The State of Women in Academic Medicine
2018-2019

EXPLORING PATHWAYS TO EQUITY
CONTENTS

Executive Summary 3
Methodology 5

SECTION 01: LEARNERS 6
U.S. Medical School Applicants, Matriculants, and Graduates by Gender, Academic Year 2018-2019 7
U.S. Medical School Graduates by Gender and Race/Ethnicity, Academic Years 2013-2014 and 2018-2019 9
Residents by Gender, 2018 10
Percentage of Women Residents by Specialty, 2018 11
Scientific Trainees: Biological and Medical Sciences Graduate Students Enrolled in Doctorate Programs by Gender, 1994-2017 12
Scientific Trainees: Biological and Medical Sciences Postdoctorates at Doctorate-Granting Institutions by Gender, 1994-2017 13
Scientific Trainees: Biological and Medical Sciences Postdoctorates by Gender and Citizenship/Visa Status at Doctorate-Granting Institutions, 2017 14

SECTION 02: FACULTY 15
Percentage of Full-Time U.S. Medical School Faculty by Gender, 2009-2018 16
Part-Time Faculty by Gender, 2018 17
Full-Time Women Faculty as a Percentage of Each Rank, 2009-2018 18
Full-Time Women Faculty by Race/Ethnicity, 2009-2018 19
Full-Time Women Faculty by Rank and Race/Ethnicity, 2018 20
Departments With the Largest Proportion of Full-Time Women Faculty, 2018 21
Departments With the Smallest Proportion of Full-Time Women Faculty, 2018 22
Average Full-Time Women Faculty New Hires and Departures, Academic Years 2005-2006 Through 2017-2018 23
Average Full-time Women Faculty Promotions by Rank, Academic Years 2005-2006 Through 2017-2018 24
Seven-Year and 10-Year Promotion Outcomes for Full-Time, First-Time Assistant and Associate Professors in Academic Year 2008-2009 25

SECTION 03: SENIOR LEADERSHIP 26
Division and Section Chiefs by Gender, 2018 27
Center and Institute Directors by Gender, 2018 28
Percentage of Department Chairs by Gender, 2009-2018 29
Department Chairs by Gender and Department, 2018 30
Women Department Chairs by Race/Ethnicity and Department Type, 2018 31
Administrative Faculty Leaders by Gender, 2018 32
Administrative Staff Leaders by Gender, 2018 33
Administrative Faculty Leaders by Gender, Rank, and Office, 2018 34
Administrative Staff Leaders by Gender, Rank, and Office, 2018 35
Percentage of Medical School Deans by Gender, 2009-2018 36

SECTION 04: SUPPORTING FACULTY IN THE ACADEMIC MEDICINE WORKPLACE 37
Perceptions of Workplace Equity, 2019 38
Feeling Respected in the Workplace, 2019 39
Departments With the Largest Percentages of Women Reporting Disrespect Based on Gender, 2019 40
Institutional Roles To Support Women Faculty, 2018 41
Institutional Resources To Support Women Faculty, 2018 42

SECTION 05: DISCUSSION POINTS 43
Learners 44
Faculty 45
Senior Leadership 46

Moving Forward 47
Endnotes 48

AUTHORS

Diana M. Lautenberger, MA, and Valerie M. Dandar, MA

ACKNOWLEDGMENTS

The authors wish to thank the following people for their contributions to this project: Marie Caulfield, PhD, Brianna Gunter, Lindsay Ruskovsky, Rae Anne Sloane, and the AAMC Group on Women in Medicine and Science (GWIMS) Steering Committee.

This is a publication of the Association of American Medical Colleges. The AAMC serves and leads the academic medicine community to improve the health of all. To request additional copies or download copies of this report, visit aamc.org/publications.

© 2020 Association of American Medical Colleges. May not be reproduced or distributed without prior permission. To request permission, please visit: aamc.org/91514/reproductions.html.
Executive Summary

Since 1983, the AAMC has published a national snapshot of women students, residents, faculty, and administrative leaders in academic medicine. The data have served as a reliable resource to support gender equity studies and to understand the progress in increasing women’s representation among medical school learners, faculty, and leadership.

The State of Women in Academic Medicine 2018-2019: Exploring Pathways to Equity updates the edition of the report published in 2014. This report uses various AAMC and external datasets to illustrate the pipeline of women in academic medicine and science. In combination, the data present a snapshot of women’s representation at key junctures in their roles as learners, faculty, and leaders. While previous editions of this report were released every year, the AAMC is exploring releasing the report in five-year increments to better illustrate demographic changes in the composition of individuals across the academic medicine continuum.

New data points in this report include:

- Scientific trainee pipeline data by gender.
- Center and institute director counts by gender.
- Women in administrative faculty leadership roles across deans’ offices.
- Women in administrative staff leadership roles across deans’ offices.
- Faculty department chairs by race/ethnicity and gender.
- Perceptions of disrespect in the workplace.

