2011

Trends in Demand for New Physicians, 2005-2010

A Summary of Demand Indicators for 35 Physician Specialties

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

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September 2011

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ACKNOWLEDGEMENTS

This report was prepared by David P. Armstrong and Gaetano J. Forte of the Center for Health Workforce Studies. The authors wish to acknowledge the editing efforts of Lyrysa Smith. Funding for the 2010 Resident Exit Survey and analysis was provided by the New York State Department of Health. The Center would like to express its 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.

BACKGROUND

The Center for Health Workforce Studies conducts an annual survey of all physicians completing a residency or fellowship training program in New York (the Resident Exit Survey). The survey instrument (see Appendix B) was developed by the Center in consultation with teaching hospitals in New York. The survey provides the medical education community with valuable information on outcomes of training and demand for new physicians in different specialties.

Each spring, the Center distributes the surveys to Graduate Medical Education (GME) directors and administrators at teaching hospitals in New York. In most cases, surveys are then forwarded to individual GME departments at each hospital which assume responsibility for having graduating residents and fellows fill out the surveys in the weeks prior to program completion. The surveys are then returned to the Center for data entry and analysis.

The year 2010 marked the eleventh year of the survey. Through the excellent collaboration of teaching hospitals throughout the state***, an aggregated total of 32,695 of the 52,513 graduates have completed the survey (62% response rate)*** for the eleven years the survey has been conducted (1998, 1999, 2000, 2001, 2002, 2003, 2005, 2007, 2008, 2009, and 2010). Many of the questions on the Resident Exit Survey are designed to assess demand for physicians in general, and by specialty. In any given year, the Resident Exit Survey provides a snapshot of the physician marketplace at a specific point in time. By conducting the survey on a regular basis, trends may be observed which are useful in projecting future supply and demand.

This data book presents profiles for 35 specialties. Each specialty profile summarizes trends in five 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 2005 to 2010). 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 U.S. in the specialty from 2000 to 2009. Definitions of the five areas are as follows:

- Starting income: The median starting income of survey respondents with confirmed plans to enter patient care/clinical practice in the U.S. following completion of their training program. Starting incomes included respondents' base salaries plus their expected incentive/bonus income. Furthermore, starting incomes were adjusted for inflation to reflect 2010 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 a 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 U.S.: 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.

KEY FINDINGS

For the second consecutive year the job market for new physicians was weaker when compared to the previous year, but overall the market continues to be good. With the exception of the last two years, analysis of trends in variables pertaining to the physician job market revealed that opportunities for physicians entering practice in most specialties have improved or remained stable over the period the Center has been conducting this survey.

In 2010, demand for primary care physicians (generalists) was stronger than the demand for non-primary care physicians (specialists).[*] Historically, resident exit survey data showed that demand for generalists has been lower compared to demand for specialists. Over the past few years, however, demand for generalist has surpassed demand for specialists. In 2010, 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:

- Strongest relative demand: urology, otolaryngology, family medicine, gastroenterology, dermatology, general anesthesiology, and emergency medicine.

- Weakest relative demand: cardio-thoracic surgery, plastic surgery, nephrology, infectious disease, pathology, and ophthalmology.

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.

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

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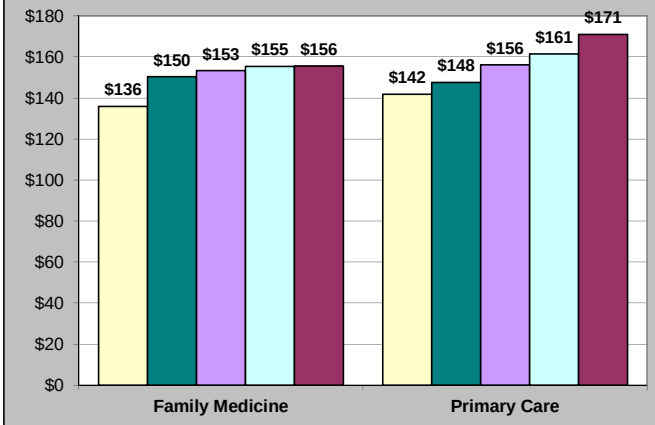
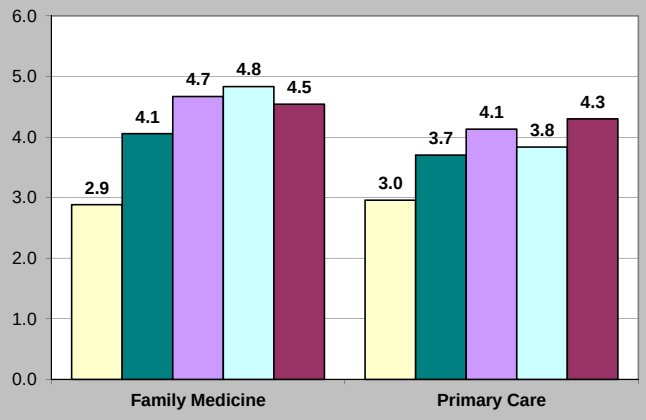
Specialty: Family Medicine

Legend: 2005 2007 2008 2009 2010

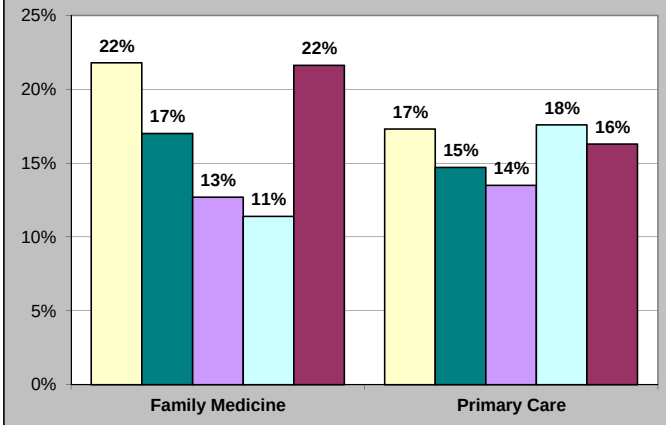
Trends in Median Starting Income,* 2005 - 2010 (in $1,000s of 2010 dollars)



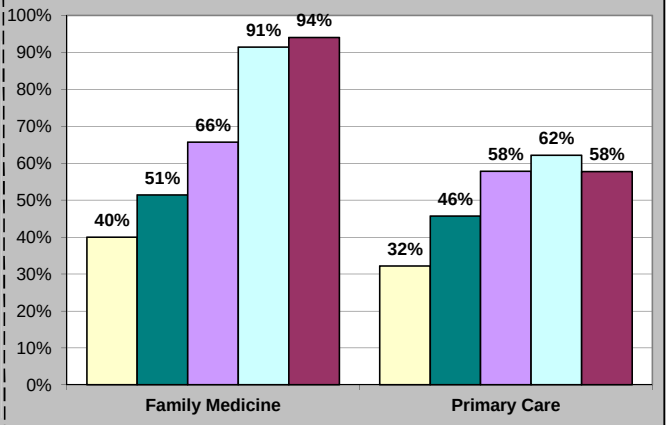
Trends in Mean Number of Job Offers Received,* 2005 - 2010



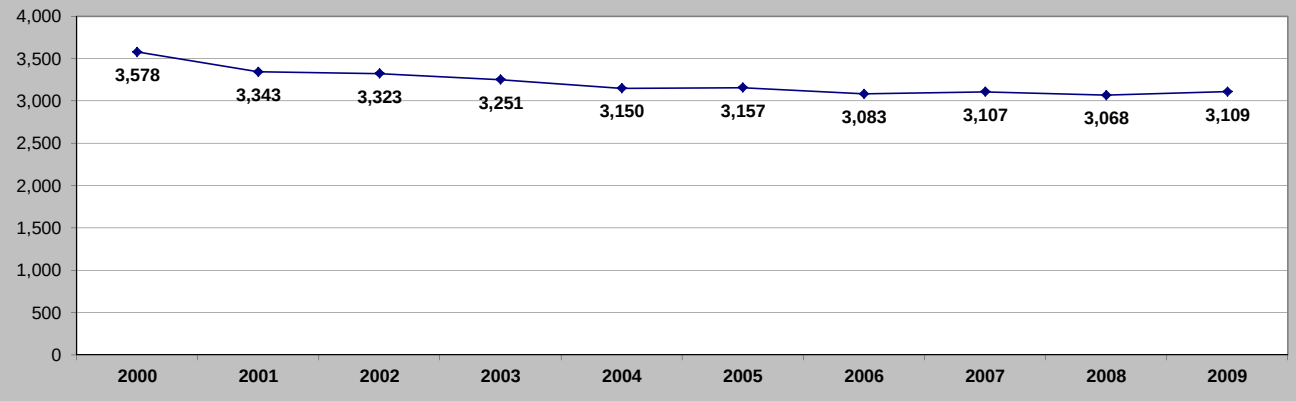
Trends in Having to Change Plans Due to Limited Practice Opportunities,* 2005 - 2010



Trends in Relative Demand* - Percentile Rank of Family Medicine, 2005 - 2010



Trends in Number of Graduates of Allopathic Family Medicine GME Programs in the U.S.,** 2000 - 2009

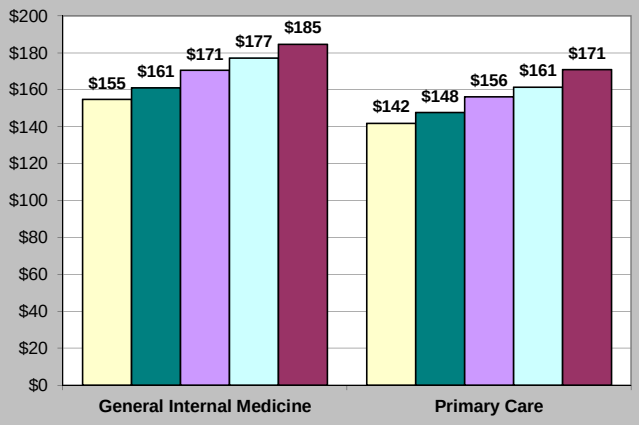


Number of responses: 2005: n = 92, 2007: n = 56, 2008: n = 84, 2009: n = 80, 2010: n = 83.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: General Internal Medicine

Legend: 2005 2007 2008 2009 2010

Trends in Median Starting Income,* 2005 - 2010 (in $1,000s of 2010 dollars)



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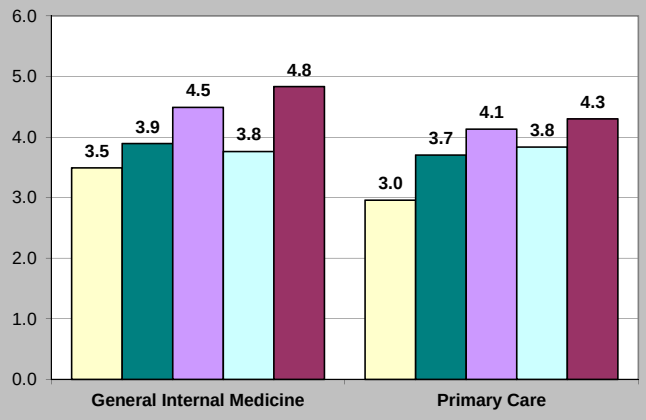

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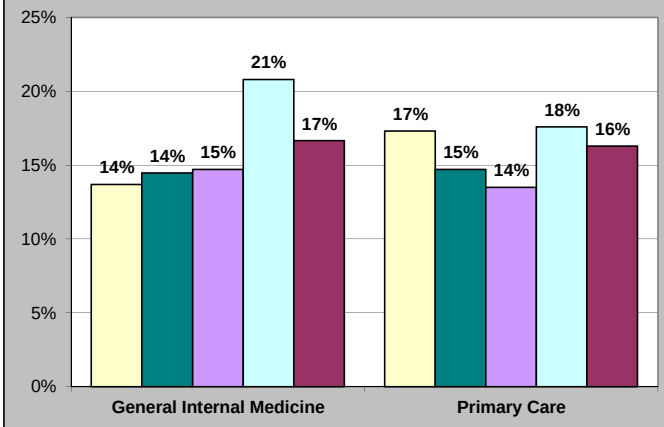
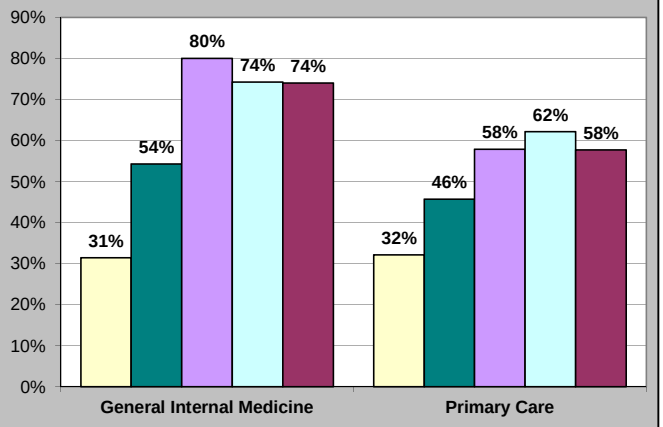
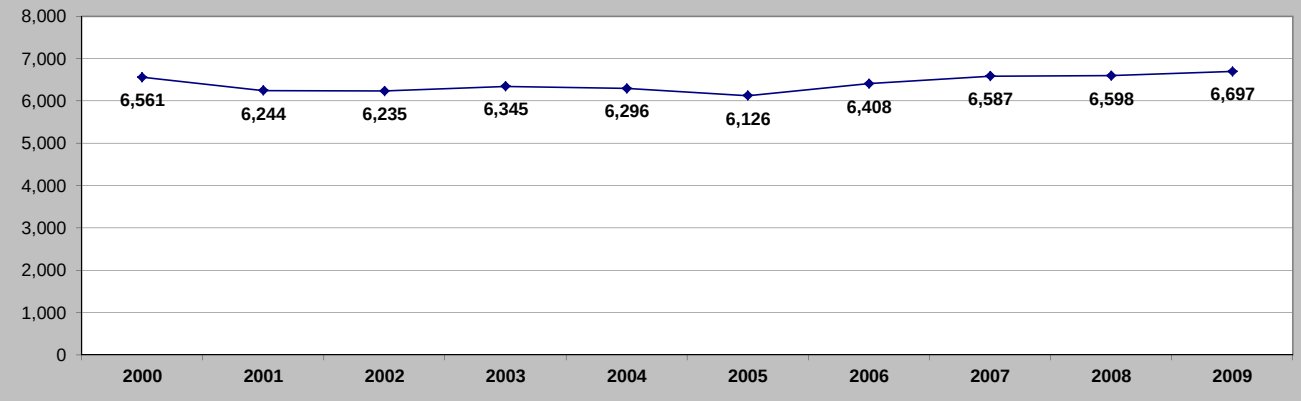


Trends in Relative Demand* - Percentile Rank of General Internal Medicine, 2005 - 2010



Trends in Number of Graduates of Allopathic General Internal Medicine GME Programs in the U.S.,** 2000 - 2009

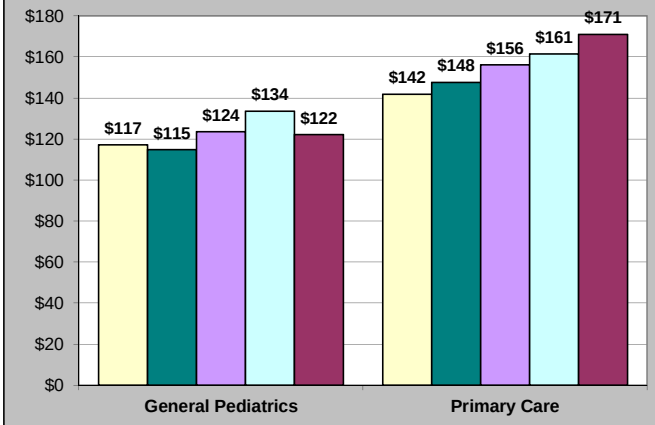


Number of responses: 2005: n = 177, 2007: n = 180, 2008: n = 202, 2009: n = 204, 2010: n = 215.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

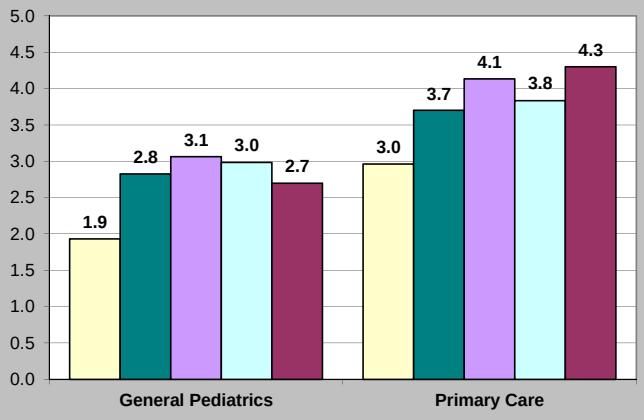
Specialty: General Pediatrics

Legend: 2005 2007 2008 2009 2010

Trends in Median Starting Income, 2005 - 2010 (in $1,000s of 2010 dollars)*



Trends in Mean Number of Job Offers Received, 2005 - 2010*



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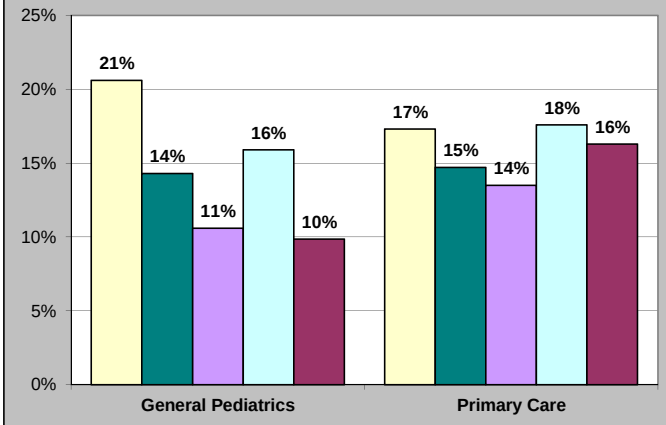
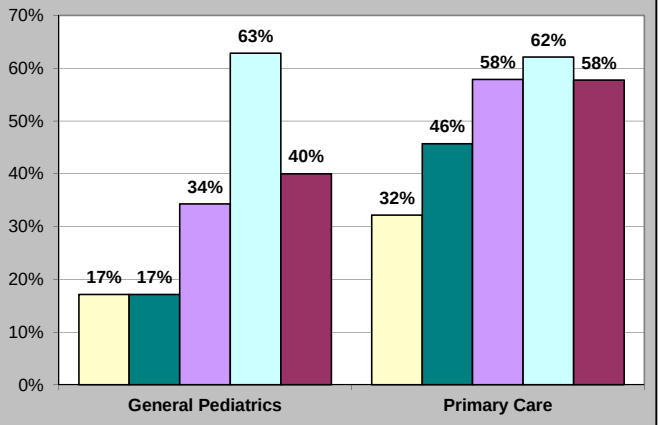
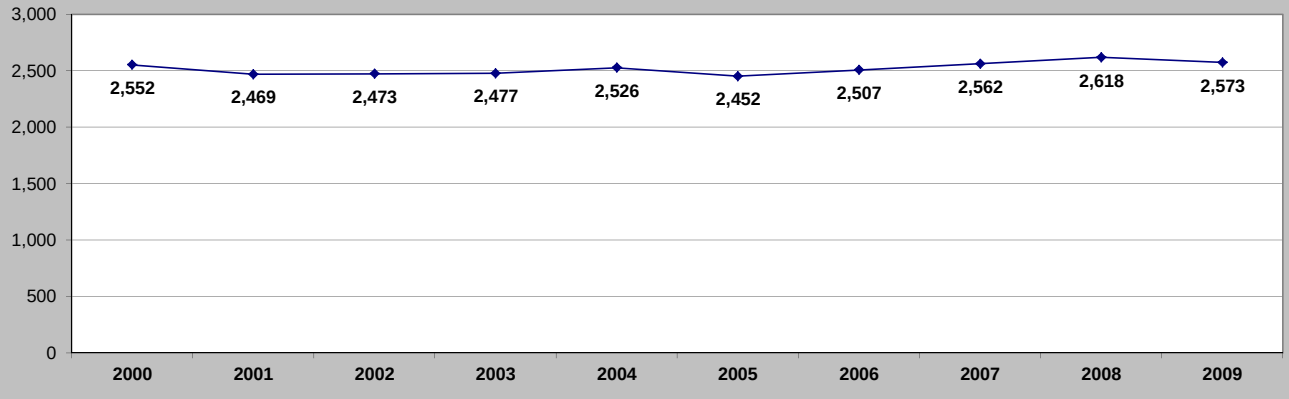


