2016

Trends in Demand for New Physicians, 2012-2016

A Summary of Demand Indicators for 34 Physician Specialties

CHWS
Center for Health Workforce Studies
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School of Public Health
University at Albany, State University of New York

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PREFACE

This data book presents profiles for 34 specialties. Each specialty profile summarizes trends in 5 key areas related to physician supply and demand: starting income, job offers, having to change plans due to limited practice opportunities, relative demand, and numbers of graduates. Data on starting income, job offers, having to change plans, and relative demand are based on responses to the Resident Exit Survey in New York (for the years 2012 to 2016).

This report was prepared by the Center for Health Workforce Studies (CHWS) staff, David Armstrong, Yuhao Liu, and Gaetano Forte, with layout design by Leanne Keough. Funding for this report was provided by the New York State Department of Health.

Established in 1996, CHWS is an academic research organization, based at the School of Public Health, University at Albany, State University of New York (SUNY). The mission of CHWS is to provide timely, accurate data and conduct policy relevant research about the health workforce. The research conducted by CHWS supports and promotes health workforce planning and policymaking at local, regional, state, and national levels. Today, CHWS has established itself as a national leader in the field of health workforce studies.

The views expressed in this report are those of CHWS and do not necessarily represent positions or policies of the School of Public Health, University at Albany, SUNY, or the New York State Department of Health.

December 2017

ACKNOWLEDGMENT

The authors would like to express their appreciation to the GME administrators and directors at participating teaching hospitals for their efforts to ensure a high response rate to the Resident Exit Survey each year. Without their assistance, this important data collection effort would not be possible.

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BACKGROUND

The Center for Health Workforce Studies (CHWS) conducts an annual survey of all physicians in New York completing a residency or fellowship training program (the Exit Survey). The goal is to provide the medical education community with useful information about the outcomes of training and the demand for new physicians. The survey instrument (Appendix C) was developed by CHWS in consultation with the state's teaching hospitals and other key stakeholders.

Each year in the spring, CHWS distributes the Exit Survey to GME administrators at teaching hospitals in New York. The Survey is then forwarded to individual programs where graduating residents and fellows are asked to complete a 31-item questionnaire in the weeks prior to finishing their program. Completed questionnaires are returned to CHWS for data entry and analysis. In 2016, with the excellent participation of teaching hospitals, a total of 3,084 of the estimated 5,225 physicians finishing a residency or fellowship training program completed the Exit Survey (59% response rate). Over the 17 years the survey has been conducted (1998-2003, 2005, 2007-2016), 50,989 of 83,810 graduates have completed the survey (61% cumulative response rate).

This data book presents profiles for 34 specialties. Each specialty profile summarizes trends in 5 key areas related to physician supply and demand: starting income, job offers, having to change plans due to limited practice opportunities, relative demand, and numbers of graduates. Data on starting income, job offers, having to change plans, and relative demand are based on responses to the Resident Exit Survey in New York (for the years 2012 to 2016). Data on GME graduates are from the annual medical education issues of the *Journal of the American Medical Association (JAMA)*, and summarize the numbers of residents (or fellows) completing allopathic GME training programs in the specialty in the US from 2006 to 2015.

Definitions of the 5 areas are as follows:

- ***Starting income:*** The median starting income of survey respondents with confirmed plans to enter patient care/clinical practice in the US following completion of their training program. Starting incomes included respondents' base salaries plus their expected incentive/bonus

income. Starting incomes in the years 2012–2016 were adjusted for inflation to reflect 2016 dollars and are reported in $1,000s.

- ***Job offers:*** The mean number of job offers for employment/practice positions of survey respondents who had actively searched for a practice position, excluding international medical graduates (IMGs) on temporary visas. Respondents with temporary citizenship status were excluded from this analysis because they were much more likely to experience difficulty in finding practice positions due to visa restrictions.

- ***Having to change plans due to limited practice opportunities:*** The percentage of respondents who had actively searched for a job (excluding IMGs on temporary visas) and who had to change their plans due to limited practice opportunities.

- ***Relative demand:*** Using several questions pertaining to the job market experiences and perceptions of survey respondents who had actively searched for a practice position (excluding IMGs on temporary visas), a composite score was computed to assign an overall rank (or relative demand score) for each specialty in each year that the survey was conducted. The percentages presented are the percentile rank of the specialty amongst all specialties in a given year. A percentile rank of 100% identifies the specialty highest in demand, and the lowest percentile rank would correspond to the specialty with the lowest relative demand score. Appendix A provides a detailed explanation of the methodology used to assess relative demand.

- ***Numbers of graduates of allopathic GME training programs in the US:*** The American Medical Association's (AMA) data on the number of residents completing training was compiled to observe how the number of new entrants to the physician marketplace has changed over time.

Important Note:

For each specialty, the number of responses by year is listed at the bottom of the page in the report. Care should be taken when interpreting outcomes based on small samples because the measures may fluctuate greatly from year to year.

KEY FINDINGS

Demand for primary care physicians* is stronger than the demand for non-primary care physicians.

Prior to 2008, the Exit Survey showed that demand for primary care physicians was lower compared to demand for non-primary care physicians. Since 2008 the demand for primary care physicians has been greater than the demand for non-primary care physicians. In 2016, primary care physicians received more job offers than specialists and were less likely to have to change plans due to limited practice opportunities.

There are important differences in the job market experiences and assessments for different specialties.

Although the overall marketplace appears relatively good for new graduates, there exist important differences in demand for individual specialties. In New York, specialties experiencing the strongest and weakest relative demand were as follows:

- *Strongest relative demand:* family medicine, emergency medicine, general internal medicine, adult psychiatry, dermatology, and neurology.

- *Weakest relative demand:* pathology, radiology, pediatric subspecialties, anesthesiology, infectious disease, and cardiology.

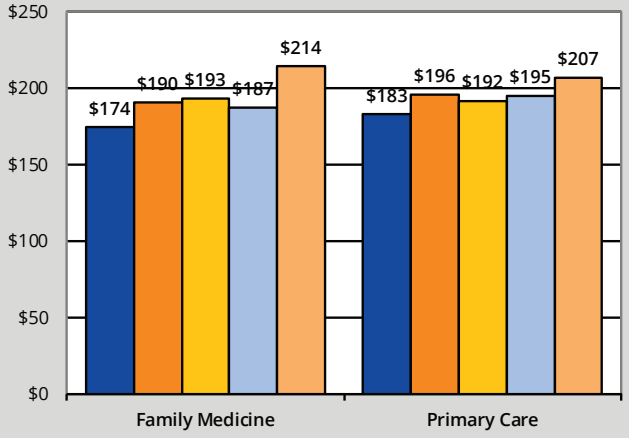
* Primary care specialties include family medicine, general internal medicine, general pediatrics, and internal medicine and pediatrics (combined).

Specialties

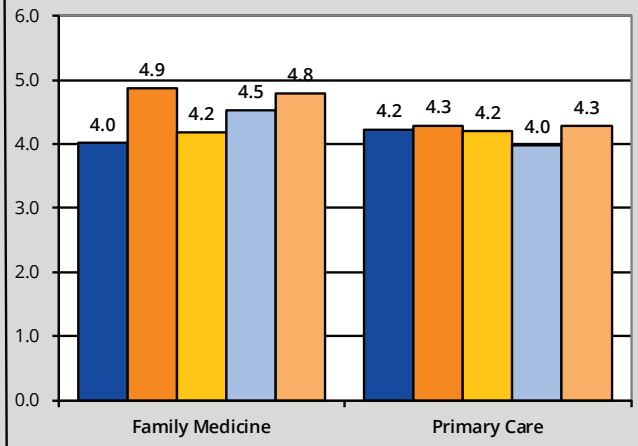
Specialty: Family Medicine

Legend: 2012 2013 2014 2015 2016

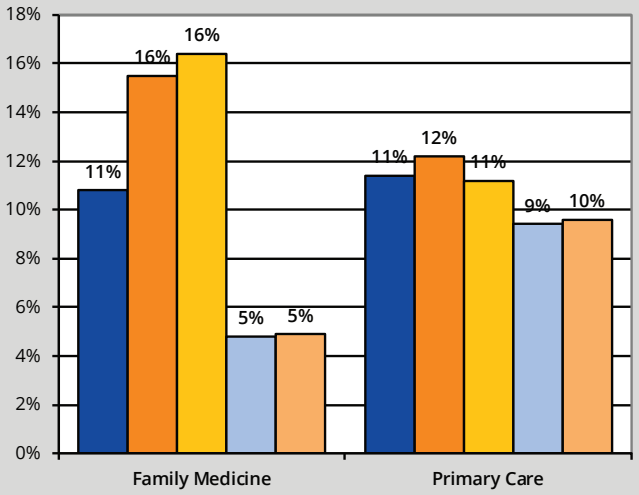
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



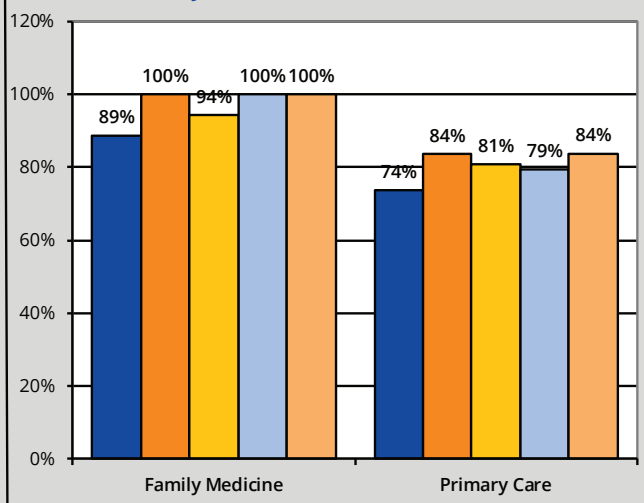
Trends in Mean Number of Job Offers Received, 2012 - 2016*



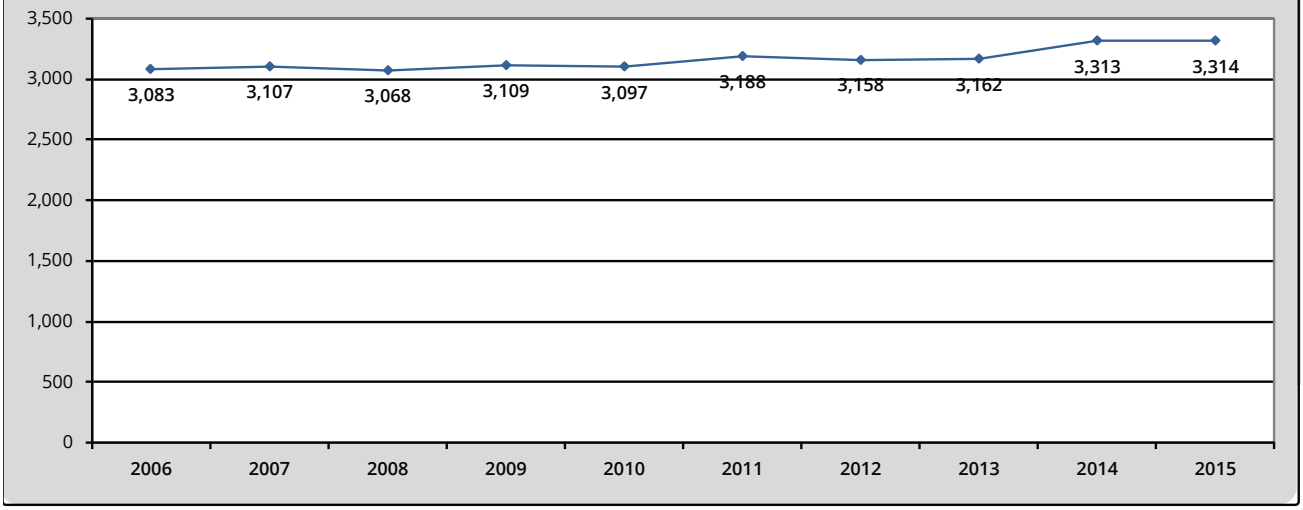
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Family Medicine, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Family Medicine GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 76, 2013: n = 72, 2014: n = 70, 2015: n = 92, 2016: n = 92.

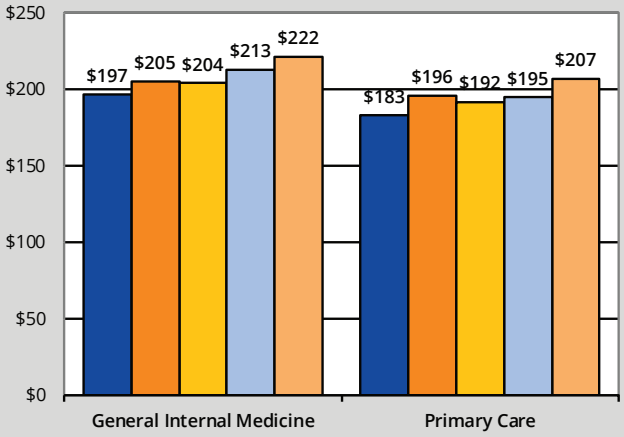
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

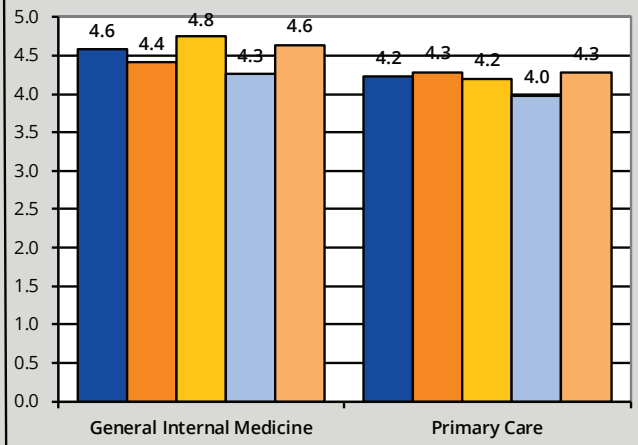
Specialty: General Internal Medicine

Legend: 2012 2013 2014 2015 2016

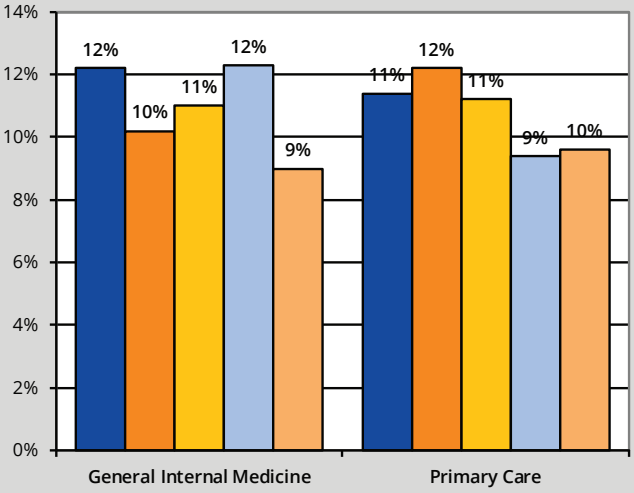
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



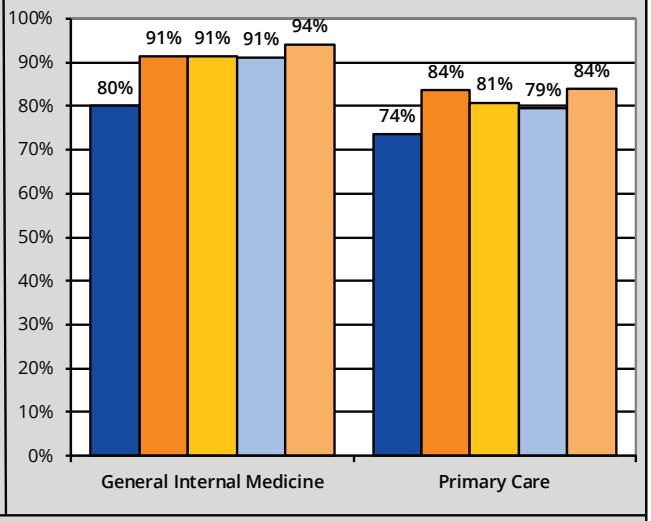
Trends in Mean Number of Job Offers Received, 2012 - 2016*



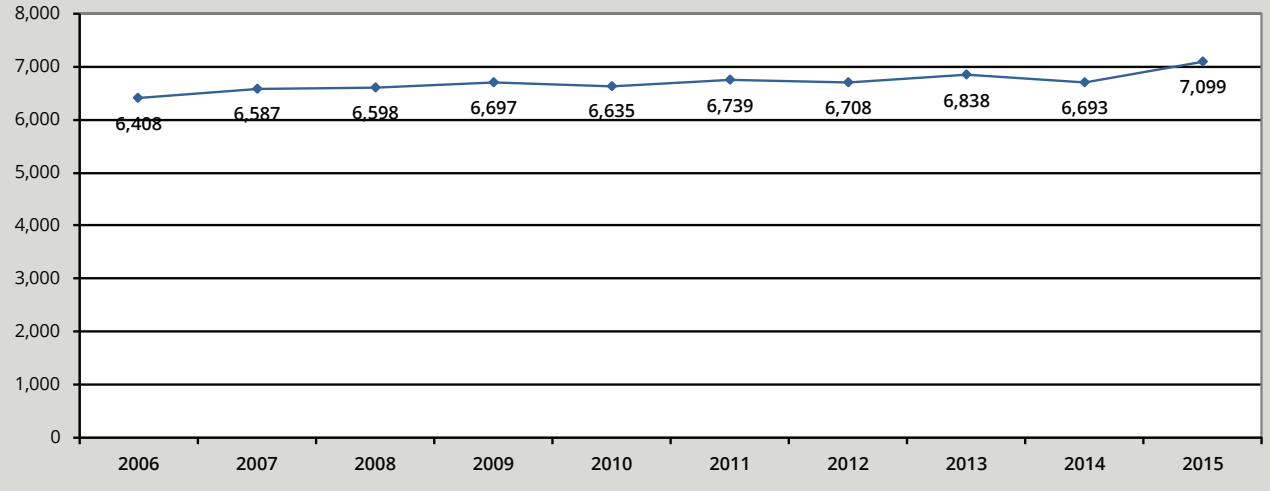
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of General Internal Medicine, 2012 - 2016*



*Trends in Number of Graduates of Allopathic General Internal Medicine GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 222, 2013: n = 237, 2014: n = 292, 2015: n = 219, 2016: n = 259.

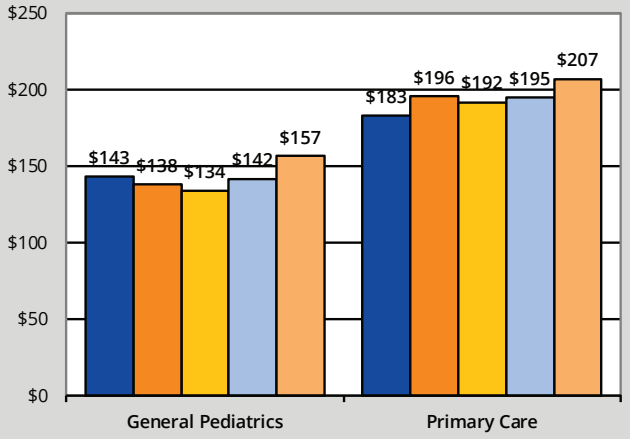
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

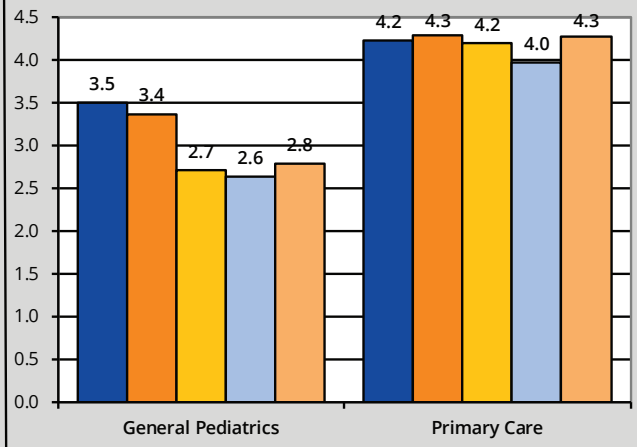
Specialty: General Pediatrics

Legend: 2012 2013 2014 2015 2016

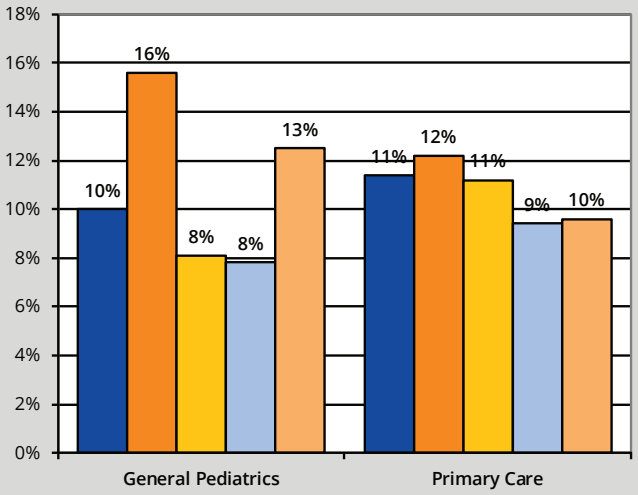
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



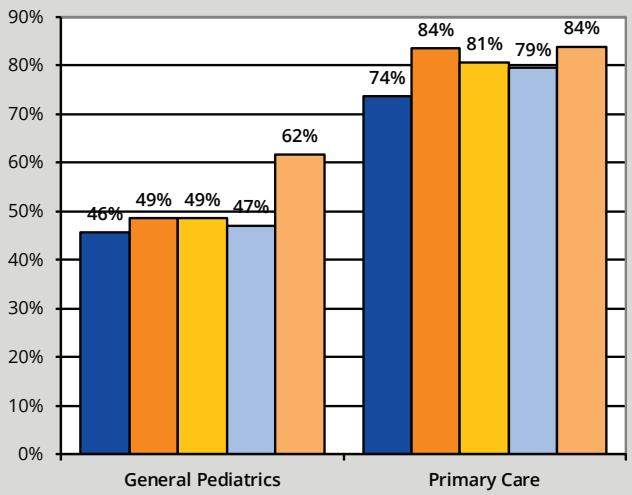
Trends in Mean Number of Job Offers Received, 2012 - 2016*



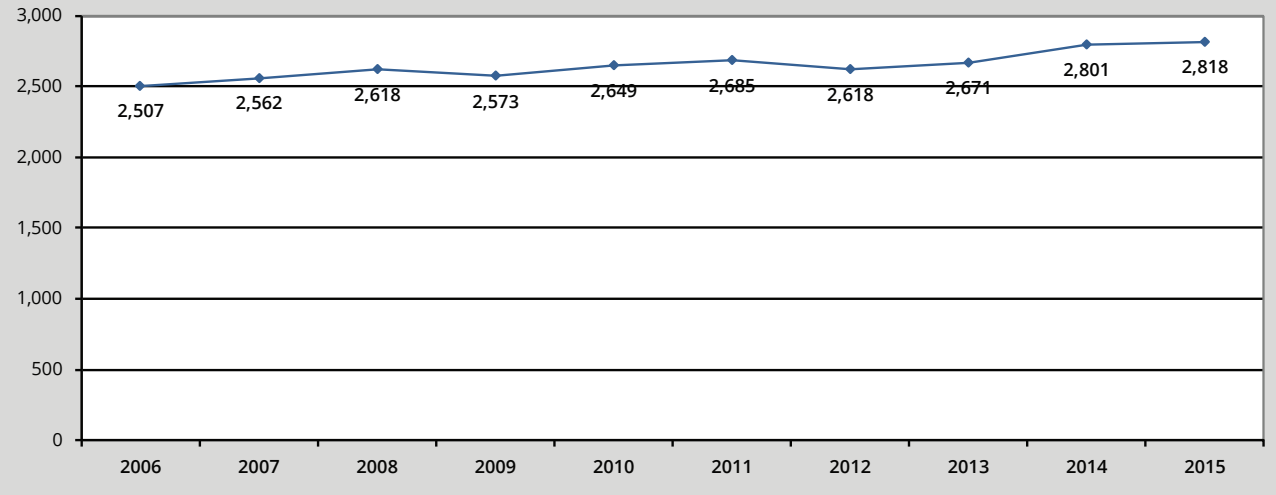
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of General Pediatrics, 2012 - 2016*



*Trends in Number of Graduates of Allopathic General Pediatrics GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 79, 2013: n = 84, 2014: n = 95, 2015: n = 87, 2016: n = 96.

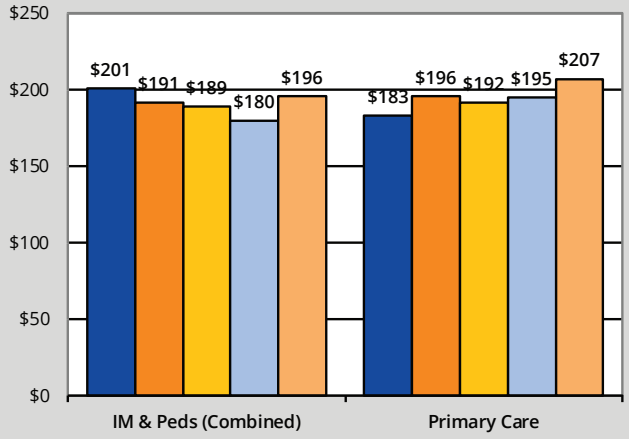
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

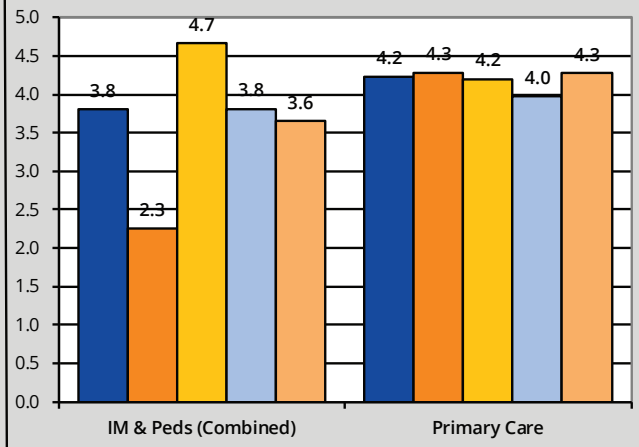
Specialty: IM & Peds (Combined)

Legend: 2012 2013 2014 2015 2016

Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



Trends in Mean Number of Job Offers Received, 2012 - 2016*



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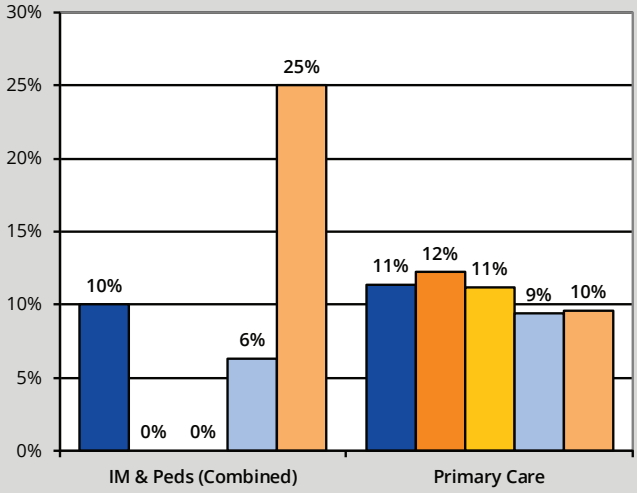
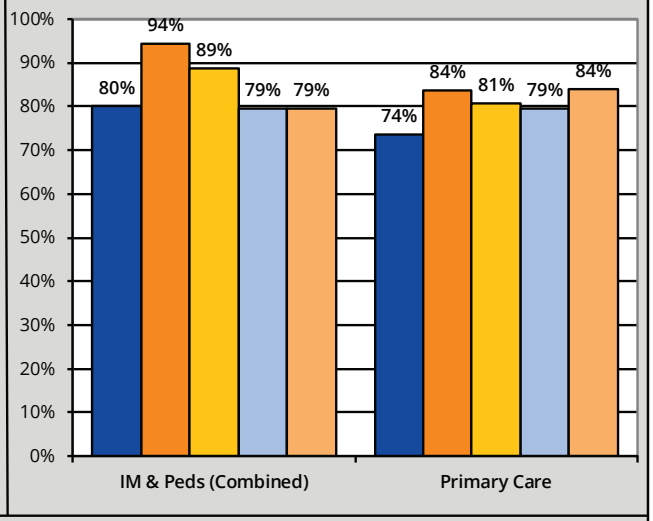
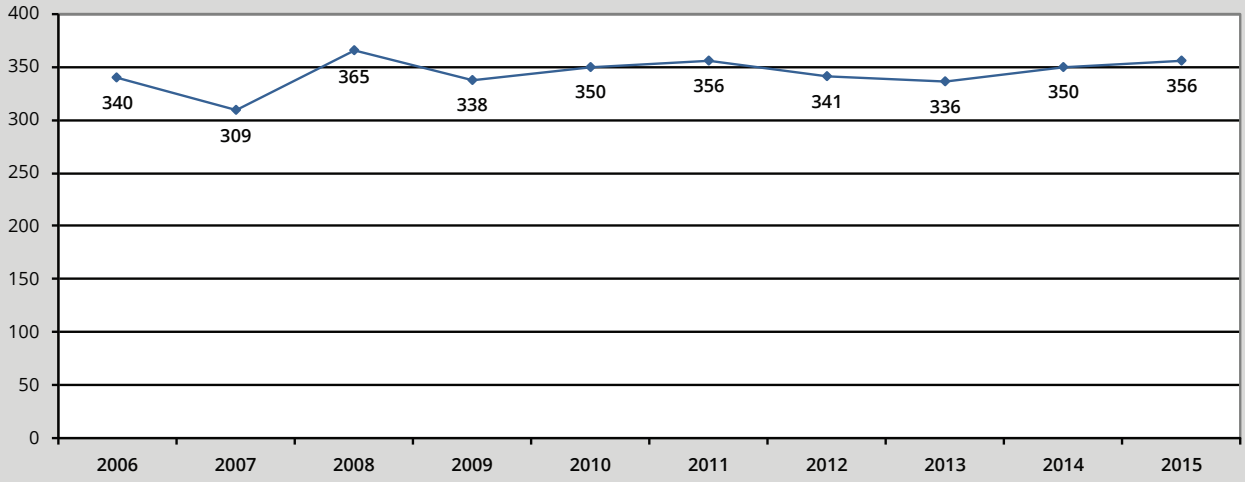


Trends in Relative Demand - Percentile Rank of IM & Peds (Combined), 2012 - 2016*



*Trends in Number of Graduates of Allopathic IM & Peds (Combined) GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 10, 2013: n = 5, 2014: n = 3, 2015: n = 16, 2016: n = 17.

