

First-Year Graduate Medical Education in the United States: 2002-2016*

To analyze trends in first-year graduate medical education (GME) training positions in the United States, the NRMP compiled NRMP Main Residency Match® outcome data with publicly-available information from the Association of American Medical Colleges (AAMC), the American Association of Colleges of Osteopathic Medicine (AACOM®), and the American Osteopathic Association (AOA®). Note that these data do not address the projected shortfall of an adequate number of residency training positions or physician workforce needs. For context, the AAMC projects a shortage of 12,500 to 31,100 primary care physicians and 28,200 to 63,700 specialists by 2025 as a result of population growth, the aging (and longer lifespan) of baby boomers, disease prevalence, and the work-life balance priorities of younger physicians compared to those who are expected to retire over the coming years.¹

Chart 1 displays the numbers of post-graduate year one (PGY-1) residency positions in the NRMP Main Residency Match (“the Match”) compared to the numbers of graduating seniors from United States allopathic medical schools. Chart 1 shows that 20,602 PGY-1 positions were placed in the 2002 Main Residency Match. That same year, 15,676 senior students graduated from US allopathic medical schools. By 2016, the number of PGY-1 positions in the Match had grown by 35 percent to 27,860 and the number of graduating seniors had increased by 21 percent to 18,938. With the exception of the 2002 Match, there have been at least 5,000 more PGY-1 residency positions in the Match than there were graduating US allopathic seniors. In 2016, the gap was 8,922. Between 91 and 96 percent of US allopathic medical school seniors participate in the Match every year, and about 94 percent match to PGY-1 positions (not shown in the chart).

US osteopathic medical school students and graduates and international medical school students and graduates (IMGs) are other major groups seeking positions in the Main Residency Match; accordingly, their Match participation also was evaluated. As shown in Chart 2, in 2002 the numbers of osteopathic physicians and IMGs who obtained PGY-1 positions in the Main Residency Match equaled approximately one-third the number of matched US allopathic seniors. By 2016, that proportion had grown to more than one-half. Chart 2 also displays the number of osteopathic students and graduates who obtained PGY-1 positions in the American Osteopathic Association (AOA) Match. The AOA Match provides matching services for osteopathic physicians seeking positions in programs accredited by the AOA, and position fill rates have varied between 50 percent and 70 percent over the reporting period, with many unfilled AOA Match positions in dually-accredited programs being placed in the NRMP. In 2002, 1,326 osteopathic students and graduates obtained PGY-1 positions through the AOA Match. By 2016, that number had increased 66 percent to 2,206.

The graduation data from the AAMC and AOA were combined to generate the total number of medical school graduates in the United States. Outcome data from both the NRMP and AOA Matches reveals more than 29,000 applicants obtained first-year GME training positions in the United States in 2016, and more than 23,000 were senior students and prior-year graduates of US allopathic and osteopathic medical schools. Since 2002, the combined number of graduating students from US allopathic and osteopathic medical schools has been lower than the total number of available PGY-1 positions in the

¹ [The complexities of physician supply and demand: Projections from 2013 to 2025](http://www.aamc.org/newsroom/newsreleases/426166/20150303.html). Association of American Medical Colleges, March 2015. Web accessed September 2015.
<https://www.aamc.org/newsroom/newsreleases/426166/20150303.html>

* Updated to incorporate 2016 Main Residency Match and AOA Match data.

NRMP and AOA Matches. The Match Week Supplemental Offer and Acceptance Program® (SOAP®), launched by the NRMP in 2012, has enhanced NRMP's ability to track the number of applicants obtaining residency positions.

Data Sources:

NRMP Match data from NRMP Data Warehouse and Results and Data Reports

- National Resident Matching Program, Results and Data: 2016 Main Residency Match. National Resident Matching Program, Washington, DC. 2016. <http://www.nrmp.org/match-data/main-residency-match-data/>. Accessed February 1, 2017.
- National Resident Matching Program, Results and Data: Main Residency Match. National Resident Matching Program, Washington, DC. 2002-2015. <http://www.nrmp.org/match-data/nrmp-historical-reports/>. Accessed September 25, 2015.

Allopathic graduation data from AAMC

- Graduation 2002-2005: *AAMC Data Book 2012*. Association of American Medical Colleges, 2012. Table B-1: U.S. Medical School Applicants, Matriculants, Enrollment, and Graduates.
- Graduation 2006-2015: Table B-2: Total Graduates by US Medical School and Sex, and Year. <https://www.aamc.org/data/facts/enrollmentgraduate/148670/total-grads-by-school-gender.html>. Accessed December 16, 2015.
- Graduation 2016: Table B-2: Total Graduates by US Medical School and Sex, 2011-2012 through 2015-2016. <https://www.aamc.org/download/321532/data/factstableb2-2.pdf>. Accessed February 1, 2017.