Trends in Relative Demand - Percentile Rank of General Pediatrics, 2005 - 2010*



*Trends in Number of Graduates of Allopathic General Pediatrics GME Programs in the U.S.,** 2000 - 2009

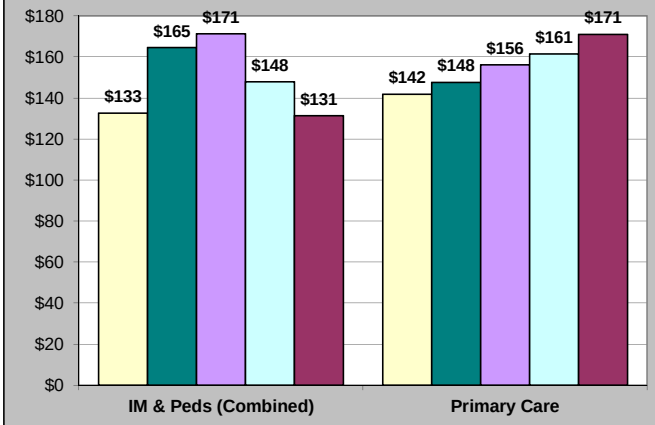


Number of responses: 2005: n = 78, 2007: n = 78, 2008: n = 114, 2009: n = 76, 2010: n = 86.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: IM & Peds (Combined)

Legend: 2005 2007 2008 2009 2010

Trends in Median Starting Income,* 2005 - 2010 (in $1,000s of 2010 dollars)



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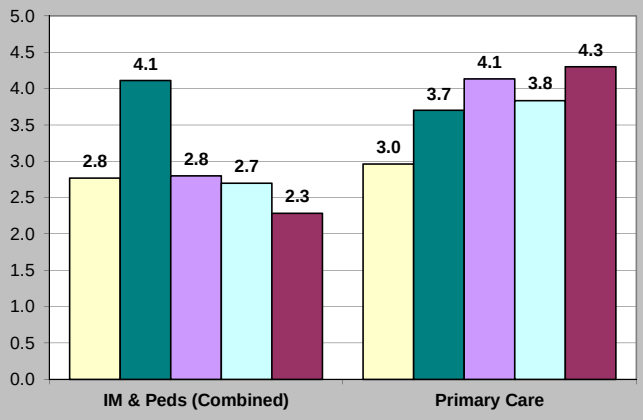

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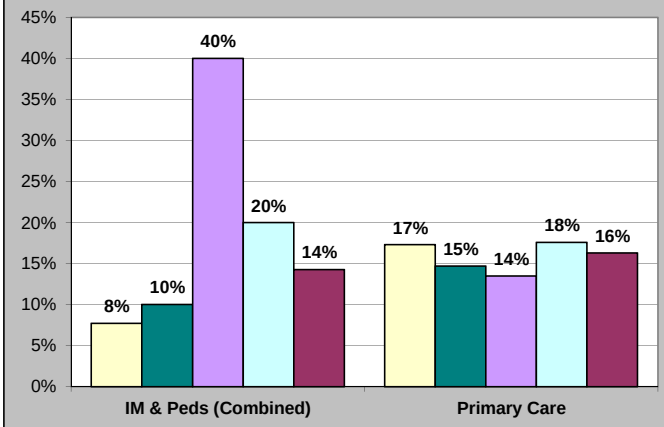
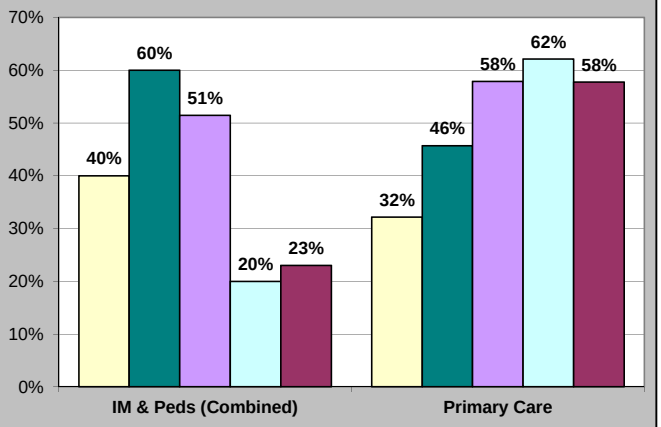
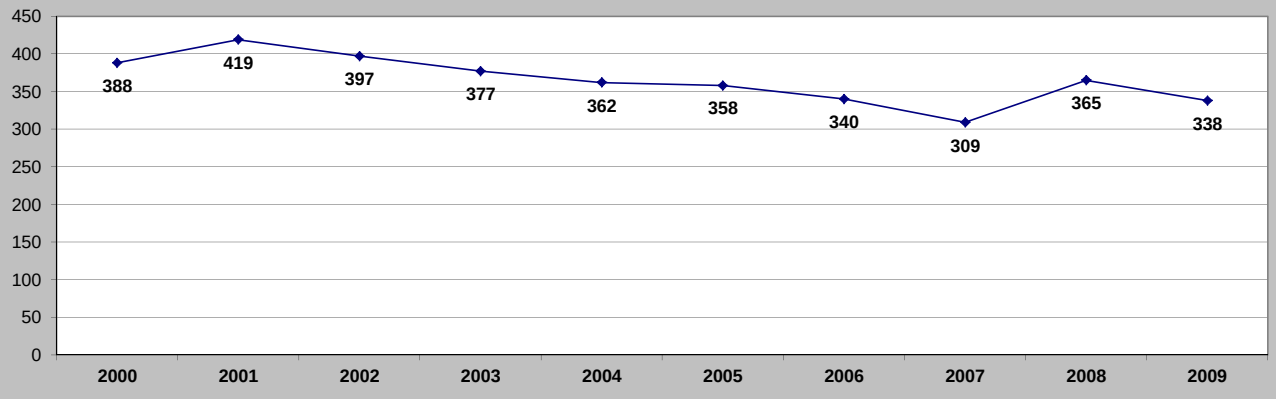


Trends in Relative Demand* - Percentile Rank of IM & Peds (Combined), 2005 - 2010



Trends in Number of Graduates of Allopathic IM & Peds (Combined) GME Programs in the U.S.,** 2000 - 2009

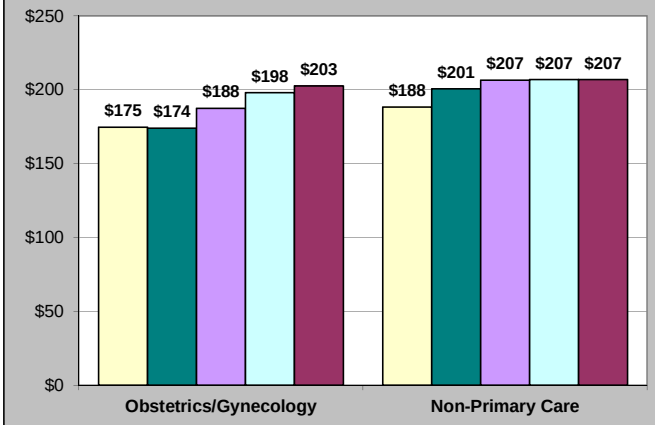


Number of responses: 2005: n = 16, 2007: n = 12, 2008: n = 7, 2009: n = 10, 2010: n = 9.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Obstetrics/Gynecology

Legend: 2005 2007 2008 2009 2010

Trends in Median Starting Income, 2005 - 2010 (in $1,000s of 2010 dollars)*



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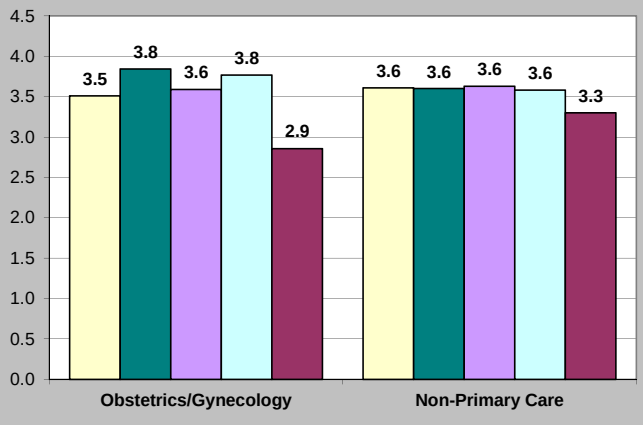

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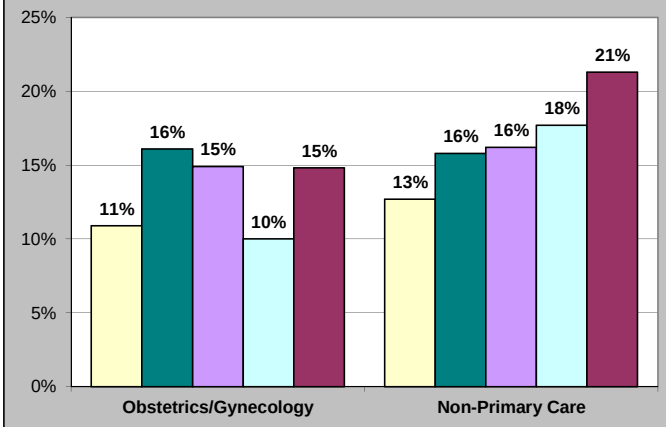
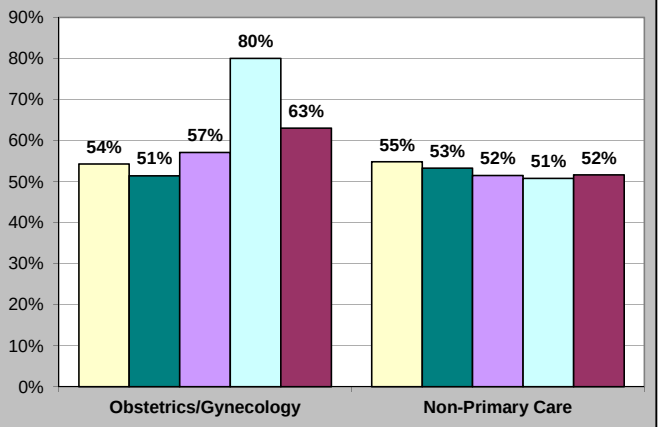
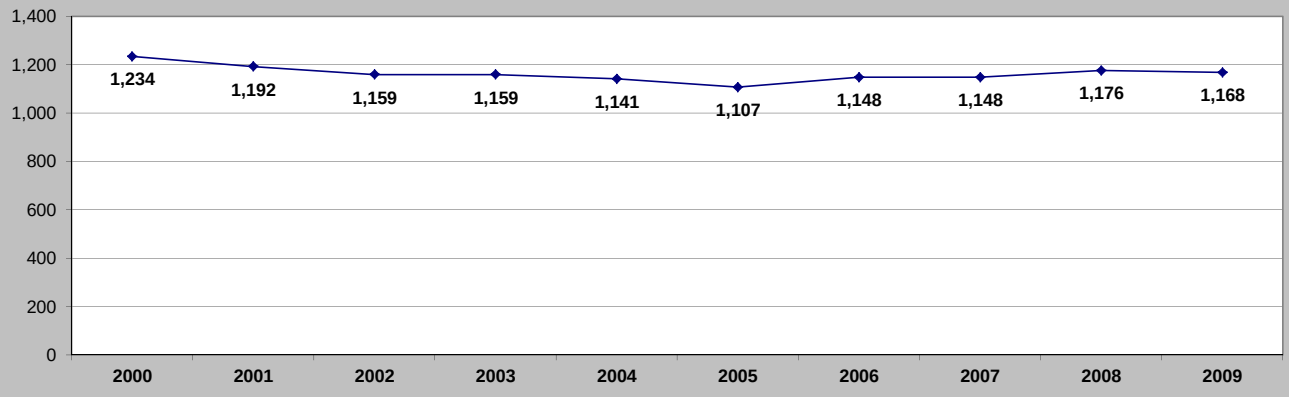


Trends in Relative Demand - Percentile Rank of Obstetrics/Gynecology, 2005 - 2010*



*Trends in Number of Graduates of Allopathic Obstetrics/Gynecology GME Programs in the U.S.,** 2000 - 2009



Number of responses: 2005: n = 63, 2007: n = 62, 2008: n = 76, 2009: n = 54, 2010: n = 94.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

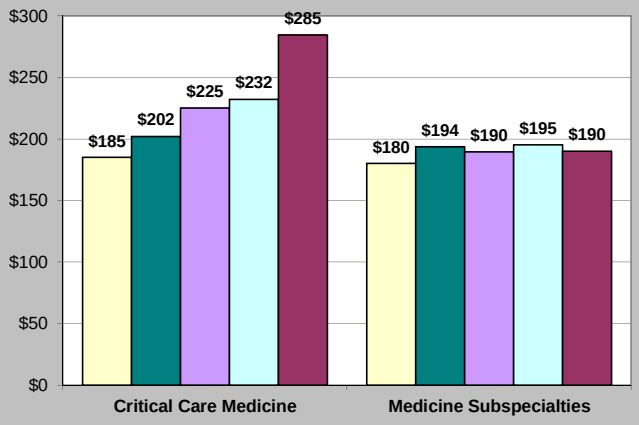
Specialty: Cardiology

Number of responses: 2005: n = 42, 2007: n = 48, 2008: n = 47, 2009: n = 63, 2010: n = 48.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Critical Care Medicine

Legend: 2005 2007 2008 2009 2010

Trends in Median Starting Income,* 2005 - 2010 (in $1,000s of 2010 dollars)



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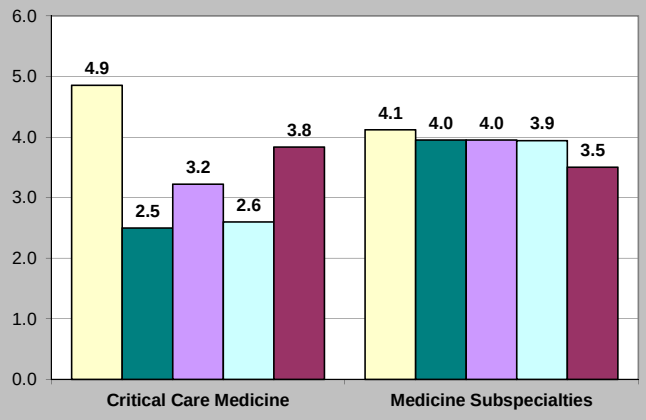

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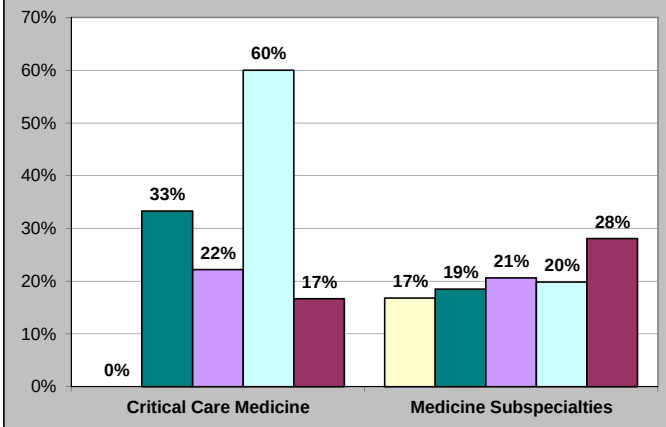
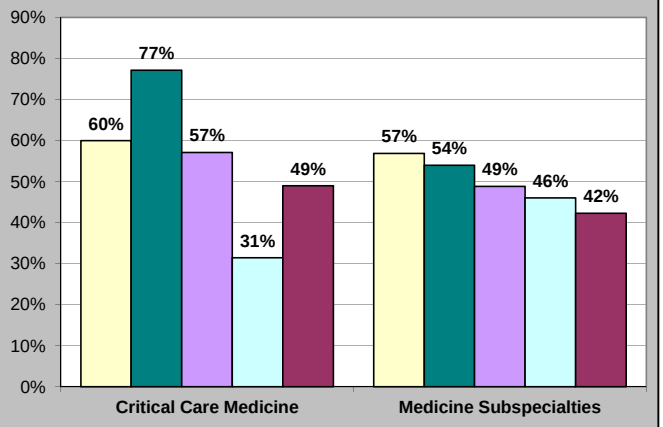
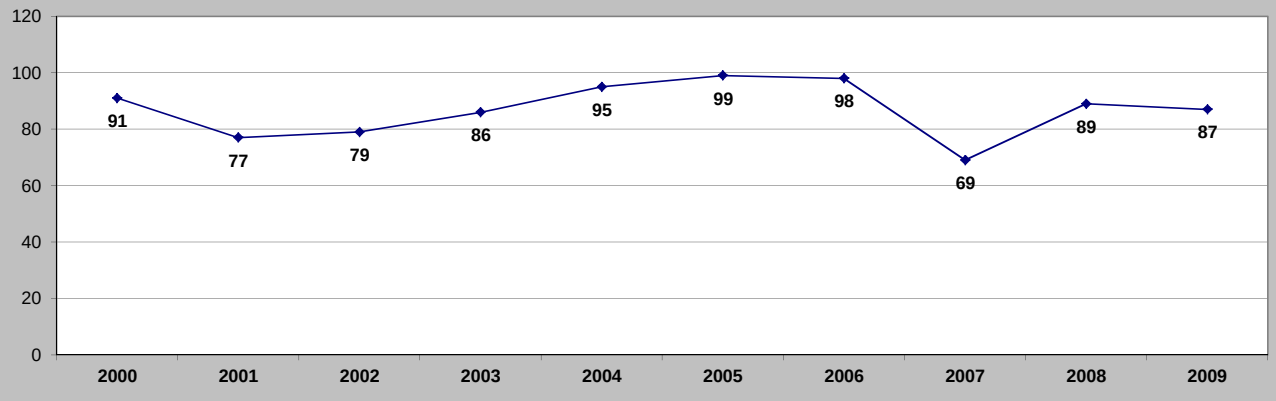


Trends in Relative Demand* - Percentile Rank of Critical Care Medicine, 2005 - 2010