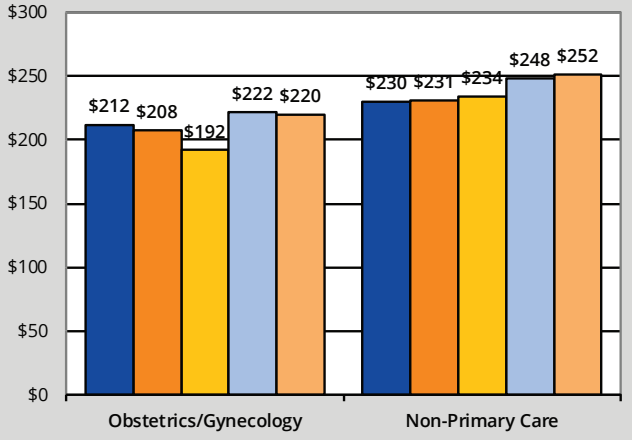
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

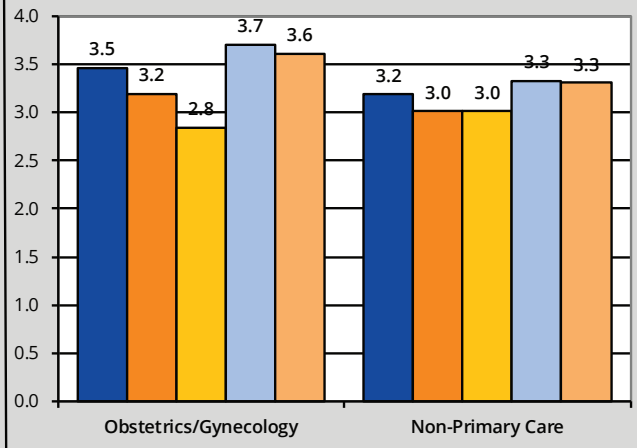
Specialty: Obstetrics/Gynecology

Legend: 2012 2013 2014 2015 2016

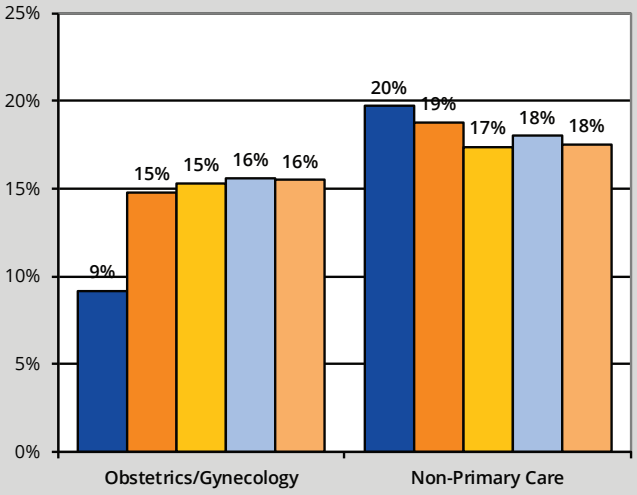
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



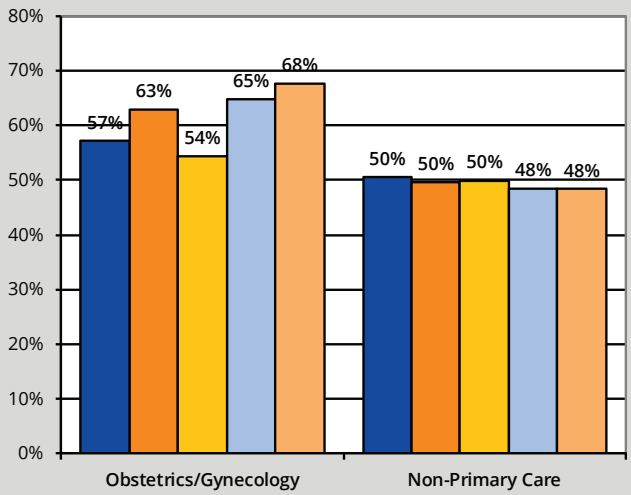
Trends in Mean Number of Job Offers Received, 2012 - 2016*



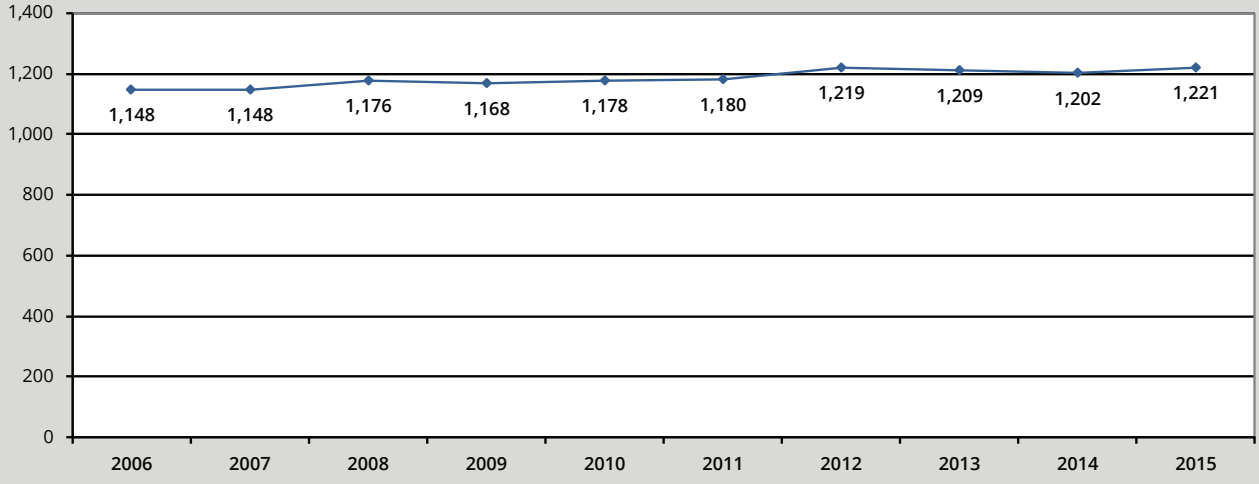
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Obstetrics/Gynecology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Obstetrics/Gynecology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 82, 2013: n = 67, 2014: n = 79, 2015: n = 71, 2016: n = 85.

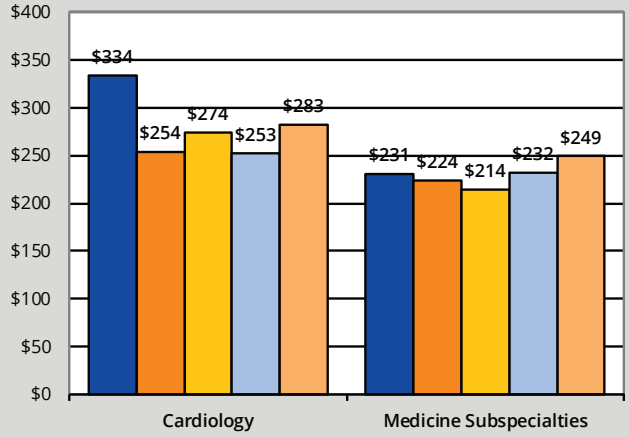
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

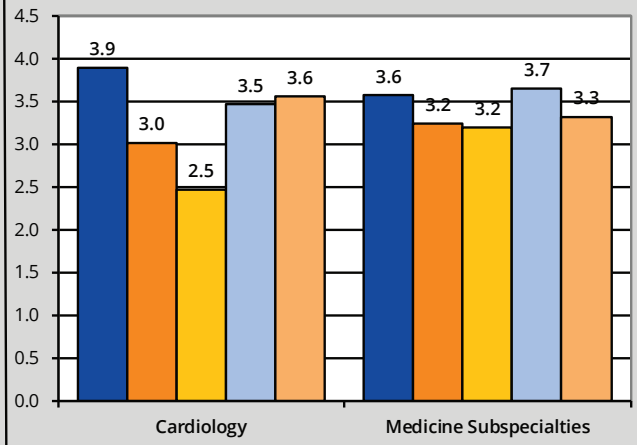
Specialty: Cardiology

Legend: 2012 2013 2014 2015 2016

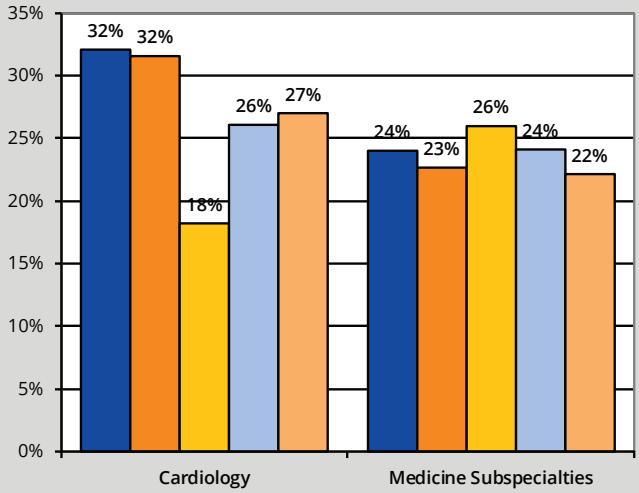
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



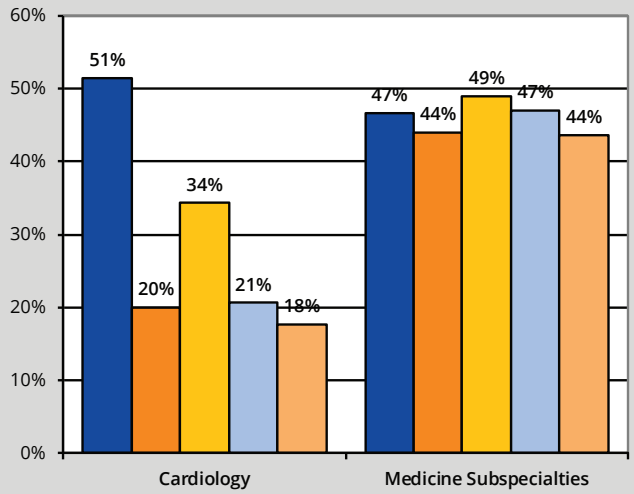
Trends in Mean Number of Job Offers Received, 2012 - 2016*



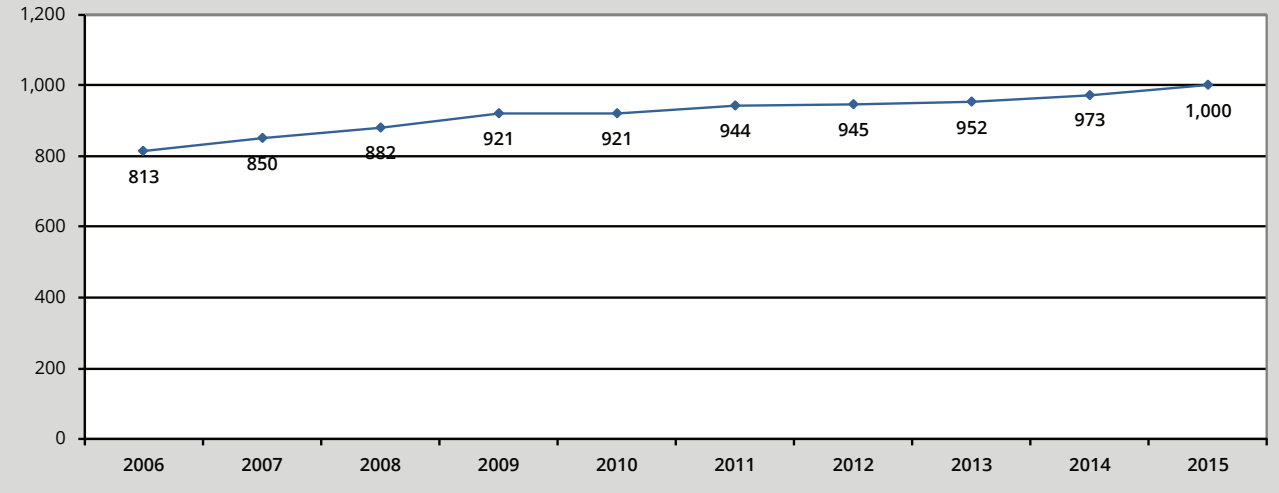
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Cardiology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Cardiology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 61, 2013: n = 61, 2014: n = 44, 2015: n = 50, 2016: n = 48.

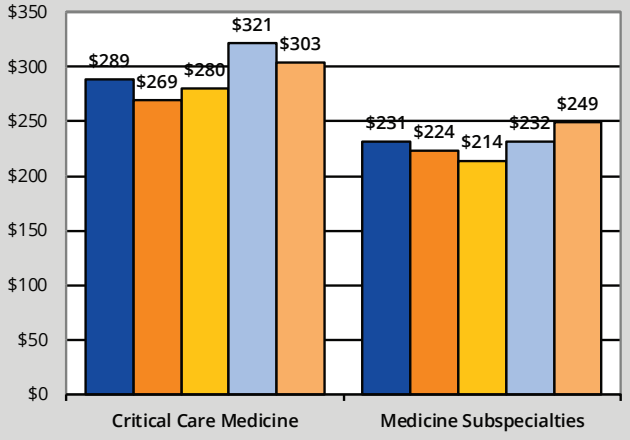
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

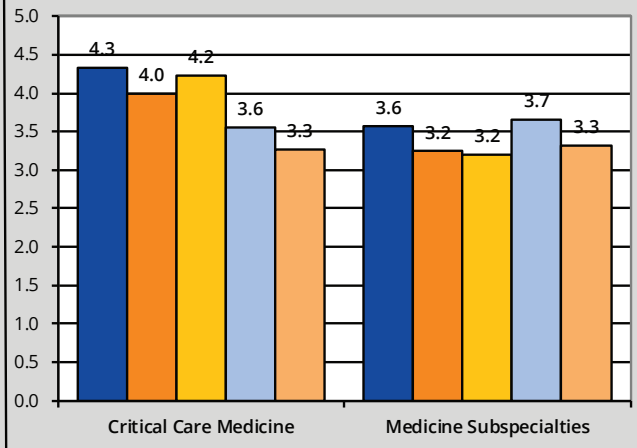
Specialty: Critical Care Medicine

Legend: 2012 2013 2014 2015 2016

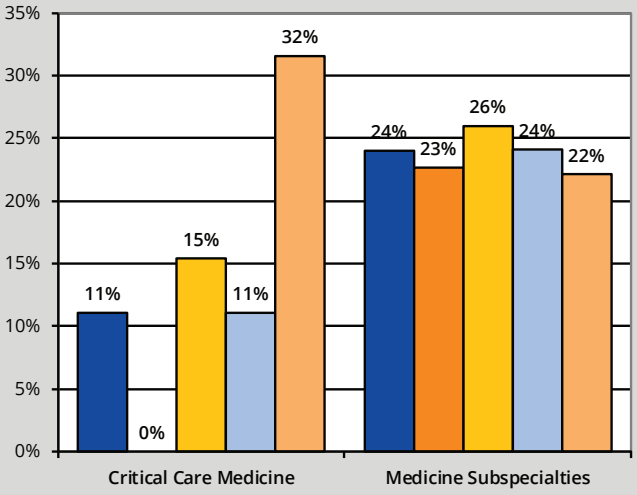
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



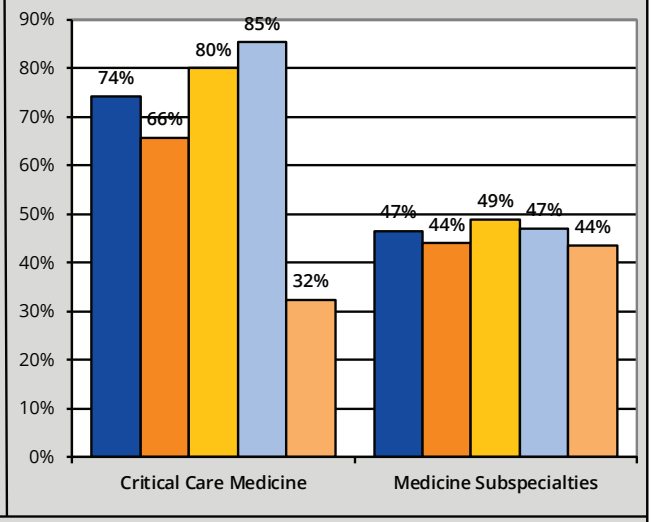
Trends in Mean Number of Job Offers Received, 2012 - 2016*



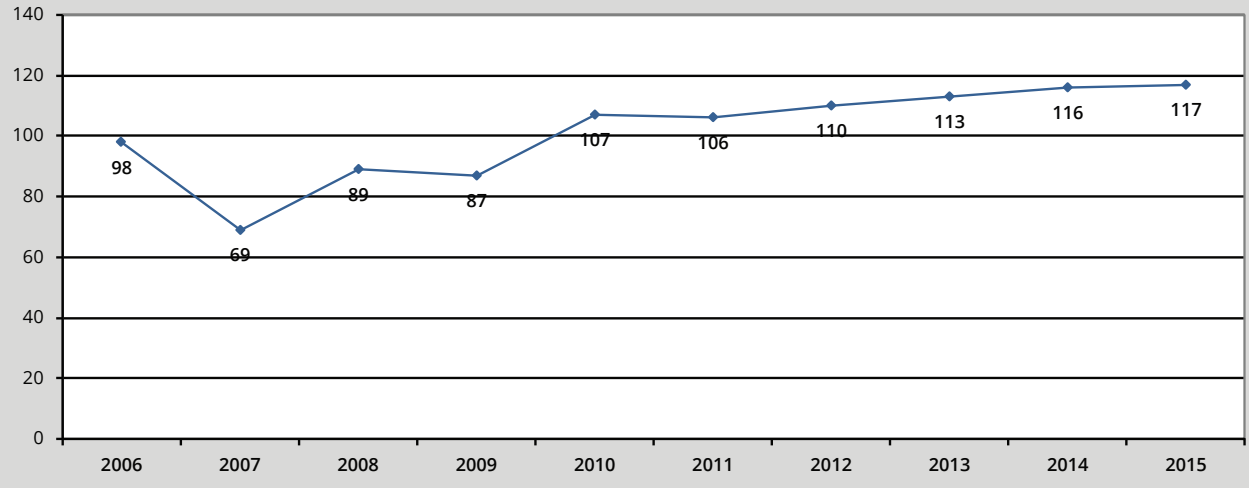
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Critical Care Medicine, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Critical Care Medicine GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 9, 2013: n = 12, 2014: n = 13, 2015: n = 9, 2016: n = 19.

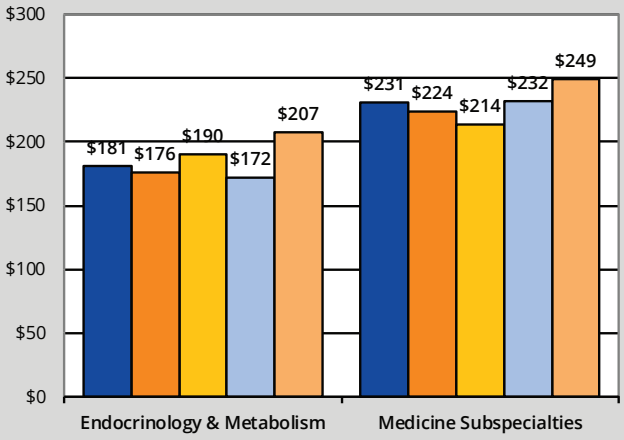
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

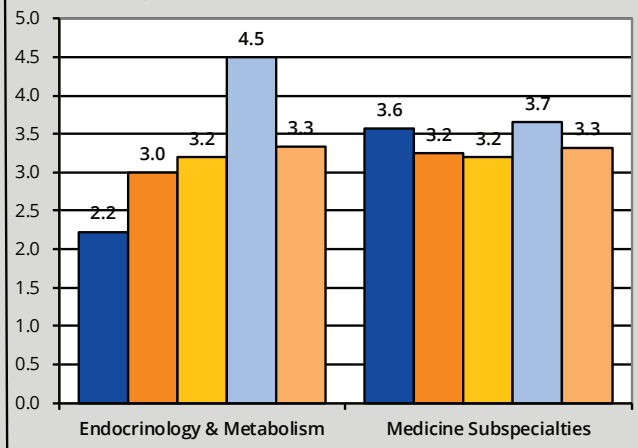
Specialty: Endocrinology & Metabolism

Legend: 2012 2013 2014 2015 2016

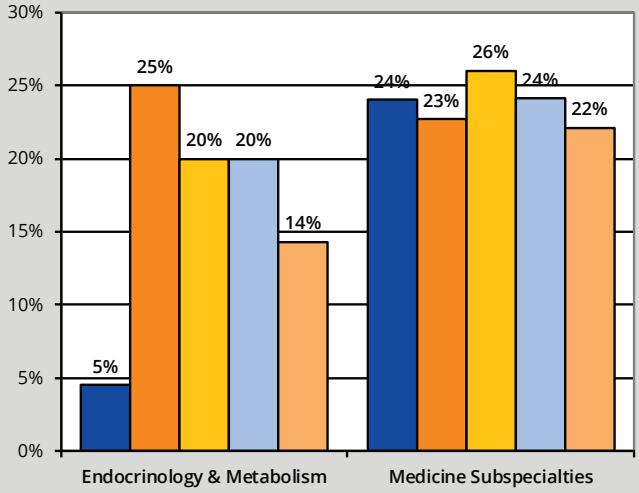
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



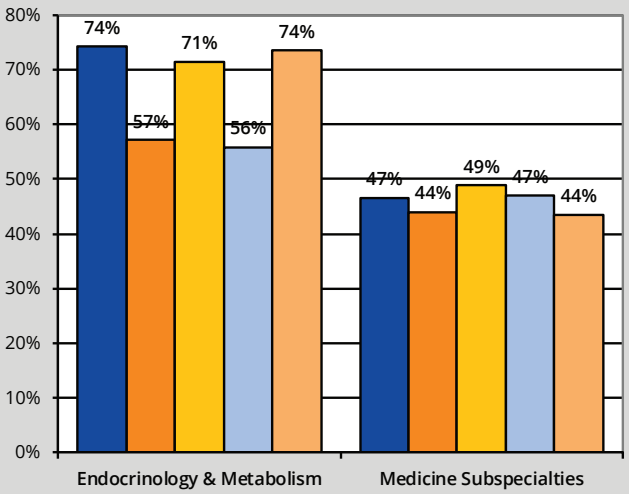
Trends in Mean Number of Job Offers Received, 2012 - 2016*



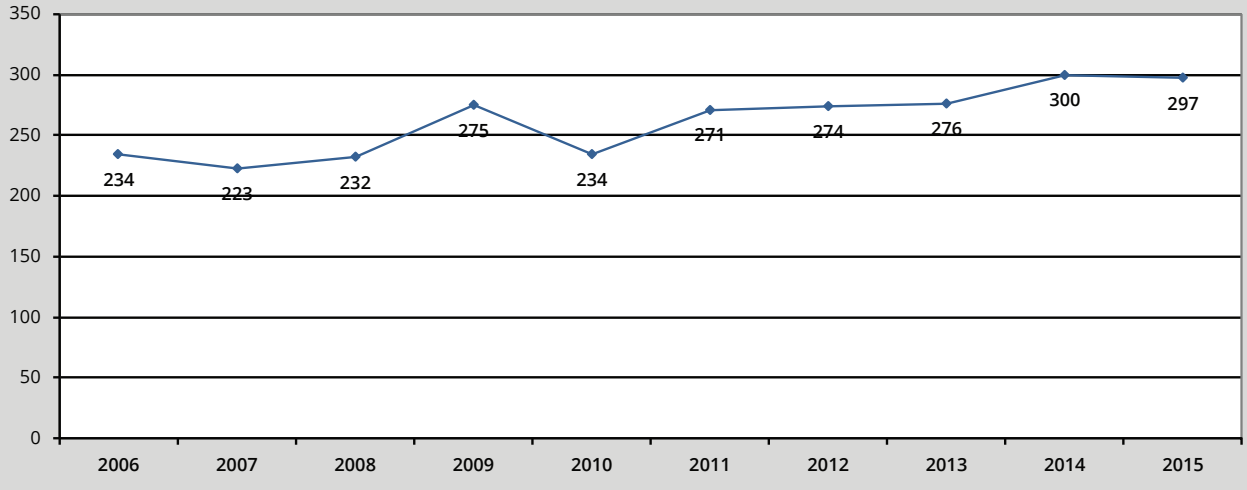
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Endocrinology & Metabolism, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Endocrinology & Metabolism GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 23, 2013: n = 17, 2014: n = 15, 2015: n = 20, 2016: n = 25.

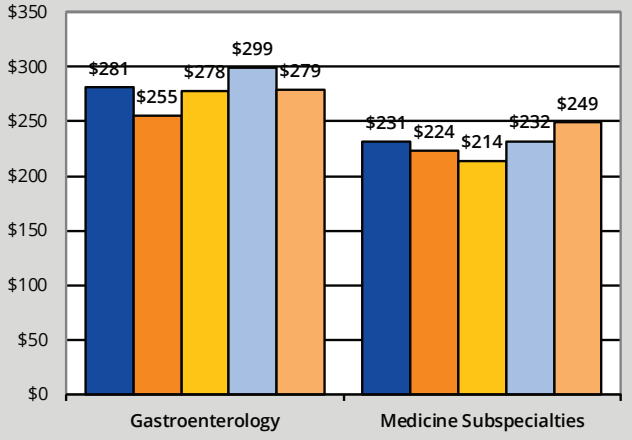
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

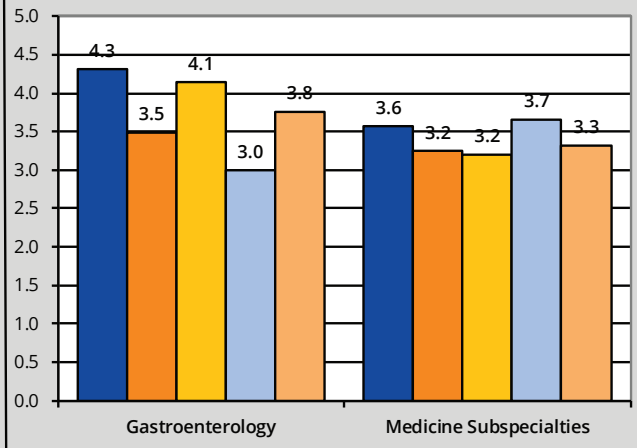
Specialty: Gastroenterology

Legend: 2012 2013 2014 2015 2016

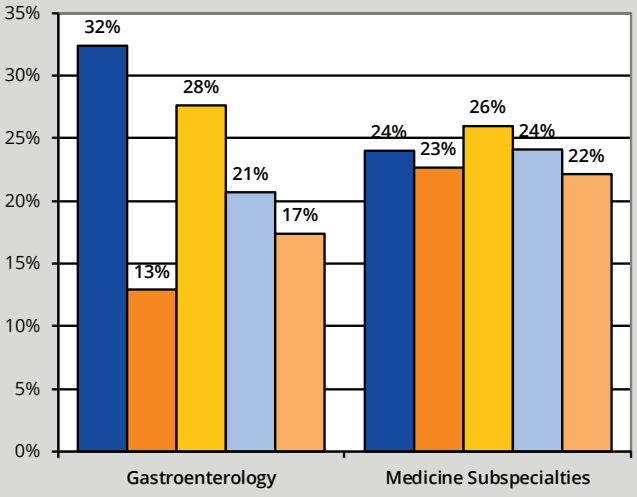
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



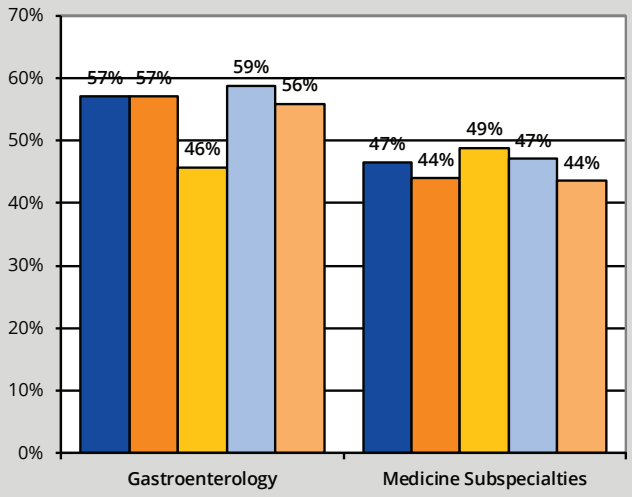
Trends in Mean Number of Job Offers Received, 2012 - 2016*



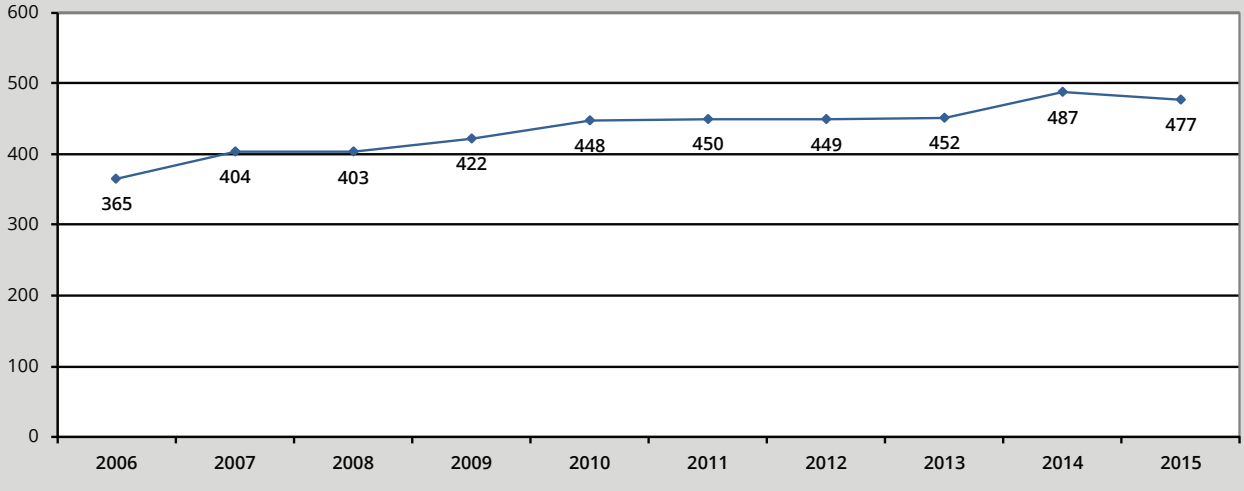
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Gastroenterology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Gastroenterology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 36, 2013: n = 33, 2014: n = 30, 2015: n = 31, 2016: n = 34.