Osteopathic graduation data from AACOM:

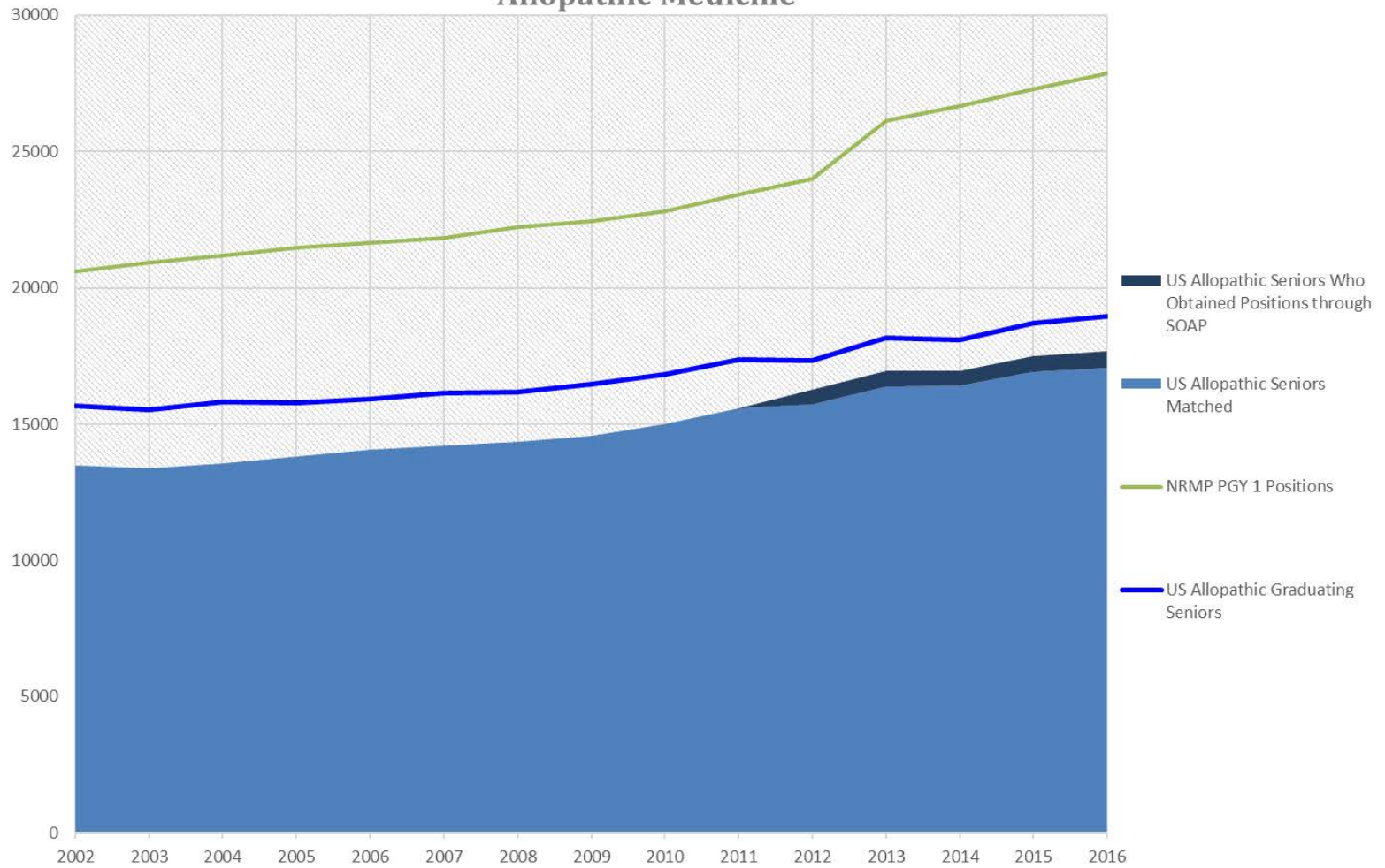
- Graduation 2002-2014: Graduates by Race and Ethnicity 1985-2014. <http://www.aacom.org/reports-programs-initiatives/aacom-reports/graduates>. Accessed September 25, 2015.
- Graduation 2015: Report on Osteopathic Medicine Placements in 2015 Matches. <http://www.aacom.org/reports-programs-initiatives/aacom-reports/special-reports>. Accessed December 16, 2015.
- Graduation 2016: AACOM 2015-16 Academic Year Survey of Graduating Seniors Summary. <http://www.aacom.org/docs/default-source/data-and-trends/2015-16-graduating-seniors-summary.pdf?sfvrsn=1>. Accessed February 1, 2017.