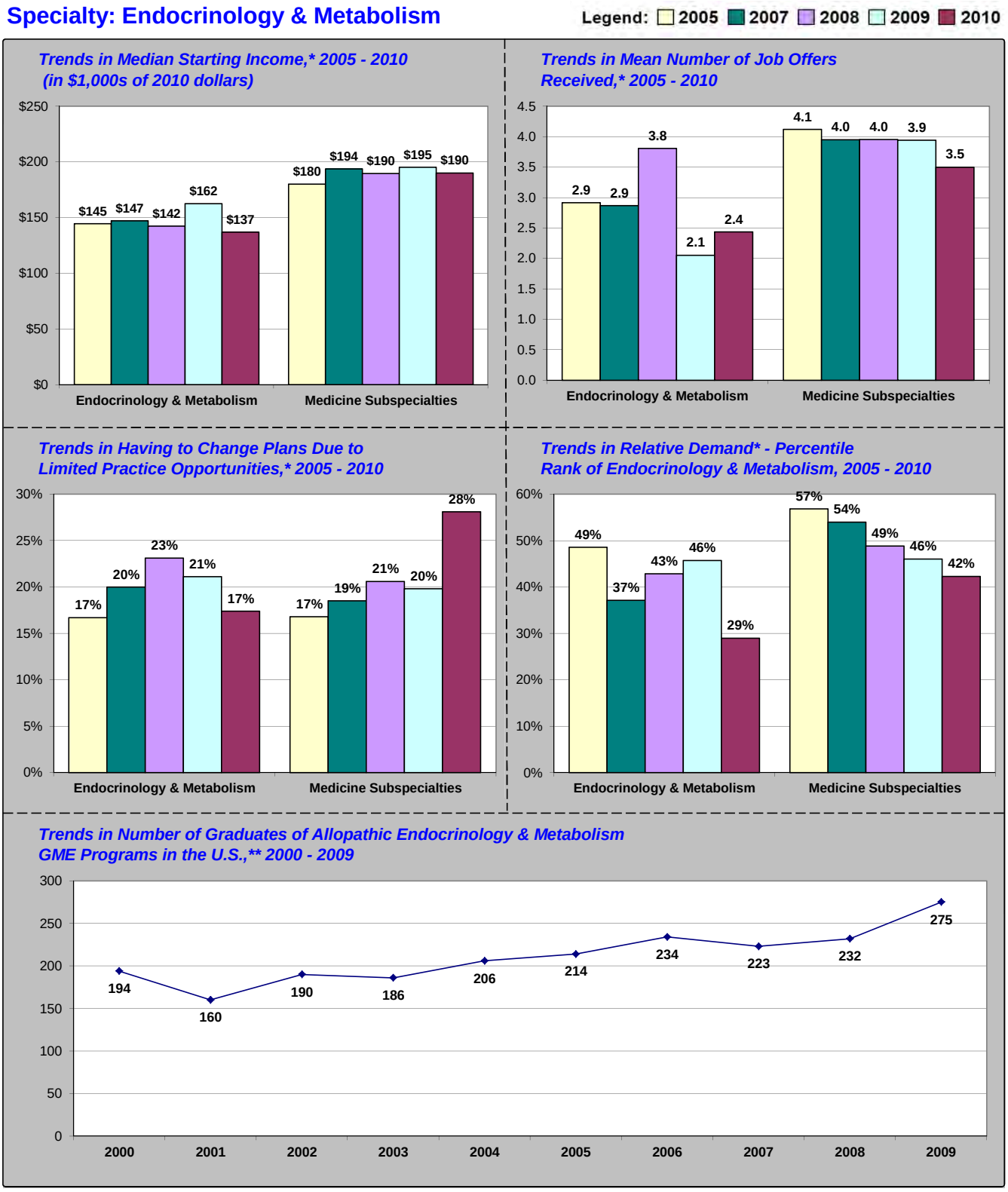


Trends in Number of Graduates of Allopathic Critical Care Medicine GME Programs in the U.S.,** 2000 - 2009



Number of responses: 2005: n = 7, 2007: n = 7, 2008: n = 10, 2009: n = 5, 2010: n = 7.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Endocrinology & Metabolism

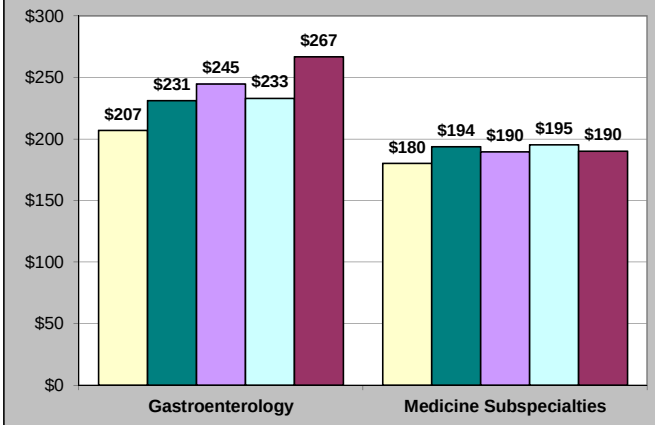


Number of responses: 2005: n = 13, 2007: n = 15, 2008: n = 27, 2009: n = 20, 2010: n = 23.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues*, 2000 - 2009.

Specialty: Gastroenterology

Legend: 2005 2007 2008 2009 2010

Trends in Median Starting Income,* 2005 - 2010 (in $1,000s of 2010 dollars)



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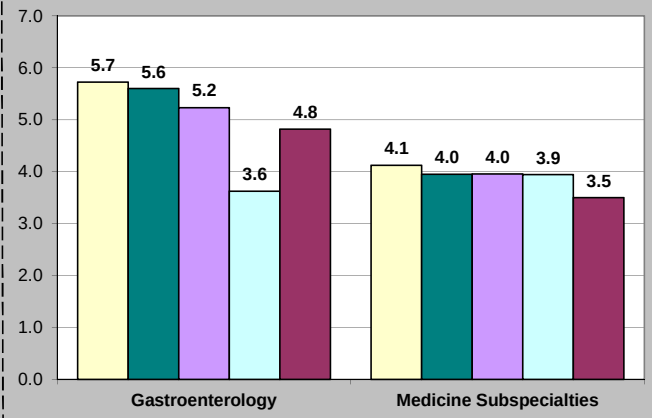

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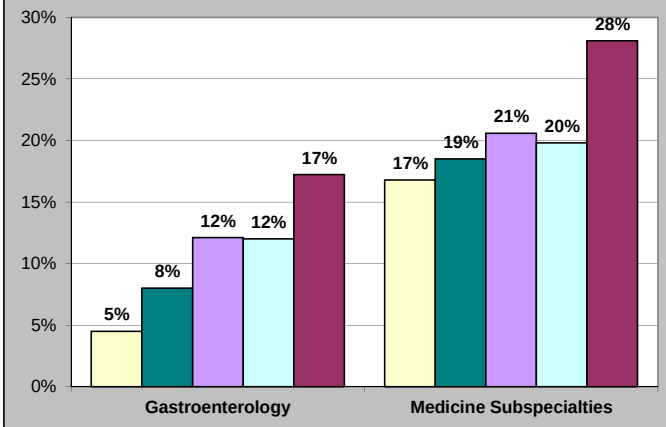
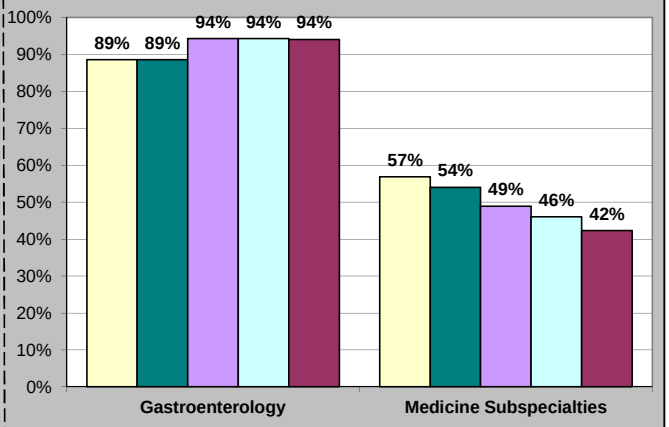


Trends in Relative Demand* - Percentile Rank of Gastroenterology, 2005 - 2010



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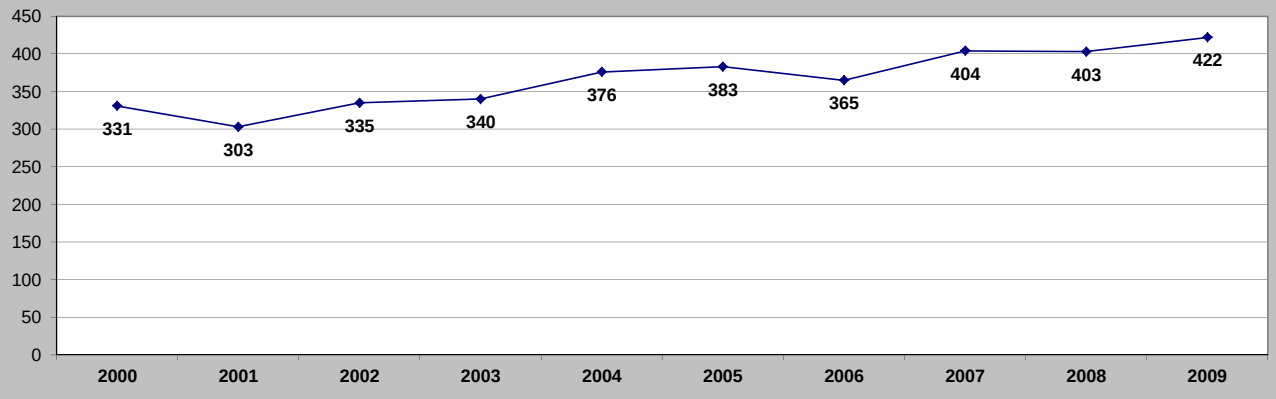
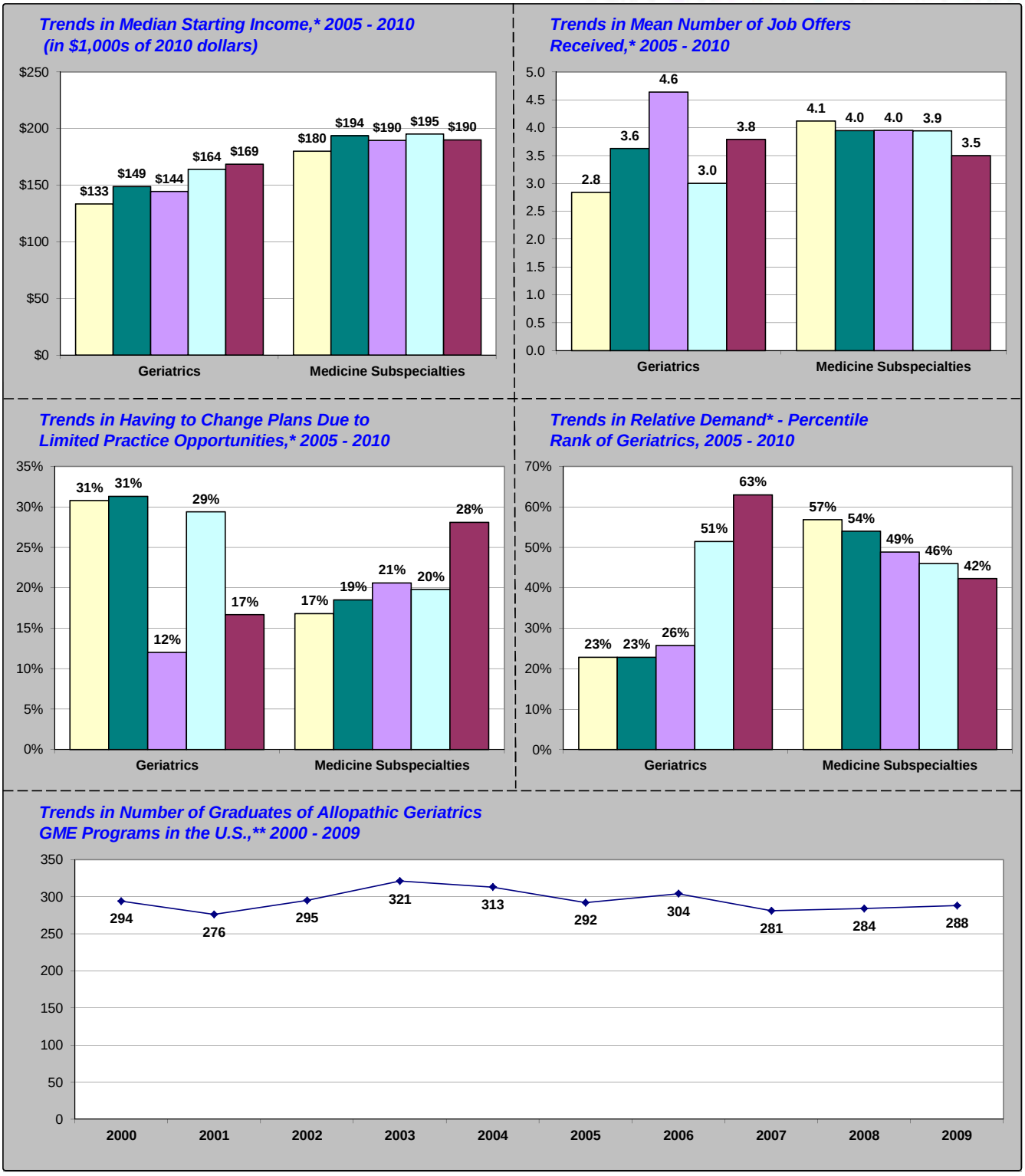


Number of responses: 2005: n = 23, 2007: n = 25, 2008: n = 35, 2009: n = 25, 2010: n = 30.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Geriatrics

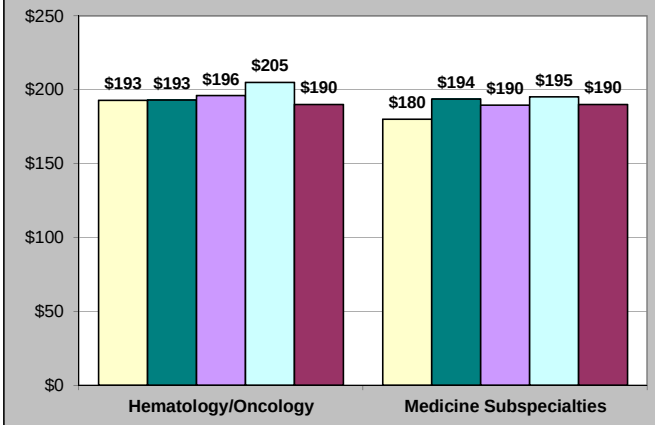


Number of responses: 2005: n = 26, 2007: n = 16, 2008: n = 27, 2009: n = 17, 2010: n = 19.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues*, 2000 - 2009.

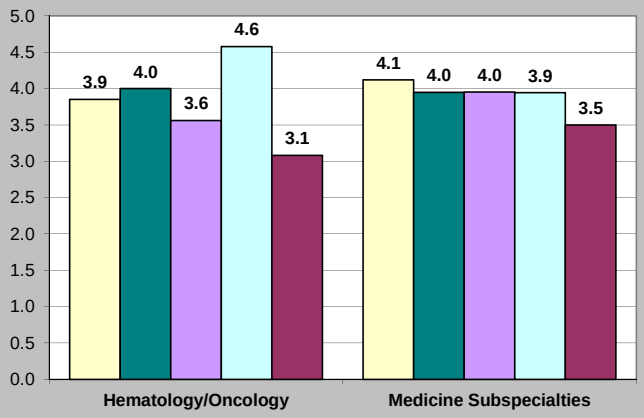
Specialty: Hematology/Oncology

Legend: 2005 2007 2008 2009 2010

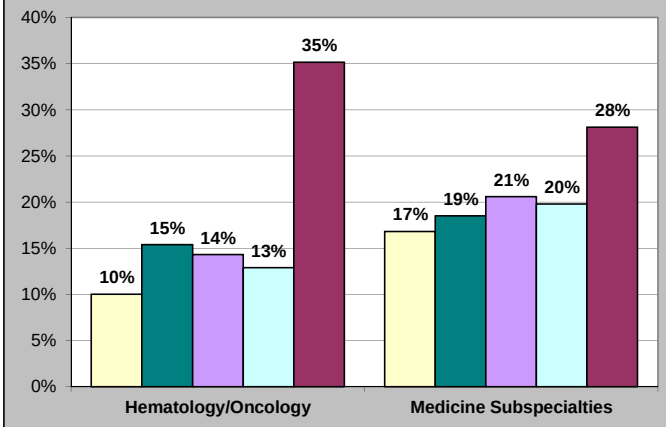
Trends in Median Starting Income,* 2005 - 2010 (in $1,000s of 2010 dollars)



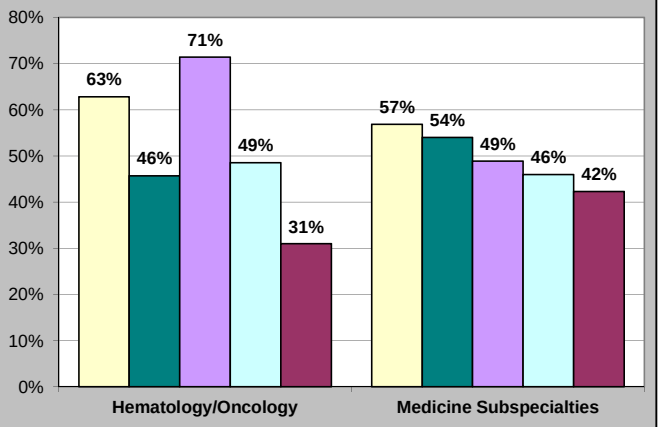
Trends in Mean Number of Job Offers Received,* 2005 - 2010



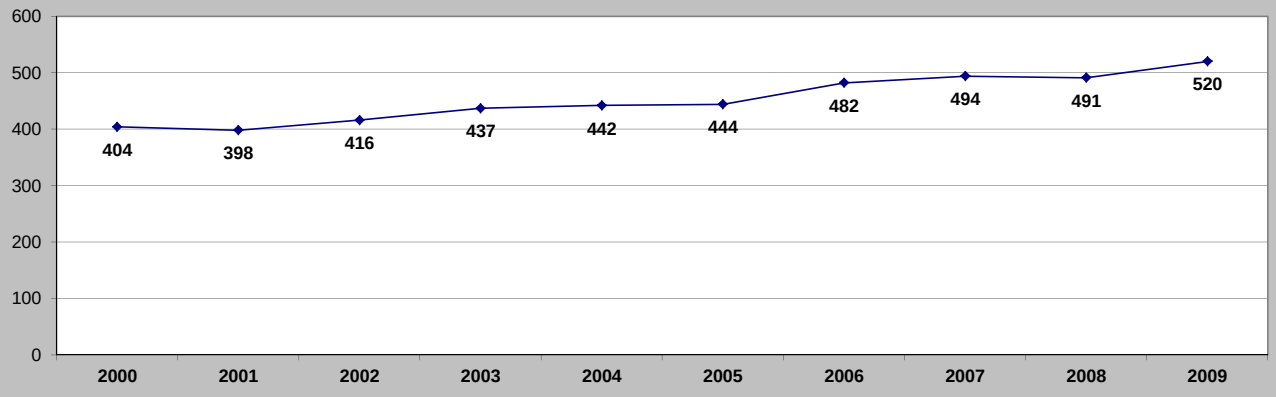
Trends in Having to Change Plans Due to Limited Practice Opportunities,* 2005 - 2010



Trends in Relative Demand* - Percentile Rank of Hematology/Oncology, 2005 - 2010



Trends in Number of Graduates of Allopathic Hematology/Oncology GME Programs in the U.S.,** 2000 - 2009

