

2018

Learn Serve Lead
Austin, Texas
November 2-6



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The State of the Physician Workforce

Michael J. Dill

Director, Workforce Studies, AAMC

November 3, 2018



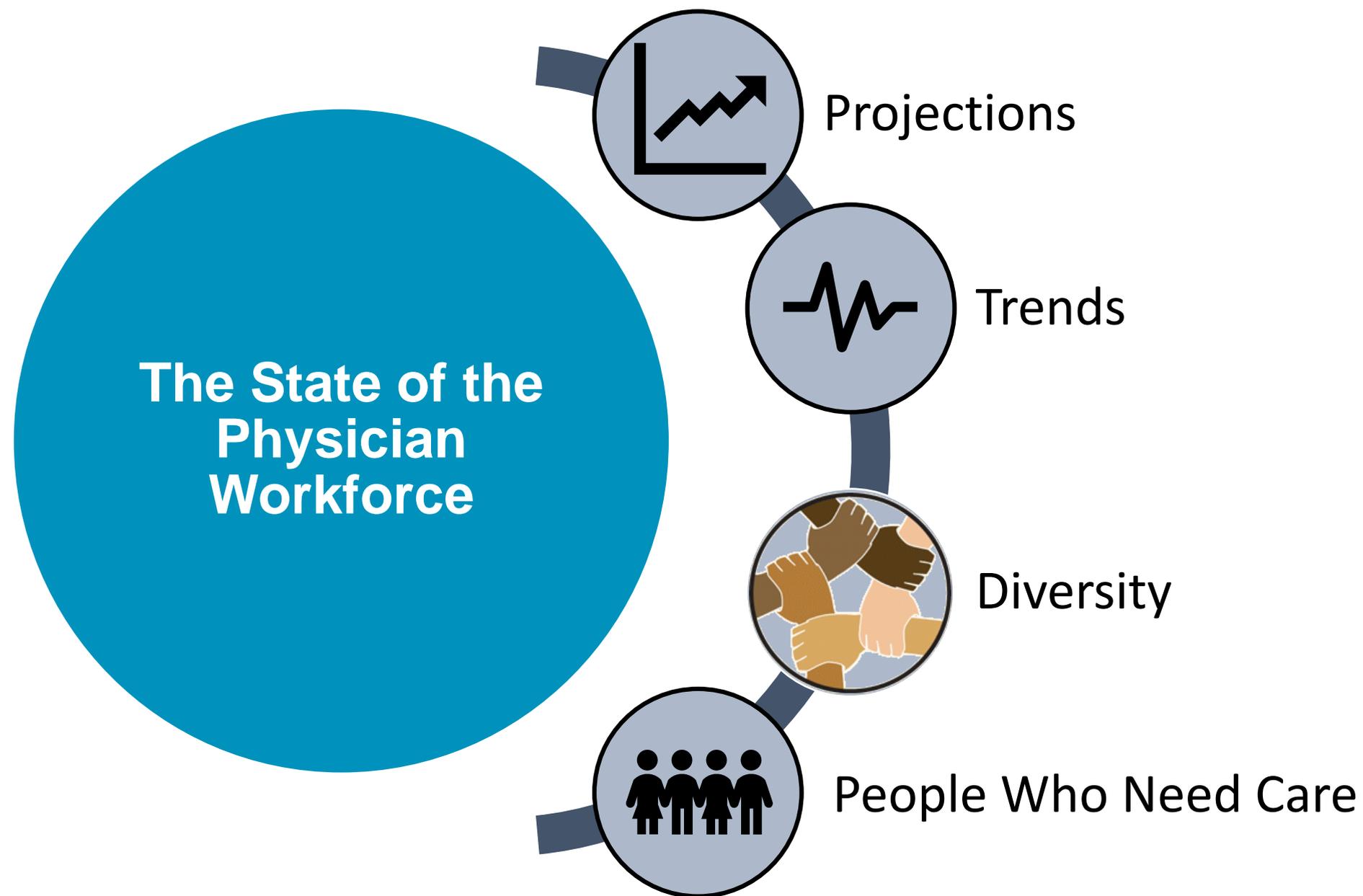
The AAMC Workforce Studies Team

- Da'Shia Davis, BS
- Kara Fisher, MPH
- Sarah Hampton, BA
- Xiaochu Hu, PhD
- Karen Jones, MApStat
- Scott Shipman, MD, MPH

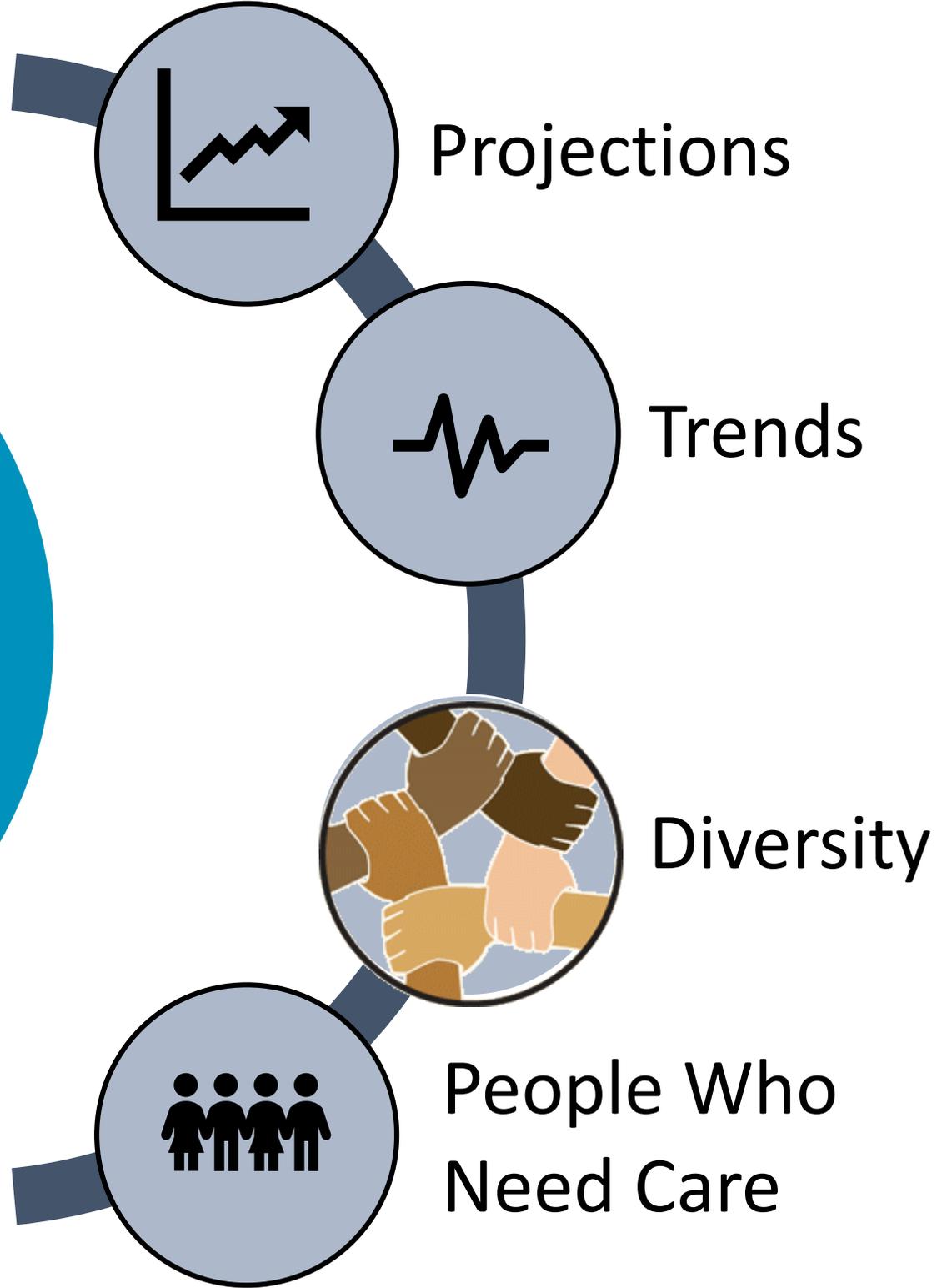
- Preeti Iyer, BSE
- Camille Moeckel
- Michelle Ogunwole, MD
- Laura Ostapenko, MD, MPP



Overview

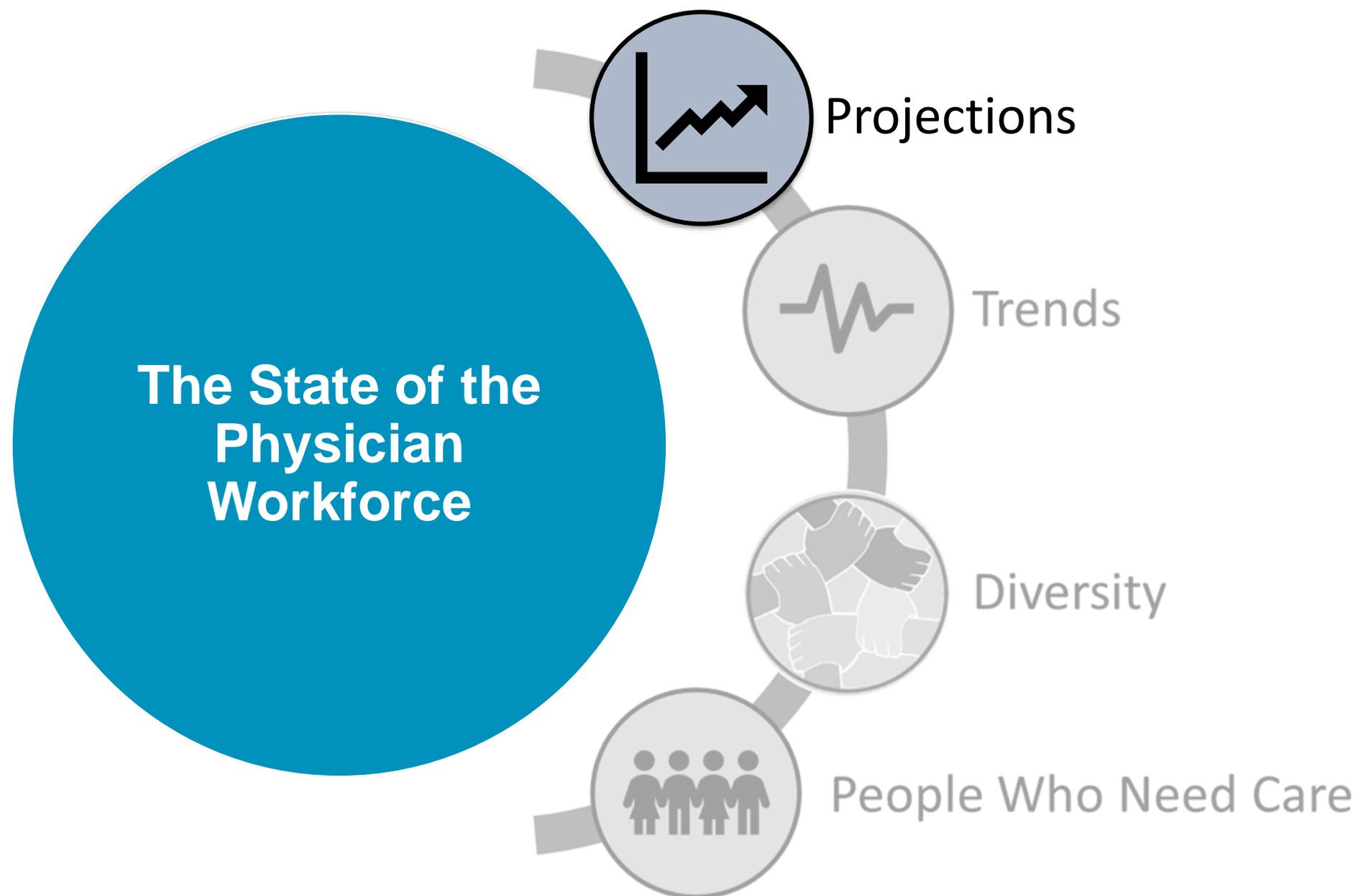


How it all fits together

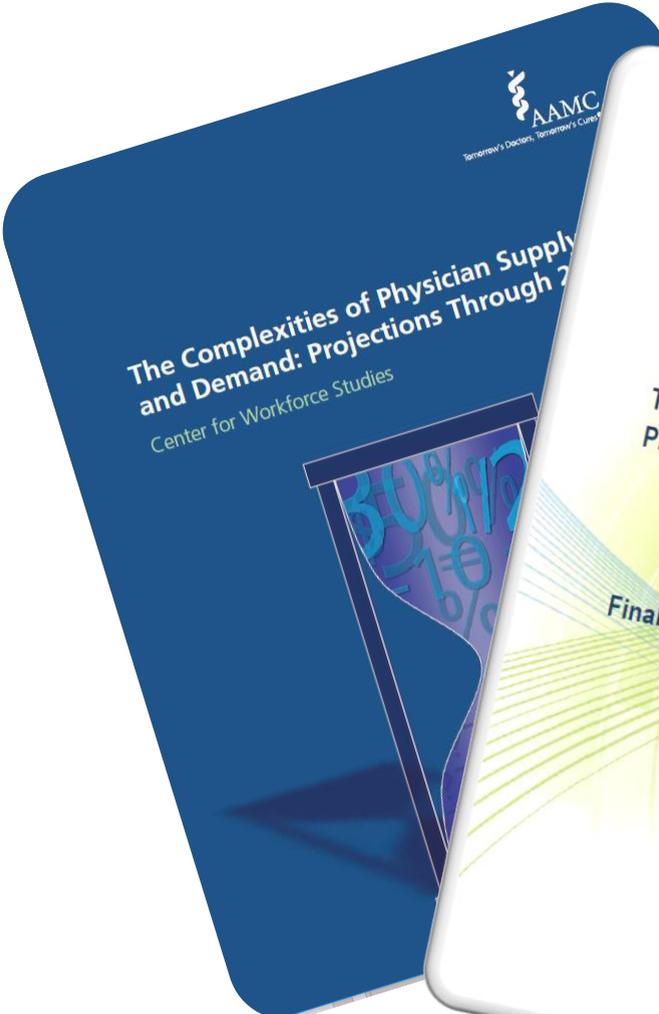


Will we meet our need?	
Pipeline growth & limits	Workforce changes
Pipeline growth & limits	Workforce changes
Access growth & limits	Population changes

Projections



Projections inform policy, and updates inform projections



2018 Update

The Complexities of Physician Supply and Demand:
Projections from 2016 to 2030

Final Report

Prepared for:
Association of American Medical Colleges

Submitted by:
IHS Markit I
Mar

For the fourth time, projections show shortages of physicians in both primary and specialty care, with a large shortage among critical surgical specialties.

Projections based on key trends, current utilization, most likely scenarios



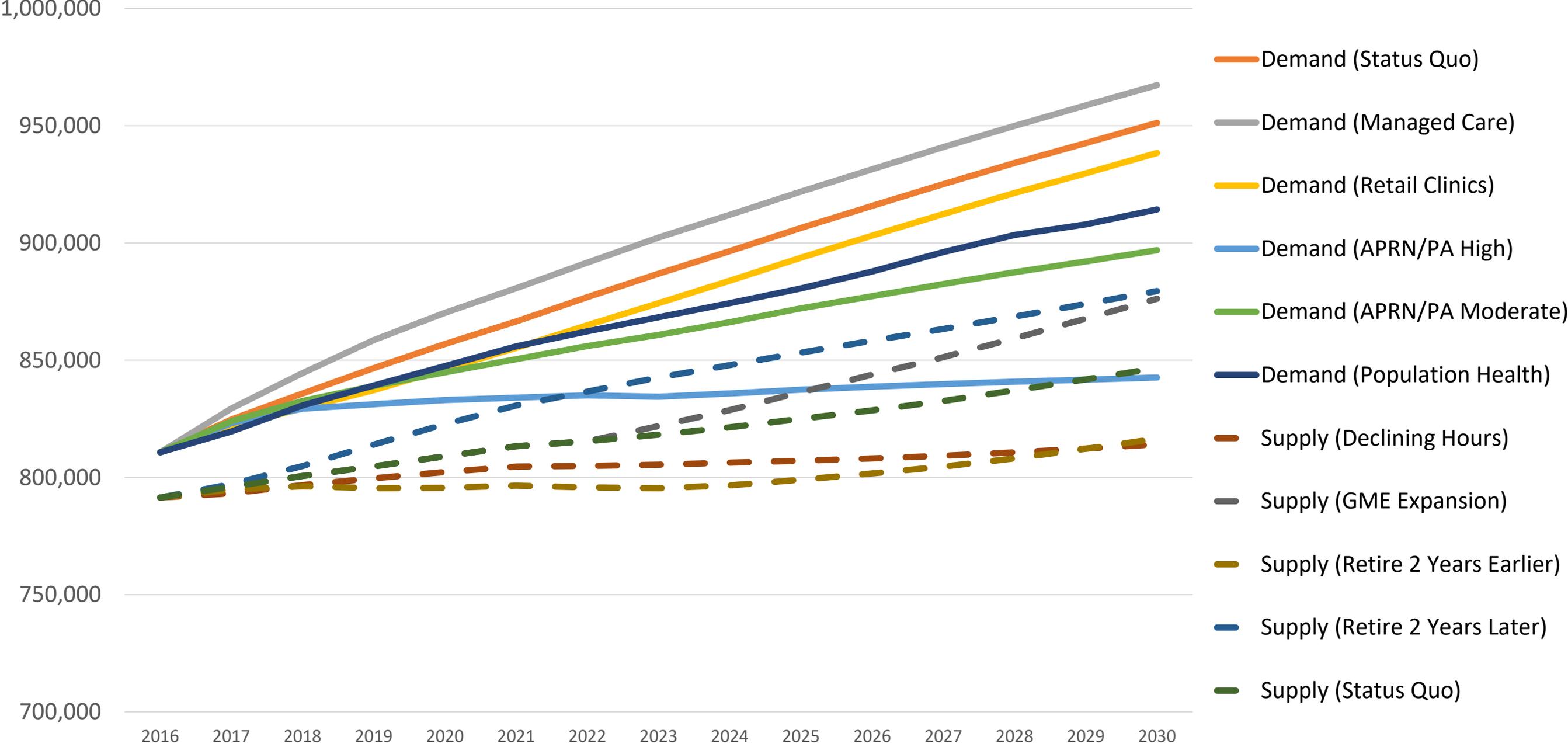
- Begin with 2016 “level of care” as status quo
- Key trends modeled as supply and demand scenarios
- Focus on most likely 25th-75th percentiles of paired projections



We model multiple scenarios

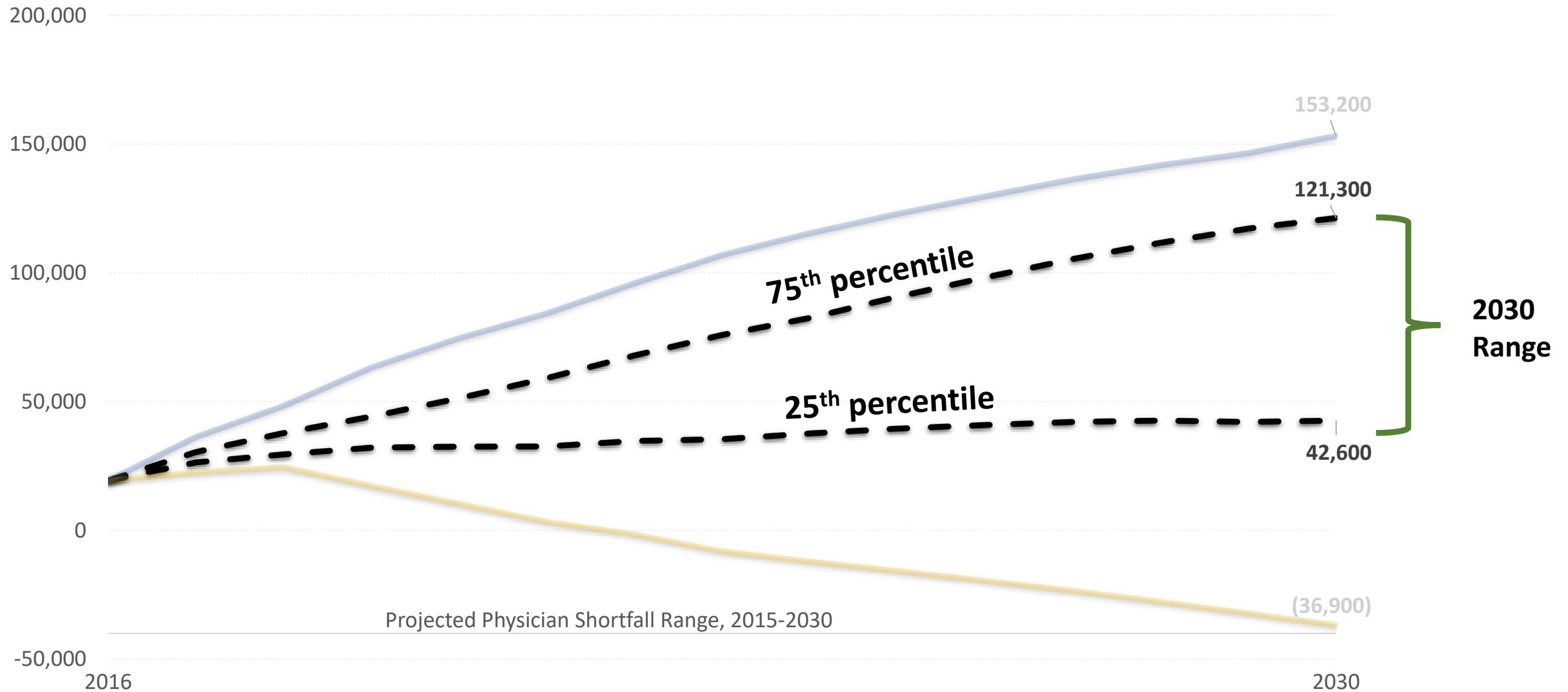
Supply scenarios	Demand scenarios
Status quo	Status quo
Work hours	Managed care
GME	Retail clinics
Retirement – earlier	APRNs/PAs – moderate
Retirement - later	APRNs/PAs - high
	Population health

We look at all possible pairings of scenarios

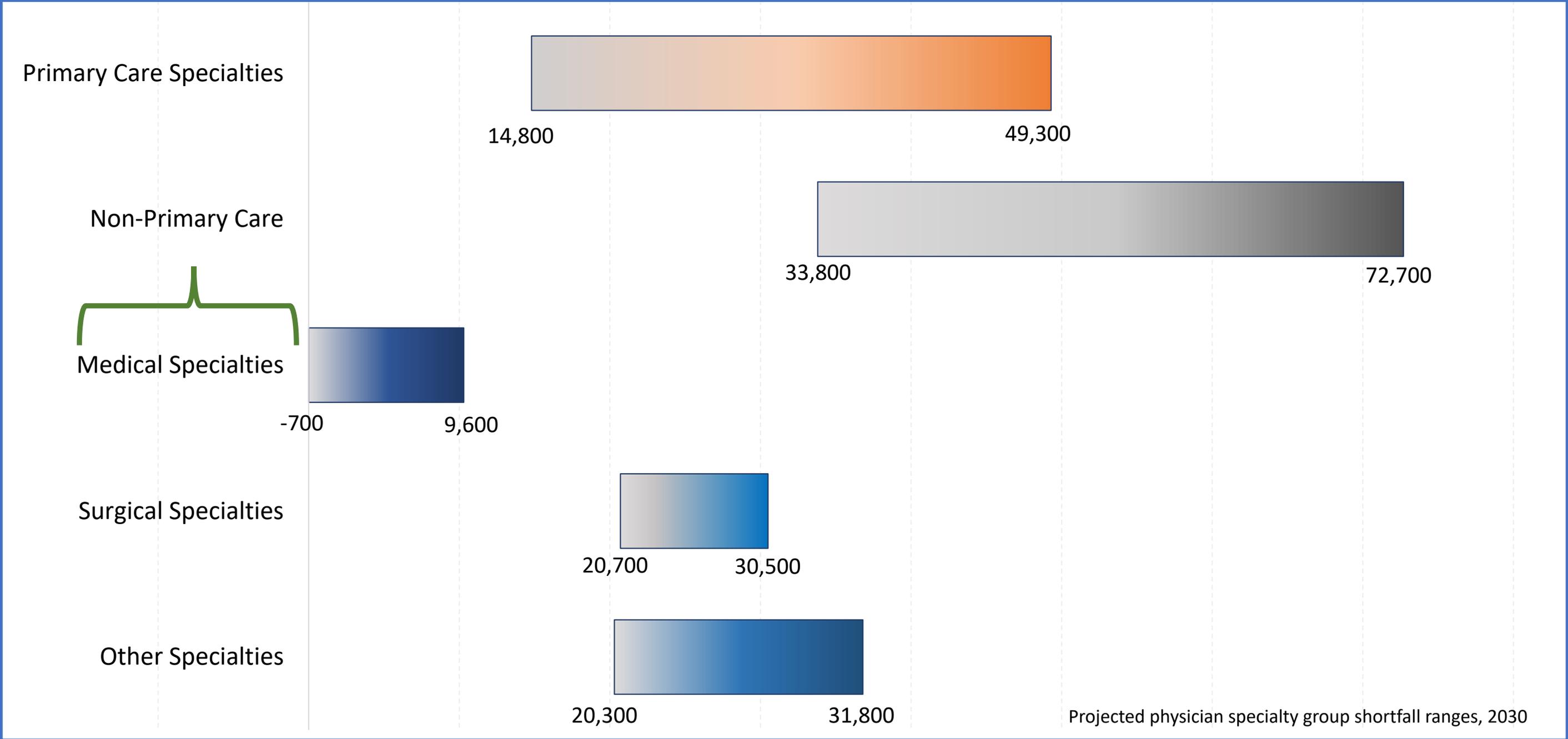


Source: AAMC, 2018 Update: Complexities of Physician Supply and Demand: Projections from 2016 to 2030.