AOA Match data from AOA and NMS:

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- American Osteopathic Association. 2014 AOA Match Results. <http://www.osteopathic.org/inside-aoa/Education/students/match-program/Pages/match-results.aspx>. Accessed March 28, 2014.
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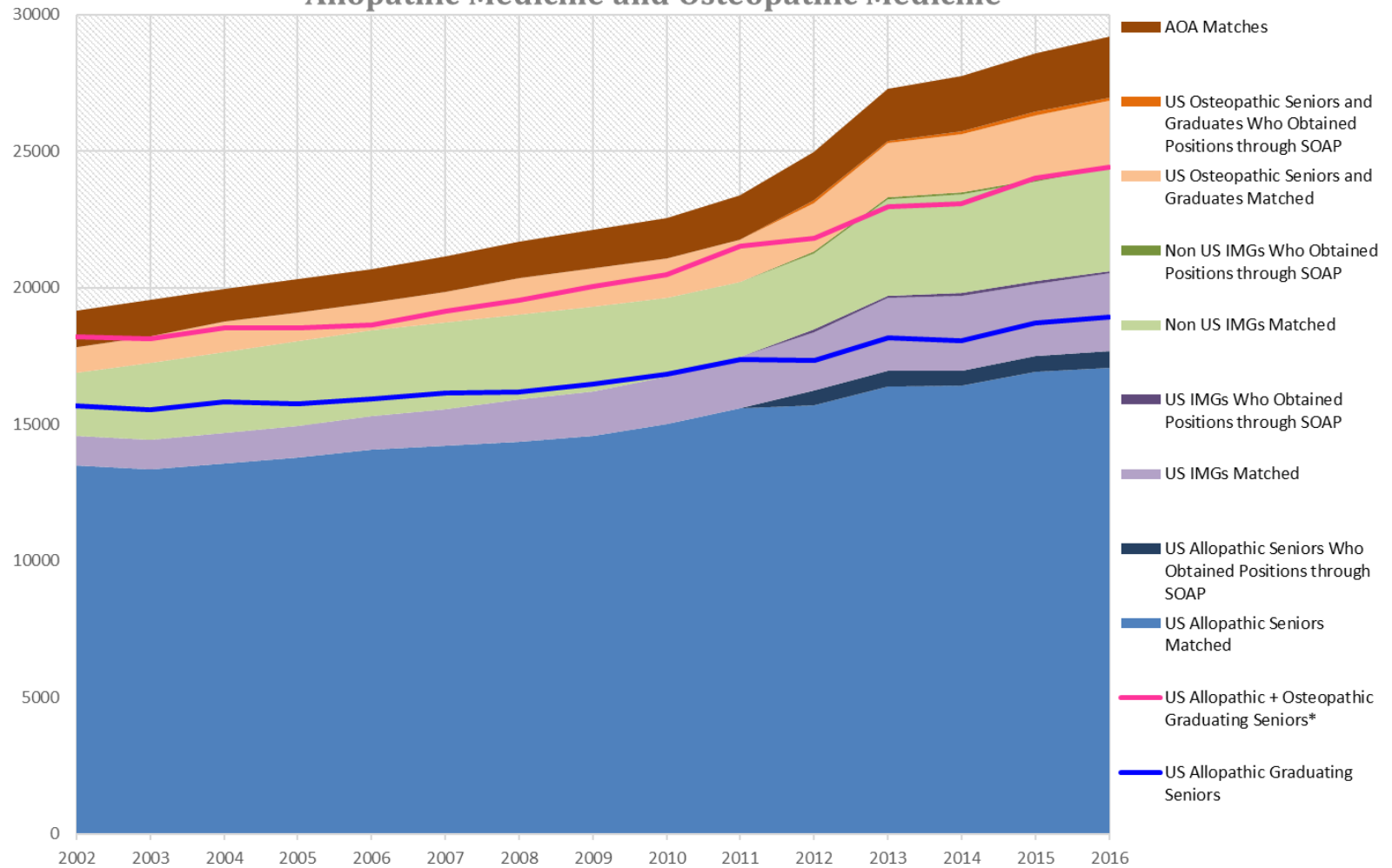
**Chart 1. First-Year Graduate Medical Education in the United States
Allopathic Medicine***



Data sources: NRMP, AAMC

* Updated February 2017

**Chart 2. First-Year Graduate Medical Education in the United States
Allopathic Medicine and Osteopathic Medicine***



Data sources: NRMP, AAMC, AACOM, AOA

* Updated February 2017