The State of the Physician Workforce

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Projections

Supply, demand, specialty groups
What’s new?

- Updated data
- Refined hospitalists estimates
- Updated PA & APRN supply projections
- Population health scenario
- Metro/non-metro location data for demand and utilization equity
Key takeaways from the updated projections

• Physician demand continues to grow faster than supply

• Projected total physician shortfall of between 40,800 and 104,900 physicians by 2030

• Shortages in both primary and specialty care – with a particularly large shortage in surgical specialties

• Consistent with 2015 & 2016 projections reports
Supply scenarios include retirement, work hours, GME expansion

Demand scenarios include ACA, APRNs/PAs, population health, retail clinics, managed care.

An increasing overall shortage of physicians is projected through 2030.

Projected shortage, FTE physicians

Total projected physician shortfall range, 2015-2030

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

Projected physician specialty group shortfall ranges, 2030

- Primary Care Specialties: 7,300 to 43,100
- Non-Primary Care Specialties: 33,500 to 61,800
- Medical Specialties: 1,300 to 12,000
- Surgical Specialties: 19,800 to 29,000
- Other Specialties: 18,600 to 31,800

Projections

Health care utilization equity & population health
We model Health Care Utilization Equity to better understand magnitude of unmet need

- What if barriers disappeared? How much more utilization (in 2015)?

**Scenario 1:** Insurance & Metro/Non-metro

- People without medical insurance and people living in non-metropolitan areas => utilization patterns equivalent to their insured peers living in metropolitan areas

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

- Everyone => utilization patterns equivalent to white insured populations residing in metropolitan areas
Estimated Additional Physicians Needed if U.S. Had Achieved Health Care Utilization Equity in 2015

**Scenario 1:** Insurance & Metro/Non-metro
- 34,800 Additional Physicians

**Scenario 2:** Insurance, Metro/Non-metro, & Race/Ethnicity
- 96,800 Additional Physicians

Estimated Additional Physicians Needed if U.S. Had Achieved Health Care Utilization Equity in 2015

Scenario 1 (Insurance, Metro)
- Primary Care: 10,300
- Specialty Care: 24,500

Scenario 2 (Insurance, Metro, Race)
- Primary Care: 21,800
- Specialty Care: 75,000

We model population health measures to better understand their long term workforce implications

- Scenario models the workforce implications of achieving selected Healthy People 2020 goals
  - Sustained 5% body weight loss for overweight and obese adults
  - Improved blood pressure, cholesterol, and blood glucose levels for adults with elevated levels
  - Smoking cessation
Achieving population health goals would have different short- and long-term effects on demand

- Short-term: 1% decline in physician demand
- Long-term: 2% increase in physician demand (by 2030)

- Shifts in demand for select physician specialties
- Shifts in utilization across delivery settings
Effect of achieving population health goals would differ across specialty groups

Projections

Underlying trends: UME
Results of the 2016 Medical School Enrollment Survey

May 2017
US MD enrollment expected to exceed 30% increase

Source: AAMC 2016 Medical School Enrollment Survey Report
Overall MD & DO first year enrollment is projected to grow 59% between 2002 and 2021.

Projected MD and DO first year enrollment through 2021

Source: AAMC 2016 Medical School Enrollment Survey Report
Medical schools are increasingly concerned about clinical training opportunities for their students.

Source: AAMC 2016 Medical School Enrollment Survey Report
Medical schools experiencing more difficulties with existing clinical training sites

- High turnover among volunteer physicians: 26.5% in 2016 vs. 11.1% in 2009
- Difficulty in replacing retired physician volunteers: 28.0% in 2016 vs. 17.0% in 2009
- Competition from osteopathic medical schools for clinical training sites: 53.0% in 2016 vs. 26.0% in 2009
- Competition from offshore medical schools for clinical training sites: 34.9% in 2016 vs. 17.0% in 2009
- Competition from other health care professionals (e.g., NPs, PAs): 62.1% in 2016 vs. 23.8% in 2009
- Pressure from existing clinical training sites regarding payment(s) for student rotations: 59.1% in 2016 vs. 32.0% in 2009

Source: AAMC 2016 Medical School Enrollment Survey Report
Adequacy of clinical opportunities for students an across-the-board concern

Source: Recruiting and Maintaining U.S. Clinical Training Sites: Joint Report of the 2013 Multi-Discipline Clerkship/Clinical Training Site Survey.
Clerkship/clinical training sites were getting harder to develop & maintain 4 years ago