Growing shortage of physicians projected from 2015 to 2030



The size and range of projected physician shortages varies by specialty group



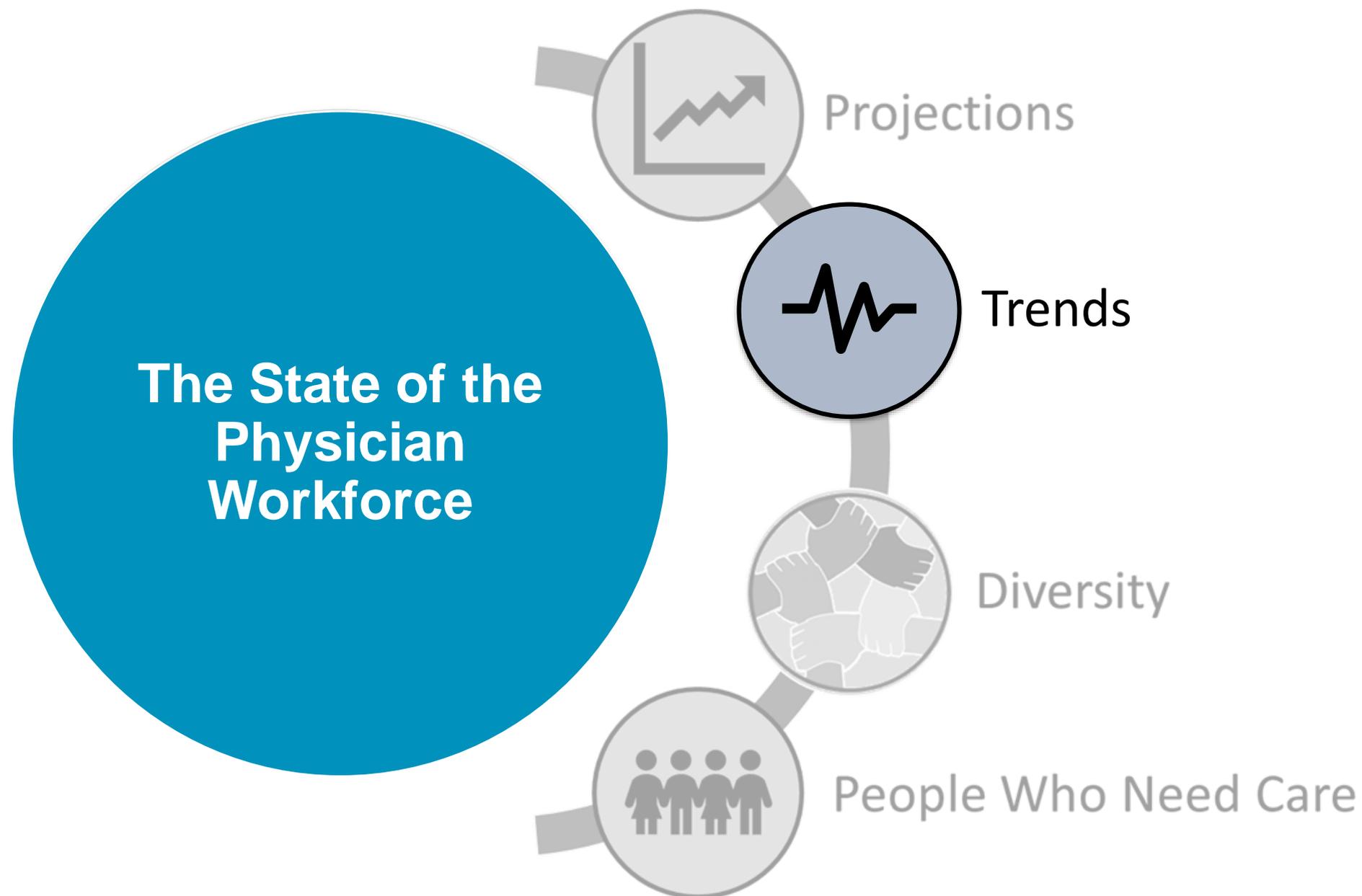
Source: AAMC, 2018 Update: Complexities of Physician Supply and Demand: Projections from 2016 to 2030.

Projections - Summary

- Most recent report consistent with past
 - Shortages
 - Surgical specialties



Trends



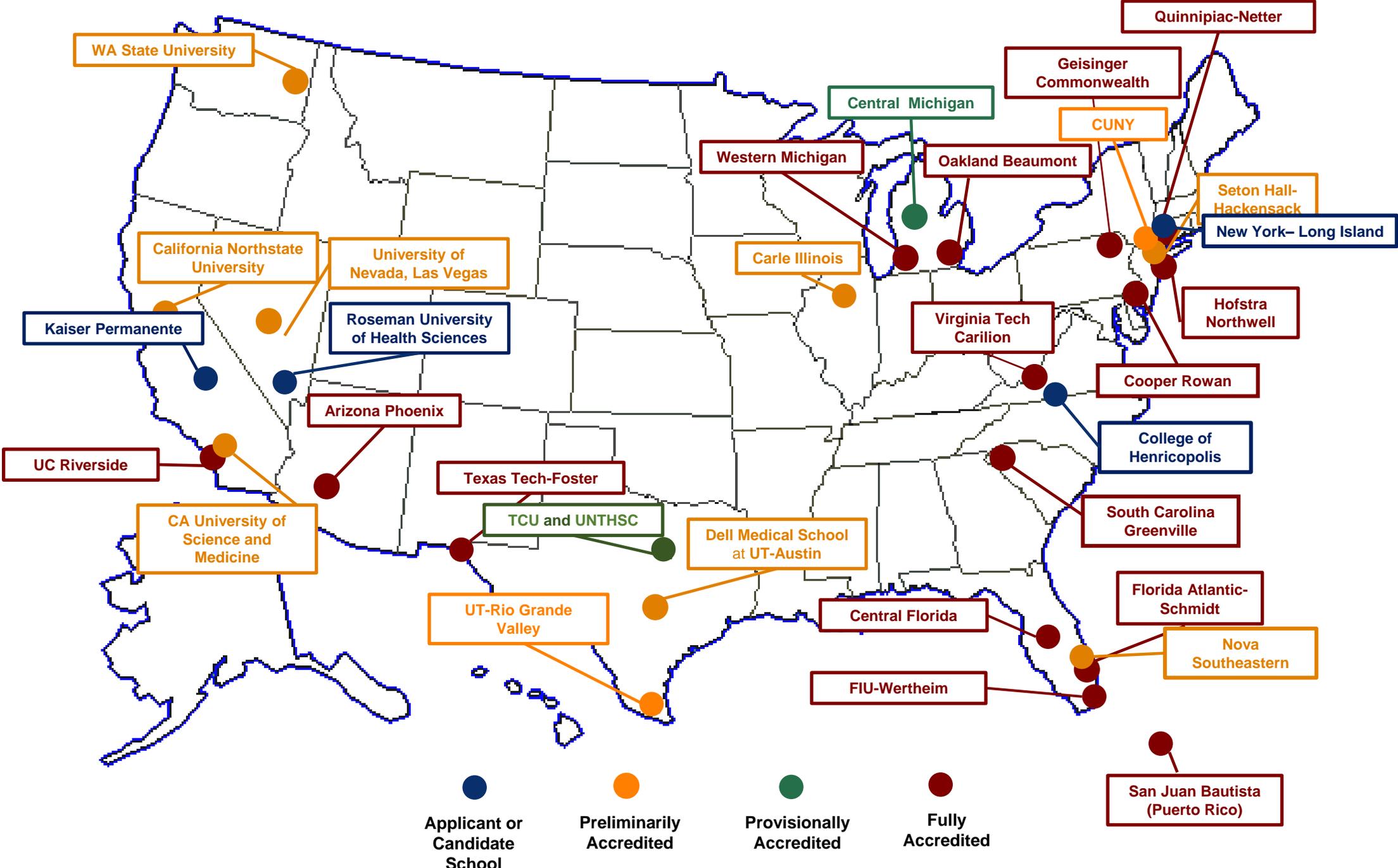


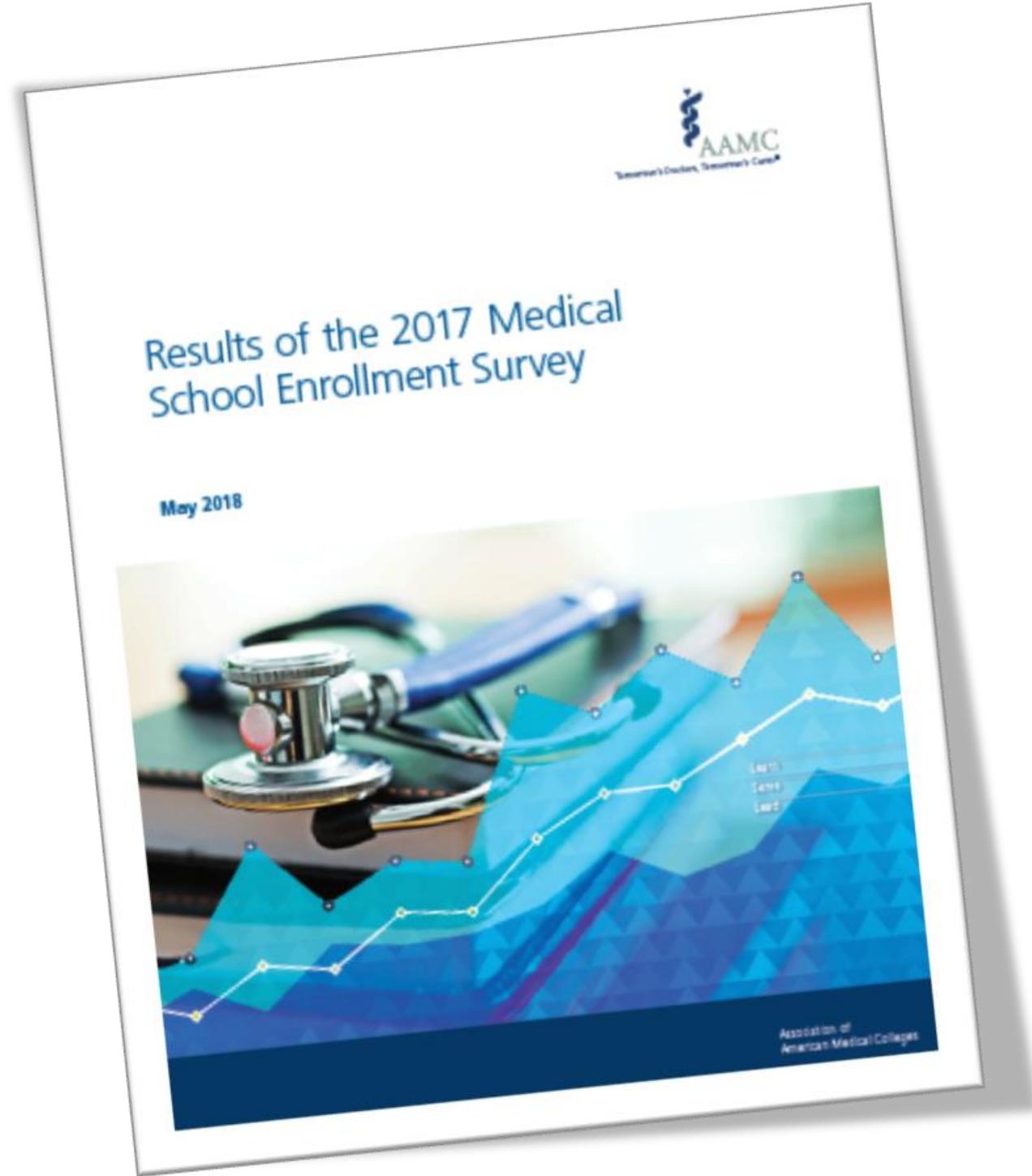
Trends

- UME

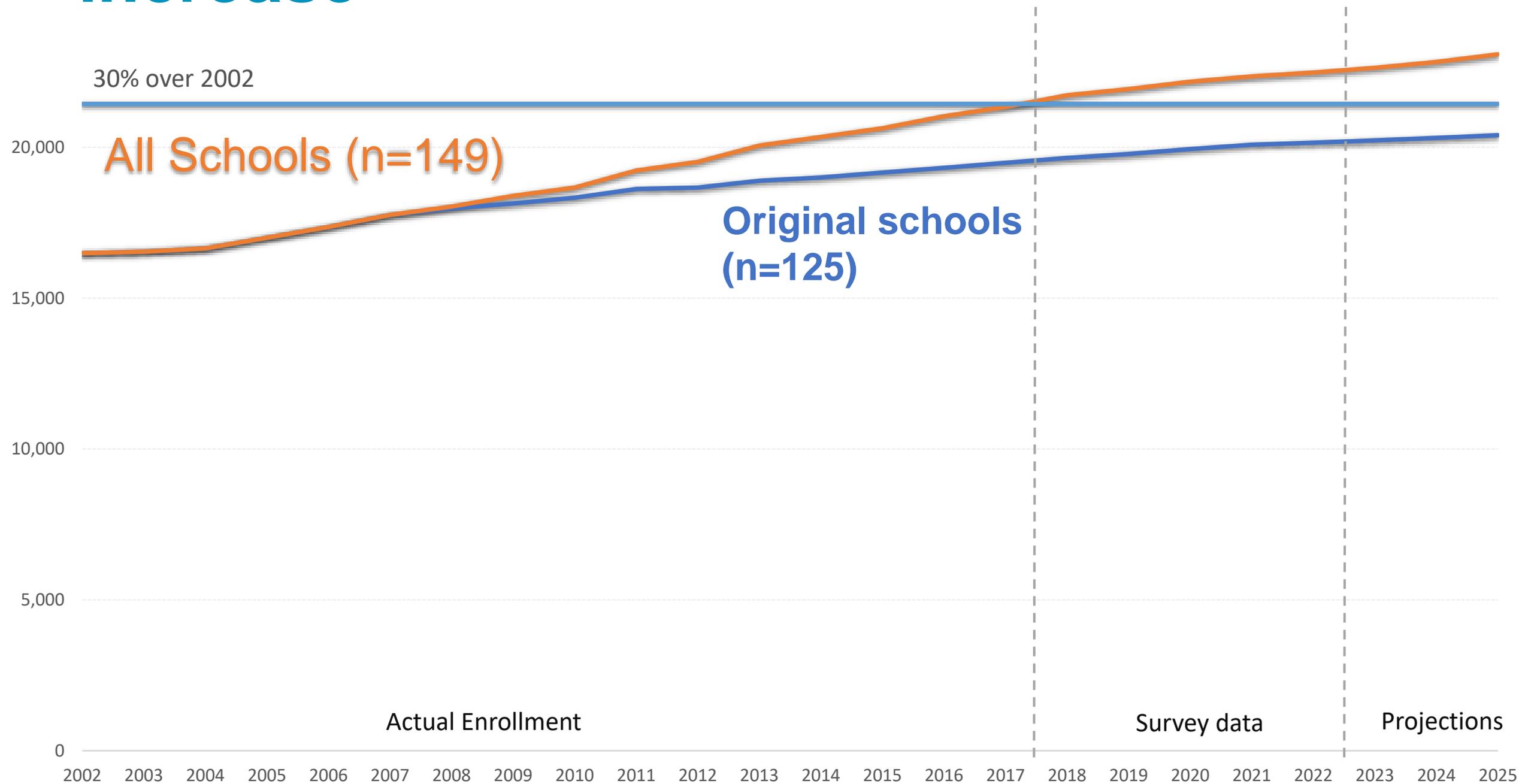


We have ~~26~~ 27 new medical schools since 2006

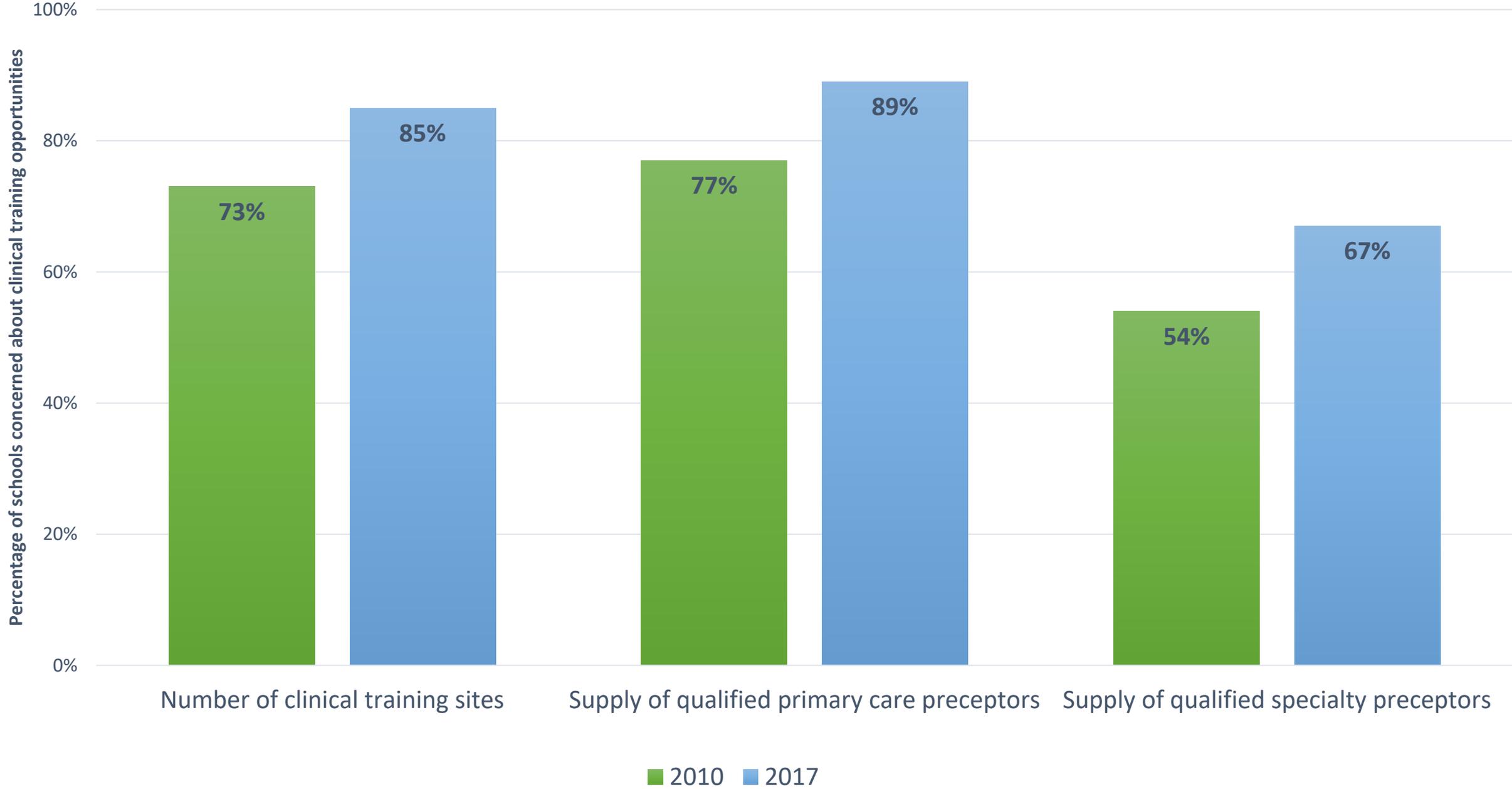




US MD enrollment expected to exceed 30% increase

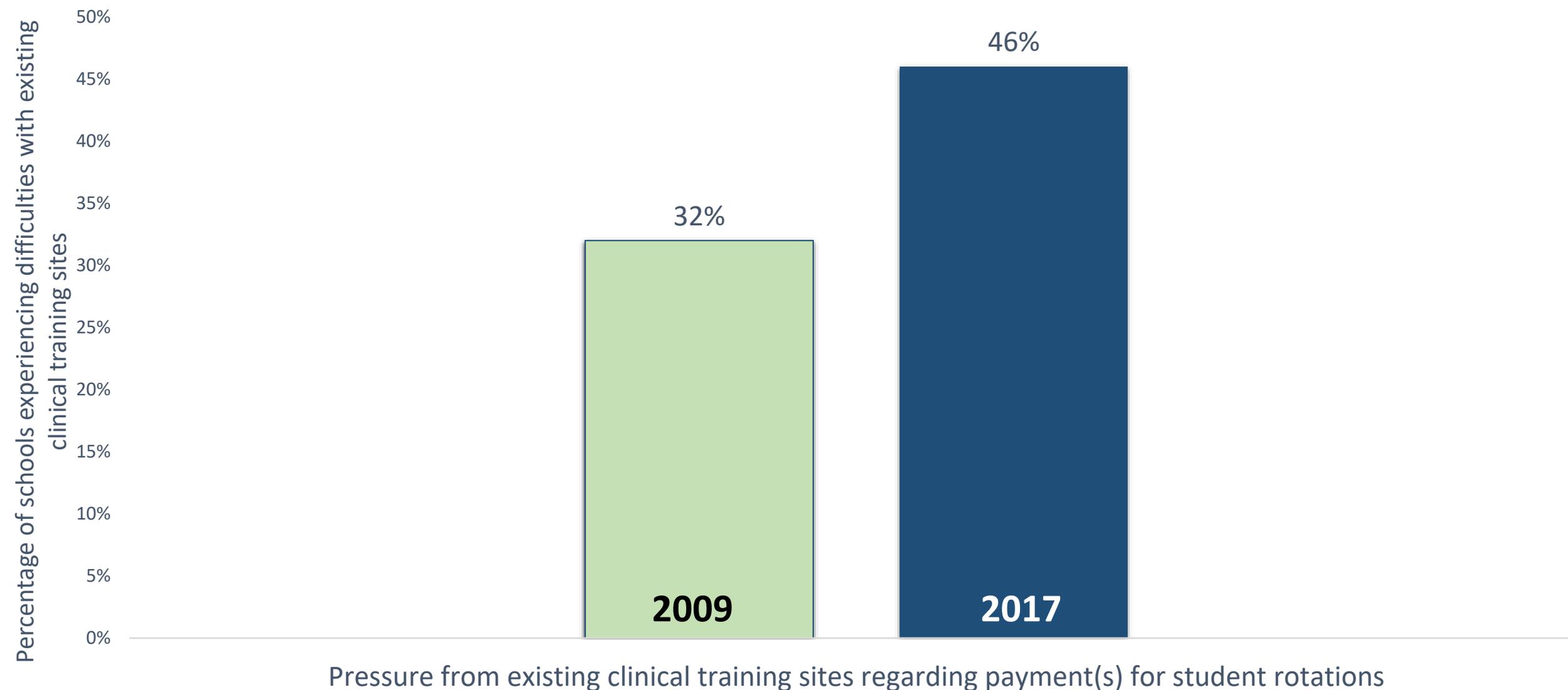


Medical schools' concern about clinical training opportunities for their students continues to grow