The data in this report show that:

- Women and men have continued to apply, enter, and graduate from medical school in similar proportions since 2003.
- Women have constituted 58% or more of graduate students in biological, clinical, and health science doctoral programs (excluding MDs) since 1994; however, in 2018, women made up just 40% of full-time basic science, clinical science, and other health science MD-PhD and PhD faculty at U.S. medical schools.
- The overall proportion of full-time women faculty has continued to rise since 2009, now at 41%, with similar increases at each faculty rank; yet, women make up a majority of faculty only at the instructor rank.
- Among full-time women faculty, the proportion of women from an underrepresented in medicine race or ethnicity (URiM) group was 12% in 2009 and 13% in 2018; the greatest proportions of URiM women faculty were at the assistant professor rank.
- Departments with the highest proportion of full-time women faculty were similar to the specialties with the most women residents; in many cases, those departments also had more women chairs.
- Among cohorts of both new assistant and associate professors starting in 2008-2009, a larger percentage of men than women advanced after seven years. However, the gap between men’s and women’s advancement narrows when 10-year promotion trends are examined.
- While there has been a steady rise in the number of women department chairs over the past 10 years, women still make up only 18% of all department chairs.
- Women faculty leaders were more heavily represented in roles related to diversity, faculty, and student affairs and less represented in leadership roles within clinical affairs and research.
- Since 2009, the number of women deans increased by about one each year, on average.

Note: This report excludes applicant, matriculant and enrollee data from 2019 due to unavailable graduation date for the 2019-2020 medical school student class. Student data in this report reflects available data for applicants, matriculants, and graduates through the 2018-2019 academic year. See the AAMC definition of underrepresented in medicine (URiM) here: https://www.aamc.org/what-we-do/mission-areas/diversity-inclusion/underrepresented-in-medicine
Knowing the data is the first step toward creating a more equitable and inclusive environment. Institutions can use these data and the full collection of national and school-level data available through the AAMC to analyze their local setting, identify opportunities to foster greater equity, and create actionable plans to improve the academic medicine learning environment and workplace. Understanding the state of women in academic medicine is key to acknowledging and evaluating the existing systems and structures that may be limiting or supporting them. While dedicated programming for women is necessary and should continue, these data indicate that new systemic and institution-level interventions are needed to address and achieve gender equity and inclusion in academic medicine.
Methodology

The Women in Medicine and Science (WIMS) Benchmarking Survey was distributed by email to the Group on Women in Medicine and Science (GWIMS) designated institutional representatives and faculty roster representatives at the 154 U.S. medical schools accredited by the Liaison Committee on Medical Education. Members had five and a half weeks to complete the survey (the survey opened Aug. 1 and closed Sept. 9, 2019) and were encouraged to partner with other leaders at their schools to complete the survey, such as those in faculty or diversity affairs offices. Ninety-eight medical schools completed the survey, yielding a response rate of 63.6%. While the AAMC has regularly collected data about women in the workforce for several years, the 2019 WIMS Benchmarking Survey is the fourth iteration of the data collection with specific questions about part-time faculty counts and leadership appointments.

New information collected this year includes leadership counts by gender for center and institute directors and counts of faculty and staff administrative leadership roles by functional area within the dean’s office.

In addition to data collected through the WIMS survey, this report includes data from the following AAMC resources to enhance the description of the academic medicine learning environment and workplace:

- Faculty Roster
- FACTS Tables
- GME Track®
- Council of Deans records
- AAMC Standpoint™ Faculty Engagement Survey

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

LEARNERS
U.S. Medical School Applicants, Matriculants, and Graduates by Gender, Academic Year 2018-2019

In 2018-2019, women constituted slightly more of both applicants (50.9%) and matriculants (51.6%) but less of graduates (47.9%).

**FIGURE 2**

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>MEN APPLICANTS</th>
<th>WOMEN APPLICANTS</th>
<th>MEN GRADUATES</th>
<th>WOMEN GRADUATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-1981</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1984-1985</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1988-1989</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992-1993</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996-1997</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000-2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004-2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008-2009</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012-2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016-2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018-2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**2003-2004**
First time the number of women applicants surpassed men applicants.

**2007-2008**
Women reached a high of 49% of graduates.

**2018-2019**
Second time the number of women applicants surpassed men applicants.


Note: Does not include applicant, matriculant, or enrollee data from the 2019-2020 academic year because graduation rates won’t be available until summer 2020.

**KEY TAKEAWAY**

Since 2007-2008, women have represented a near-majority of graduates (49%) but have never reached 50% or more.
U.S. Medical School Graduates by Gender and Race/Ethnicity, Academic Years 2013-2014 and 2018-2019

FIGURE 3

While racial and ethnic diversity of the graduate pool increased, women graduates were slightly more diverse than men graduates in both 2013-2014 and 2018-2019.

Source: AAMC 2018 FACTS Table B-4, AAMC 2019 FACTS Table B-4.

Note: Race and ethnicity categories are unduplicated counts that reflect those who identified as one race/ethnicity only or were otherwise categorized as “multiple race/ethnicity” if they identified with more than one race/ethnicity.
Residents by Gender, 2018

**FIGURE 4**

TOTAL U.S. RESIDENTS

- **MEN**
  - 73,354
  - 54.4%
- **WOMEN**
  - 61,596
  - 45.6%

TYPE OF DEGREE-GANTING INSTITUTION

- **U.S. MD-GANTING**
  - 83,794
  - 53.6%
  - **MEN**
    - 73,354
    - 55.4%
  - **WOMEN**
    - 61,596
    - 44.6%
- **U.S. DO-GANTING**
  - 19,531
  - 45.0%
  - **MEN**
    - 55.0%
  - **WOMEN**
    - 45.0%
- **INTERNATIONAL MEDICAL SCHOOL**
  - 31,486
  - 43.9%
  - **MEN**
    - 44.6%
  - **WOMEN**
    - 45.0%
- **CANADIAN MD-GANTING**
  - 139
  - 55.4%

**KEY TAKEAWAY**

Men still outnumbered women in MD and DO residencies, with similar proportions of women across U.S. MD-granting, U.S. DO-granting, and international medical schools.