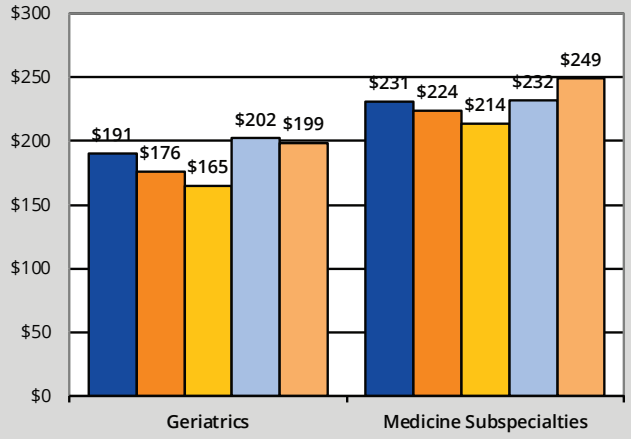
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

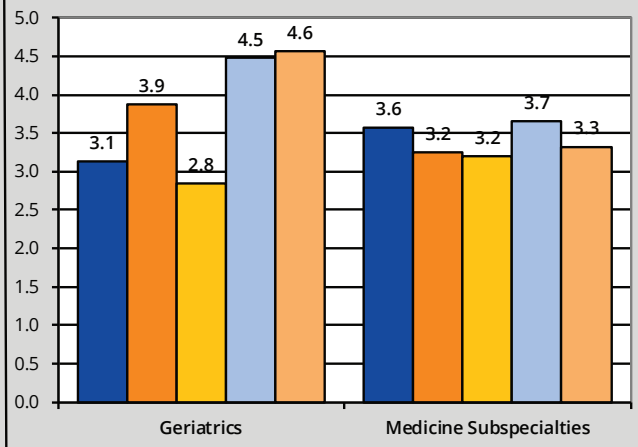
Specialty: Geriatrics

Legend: 2012 2013 2014 2015 2016

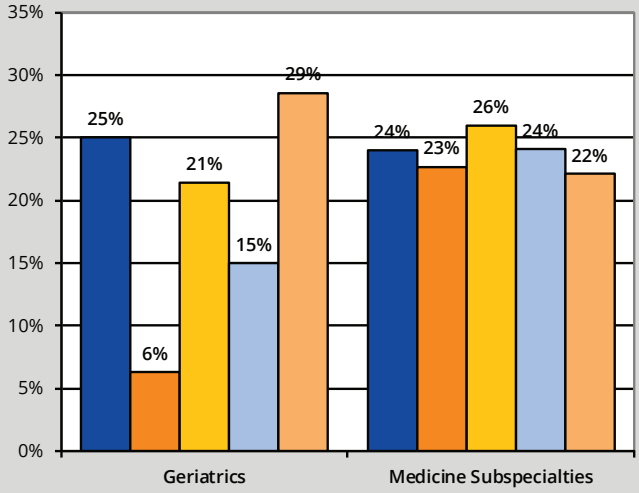
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



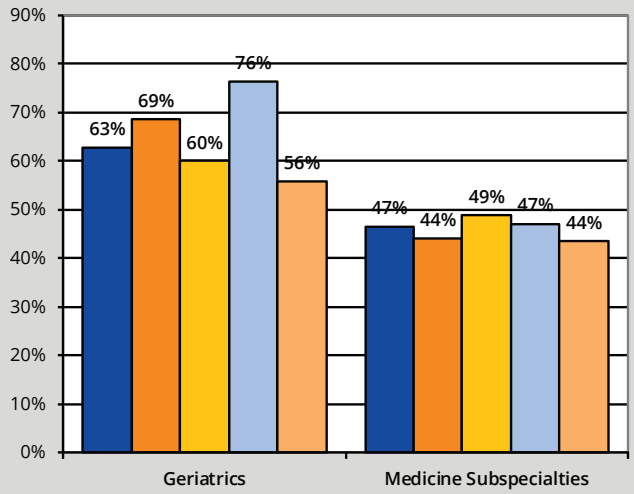
Trends in Mean Number of Job Offers Received, 2012 - 2016*



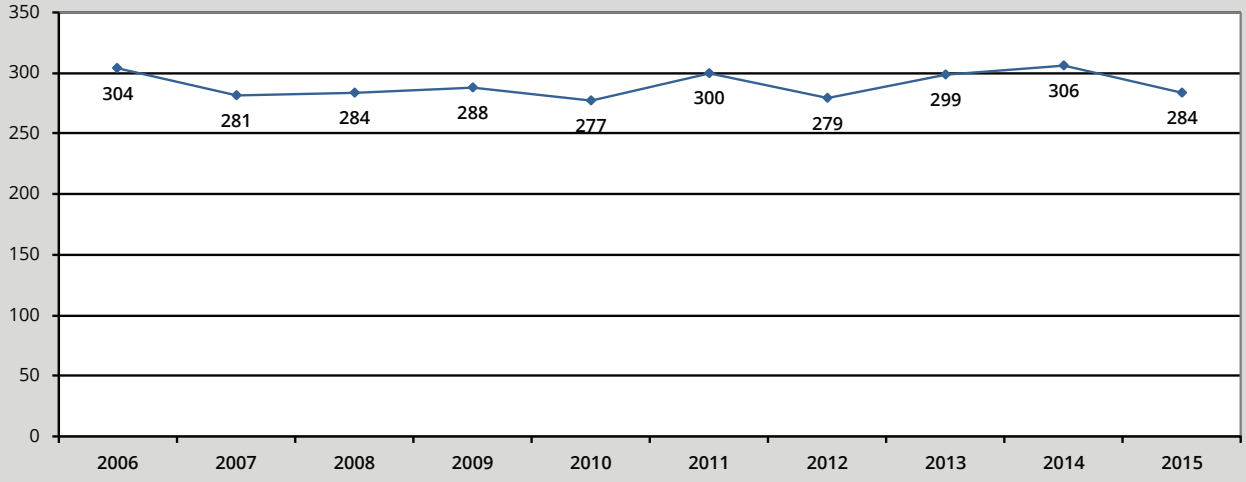
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Geriatrics, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Geriatrics GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 9, 2013: n = 17, 2014: n = 15, 2015: n = 20, 2016: n = 18.

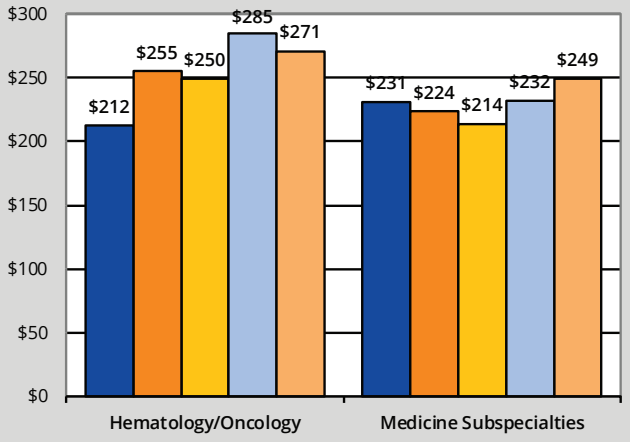
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

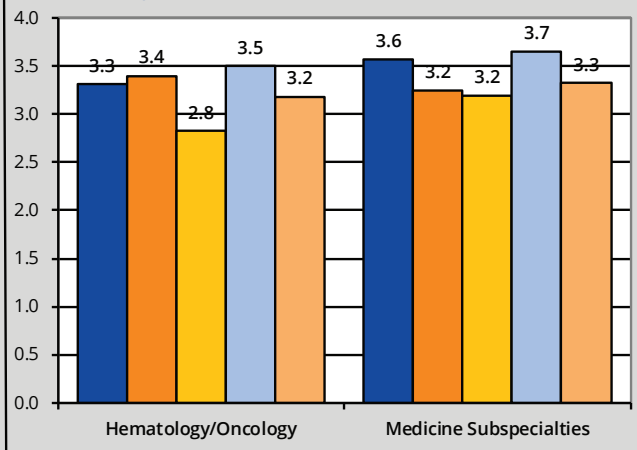
Specialty: Hematology/Oncology

Legend: 2012 2013 2014 2015 2016

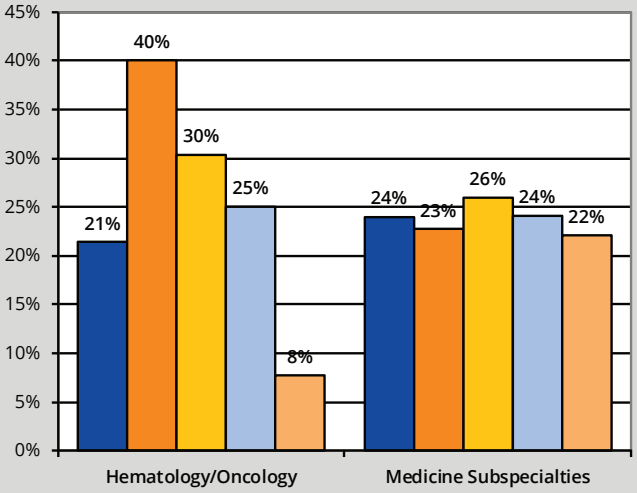
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



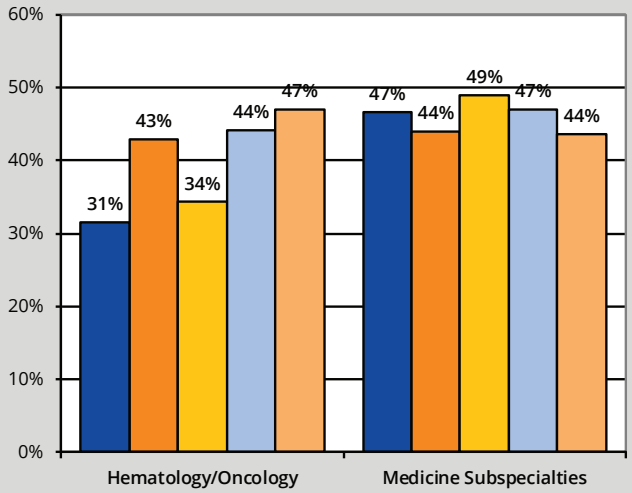
Trends in Mean Number of Job Offers Received, 2012 - 2016*



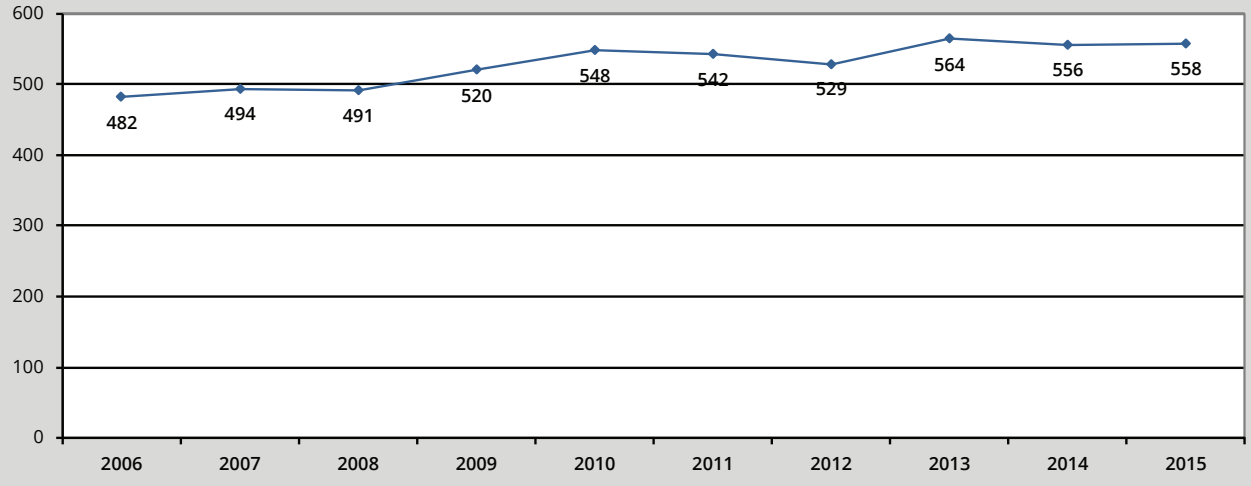
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Hematology/Oncology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Hematology/Oncology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 34, 2013: n = 26, 2014: n = 24, 2015: n = 17, 2016: n = 38.

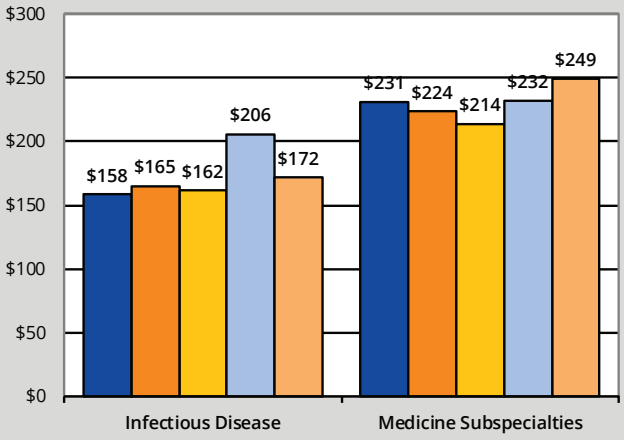
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

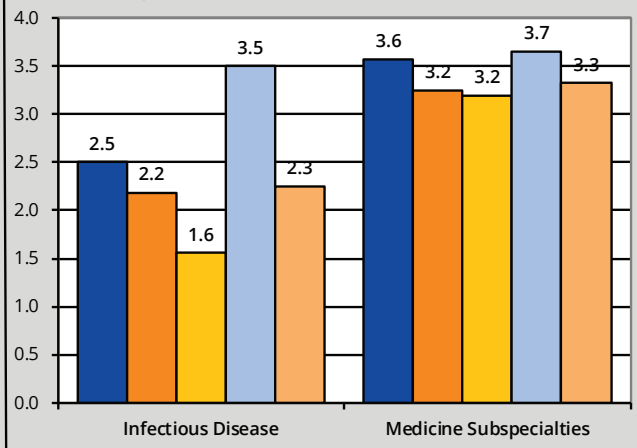
Specialty: Infectious Disease

Legend: 2012 2013 2014 2015 2016

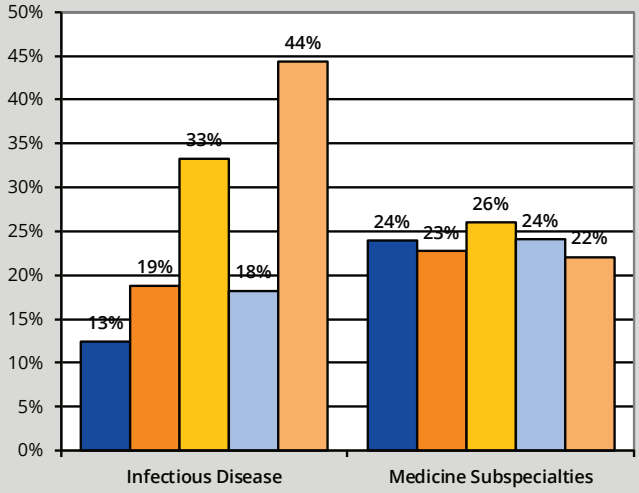
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



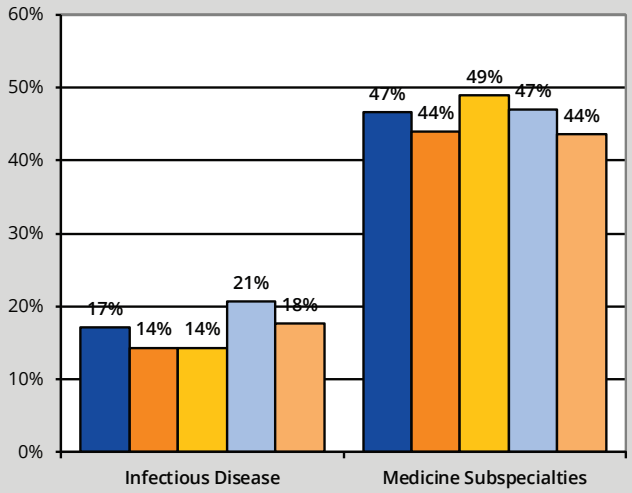
Trends in Mean Number of Job Offers Received, 2012 - 2016*



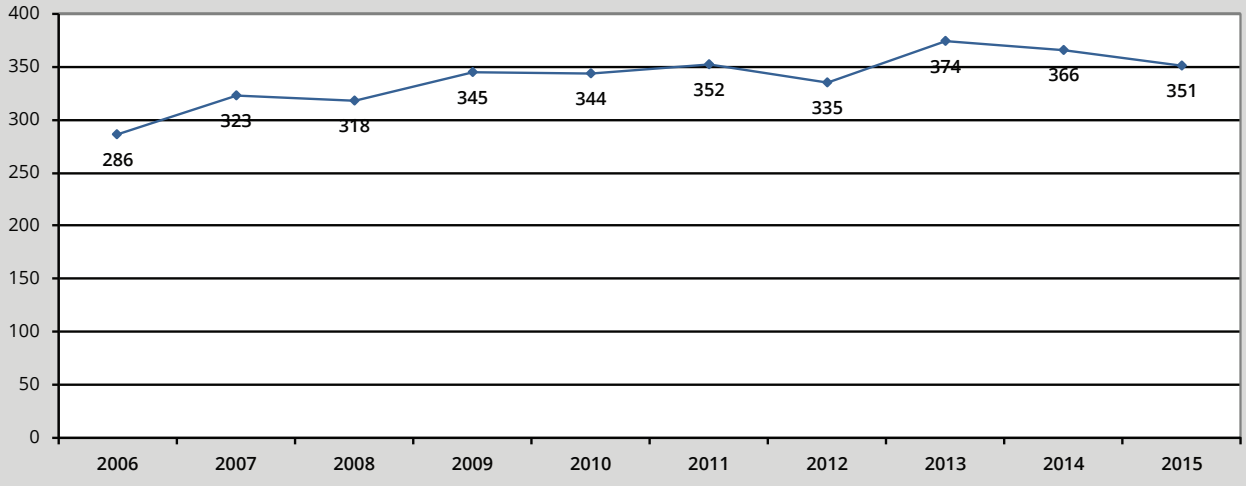
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Infectious Disease, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Infectious Disease GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 17, 2013: n = 17, 2014: n = 10, 2015: n = 12, 2016: n = 12.

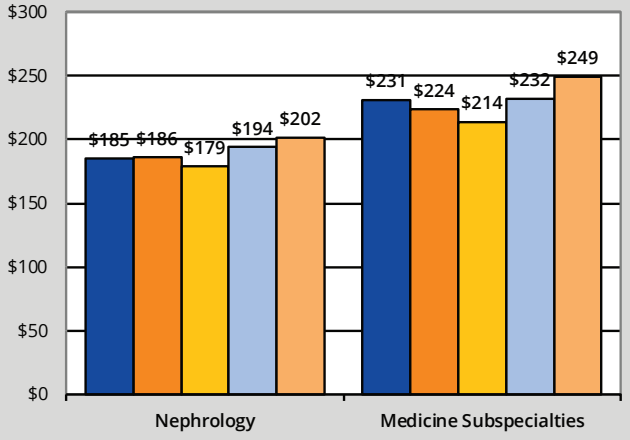
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

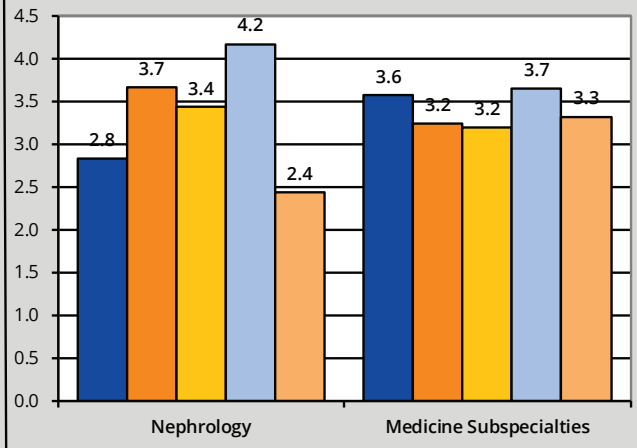
Specialty: Nephrology

Legend: 2012 2013 2014 2015 2016

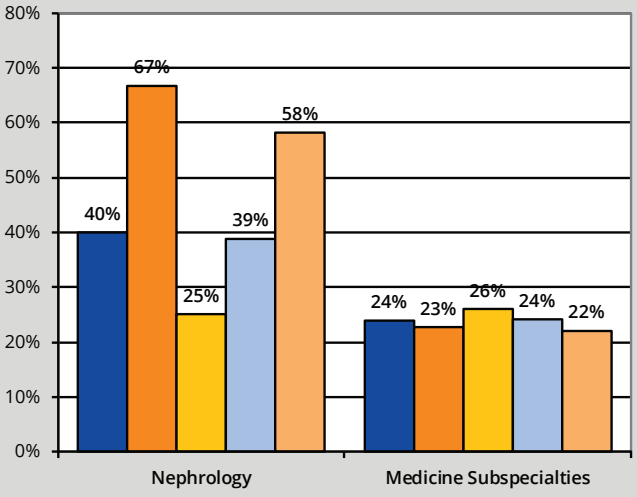
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



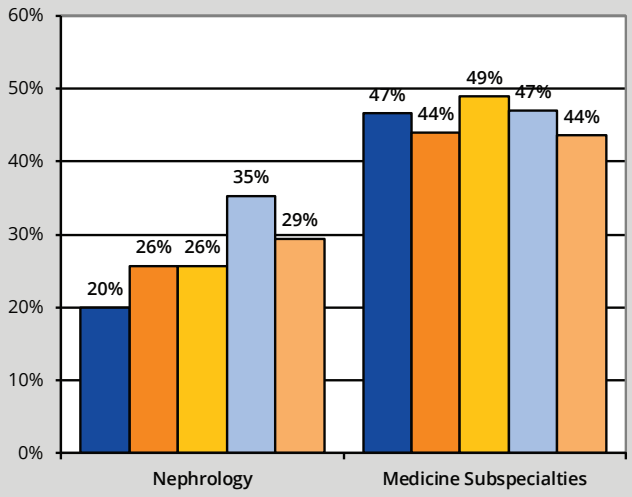
Trends in Mean Number of Job Offers Received, 2012 - 2016*



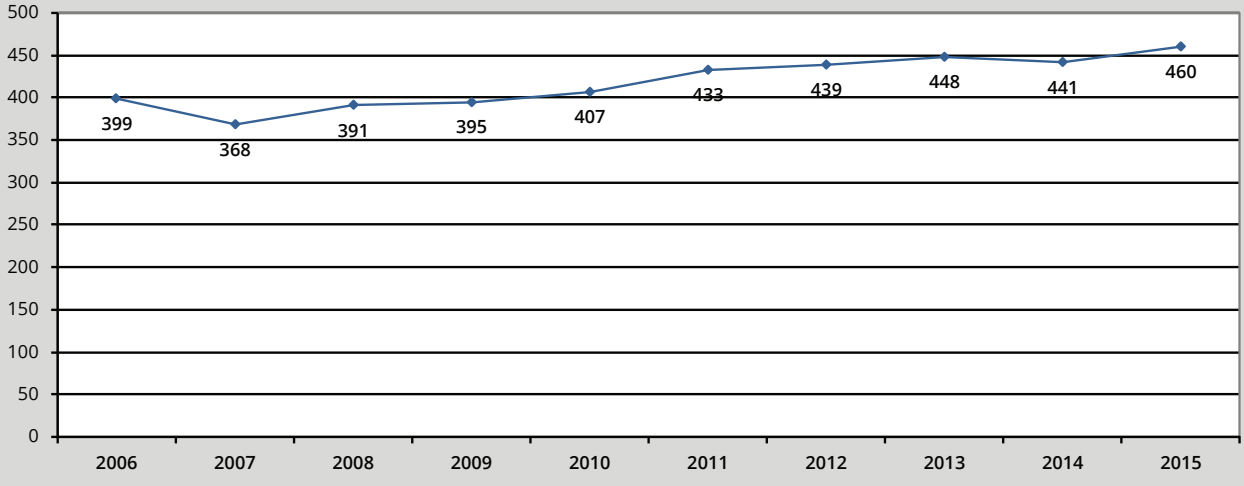
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Nephrology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Nephrology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 27, 2013: n = 10, 2014: n = 16, 2015: n = 19, 2016: n = 18.

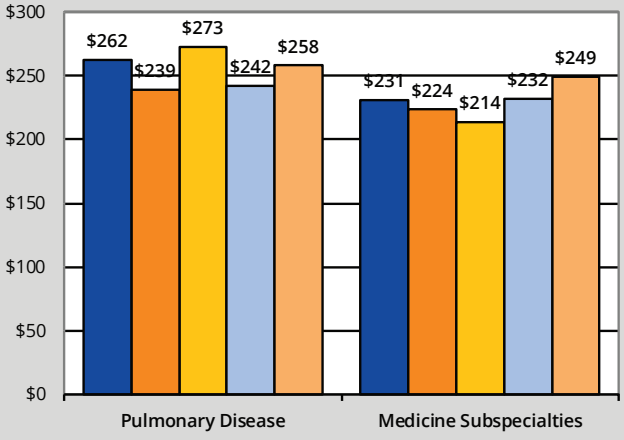
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

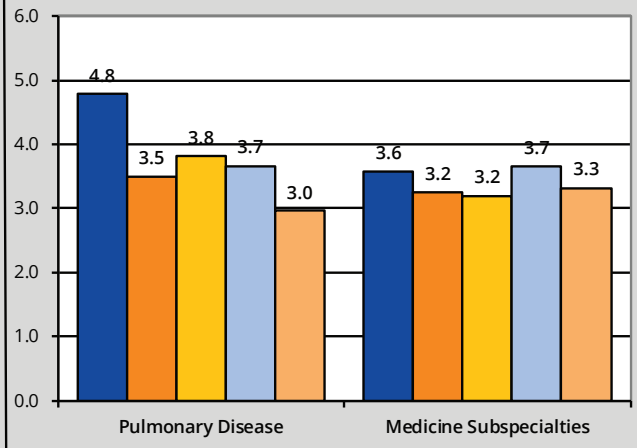
Specialty: Pulmonary Disease

Legend: 2012 2013 2014 2015 2016

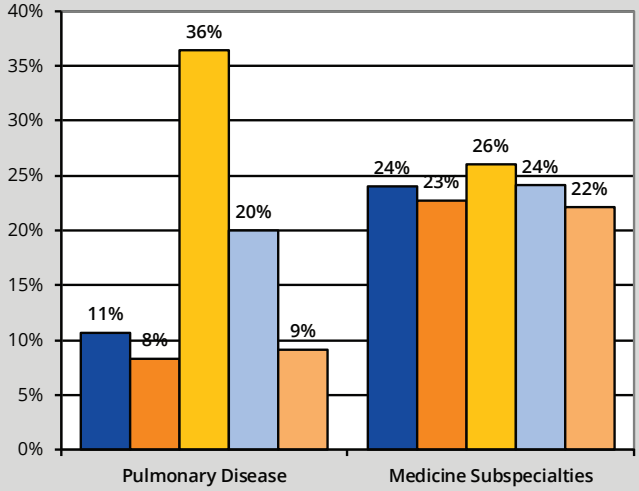
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



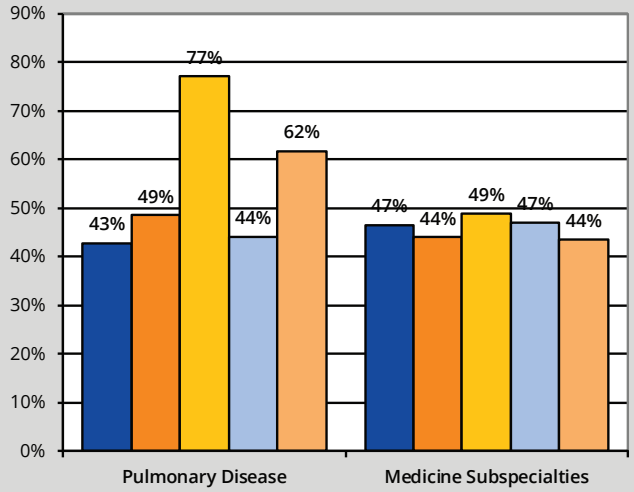
Trends in Mean Number of Job Offers Received, 2012 - 2016*



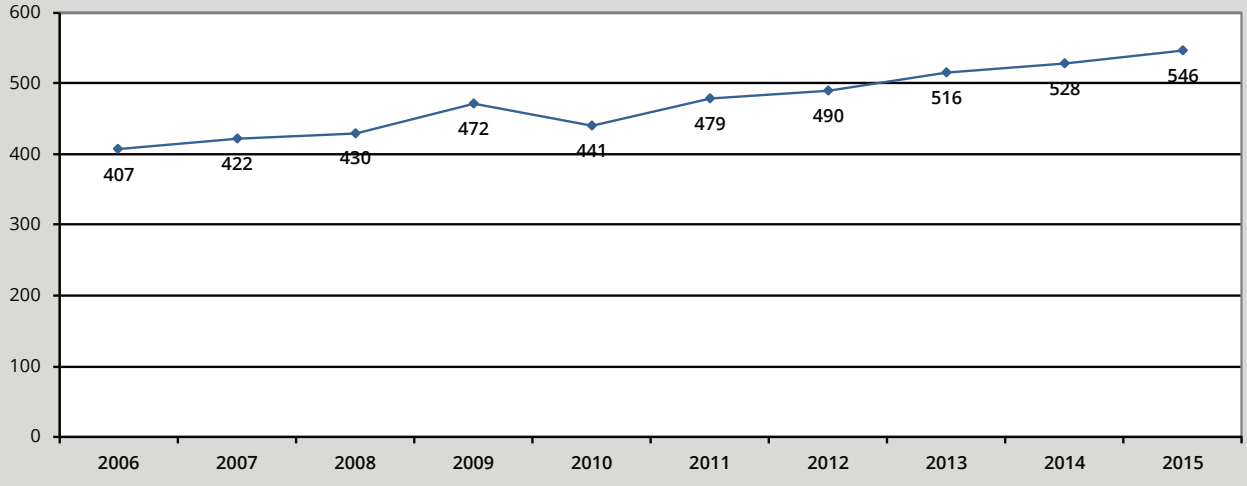
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Pulmonary Disease, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Pulmonary Disease GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 30, 2013: n = 25, 2014: n = 23, 2015: n = 15, 2016: n = 26.