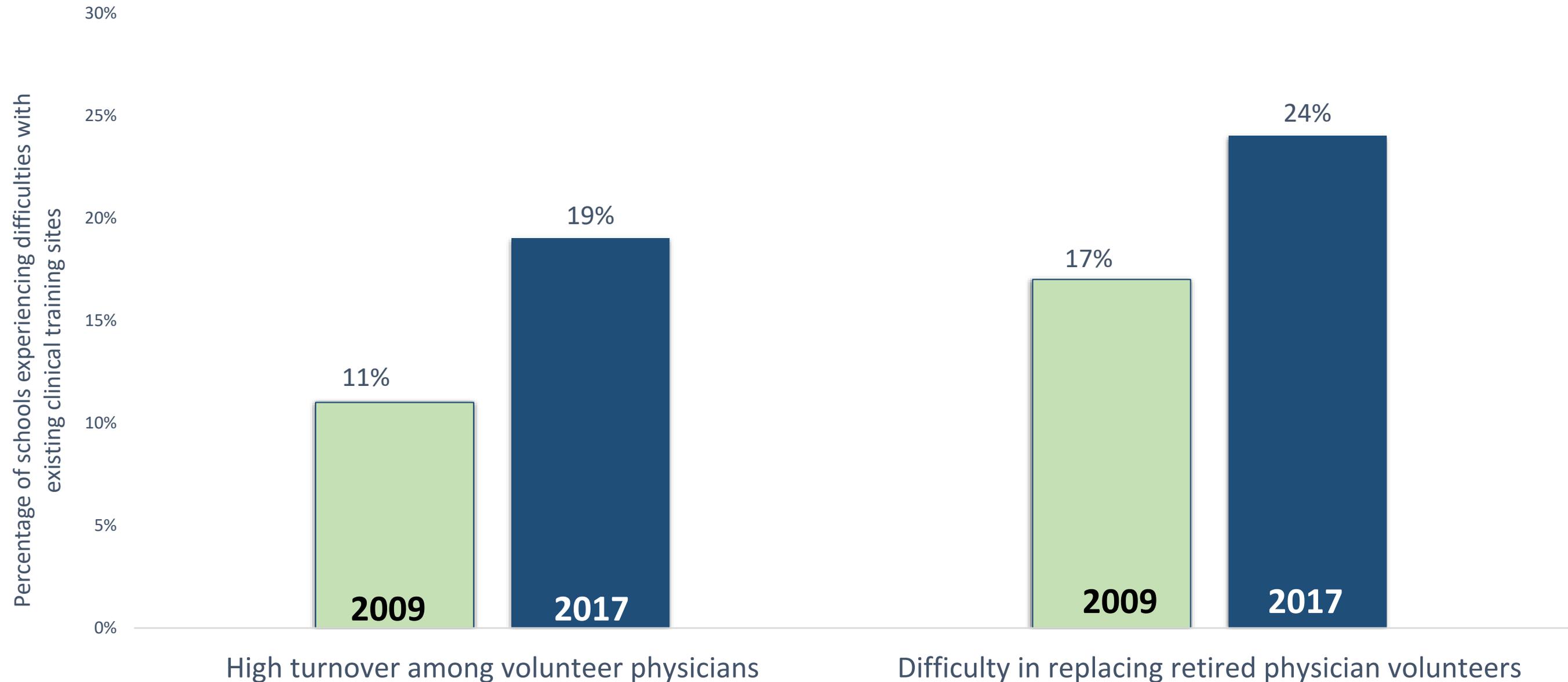


Source: AAMC 2017 Medical School Enrollment Survey Report

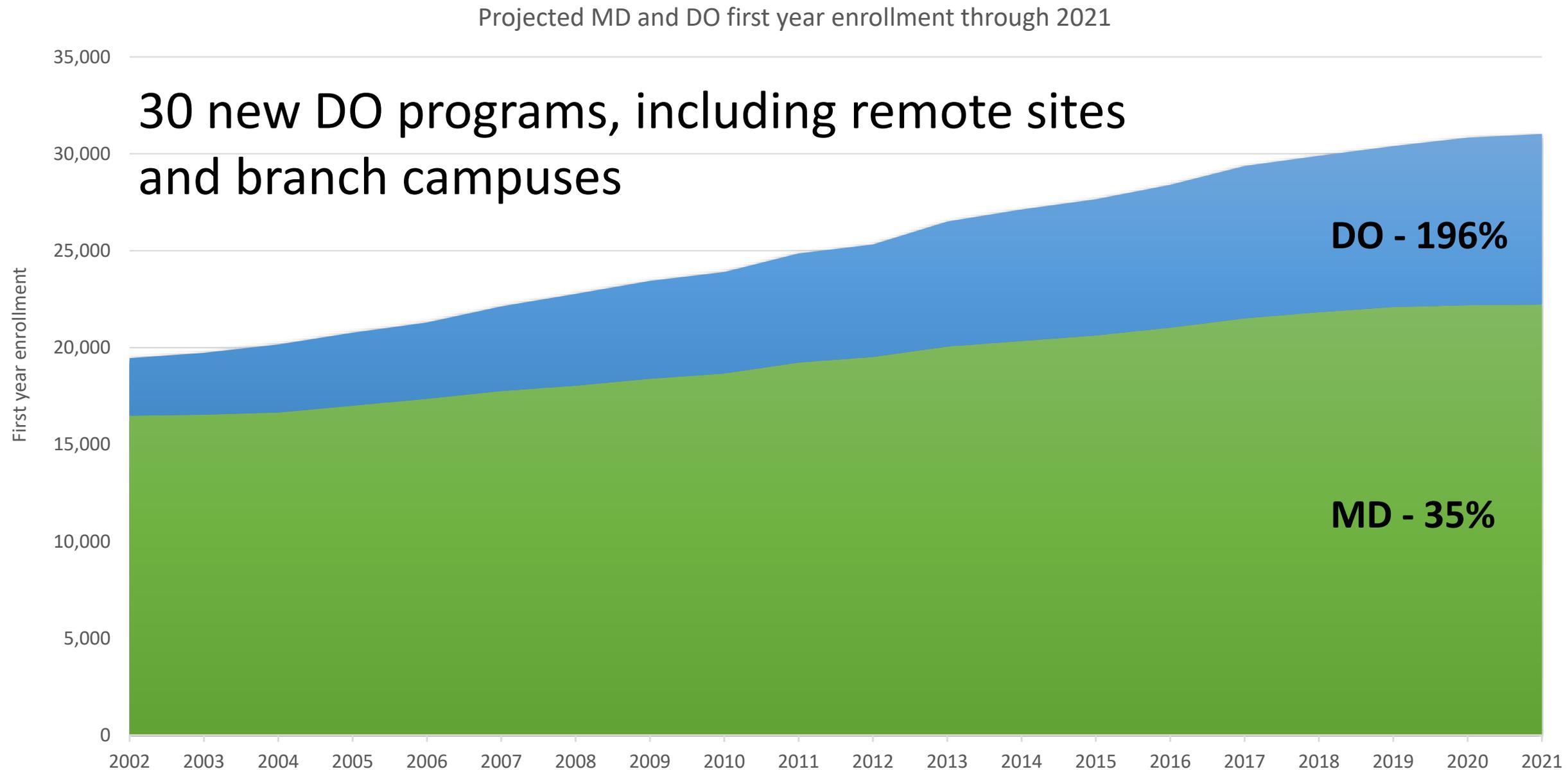
Pressure from sites regarding payment for student rotations on the rise



Turnover and difficulties with replacement of physician volunteers are growing problems



Overall MD & DO first year enrollment is projected to grow 59% between 2002 and 2021



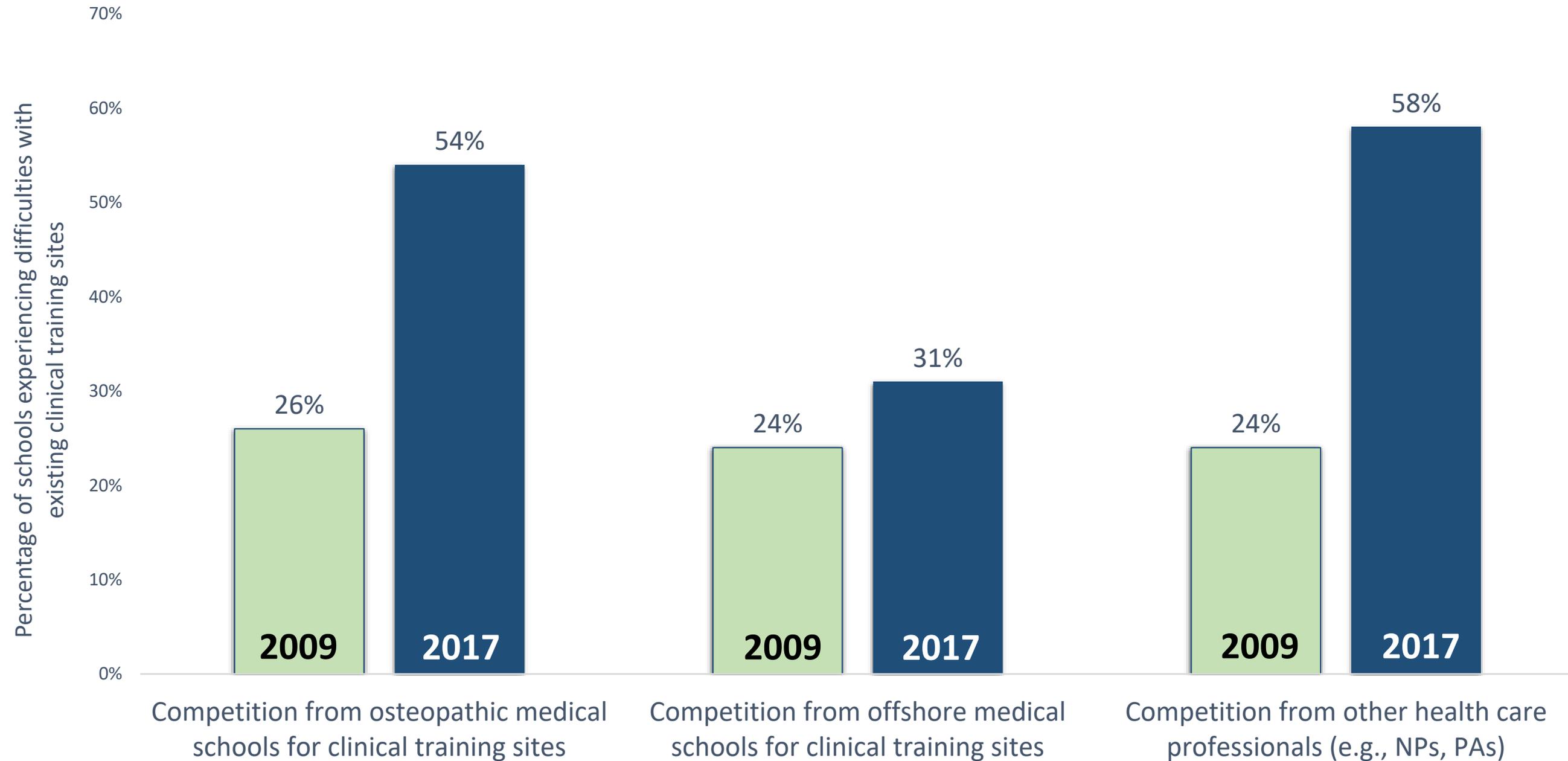
PAAs & NPs are growing their pipelines rapidly



	2007	2008	2016
PA programs	134		209
PA enrollment		10,920	21,585
DNP programs	53		313
DNP enrollment		3,415	25,289



Competition, especially from DO, NP & PA programs, rising rapidly



The Economics of Supply and Demand for Year 3 and 4 Clinical Clerkships

- Create an understanding of current situation
- Highlight contributing factors
- Focus on challenges and options moving forward with innovative solutions

- Hilton: Austin Grand Salon FG
- Today: 3:15-4:30 pm

- Anne Barnes
- Raymond Curry
- Tim Johnson





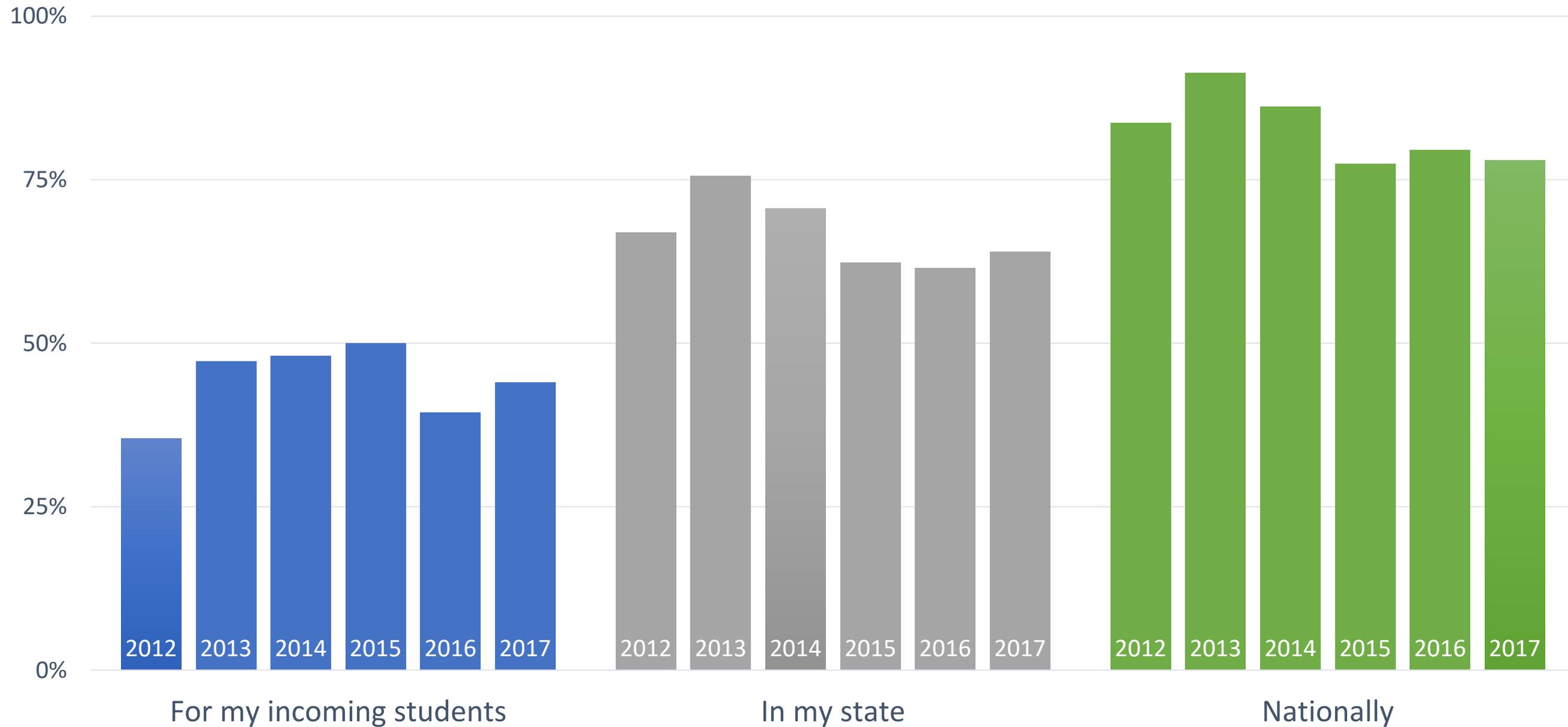
Trends

- GME

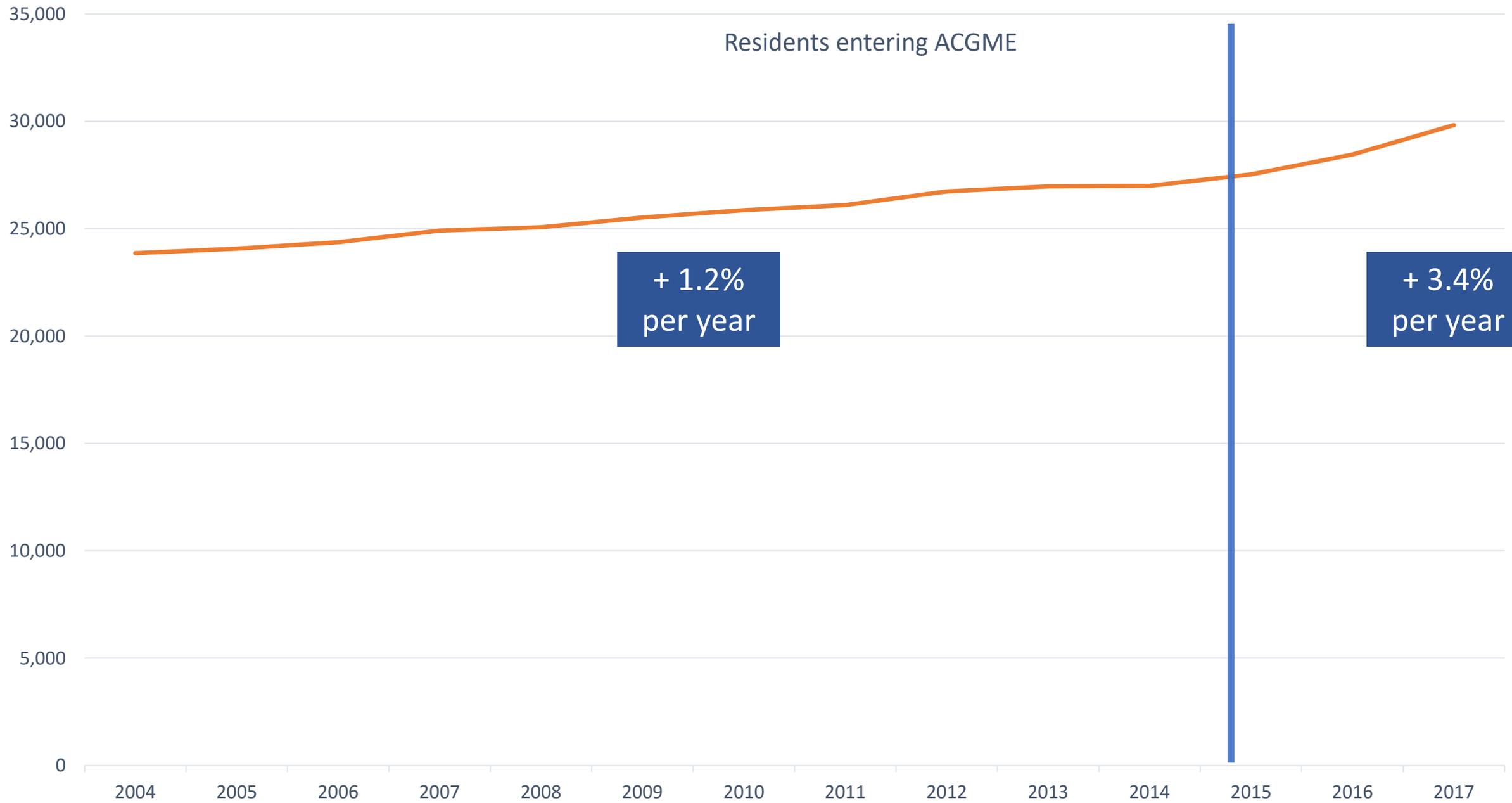


Medical schools concerned about students' ability to find a residency training position

Percent of schools reporting major or moderate concern



Residents entering pipeline rising, but slowly



Sources: ACGME Data Resource Books.

Recent growth in DO residents and fellows may reflect shift to a single GME accreditation system

Average annual growth rate	2005-2015	2015-2017
USMD	1%	2%
IMG	0%	3%
DO	5%	14%

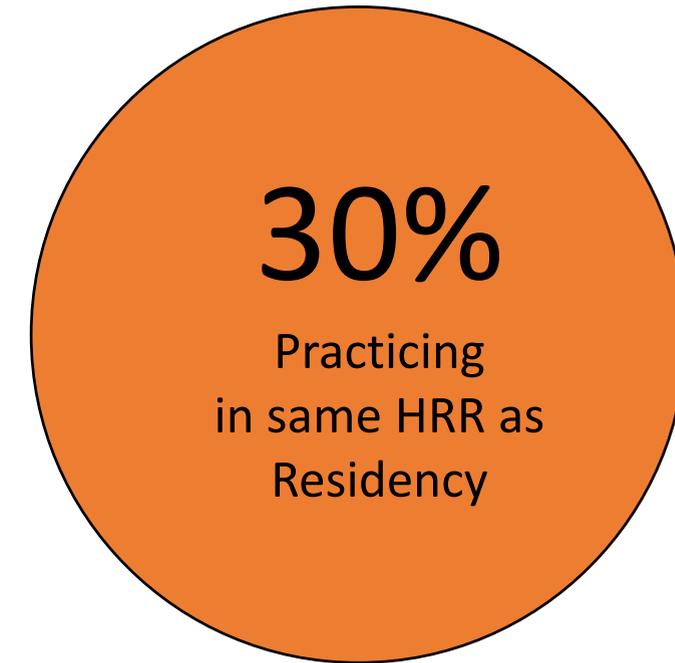
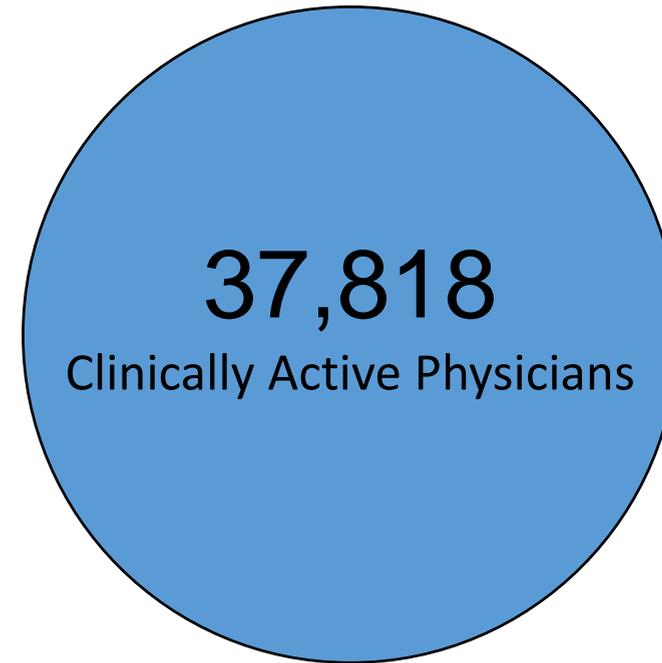


Trends

- GME Retention

How far does the apple fall from the tree?

11 years after
residency



Higher retention for

- Female physicians
- Physicians with 3+ gap years before med school
- Primary care physicians
- Physicians with ties to state of residency

Ties to location have the strongest effect

Number of Physicians

HRR Retention

Birth State

Same as residency
Different than residency

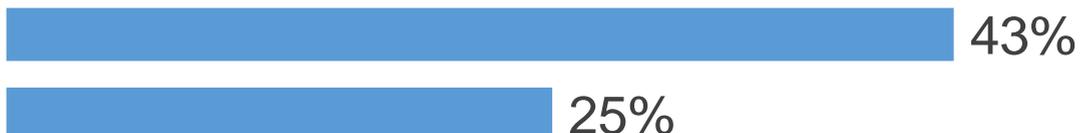
9,212
28,606



Undergraduate State

Same as residency
Different than residency

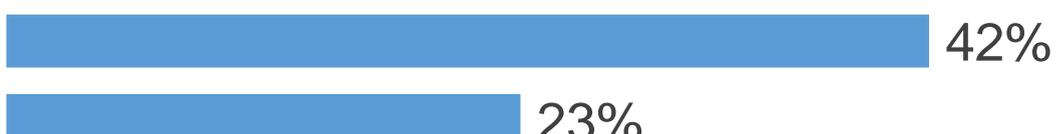
10,912
23,130



Medical School State

Same as residency
Different than residency

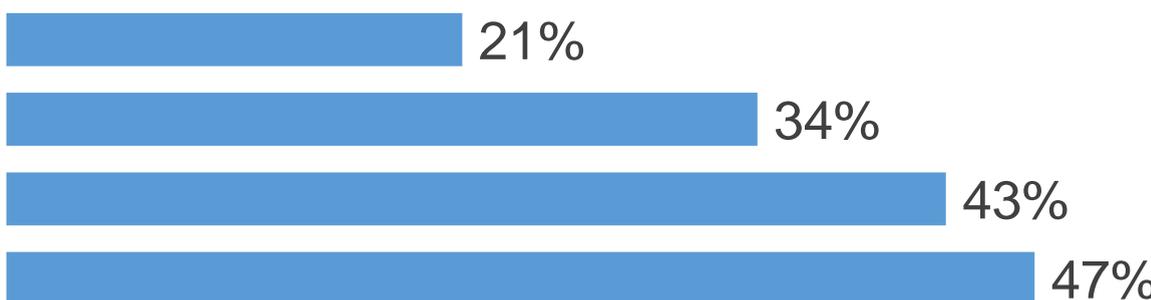
14,568
22,472



Previous times in Residency State

None
One
Two
Three

19,373
6,857
6,929
4,659



Source: Ostapenko & Fisher. Forthcoming. "How far does the apple fall from the tree? Factors Associated with Physician Retention in the Geographic Location of their Residency".

