may be the result of how the pandemic changed workforce trends and household roles. However, it is important to keep in mind context about the literature on part-time work, which has showed that men typically seek part-time appointments due to having second careers while women do so due to caregiving responsibilities.[27]

The representation of women faculty from racial/ethnic groups underrepresented in medicine (URiM) continues to be virtually unchanged over the past 10 years. This signals that we must continue to assess the barriers faced by URiM faculty in both their recruitment and retention within academic medicine. While much-needed attention is being paid to the decline in the representation of men of color, equal attention must be paid to women faculty of color's inclusion and success in academic medicine, or we risk losing them.

An interesting finding regarding faculty trends is seeing the large proportion of women faculty under the age of 50, suggesting that there may be a majority of women in early, mid-, and eventually senior faculty ranks in the coming years. The data related to age and rank show that faculty demographics may shift. As full-time faculty experience increased teaching and administrative demands, we may see more women fill these roles as men increasingly occupy volunteer faculty roles and focus on clinical activities. This also becomes increasingly important as we look at the faculty diversity within different departments and specialties. While we saw a slight increase in the percentage of women residents choosing specialties with fewer women, there were also slight increases among women faculty in departments with the highest (Obstetrics and Gynecology) and lowest rates of women (Surgery). These increases may reflect the increase in women faculty overall and do not necessarily mean that specialties with the lowest proportions of women have improved their departmental cultures and are attracting more women.

Leadership

The findings related to leadership positions give us critical information about where we are making progress and how we can continue to bolster our efforts to get women in positions of leadership and institutional power. In a positive sign of progress, the percentage of women department chairs increased from less than 20% prior to the pandemic to 25% in 2023. This may be the result of improvements in leadership climate and culture, or it could also be explained by the tendency of institutions to appoint women to manage periods of transition and uncertainty in times of crises.[28] It could also be the result of strong national programs and awareness campaigns about mitigating bias in leadership search and hiring processes. This trend was also seen among medical school deans, with a notable increase in women deans between 2020 and 2023, from 19% to 27%. While these improvements are a positive sign, there is still significant progress to be made in increasing women's representation among department chairs and deans.

Regarding dean's office roles, women decanal leaders continue to be overrepresented in offices of diversity, equity, and inclusion (DEI), faculty affairs, and student affairs, and underrepresented in clinical and research affairs. Research shows that having 30% representation within a group is often the tipping point at which marginalized groups can make a difference within the larger group — and women have reached or are close to reaching this percentage in many leadership positions described in this report, which indicates that momentous change could be imminent.[29] These improvements signal movement in the right direction when it comes to increasing women in leadership. Institutions in academic medicine should be mindful of the biases in perceptions of women leaders and their performance in order to provide our cadre of emerging leaders with equitable opportunities to lead and grow.

A new area collected in this report shows us the progress we have yet to make in women's leadership within health systems, with only a quarter of health system CEOs being women. As academic medicine continues to grow more complex with integrated health systems, having women in the leadership positions of these organizations will be critical to meeting the health challenges of the future. We must provide additional mentoring and training to current health system leaders, as well as educate and guide the search firms responsible for recruitment, to increase the number of women in these top leadership ranks.

Workplace Issues

One unexpected positive finding was regarding the proportion of schools — nearly two-thirds — that reported conducting a salary equity study within the last five years. National awareness and resources to conduct salary studies have clearly translated into institutions taking action at the local level to address this topic. This was also evidenced by slight increases in salary equity in clinical departments among MD faculty. One analysis specifically included in this report examined cents-on-the-dollar comparisons for women and men assistant professors. Continuing to monitor and address salaries for junior faculty is an effective practice for promoting salary equity as junior faculty begin their careers with comparable experience.

Another area that has also seen some slight improvement is sexual harassment. Rates of women experiencing sexual harassment fell slightly and rates among men remained the same as in 2022. However, rates of harassment among faculty in Anesthesiology, a specialty reported to already have the highest rates in the AAMC's 2022 study, rose slightly. These results show that sexual harassment is still a pervasive problem that remains intractable in certain departments. Medical schools should ensure that anti-harassment training, bias reporting, and bystander intervention training is occurring across their institutions, especially in those specialties and departments with rates above the national average. These findings show that institutions need to continue to assess and act upon regularly conducted salary equity audits and sexual harassment reports.

Moving Forward

The findings of this report show that we are making progress. It is important to note that this progress is not accidental or purely a result of inevitable changes in the changing demographics of medicine: It can be attributed to intentional effort on the part of institutions to invest in DEI efforts. In fact, local Women in Medicine and Science (WIMS) and DEI offices have persisted in their efforts, even considering reduced institutional resources and support in recent years. Given this intentionality, we must look toward the future to see how institutions support the advancement of women and other marginalized genders.