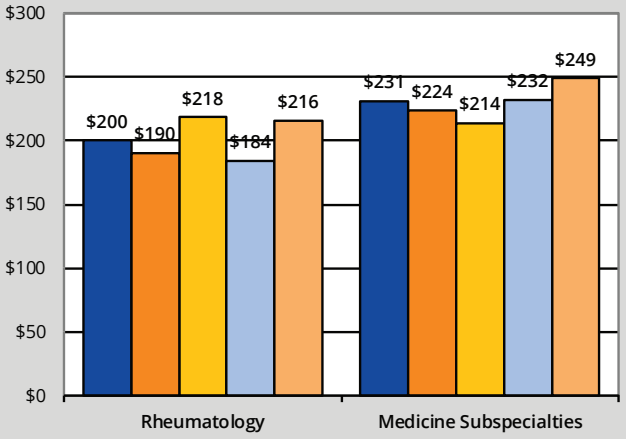
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

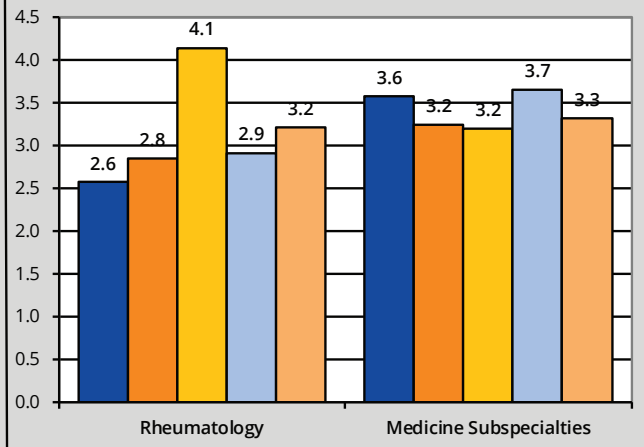
Specialty: Rheumatology

Legend: 2012 2013 2014 2015 2016

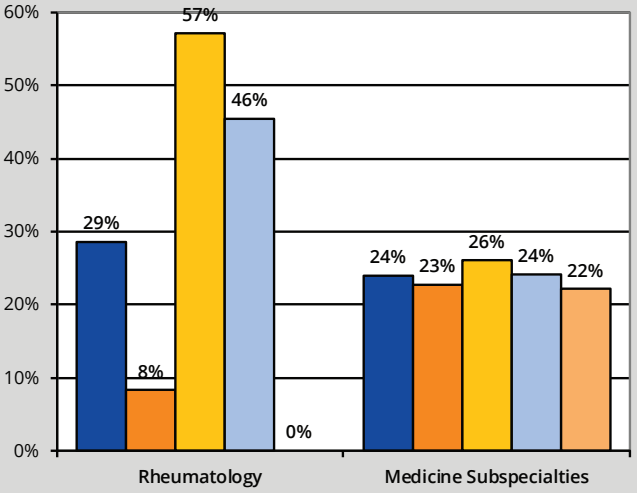
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



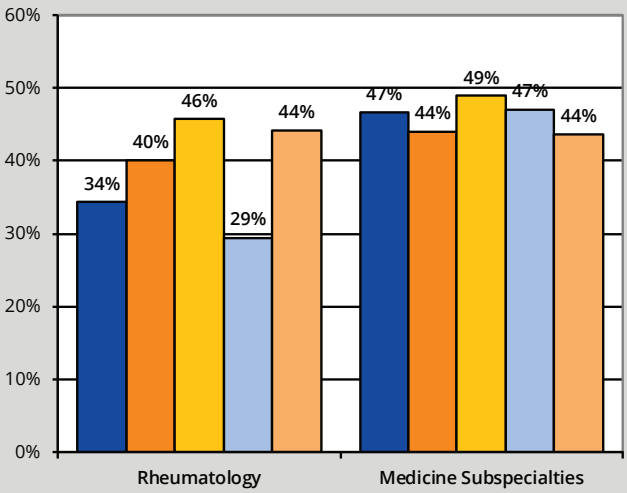
Trends in Mean Number of Job Offers Received, 2012 - 2016*



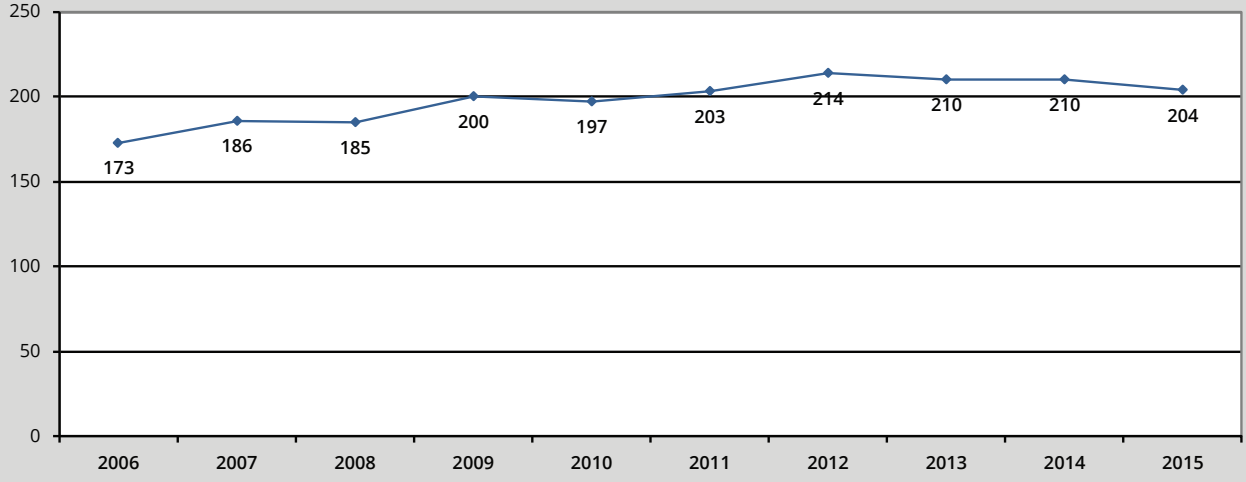
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Rheumatology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Rheumatology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 8, 2013: n = 13, 2014: n = 7, 2015: n = 14, 2016: n = 15.

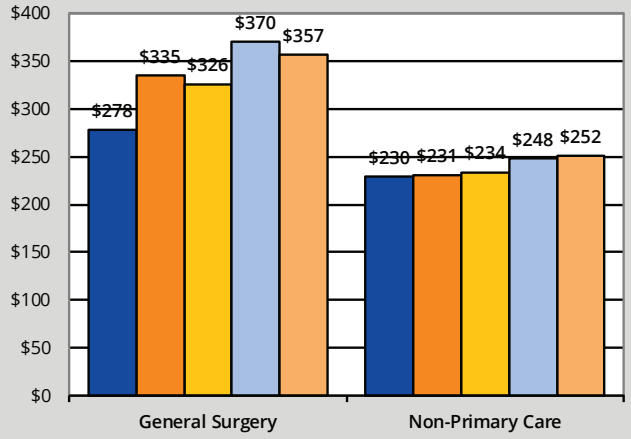
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

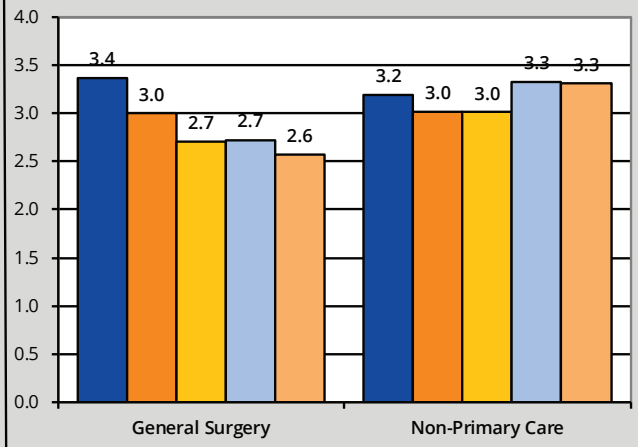
Specialty: General Surgery

Legend: 2012 2013 2014 2015 2016

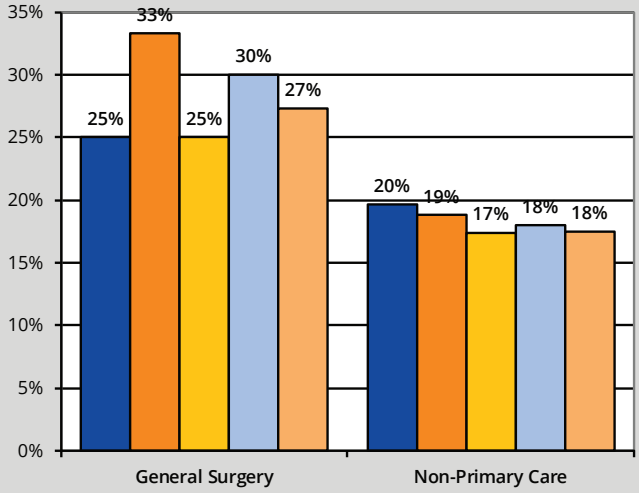
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



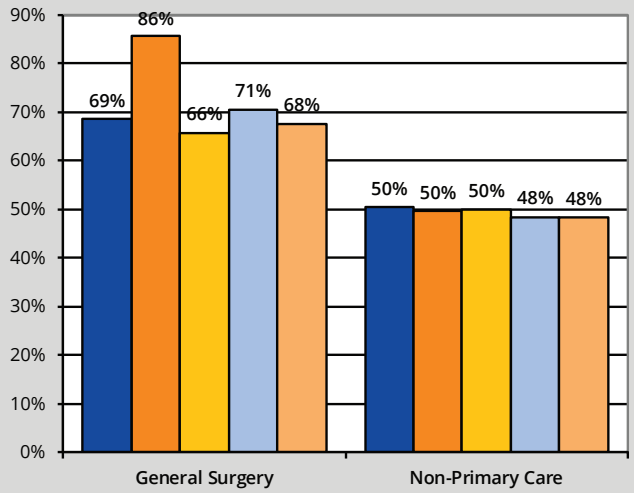
Trends in Mean Number of Job Offers Received, 2012 - 2016*



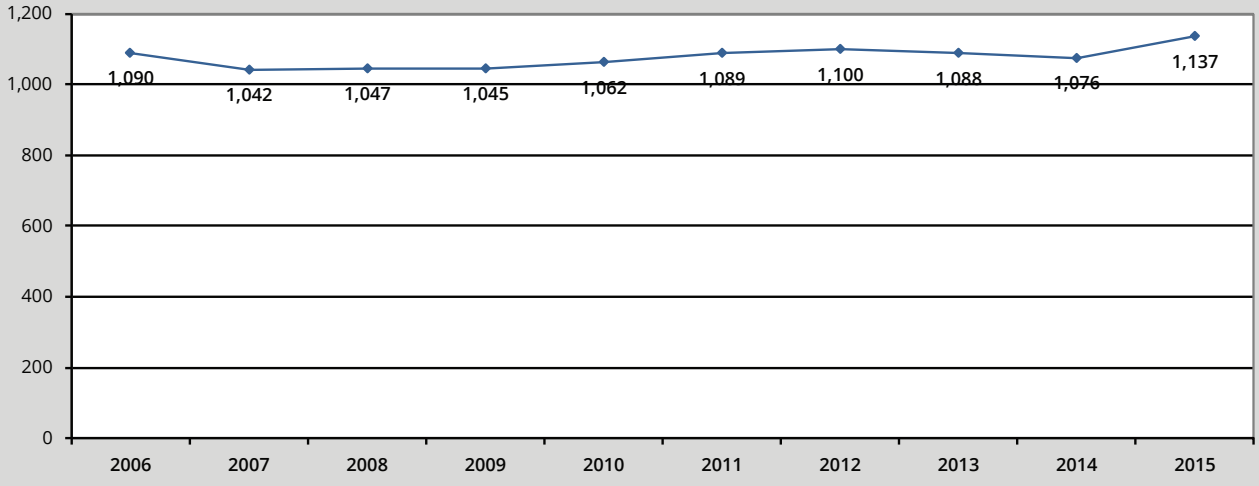
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of General Surgery, 2012 - 2016*



*Trends in Number of Graduates of Allopathic General Surgery GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 9, 2013: n = 9, 2014: n = 18, 2015: n = 14, 2016: n = 15.

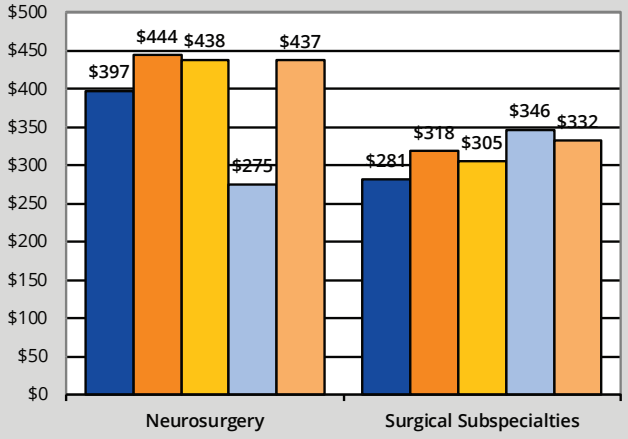
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues*, 2006 - 2015.

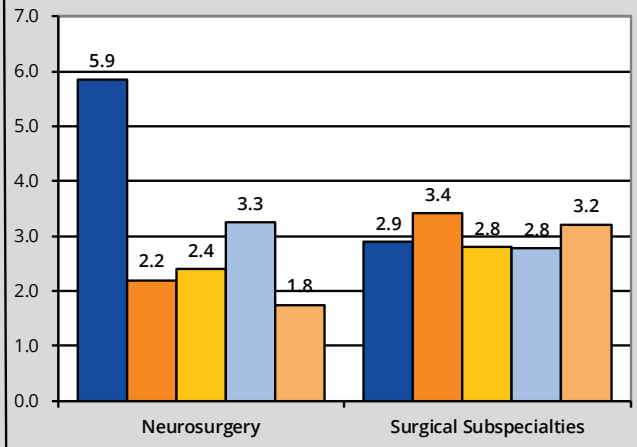
Specialty: Neurosurgery

Legend: 2012 2013 2014 2015 2016

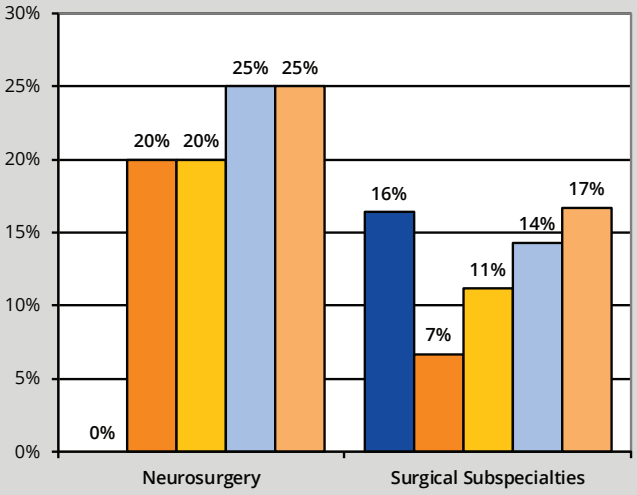
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



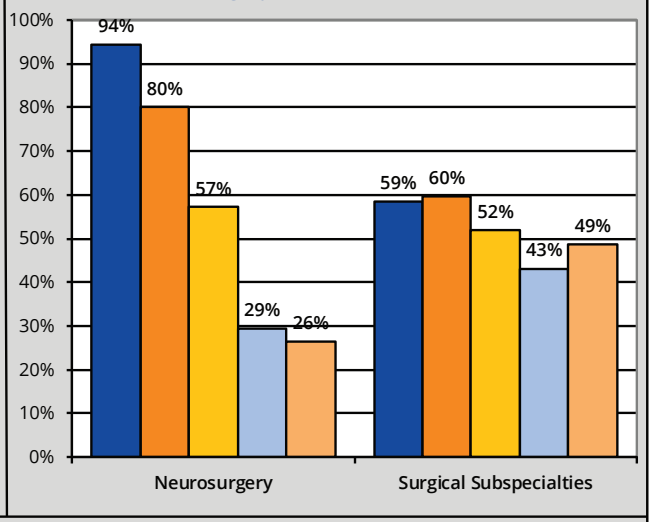
Trends in Mean Number of Job Offers Received, 2012 - 2016*



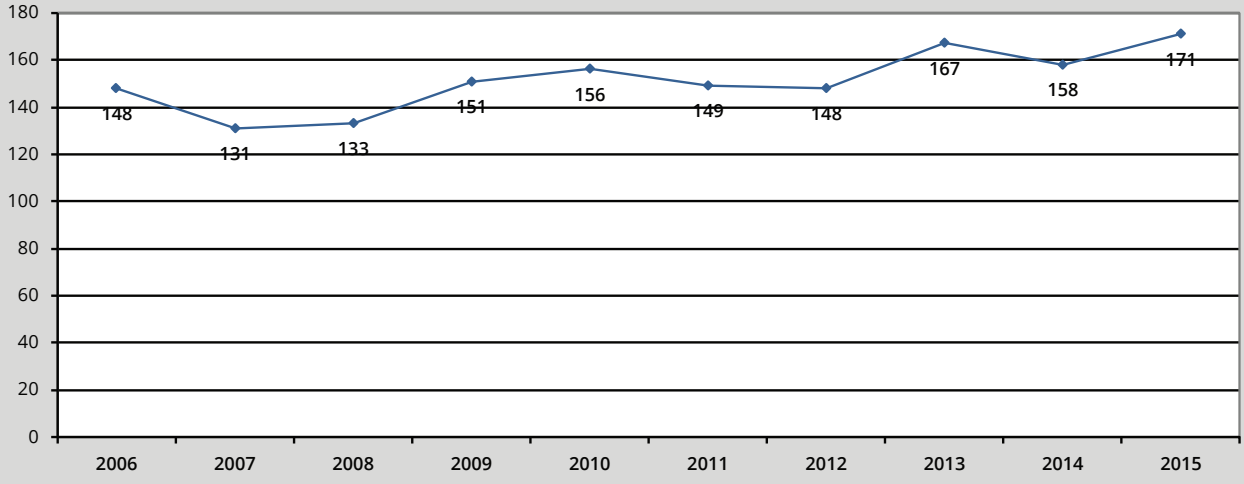
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Neurosurgery, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Neurosurgery GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 7, 2013: n = 6, 2014: n = 5, 2015: n = 5, 2016: n = 6.

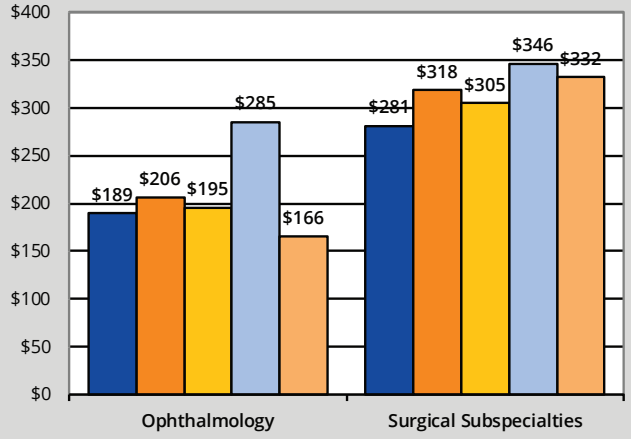
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

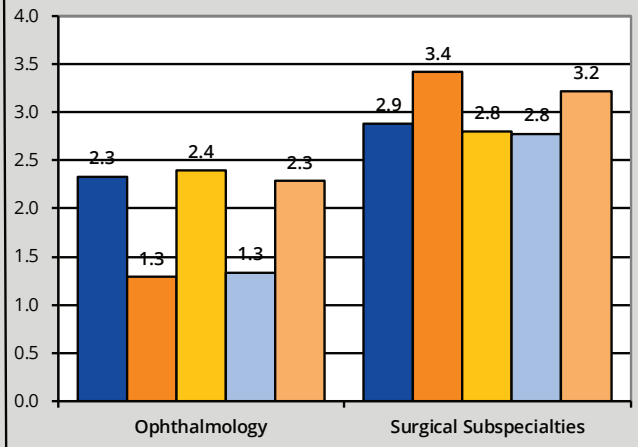
Specialty: Ophthalmology

Legend: 2012 2013 2014 2015 2016

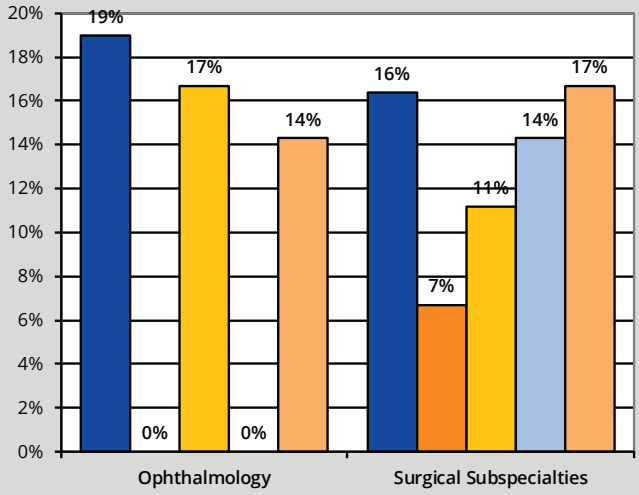
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



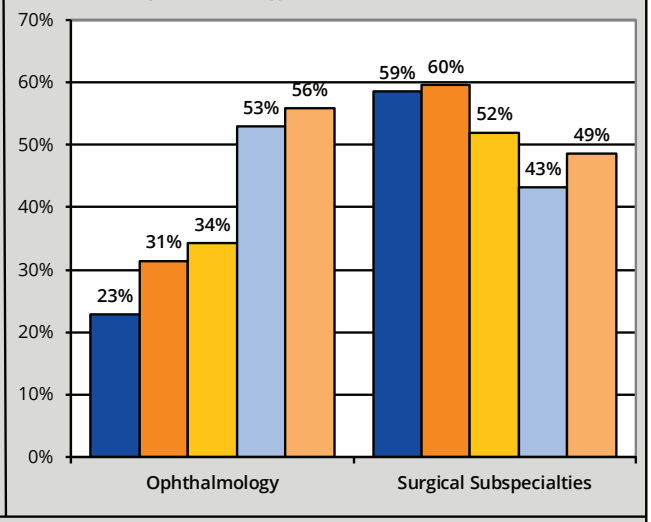
Trends in Mean Number of Job Offers Received, 2012 - 2016*



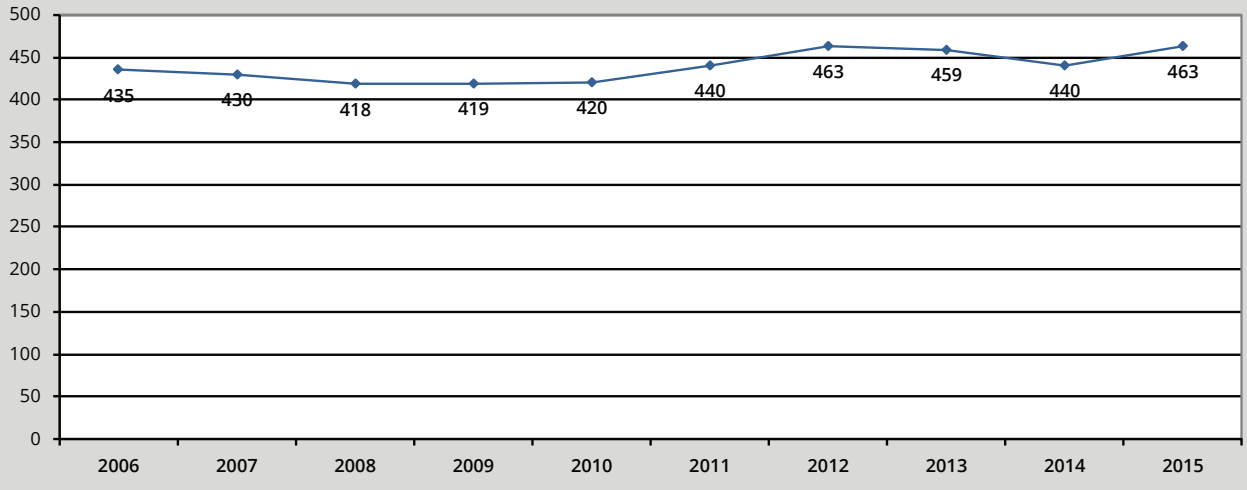
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Ophthalmology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Ophthalmology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 23, 2013: n = 9, 2014: n = 14, 2015: n = 3, 2016: n = 8.

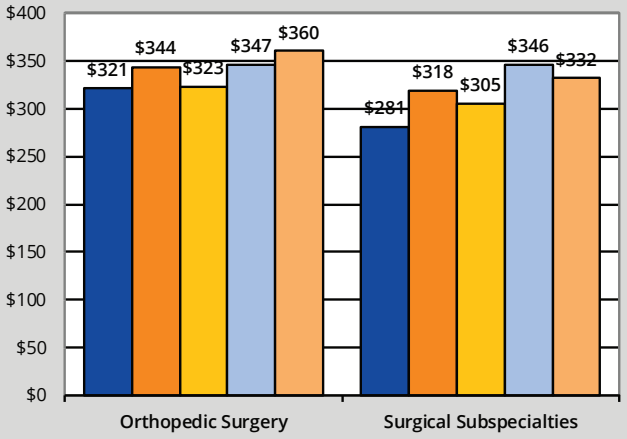
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

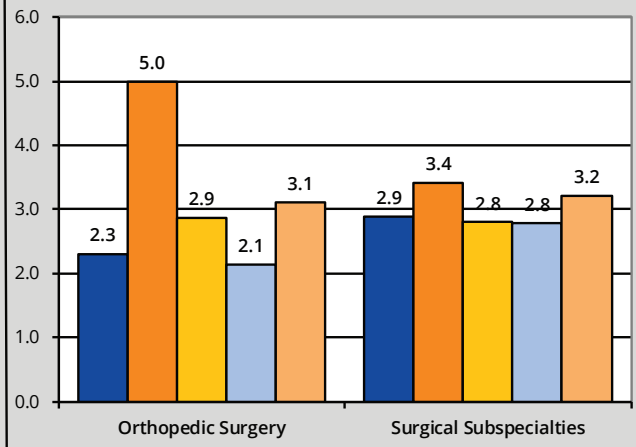
Specialty: Orthopedic Surgery

Legend: 2012 2013 2014 2015 2016

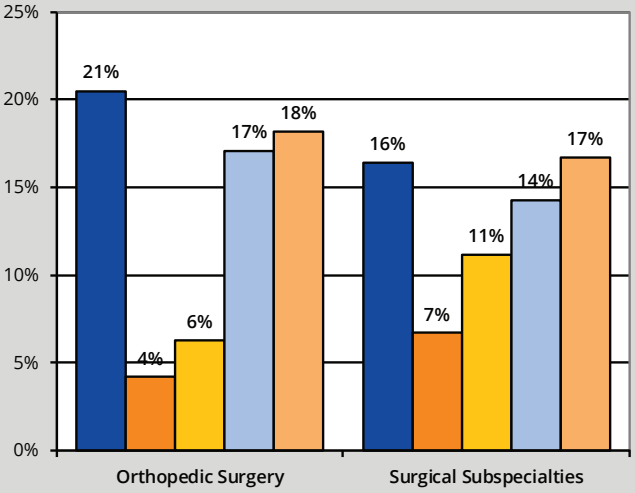
Trends in Median Starting Income,* 2012 - 2016 (in $1,000s of 2016 dollars)



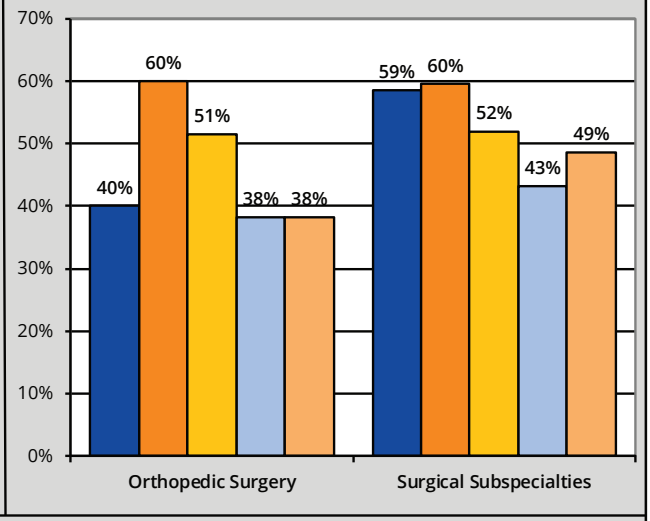
Trends in Mean Number of Job Offers Received,* 2012 - 2016



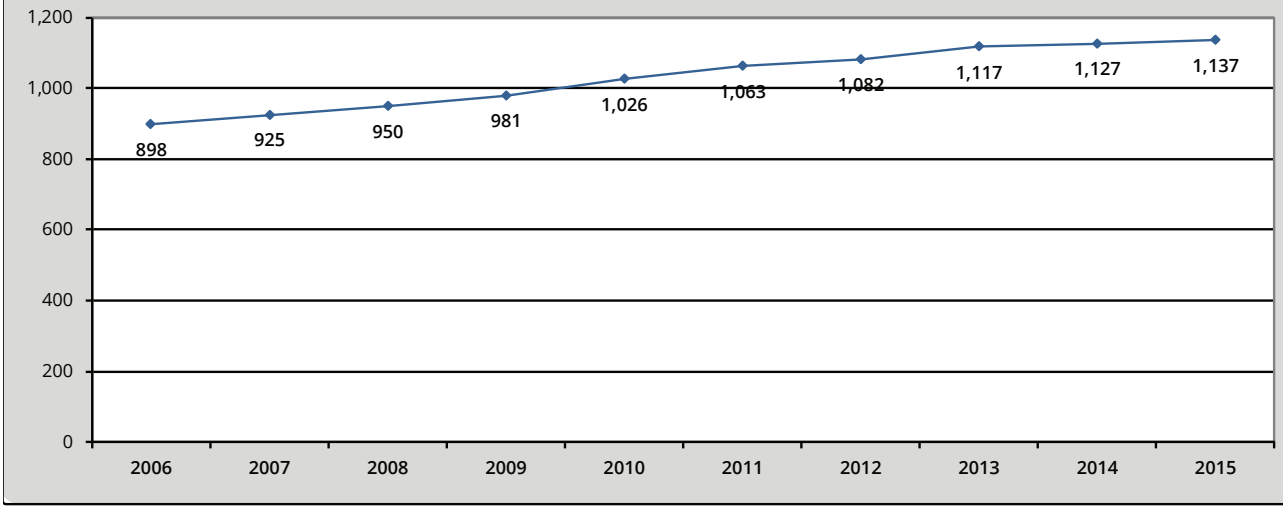
Trends in Having to Change Plans Due to Limited Practice Opportunities,* 2012 - 2016



Trends in Relative Demand* - Percentile Rank of Orthopedic Surgery, 2012 - 2016



Trends in Number of Graduates of Allopathic Orthopedic Surgery GME Programs in the US,** 2006 - 2015



Number of responses: 2012: n = 42, 2013: n = 24, 2014: n = 35, 2015: n = 35, 2016: n = 50.