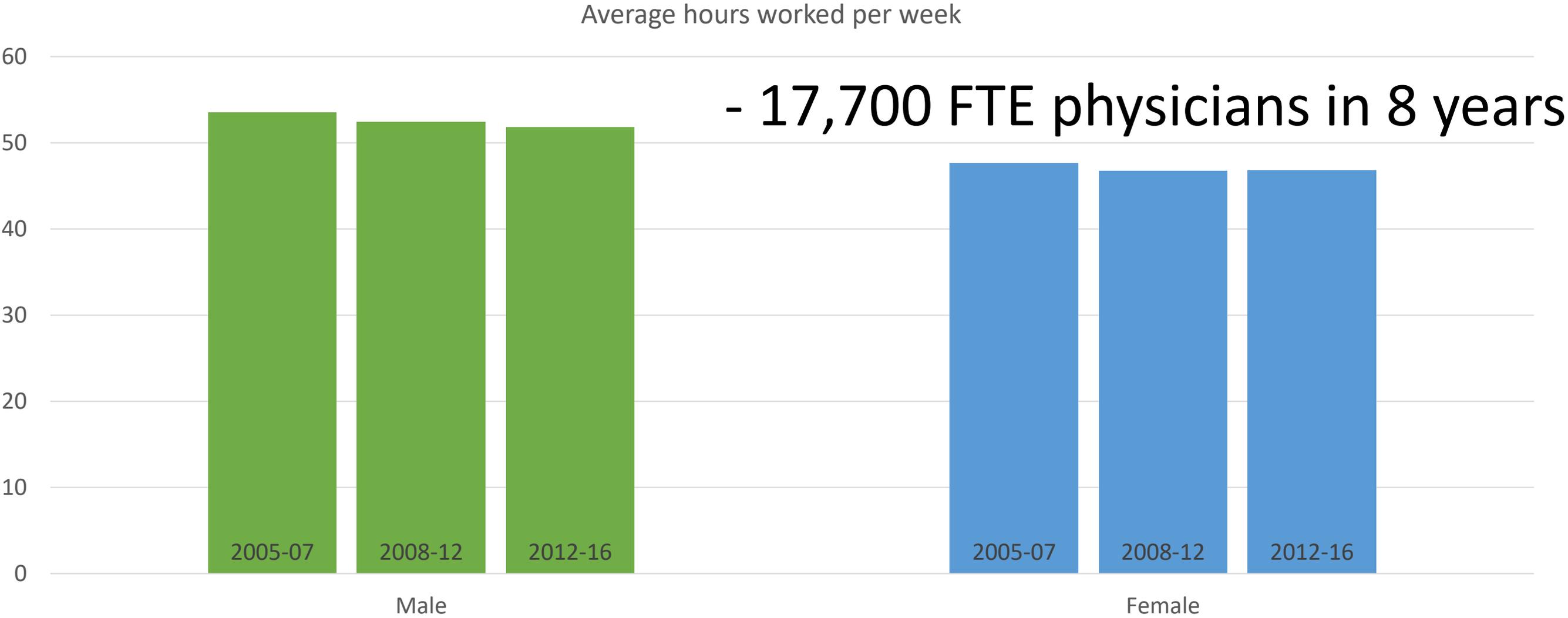


Trends

- Practicing physicians

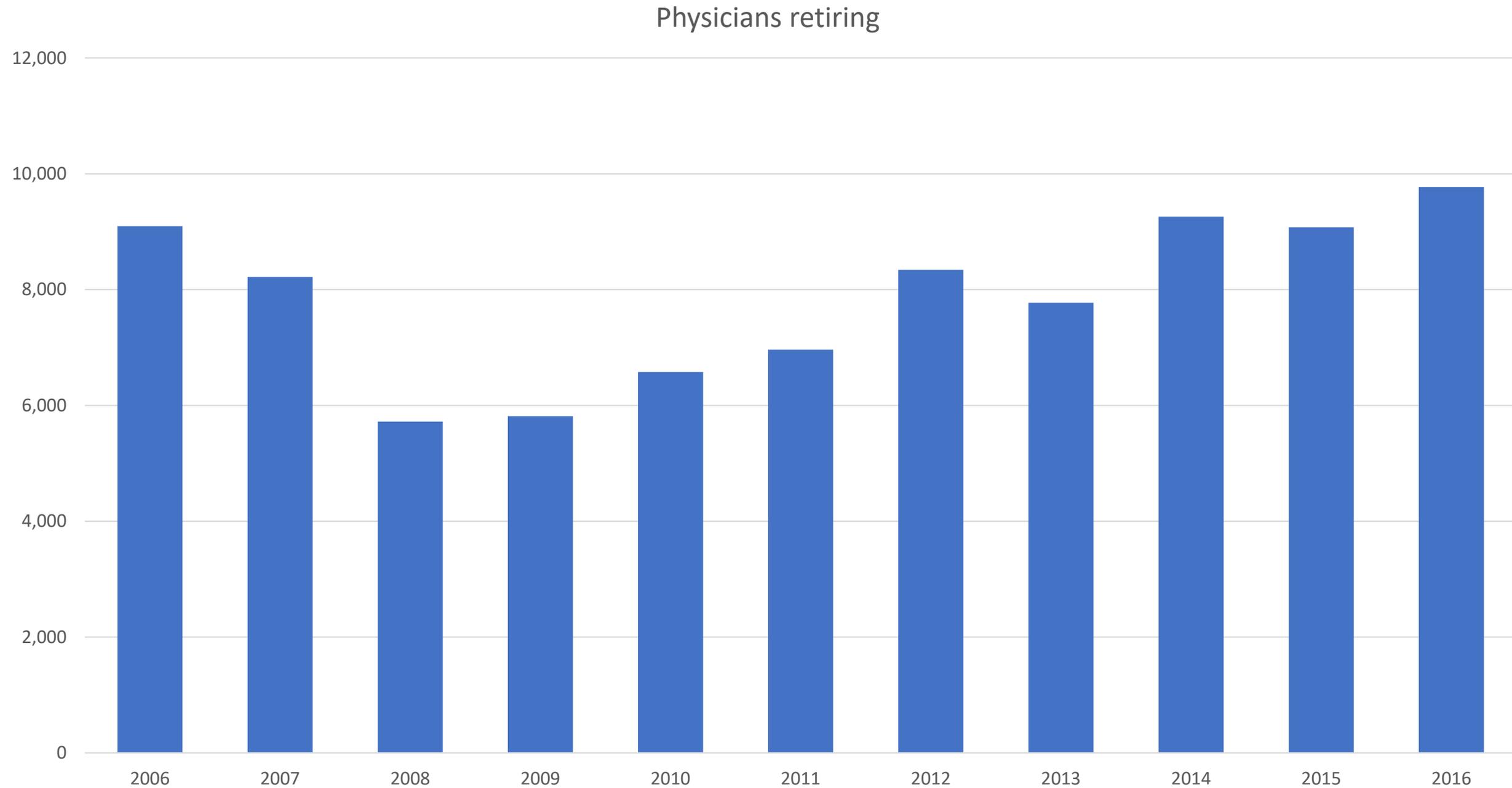


Physicians are working fewer hours, especially male physicians



Source: Census Bureau, American Community Survey 2005-7 3-year estimates, 2008-12 and 2012-16 5-year estimates. Accessed via IPUMS-USA.

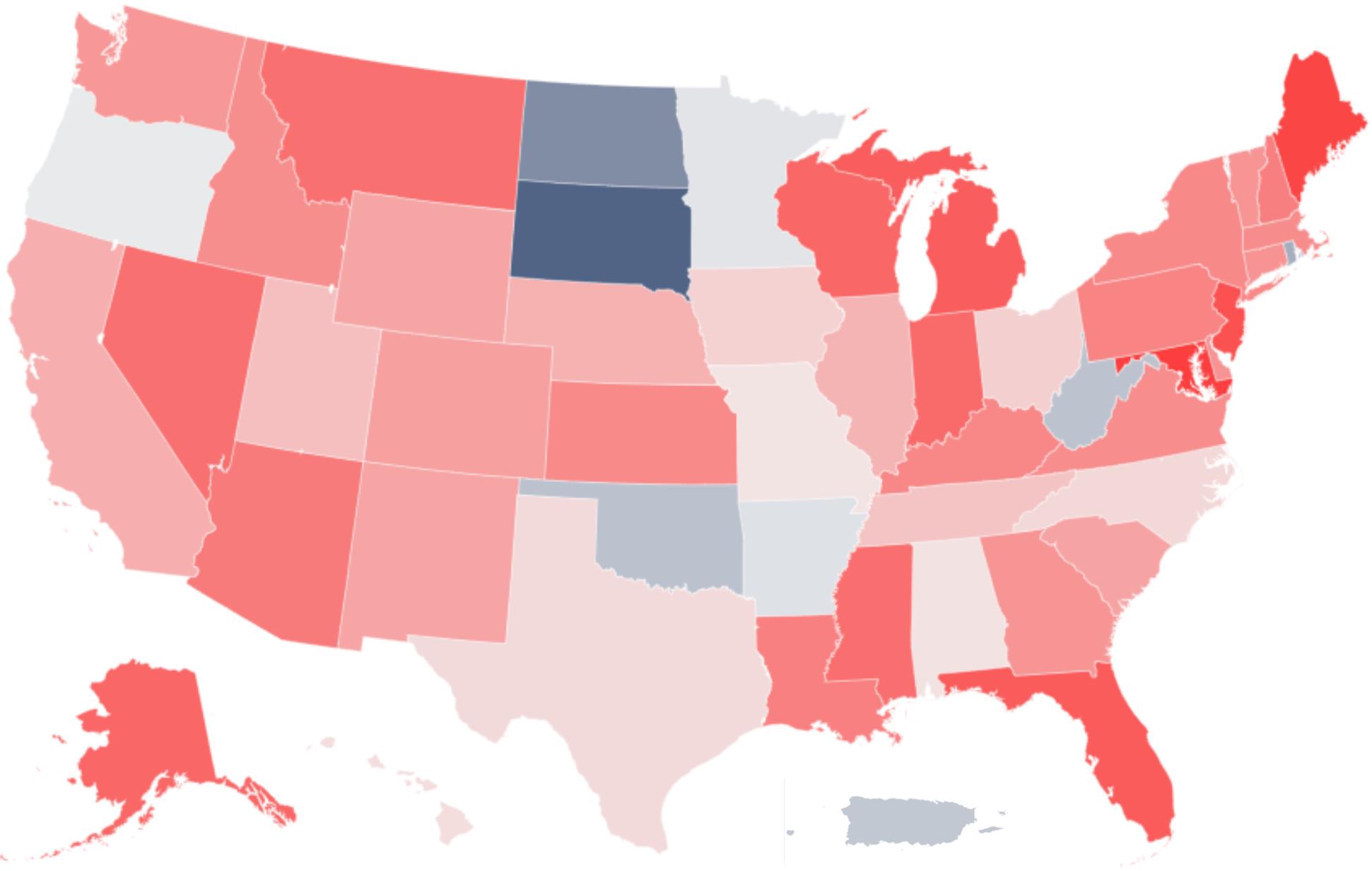
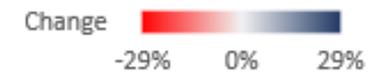
Post-recession, physician retirements are rising



Some large specialties are older than others

Specialty	Total active physicians	Percent 55+ years
Psychiatry	38,193	61.3
Anesthesiology	41,753	51.7
Radiology and Diagnostic Radiology	27,711	51.6
General Surgery	25,026	46.4
Family Medicine/General Practice	113,283	45.7
Internal Medicine	115,476	44.2
Obstetrics and Gynecology	41,623	43.5
Pediatrics	58,406	42.2
Emergency Medicine	42,280	34.8

Change in psychiatrists per 10,000 population, 2004 to 2017



Psychiatry



Trends

- Wellness



Physician wellness matters to everyone

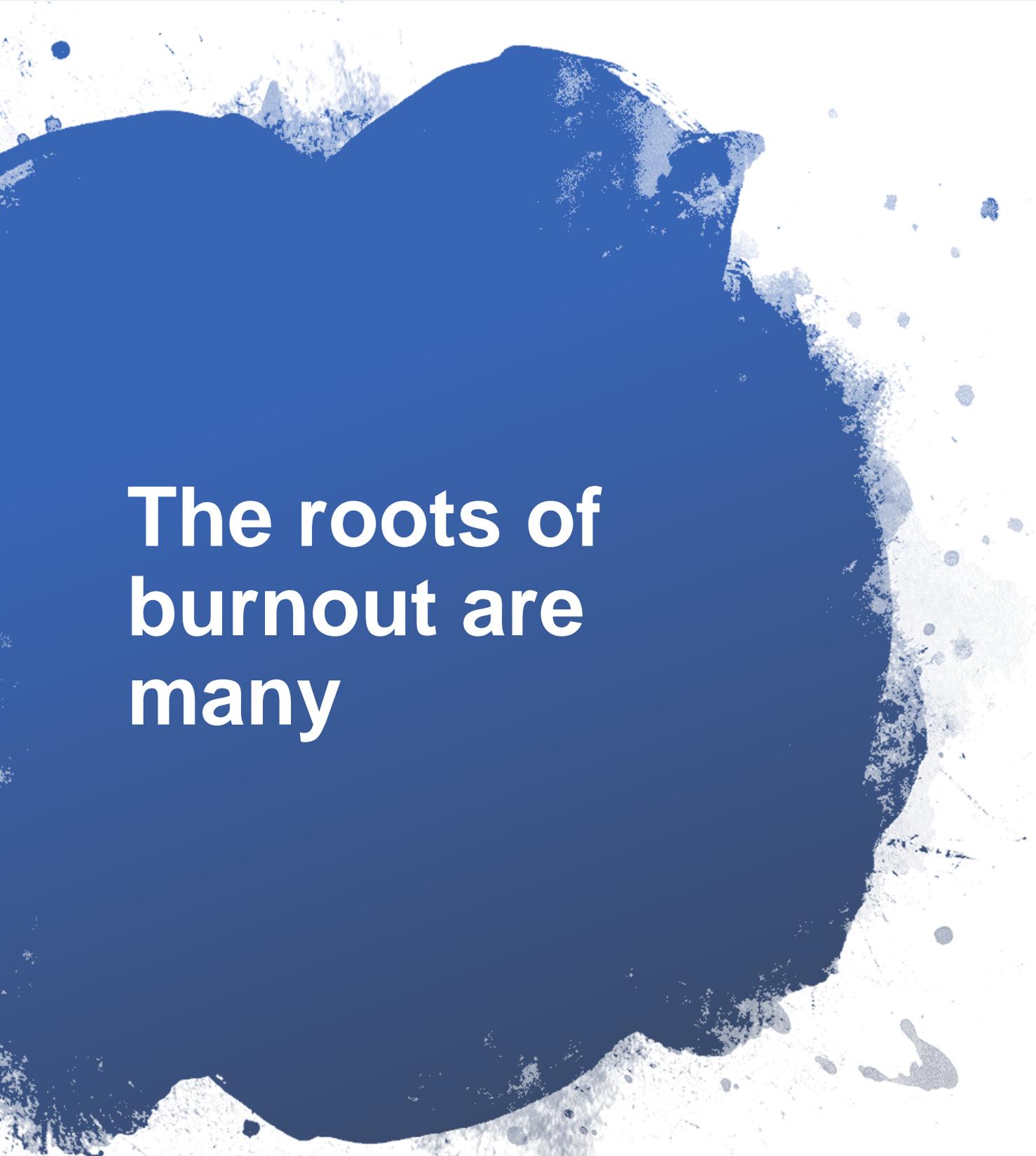
“Physician burnout is associated with suboptimal patient care and professional inefficiencies; health care organizations have a duty to jointly improve these core and complementary facets of their function.”

- Pangioti, Geraghty, Johnson, et al. JAMA Intern Med. 20148.

Physician Burnout

- 42% burned out
 - Male – 38%
 - Female – 48%





The roots of burnout are many

Main physician-reported causes of burnout:

- Too many bureaucratic tasks (e.g., charting, paperwork)
- Spending too many hours at work
- Lack of respect from administrators/employers, colleagues, or staff
- Increasing computerization of practice

<https://www.aamc.org/wellbeing>

Sexual harassment is common in academic medicine

“Women students, trainees, and faculty in academic medical centers experience sexual harassment by patients and patients’ families in addition to the harassment they experience from colleagues and those in leadership positions.”

-National Academies of Sciences, Engineering, Medicine

Putting an end to the culture of gender-based harassment is key to recruiting, retaining, and realizing the full potential of nearly half the medical workforce. Doing so will depend on our willingness to undergo a complete transformation in how we approach this problem.

Just as it is difficult to correct the potassium level in a magnesium-depleted patient, interventions targeting sexual harassment are sure to fail in an environment that fosters the devaluation of women in every other sense.

Esther K. Choo, M.D., M.P.H., Jane van Dis, M.D., and Dara Kass, M.D.



The NEW ENGLAND
JOURNAL of MEDICINE

Time's Up for Medicine? Only Time Will Tell

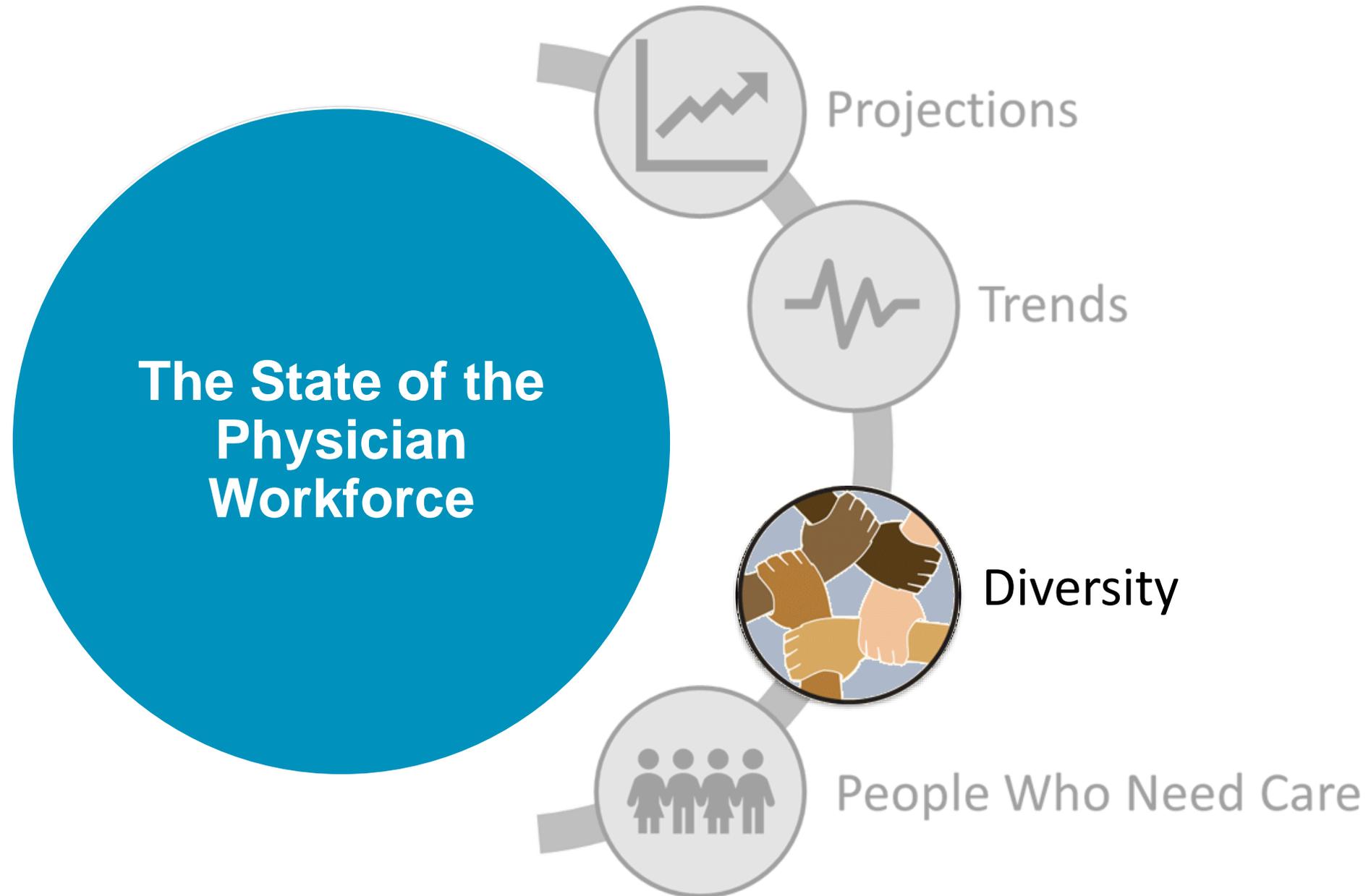
Trends Summary

- Exceed enrollment goal
- Clerkships & GME
- Single accreditation

- Work hours declining
- Retirement on the rise
- Burnt out



Diversity





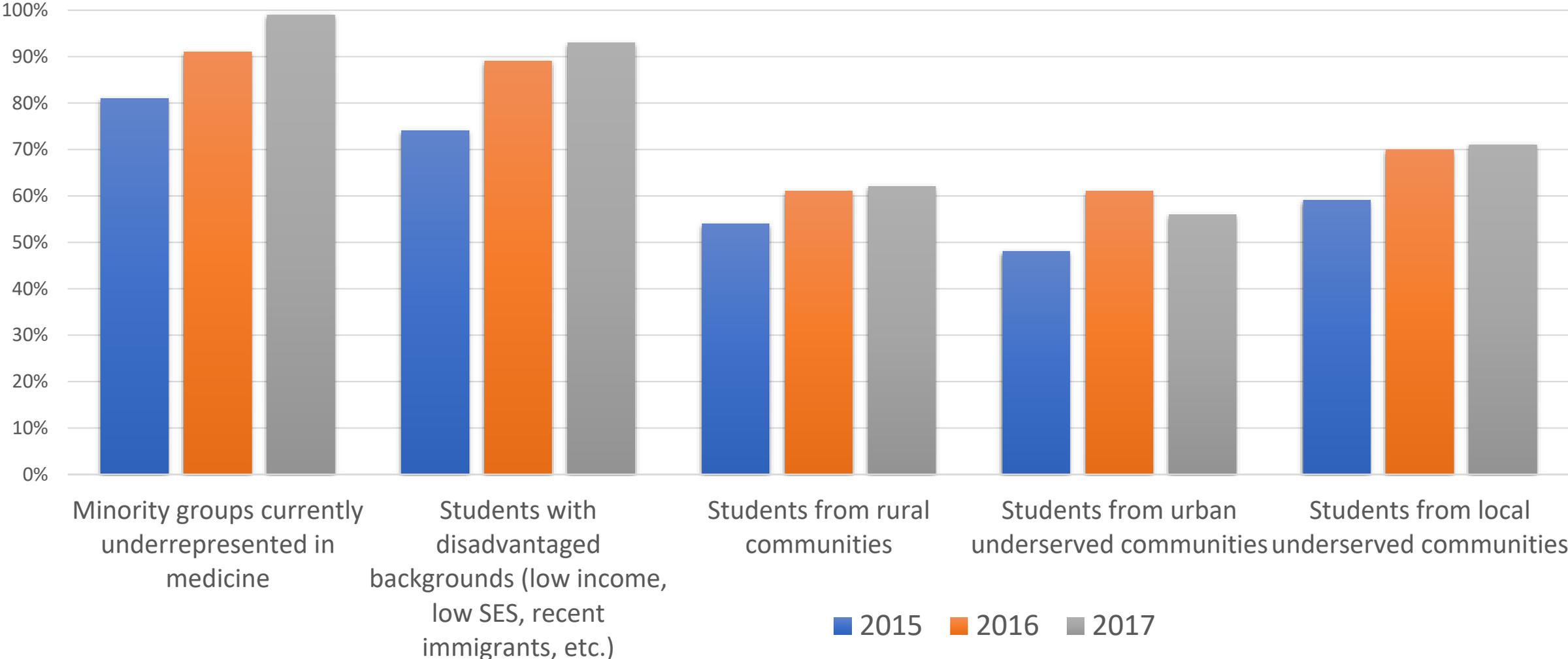
Diversity

- UME



Number of schools with programs to recruit under-represented groups rising

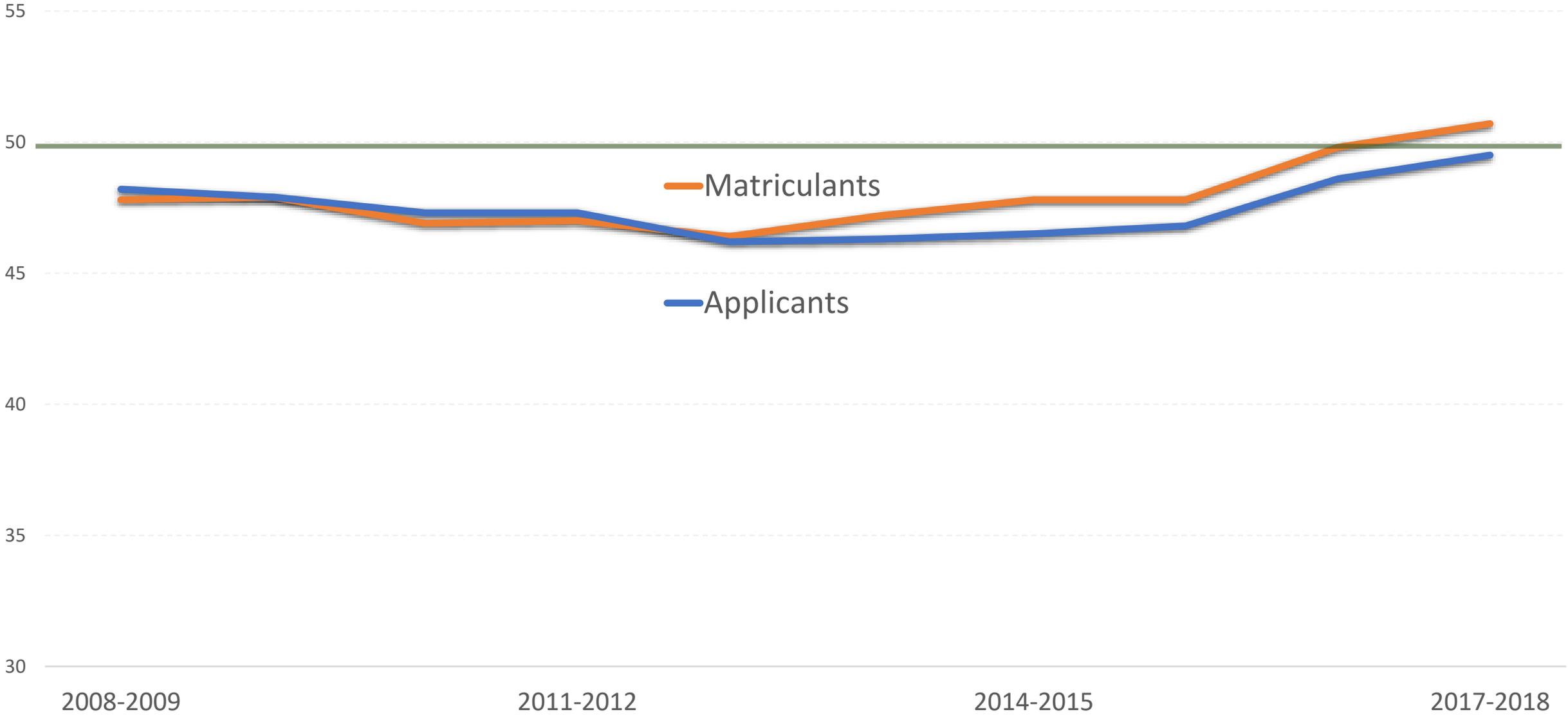
Percentage of respondents who have an established program for recruiting the following populations, 2015-2017



Source: AAMC Medical School Enrollment Survey Reports, 2015-2017.