New questions in this year's AAMC WIMS Benchmarking Survey asked institutional leaders to identify the key priorities for their WIMS offices over the next one to two years. These responses provided important information about how institutions are investing in women and other marginalized genders and where they see the most need. The area most reported by institutions was mentorship and sponsorship, where approximately half of all responding schools indicated they were prioritizing these activities. This supports the notion that additional work is needed to advance marginalized individuals beyond just representation. There are still cultural biases and inequities that individuals need mentorship and sponsorship to navigate.

The second most common area that WIMS offices are prioritizing is promotion, advancement, and leadership, with nearly 40% of respondents saying they are addressing these areas. This speaks to the gaps we still have in senior leadership positions, despite the progress in some areas. Women are still missing from influential operational roles in the dean's office and in chief and chair positions. A key component in advancing women's leadership is having institutions create more transparency and equity, including training and policy development, in the promotion process — both to help individual faculty members understand the process and to mitigate biases in the evaluation process. Additionally, institutions should be actively rethinking traditional notions of leadership that may be outdated or counterproductive in academic medicine's rapidly changing environment.

Finally, the third most common area of focus for WIMS offices is salary equity. There has been much attention and subsequent progress around salary equity in academic medicine in recent years, and institutions can continue to build on this momentum. Historically, WIMS and DEI programs have had difficulty addressing salary equity because of its complex nature; however, recent national efforts have encouraged institutions to do their own salary equity studies, and these data support that there is growing interest to address these issues broadly.

The data provided in this report provide a compelling vision for the future and identify areas that still need attention. Institutions should leverage these data, in concert with their own local information, to make actionable plans to advance gender equity, and diversity broadly, to achieve organizational excellence in the future.

Top Institutional Strategies to Advance Gender Equity

Institutions can consider the following actions, founded upon evidence-based practices from the literature, in their continued work to advance gender equity:

1. Bring visibility, support, and resources to those with multiple marginalized identities who may face additional barriers and include these individuals in your WIMS programming.
2. Remove bias from systems, processes, and traditional attitudes around advancement, leadership, and recognition to foster greater diversity in awards and leadership ranks.
3. Collaborate with human resources, faculty affairs, and other departments to facilitate conversations around and establish equitable policies and programs for caregiving (for children, elders, and others).
4. Understand and address the unique institutional challenges women and marginalized groups face that affect their well-being and develop system-level solutions for how they can be supported.
5. Ensure all search, hiring, and advancement processes use best practices for attracting and selecting a diverse applicant pool, such as wide advertisement, ranked criteria prior to search, and diverse search committees.
6. Establish allyship trainings and programming for men and others with dominant identities to support the advancement of women and marginalized groups.
7. Initiate policies that ensure equitable compensation for faculty, especially new hires, and policies to regularly review faculty salaries and opportunities for earning.
8. Create mechanisms for faculty, staff, and learners to safely report sexual harassment, bullying, and bias, such as through regular surveys and other data collections, and address the reports systematically, transparently, and regularly.
9. Educate faculty, especially leaders like department chairs and division chiefs, on how to recognize gender bias, mitigate unconscious bias, prevent harassment, and interrupt microaggressions.
10. Track your institution's data on individual demographics, employee engagement, bias and harassment rates, and salary equity, among other equity audits, to monitor your progress, and set short- and long-term goals in each of these areas. Expand your demographic data to collect multiple gender identities, race/ethnicity categories, and sexual orientations, among other demographic variables.

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Appendix A. Aggregation of Residency Data

This report aggregated a number of subspecialties in reporting residency data by gender. Data are categorized as follows:

- Allergy and Immunology
- **Anesthesiology and Subspecialties:** Anesthesiology, Adult Cardiothoracic Anesthesiology, Pediatric Anesthesiology, Obstetric Anesthesiology, Clinical Informatics (Anesthesiology), Critical Care Medicine (Anesthesiology), Regional Anesthesiology and Acute Pain Medicine, Pediatric Cardiac Anesthesiology (Anesthesiology)
- Child Neurology
- Colon and Rectal Surgery
- **Dermatology and Subspecialties:** Dermatology, Micrographic Surgery and Dermatologic Oncology, Dermatopathology (Dermatology and Pathology), Pediatric Dermatology
- **Emergency Medicine and Subspecialties:** Emergency Medicine, Clinical Informatics (Emergency Medicine), Emergency Medical Services (Emergency Medicine), Pediatric Emergency Medicine (Emergency Medicine), Sports Medicine (Emergency Medicine), Medical Toxicology (Emergency Medicine), Undersea and Hyperbaric Medicine (Emergency Medicine)
- **Family Medicine and Subspecialties:** Family Medicine, Clinical Informatics (Family Medicine), Geriatric Medicine (Family Medicine), Sports Medicine (Family Medicine)
- **Internal Medicine and Subspecialties:** Internal Medicine, Clinical Informatics (Internal Medicine), Cardiovascular Disease (Internal Medicine), Critical Care Medicine (Internal Medicine), Endocrinology, Diabetes, and Metabolism (Internal Medicine), Gastroenterology (Internal Medicine), Hematology and Oncology (Internal Medicine), Infectious Disease (Internal Medicine), Oncology (Internal Medicine), Nephrology (Internal Medicine), Pulmonary Disease (Internal Medicine), Rheumatology (Internal Medicine), Geriatric Medicine (Internal Medicine), Interventional Cardiology (Internal Medicine), Adult Congenital Heart Disease (Internal Medicine), Clinical Cardiac Electrophysiology (Internal Medicine), Hematology and Oncology (Internal Medicine), Pulmonary Disease and Critical Care Medicine (Internal Medicine), Transplant Hepatology (Internal Medicine), Advanced Heart Failure and Transplant Cardiology
- **Neurological Surgery and Subspecialties:** Neurological Surgery, Endovascular Surgical Neuroradiology (Neurological Surgery)
- **Neurology and Subspecialties:** Neurology, Endovascular Surgical Neuroradiology (Neurology), Neuromuscular Medicine (Neurology), Epilepsy (Neurology), Neurodevelopmental Disabilities, Clinical Neurophysiology (Neurology), Vascular Neurology, Brain Injury Medicine (Neurology)
- Medical Biochemical Genetics
- Medical Genetics and Genomics
- Molecular Genetic Pathology (Multidisciplinary)
- Nuclear Medicine
- **Obstetrics and Gynecology and Subspecialties:** Obstetrics and Gynecology, Female Pelvic Medicine and Reconstructive Surgery (Obstetrics and Gynecology), Gynecologic Oncology (Obstetrics and Gynecology), Maternal-Fetal Medicine, Reproductive Endocrinology and Infertility, Complex Family Planning
- **Ophthalmology and Subspecialties:** Ophthalmology, Ophthalmic Plastic and Reconstructive Surgery
- **Orthopaedic Surgery and Subspecialties:** Orthopaedic Surgery, Adult Reconstructive Orthopaedics (Orthopaedic Surgery), Foot and Ankle Orthopaedics (Orthopaedic Surgery), Hand Surgery (Orthopaedic Surgery), Pediatric Orthopaedics (Orthopaedic Surgery), Orthopaedic Surgery of the Spine (Orthopaedic Surgery), Orthopaedic Sports Medicine (Orthopaedic Surgery), Orthopaedic Trauma (Orthopaedic Surgery), Musculoskeletal Oncology (Orthopaedic Surgery), Osteopathic Neuromusculoskeletal Medicine