Source: GME Track® as of Sept. 6, 2019.
Note: GME year indicates residents active as of Dec. 31 of the corresponding year. Therefore, GME year 2018 represents residents active in training as of Dec. 31, 2018. Residents whose gender was unknown are removed from total counts.
Percentage of Women Residents by Specialty, 2018

FIGURE 5

Preventative Medicine + Subspecialties: 50%, Total n=1,294
Neurology + Subspecialties: 45%, Total n=3,254
Colon and Rectal Surgery: 44%, Total n=98
Nuclear Medicine: 44%, Total n=68
Plastic Surgery — Integrated + Subspecialties: 41%, Total n=292
Surgery-General + Subspecialties: 41%, Total n=9,856
Internal Medicine + Subspecialties: 41%, Total n=39,109
Ophthalmology + Subspecialties: 40%, Total n=1,337

Physical Medicine and Rehab + Subspecialties: 39%, Total n=1,432
Transitional Year: 37%, Total n=1,262
Emergency Medicine + Subspecialties: 36%, Total n=7,943
Otolaryngology + Subspecialties: 36%, Total n=1,671
Anesthesiology + Subspecialties: 34%, Total n=6,704
Vascular Surgery — Integrated: 34%, Total n=319
Plastic Surgery: 31%, Total n=205
Radiation Oncology: 30%, Total n=744

Urology + Subspecialties: 27%, Total n=1,423
Thoracic Surgery — Integrated: 27%, Total n=217
Radiology — Diagnostic: 26%, Total n=4,972
Pain Medicine (Multidisciplinary): 24%, Total n=319
Thoracic Surgery + Subspecialties: 21%, Total n=244
Interventional Radiology — Integrated: 20%, Total n=215
Neurological Surgery + Subspecialties: 18%, Total n=1,479
Orthopedic Surgery + Subspecialties: 15%, Total n=4,410

Women continued to represent a large proportion of residents in obstetrics and gynecology and pediatrics and related subspecialties, while many surgical subspecialties had a smaller proportion of women residents.
Since 1994, women have represented 58% or more of graduate students enrolled in doctorate programs in the biological and medical sciences. Yet, the numbers of women enrolled have been declining since 2008.
Scientific Trainees
Biological and Medical Sciences Postdoctorates at Doctorate-Granting Institutions by Gender, 1994-2017

FIGURE 7

While there have been fewer women than men postdoctorates since 1994, women have continued to increase in number and proportional representation since that time.


Note: Data reflect postdoctorates enrolled in doctorate or postdoctorate/non-degree programs at doctorate-granting institutions in the fields of biological and biomedical sciences (prior to 2017, neurobiology and neuroscience was an independent category), clinical medicine, and other health sciences. See endnotes for fields included in "biological and medical sciences."
**Scientific Trainees**

Biological and Medical Sciences Postdoctorates by Gender and Citizenship/Visa Status at Doctorate-Granting Institutions, 2017

**Figures**

- **FOREIGN POSTDOCS, WOMEN**: 8,475 (21%)
- **U.S. POSTDOCS, MEN**: 9,443 (24%)
- **U.S. POSTDOCS, WOMEN**: 9,744 (25%)
- **FOREIGN POSTDOCS, MEN**: 11,666 (30%)

**Source:** National Science Foundation, Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS), 2017.

**Note:** Data reflect postdoctorates enrolled in doctorate or postdoctoral/non-degree programs at doctorate-granting institutions in the fields of biological and biomedical sciences (prior to 2017, neurobiology and neuroscience was an independent category), clinical medicine, and other health sciences. See endnotes for fields included in “biological and medical sciences.”

**KEY TAKEAWAY**

In 2017, men and women who were U.S. citizens or permanent residents were about equally represented among postdoctorates, while men who were foreign nationals represented a slightly larger proportion of foreign postdoctorates than women.
WOMEN IN ACADEMIC MEDICINE

FACULTY

02
Percentage of Full-Time U.S. Medical School Faculty by Gender, 2009-2018

FIGURE 9

Source: AAMC Faculty Roster, Dec. 31, 2018 snapshot. Data represent Dec. 31 snapshots for each year presented. U.S. Medical School Faculty Tables, Table 14. U.S. Medical School Faculty by Sex, Degree, and Department, 2018.

Note: This figure excludes faculty with missing gender, which accounts for less than 0.5% of all faculty in each snapshot year. The data displayed by department type and degree type include faculty in basic science and clinical departments only; faculty in “Other” departments and faculty with other degrees were excluded. Department degree type breakouts exclude faculty of other and unknown degree types and faculty in “Other Health” departments.

KEY TAKEAWAY
The proportion of full-time women faculty has increased steadily over the past 10 years, from 36% in 2009 to 41% in 2018.
Part-Time Faculty by Gender, 2018

NUMBER OF PART-TIME FACULTY

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEN</td>
<td>8,963</td>
<td>50.1%</td>
</tr>
<tr>
<td>WOMEN</td>
<td>8,936</td>
<td>49.9%</td>
</tr>
</tbody>
</table>

Institutions identified the number of part-time faculty at their institutions based on their own policies. For some institutions, PT faculty are defined as any appointment less than 1 FTE, while other policies may use less than 0.75 or 0.50 as the definition. There is not a consistent definition of what constitutes a part-time appointment across medical schools.

Institutions reported that similar proportions of men and women faculty (50.1% and 49.9%, respectively) had part-time appointments.