Percent of programs reporting much more difficult than two years prior

Source: Recruiting and Maintaining U.S. Clinical Training Sites: Joint Report of the 2013 Multi-Discipline Clerkship/Clinical Training Site Survey.
Percentage of schools concerned about graduate medical education, 2012–2016

PERCENT OF SCHOOLS REPORTING MAJOR OR MODERATE CONCERN

FOR MY INCOMING STUDENTS
- 2012: 35%
- 2013: 47%
- 2014: 48%
- 2015: 50%
- 2016: 39%

IN MY STATE
- 2012: 67%
- 2013: 76%
- 2014: 71%
- 2015: 62%
- 2016: 62%

NATIONALLY
- 2012: 84%
- 2013: 91%
- 2014: 86%
- 2015: 77%
- 2016: 80%

Source: AAMC 2016 Medical School Enrollment Survey Report
Production of new physicians not keeping up with aging workforce and population

![Graph showing the production of new physicians, the aging workforce, and the population of those aged 65 and older. The graph indicates that the production of new physicians is not keeping pace with the aging workforce and population.]

Source: ACGME, Census, AMA Physician Masterfile; US Census Bureau
Projections

Underlying trends: Physician practice
Numbers of new PAs and NPs still growing rapidly

Source: NCCPA; AACN.
The shift in physician work hours has varied by age group

Average physician work hours per week

Source: Census (Decennial/ACS).
The shift in physician work hours has varied by age group and sex

Change in average male physician work hours, 1980 to 2012-2014

Change in average female physician work hours, 1980 to 2012-2014

Source: Census (Decennial/ACS).
The US physician workforce is getting older

Retirement scenarios remain the most extreme physician supply projections

Projected FTE Physician Supply: All Physicians

- Retire Later +2
- GME Expansion
- Status Quo
- Millennial Hours
- Retire Earlier -2

Technology can improve access to a wide array of services

From a patient perspective, we ask about:

• Viewing lab results online
• Making appointments online
• Telephone communication
• Email communication
• Video communication
Consumers report overall increases in most types of technology use

DATA REMOVED PENDING PUBLICATION.
Largest divergence in consumers’ use of technology reported for video communication

DATA REMOVED PENDING PUBLICATION.
Physician workforce in the US continues to grow and to include more female physicians

Source: United States Census Bureau
Note: Data for 2010 are a combination of 2009, 2010, 2011 American Community Surveys
Physician workforce is slowly becoming more racially and ethnically diverse

North Carolina makes a good case study in the need to understand workforce diversity in context

Data Source: 2015 American Community Survey 5-year Estimates; 2014 North Carolina Physician Licensure Data
Black or African American population and physician distributions dissimilar

PHYSICIAN DATA REMOVED PENDING PUBLICATION.
American Indian / Alaska Native population and physician distributions somewhat similar

PHYSICIAN DATA REMOVED PENDING PUBLICATION.

Data Source: 2015 American Community Survey 5-year Estimates; 2014 North Carolina Physician Licensure Data
IMGs comprise a significant part of the nation’s physician workforce

24.5% of 2016 active physicians were International Medical Graduates (IMGs).

24.9% of 2015-2016 active residents were International Medical Graduates (IMGs).

17 State Physician Workforce Data Report, AAMC Workforce Studies.
2 2016 AAMC Report on Residents, December 2016
Deferred Action for Childhood Arrivals (DACA) program uncertainty could impact workforce diversity

Students with DACA status:

113 Applied to U.S. medical schools for the 2016-2017 year

65 Enrolled in U.S. medical schools in the 2016-2017 year

AAMC expects increased enrollment of DACA Dreamers in 2017-2018 since most with confirmed DACA status have not yet finished their undergraduate degrees.
Education pipeline

Diversity
Small but important gains from medical school expansion

- Most expansion - highest proportions in primary care and practicing in underserved and rural areas.

- Racial and ethnic diversity of matriculants increased modestly - new schools contributed disproportionately.