- **Otolaryngology and Subspecialties:** Otolaryngology, Otology-Neurotology (Otolaryngology), Pediatric Otolaryngology (Otolaryngology)
- **Pathology and Subspecialties:** Pathology-Anatomic and Clinical, Selective Pathology (Pathology), Clinical Informatics (Pathology), Blood Banking/Transfusion Medicine (Pathology), Chemical Pathology (Pathology), Cytopathology (Pathology), Forensic Pathology (Pathology), Hematology (Pathology), Medical Microbiology (Pathology), Neuropathology (Pathology), Pediatric Pathology (Pathology)
- **Pediatrics and Subspecialties:** Pediatrics, Adolescent Medicine (Pediatrics), Clinical Informatics (Pediatrics), Pediatric Critical Care Medicine (Pediatrics), Pediatric Emergency Medicine (Pediatrics), Pediatric Cardiology (Pediatrics), Pediatric Endocrinology (Pediatrics), Pediatric Hematology/Oncology (Pediatrics), Pediatric Nephrology (Pediatrics), Neonatal-Perinatal Medicine (Pediatrics), Pediatric Pulmonology (Pediatrics), Pediatric Rheumatology (Pediatrics), Pediatric Gastroenterology (Pediatrics), Pediatric Sports Medicine (Pediatrics), Pediatric Hospital Medicine (Pediatrics), Pediatric Infectious Diseases (Pediatrics), Developmental-Behavioral Pediatrics, Pediatric Transplant Hepatology (Pediatrics), Child Abuse Pediatrics
- **Physical Medicine and Rehabilitation and Subspecialties:** Physical Medicine and Rehabilitation, Sports Medicine (Physical Medicine and Rehabilitation), Spinal Cord Injury Medicine (Physical Medicine and Rehabilitation), Pediatric Rehabilitation, Brain Injury Medicine (Physical Medicine and Rehabilitation)
- **Plastic Surgery and Subspecialties:** Plastic Surgery, Craniofacial Surgery (Plastic Surgery), Plastic Surgery-Integrated, Hand Surgery (Plastic Surgery)
- **Preventive Medicine and Subspecialties:** Public Health and General Preventive Medicine, Undersea and Hyperbaric Medicine (Preventive Medicine), Medical Toxicology (Preventive Medicine), Aerospace Medicine, Occupational and Environmental Medicine
- **Psychiatry and Subspecialties:** Psychiatry, Addiction Psychiatry (Psychiatry), Addiction Medicine (Multidisciplinary), Child and Adolescent Psychiatry (Psychiatry), Forensic Psychiatry (Psychiatry), Geriatric Psychiatry (Psychiatry), Consultation-Liaison Psychiatry
- **Radiology and Subspecialties:** Radiology-Diagnostic, Interventional Radiology-Integrated, Abdominal Radiology (Radiology-Diagnostic), Neuroendovascular Intervention (Radiology), Neuroradiology (Radiology-Diagnostic), Pediatric Radiology (Radiology-Diagnostic), Nuclear Radiology (Radiology-Diagnostic), Musculoskeletal Radiology (Radiology-Diagnostic), Vascular and Interventional Radiology (Radiology-Diagnostic)
- **Radiation Oncology**
- **Surgery and Subspecialties:** Surgery-General, Surgical Critical Care (General Surgery), Hand Surgery (General Surgery), Pediatric Surgery (General Surgery), Complex General Surgical Oncology (General Surgery), Vascular Surgery (General Surgery), Vascular Surgery-Integrated
- **Thoracic Surgery and Subspecialties:** Thoracic Surgery, Thoracic Surgery-Integrated, Congenital Cardiac Surgery (Thoracic Surgery)
- **Urology and Subspecialties:** Urology, Pediatric Urology (Urology), Female Pelvic Medicine and Reconstructive Surgery (Urology)
- **Sleep Medicine**
- **Pain Medicine (Multidisciplinary)**
- **Hospice and Palliative Medicine**

Appendix B. Graduate Student and Postdoctoral Appointee Specialties

The following departments and/or specialties were included in graduate student and postdoctoral appointee counts in the National Science Foundation Survey of Graduate Students and Postdoctorates in Science and Engineering:

- Biochemistry
- Biology
- Biomedical sciences
- Biophysics
- Biostatistics and bioinformatics
- Biotechnology
- Botany and plant biology
- Cell, cellular biology, and anatomical sciences
- Ecology and population biology
- Epidemiology
- Genetics
- Microbiological sciences and immunology
- Molecular biology
- Neurobiology and neuroscience
- Nutrition science
- Pathology and experimental pathology
- Pharmacology and toxicology
- Physiology
- Zoology and animal biology
- Biological and biomedical sciences nec.
- Public health
- Medical clinical sciences and clinical and medical laboratory sciences
- Clinical medicine nec.

List of departments and/or specialties included in postdoctoral appointee counts:

- Biochemistry
- Biology
- Biomedical sciences
- Biophysics
- Biostatistics and bioinformatics
- Biotechnology
- Botany and plant biology
- Cell, cellular biology, and anatomical sciences
- Ecology and population biology
- Epidemiology
- Genetics
- Microbiological sciences and immunology
- Molecular biology
- Neurobiology and neuroscience
- Nutrition science
- Pathology and experimental pathology
- Pharmacology and toxicology
- Physiology
- Zoology and animal biology
- Biological and biomedical sciences nec.
- Medical clinical sciences and clinical and medical laboratory sciences
- Public health
- Anesthesiology
- Cardiology and cardiovascular disease
- Endocrinology, diabetes, and metabolism
- Gastroenterology
- Hematology
- Neurology and neurosurgery
- Obstetrics and gynecology
- Oncology and cancer research
- Ophthalmology
- Otorhinolaryngology
- Pediatrics
- Psychiatry
- Pulmonary disease
- Radiological sciences
- Surgery
- Clinical medicine nec.

Note: “nec.” indicates “not elsewhere classified.”

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