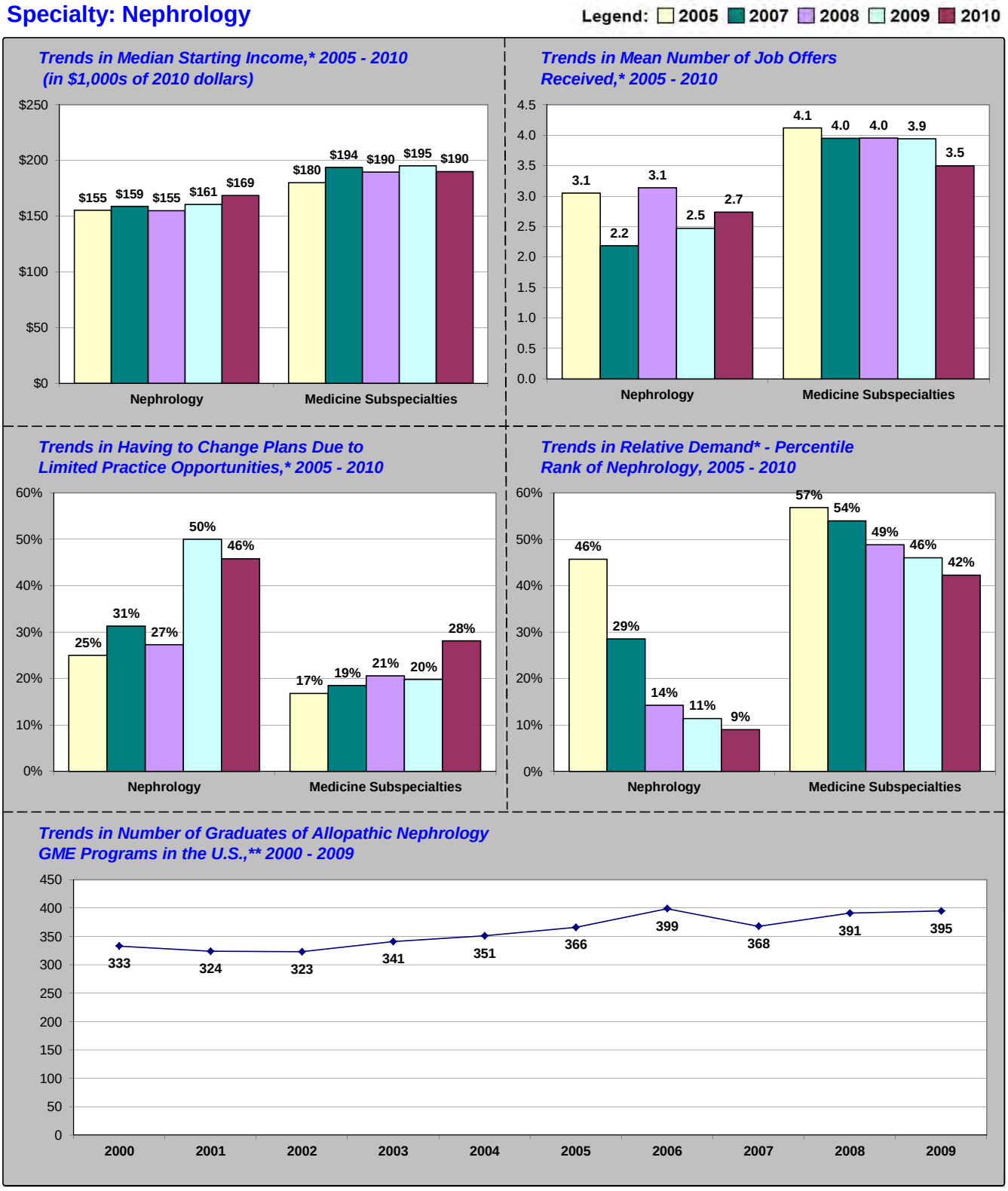


Number of responses: 2005: n = 20, 2007: n = 27, 2008: n = 37, 2009: n = 31, 2010: n = 38.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Infectious Disease

Number of responses: 2005: n = 17, 2007: n = 13, 2008: n = 14, 2009: n = 16, 2010: n = 15.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Nephrology

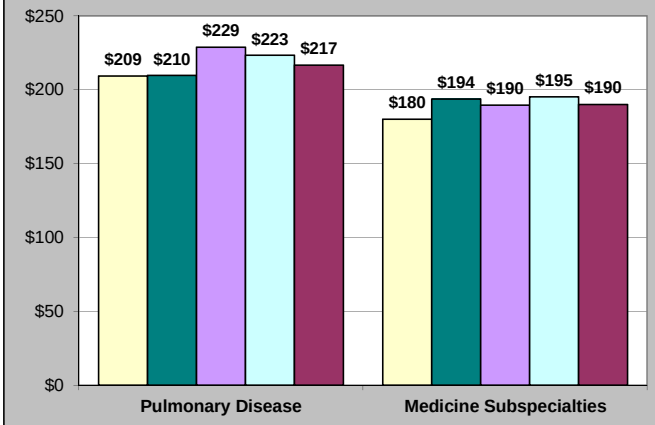


Number of responses: 2005: n = 20, 2007: n = 17, 2008: n = 22, 2009: n = 21, 2010: n = 25.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

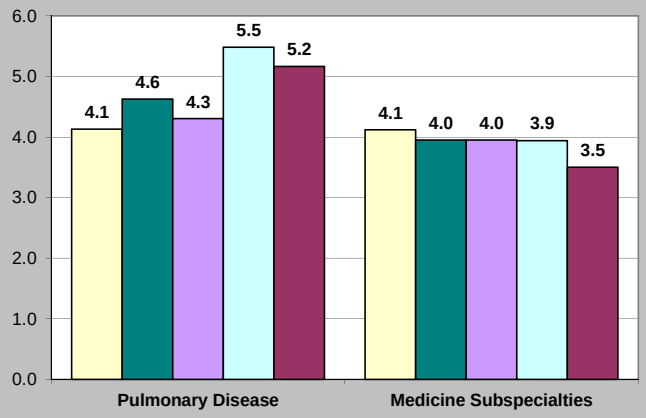
Specialty: Pulmonary Disease

Legend: 2005 2007 2008 2009 2010

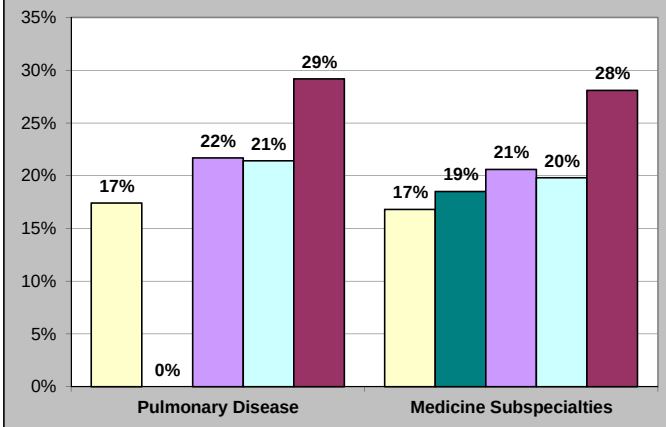
Trends in Median Starting Income,* 2005 - 2010 (in $1,000s of 2010 dollars)



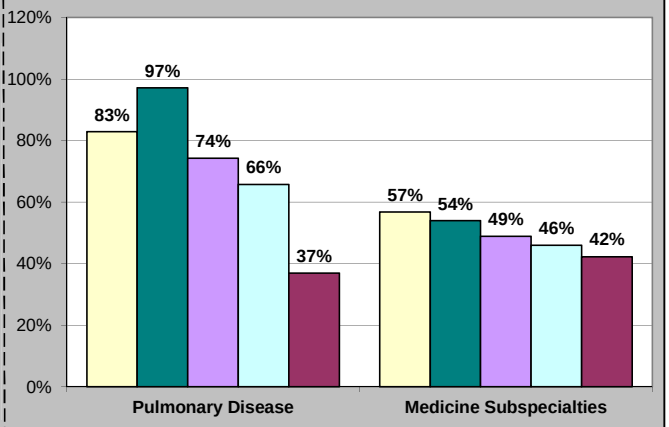
Trends in Mean Number of Job Offers Received,* 2005 - 2010



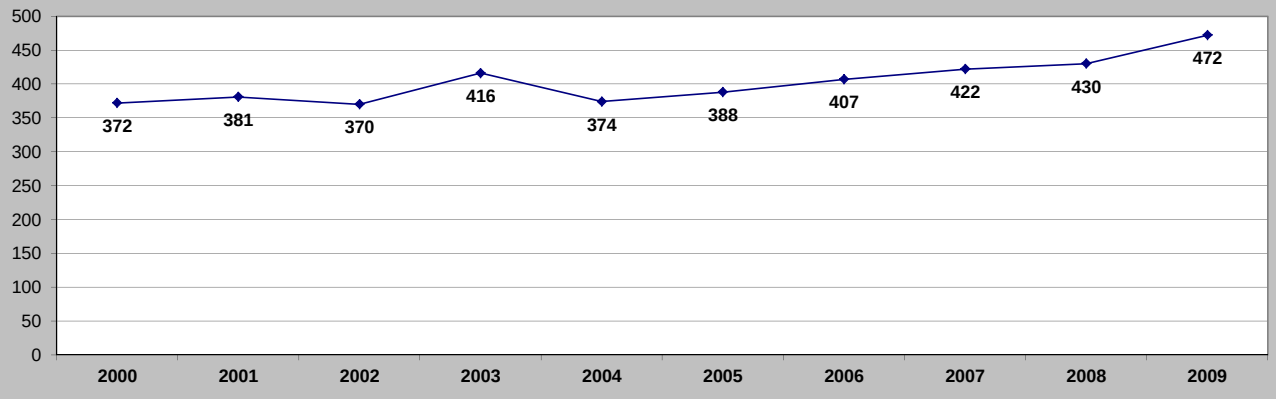
Trends in Having to Change Plans Due to Limited Practice Opportunities,* 2005 - 2010



Trends in Relative Demand* - Percentile Rank of Pulmonary Disease, 2005 - 2010

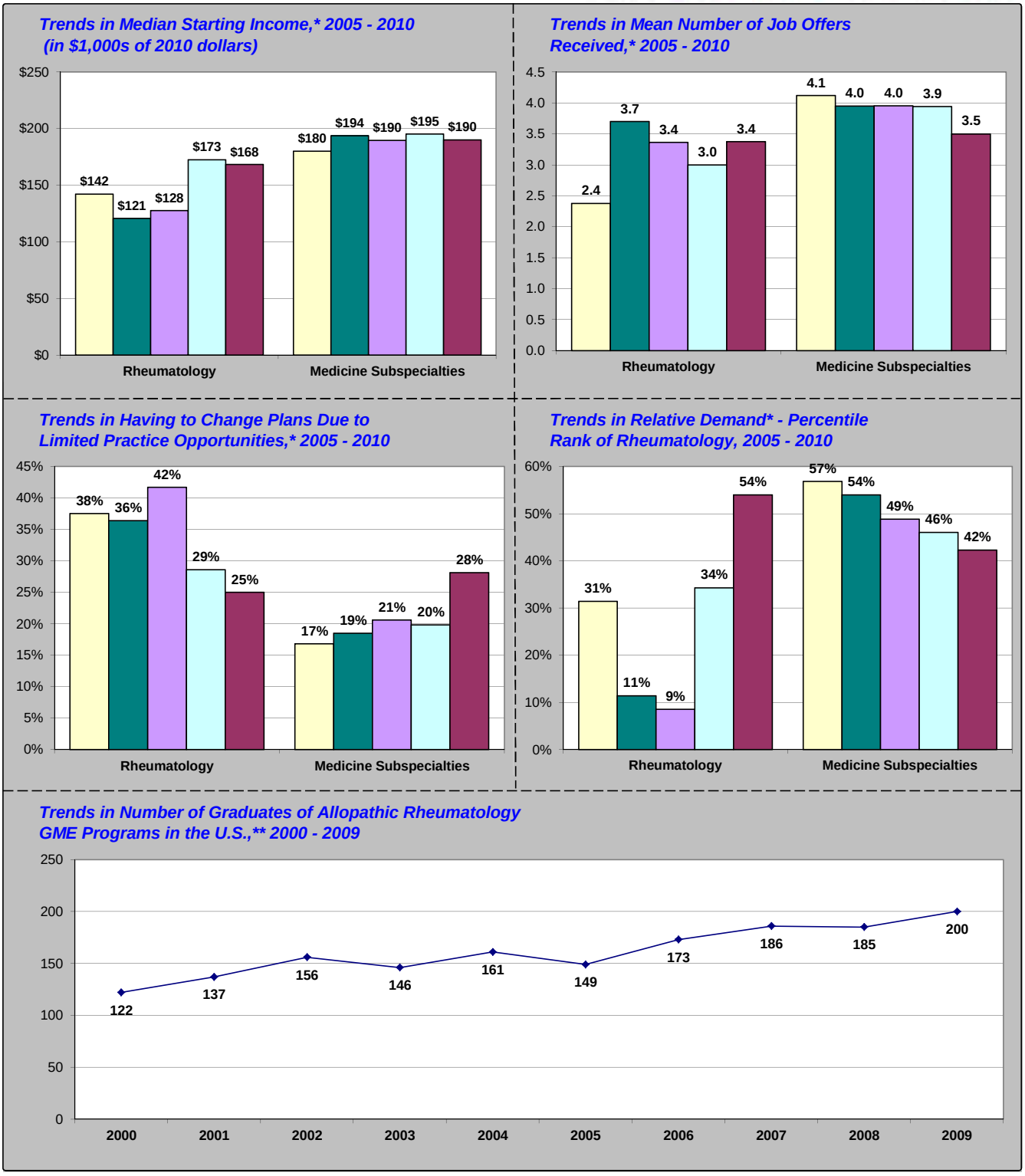


Trends in Number of Graduates of Allopathic Pulmonary Disease GME Programs in the U.S.,** 2000 - 2009



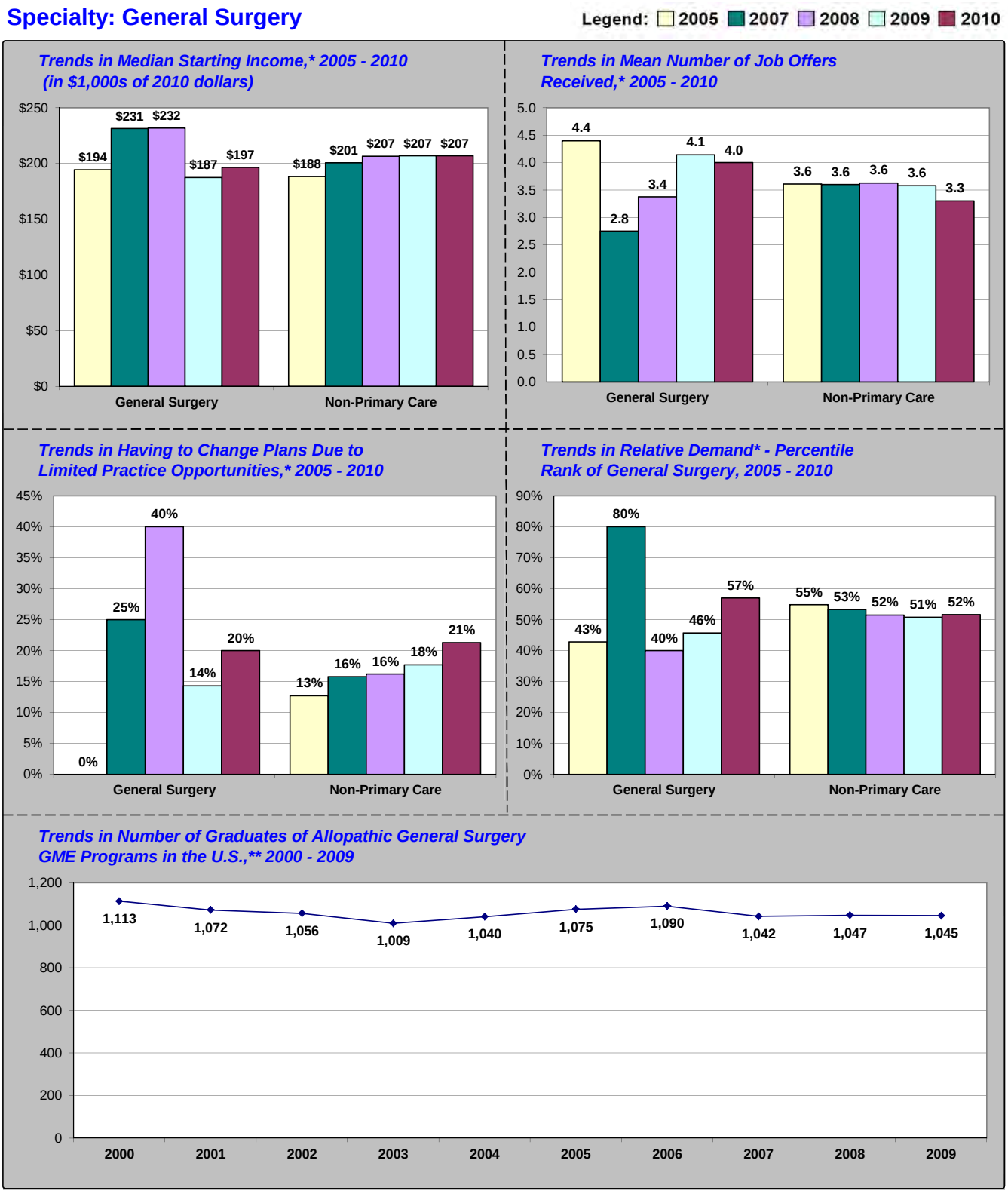
Number of responses: 2005: n = 23, 2007: n = 17, 2008: n = 25, 2009: n = 30, 2010: n = 25.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Rheumatology



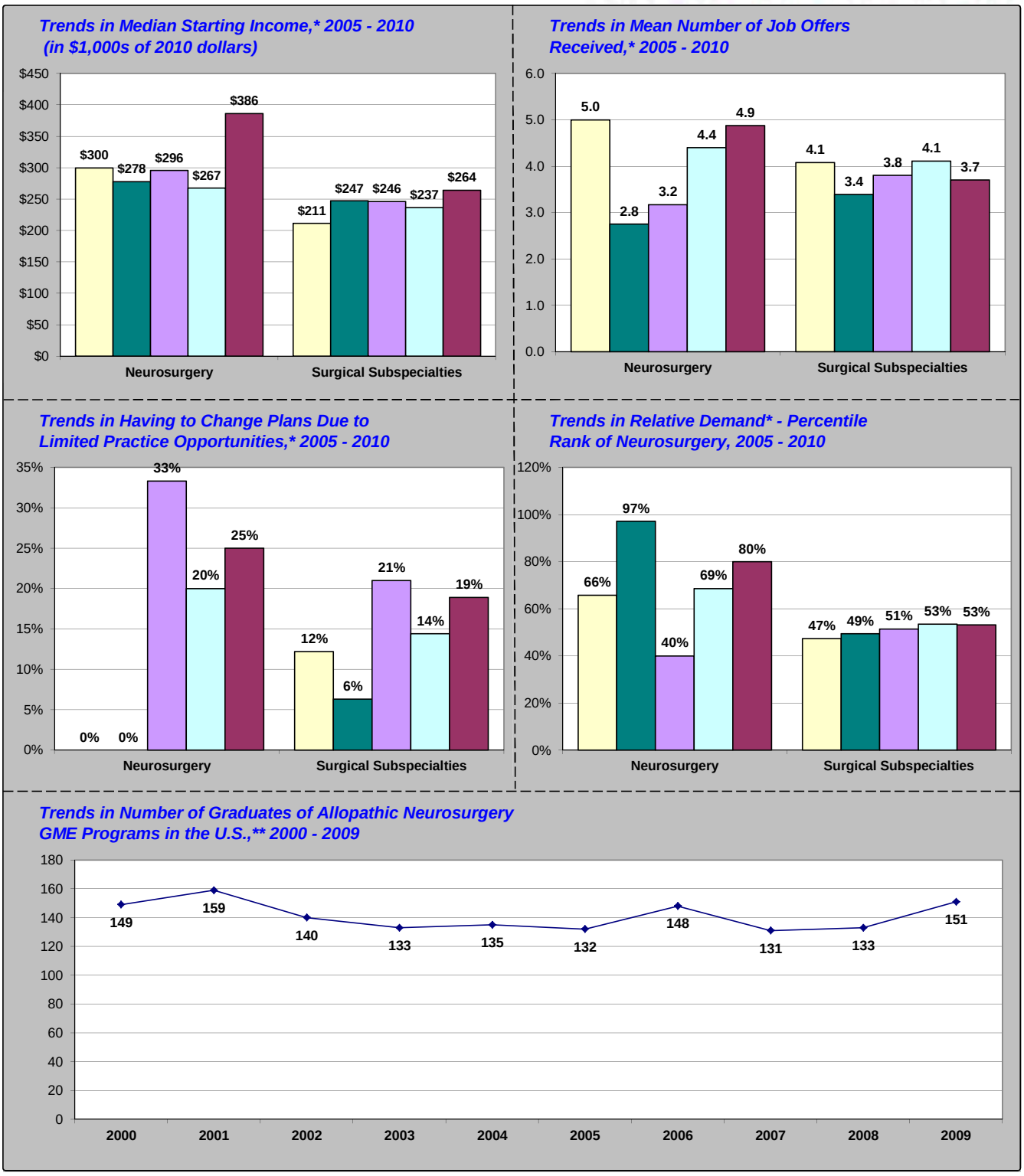
Number of responses: 2005: n = 8, 2007: n = 11, 2008: n = 13, 2009: n = 7, 2010: n = 8.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: General Surgery



Number of responses: 2005: n = 17, 2007: n = 6, 2008: n = 11, 2009: n = 16, 2010: n = 12.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Neurosurgery