Percentage of U.S. medical school graduates by sex, 1980-2015

Source: AAMC Data Warehouse: Student file, as of 1/7/2016.
Percentage of U.S. medical school white graduates by sex, 1986-2015

Source: AAMC Data Warehouse: Student data and Applicant and Matriculant file, as of 7/11/2016.
Percentage of U.S. medical school Hispanic graduates by sex, 1986-2015

Source: AAMC Data Warehouse: Student data and Applicant and Matriculant file, as of 7/11/2016.
Percentage of U.S. medical school Asian graduates by sex, 1986-2015

Source: AAMC Data Warehouse: Student data and Applicant and Matriculant file, as of 7/11/2016.
Percentage of U.S. medical school American Indian/Alaska Native graduates by sex, 1986-2015

Source: AAMC Data Warehouse: Student data and Applicant and Matriculant file, as of 7/11/2016.
Percentage of U.S. medical school Black or African American graduates by sex, 1986-2015

Source: AAMC Data Warehouse: Student data and Applicant and Matriculant file, as of 7/11/2016.

Source: AAMC Data Warehouse: Student data and Applicant and Matriculant file, as of 7/11/2016.
After 30+ years, Black male matriculation is slowly increasing above 1980 levels

Source: AAMC AMCAS APP_BIO tables. Race is only available for permanent residents.
Most USMD schools have programs or policies designed to recruit a diverse student body.

- Minority groups currently underrepresented in medicine: 90%
- Students with disadvantaged backgrounds: 88%
- Students from rural communities: 60%
- Students from underserved communities: 61%
- Students from local underserved communities: 70%

Source: AAMC 2016 Medical School Enrollment Survey Report
Recruitment programs begin in elementary school

Percentage of schools with specific admissions programs or policies

- Elementary school students: 23%
- Middle school students: 59%
- High school students: 91%
- Community college students--nationwide: 8%
- Community college students--local: 42%
- Four-year-university students--nationwide: 59%
- Four-year-university students--local: 86%

Source: AAMC 2016 Medical School Enrollment Survey Report
More absolute future growth in utilization projected from whites than other groups.

Projected growth in FTE physician demand, 2015 to 2030:

- **White**: 70,000
- **Black**: 20,000
- **Asians, Pacific Islanders, Native Americans, and Alaskan Natives**: 40,000
- **Hispanic**: 60,000

Much faster utilization growth rates projected for other groups than for whites

Projected percentage growth in FTE physician demand, 2015 to 2030

- White: 10%
- Black: 25%
- Asians, Pacific Islanders, Native Americans, and Alaskan Natives: 45%
- Hispanic: 49%

The vast majority of physician demand – current and projected – is in metropolitan areas.
Access to care

Population
AAMC collects data on health care access from consumers

7% of U.S. adults (>17 million people) could not always get care

- Needed care last 12 months-always able to get it, 50%
- Did not need care, 43%
- Could not afford, 3%
- Could not get appointment soon enough, 1%
- Could not find provider, 2%
- Transportation problems, 1%
- Other, 0%

Source: AAMC Consumer Survey of Health Care Access (June, 2017)
LGB individuals consistently face greater challenges accessing care

Access to care appears to be improving, though racial/ethnic disparities persist

Percent of respondents not always able to get care

Source: AAMC Consumer Survey of Health Care Access Native Hawaiian/Other Pacific Islander & Other excluded due to sample size.
The nation’s rural population is not homogenous.
Rural access varies by race/ethnicity

DATA REMOVED PENDING PUBLICATION.
“The diversity of American medicine — and the conversations, ideas and breakthroughs this diversity sparks — may be one reason for our competitiveness as a global leader in biomedical research and innovation.”

- Dhruv Khullar, MD
The AAMC Workforce Studies Team

- Da’Shia Davis, BS
- Kara Fisher, MPH
- Sarah Hampton, BA
- Karen Jones, MApStat
- Scott Shipman, MD
- Imam Xierali, PhD

- Preeti Iyer, BSE (in progress)
- Michelle Ogunwole, MD
Physician data reports

State and specialty rankings and data on:
- Physician Supply
- UME/GME
- In-State Retention
2018 Health Workforce Research Conference
Tysons, VA
May 9-11, 2018
Production of new physicians not keeping up with aging workforce and population

Source: ACGME, Census, AMA Physician Masterfile; US Census Bureau
Pulling it all together

**DIVERSITY**
- A GOOD THING
- PROGRESS
- NEED MORE PROGRESS

**POPULATION**
- AGING
- DIVERSE
- DEALING WITH DISPARITIES

**PROJECTIONS**
- SHORTAGES
- NOT KEEPING UP WITH AGING
Where do we go from here?

- Extent of current shortages
- Work hours and retirement
- PAs and APRNs
- Clinical training/clerkships
- Distribution solutions
- Pipeline programs
- Keep tracking access
Questions?