Most medical school matriculants are now female

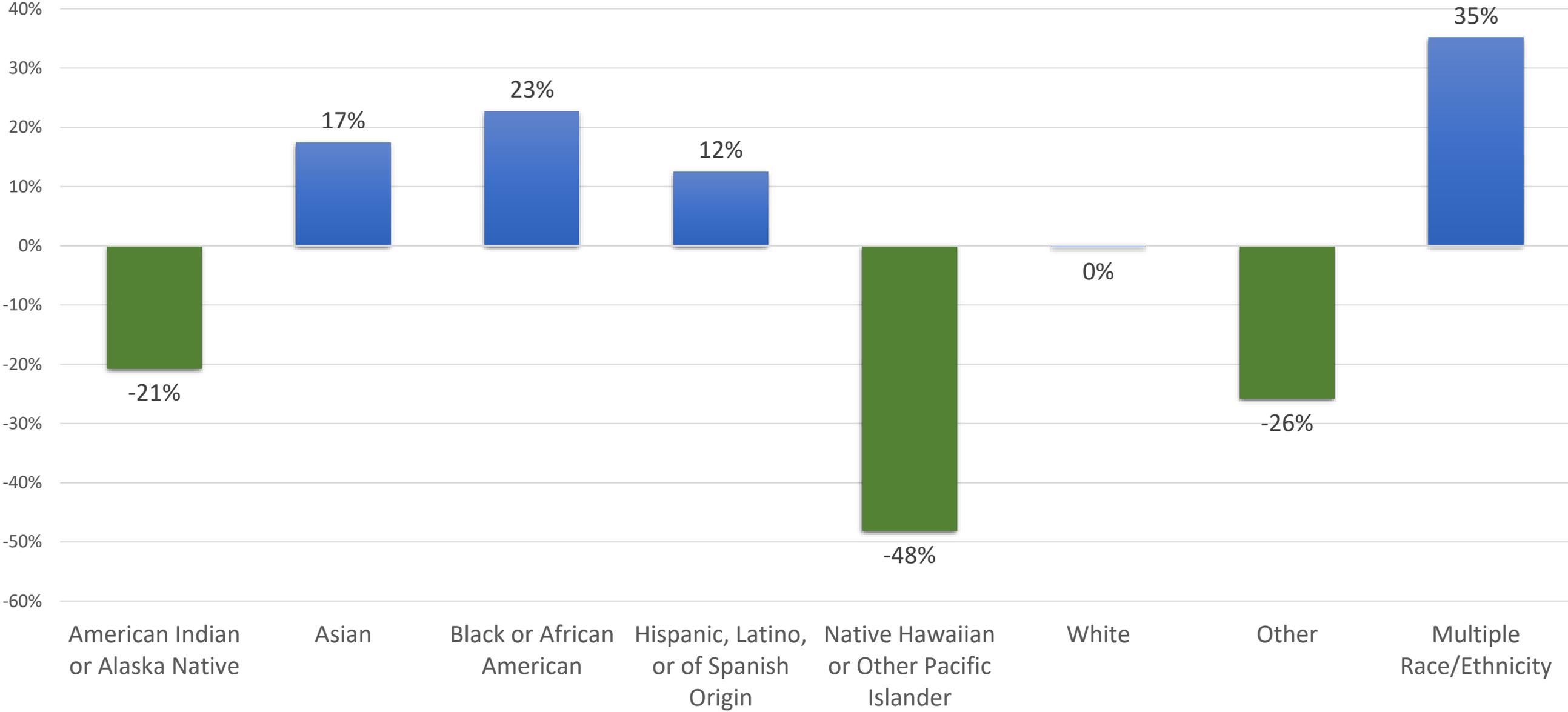
Applicants and Matriculants to U.S. Medical Schools, Percent Female, 2008-2009 through 2017-2018



Source: AAMC Applicants and Matriculants Data.

Recent diversification of matriculants has been uneven

Change in Matriculants to U.S. Medical Schools by Race/Ethnicity, 2014-2015 through 2017-2018



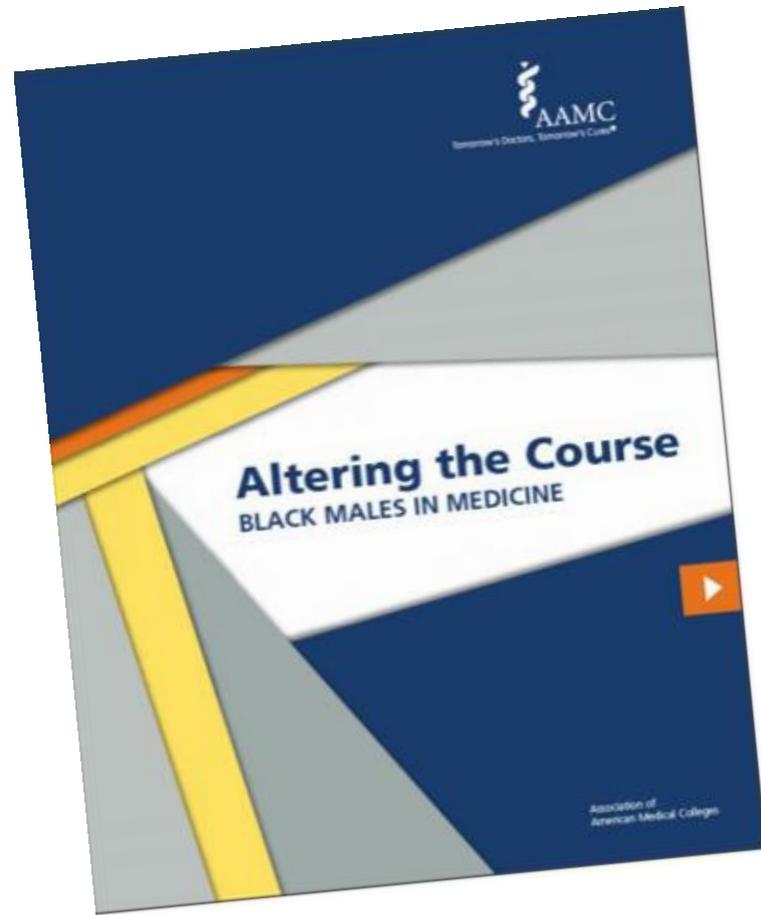
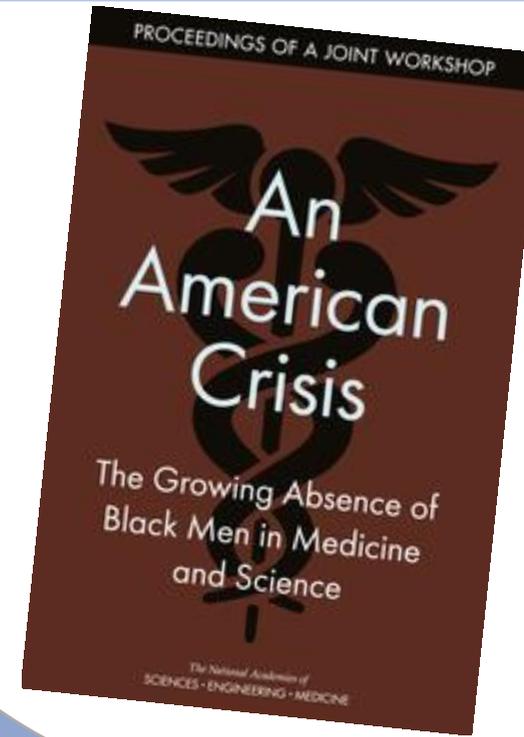
Source: AAMC Applicants and Matriculants Data.

Many minorities still under-represented among medical school graduates and residents

Actual 2017 Composition	American Indian or Alaska Native	Asian	Black or African American	Hispanic, Latino or of Spanish Origin	Native Hawaiian or Other Pacific Islander	White	Multiple Race/Ethnicity
Graduates	0%	21%	6%	5%	0%	56%	8%
Residents	0%	27%	5%	8%	0%	53%	4%
Population 25-29 yrs.	1%	7%	15%	21%	0%	55%	2%



Source: AAMC FACTS Table B4 with the persons of Hispanic origin and one or more race moved out of the Multiple Race/Ethnicity into Hispanic; ACS Data from the US Census.



Black Males in Medicine



Reshaping the Journey

American Indians and Alaska Natives in Medicine

Learn
Serve
Lead



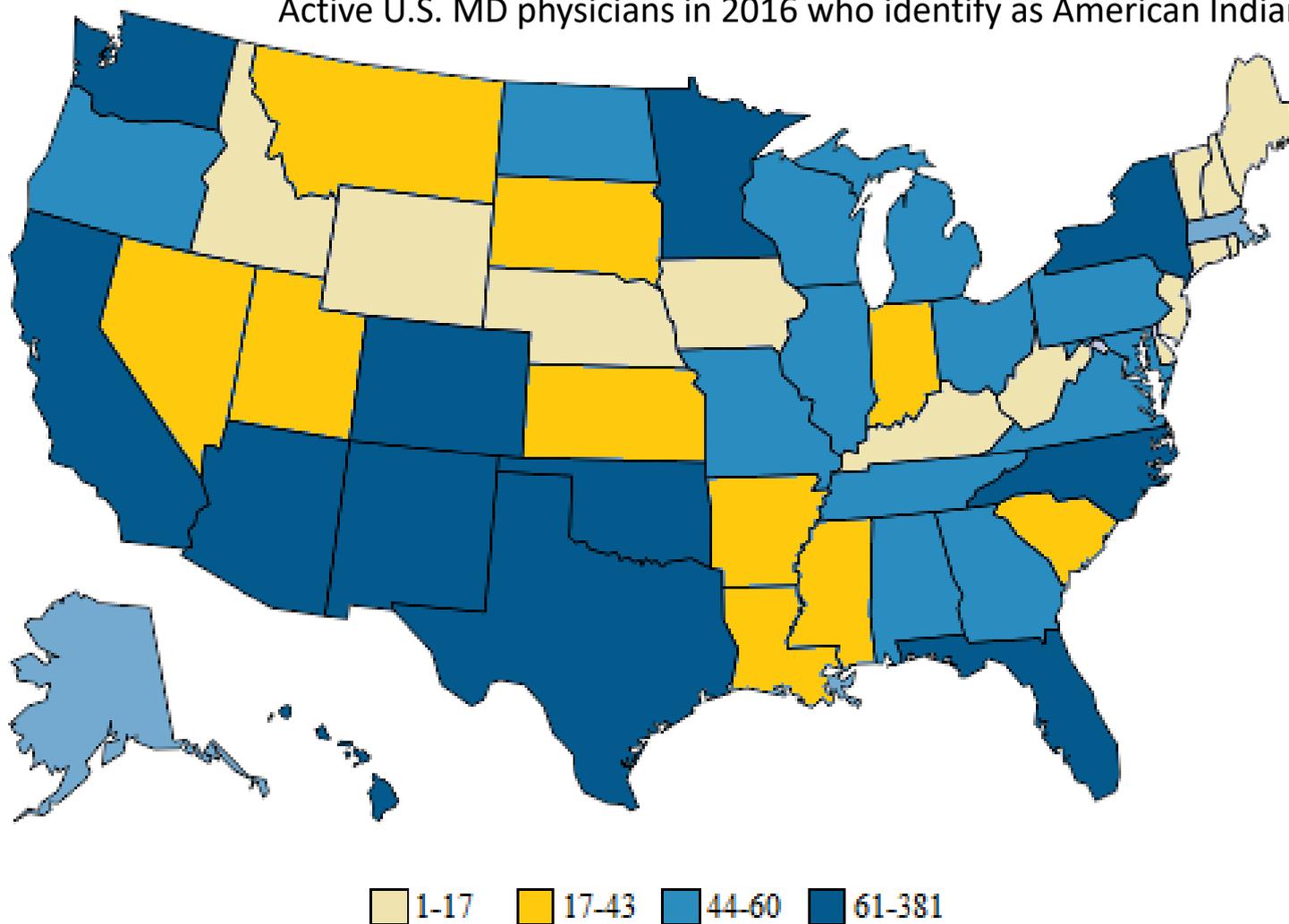
October 2018

Association of
American Medical Colleges

American Indians and Alaskan Natives under-represented in the physician workforce

Only 0.56% of active physicians in the US identify as American Indian or Alaskan Native (alone or in combination with another race)

Active U.S. MD physicians in 2016 who identify as American Indian or Alaska Native.





The demographics on graduating AI-AN physicians and those represented within the Native health care workforce are **appalling and embarrassing**.

-Ronald Shaw, MD (Osage-Creek)

The AAMC is honored to co-create this report with the AAIP, and it is our hope that we can all assist in addressing the challenges facing our Native communities across America. There has never been a better time to... **remind ourselves of the social accountability we have**, as academic medical institutions, to society.

-David A. Acosta, MD, FAAFP



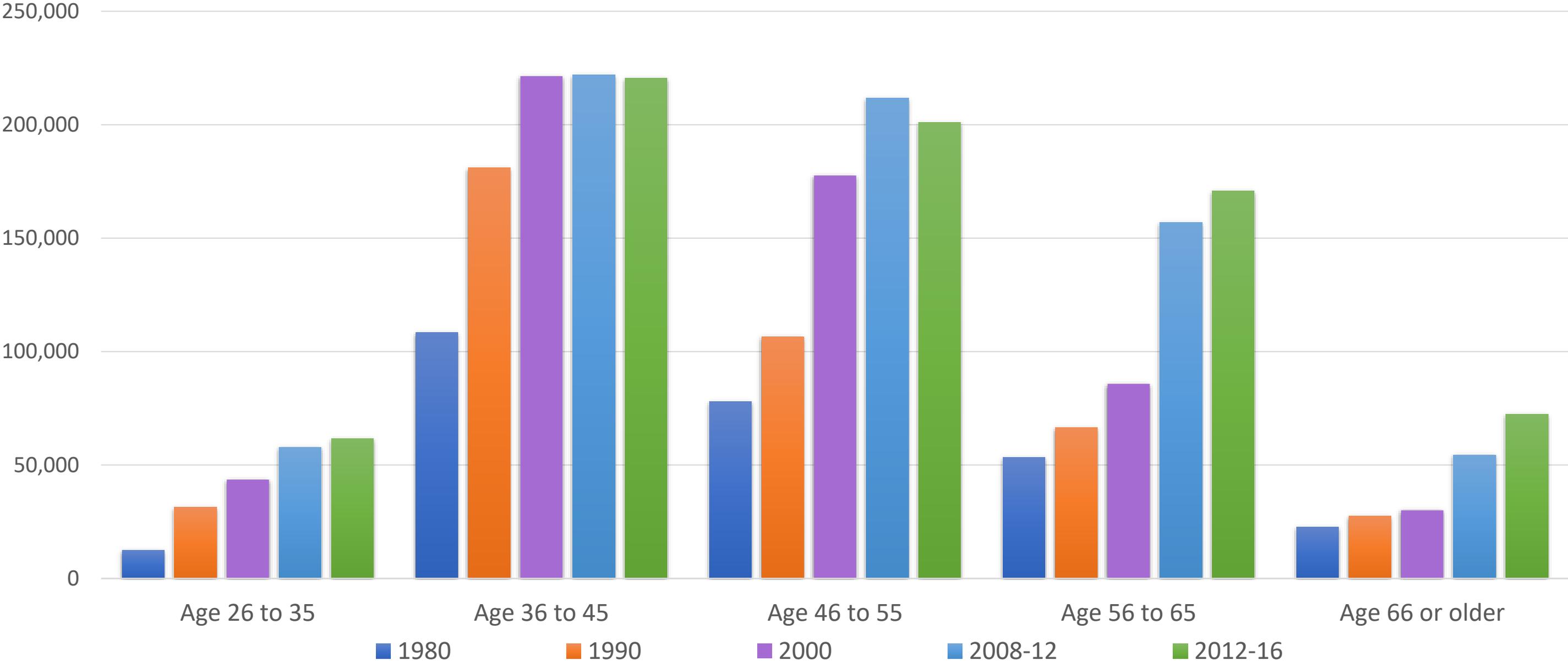
Diversity

- Practicing physicians



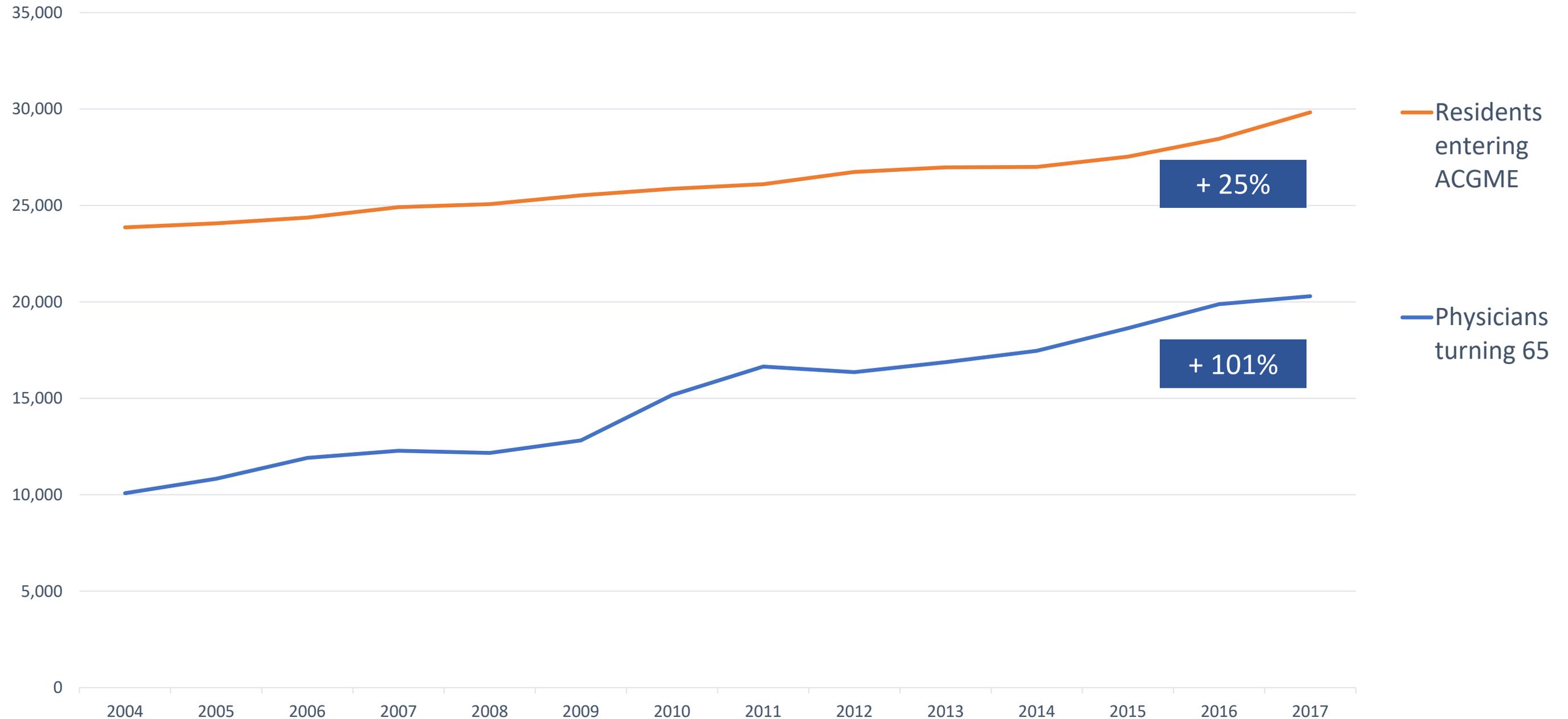
The US physician workforce is aging

Physicians in the US, 1980 to 2012-16

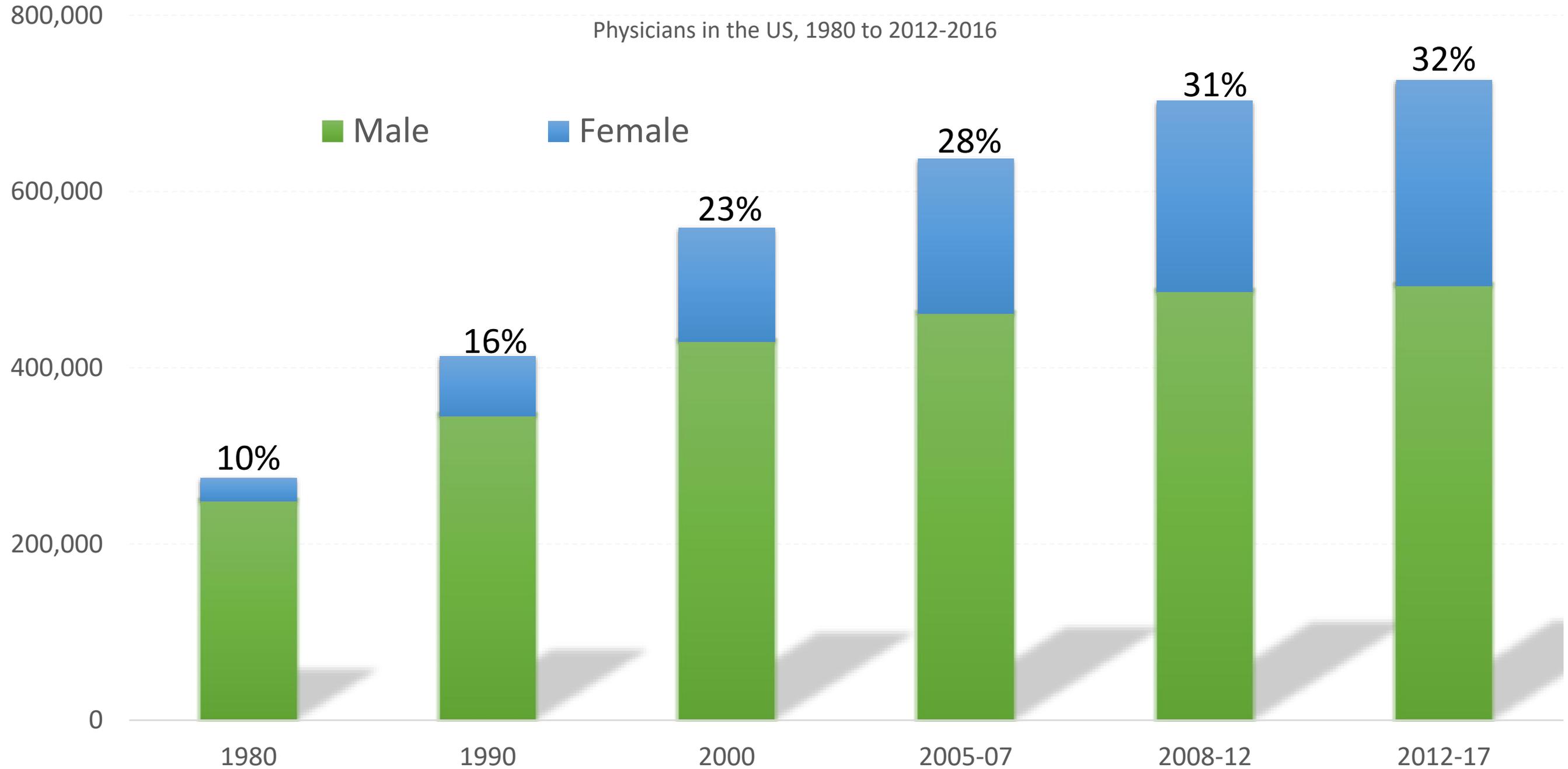


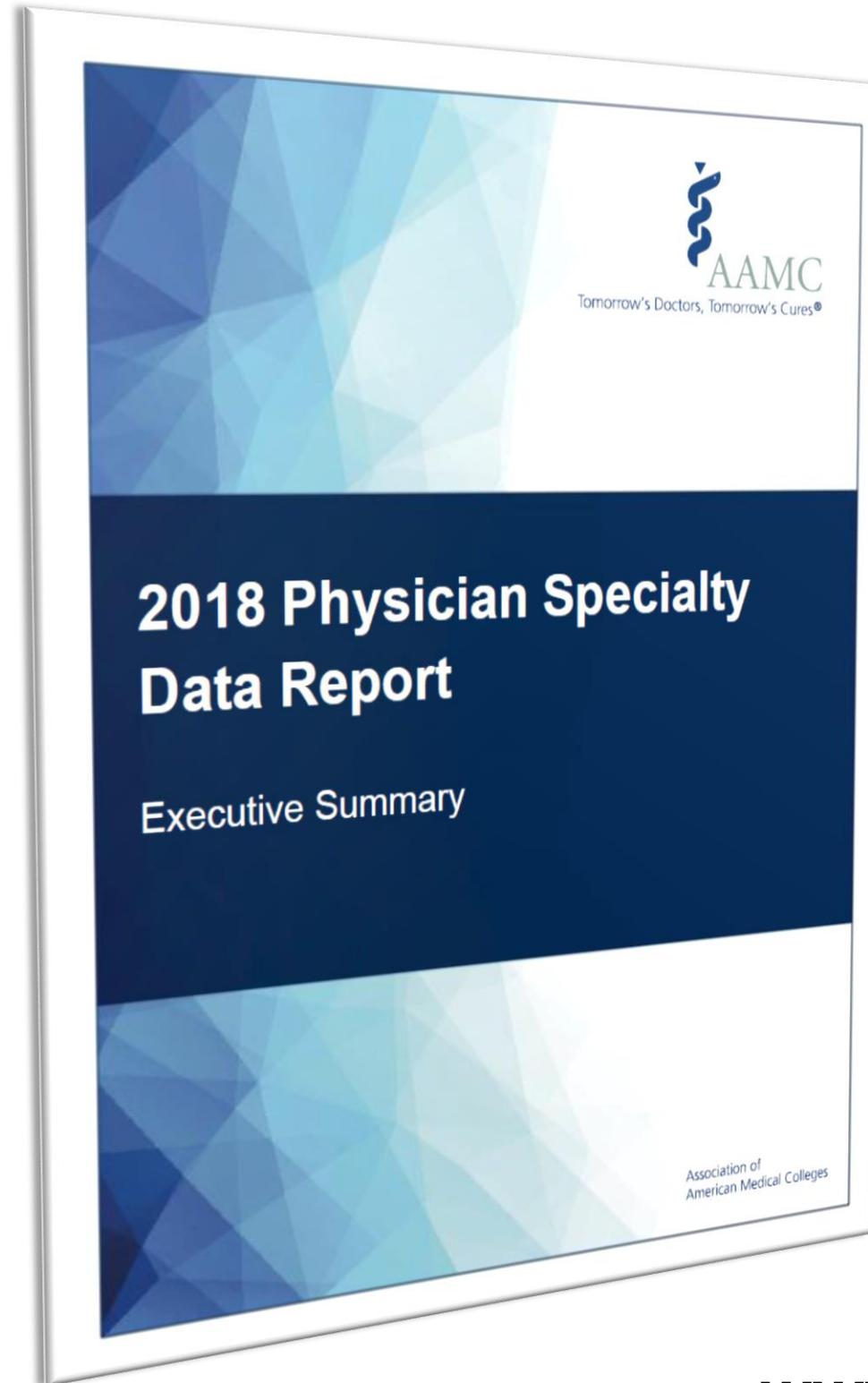
Source: Census Bureau 1980, 1990, 2000 5% state sample, American Community Survey 2005-7 3-year estimates, 2008-12 and 2012-16 5-year estimates. Accessed via IPUMS-USA.