KEY TAKEAWAY

Source: AAMC 2019 WIMS Benchmarking Survey. Data reflect faculty counts as of Dec. 31, 2018 (n=98 institutions; n=17,899 part-time faculty).
Note: In surveys before 2018, part-time was defined as 0.75 FTE or less.
While the proportion of women faculty has increased at assistant, associate, and full professor ranks since 2009, women continued to represent a majority of faculty only at the instructor ranks (58%).

**KEY TAKEAWAY**

*Source: AAMC Faculty Roster, Dec. 31, 2018 snapshot.
Note: This figure excludes faculty with missing gender, which accounts for less than 0.5% of all faculty in each snapshot year.*
Full-Time Women Faculty by Race/Ethnicity, 2009-2018

FIGURE 12

The proportion of women from an underrepresented-in-medicine race or ethnicity group was 12% in 2009 and 13% in 2018.

Source: AAMC Faculty Roster, Dec. 31, 2018 snapshot.

Note: This figure excludes faculty with missing gender, which accounts for less than 0.5% of all faculty in each snapshot year. Percentages may not sum to 100% due to rounding. Statistics in this key takeaway exclude the category “Other/Unknown” in calculating the percentage of URiM individuals.
Full-Time Women Faculty by Rank and Race/Ethnicity, 2018

FIGURE 13

The greatest proportions of URiM women faculty were at the assistant professor and instructor ranks.

KEY TAKEAWAY
Departments With the Largest Proportion of Full-Time Women Faculty, 2018

**FIGURE 14**

- Obstetrics and Gynecology: 64%
- Pediatrics: 58%
- Public Health and Preventative Medicine: 54%
- Psychiatry: 53%
- Family Practice: 51%
- Dermatology: 51%

**KEY TAKEAWAY**

The six academic departments with 50% or more full-time women faculty are represented among the specialty programs with 50% or more women residents.

Source: AAMC Faculty Roster, Dec. 31, 2018 snapshot, as of April 30, 2019.

Note: This figure excludes 200 faculty with missing gender data. This analysis includes basic science and clinical departments only; “Other” departments were excluded.
While six academic departments with 50% or more full-time women faculty were all among clinical disciplines, the six departments with the smallest proportion of full-time women faculty (between 32% and 19%) included both clinical and basic science disciplines.
Average Full-Time Women Faculty New Hires and Departures, Academic Years 2005-2006 Through 2017-2018

**Figure 16**

The gap between the percentages of women faculty new hires and women faculty departures has remained relatively consistent since 2009.

The proportion of new full-time faculty hires who were women continued to be larger than the proportion of full-time faculty departures who were women.

**Key Takeaway**

Source: AAMC Faculty Roster, March 31, 2019 snapshot.

Note: Each reporting year displays the percentage of new hires and departures who are women based on the average number of hires/departures over the previous four academic years. For example, the percentage displayed for the 2009 reporting year is calculated on the average number of full-time faculty who were hired at or who left a medical school per year during academic year 2005-2006 through academic year 2008-2009. This figure excludes faculty with missing gender, which accounts for less than 1% of all new hires and departures in each reporting year.
Average Full-time Women Faculty Promotions by Rank, Academic Years 2005-2006 Through 2017-2018

**FIGURE 17**

There has been a steady rise in the proportion of promoted faculty who were women since 2009. The percentage of full-time faculty promotions who were women continued to grow over time, with the percentage of promotions for women being consistently higher than the percentage of women currently at those ranks. For example, 25% of women were full professors in 2018, while 35% of promotions to full professor were for women, on average.

Source: AAMC Faculty Roster, March 31, 2019 snapshot.

Note: Each reporting year displays the percentage of promoted faculty who are women, based on the average number of promotions over the previous four academic years. For example, the percentage displayed for the 2009 reporting year is calculated on the average number of full-time faculty who were promoted at a medical school per year during academic year 2005-2006 through academic year 2008-2009. This figure excludes faculty with missing gender, which accounts for less than 1% of all promotions in each reporting year.
Among cohorts of both new assistant and associate professors starting in 2008-2009, a larger percentage of men than women advanced after seven years. However, the gap between men's and women's advancement narrows when 10-year promotion trends are examined.

### Key Takeaway

Among cohorts of both new assistant and associate professors starting in 2008-2009, a larger percentage of men than women advanced after seven years. However, the gap between men's and women's advancement narrows when 10-year promotion trends are examined.

### Figure 18

#### Seven-Year Promotions

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage of Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men Associate to Full Professor (N=331)</td>
<td>30% 16% 5% 48%</td>
</tr>
<tr>
<td>Women Associate to Full Professor (N=194)</td>
<td>28% 19% 13% 51%</td>
</tr>
<tr>
<td>Men Assistant to Associate Professor (N=504)</td>
<td>26% 30% 3% 39%</td>
</tr>
<tr>
<td>Women Assistant to Associate Professor (N=334)</td>
<td>20% 34% 5% 41%</td>
</tr>
</tbody>
</table>

#### Ten-Year Promotions

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage of Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men Associate to Full Professor (N=1,977)</td>
<td>39% 20% 9% 32%</td>
</tr>
<tr>
<td>Women Associate to Full Professor (N=1,018)</td>
<td>37% 24% 7% 32%</td>
</tr>
<tr>
<td>Men Assistant to Associate Professor (N=4,411)</td>
<td>38% 36% 10% 17%</td>
</tr>
<tr>
<td>Women Assistant to Associate Professor (N=3,588)</td>
<td>31% 41% 8% 20%</td>
</tr>
</tbody>
</table>

Source: AAMC Faculty Roster, Jan. 31, 2020 snapshot.