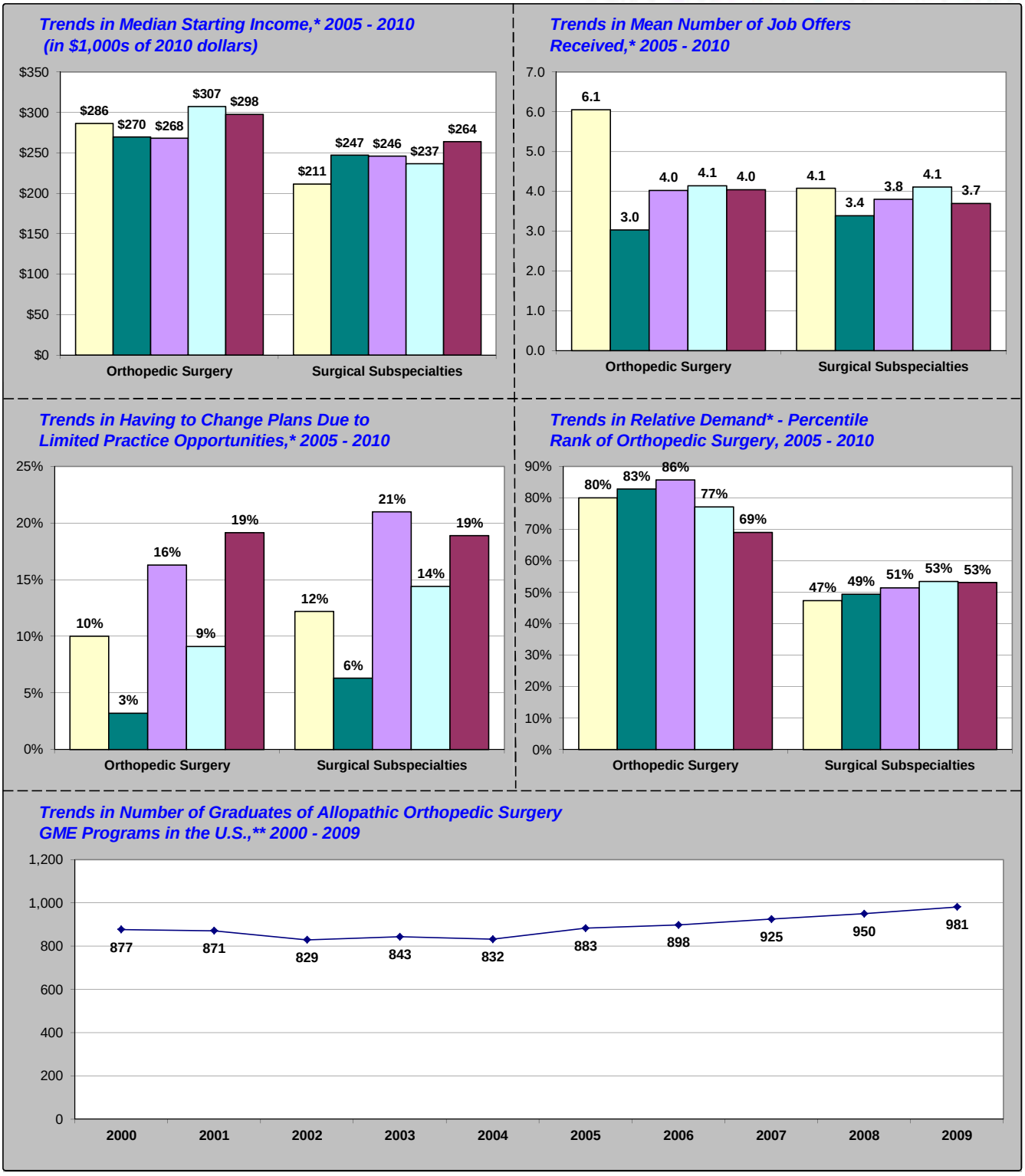


Number of responses: 2005: n = 4, 2007: n = 4, 2008: n = 6, 2009: n = 5, 2010: n = 8.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Ophthalmology

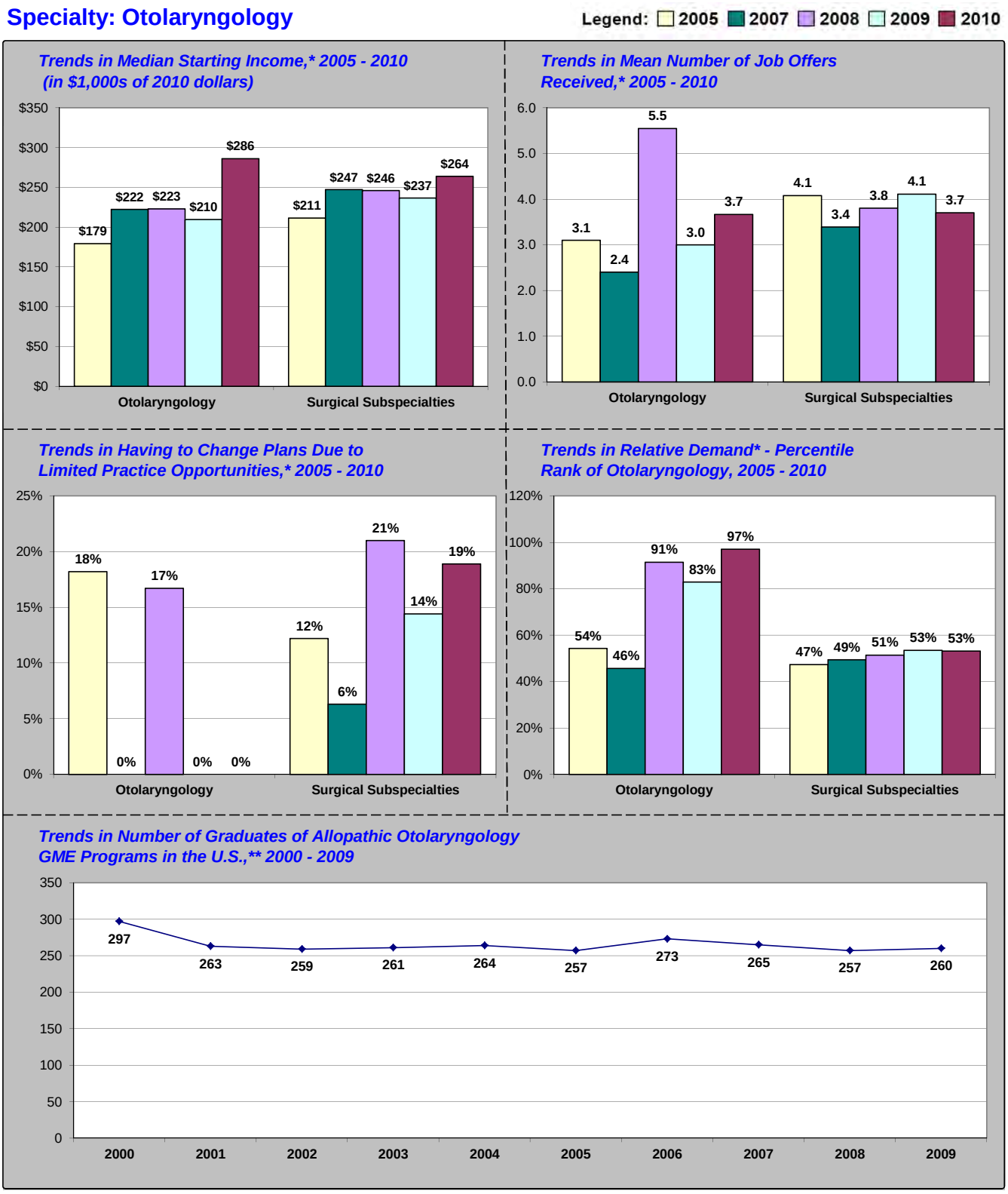
Number of responses: 2005: n = 12, 2007: n = 10, 2008: n = 11, 2009: n = 13, 2010: n = 9.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Orthopedic Surgery



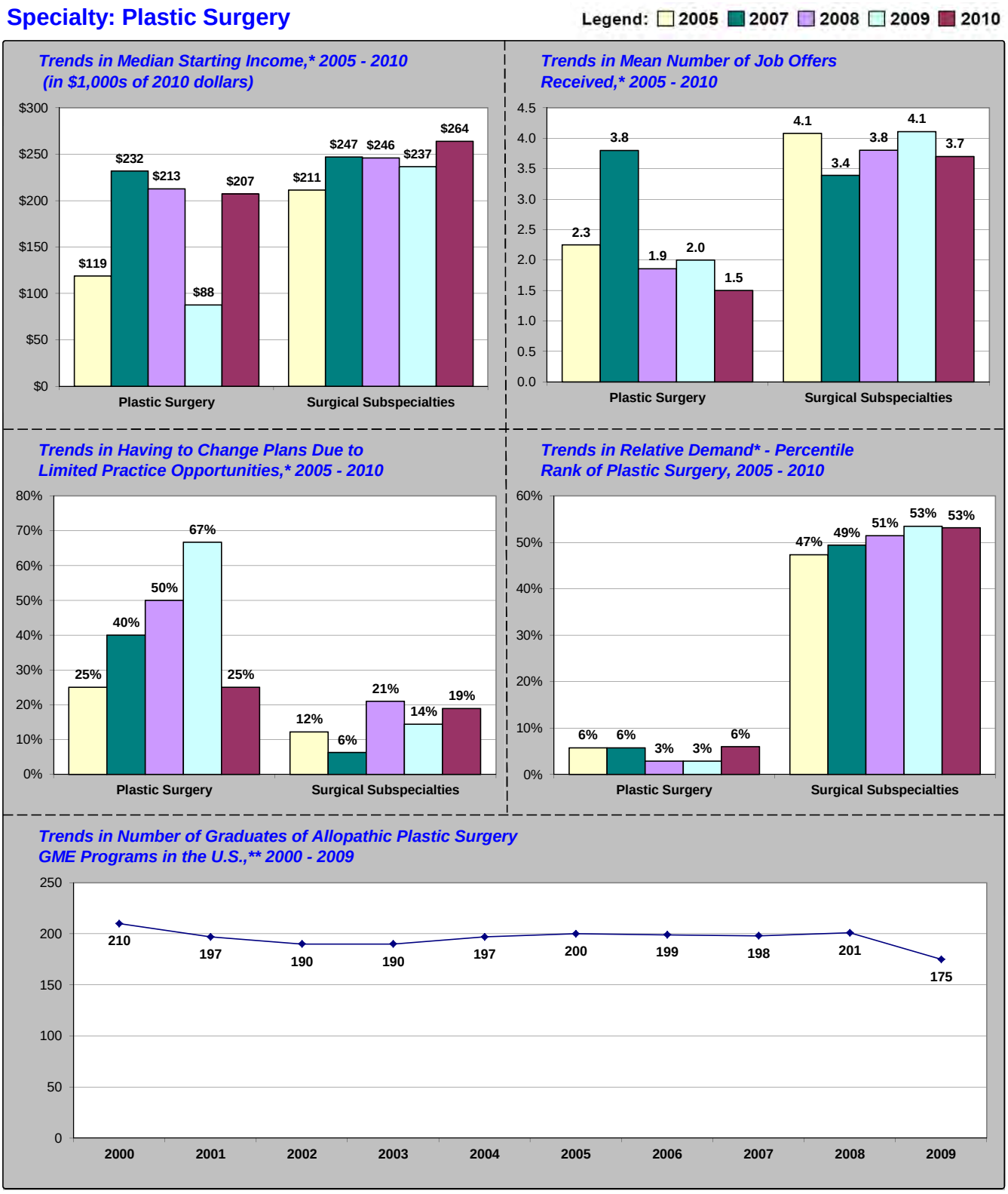
Number of responses: 2005: n = 21, 2007: n = 33, 2008: n = 52, 2009: n = 47, 2010: n = 47.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues*, 2000 - 2009.

Specialty: Otolaryngology



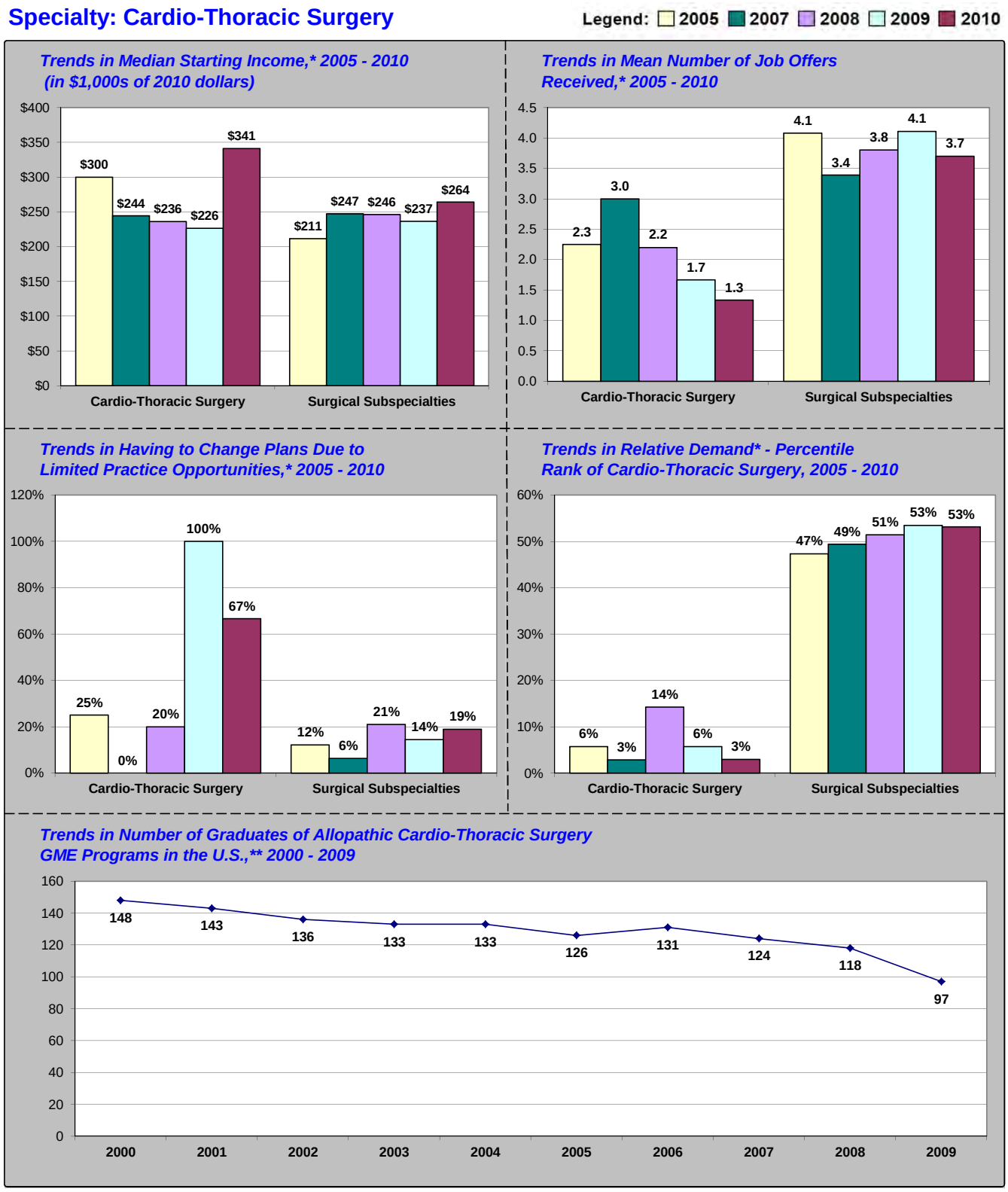
Number of responses: 2005: n = 11, 2007: n = 5, 2008: n = 12, 2009: n = 11, 2010: n = 6.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Plastic Surgery



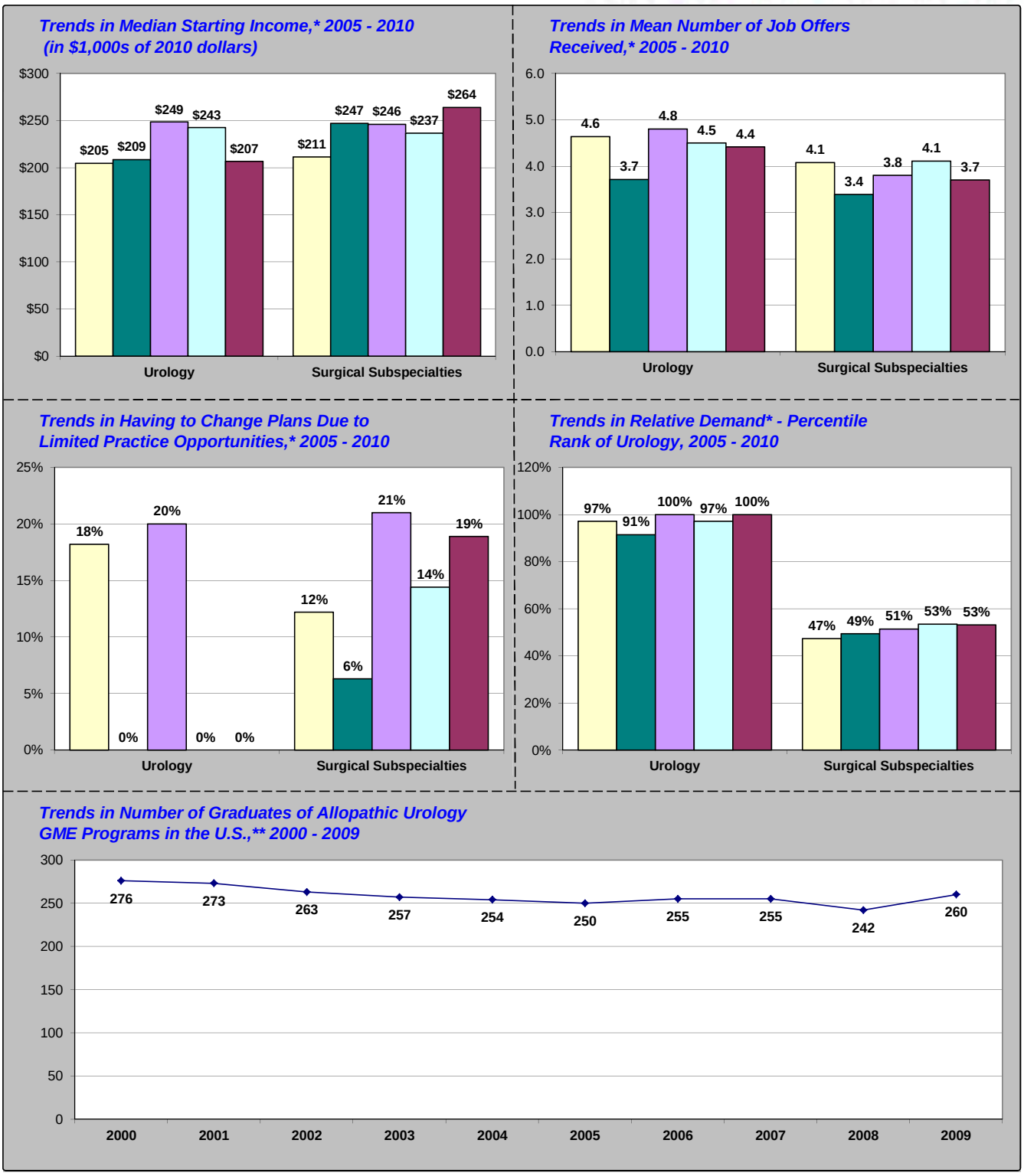
Number of responses: 2005: n = 8, 2007: n = 5, 2008: n = 8, 2009: n = 4, 2010: n = 4.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Cardio-Thoracic Surgery