Production of new physicians not keeping pace with aging workforce (change)



US physician workforce continues to grow and to include more female physicians





www.aamc.org/specialtydatareport

Specialties with the highest percentages of female physicians



Active Physicians, Percent Female, by Specialty, 2017

Specialty	Total physicians	Percent female
Pediatrics	36,945	63.3
Obstetrics & Gynecology	23,740	57.0
Pediatric Hematology/Oncology	1,489	53.4
Internal Medicine/Pediatrics	2,704	52.8
Child and Adolescent Psychiatry	4,849	52.7
Geriatric Medicine	2,939	52.6



Specialties with the highest percentages of male physicians

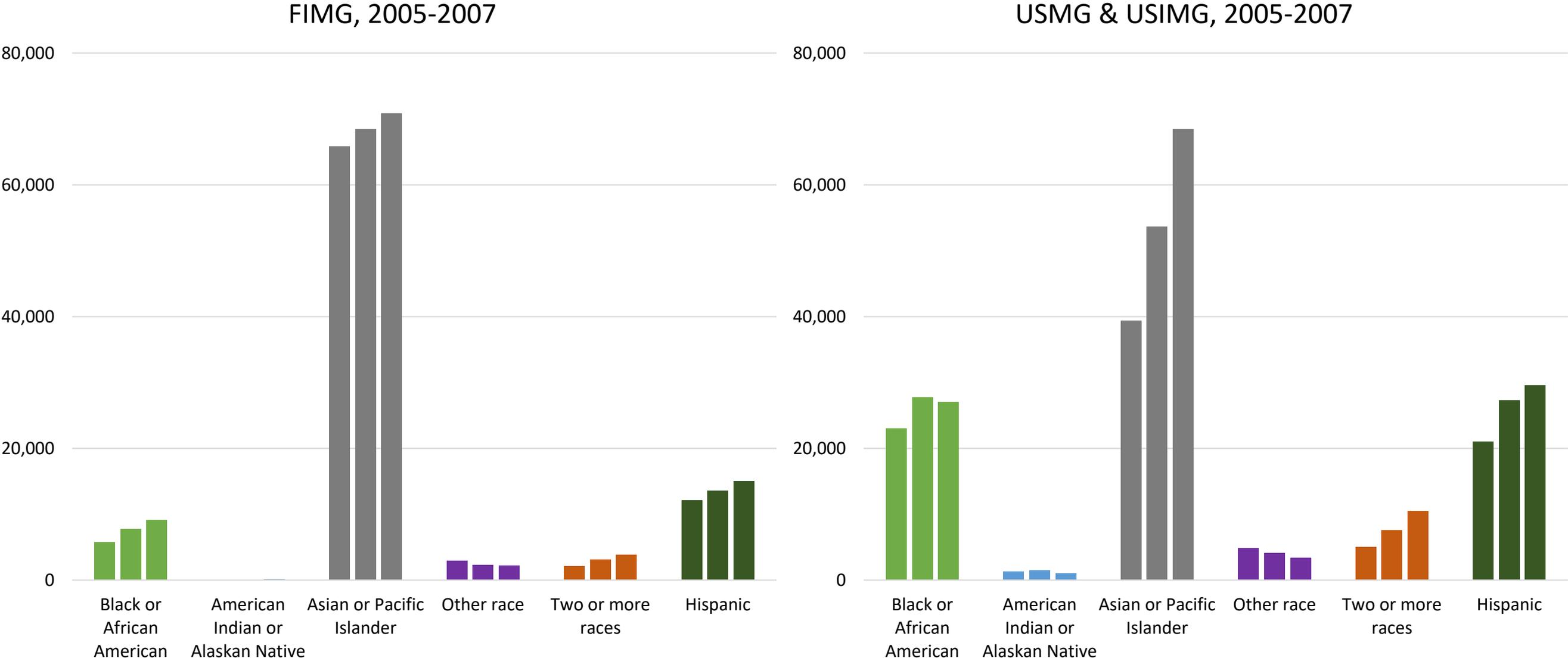


Active Physicians, Percent Male, by Specialty, 2017

Specialty	Total physicians	Percent male
Orthopedic Surgery	17,981	94.7
Sports Medicine (Orthopedic Surgery)	2,440	93.4
Thoracic Surgery	4,102	93.0
Interventional Cardiology	3,546	92.3
Neurological Surgery	5,065	91.6
Urology	9,051	91.3

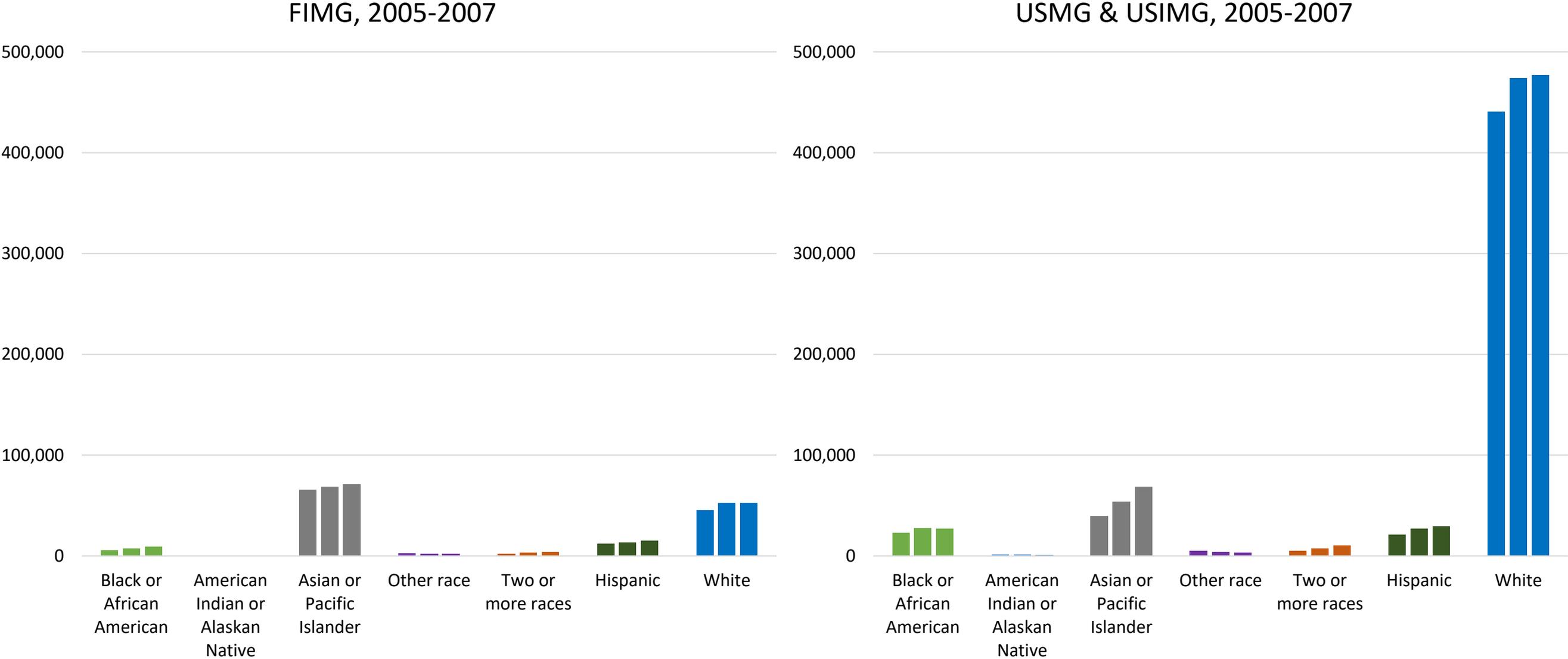


Most workforce race and ethnicity diversity is from USMG and USIMG physicians



Source: US Census Bureau.

Most workforce race and ethnicity diversity is from USMG and USIMG physicians



Source: US Census Bureau.

What We Do Not Know (Because It Has Not Been Asked)



Sexual orientation



Gender identity



Military Service



Disability Status



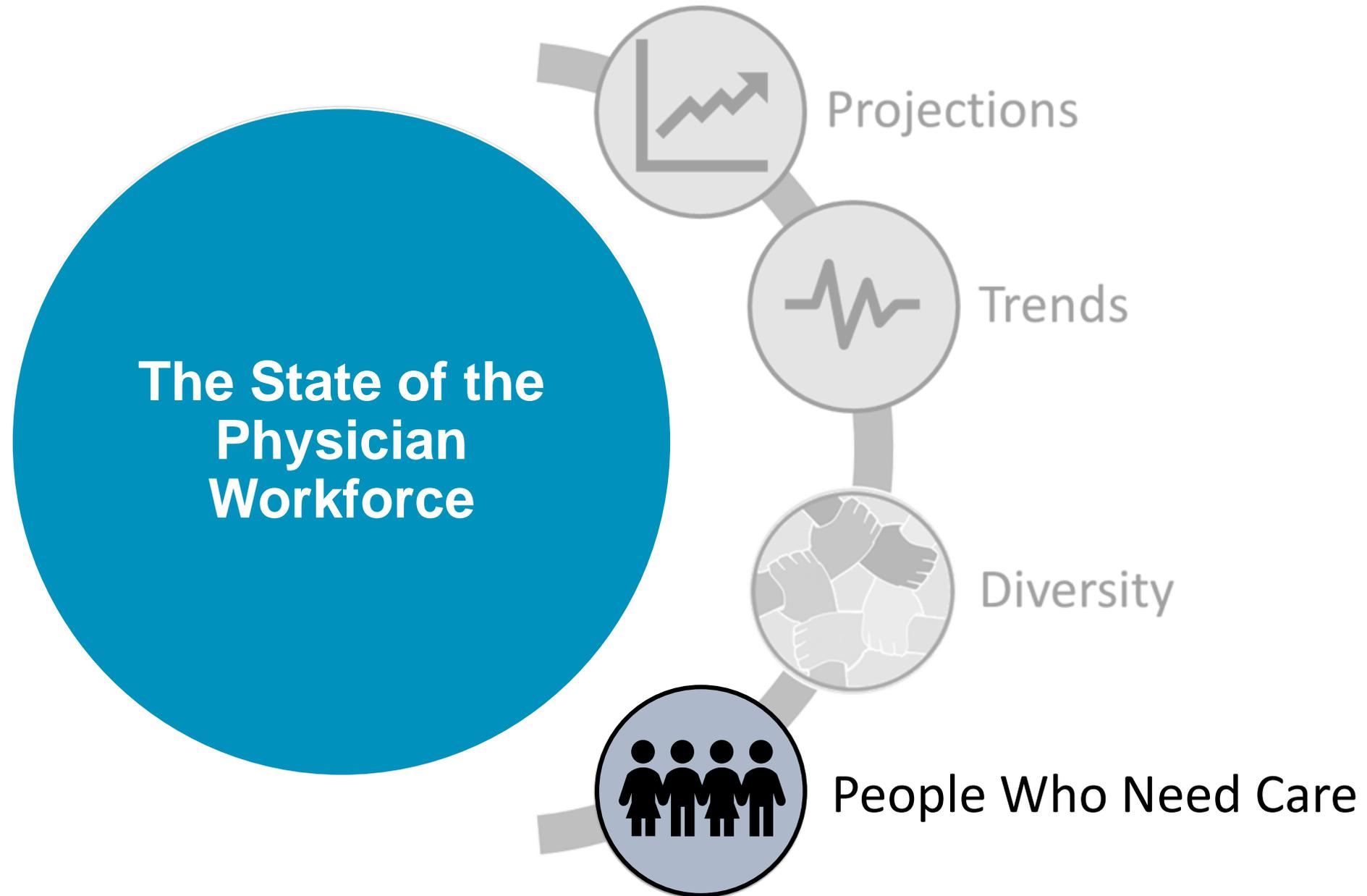
Experience of Bias,
Harassment,
Assault or Harm

Diversity Summary

- Female matriculants > 50%
- Rural matriculants declining
- Race and ethnicity uneven - but still nowhere near representation
 - Black males
 - American Indians and Alaskan Natives
- Older
- More female
- Much we do not know



People Who Need Care



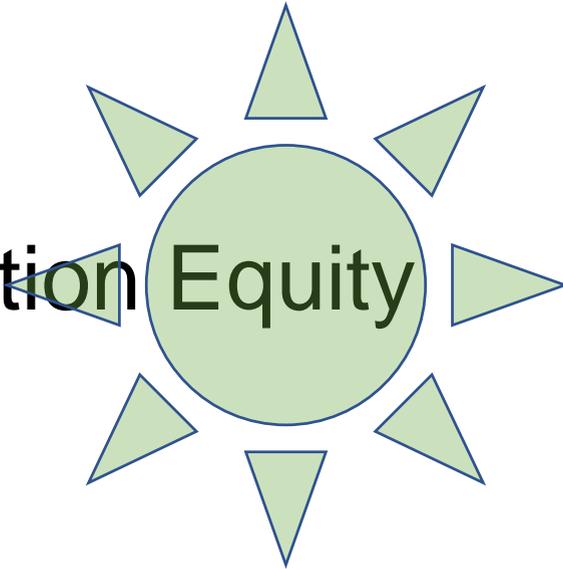


If **underserved populations** had the same access to health care as those without barriers to health care and used it at the same rate, the United States would have needed

95,100 MORE PHYSICIANS IN 2016

People

- Health Care Utilization Equity



What does health care utilization equity look like?



- Same use of care
- Says nothing about quality
- Says nothing about outcomes

- Window into magnitude of unmet need



The magnitude of unmet need

What if barriers disappeared? How much more utilization (in 2016) if...

Scenario 1

- Everyone used care like insured people living in metropolitan areas?

Scenario 2

- Everyone used care like white insured people living in metropolitan areas?



Estimated Additional Physicians Needed if U.S. Had Achieved Health Care Utilization Equity in 2016

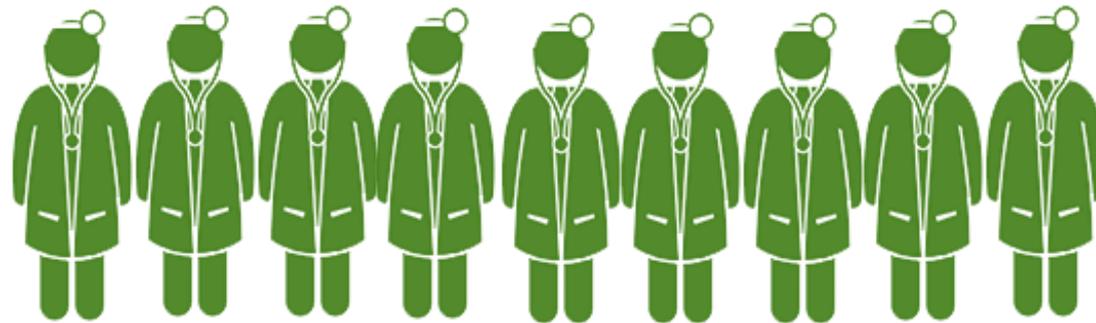
Scenario 1:
Insurance &
Metro/
Non-metro



31,600

Additional Physicians

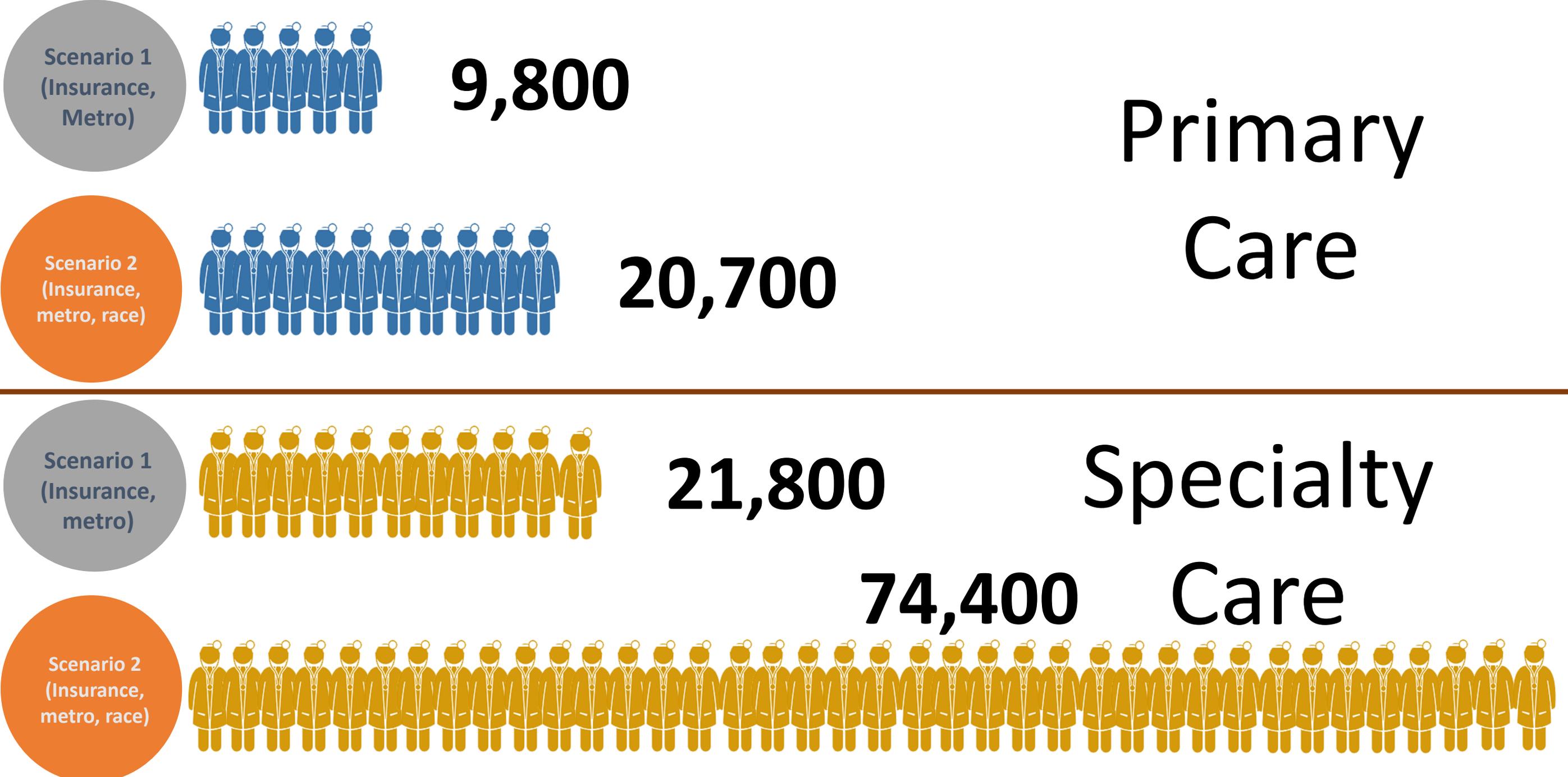
Scenario 2:
Insurance,
Metro/Non-
metro, &
Race/Ethnicity



95,100

Additional Physicians

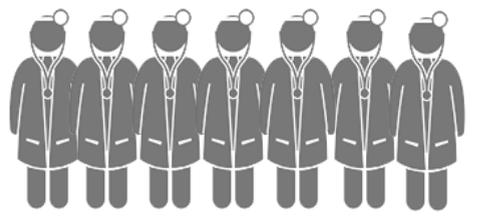
Estimated Additional Physicians Needed if U.S. Had Achieved Health Care Utilization Equity in 2016



Source: AAMC, 2018 Update: Complexities of Physician Supply and Demand: Projections from 2016 to 2030.

Health care use would change most in metropolitan areas

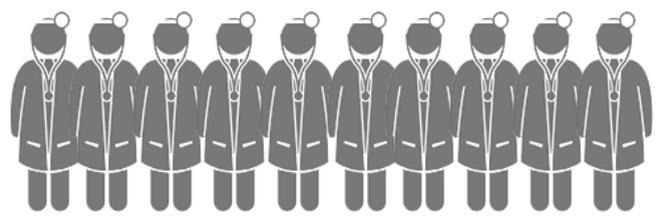
Scenario 1
(Insurance,
Metro)



15,100

Non-
metropolitan

Scenario 2
(Insurance,
metro, race)



19,100

Scenario 1
(Insurance,
metro)



16,500

Metropolitan

Scenario 2
(Insurance,
metro, race)



76,000

Source: AAMC, 2018 Update: Complexities of Physician Supply and Demand: Projections from 2016 to 2030.