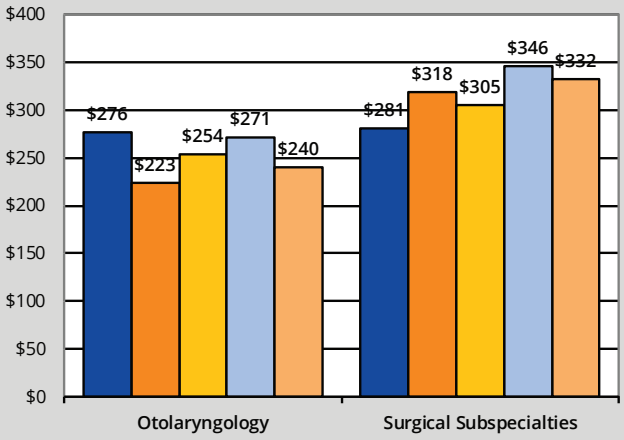
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

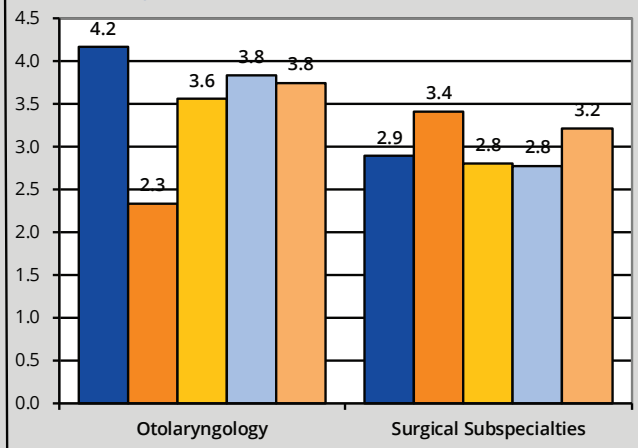
Specialty: Otolaryngology

Legend: 2012 2013 2014 2015 2016

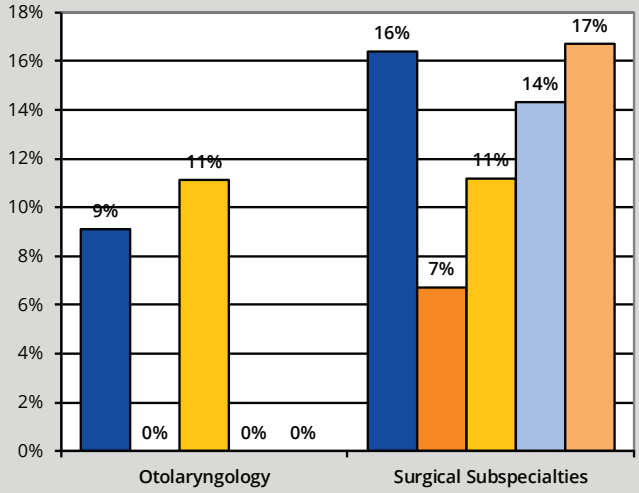
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



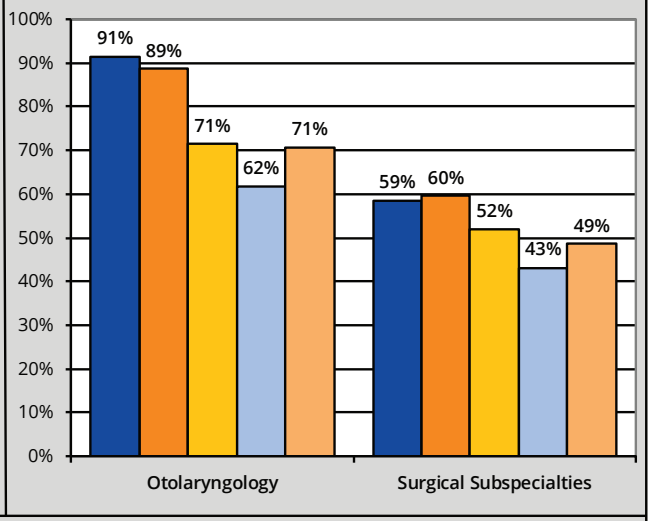
Trends in Mean Number of Job Offers Received, 2012 - 2016*



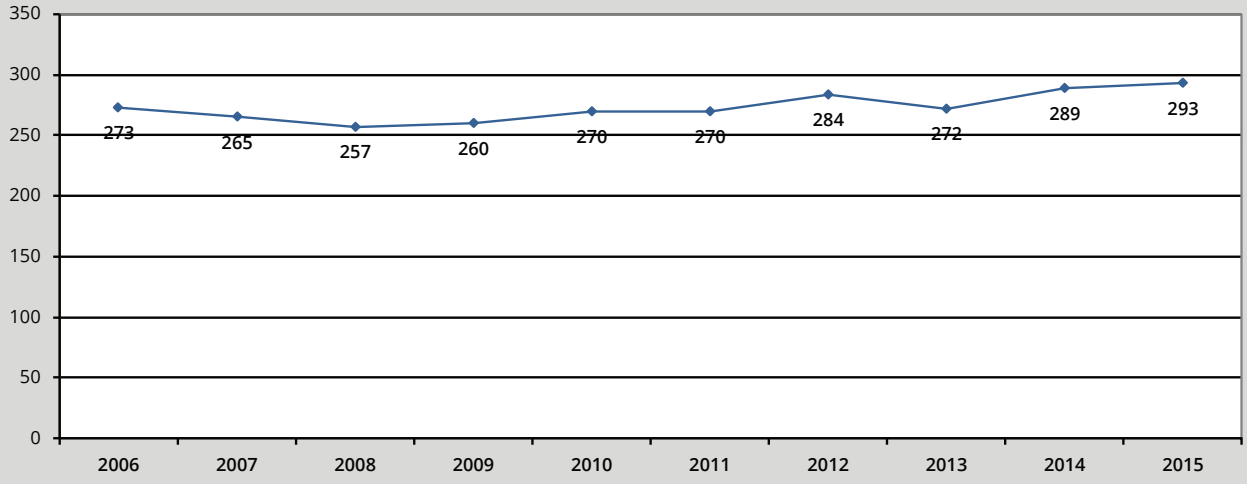
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Otolaryngology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Otolaryngology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 13, 2013: n = 9, 2014: n = 10, 2015: n = 6, 2016: n = 4.

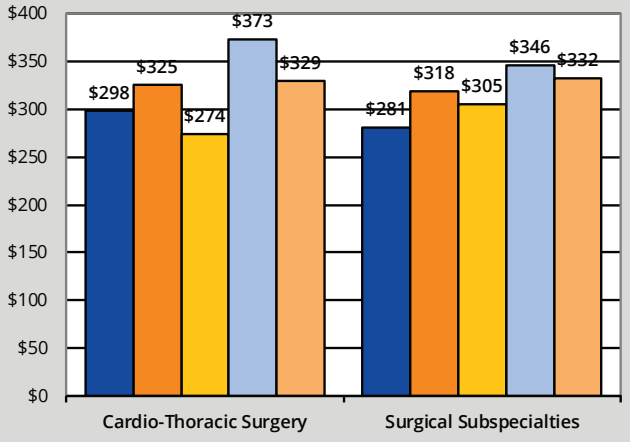
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

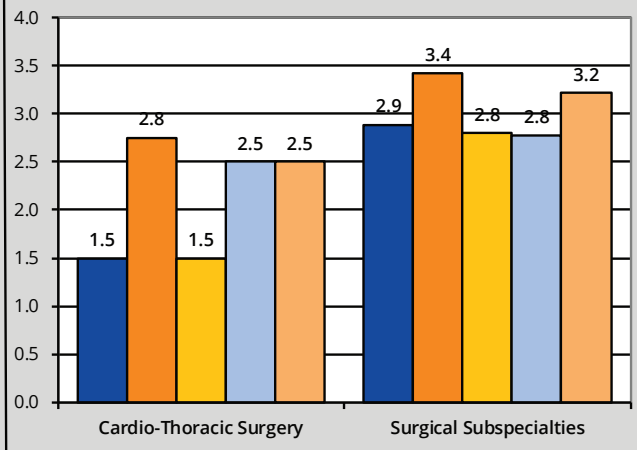
Specialty: Cardio-Thoracic Surgery

Legend: 2012 2013 2014 2015 2016

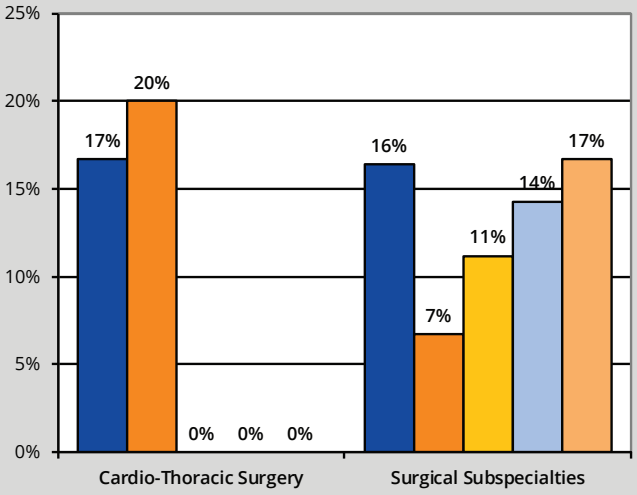
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



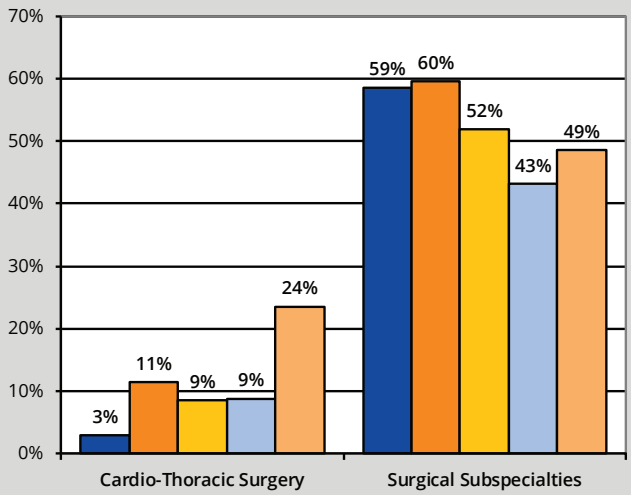
Trends in Mean Number of Job Offers Received, 2012 - 2016*



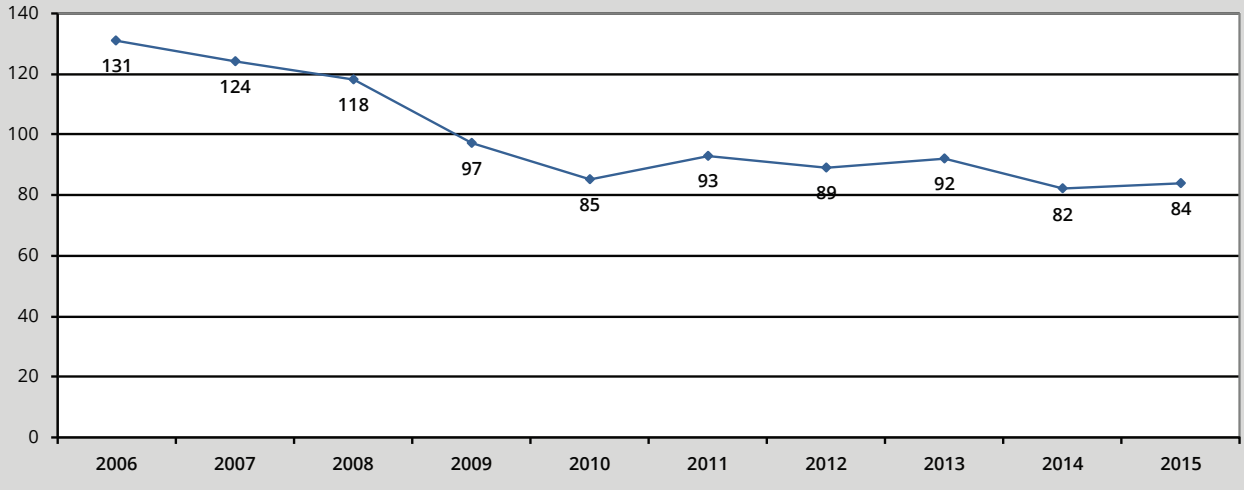
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Cardio-Thoracic Surgery, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Cardio-Thoracic Surgery GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 6, 2013: n = 5, 2014: n = 3, 2015: n = 3, 2016: n = 2.

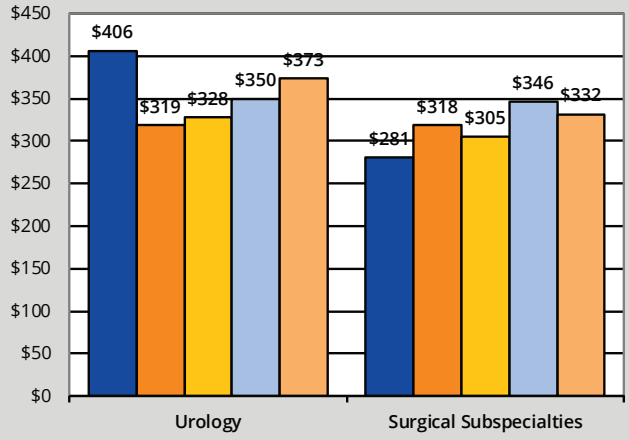
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

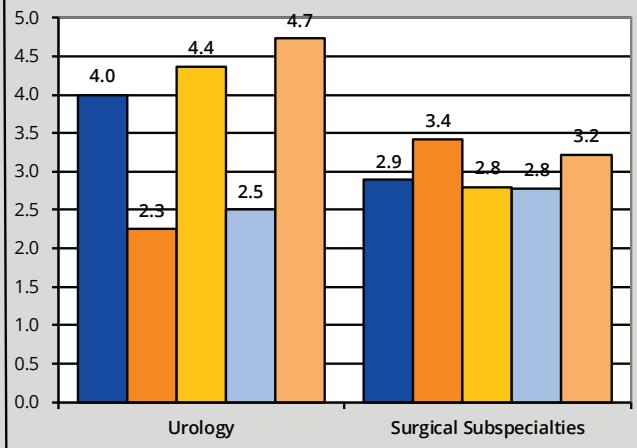
Specialty: Urology

Legend: 2012 2013 2014 2015 2016

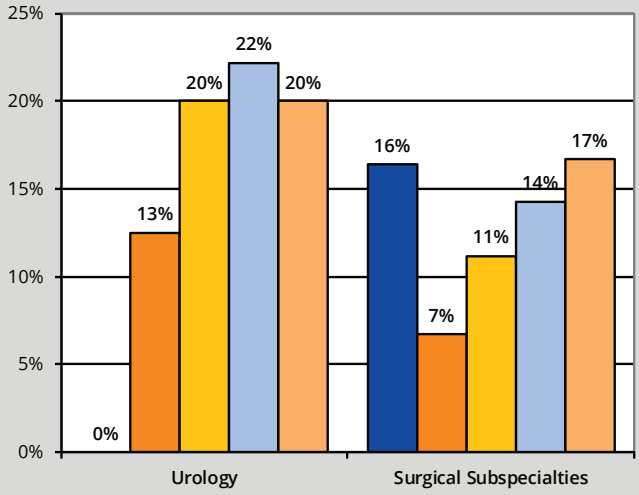
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



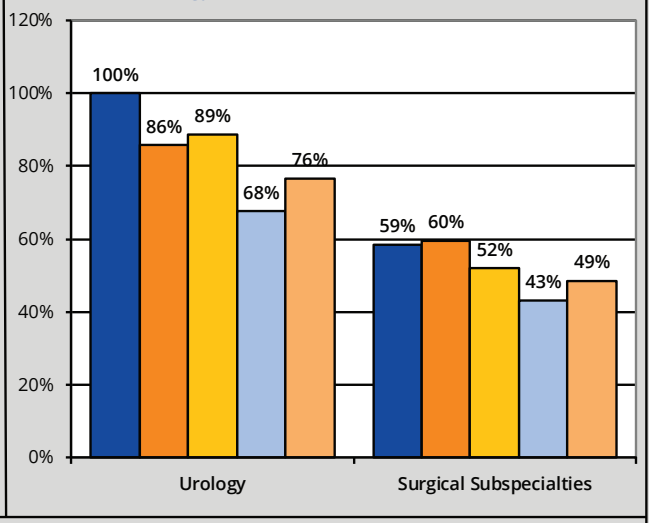
Trends in Mean Number of Job Offers Received, 2012 - 2016*



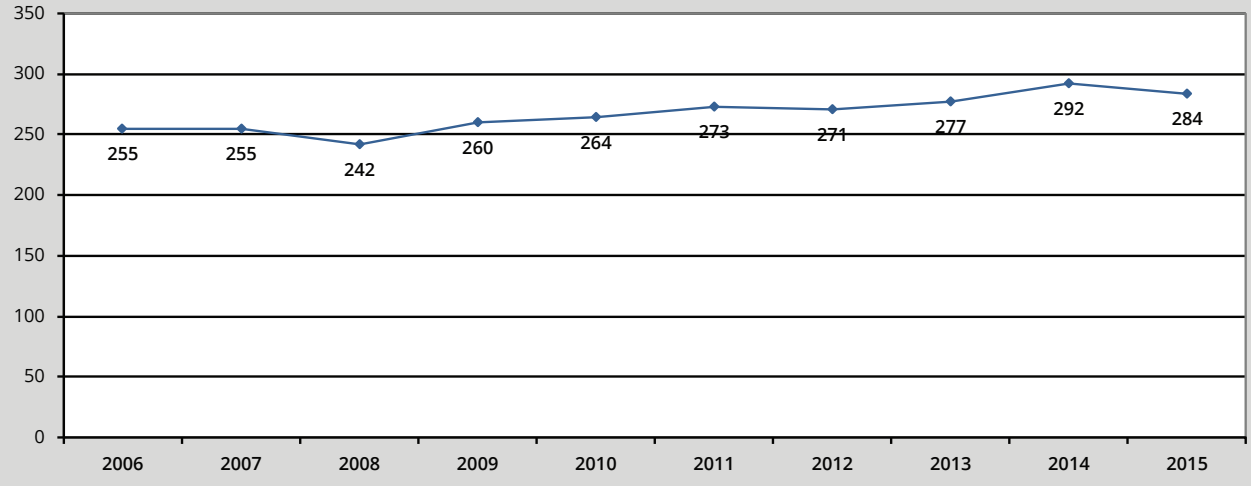
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Urology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Urology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 13, 2013: n = 8, 2014: n = 11, 2015: n = 10, 2016: n = 13.

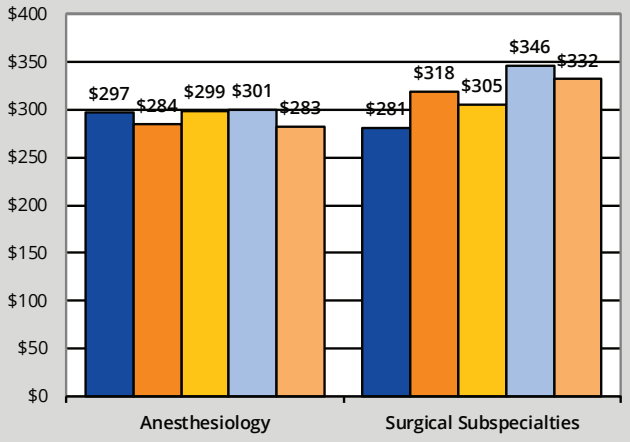
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

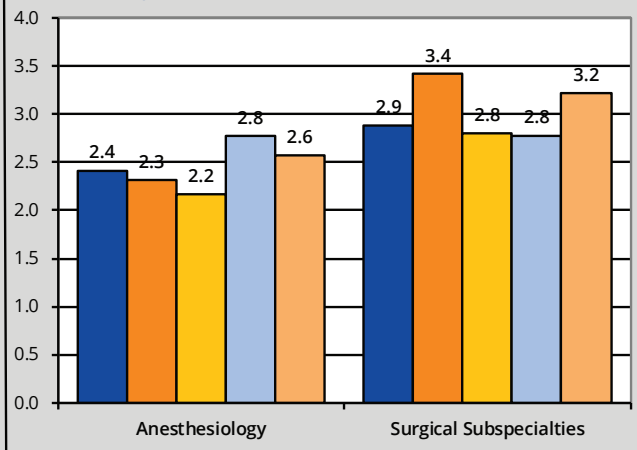
Specialty: Anesthesiology

Legend: 2012 2013 2014 2015 2016

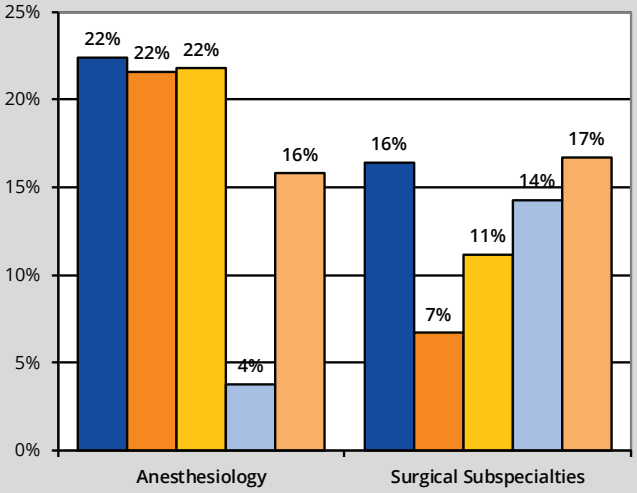
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



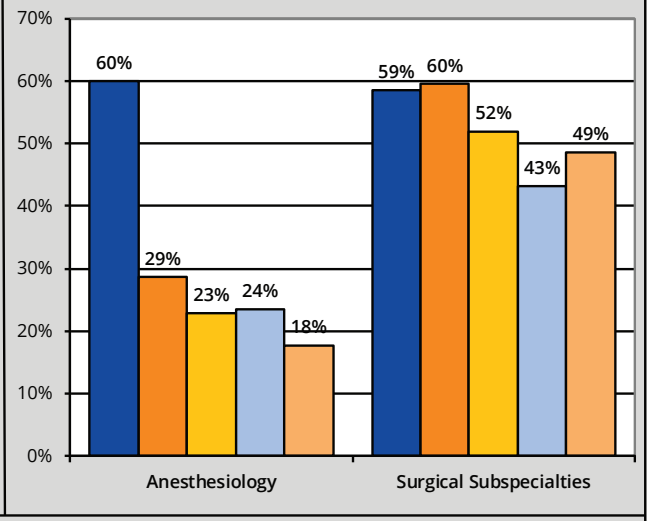
Trends in Mean Number of Job Offers Received, 2012 - 2016*



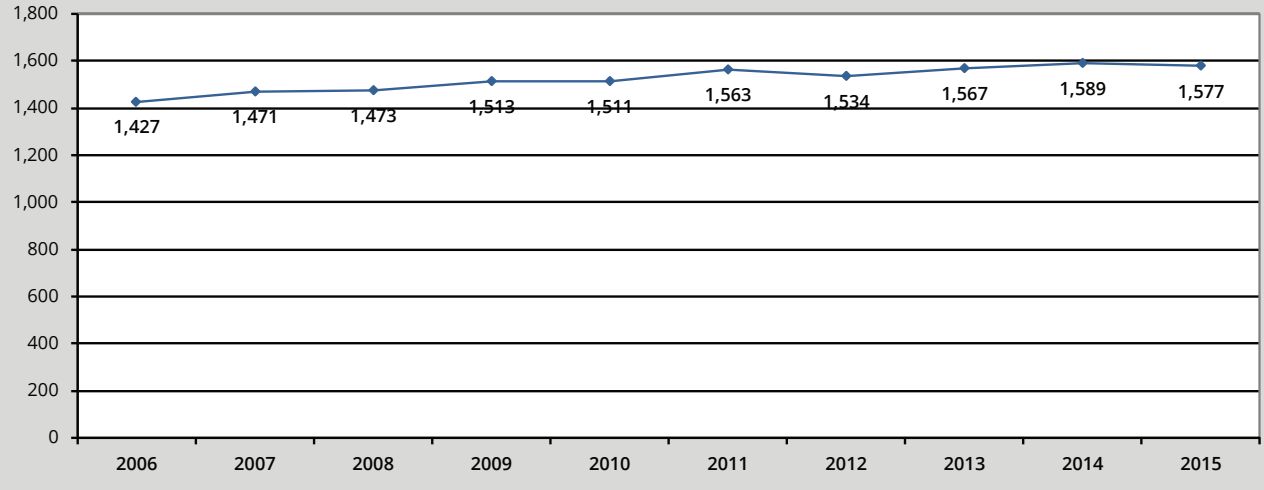
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Anesthesiology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Anesthesiology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 60, 2013: n = 41, 2014: n = 56, 2015: n = 28, 2016: n = 44.