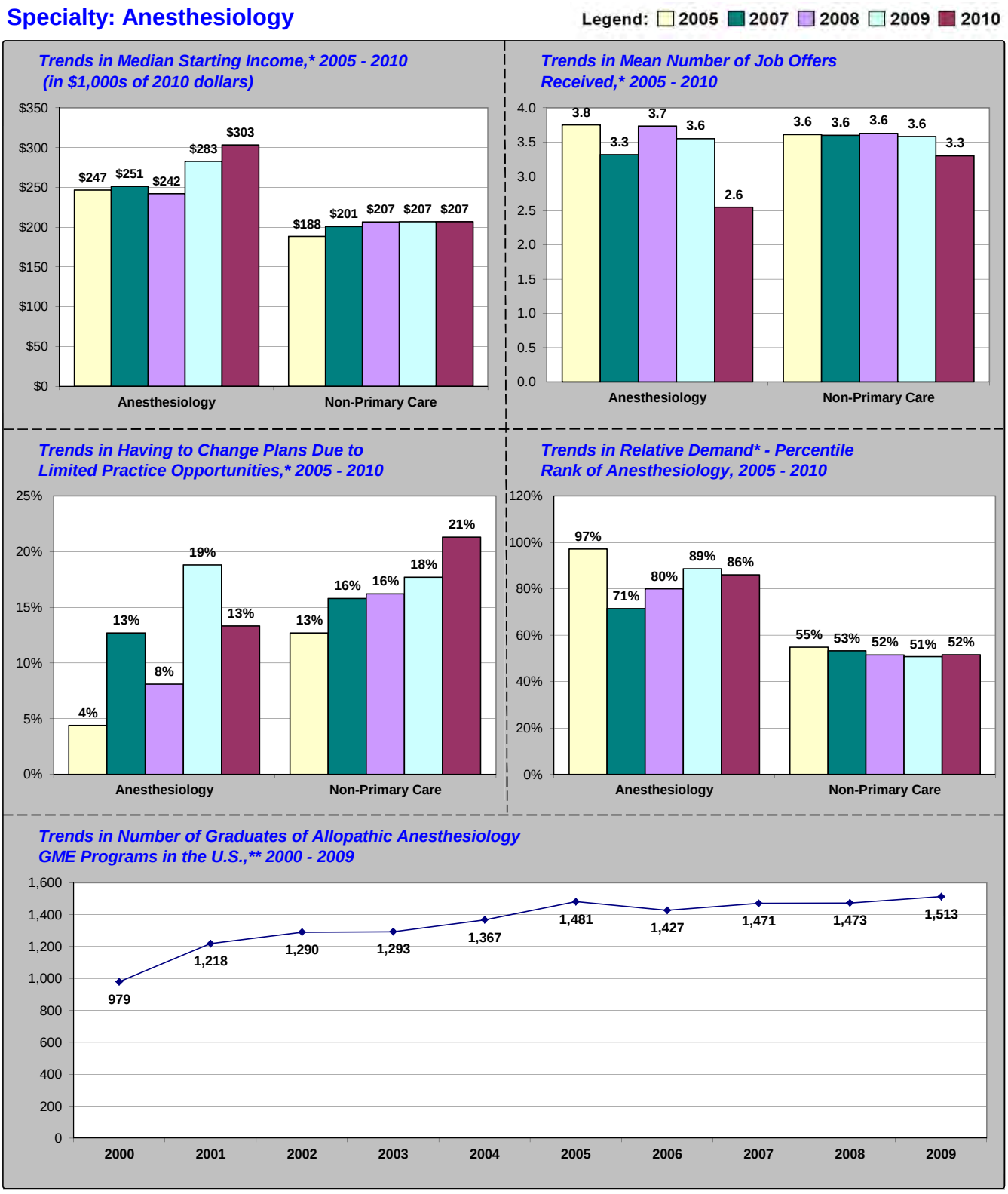
Number of responses: 2005: n = 4, 2007: n = 3, 2008: n = 5, 2009: n = 3, 2010: n = 3.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Urology



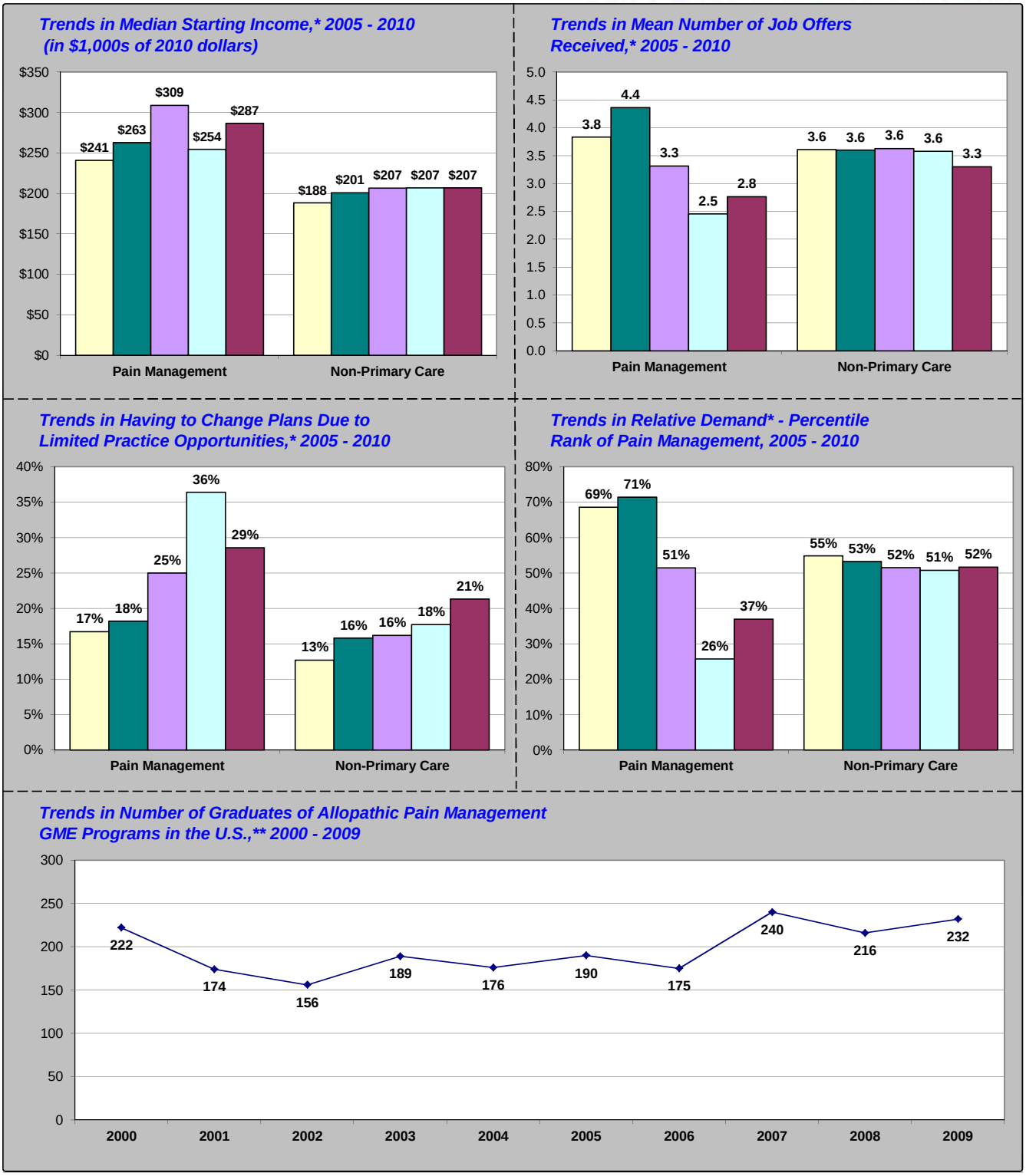
Number of responses: 2005: n = 11, 2007: n = 9, 2008: n = 15, 2009: n = 7, 2010: n = 12.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Anesthesiology



Number of responses: 2005: n = 49, 2007: n = 59, 2008: n = 67, 2009: n = 52, 2010: n = 67.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Pain Management



Number of responses: 2005: n = 7, 2007: n = 12, 2008: n = 17, 2009: n = 12, 2010: n = 21.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

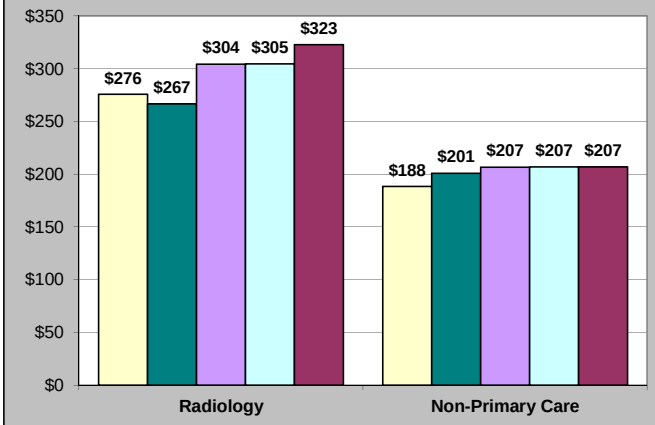
Specialty: Pathology

Number of responses: 2005: n = 12, 2007: n = 21, 2008: n = 23, 2009: n = 39, 2010: n = 47.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

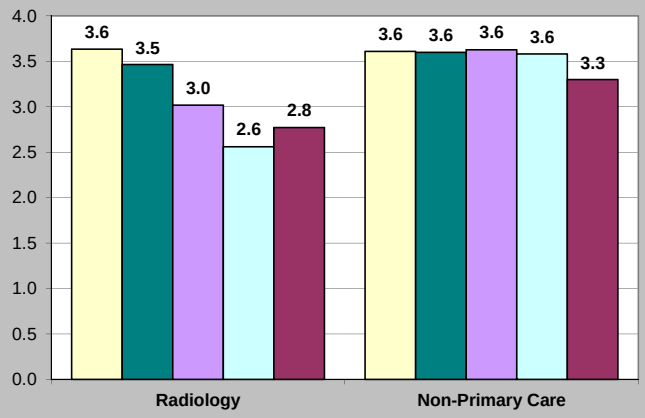
Specialty: Radiology

Legend: 2005 2007 2008 2009 2010

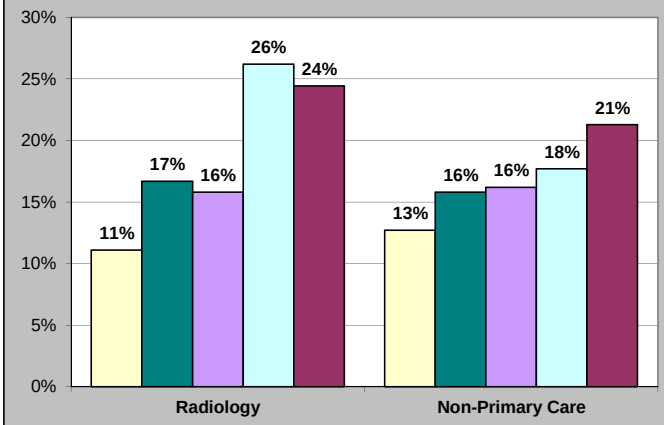
Trends in Median Starting Income,* 2005 - 2010 (in $1,000s of 2010 dollars)



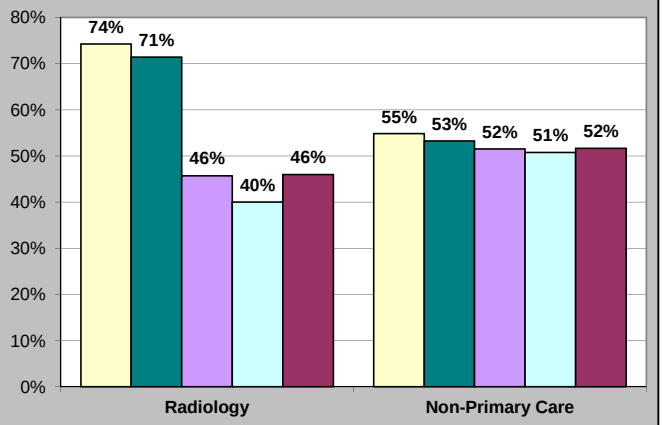
Trends in Mean Number of Job Offers Received,* 2005 - 2010



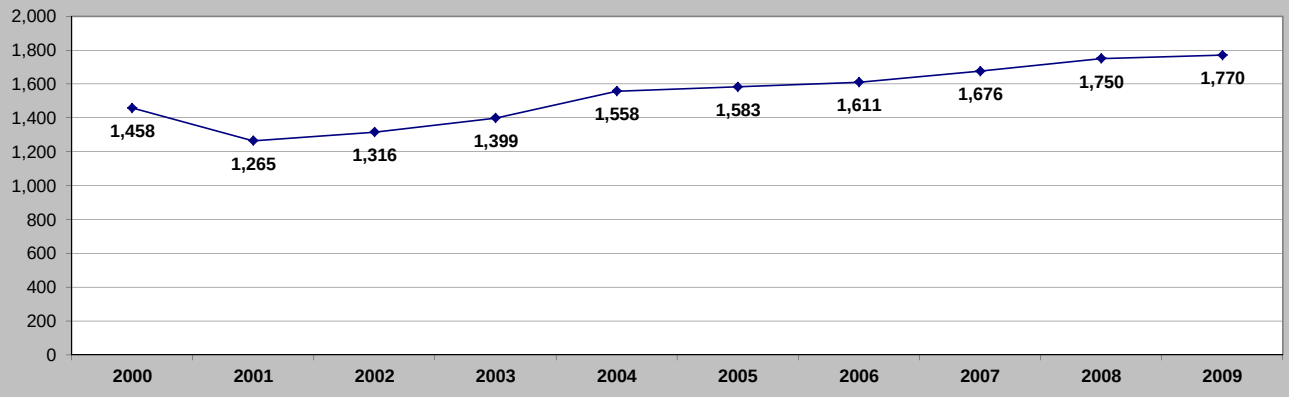
Trends in Having to Change Plans Due to Limited Practice Opportunities,* 2005 - 2010



Trends in Relative Demand* - Percentile Rank of Radiology, 2005 - 2010



Trends in Number of Graduates of Allopathic Radiology GME Programs in the U.S.,** 2000 - 2009

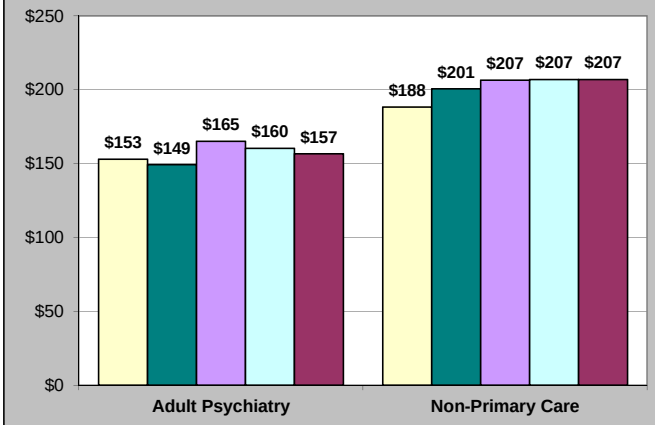


Number of responses: 2005: n = 44, 2007: n = 47, 2008: n = 62, 2009: n = 46, 2010: n = 49.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

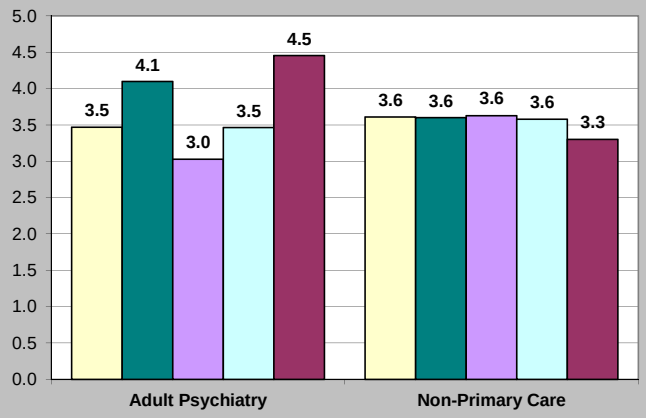
Specialty: Adult Psychiatry

Legend: 2005 2007 2008 2009 2010

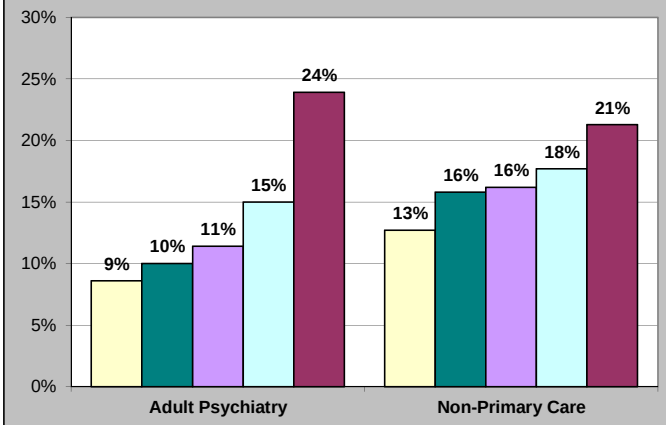
Trends in Median Starting Income,* 2005 - 2010 (in $1,000s of 2010 dollars)



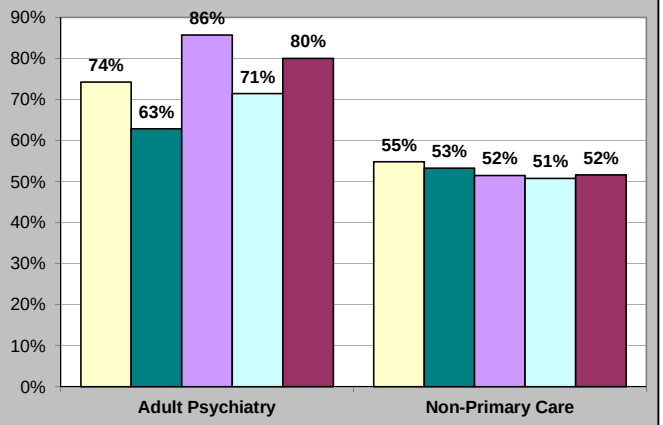
Trends in Mean Number of Job Offers Received,* 2005 - 2010



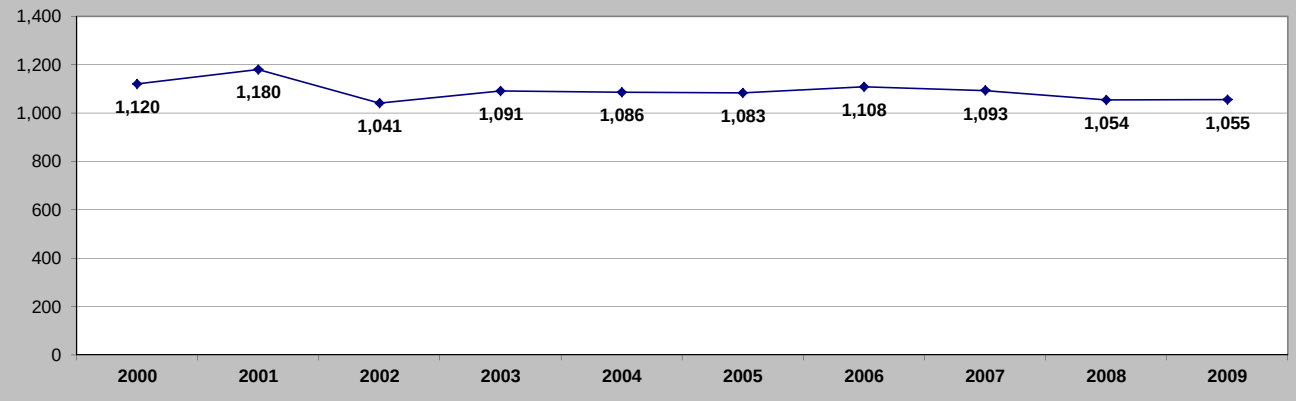
Trends in Having to Change Plans Due to Limited Practice Opportunities,* 2005 - 2010