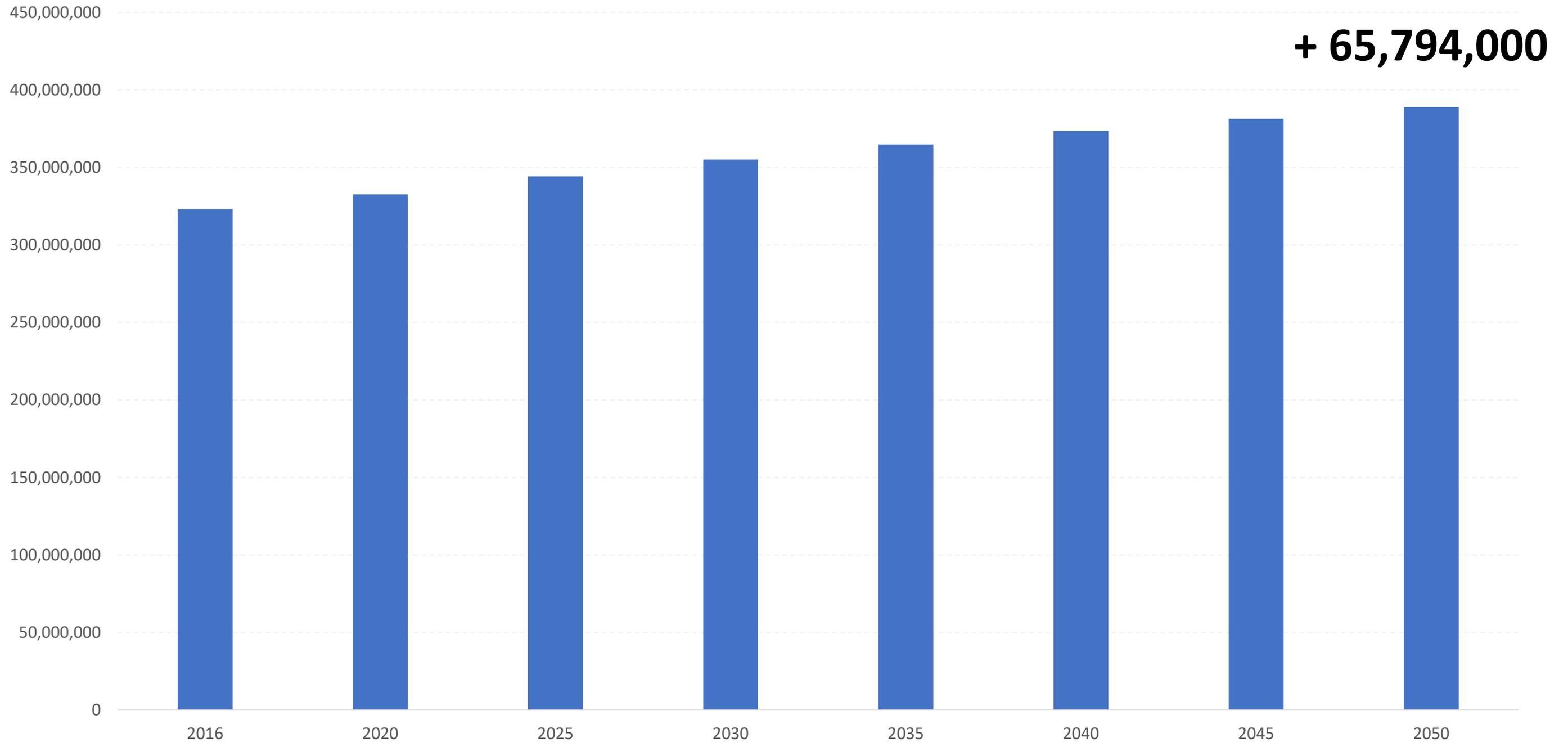
People (Who Need Health Care)

- Population Trends

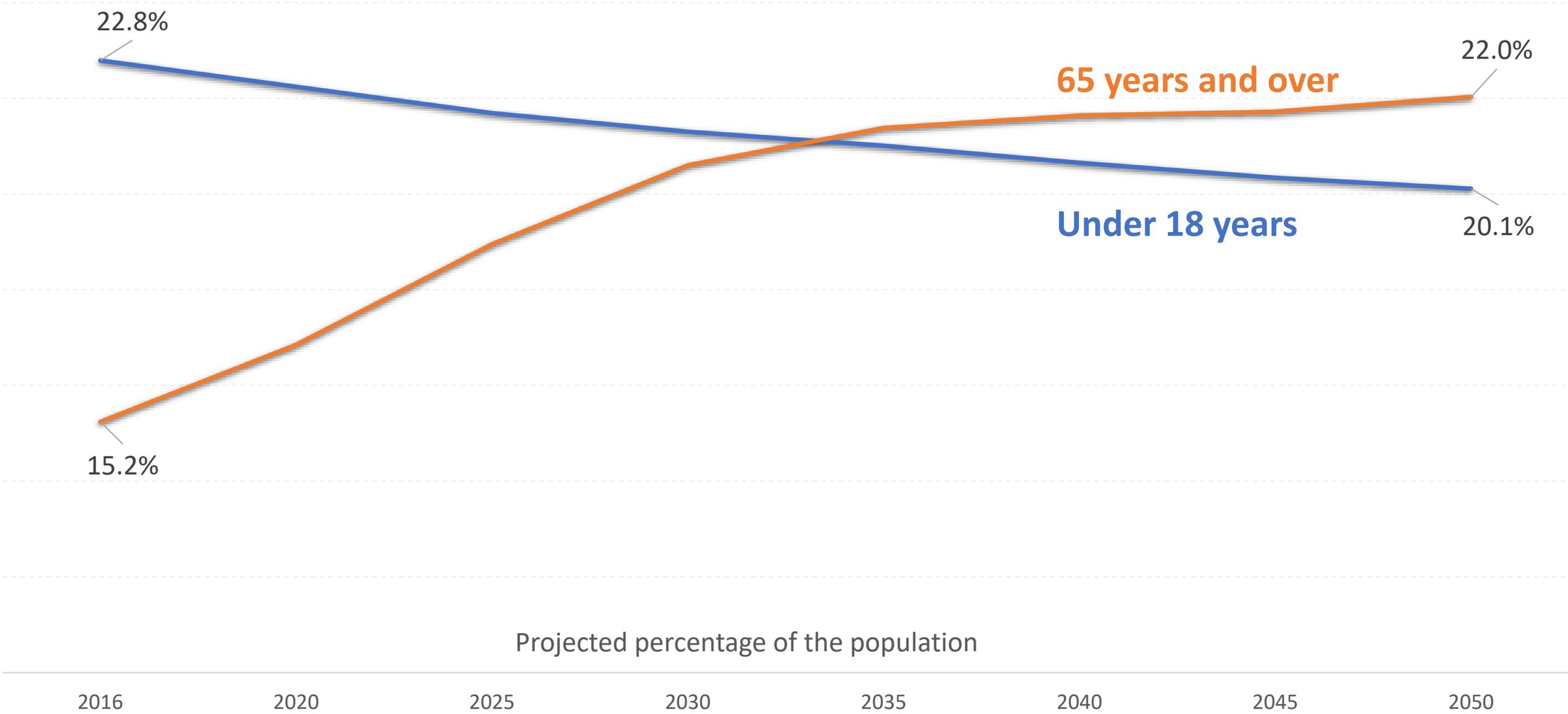


The nation's population is growing rapidly

Total projected population

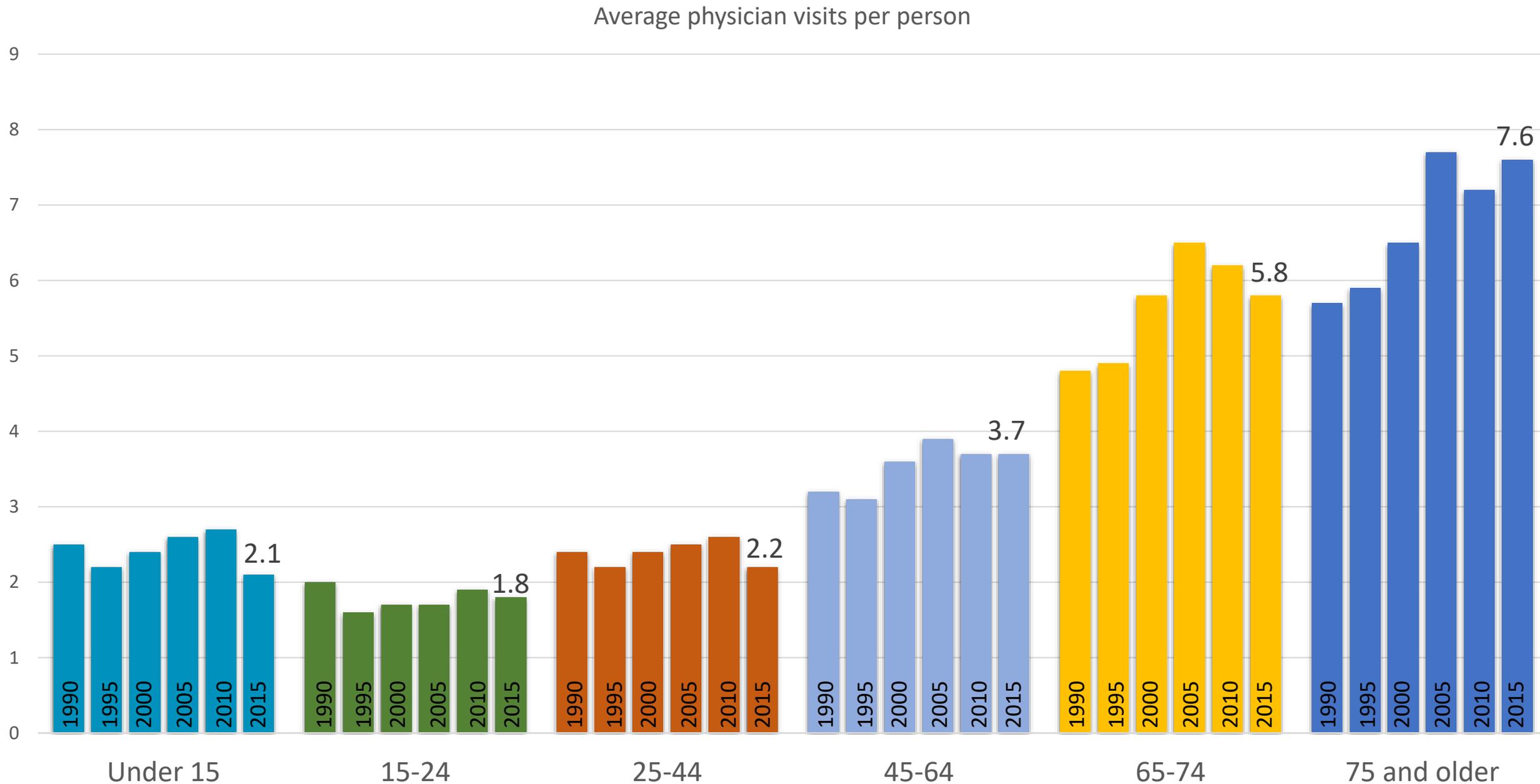


We are approaching a crossroads in our nation's age profile

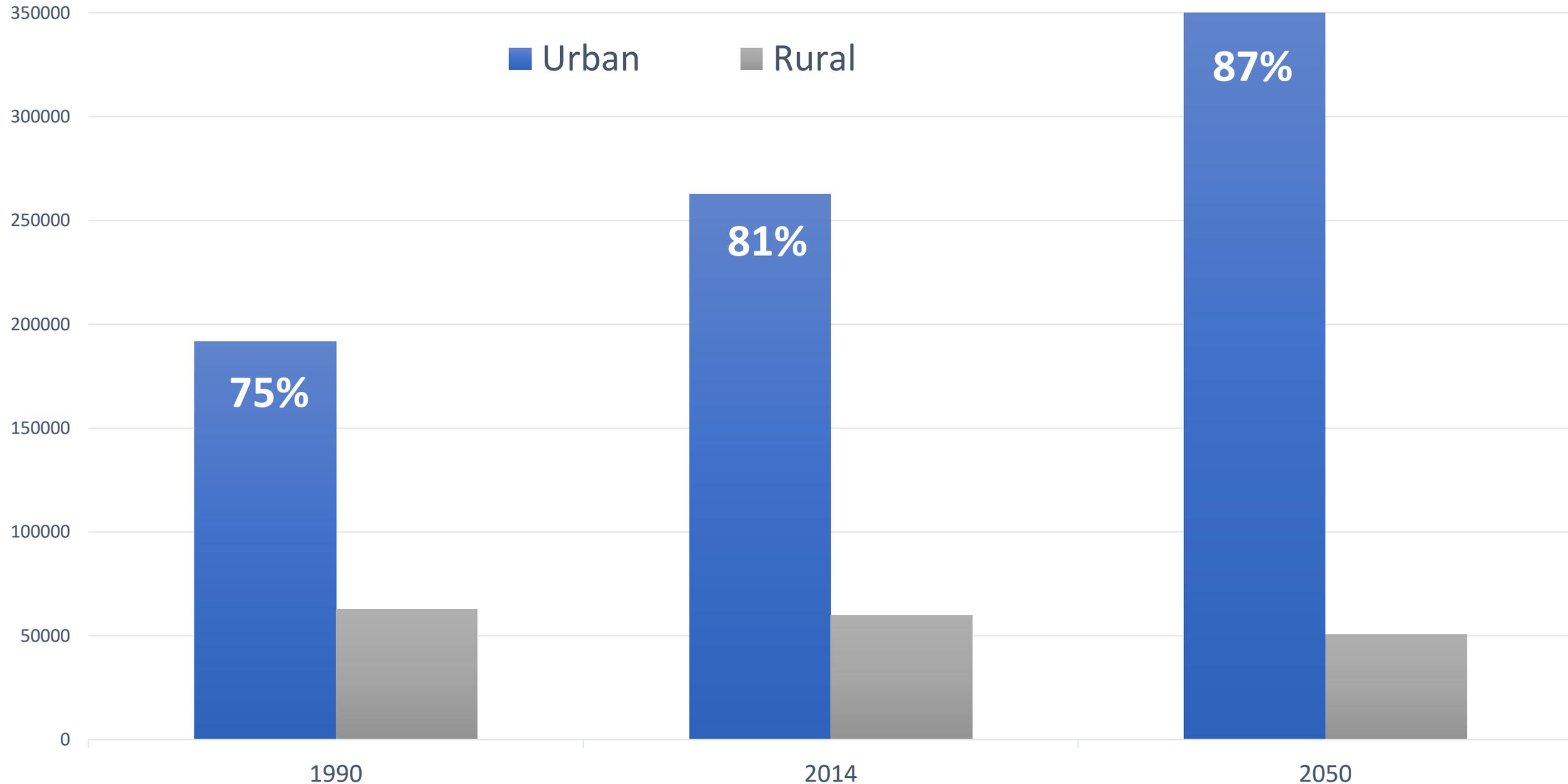


Source: Projected Age Groups and Sex Composition of the Population: Main Projections Series for the United States, 2017-2060. US Census Bureau, Population Division: Washington, DC.

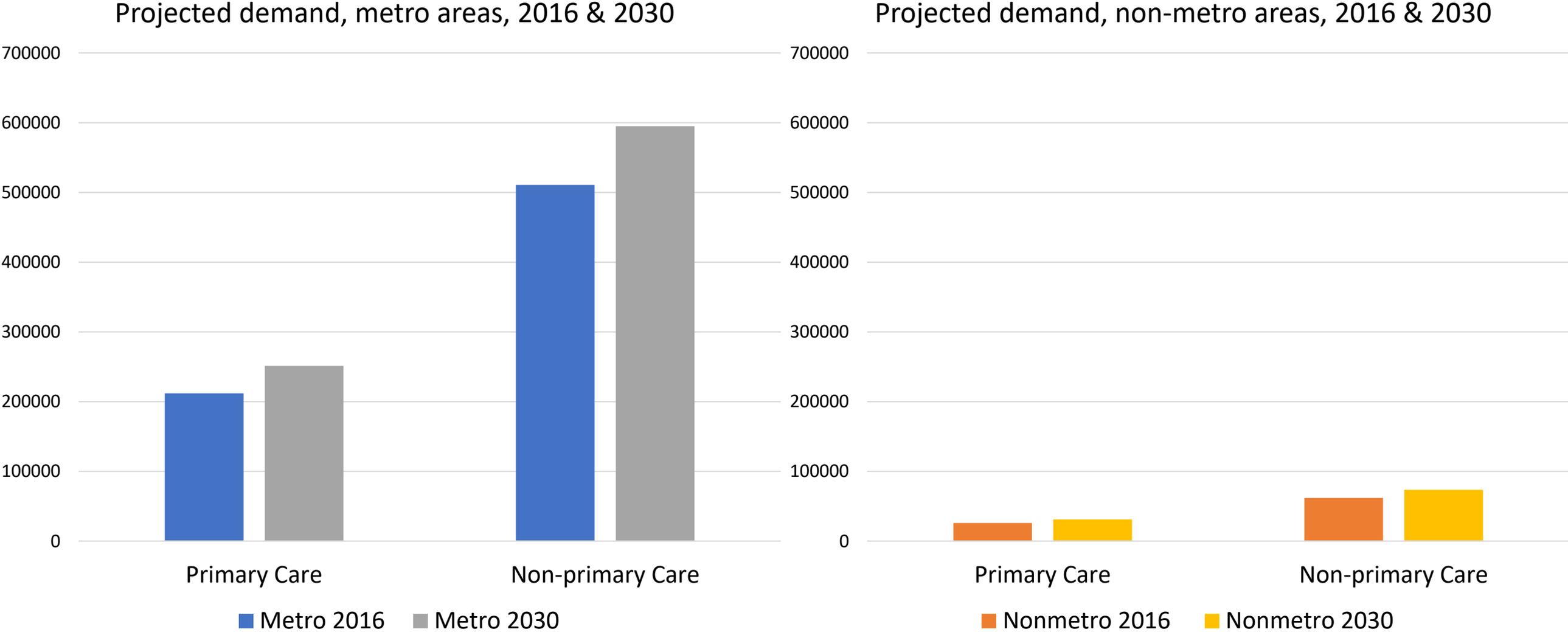
Demand increases as U.S population ages



The nation's population is urbanizing rapidly



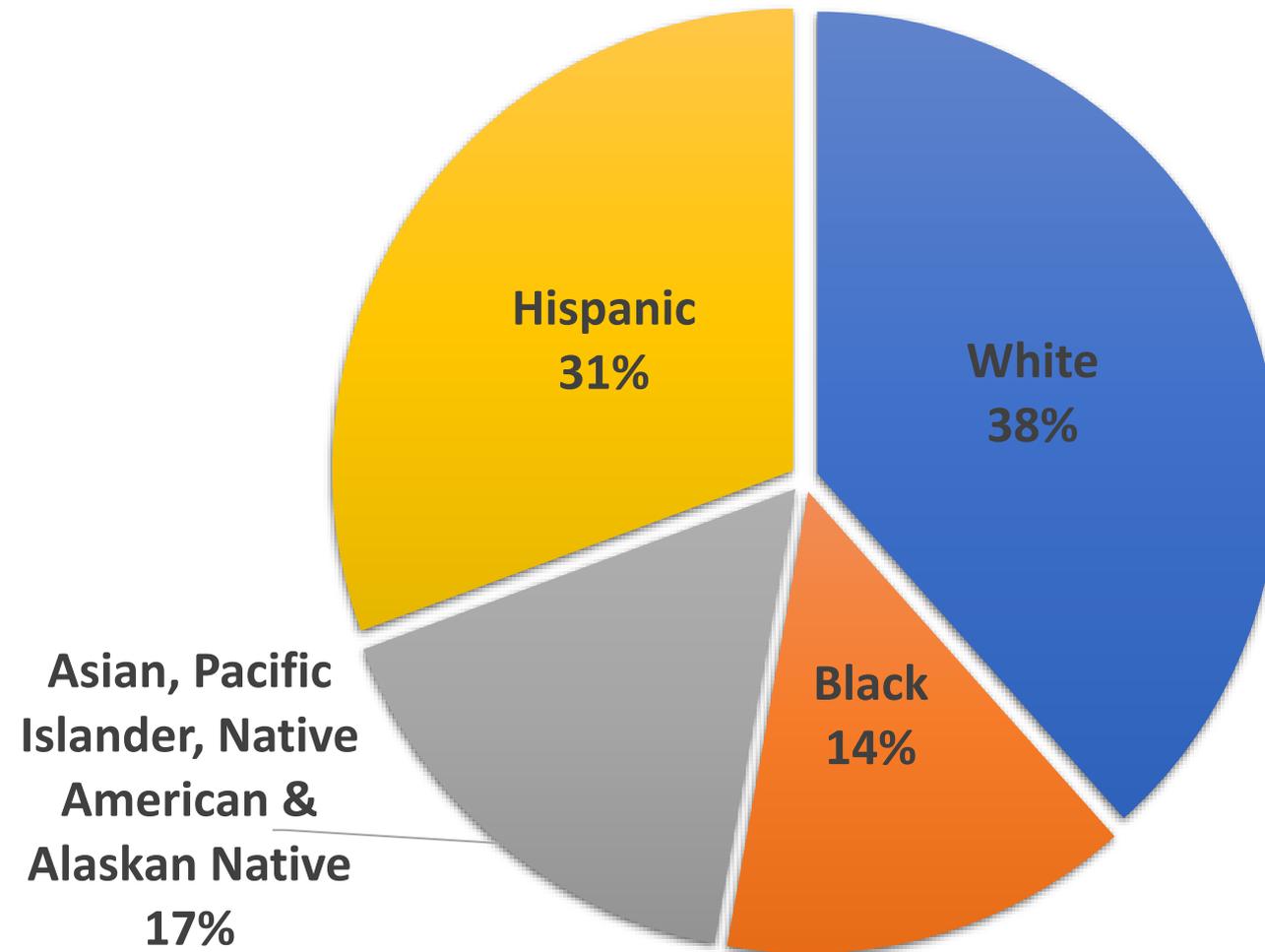
Most demand will continue to come from metro areas



Source: AAMC, 2018 Update: Complexities of Physician Supply and Demand: Projections from 2016 to 2030.

Most of the future demand growth will be from minority populations

Percent of demand growth, 2016-2030





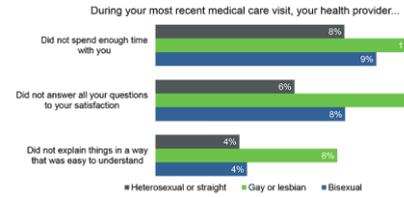
People

- Access to Care



AAMC Consumer Survey of Health Care Access

Gay, Lesbian & Bisexual Health Care



#AAMCWorkforce



Gay, Lesbian & Bisexual Health Care

How often were you able to get needed care in the last 12 months?



#AAMCWorkforce



Gay, Lesbian & Bisexual Health Care

Percent of respondents reporting no usual source of medical care

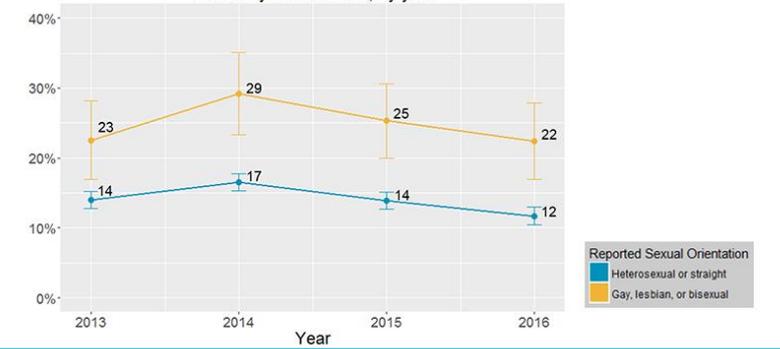


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AAMC Consumer Survey of Health Care Access

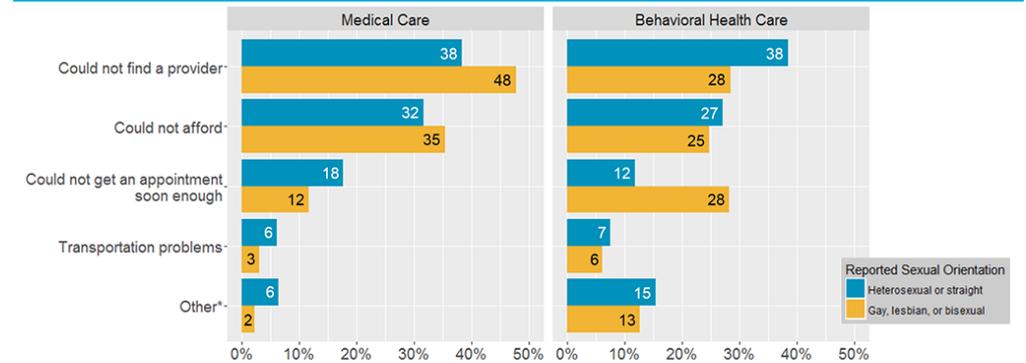
Percent of respondents not always able to get necessary medical care, by year



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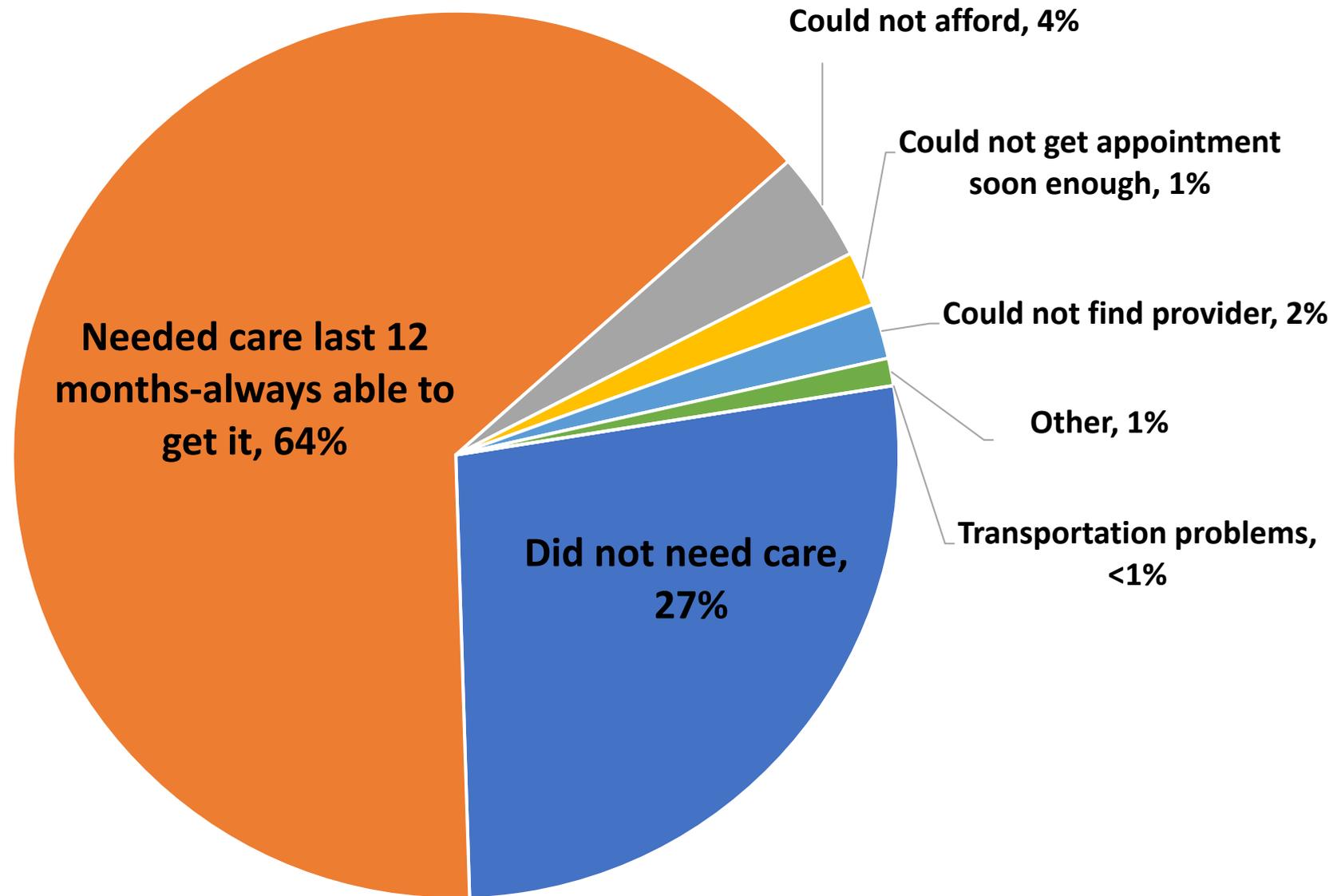
AAMC Consumer Survey of Health Care Access