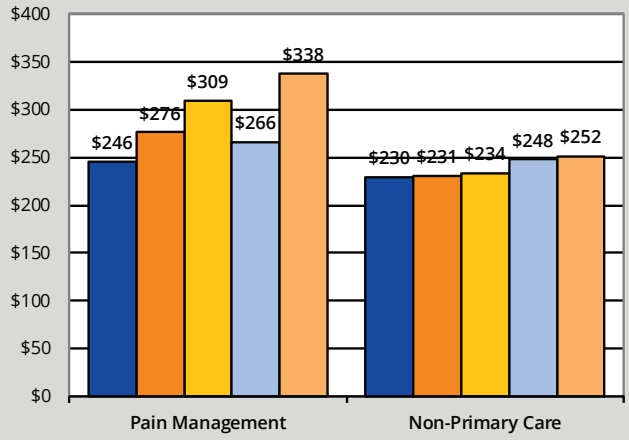
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

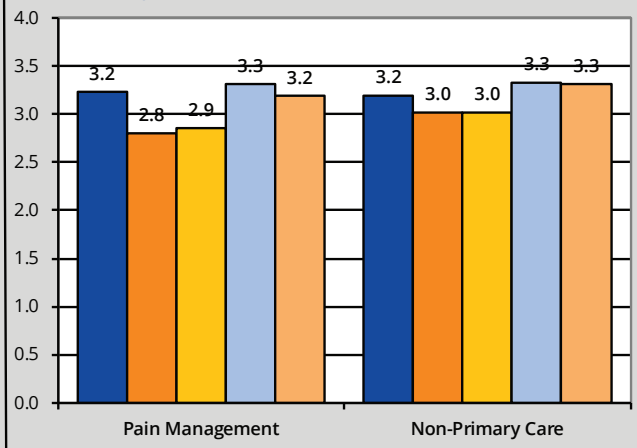
Specialty: Pain Management

Legend: 2012 2013 2014 2015 2016

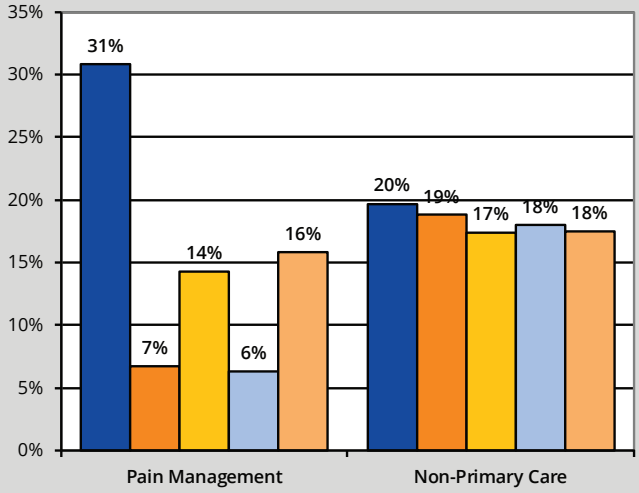
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



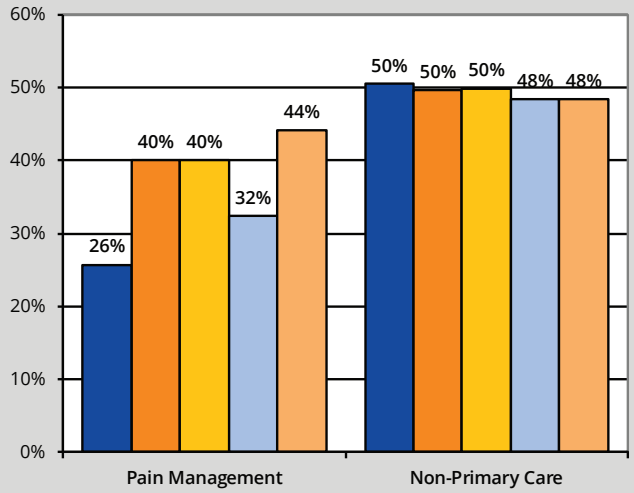
Trends in Mean Number of Job Offers Received, 2012 - 2016*



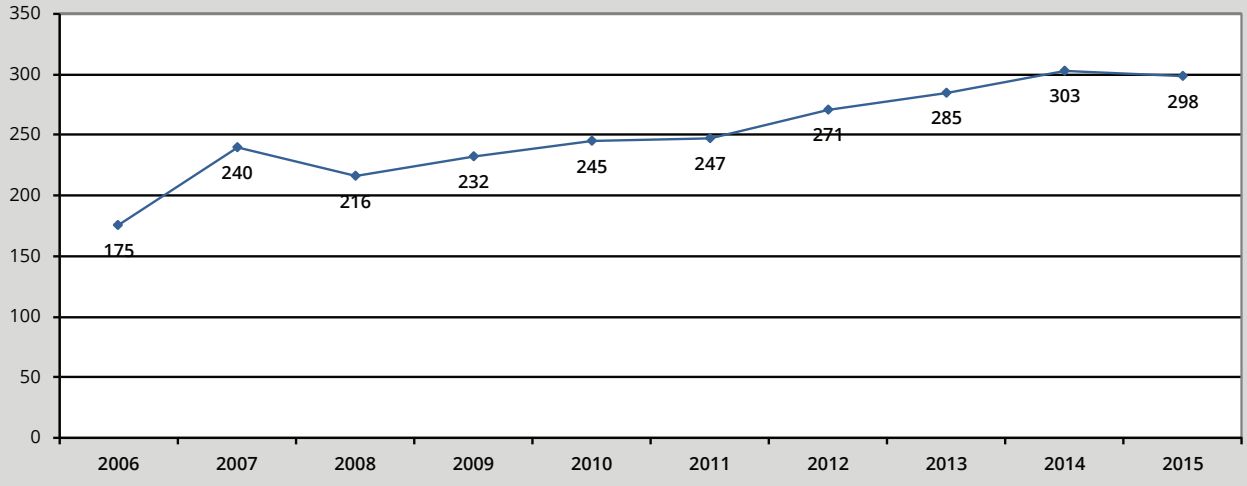
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Pain Management, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Pain Management GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 13, 2013: n = 15, 2014: n = 22, 2015: n = 16, 2016: n = 22.

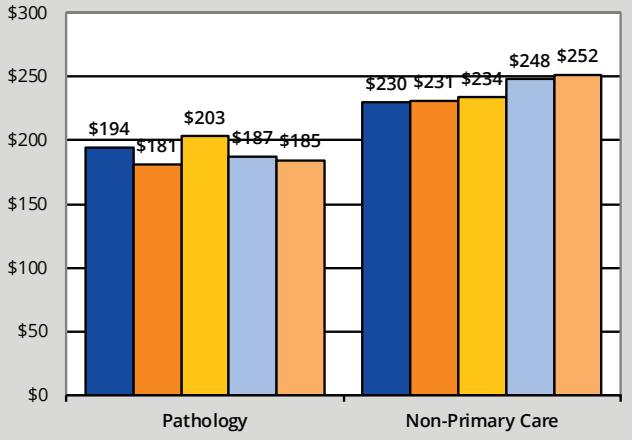
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

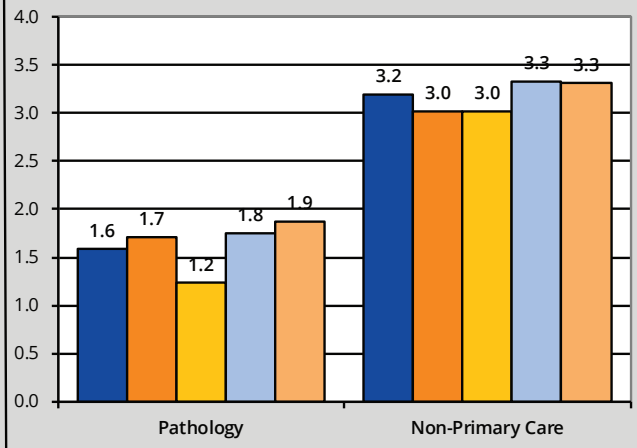
Specialty: Pathology

Legend: 2012 2013 2014 2015 2016

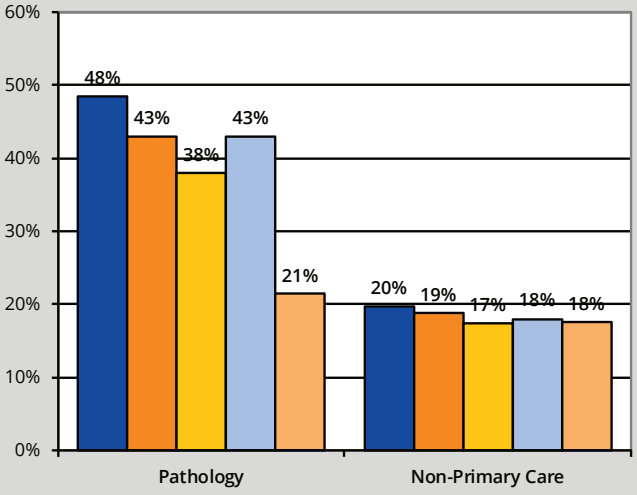
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



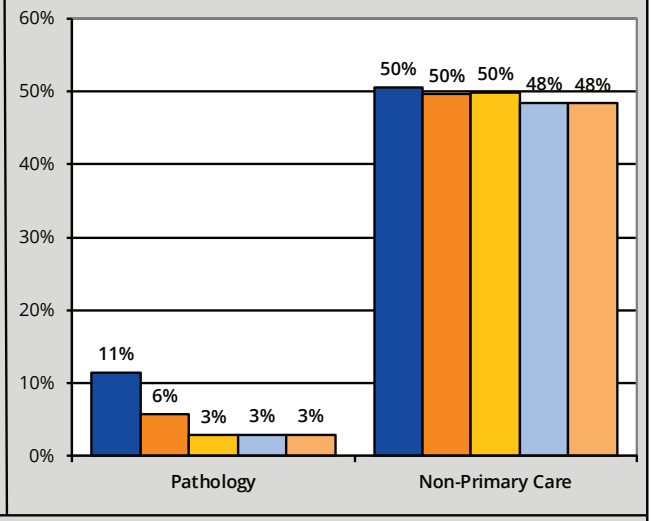
Trends in Mean Number of Job Offers Received, 2012 - 2016*



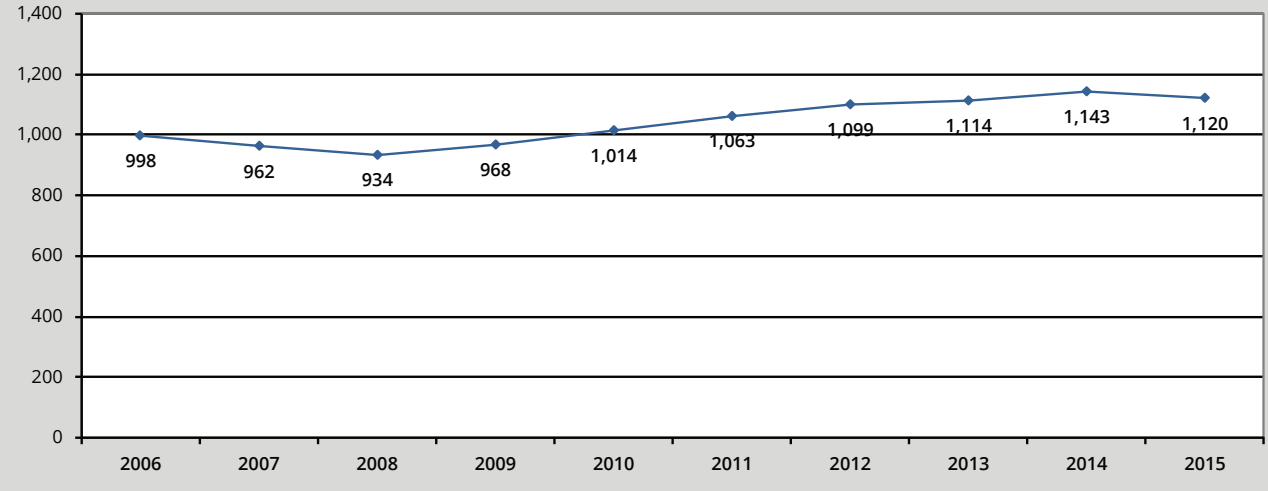
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Pathology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Pathology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 32, 2013: n = 35, 2014: n = 33, 2015: n = 22, 2016: n = 18.

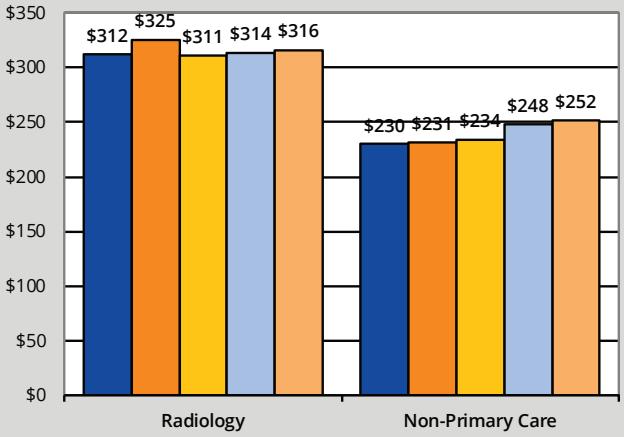
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

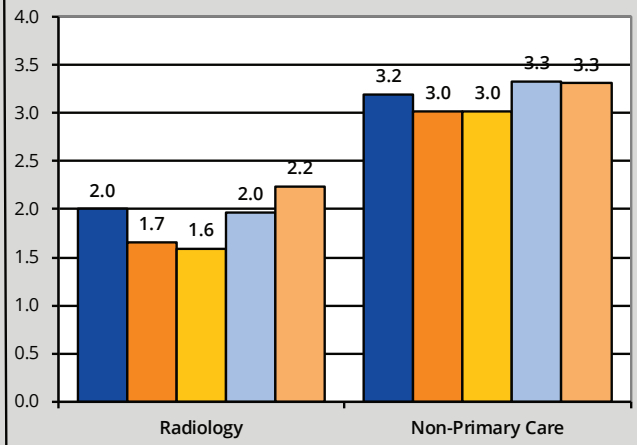
Specialty: Radiology

Legend: 2012 2013 2014 2015 2016

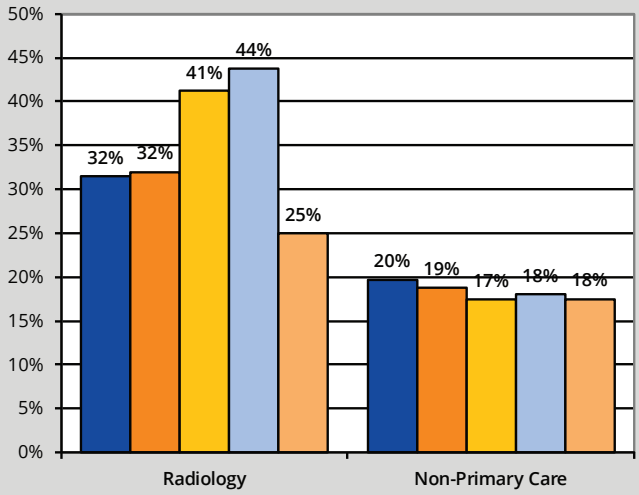
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



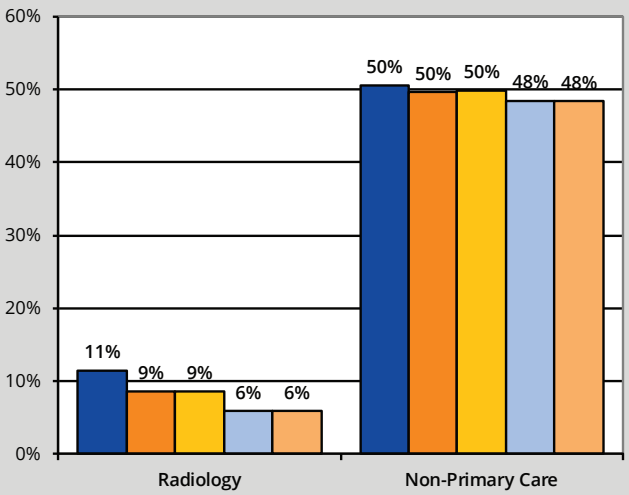
Trends in Mean Number of Job Offers Received, 2012 - 2016*



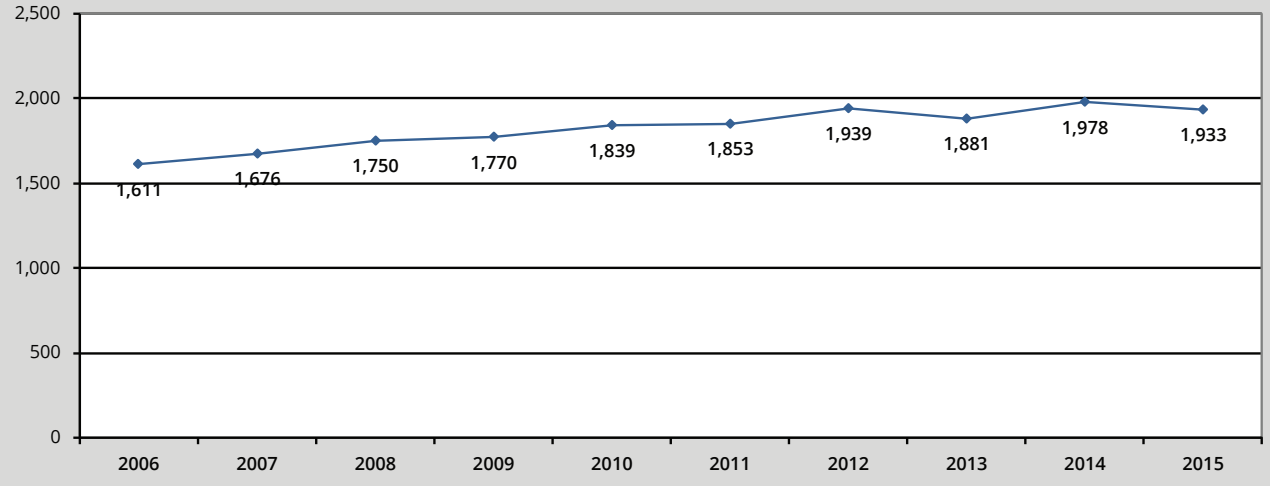
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Radiology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Radiology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 57, 2013: n = 54, 2014: n = 39, 2015: n = 35, 2016: n = 51.

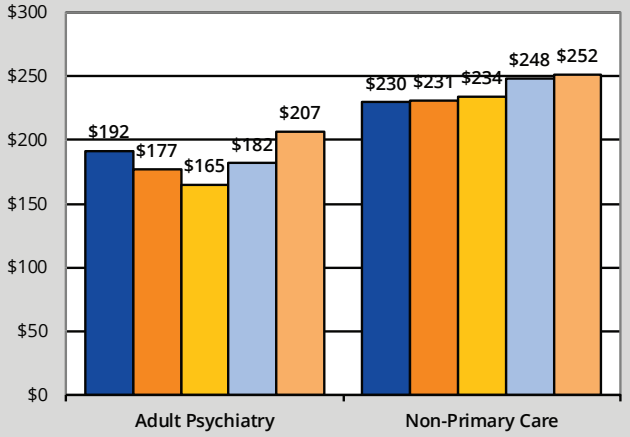
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

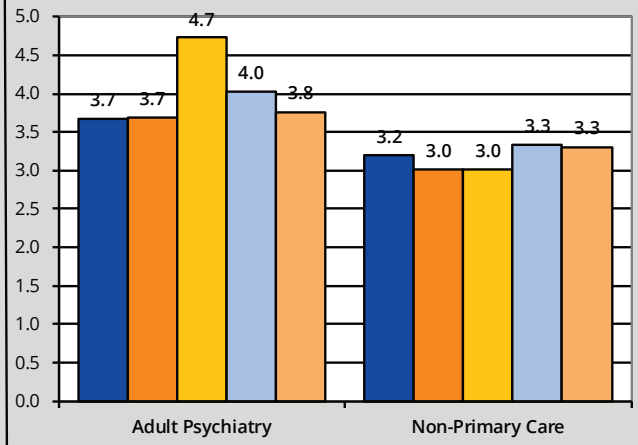
Specialty: Adult Psychiatry

Legend: 2012 2013 2014 2015 2016

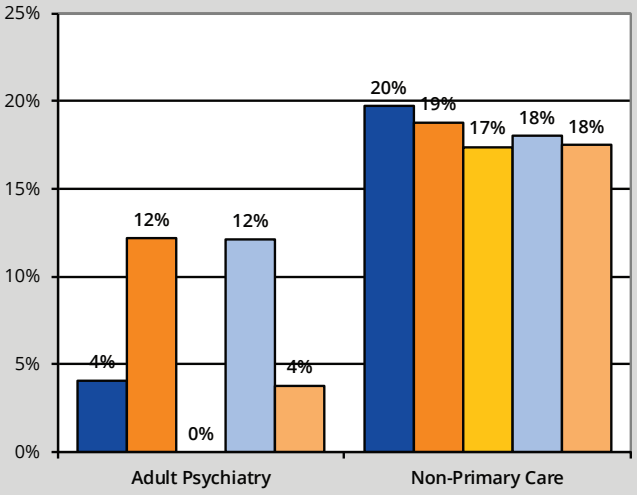
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



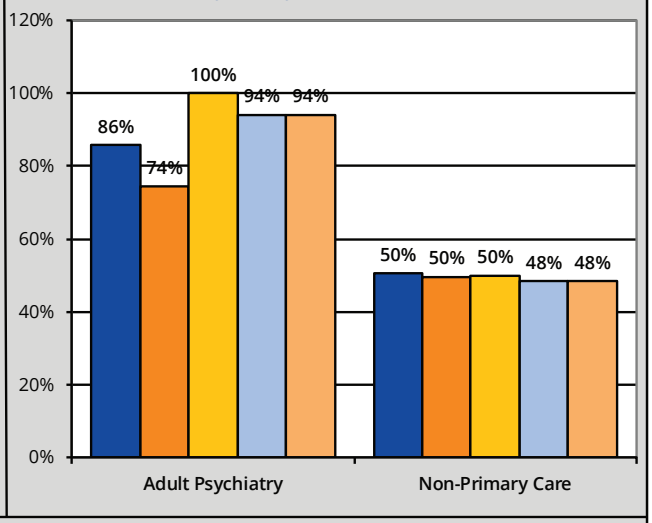
Trends in Mean Number of Job Offers Received, 2012 - 2016*



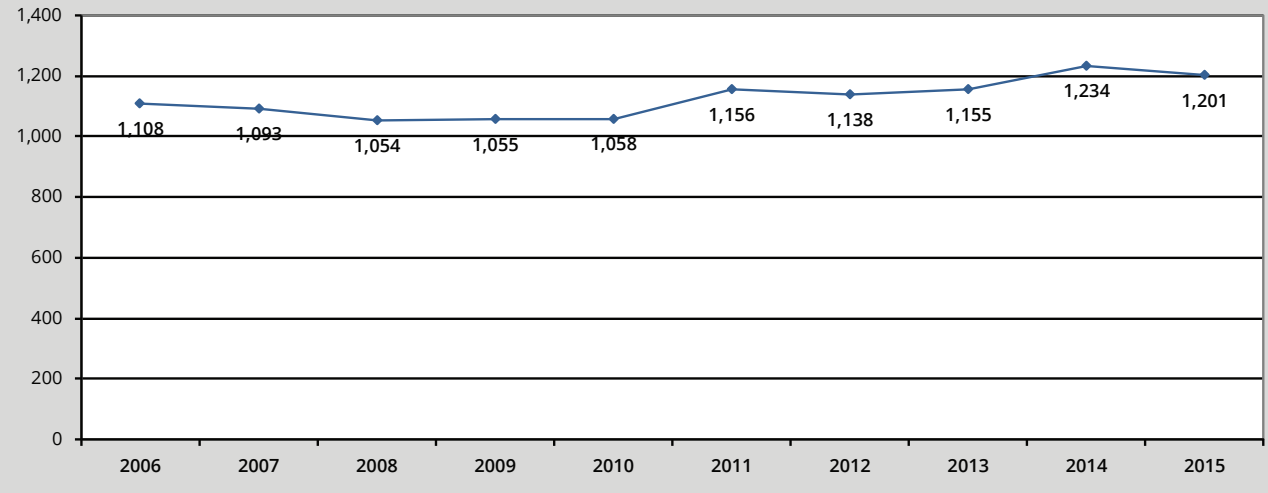
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Adult Psychiatry, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Adult Psychiatry GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 56, 2013: n = 44, 2014: n = 40, 2015: n = 38, 2016: n = 58.

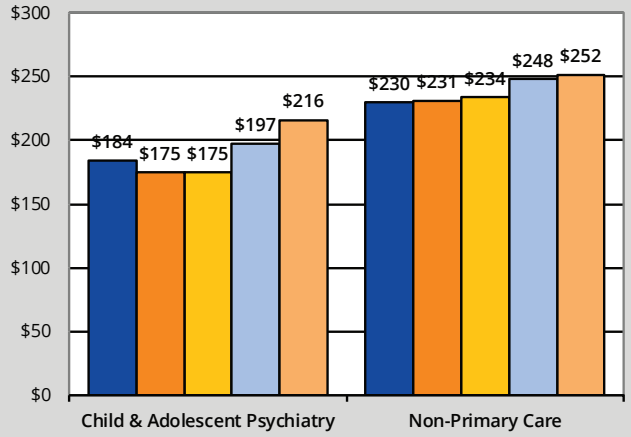
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

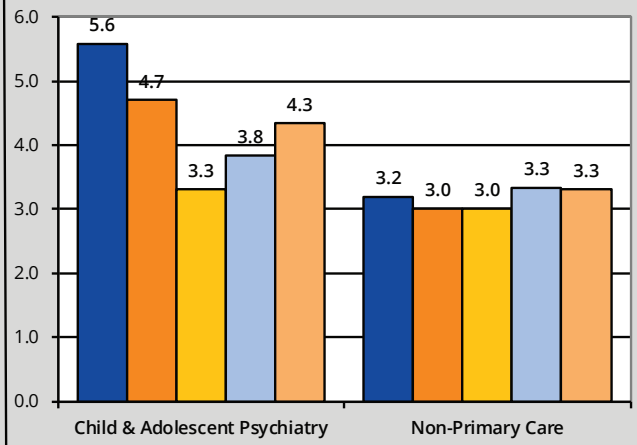
Specialty: Child & Adolescent Psychiatry

Legend: 2012 2013 2014 2015 2016

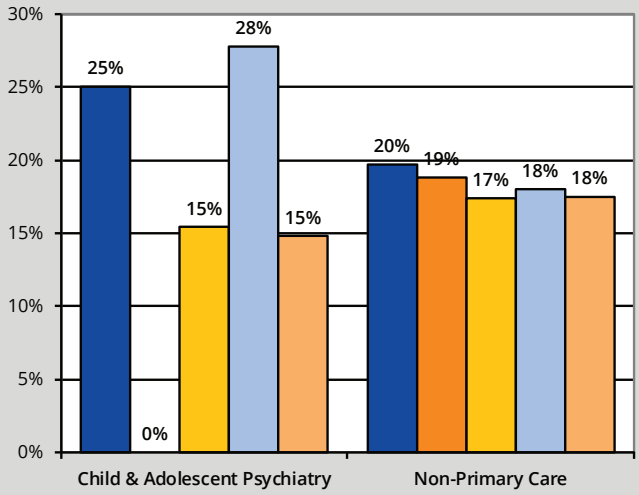
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



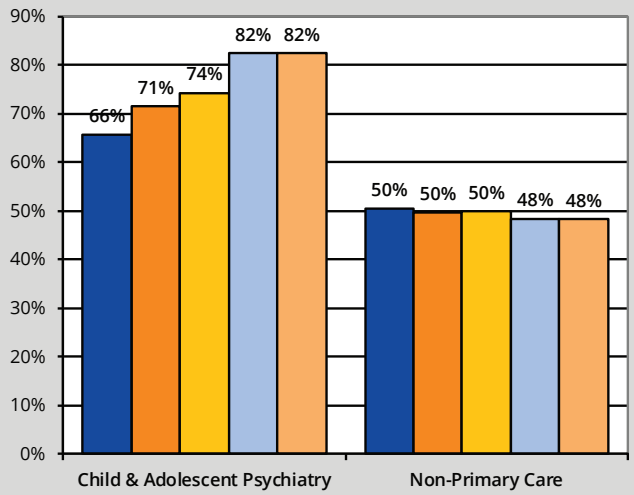
Trends in Mean Number of Job Offers Received, 2012 - 2016*



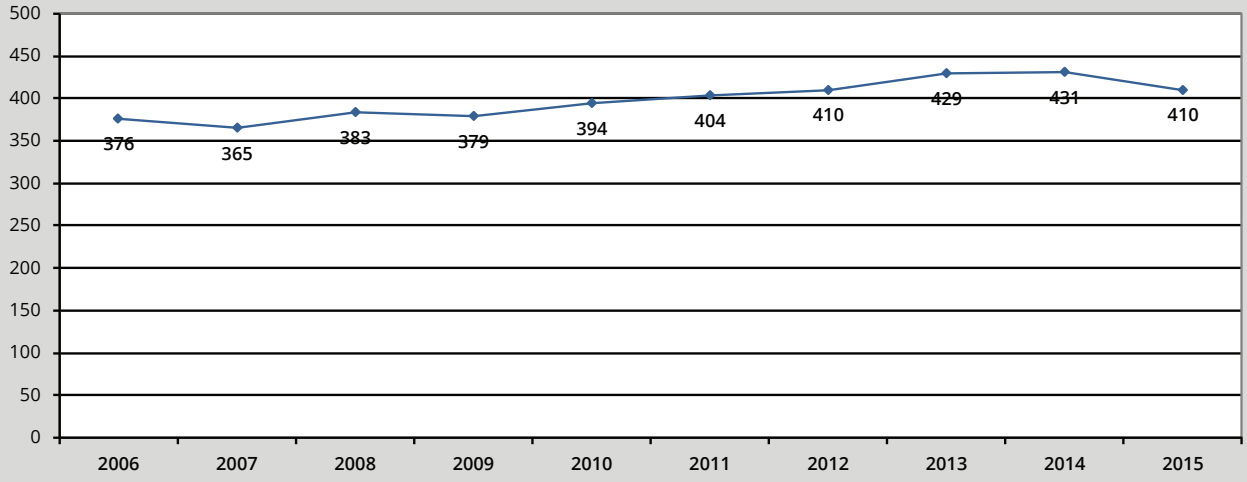
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Child & Adolescent Psychiatry, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Child & Adolescent Psychiatry GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 15, 2013: n = 11, 2014: n = 29, 2015: n = 20, 2016: n = 31.