Note: This figure excludes 32 faculty with missing sex. The percentages may not sum to 100% due to rounding.
Division and Section Chiefs by Gender, 2018

**FIGURE 19**

**CURRENT DATA**
- **MEN** 3,393 (71%)
- **WOMEN** 1,386 (29%)

**PREVIOUS YEARS**
- **2003**
  - **MEN** 3,308 (84%)
  - **WOMEN** 582 (16%)
- **2008**
  - **MEN** 2,970 (79%)
  - **WOMEN** 911 (21%)
- **2013**
  - **MEN** 3,098 (76%)
  - **WOMEN** 1,021 (24%)

**THE PROPORTION OF WOMEN DIVISION AND SECTION CHIEFS HAS SLOWLY BEEN INCREASING OVER THE YEARS**


**KEY TAKEAWAY**

The proportion of women who were section chiefs, division chiefs, or both has nearly doubled since 2004; however, less than a third of all chiefs were women in 2018.
Center and Institute Directors by Gender, 2018

FIGURE 20

Women constituted slightly less than a third of all center and institute directors.

Percentage of Department Chairs by Gender, 2009-2018

FIGURE 21

The proportion of women department chairs has grown only slightly since 2009, at a rate about half a percentage point per year.

While there has been a steady rise in the proportion of women department chairs over the past 10 years, women still made up only 18% of all department chairs.

Source: AAMC Faculty Roster, Dec. 31, 2018 snapshot. Data represent Dec. 31 snapshots for each year presented.

Note: This figure includes permanent chairs, co-chairs, interim chairs, and acting chairs. It excludes department chairs with missing gender data, which accounts for less than 0.5% of all chairs in each snapshot year.
### FIGURE 22

**Department Chairs by Gender and Department, 2018**

<table>
<thead>
<tr>
<th>DEPARTMENTS WITH HIGHEST PERCENTAGE OF WOMEN CHAIRS</th>
<th>ANATOMY</th>
<th>PUBLIC HEALTH AND PREVENTIVE MEDICINE</th>
<th>FAMILY PRACTICE</th>
<th>DERMATOLOGY</th>
<th>OB/GYN</th>
<th>PEDIATRICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>% WOMEN CHAIRS</td>
<td>33.3%</td>
<td>31.0%</td>
<td>30.4%</td>
<td>29.6%</td>
<td>27.6%</td>
<td>27.5%</td>
</tr>
</tbody>
</table>

### BASIC SCIENCES

<table>
<thead>
<tr>
<th>Department</th>
<th>Women</th>
<th>Men</th>
<th>% Women Chairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy</td>
<td>26</td>
<td>52</td>
<td>33.3%</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>26</td>
<td>74</td>
<td>26.0%</td>
</tr>
<tr>
<td>Microbiology</td>
<td>19</td>
<td>81</td>
<td>19.0%</td>
</tr>
<tr>
<td>Pathology (Basic Science)</td>
<td>10</td>
<td>30</td>
<td>25.0%</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>17</td>
<td>71</td>
<td>19.3%</td>
</tr>
<tr>
<td>Physiology</td>
<td>12</td>
<td>67</td>
<td>15.2%</td>
</tr>
<tr>
<td>Other Basic Sciences</td>
<td>84</td>
<td>236</td>
<td>26.3%</td>
</tr>
</tbody>
</table>

### CLINICAL SCIENCES

<table>
<thead>
<tr>
<th>Department</th>
<th>Women</th>
<th>Men</th>
<th>% Women Chairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiology</td>
<td>16</td>
<td>107</td>
<td>13.0%</td>
</tr>
<tr>
<td>Dermatology</td>
<td>24</td>
<td>57</td>
<td>29.6%</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>13</td>
<td>102</td>
<td>11.3%</td>
</tr>
<tr>
<td>Family Practice</td>
<td>42</td>
<td>96</td>
<td>30.4%</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>31</td>
<td>144</td>
<td>17.7%</td>
</tr>
<tr>
<td>Neurology</td>
<td>14</td>
<td>115</td>
<td>10.9%</td>
</tr>
<tr>
<td>Obstetrics and Gynecology</td>
<td>42</td>
<td>110</td>
<td>27.6%</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>14</td>
<td>89</td>
<td>14.0%</td>
</tr>
<tr>
<td>Orthopedic Surgery</td>
<td>1</td>
<td>118</td>
<td>0.8%</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>3</td>
<td>83</td>
<td>3.5%</td>
</tr>
<tr>
<td>Pathology (Clinical)</td>
<td>20</td>
<td>72</td>
<td>21.7%</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>41</td>
<td>108</td>
<td>27.5%</td>
</tr>
<tr>
<td>Physical Medicine and Rehabilitation</td>
<td>10</td>
<td>53</td>
<td>15.9%</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>34</td>
<td>120</td>
<td>22.1%</td>
</tr>
<tr>
<td>Public Health and Preventive Medicine</td>
<td>9</td>
<td>20</td>
<td>31.0%</td>
</tr>
<tr>
<td>Radiology</td>
<td>36</td>
<td>178</td>
<td>16.8%</td>
</tr>
<tr>
<td>Surgery</td>
<td>24</td>
<td>356</td>
<td>6.3%</td>
</tr>
<tr>
<td>Other Clinical Sciences</td>
<td>17</td>
<td>64</td>
<td>21.0%</td>
</tr>
</tbody>
</table>