Trends in Relative Demand* - Percentile Rank of Adult Psychiatry, 2005 - 2010

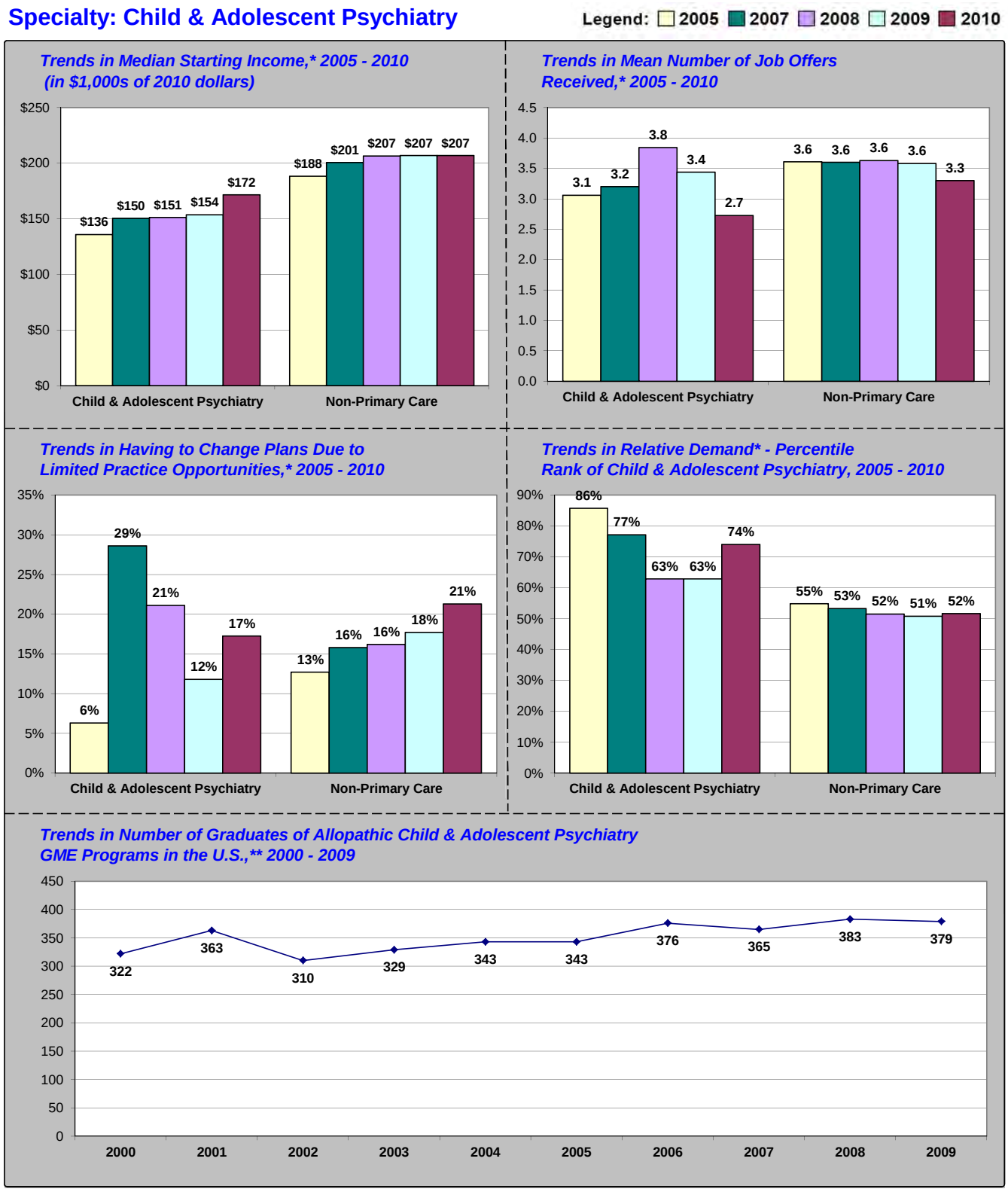


Trends in Number of Graduates of Allopathic Adult Psychiatry GME Programs in the U.S.,** 2000 - 2009



Number of responses: 2005: n = 39, 2007: n = 46, 2008: n = 38, 2009: n = 50, 2010: n = 48.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Child & Adolescent Psychiatry

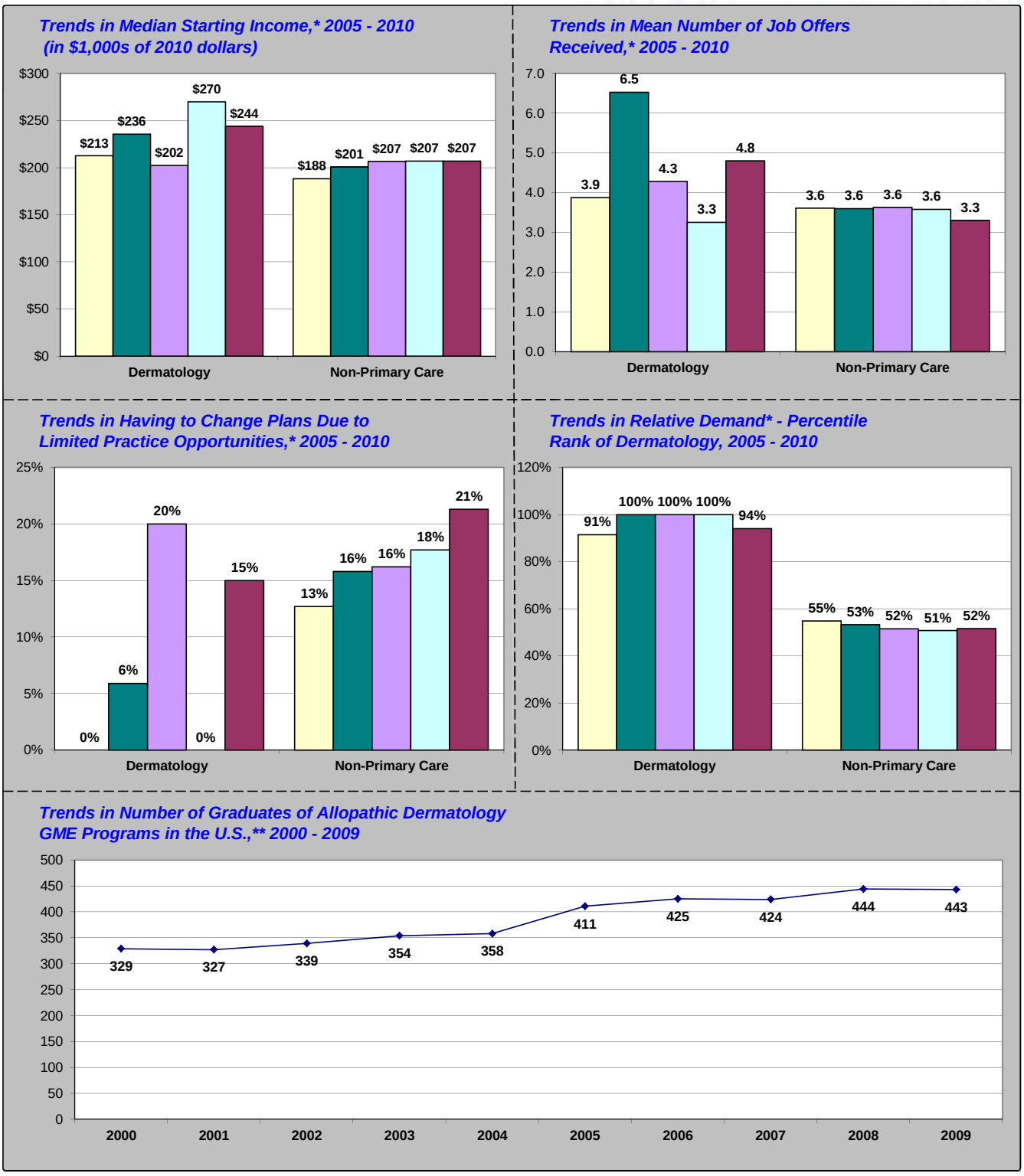


Number of responses: 2005: n = 17, 2007: n = 15, 2008: n = 22, 2009: n = 17, 2010: n = 31.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Allergy & Immunology

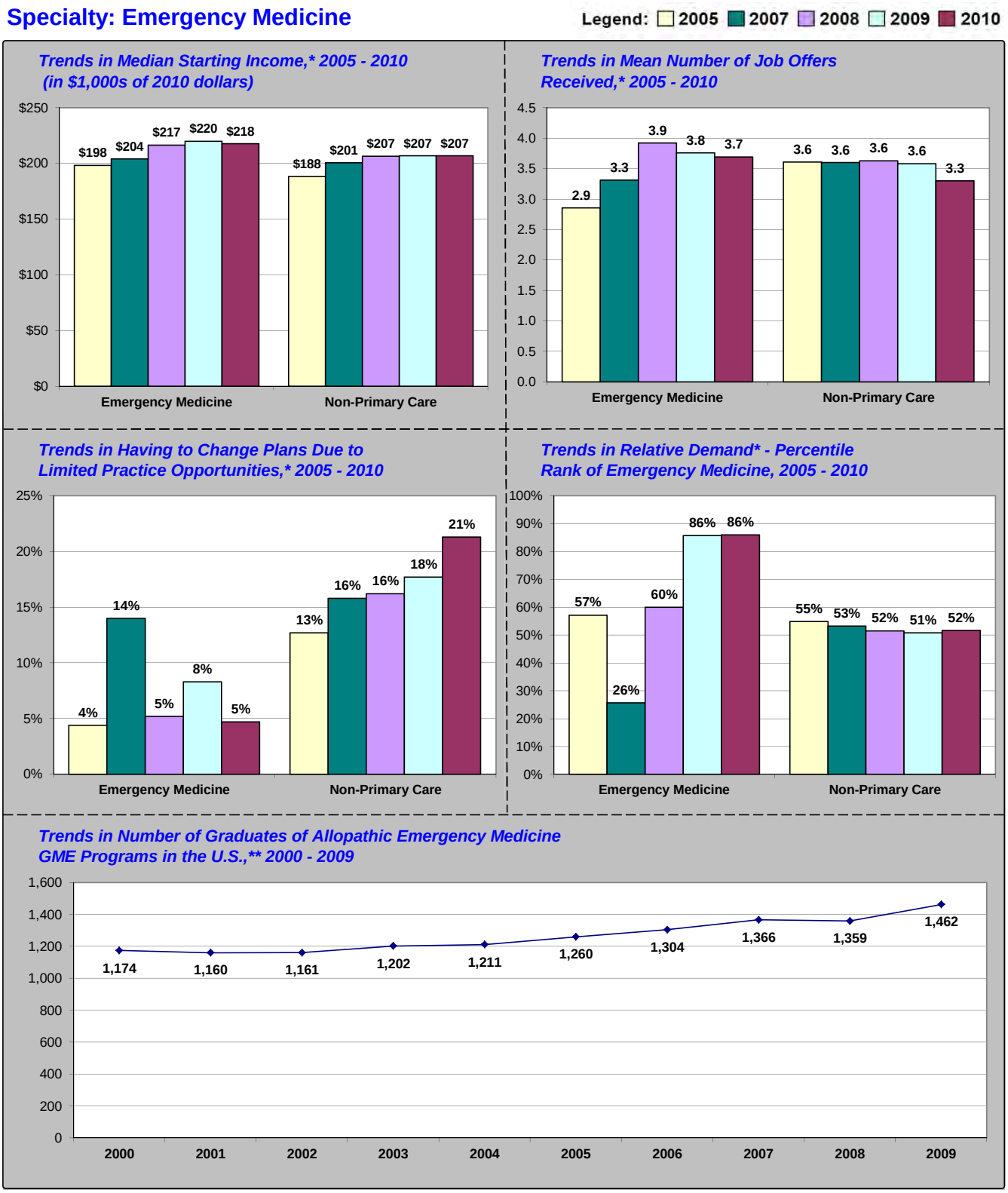
Number of responses: 2005: n = 6, 2007: n = 6, 2008: n = 6, 2009: n = 9, 2010: n = 10.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Dermatology



Number of responses: 2005: n = 17, 2007: n = 18, 2008: n = 21, 2009: n = 12, 2010: n = 22.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

Specialty: Emergency Medicine

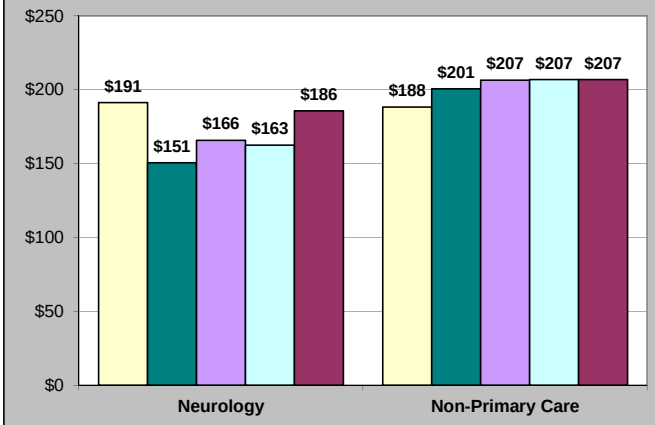


Number of responses: 2005: n = 72, 2007: n = 88, 2008: n = 78, 2009: n = 115, 2010: n = 90.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

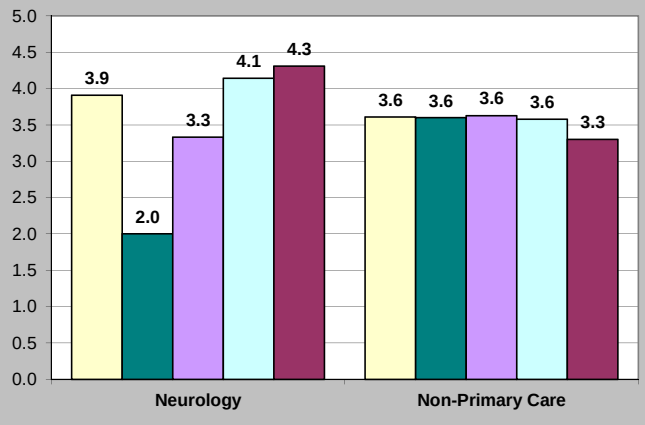
Specialty: Neurology

Legend: 2005 2007 2008 2009 2010

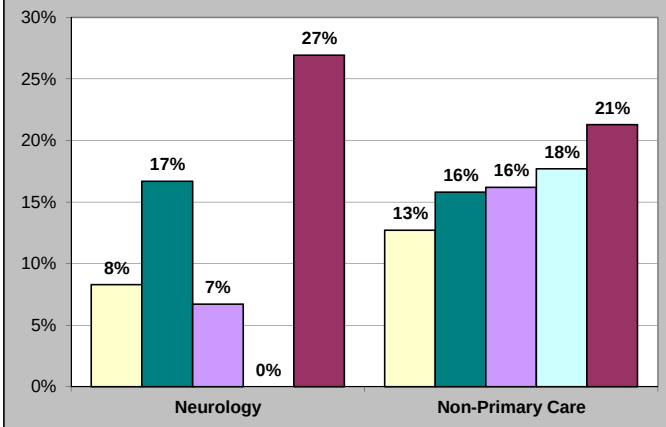
Trends in Median Starting Income,* 2005 - 2010 (in $1,000s of 2010 dollars)



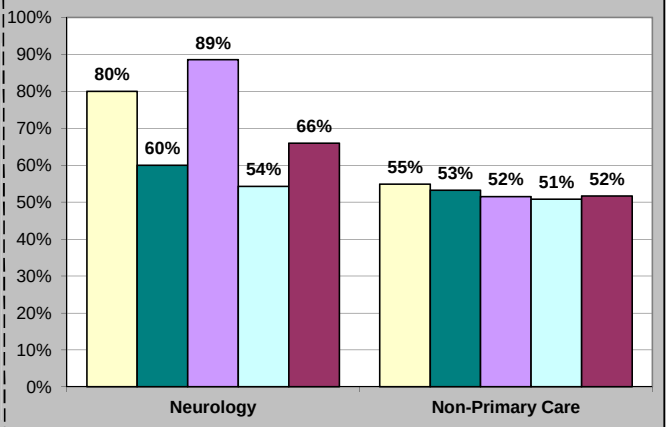
Trends in Mean Number of Job Offers Received,* 2005 - 2010



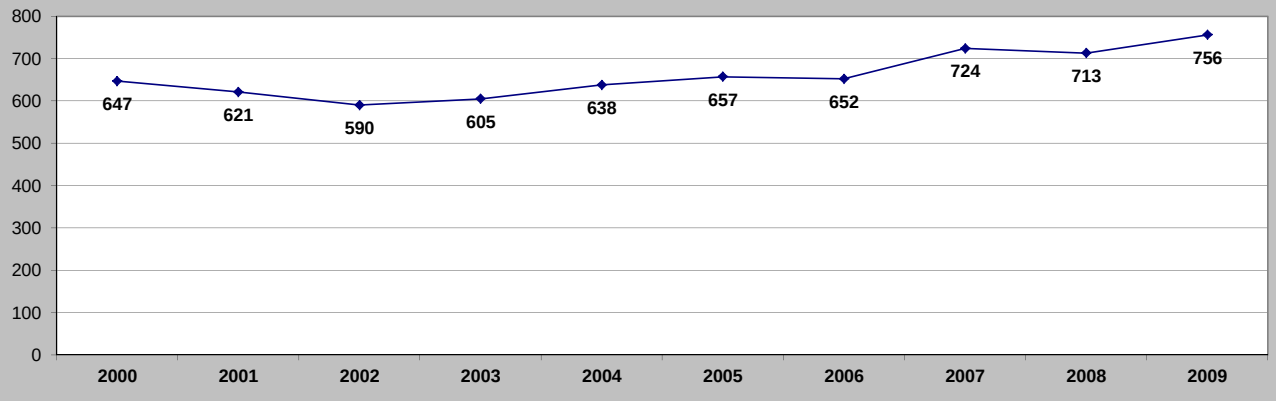
Trends in Having to Change Plans Due to Limited Practice Opportunities,* 2005 - 2010



Trends in Relative Demand* - Percentile Rank of Neurology, 2005 - 2010



Trends in Number of Graduates of Allopathic Neurology GME Programs in the U.S.,** 2000 - 2009

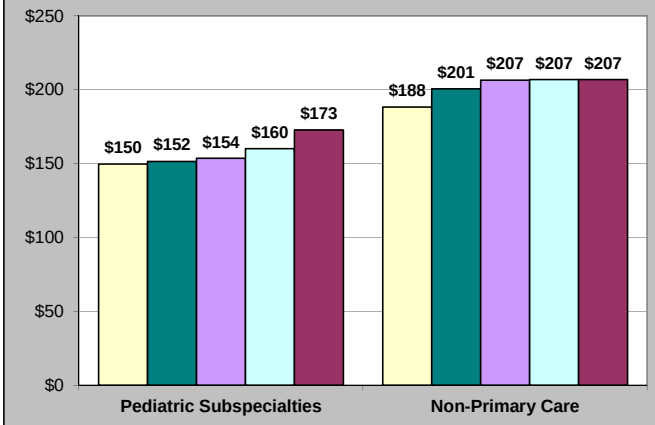


Number of responses: 2005: n = 13, 2007: n = 15, 2008: n = 18, 2009: n = 16, 2010: n = 27.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

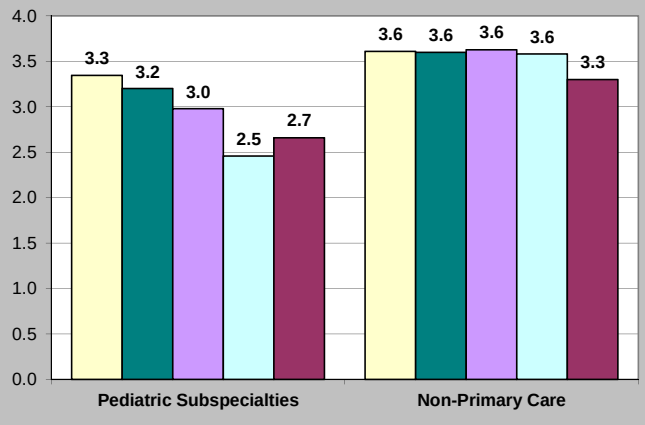
Specialty: Pediatric Subspecialties

Legend: 2005 2007 2008 2009 2010

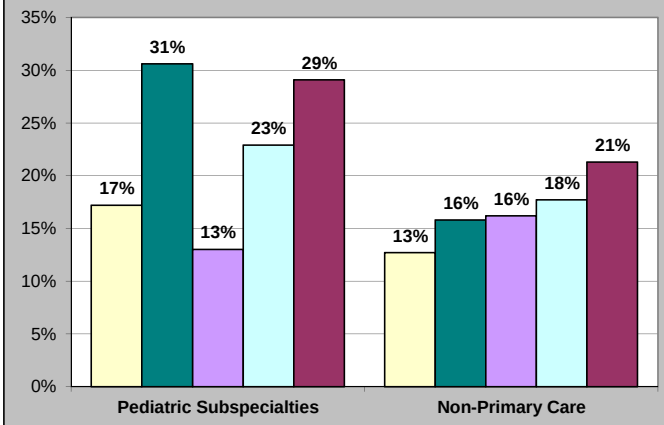
Trends in Median Starting Income,* 2005 - 2010 (in $1,000s of 2010 dollars)