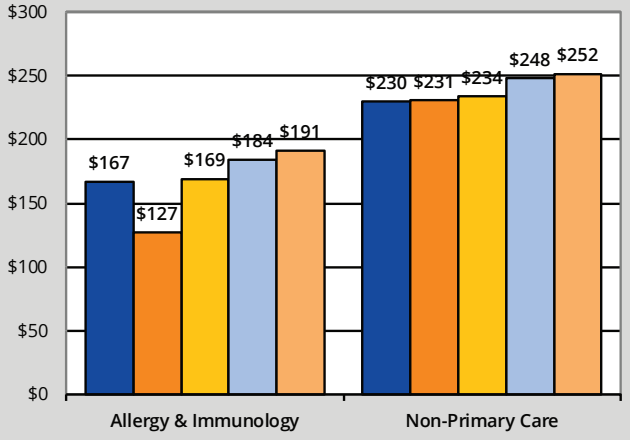
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

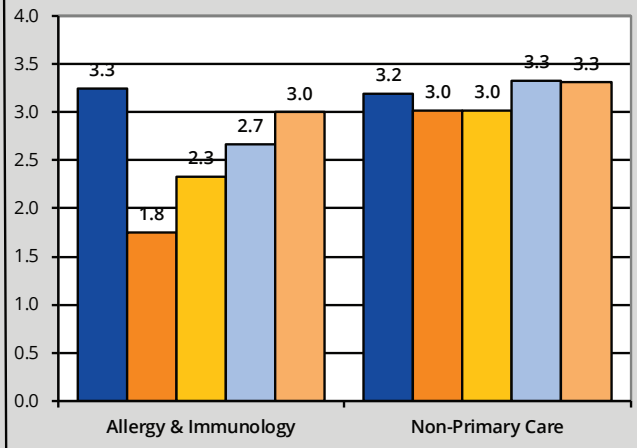
Specialty: Allergy & Immunology

Legend: 2012 2013 2014 2015 2016

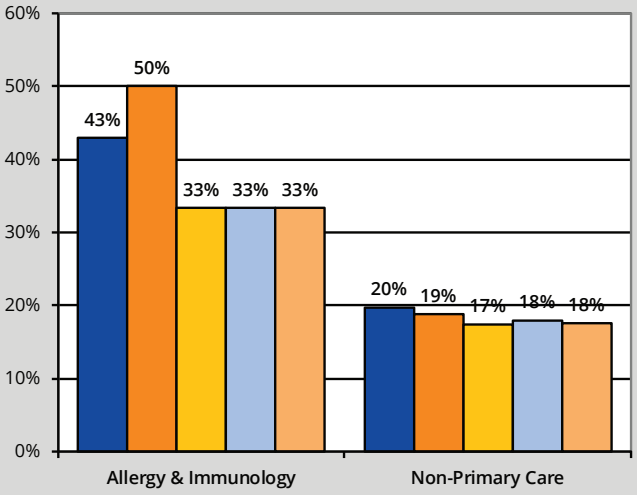
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



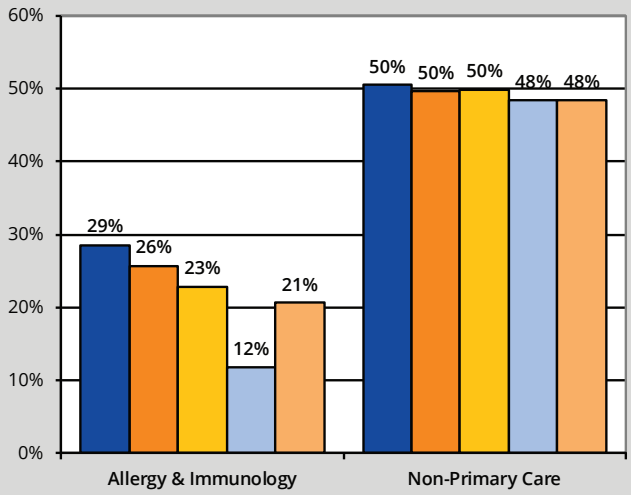
Trends in Mean Number of Job Offers Received, 2012 - 2016*



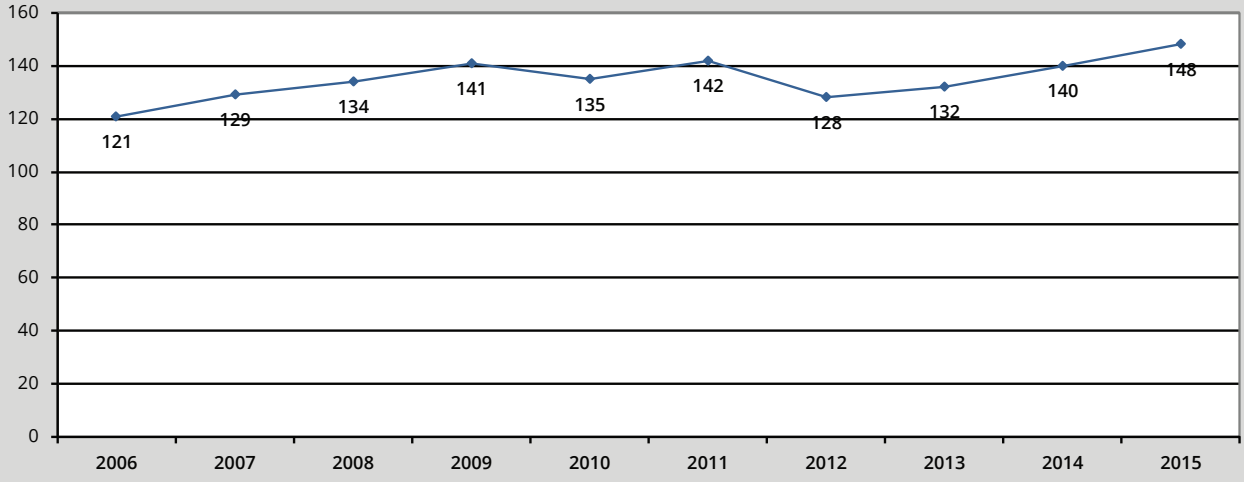
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Allergy & Immunology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Allergy & Immunology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 9, 2013: n = 4, 2014: n = 6, 2015: n = 6, 2016: n = 9.

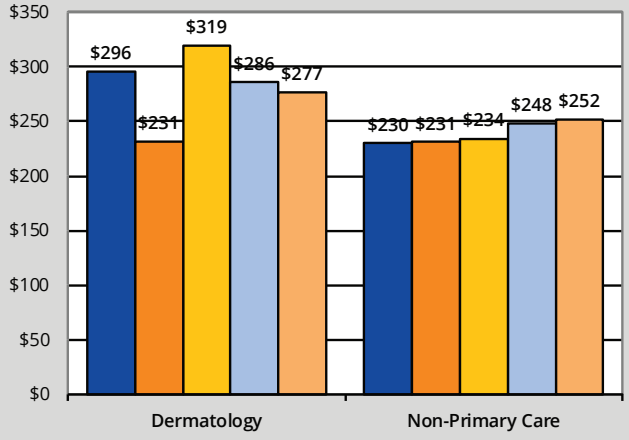
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

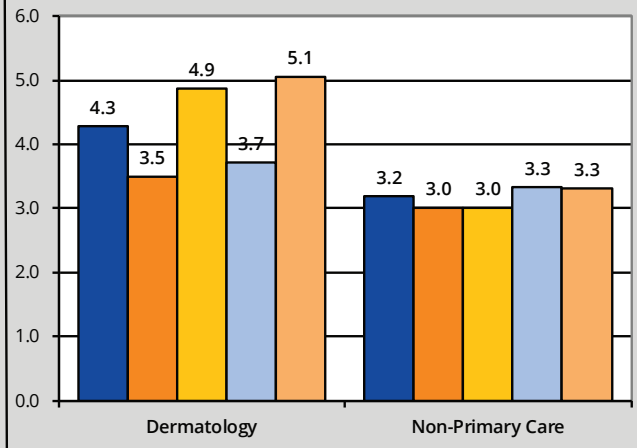
Specialty: Dermatology

Legend: 2012 2013 2014 2015 2016

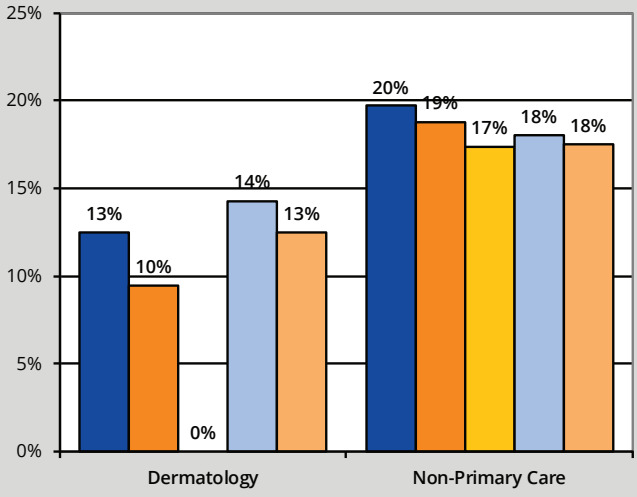
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



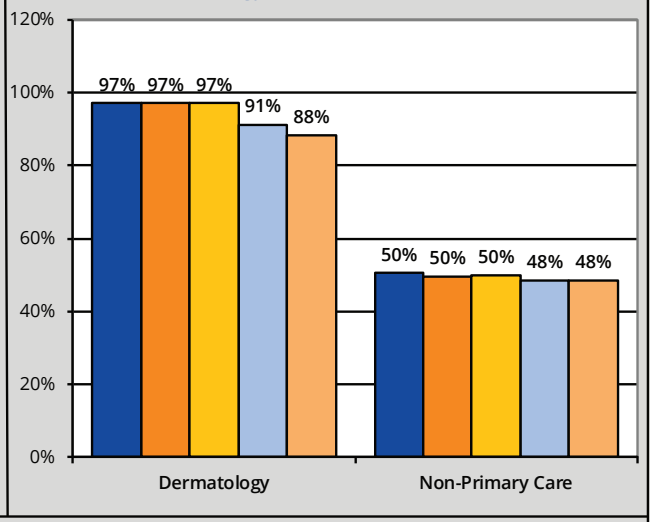
Trends in Mean Number of Job Offers Received, 2012 - 2016*



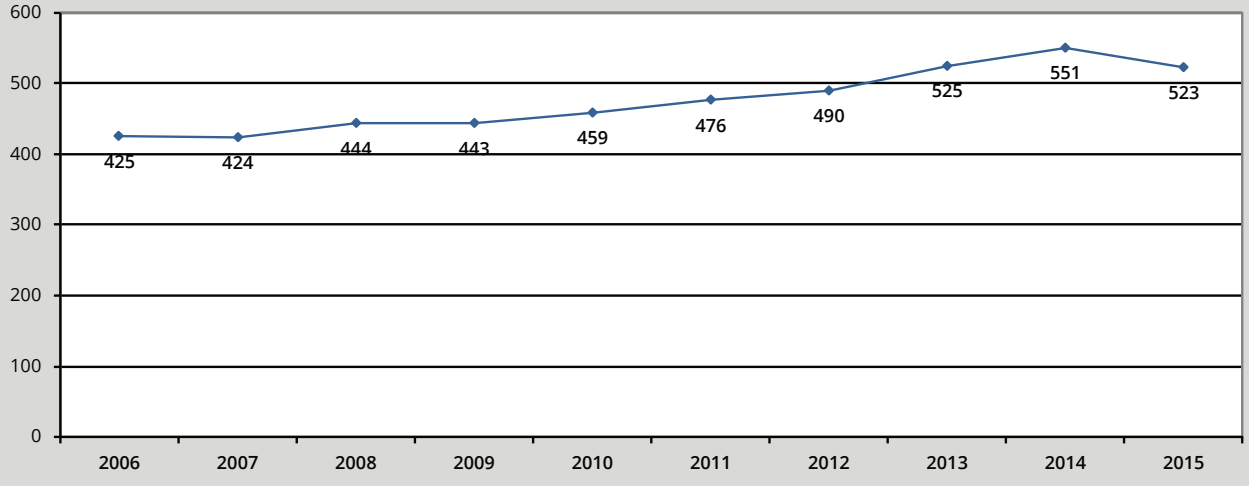
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Dermatology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Dermatology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 17, 2013: n = 21, 2014: n = 19, 2015: n = 14, 2016: n = 18.

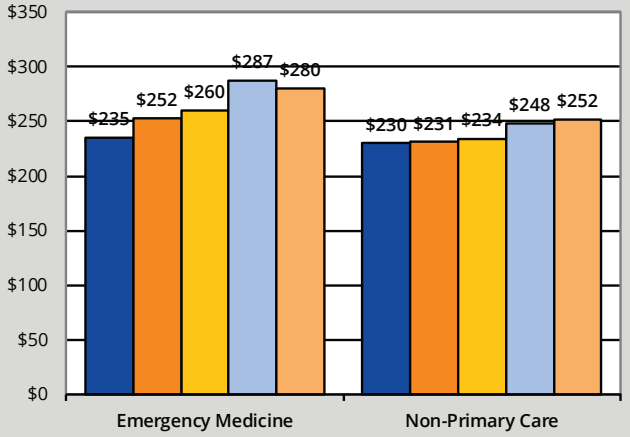
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

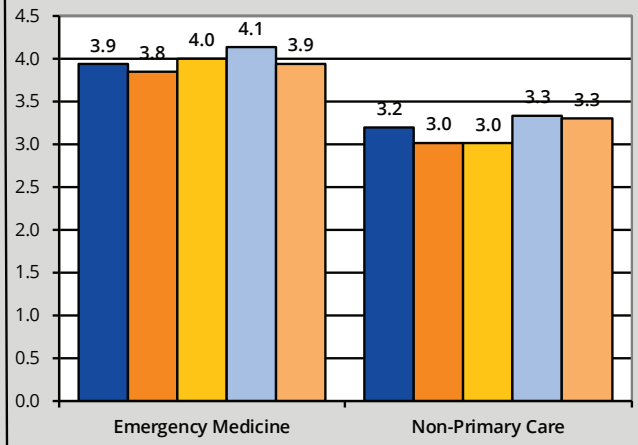
Specialty: Emergency Medicine

Legend: 2012 2013 2014 2015 2016

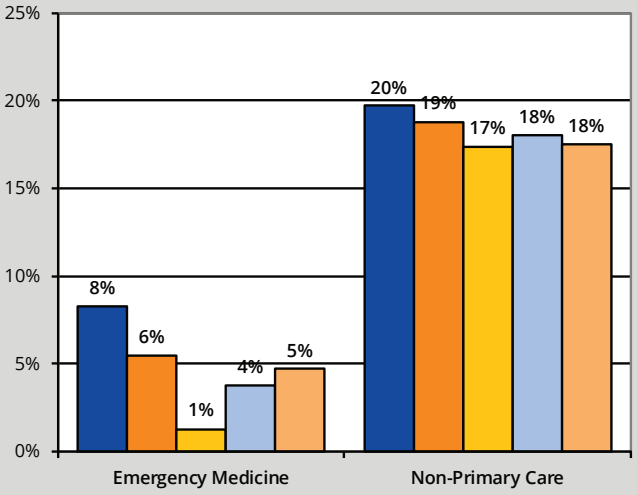
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



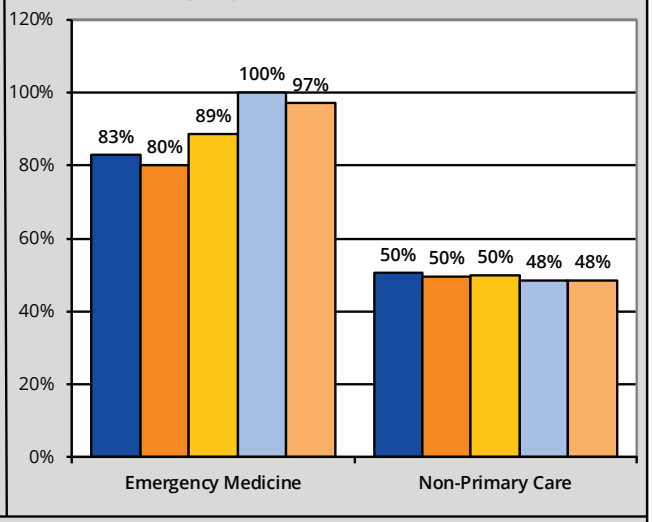
Trends in Mean Number of Job Offers Received, 2012 - 2016*



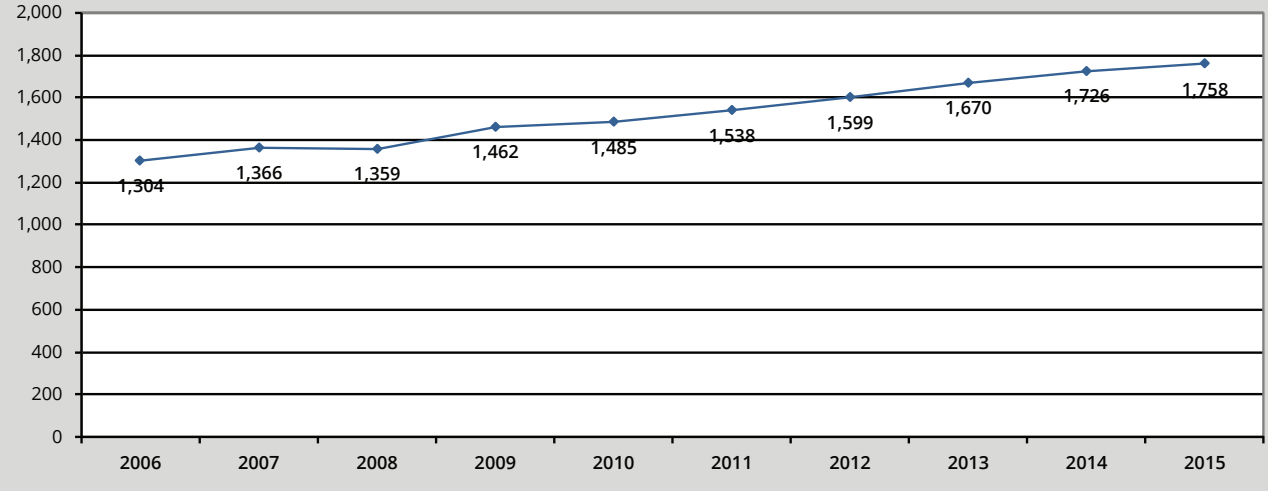
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Emergency Medicine, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Emergency Medicine GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 119, 2013: n = 99, 2014: n = 88, 2015: n = 138, 2016: n = 135.

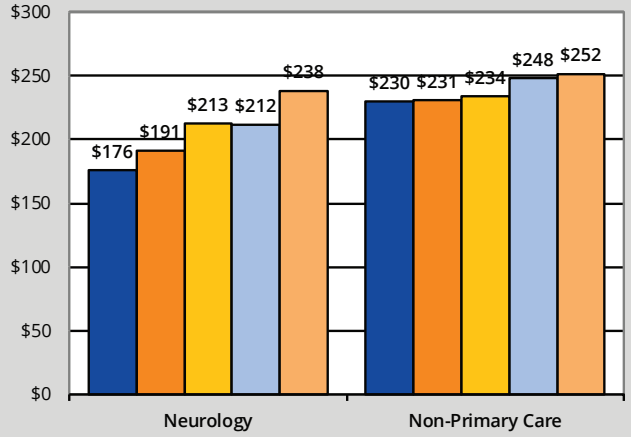
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

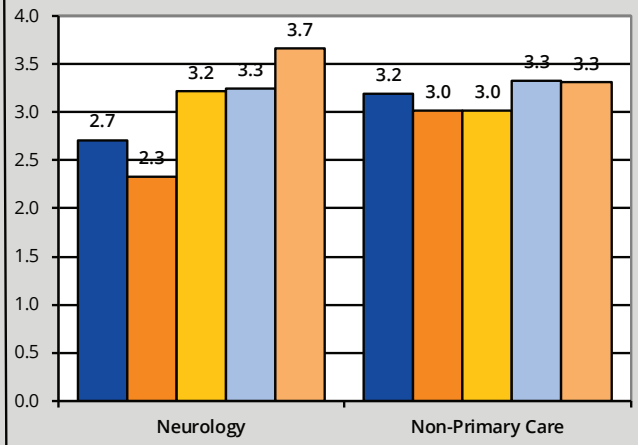
Specialty: Neurology

Legend: 2012 2013 2014 2015 2016

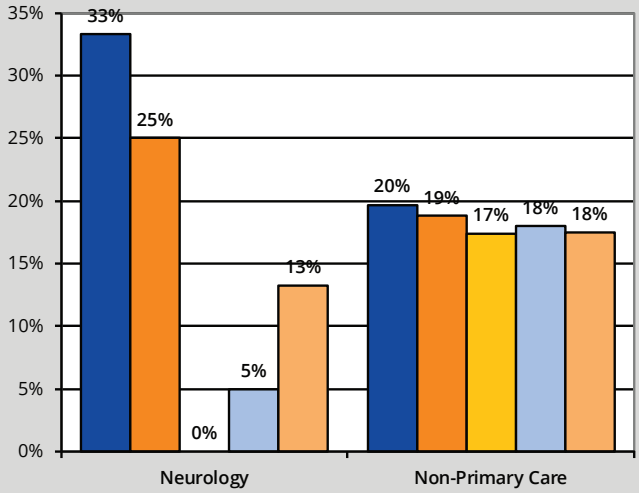
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



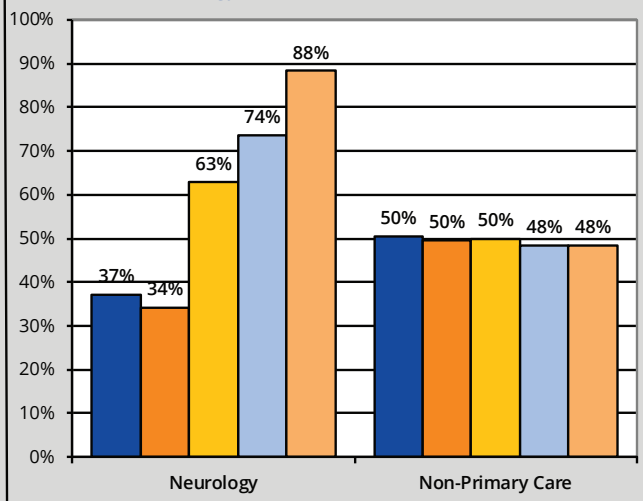
Trends in Mean Number of Job Offers Received, 2012 - 2016*



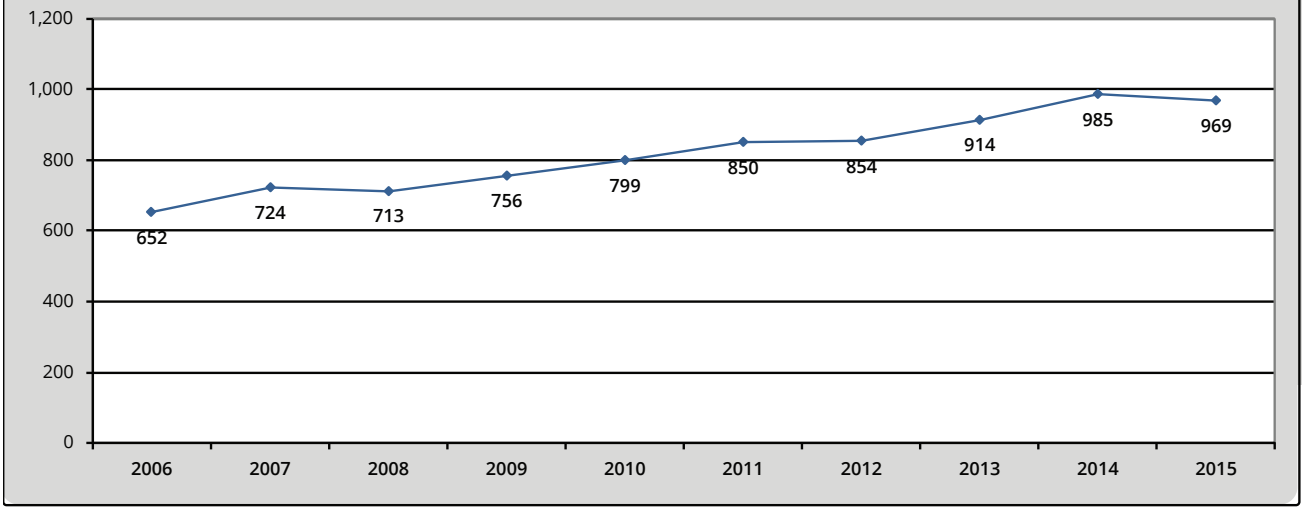
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Neurology, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Neurology GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 17, 2013: n = 11, 2014: n = 14, 2015: n = 22, 2016: n = 18.

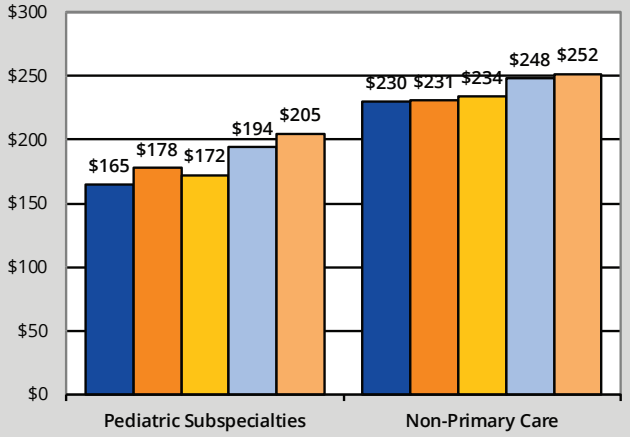
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

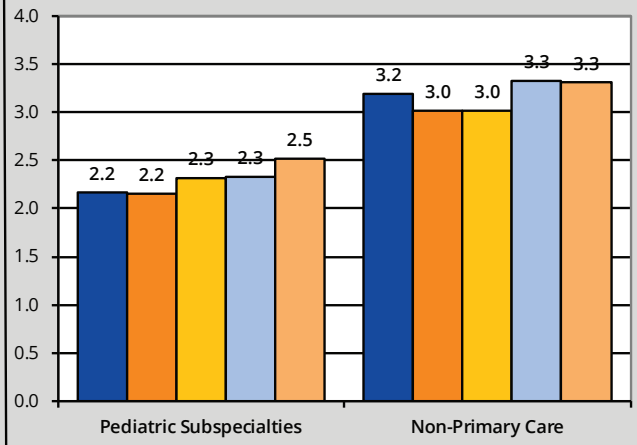
Specialty: Pediatric Subspecialties

Legend: 2012 2013 2014 2015 2016

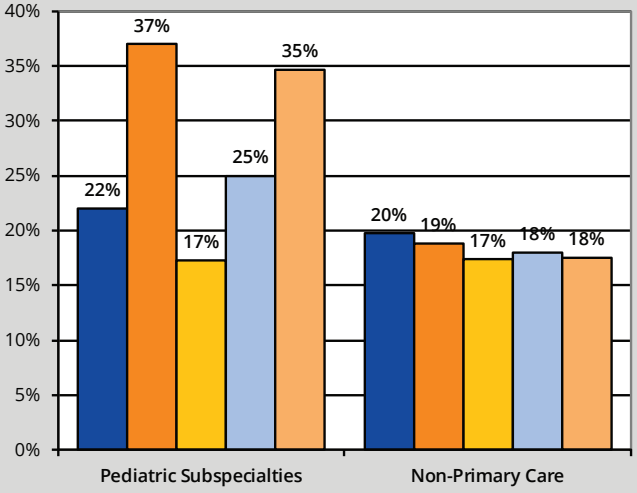
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



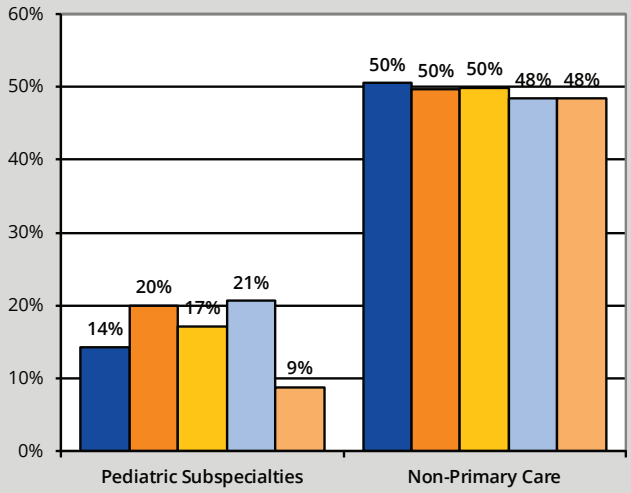
Trends in Mean Number of Job Offers Received, 2012 - 2016*



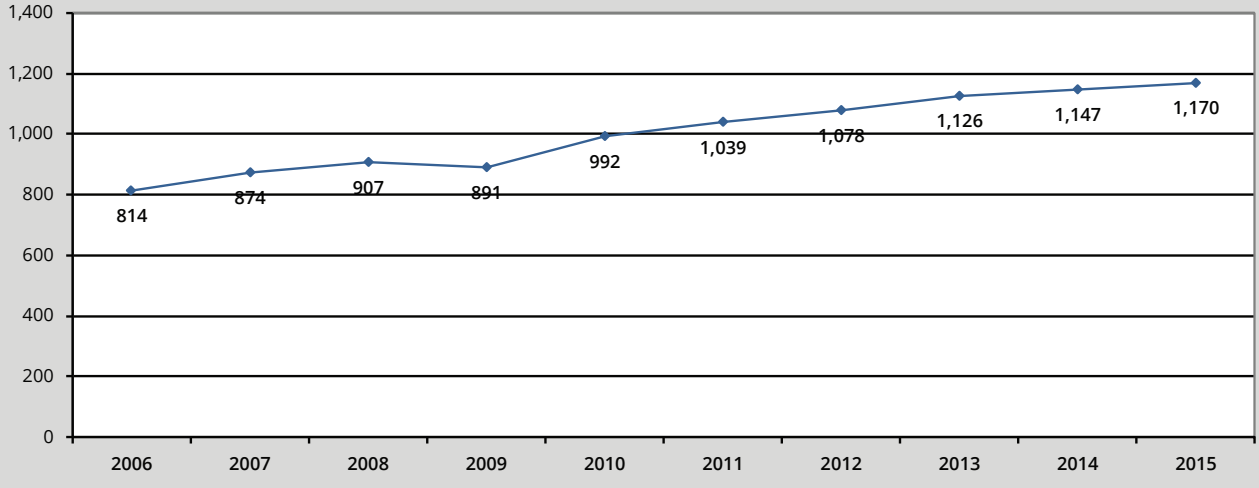
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Pediatric Subspecialties, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Pediatric Subspecialties GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 46, 2013: n = 50, 2014: n = 54, 2015: n = 56, 2016: n = 58.

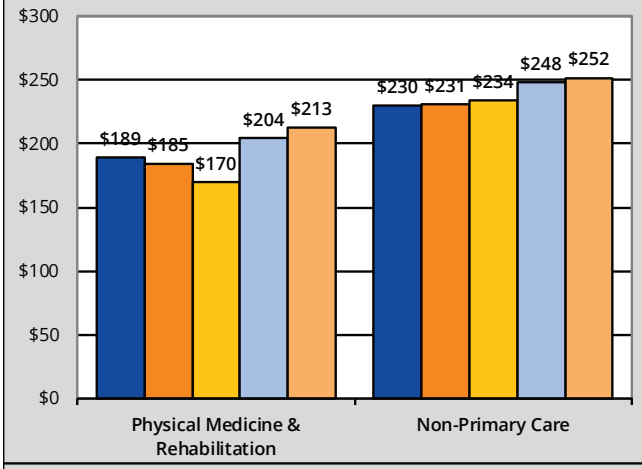
*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues* , 2006 - 2015.