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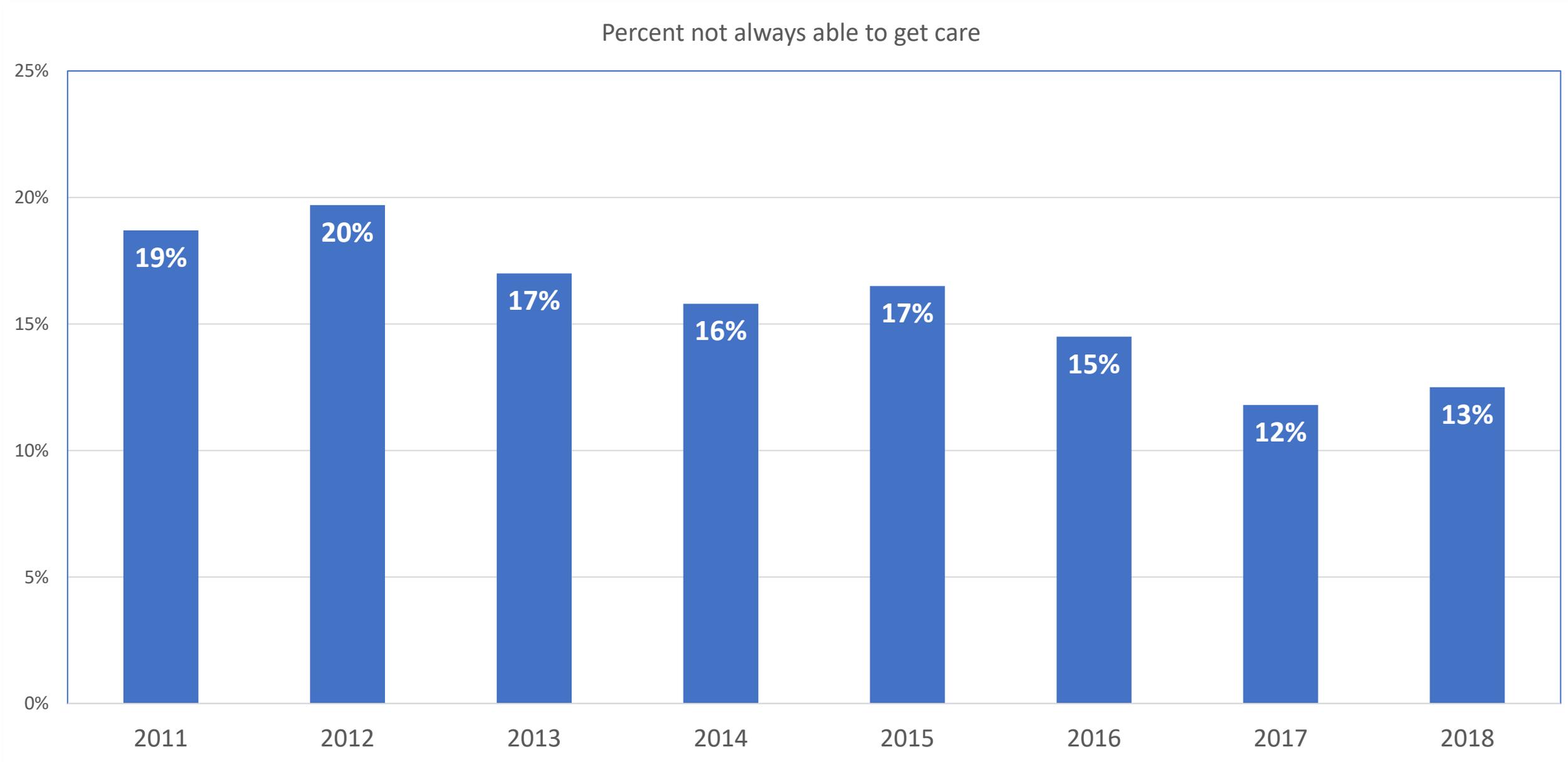
Millions of Americans cannot always get care when they need it



9% of U.S. adults (>22 million people) could not always get care



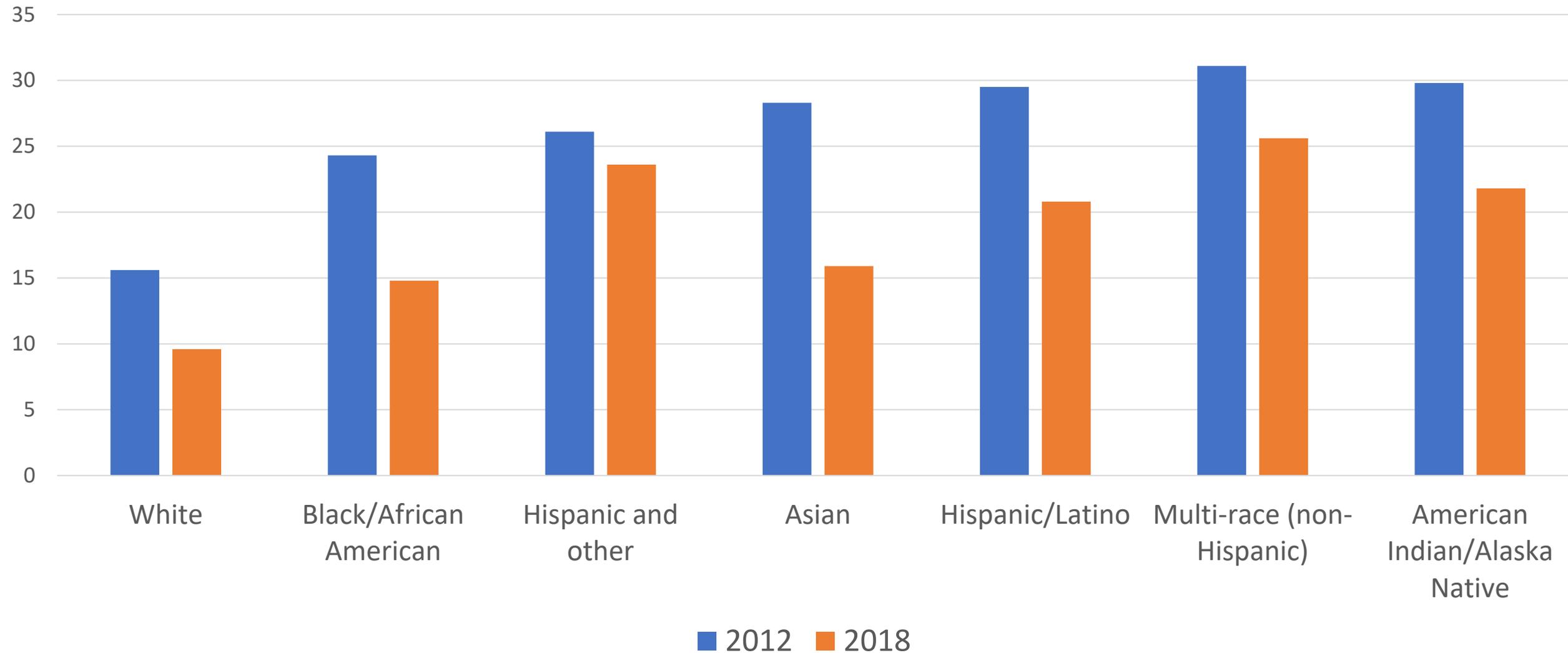
Access to care has been improving



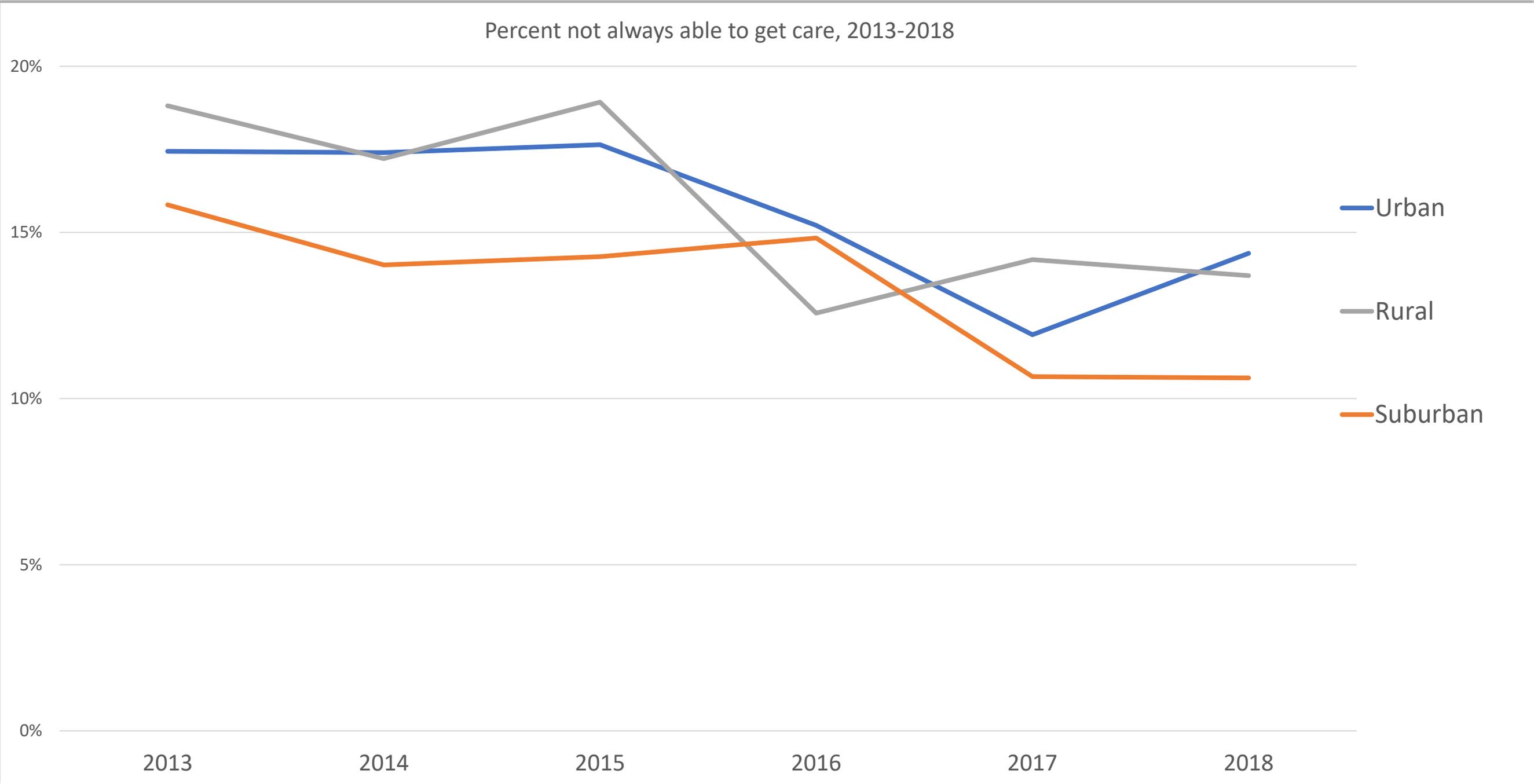
Racial and ethnic access disparities persist



Percent of respondents not always able to get care



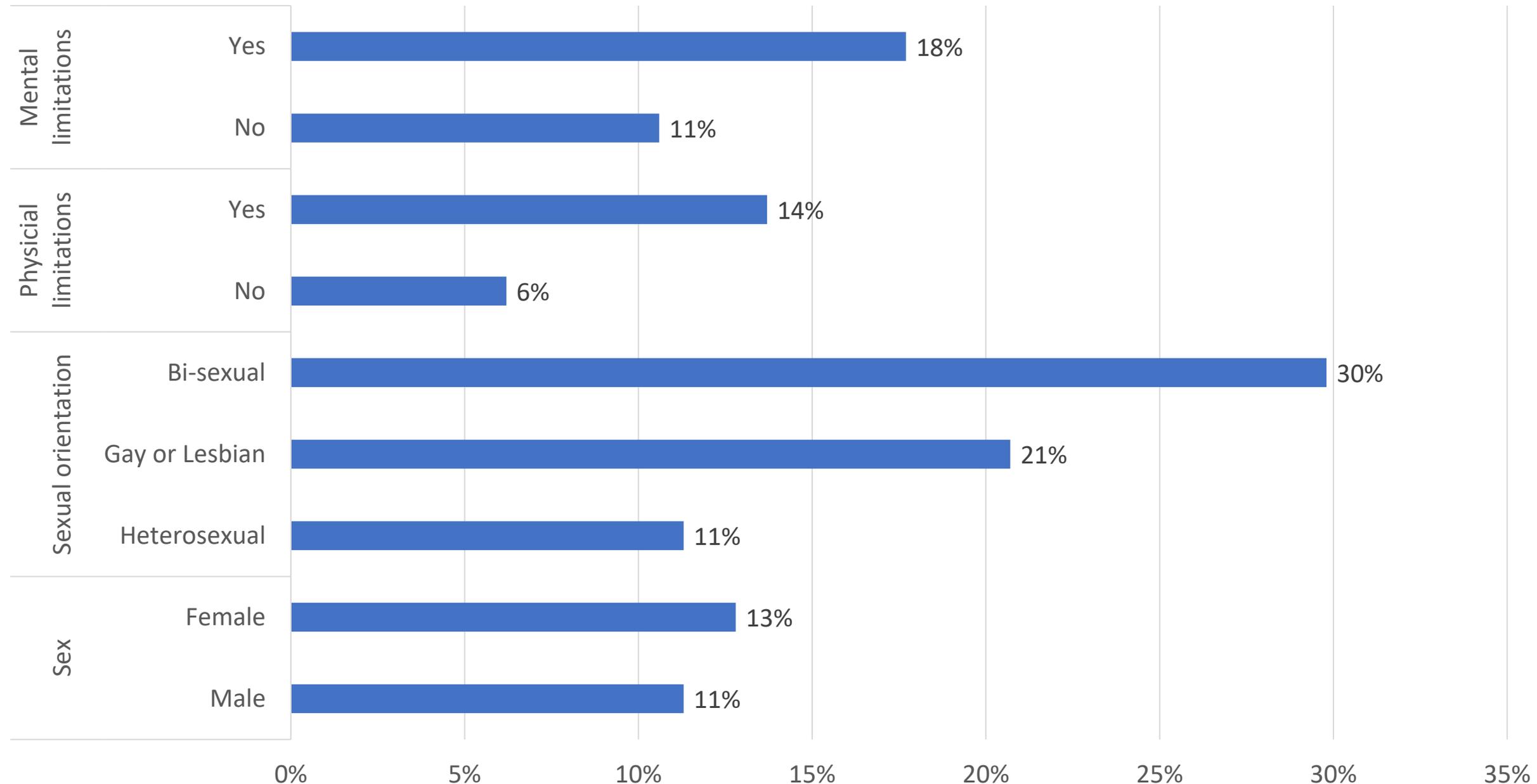
Access improving in all types of places



Source: AAMC Consumer Survey of Health Care Access.

Access to care varies by more than race and rurality

Percent of respondents not always able to get care, 2017-2018

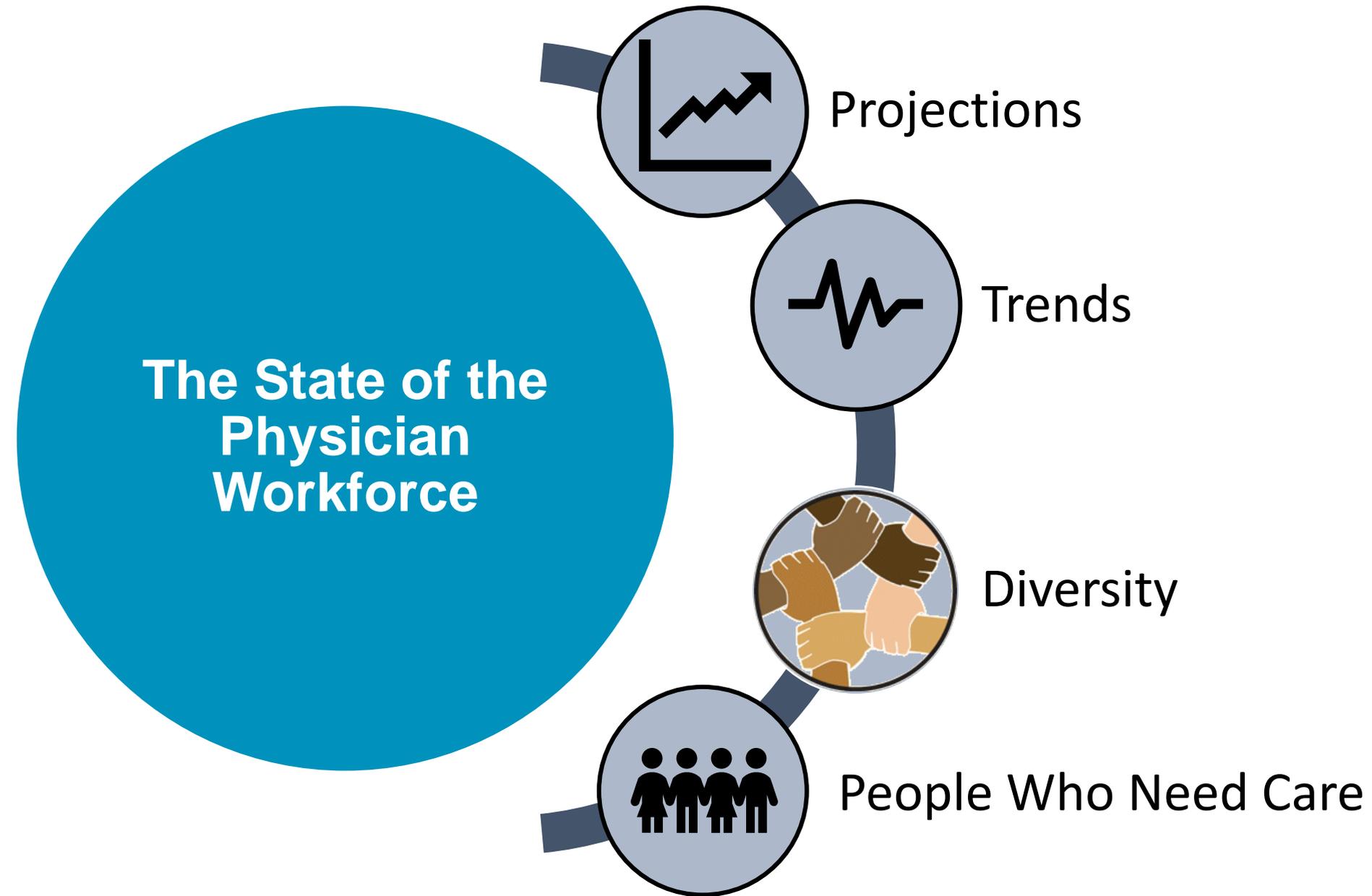


People Who Need Care Summary

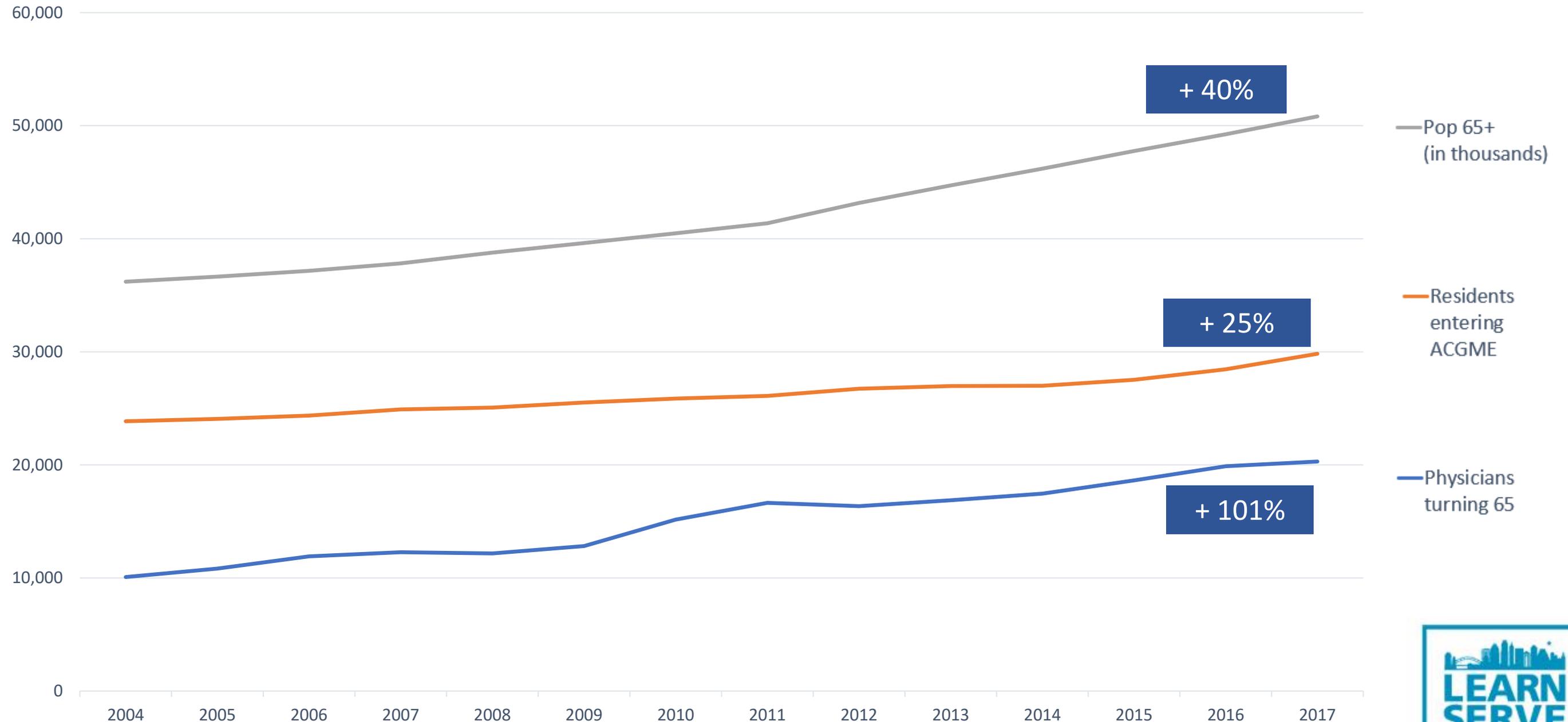
- Many more people
- Older
- Urban
- Moving toward majority minority
- Access
 - Improving
 - Disparities persist



Review



Production of new physicians not keeping pace with aging workforce and population



Sources: National Population by Characteristics: 2010-2017 from the U.S. Census. <https://www.census.gov/data/tables/2017/demo/age/nation-detail.html>; Physicians turning 65: AMA Masterfile as of years-end 2004-2017; Residents entering GME: ACGME Data Resource Books, academic years 2003-2004 through 2016-2017.



Other key takeaways

- A diverse physician workforce will not get easier to create if we wait
- Physician burnout is a national crisis
- Shortages are everywhere



“bias as the biggest challenge”

In addition to admitting women into programs, we need to address how women, including women of color, are progressing through their careers starting with undergraduate and graduate schools, probably all the way up to their retirement. It's about all the hurdles they have that really seem to point to bias as the biggest challenge. The same can be said for men of color.

-Anita Hill

Monday, November 5, 8:45-10:00 am
Convention Center: Hall 4

DIVERSITY & INCLUSION



Tuesday, September 25, 2018 | by Lindsay Kalter, Staff Writer

Anita Hill speaks out

Sexual harassment affects us all, says the acclaimed advocate for women's rights and racial justice. She talked to AAMCNews about the #MeToo movement, gender and racial equities in the sciences, and more.



Workforce Home

Data and Reports

Resources

Meetings and Presentations

Our Team

Workforce Studies

The mission of the AAMC Workforce Studies team is to be the pre-eminent resource for physician workforce projections, data, and research, providing support and value to AAMC and AAMC's members, and leadership to the health workforce research community.

The 2018 Update: The Complexities of Physician Supply and Demand: Projections from 2016 to 2030



The 2018 Update: Complexities of Physician Supply and Demand: Projections from 2016 to 2030, conducted by IHS Markit on behalf of the AAMC, presents workforce projections that reflect the potential impact of a variety of health care delivery and policy scenarios. The study is an update to last year's report. It incorporates the most current and best available evidence on health care delivery and responds to questions received after releasing the prior report.

[Download the full report](#)

Featured Data and Reports

2017 State Physician Workforce Data Report

2017 State Physician Workforce Data Report



Looking for a summary of your state's workforce data? The State Physician Workforce Data Report is published biennially. It provides state-specific data about active physicians and physicians in training, in a series of figures, tables, and maps that provide detailed statistics on active physicians, MD and DO students, and residents and fellows. Click [here](#) for a list of state profiles. [Download the full report.](#)

2016 Physician Specialty Data Report



Published biennially, this Workforce Studies report provides the most current data available about the active physicians and physicians in training. A series of figures and tables provide detailed statistics on active U.S. physicians and physicians in residency and fellowship programs, who are in the 43 largest specialty groups.

aamc.org/workforce

What's next for AAMC's Workforce Studies?

- Work hours
- Retirement
- Workforce diversity
 - More complete data
 - Specialty-specific
 - Programs
- Role of PAs/APRNs



May 1-3, 2019 - The Westin Alexandria, Alexandria, VA

Developing a health workforce for 2030 and beyond

- How do we train and prepare the current and future workforce to meet current and future needs? To skillfully deploy current and future technologies? To work effectively in current and future health care systems? How do we train and educate the workforce to keep up with the pace of change? How do we reconfigure training and education to keep up with the pace of change?
- What workforce do we need, where do we need them, and doing what, in order to have fewer disparities in the future?
- What partnerships are needed to connect the health workforce with the communities they serve in order to achieve fewer disparities and better health in communities across the country?

Questions? Please contact workforce@aamc.org