### OTHER DEPARTMENTS

<table>
<thead>
<tr>
<th>Department</th>
<th>Women</th>
<th>Men</th>
<th>% Women Chairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dentistry</td>
<td>0</td>
<td>6</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other Health Professions</td>
<td>9</td>
<td>18</td>
<td>33.3%</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>3</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Veterinary Sciences</td>
<td>2</td>
<td>1</td>
<td>66.7%</td>
</tr>
<tr>
<td>All Others</td>
<td>19</td>
<td>28</td>
<td>40.4%</td>
</tr>
</tbody>
</table>

**TOTALS (Numbers and Average %)**

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
<th>% Women Chairs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTALS</strong></td>
<td>618</td>
<td>2,656</td>
<td>18.9%</td>
</tr>
</tbody>
</table>

**KEY TAKEAWAY**

Many of the departments with the largest proportions of full-time women faculty also had the largest proportions of women chairs, except for anatomy.
Women Department Chairs by Race/Ethnicity and Department Type, 2018

FIGURE 23

URiM women made up 15% of women chairs in basic science and clinical science departments.

Source: AAMC Faculty Roster, Dec. 31, 2018 snapshot, as of April 30, 2019.

Note: This figure excludes six chairs with missing gender data and nine chairs with missing race/ethnicity data. The All Hispanic breakout includes all chairs who are reported as Hispanic/Latino alone or in combination with another race/ethnicity. The "All Others" breakout includes chairs who are reported as American Indian or Alaskan Native, Native Hawaiian or Other Pacific Islander, or other race/ethnicity and chairs who are reported as more than one race/ethnicity (who are not reported as Hispanic).
Administrative Faculty Leaders by Gender, 2018

The largest gains for women in faculty leadership positions since 2014 were at the associate dean level (8-percentage-point increase); the smallest gains were at the senior associate dean level (1-percentage-point change), with assistant deans remaining the only leadership position with a majority of women.


Note: Includes permanent roles only.
At every administrative level, women made up a much larger proportion of staff leaders than faculty leaders.
### Administrative Faculty Leaders by Gender, Rank, and Office, 2018

**FIGURE 26**

<table>
<thead>
<tr>
<th>Office</th>
<th>Academic Affairs</th>
<th>Clinical/Health Affairs</th>
<th>Diversity, Equity, Inclusion</th>
<th>Faculty Affairs/Development</th>
<th>Medical Education</th>
<th>Research</th>
<th>Student Affairs/Admissions</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SR. ASSOCIATE/VICE DEAN</strong></td>
<td>40% n=57</td>
<td>15% n=78</td>
<td>57% n=28</td>
<td>58% n=43</td>
<td>35% n=93</td>
<td>26% n=101</td>
<td>64% n=28</td>
<td>36% n=94</td>
</tr>
<tr>
<td><strong>ASSOCIATE DEAN</strong></td>
<td>47% n=45</td>
<td>33% n=57</td>
<td>68% n=45</td>
<td>61% n=67</td>
<td>46% n=192</td>
<td>39% n=92</td>
<td>52% n=99</td>
<td>46% n=90</td>
</tr>
<tr>
<td><strong>ASSISTANT DEAN</strong></td>
<td>42% n=31</td>
<td>40% n=15</td>
<td>56% n=34</td>
<td>59% n=27</td>
<td>53% n=159</td>
<td>34% n=38</td>
<td>63% n=107</td>
<td>45% n=53</td>
</tr>
</tbody>
</table>


Note: Administrative Affairs, Business Affairs, and Development/Alumni Relations have been removed due to small sample sizes.

**KEY TAKEAWAY**

The largest proportions of women faculty at all administrative levels were in offices for diversity, equity, and inclusion, faculty affairs/development, and student affairs/admissions, while the smallest proportions were in offices for research and clinical/health affairs.
Administrative Staff Leaders by Gender, Rank, and Office, 2018

FIGURE 27


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.

KEY TAKEAWAY

Women staff constituted at least 50% of medical school administrative leaders, except for senior associate deans in the business affairs and development/alumni relations offices.
Percentage of Medical School Deans by Gender, 2009-2018

**FIGURE 28**

Since 2009, the number of women deans increased by about one each year, on average.

While there has been a steady rise in the proportion of women deans over the past 10 years, women still made up only 18% of all U.S. medical school deans.

Source: AAMC Council of Deans records, as of Jan. 7, 2019. Data represent Dec. 31 snapshots for each year presented.

Note: This figure includes permanent deans, interim deans, and acting deans.
WOMEN IN ACADEMIC MEDICINE

SUPPORTING FACULTY IN THE ACADEMIC MEDICINE WORKPLACE
Perceptions of Workplace Equity, 2019

FIGURE 29

PERCENTAGE OF FACULTY WHO ...

Reported having a formal mentor
- 36% WOMEN
- 37% MEN

Did not have a formal mentor but felt having one is important
- 59% WOMEN
- 44% MEN

Believed their medical school offered equal opportunities to faculty regardless of gender
- 65% WOMEN
- 85% MEN

Agreed that diversity was represented in all levels of the medical school
- 56% WOMEN
- 65% MEN

Thought their department was successful in retaining female faculty
- 66% WOMEN
- 76% MEN

Report experiencing an incident of disrespect based on their gender in the past year
- 17% WOMEN

Only 65% of women faculty agreed that their medical school offers equal opportunities regardless of gender, compared with 85% of men.