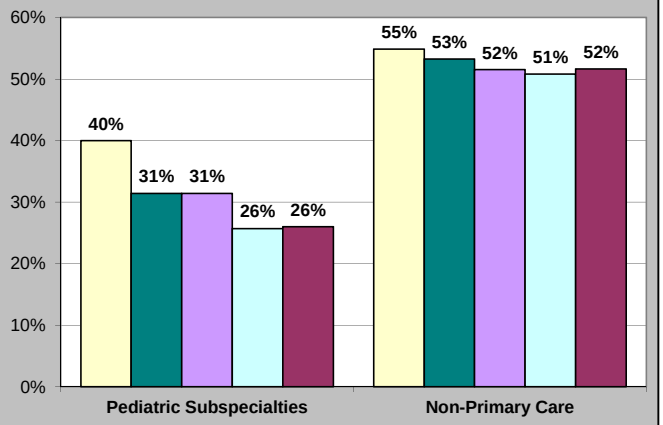
Trends in Mean Number of Job Offers Received,* 2005 - 2010



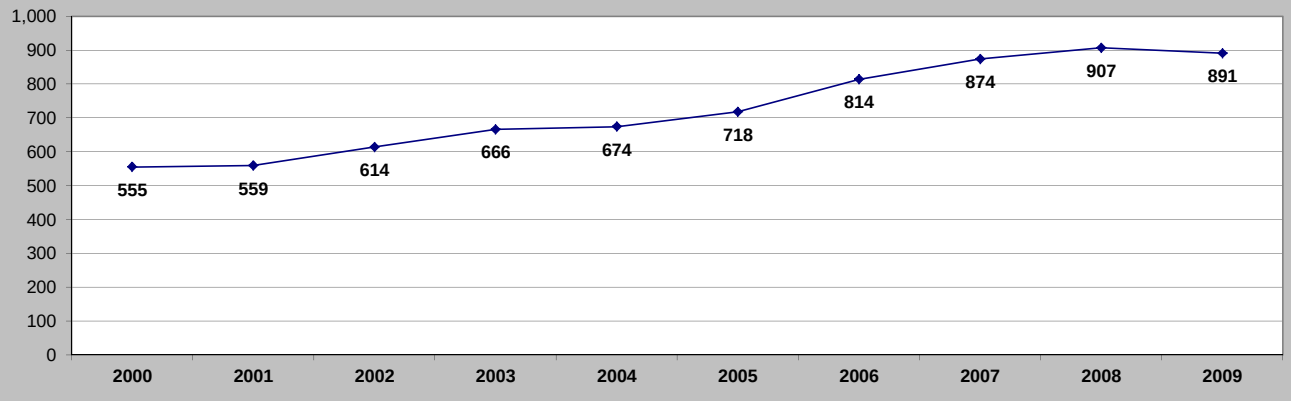
Trends in Having to Change Plans Due to Limited Practice Opportunities,* 2005 - 2010



Trends in Relative Demand* - Percentile Rank of Pediatric Subspecialties, 2005 - 2010



Trends in Number of Graduates of Allopathic Pediatric Subspecialties GME Programs in the U.S.,** 2000 - 2009

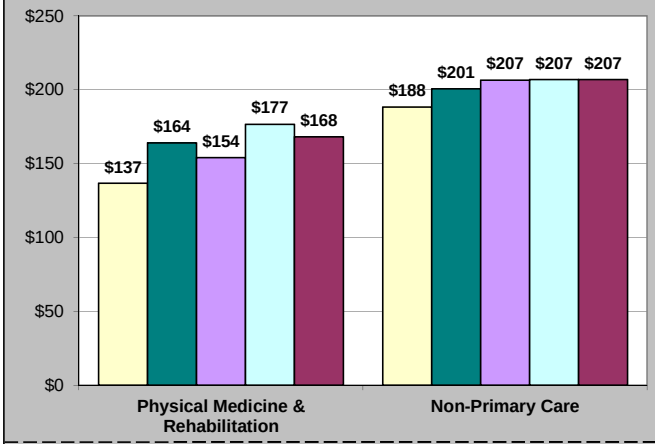


Number of responses: 2005: n = 30, 2007: n = 39, 2008: n = 49, 2009: n = 48, 2010: n = 58.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

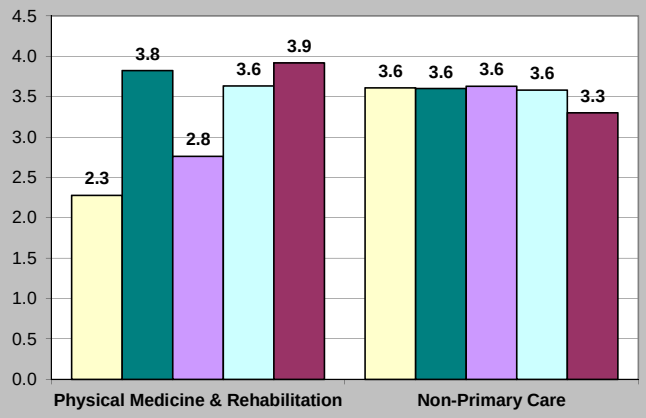
Specialty: Physical Medicine & Rehabilitation

Legend: 2005 2007 2008 2009 2010

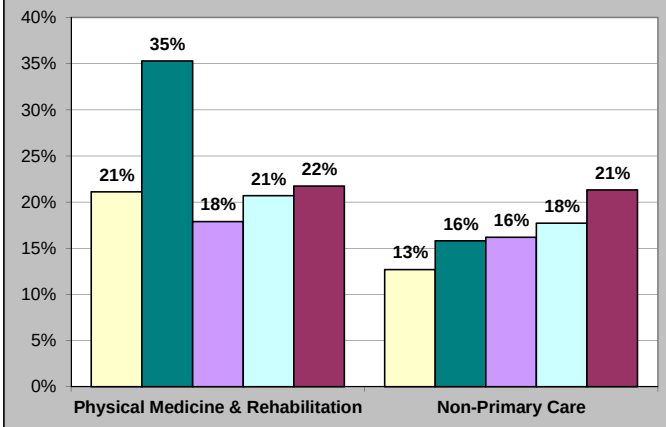
Trends in Median Starting Income, 2005 - 2010 (in $1,000s of 2010 dollars)*



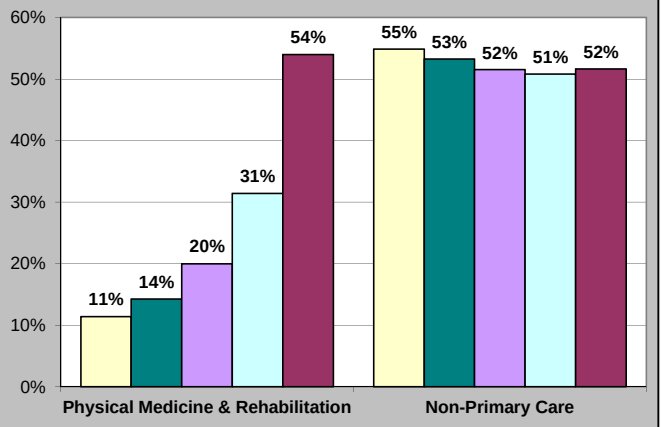
Trends in Mean Number of Job Offers Received, 2005 - 2010*



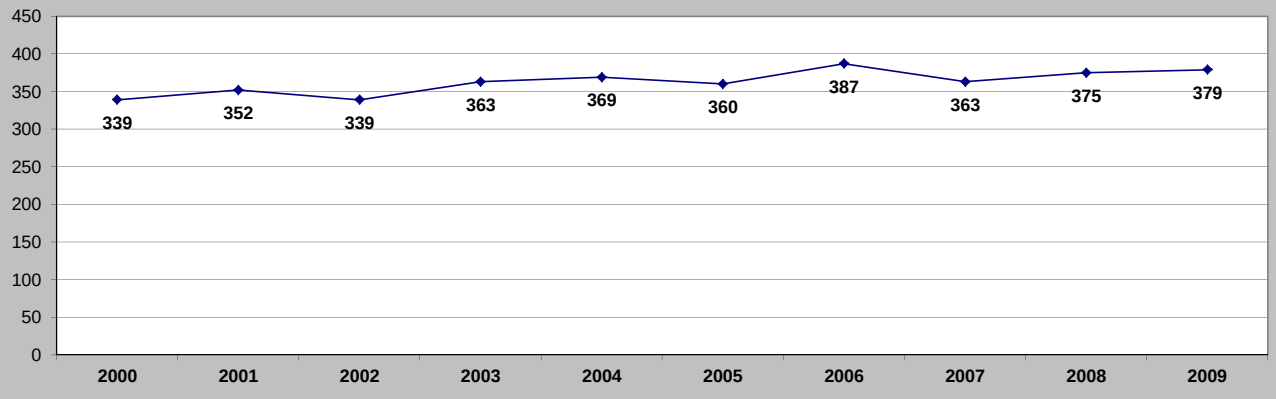
Trends in Having to Change Plans Due to Limited Practice Opportunities, 2005 - 2010*



Trends in Relative Demand - Percentile Rank of Physical Medicine & Rehabilitation, 2005 - 2010*



*Trends in Number of Graduates of Allopathic Physical Medicine & Rehabilitation GME Programs in the U.S.,** 2000 - 2009*



Number of responses: 2005: n = 22, 2007: n = 17, 2008: n = 29, 2009: n = 30, 2010: n = 26.
*Source: CHWS, Survey of Residents Completing Training in New York, 2005 - 2010.
**Source: *JAMA Medical Education Issues* , 2000 - 2009.

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 (i.e., 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 (i.e., 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 specialty 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 family medicine in New York in 2010 was 94% (i.e., family medicine had a relative rank equal to or better than 94% of the 35 specialties that were ranked), and the percentile rank of radiology was 46%, this *does not* imply that demand for family medicine was more than twice as strong as for radiology. The scale is only ordinal.

To measure demand for a given year, a composite score was computed by taking the median of the ranks (i.e., where each specialty stood relative to all 35 specialties) scored by each specialty on each of the demand indicators for data from the previous four 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 2010, data from 2010 were weighted .40, data from 2009 were weighted .30, data from 2008 were weighted .20, and data from 2009 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; and
- ✓ trend (i.e., 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 (i.e., 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." For this reason, the "job offers" variable and the "trends in starting income" variable were each double weighted in computing a composite demand score.

The table on the next page summarizes the rank of each specialty (ranked among 35 specialties) on each demand indicator. The variables are:

- ✓ diff: rank of each specialty based on the percentage of respondents reporting difficulty finding a satisfactory practice position→e.g., the specialty with the lowest percentage of respondents reporting difficulty (otolaryngology) ranked #1 and the specialty with the highest percentage of respondents reporting difficulty (cardio-thoracic surgery) ranked #35.
- ✓ chpln: rank of each specialty based on the percentage of respondents that had to change plans due to practice opportunities→e.g., the specialty with the lowest percentage of respondents having to change plans (otolaryngology) ranked #1 and the specialty with the highest percentage of respondents reporting difficulty (cardio-thoracic surgery) ranked #35.
- ✓ offrs: 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) →e.g., the specialty with the most job offers (pulmonary disease) ranked #1 and the specialty with the fewest job offers (cardio-thoracic surgery) ranked #35.
- ✓ reg_mrkt: rank of each specialty in terms of the mean Likert score summarizing respondents' assessments of the regional job market for their specialty→e.g., the specialty with the most positive assessment of the regional job market (adult psychiatry) ranked #1 and the specialty with the least positive assessment of the regional job market (cardio-thoracic surgery) ranked #35.
- ✓ nat_mrkt: rank of each specialty in terms of the mean Likert score summarizing respondents' assessments of the national job market for their specialty→e.g., the specialty with the most positive assessment of the national job market (urology) ranked #1 and the specialty with the least positive assessment of the national job market (cardio-thoracic surgery) ranked #35.
- ✓ inc_trnd: rank of each specialty in terms the average annual change (or trend) in median starting income levels of respondents from each specialty→e.g., the specialty with the strongest trend in median starting income (plastic surgery) ranked #1 and the specialty with the weakest trend in median starting income (IM & Peds (combined)) ranked #35.

SUMMARY OF RANKS ON DEMAND INDICATORS

Specialty	diff	ch_pln	offers*	reg_mrkt	nat_mrkt	inc_trnd*	Median Rank	Overall Rank	Percentile Rank**
Family Medicine	8	11	3	7	8	27	8.0	3.0	94%
General Internal Med	17	13	6	13	7	12	12.0	10.0	74%
General Pediatrics	13	7	27	14	20	21	20.5	22.0	40%
IM & Peds (Comb)	11	4	29	5	23	35	26.0	28.0	23%
Ob/Gyn	14	8	20	11	21	10	12.5	14.0	63%
Cardiology	21	9	14	23	24	31	22.0	20.0	46%
Critical Care Med	25	30	21	21	9	5	21.0	19.0	49%
Endocrinology & Met	22	19	28	16	11	32	25.0	26.0	29%
Gastroenterology	9	10	2	10	6	11	9.5	3.0	94%
Geriatrics	24	17	13	24	25	16	16.5	14.0	63%
Hematology/Onc	28	23	17	26	14	30	24.5	25.0	31%
Infectious Disease	31	32	16	33	30	33	31.5	32.0	11%
Nephrology	32	33	32	34	28	23	32.0	33.0	9%
Pulmonary Disease	26	27	1	22	4	25	23.5	23.0	37%
Rheumatology	30	31	19	29	19	4	19.0	17.0	54%
General Surgery	6	21	10	17	16	34	16.5	16.0	57%
Neurosurgery	18	26	7	15	18	2	11.0	8.0	80%
Ophthalmology	29	20	30	25	31	18	27.0	30.0	17%
Orthopedic	5	12	8	18	15	19	13.5	12.0	69%
Otolaryngology	1	1	12	8	5	6	6.0	2.0	97%
Plastic Surgery	33	34	34	32	34	1	33.5	34.0	6%
Cardio-Thoracic Surg	35	35	35	35	35	3	35.0	35.0	3%
Urology	3	2	4	9	1	28	4.0	1.0	100%
Anesthesiology	7	5	23	3	13	9	9.0	6.0	86%
Pain Management	23	29	25	20	29	15	24.0	23.0	37%
Pathology	27	24	33	30	33	17	28.5	31.0	14%
Radiology	16	18	26	28	27	8	22.0	20.0	46%
Adult Psychiatry	4	15	11	1	2	24	11.0	8.0	80%
Child & Adol Psych	15	14	22	6	12	13	13.5	10.0	74%
Allergy & Immun	34	28	24	31	32	29	29.0	28.0	23%
Dermatology	12	6	5	4	10	20	8.0	3.0	94%
Emergency Medicine	2	3	15	2	3	22	9.0	6.0	86%
Neurology	10	16	9	12	17	7	9.5	13.0	66%
Pediatric Subspecs	20	25	31	27	26	14	25.5	27.0	26%
Phys Med & Rehab	19	22	18	19	22	26	20.5	17.0	54%

*The job offers variable and the income trend variable were each double weighted in computing the median rank.

**The percentile rank is the percentage of all 35 specialties with a median demand rank equal to or lower than each specialty.

The following example illustrates how the demand score was calculated for family medicine in New York in 2010:

Median $Rank_{FM}$ = median (diff, chpln, offers, offers, reg_mrkt, nat_mrkt, inc_trnd, inc_trnd)

Median $Rank_{FM}$ = median (8, 11, 3, 3, 7, 8, 22, 22)

Median $Rank_{FM}$ = 8.0***

***With a median rank of 8.0, family medicine ranked 3 out of 35 specialties. The percentile rank is computed as:

$$\%rank_{FM} = \{ 1 - (Rank_{FM} / \#specs) + (1 / \#specs) \}$$ where "#specs" is the number of specialties being ranked. In New York in 2010, there were 35 specialties being ranked, so the percentile rank of family medicine is:

$$\%rank_{FM} = \{ 1 - (3 / 35) + (1 / 35) \} \simeq 94\%.$$

APPENDIX B. Specialty Comparison Groups

SPECIALTY COMPARISON GROUPS

Specialty	Comparison Group*
Family Medicine	Primary Care
General Internal Medicine	Primary Care
General Pediatrics	Primary Care
IM & Peds (Combined)	Primary Care
Obstetrics/Gynecology	Non-Primary Care
Cardiology	Medicine Subspecialties
Critical Care Medicine	Medicine Subspecialties
Endocrinology & 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
Plastic Surgery	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 & Adolescent Psychiatry	Non-Primary Care
Allergy & Immunology	Non-Primary Care
Dermatology	Non-Primary Care
Emergency Medicine	Non-Primary Care
Neurology	Non-Primary Care
Pediatric Subspecialties	Non-Primary Care
Physical Medicine & Rehabilitation	Non-Primary Care

*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 (i.e., 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. 2010 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 2010

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 2010 *(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:

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

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
- ○ Other

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. Where did you live when you graduated from high school?

- ○ New York
- ○ Other U.S.
- ○ Canada
- ○ Other country

B. MEDICAL EDUCATION AND TRAINING

6. 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

7. Type of Medical Education:

○ Allopathic (M.D.) ○ Osteopathic (D.O.)

8. 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
- ○ 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

9. 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

10. **Specialty you are COMPLETING in 2010** *(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: _____

11. 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

12. 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 any job
- ○ To stay in the U.S. (i.e., due to visa status)
- ○ Other (specify): _____
- ○ 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

13. 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	○	○	○	○	○	○	○	○

14. 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

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

- ○ Yes
- ○ No

16. 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 (Skip to 16C)
- ○ No, I will be self-employed (Skip to 16C)

B. Which of the following approaches have you used in your job search? Which one did you find most effective?

	Used (mark all that apply)	Most Effective (mark only one)
Third party representation (recruitment agencies/headhunters, online or otherwise)	○	○
Independent search activity on the Internet (direct to employers)	○	○
Print/traditional want ad responses (journals, newspapers, trade publications)	○	○
Residency program announcements/career fairs	○	○
Social networking/word of mouth	○	○
Other (specify): _____	○	○

C. 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 25)
- ○ No, but I have not actively searched yet (Skip to Question 25)
- ○ No, I have not yet been offered a practice position (Skip to Question 25)

D. PRACTICE PLANS

If you have accepted a position in patient care/clinical practice please answer the following questions, if not, skip to Question 25.

17. 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
○	○	Hospital—Inpatient
○	○	Hospital—Ambulatory care
○	○	Hospital—Emergency room
○	○	Freestanding health center or clinic
○	○	Nursing home
○	○	Other: _____

18. What level of ownership will you have in your upcoming practice?

- ○ None, I will be an employee
- ○ None currently, but I may have the option to become a partner in the future
- ○ I will be a partner, but will not have any capital invested in the practice
- ○ I will be an owner/partner (i.e., will have capital invested and own a financial stake in the practice)

19. 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 Reasons (mark all that apply)	Main Reason (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 . . .

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

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 or more

21. 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

22. 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	○	○
Partner/Spouse 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 ○ Moderately important
○ Somewhat important ○ Very important

23. 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

24. 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.)

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

○ Yes ○ No ○ Haven't looked yet (Skip to Question #28)

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): _____

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

○ Yes ○ No ○ Haven't looked yet (Skip to Question #28)

27. 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

28. 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

29. 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.

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