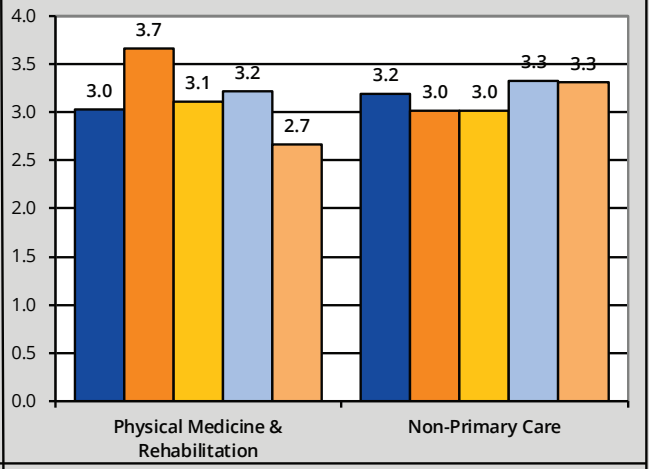
Specialty: Physical Medicine & Rehabilitation

Legend: 2012 2013 2014 2015 2016

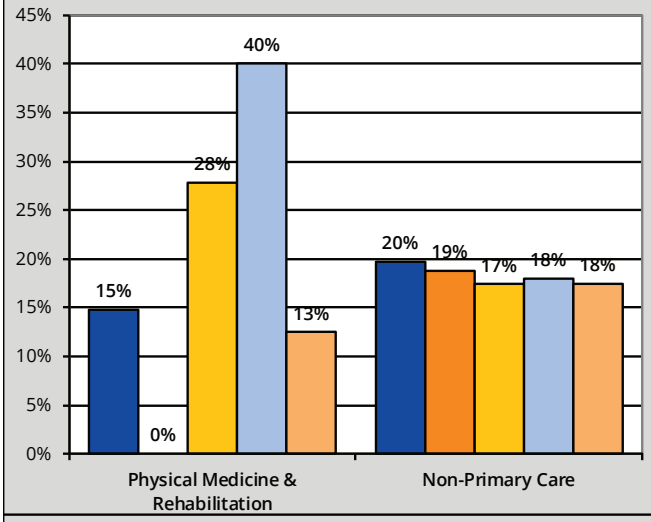
Trends in Median Starting Income, 2012 - 2016 (in $1,000s of 2016 dollars)*



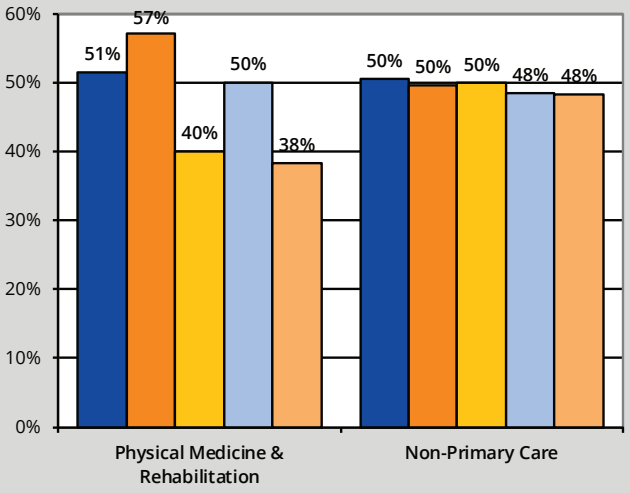
Trends in Mean Number of Job Offers Received, 2012 - 2016*



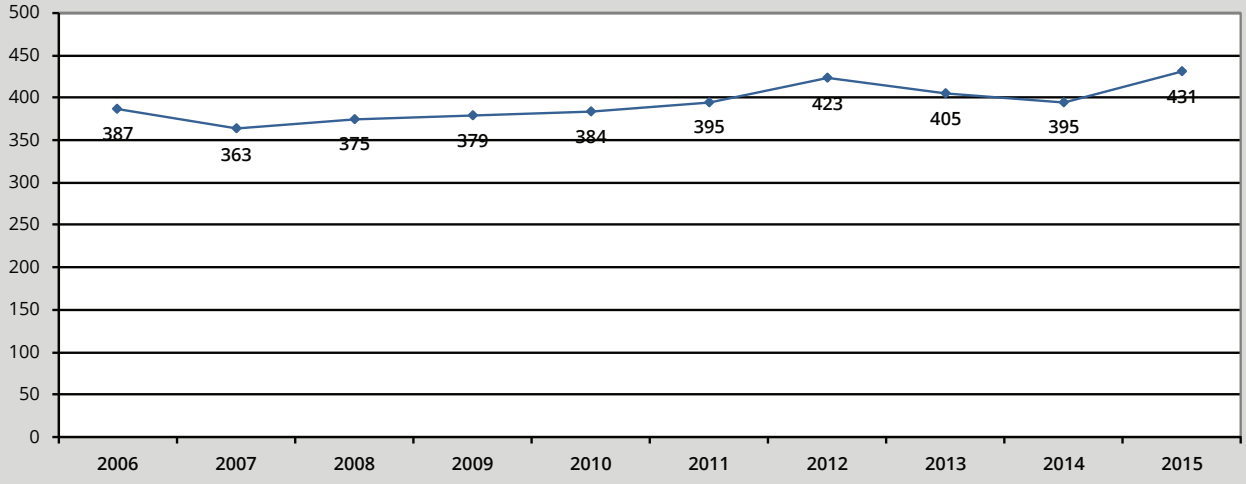
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2012 - 2016*



Trends in Relative Demand - Percentile Rank of Physical Medicine & Rehabilitation, 2012 - 2016*



*Trends in Number of Graduates of Allopathic Physical Medicine & Rehabilitation GME Programs in the US,** 2006 - 2015*



Number of responses: 2012: n = 28, 2013: n = 16, 2014: n = 19, 2015: n = 15, 2016: n = 21.

*Source: CHWS, Survey of Residents Completing Training in New York, 2012 - 2016.

**Source: *JAMA Medical Education Issues*, 2006 - 2015.

Appendix A

METHODOLOGY USED TO MEASURE RELATIVE DEMAND

The Resident Exit Survey cannot be used to determine *absolute* demand for new physicians in different specialties (ie, it cannot be used to determine the number of physicians necessary to serve a given population). However, by analyzing several questions pertaining to job market experiences and perceptions of new physicians and comparing responses over time, in different geographical locations, and between specialties, it is possible to assess whether respondents from certain specialties or in certain locations are finding more or fewer practice opportunities (ie, it measures *relative* demand).

The implication is that while a specialty, such as pathology, may be in low demand relative to other specialties in an absolute sense, there may still be good opportunities for pathologists, but not as good or as many as another specialist that is seeing higher demand (such as child and adolescent psychiatry). In addition, it is not possible to measure the magnitude of the difference in demand between different specialties. So, if the percentile rank of general internal medicine in New York in 2016 was 94% (ie, general internal medicine had a relative rank equal to or better than 94% of the 34 specialties that were ranked), and the percentile rank of pain management was 44%, this *does not* imply that demand for general internal medicine was more than twice as strong as for pain management. The scale is at the ordinal level of measurement.

To measure demand for a given year, a composite score was computed by taking the median of the ranks (ie, where each specialty stood relative to all 34 specialties) scored by each specialty on each of the demand indicators for data from the previous 4 years of the survey. Data from more recent years of the survey received a greater weight than data from earlier years. For example, when calculating the demand score for 2016, data from 2016 were weighted .40, data from 2015 were weighted .30, data from 2014 were weighted .20, and data from 2013 were weighted .10. The following variables were used as indicators of demand:

- Percentage of respondents having difficulty finding a satisfactory practice position
- Percentage of respondents having to change plans due to limited practice opportunities
- Mean number of job offers received by respondents
- Respondents' mean Likert score summarizing their assessment of the regional job market
- Respondents' mean Likert score summarizing their assessment of the national job market
- Trend (ie, average annual change) in median starting income

None of these indicators used alone will provide a perfect picture of demand. However, considered together, they provide a good picture of relative demand by specialty. There was a high degree of correlation between the "percentage of respondents with difficulty finding a satisfactory practice position" variable and the "percentage of respondents having to change plans due to limited practice opportunities" variable (ie, a respondent reporting "difficulty…" was much more likely to also report "having to change plans…"). There was also a high degree of correlation between respondents' assessments of the "regional job market" and the "national job market." To compensate for these observed correlations, the "job offers" variable and the "trends in starting income" variable were each double weighted in computing a composite demand score.

Table 1 summarizes the rank of each specialty (ranked among 34 specialties) on each demand indicator. The variables are:

- ***Difficulty:*** Rank of each specialty based on the percentage of respondents reporting difficulty finding a satisfactory practice position → eg, the specialty with the lowest percentage of respondents reporting difficulty (emergency medicine) ranked #1 and the specialty with the highest percentage of respondents reporting difficulty (pathology) ranked #34.

- ***Change Plans:*** Rank of each specialty based on the percentage of respondents that had to change plans due to practice opportunities → eg, the specialty with the lowest percentage of respondents having to change plans (adult psychiatry) ranked #1 and the specialty with the highest percentage of respondents reporting difficulty (pathology) ranked #34.

- ***Job Offers:*** Rank of each specialty in terms of the mean number of job offers received by respondents (this variable was double weighted in computing the overall demand score) → eg, the specialty with the most job offers (general internal medicine) ranked #1 and the specialty with the fewest job offers (plastic surgery) ranked #34.

- ***Regional Market:*** Rank of each specialty in terms of the mean Likert score summarizing respondents' assessments of the regional job market for their specialty → eg, the specialty with the most positive assessment of the regional job market (emergency medicine) ranked #1 and the specialty with the least positive assessment of the regional job market (pathology) ranked #34.

- ***National Market:*** Rank of each specialty in terms of the mean Likert score summarizing respondents' assessments of the national job market for their specialty → eg, the specialty with the most positive assessment of the national job market (adult psychology) ranked #1 and the specialty with the least positive assessment of the national job market (pathology) ranked #34.

- ***Income Trend:*** Rank of each specialty in terms the average annual change (or trend) in median starting income levels of respondents from each specialty → eg, the specialty with the strongest trend in median starting income (general surgery) ranked #1 and the specialty with the weakest trend in median starting income (cardio-thoracic) ranked #34.

Table 1. Summary of Ranks and Demand Indicators

Specialty	Difficulty	Change Plans	Job Offers[a]	Regional Market	National Market	Income Trends[a]	Median Rank	Overall Rank	Percentile Rank[b]
Family Medicine	9	5	1	2	3	7	4.0	1.0	100%
General Internal Medicine	5	9	2	6	5	16	5.5	3.0	94%
General Pediatrics	12	8	24	9	14	18	16.0	14.0	62%
Internal Medicine and Pediatrics (Combined)	1	12	9	8	22	29	10.5	8.0	79%
Ob/Gyn	13	14	14	10	13	24	14.0	12.0	68%
Cardiology	25	26	18	29	29	34	27.5	29.0	18%
Critical Care Med	23	23	12	23	16	23	23.0	24.0	32%
Endocrinology and Metabolism	17	18	10	13	18	12	12.5	10.0	74%
Gastroenterology	20	22	11	16	12	28	18.0	16.0	56%
Geriatrics	21	21	4	14	15	22	18.0	16.0	56%
Hematology/Oncology	26	19	19	25	17	5	19.0	19.0	47%
Infectious Disease	29	30	27	28	32	14	27.5	29.0	18%
Nephrology	31	34	17	27	31	20	23.5	25.0	29%
Pulmonary Disease	16	16	16	24	8	27	16.0	14.0	62%
Rheumatology	18	27	20	20	24	17	20.0	20.0	44%
General Surgery	7	28	26	21	6	4	14.0	12.0	68%
Neurosurgery	24	25	30	31	21	3	24.5	26.0	26%
Ophthalmology	4	10	32	15	11	21	18.0	16.0	56%
Orthopedic	19	13	23	22	25	15	20.5	22.0	38%
Otolaryngology	14	1	13	11	20	33	13.5	11.0	71%
Cardio-Thoracic Surg	27	3	31	30	23	10	25.0	27.0	24%
Urology	8	20	8	12	10	32	11.0	9.0	76%
Anesthesiology	10	15	28	17	27	31	27.5	29.0	18%
Pain Management	22	11	21	19	26	1	20.0	20.0	44%
Pathology	34	33	34	34	34	30	34.0	34.0	3%
Radiology	30	31	33	32	33	26	31.5	33.0	6%
Adult Psychiatry	3	4	7	1	1	19	5.5	3.0	94%
Child and Adolescent Psychiatry	15	17	5	4	7	11	9.0	7.0	82%
Allergy and Immunology	33	32	25	26	28	8	25.5	28.0	21%
Dermatology	6	7	3	5	9	25	6.5	5.0	88%
Emergency Medicine	2	2	6	3	4	9	5.0	2.0	97%
Neurology	11	6	15	7	2	2	6.5	5.0	88%
Pediatric Subspecialties	28	29	29	33	30	6	29.0	32.0	9%
Physical Medicine and Rehabilitation	32	24	22	18	19	13	20.5	22.0	38%

[a] The job offers variable and the income trend variable were each double weighted in computing the median rank.
[b] The percentile rank is the percentage of all 34 specialties with a median demand rank equal to or lower than each specialty.

The following example illustrates how the demand score was calculated for General Internal Medicine in New York in 2016:

Median $Rank_{GIM}$ = median (difficulty, change plans, job offers, job offers, regional market, national market, income trends, income trends)

Median $Rank_{GIM}$ = median (5, 9, 2, 2, 6, 5, 16, 16)

Median $Rank_{GIM}$ = **5.5**

With a median rank of 5.5, General Internal Medicine ranked 3rd out of 34 specialties.

The ***percentile rank*** is computed as:

$\%rank_{GIM}$ = { 1 – (RankGIM / #Specs) + (1 / #Specs) }

"#Specs" = the number of specialties being ranked

In New York in 2016, there were 34 specialties being ranked, so the percentile rank of General Internal Medicine is:

$\%rank_{GIM}$ = { 1 – (5.5/ 34) + (1 / 34) } = **94%**.

Appendix B

SPECIALTY COMPARISON GROUPS

Specialty	Comparison Group[a]
Family Medicine	Primary Care
General Internal Medicine	Primary Care
General Pediatrics	Primary Care
Internal Medicine and Pediatrics (Combined)	Primary Care
Obstetrics/Gynecology	Non-Primary Care
Cardiology	Medicine Subspecialties
Critical Care Medicine	Medicine Subspecialties
Endocrinology and Metabolism	Medicine Subspecialties
Gastroenterology	Medicine Subspecialties
Geriatrics	Medicine Subspecialties
Hematology/Oncology	Medicine Subspecialties
Infectious Disease	Medicine Subspecialties
Nephrology	Medicine Subspecialties
Pulmonary Disease	Medicine Subspecialties
Rheumatology	Medicine Subspecialties
General Surgery	Non-Primary Care
Neurosurgery	Surgical Subspecialties
Ophthalmology	Surgical Subspecialties
Orthopedic Surgery	Surgical Subspecialties
Otolaryngology	Surgical Subspecialties
Cardio-Thoracic Surgery	Surgical Subspecialties
Urology	Surgical Subspecialties
Anesthesiology	Non-Primary Care
Pain Management	Non-Primary Care
Pathology	Non-Primary Care
Radiology	Non-Primary Care
Adult Psychiatry	Non-Primary Care
Child and Adolescent Psychiatry	Non-Primary Care
Allergy and Immunology	Non-Primary Care
Dermatology	Non-Primary Care
Emergency Medicine	Non-Primary Care
Neurology	Non-Primary Care
Pediatric Subspecialties	Non-Primary Care
Physical Medicine and Rehabilitation	Non-Primary Care

[a] In each specialty profile, statistics for the specialty are presented next to the average of all specialties in the group to which the specialty belongs (ie, the comparison group). As an example, the starting median of family practice is compared to the median starting income of all primary care. Likewise, the relative demand (or percentile rank) of cardiology is compared against the average percentile rank of all medicine subspecialties.

Appendix C

NY RESIDENT EXIT SURVEY INSTRUMENT

MARKING INSTRUCTIONS

- Use a No. 2 pencil or blue or black ink pen only.
- Do not use pens with ink that soaks through the paper.
- Make solid marks that fill the oval completely.
- Make no stray marks on this form.
- Do not fold, tear, or mutilate this form.

CORRECT

INCORRECT

Survey of Residents Completing Training in NY in 2016

Center for Health Workforce Studies
University at Albany, School of Public Health
1 University Place / Suite 220
Rensselaer, NY 12144-3445

ACGME Residency Program # ___ ___ ___ – ___ ___ – ___ ___ – ___ ___ ___ — **For Office Use**

This questionnaire should be completed by all physicians completing a residency/fellowship training program in New York in 2016 *(excluding preliminary training positions)*.

LAST NAME

FIRST NAME

Main Hospital at Which You Did Your Training:

For each question ***mark only one answer*** unless otherwise directed.

A. BACKGROUND

1. Gender:
- ○ Male
- ○ Female

2. Age: ___

3. Citizenship Status:
- ○ Native born U.S.
- ○ Naturalized U.S.
- ○ Permanent resident
- ○ H-1, H-2, H-3 Temporary worker
- ○ J-1, J-2 Exchange visitor

4. A. Are you of Hispanic/Latino origin?
- ○ Yes ○ No

B. What is your race? *(mark all that apply)*
- ○ American Indian/Alaska Native
- ○ Asian or Pacific Islander
- ○ Black/African American
- ○ White
- ○ Other

5. A. Which best describes your current relationship status?
- ○ Now Married
- ○ In Long-term Relationship
- ○ Divorce/Separated (Skip to 6)
- ○ Never Married/Single (Skip to 6)

B. If currently married or in a long-term relationship, is your partner also a physician?
- ○ Yes ○ No ○ Question does not apply

6. Do you have any dependent children?
- ○ Yes ○ No

7. Where did you live when you graduated from high school?
- ○ New York
- ○ Canada
- ○ Other U.S.
- ○ Other country

B. MEDICAL EDUCATION AND TRAINING

8. At the end of your current year of training, how many total years of post-graduate training will you have completed in the U.S.?
- ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 or more

9. Type of Medical Education:
- ○ Allopathic (M.D.) ○ Osteopathic (D.O.)

10. Medical School Attended:
- ○ New York (if yes, complete below)
- ○ Canada
- ○ Other state in the U.S.
- ○ Other country

Specify if in NY:
- ○ Albany Medical College
- ○ Albert Einstein Col of Med of Yeshiva Univ
- ○ Columbia University Col of Phys and Surg
- ○ Hofstra North Shore-LIJ School of Medicine
- ○ Mt. Sinai School of Medicine
- ○ New York College of Osteo Med of NYIT
- ○ New York Medical College (Valhalla)
- ○ New York University Sch of Med
- ○ Stony Brook Univ Med Ctr Sch of Med
- ○ SUNY Buffalo Sch of Med & Biomed Sci
- ○ SUNY Downstate Med Ctr Col of Med
- ○ Touro College of Osteopathic Med
- ○ University of Rochester
- ○ Upstate Medical University, SUNY
- ○ Weill Cornell Medical College

11. What is your current level of educational debt?
- ○ None
- ○ Less than $25,000
- ○ $25,000–$49,999
- ○ $50,000–$74,999
- ○ $75,000–$99,999
- ○ $100,000–$124,999
- ○ $125,000–$149,999
- ○ $150,000–$174,999
- ○ $175,000–$199,999
- ○ $200,000–$224,999
- ○ $225,000–$249,999
- ○ $250,000–$274,999
- ○ $275,000–$299,999
- ○ $300,000 and over

continue . . .

SERIAL #

PLEASE DO NOT WRITE IN THIS AREA

Center Perf

12. **Specialty you are COMPLETING in 2016** *(select only one)*

- ○ Allergy and Immunology
- ○ Anesthesiology (General)
- ○ Anesthesiology–Pain Management
- ○ Other Anesthesiology Subspecialty–specify: _____
- ○ Dermatology
- ○ Emergency Medicine
- ○ Family Medicine
- ○ Internal Medicine (General)
- ○ Cardiology
- ○ Critical Care Medicine
- ○ Endocrinology and Metabolism
- ○ Gastroenterology
- ○ Geriatrics
- ○ Hematology/Oncology
- ○ Infectious Disease
- ○ Nephrology
- ○ Pulmonary Disease/CCM
- ○ Rheumatology
- ○ Other Internal Medicine Subspecialty–specify: _____
- ○ Internal Medicine and Pediatrics (Combined)
- ○ Neurology
- ○ Nuclear Medicine
- ○ Obstetrics and Gynecology (General)
- ○ Obstetrics and Gynecology (Subspecialty)–specify: _____
- ○ Pathology (General)
- ○ Pathology (Subspecialty)–specify: _____
- ○ Pediatrics (General)
- ○ Pediatrics (Subspecialty)–specify: _____
- ○ Physical Medicine and Rehabilitation
- ○ Preventive Medicine/Public Health/Occupational Medicine
- ○ Psychiatry
- ○ Child and Adolescent Psychiatry
- ○ Other Psychiatry Subspecialty–specify: _____
- ○ Radiology (Diagnostic)
- ○ Radiology (Therapeutic)
- ○ Surgery (General)
- ○ Cardio-Thoracic Surgery
- ○ Neurological Surgery
- ○ Ophthalmology
- ○ Orthopedic Surgery
- ○ Otolaryngology
- ○ Plastic Surgery
- ○ Urology
- ○ Other Surgical Subspecialty–specify: _____
- ○ Other–specify: _____

13. What do you expect to be doing after completion of your current training program?

Primary Activity *(mark only one)*

- ○ Patient care/clinical practice (in non-training position)
- ○ Additional subspecialty training or fellowship (specify specialty): _____
- ○ Chief resident
- ○ Teaching/research (in non-training position)
- ○ Temporarily out of medicine
- ○ Other (specify): _____
- ○ Undecided/don't know yet

C. FUTURE PLANS

14. If you are going on for additional training/fellowship, please answer the following:

A. Why are you subspecializing/continuing training? *(mark all that apply)*

- ○ To further your medical education
- ○ Unable to find a job you are happy with
- ○ Unable to find <u>any</u> job
- ○ To stay in the U.S. (i.e., due to visa status)
- ○ Other (specify): _____
- ○ Always intended to subspecialize
- ○ Question does not apply

B. If you are leaving NY to continue your training, do you plan to return to NY to practice when your training is complete?

- ○ Yes
- ○ No
- ○ Don't know yet
- ○ Question does not apply

15. In your upcoming position, how many hours per week do you expect to spend in each of the following activities?

	None	1–9	10–19	20–29	30–39	40–49	50–59	60+
Direct patient care	○	○	○	○	○	○	○	○
Research	○	○	○	○	○	○	○	○
Teaching	○	○	○	○	○	○	○	○
Administration	○	○	○	○	○	○	○	○
Volunteering/Community service	○	○	○	○	○	○	○	○

16. Where is the location of your primary activity after completing your current training position?

- ○ Same city/county as current training
- ○ Same region within NY, but different city/county
- ○ Other area within NY
- ○ Other state
- ○ Outside the U.S.
- ○ Don't know yet

17. Do you have an obligation or visa requirement to work in a federally designated Health Professional Shortage Area?

- ○ Yes
- ○ No

18. How important is it for you to have control over the following job characteristics:

	Not important at all	Of little importance	Important	Very important
Predictable start and end time each workday	○	○	○	○
Length of each workday	○	○	○	○
Frequency of overnight calls	○	○	○	○
Frequency of weekend duties	○	○	○	○

19. If you are planning to enter or have considered entering patient care/clinical practice:

A. Have you actively searched for a job?
- ○ Yes
- ○ No, not yet
- ○ No, I will be self-employed

B. Have you been offered a job?
- ○ Yes, and I have accepted an offer
- ○ Yes, but I declined the offer(s) and am still searching (Skip to Question 27)
- ○ No, but I have not actively searched yet (Skip to Question 27)
- ○ No, I have not yet been offered a practice position (Skip to Question 27)

D. PRACTICE PLANS

If you have accepted a position in patient care/clinical practice please answer the following questions, if not, skip to Question 27.

20. Which best describes the type of patient care practice you will be entering?

Principal Practice Setting *(mark only one)*	Secondary Practice Setting(s) *(mark all that apply)*	
○	○	Solo practice
○	○	Partnership (2 people)
○	○	Group practice (owner/partner)
○	○	Group practice (employee)
○	○	Hospital—Inpatient
○	○	Hospital—Ambulatory care
○	○	Hospital—Emergency room
○	○	Freestanding health center or clinic
○	○	Nursing home
○	○	Other: _____

21. A. What is the zip code of the principal practice address where you will be working? If zip code is unknown, please give city or town and state.

Principal Practice Zip Code

0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

City/Town _____ State _____

B. Is this principal practice address located in a federally designed Health Professional Shortage Area?
○ Yes ○ No ○ I don't know

C. **If you are <u>not</u> going to practice in New York,** please indicate the reasons why. In the first column, indicate all of the reasons why *(mark all that apply)*. In the second column, indicate the main reason why *(mark only one)*.

	All <u>Reasons</u> *(mark all that apply)*	Main <u>Reason</u> *(mark only one)*
Practice Reasons		
Overall lack of jobs/practice opportunities in New York	○	○
Better jobs/practice opportunities in desired locations outside New York	○	○
Better jobs/practice opportunities in desired practice setting (e.g., hospital, group practice, etc.) outside New York	○	○
Better jobs/practice opportunities outside New York that meet visa status requirements	○	○
Financial Reasons		
Better salary/compensation offered outside New York	○	○
Cost of malpractice insurance in New York	○	○
Cost of establishing a medical practice in New York	○	○
Taxes in New York	○	○
Cost of living in New York	○	○
Personal Reasons		
Proximity to family	○	○
Better employment opportunities for spouse/partner outside New York	○	○
Climate (e.g., weather)	○	○
Other Reasons		
Never intended to practice in New York	○	○
Other reason: _____	○	○

continue . . .

22. How many years do you expect to be at your principal practice?

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 or more

23. Which best describes the demographics of the area in which you will be practicing?

- ○ Inner city
- ○ Other area within major city
- ○ Suburban
- ○ Small city (population less than 50,000)
- ○ Rural

24. A. Please identify all of the incentives you received for accepting this practice position *(mark all that apply)*. Also, please indicate the most influential incentive in your decision to accept this practice position *(mark only one)*.

	Incentives Received	Most Influential Incentive
H-1 visa sponsorship	○	○
J-1 visa waiver	○	○
Sign-on bonus	○	○
Income guarantees	○	○
On-call payments	○	○
Relocation allowances	○	○
Spouse/Partner job transition assistance	○	○
Support for maintenance of certification and continuing medical education	○	○
Career development opportunities	○	○
Educational loan repayment	○	○
Other, specify: _____	○	○
None	○	

B. If you received any incentives, how important were they in your decision to accept this practice position?

○ Not at all important ○ Important
○ Of little importance ○ Very important

25. Expected gross income during first year of practice:

A. Base Salary/Income	B. Anticipated Additional Incentive Income
○ Less than $75,000	○ None
○ $75,000–$99,999	○ Less than $5,000
○ $100,000–$124,999	○ $5,000–$9,999
○ $125,000–$149,999	○ $10,000–$14,999
○ $150,000–$174,999	○ $15,000–$19,999
○ $175,000–$199,999	○ $20,000–$24,999
○ $200,000–$224,999	○ $25,000–$29,999
○ $225,000–$249,999	○ $30,000–$34,999
○ $250,000–$274,999	○ $35,000–$39,999
○ $275,000–$299,999	○ $40,000–$44,999
○ $300,000–$324,999	○ $45,000–$49,999
○ $325,000–$349,999	○ $50,000–$54,999
○ $350,000–$374,999	○ $55,000–$59,999
○ $375,000 and over	○ $60,000 and over

26. What is your level of satisfaction with your salary/compensation?

○ Very dissatisfied ○ Somewhat satisfied
○ Somewhat dissatisfied ○ Very satisfied

E. EXPERIENCE IN JOB MARKET
(If you are going into patient care or have considered going into patient care, please complete the following.)

27. A. Did you have difficulty finding a practice position you were satisfied with?

○ Yes ○ No ○ Haven't looked yet (Skip to Question #30)

B. **If Yes,** what would you say was the main reason? *(mark only one)*

- ○ Overall lack of jobs/practice opportunities
- ○ Lack of jobs/practice opportunities that meet visa status requirements
- ○ Lack of jobs/practice opportunities in desired locations
- ○ Lack of jobs/practice opportunities in desired practice setting (e.g., hospital, group practice, etc.)
- ○ Inadequate salary/compensation offered
- ○ Lack of employment opportunities for spouse/partner
- ○ Other (specify): _____

28. Did you have to change your plans because of limited practice opportunities?

○ Yes ○ No ○ Haven't looked yet (Skip to Question #30)

29. How many offers for practice positions did you receive (*excluding fellowships, chief residency, and other training positions*)?

○ None ○ 1 ○ 2 ○ 3
○ 4 ○ 5 ○ 6–10 ○ Over 10

30. What is your overall assessment of practice opportunities in **your specialty, and within 50 miles of the site where you trained?**

○ No jobs ○ Some jobs
○ Very few jobs ○ Many jobs
○ Few jobs ○ Unknown

31. What is your overall assessment of practice opportunities in **your specialty nationally?**

○ No jobs ○ Some jobs
○ Very few jobs ○ Many jobs
○ Few jobs ○ Unknown

THANK YOU FOR COMPLETING THIS IMPORTANT SURVEY.

PLEASE DO NOT WRITE IN THIS AREA

SERIAL #

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Dr. Armstrong oversees CHWS projects which monitor the supply and distribution of the health workforce in New York and other states. In collaboration with professional health organizations in the state, he also administers provider recruitment and retention surveys to monitorhealth workforce demand. Dr. Armstrong also is the director of the Health Workforce Technical Assistance Center, which provides technical assistance to individuals, hospitals, and various states and organizations.

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