Source: Data are from the AAMC StandPoint Faculty Engagement Survey and were collected between October 2015 and May 2019 from 36 institutions representing 22,233 faculty respondents.
Feeling Respected in the Workplace, 2019

OVER THE PAST YEAR...

PERCENTAGE OF FACULTY WHO FELT RESPECTED IN THE WORKPLACE:
- WOMEN: 73%
- MEN: 86%

PERCENTAGE OF FACULTY WHO FELT DISRESPECTED IN THE WORKPLACE BECAUSE OF THEIR GENDER:
- WOMEN: 17.4%
- MEN: 1.2%

PERCENTAGE OF WOMEN WHO REPORTED FEELING DISRESPECTED IN THE WORKPLACE BECAUSE OF THEIR GENDER BY RACE:
- ASIAN: 12.8%
- HISPANIC/LATINO: 14.6%
- WHITE: 18.9%
- BLACK/AFRICAN AMERICAN: 19.6%
- OTHER: 25.6%

Source: Data are from the AAMC StandPoint Faculty Engagement Survey and were collected between October 2015 and May 2019 from 36 institutions representing 22,233 faculty respondents.

Note: “Other” represents an aggregation of data from faculty who identified as “American Indian/Alaskan Native,” “Native Hawaiian/Other Pacific Islander,” “Other Race/Ethnicity,” and those who selected two or more races/ethnicities.

KEY TAKEAWAY
Overall, 73% of women faculty felt respected and 27% felt disrespected in the academic medicine workplace, with disrespect based on one’s gender as the most cited reason.
Departments With the Largest Percentages of Women Reporting Disrespect Based on Gender, 2019

Approximately 1 in 4 women in the following departments reported experiencing disrespect based on their gender over the past year.

- Anesthesiology: 26%
- Emergency Medicine: 26%
- Orthopedic Surgery: 25%
- Surgery: 25%

Source: Data are from the AAMC StandPoint Faculty Engagement Survey and were collected between October 2015 and May 2019 from 36 institutions representing 22,233 faculty respondents.

KEY TAKEAWAY

Two of the four departments with the highest levels of disrespect were also among the departments with the smallest proportion — less than a third — of women full-time faculty.
Institutional Roles To Support Women Faculty, 2018

**FIGURE 32**

**PERCENTAGE OF MEDICAL SCHOOLS**

- **49%**
  - n=96
  - Medical schools with a formal role dedicated to women/gender equity issues, beyond Title IX/compliance roles.

- **80%**
  - n=46
  - Medical schools without a formal role dedicated solely to women/gender equity issues, beyond compliance roles.

0.38
Average Professional FTE Allocated for the Role
(range=0.1-1.5)

**KEY TAKEAWAY**

Approximately half (49%) of medical schools had a formal administrative role dedicated solely to women/gender equity issues, beyond compliance roles.

Institutional Resources To Support Women Faculty, 2018

FIGURE 33

SUPPORT FOR LOCAL WIMS PROGRAMS

<table>
<thead>
<tr>
<th>Resource</th>
<th>% of Institutions Responding That Have These Resources</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated office space</td>
<td>33%</td>
<td>81</td>
</tr>
<tr>
<td>Dedicated effort for leader of local WIMS organization</td>
<td>39%</td>
<td>78</td>
</tr>
<tr>
<td>Financial support for faculty/leadership development</td>
<td>76%</td>
<td>82</td>
</tr>
<tr>
<td>Financial support for AAMC EWIMS program</td>
<td>63%</td>
<td>82</td>
</tr>
<tr>
<td>Financial support for AAMC Mid-WIMS program</td>
<td>66%</td>
<td>83</td>
</tr>
<tr>
<td>Financial support for ELAM Program</td>
<td>75%</td>
<td>80</td>
</tr>
<tr>
<td>Support for other internal programs</td>
<td>79%</td>
<td>77</td>
</tr>
</tbody>
</table>

Schools that have one or more local WIMS organizations: 80%
Schools that have no WIMS organization but have targeted programming: 10%
Schools with no WIMS organization and no targeted programming: 10%


KEY TAKEAWAY
Twenty percent of schools did not have a local Women in Medicine and Science (WIMS) organization.
Learners

Women and men have continued to apply to and enter medical school at similar rates, but women have never constituted 50% or more of medical school graduates. The class of 2008 (who applied in 2003-2004) yielded the most equitable matriculating and graduating class to date, yet women still constituted only 49% of those graduates. Women were again represented at over 50% among both 2018-2019 applicants and matriculants, so monitoring the attrition and graduate rates of these students will be imperative to better understand how to achieve equity among graduates and, ultimately, residents. In addition to monitoring gender equity, institutions should continue to monitor the other types of diversity women learners bring to their campuses. As shown in this report, women graduates continue to increasingly identify with racial and ethnic groups underrepresented in medicine whereas this is not the case with men.

Among residents, women continue to enter fields such as obstetrics and gynecology, pediatrics, and dermatology at high rates (83%, 71%, and 60%, respectively); however, little progress has been made in growing their representation in surgical specialties and other fields, such as radiology, that have traditionally had few women. As described in the AAMC’s recent Promising Practices for Understanding and Addressing Salary Equity at U.S. Medical Schools report, there may continue to be inherent structural barriers or biases keeping women from entering certain fields. To fully understand how to grow women’s representation across all medical fields, institutions must explore the factors, including mentorship and sponsorship, that influence women’s specialty choice.

For the first time, this report features data about women’s representation among graduate students and postdoctorate learners in the biological and medical sciences. To fully understand the faculty and leadership pipeline in academic medicine, examining the composition of these populations is critical. According to data collected by the National Science Foundation, while women have long outnumbered men among doctoral students in these fields, there have continued to be fewer women in postdoctorate positions than men. Given the importance of the postdoctorate experience for individuals who aspire to be faculty and the continued underrepresentation of women in many basic science departments, institutions must continue to mentor women graduate students, encourage them to pursue these advanced positions, and promote careers in academic medicine.
The representation of full-time women faculty has grown by 5 percentage points in the past 10 years, from 36% to 41%, with no greater than a 1 percentage point increase in any given year during that period. While the definitions used to count part-time faculty differed slightly in the 2013 and 2019 WIMS surveys, women and men with part-time appointments continued to be almost equally represented (49.9% and 50.9%, respectively). Sharing data on part-time appointments by gender is important in debunking cultural narratives that proprot that part-time schedules are discouraged and held primarily by women.

The percentage of promotions for women have been consistently higher than the proportion of women currently at those ranks since 2009. For example, 25% of women were full professors in 2018 while, on average, 35% of promotions to full professor were for women, perhaps indicating that the percentages of women at higher faculty ranks may continue to grow. However, data also illustrate that a larger percentage of men than women were promoted after a seven-year period. This gap between men and women narrows in examining 10-year promotion rates of the same cohort. Great attention needs to be paid to increasing the representation and the advancement of women of color. Over the past 10 years, the percentage of women from races/ethnicities underrepresented in medicine has grown approximately 1 percentage point in aggregate, with URiM women mostly concentrated at the assistant professor and instructor ranks.

Data from the AAMC StandPoint Faculty Engagement Survey presented in this report provide supporting evidence of women’s perceptions of diversity, equity, and inclusion in the academic medicine workplace. In addition to the trends presented here on advancement, only 65% of women StandPoint Survey respondents agreed that their schools provided equal opportunities for promotion regardless of gender. Additionally, 27% of women felt disrespected in their workplaces, and respondents most commonly cited gender as the reason they felt disrespected. Institutions must increase their efforts to recruit and retain not only women, but diverse women in faculty positions at all ranks and provide a climate that promotes inclusion, professional success, and engagement.
While women have continued to grow in representation among division chiefs (up from 21% in 2008 to 29% in 2018) and made up 30% of center directors in 2018, they still account for slightly less than a third of these leaders. Because these positions may be precursors to more senior leadership roles within academic and clinical leadership, such as department chair roles, institutions must focus on increasing the representation of women at this level in order to create a pipeline for diversity among department chairs.

In looking at leadership across the dean’s office, women have increasingly grown in representation at the assistant and associate dean level positions since 2014 (up 6 and 8 percentage points, respectively), but growth among senior associate dean positions has only risen 1 percentage point. While growth in assistant and associate dean positions is critical to developing pipelines for more senior roles, final decision-making and budgetary power often reside with senior associate deans. Additionally, this year’s analysis showed that women who were in academic leadership positions were concentrated in roles seen as requiring “soft skills,” such as offices for faculty, diversity, and student affairs, and were less represented in roles seen as requiring “hard skills,” such as research and clinical affairs. This speaks to the ongoing need for fostering more diverse mentorship and sponsorship opportunities and integrating different kinds of educational programming in leadership courses for women.

Lastly, the steady, yet small, increases in the number of women department chairs and senior associate deans were mirrored in trends across medical school deans, of which 18% are women. Despite research that indicates the median tenure of first-time decanal positions is around five years and the number of new medical schools has increased over the past 10 years, the number of women deans has only increased by about one each year, on average, since 2009. Until greater progress is made earlier in the leadership pipeline, large increases in women’s representation among medical school deans are unlikely.
As academic medicine continues efforts to diversify the workforce, both within academia and among all medical and scientific fields, the unique needs of all women must remain an intentional focus and approached through an intersectional lens. Furthermore, institutions must take a hard look at the systemic inequities that have created and sustained barriers to the success of all individuals and identify ways to remove these barriers. The steady, incremental progress made since the *State of Women in Academic Medicine Report 2013-2014* suggests that leaders in academic medicine must continue to promote diversity and find solutions and devote resources to address gender inequity at their institutions. Using these data to take an evidence-based approach, along with recognizing the potential of every person in the academic medicine community, will help accelerate progress and move toward true equity and inclusion.
FIGURES 6-8

FIELD SPECIFICATIONS

National Science Foundation, Survey of Graduate Students and Postdoctorates in Science and Engineering, 2017 Fields

Biological and Biomedical Sciences

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 not elsewhere classified.

Health Sciences


Other Health: Communication disorders sciences, Dental sciences, Nursing science, Pharmaceutical sciences, Veterinary biological and clinical sciences, Other health not elsewhere classified.

National Science Foundation, Survey of Graduate Students and Postdoctorates in Science and Engineering, Fields Prior to 2017

Biological and Biomedical Sciences

Anatomy, Biochemistry, Biology, Biometry/epidemiology, Biophysics, Botany, Cell biology, Ecology, Entomology/parasitology, Genetics, Microbiology/immunology/virology, Nutrition, Pathology, Pharmacology, Physiology, Zoology, and Biosciences not elsewhere classified.

Beginning in 2007, Neurosciences was treated as a separate field.

Health Sciences


Other Health: Dental sciences, Nursing, Pharmaceutical sciences, Speech pathology/audiology, Veterinary sciences, Health related not elsewhere classified.

ENDNOTES