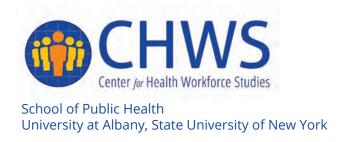


Trends in Demand for New Physicians, 2001-2007

A Summary of Demand Indicators for 35 Physician Specialties



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 2007 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 who assume responsibility for having graduating residents and fellows fill out the surveys in the weeks prior to program completion. Completed surveys are then returned to the Center for data entry and analysis.

The year 2007 marked the eighth year of the survey. Through the excellent collaboration of teaching hospitals throughout the state, an aggregated total of 23,653 of the 37,252 graduates have completed the survey (63% response rate) for the eight years the survey has been conducted (1998, 1999, 2000, 2001, 2002, 2003, 2005, and 2007). In addition to New York, several other states (including California, Georgia, Minnesota, New Jersey, and Texas) have conducted similar surveys. 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 2001 to 2007). Data on GME graduates are from the annual medical education editions 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 1998 to 2007. Definitions of the five areas are as follows:

- ➤ <u>Starting income</u>: 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 2007 dollars and are reported in \$1,000s.
- ➤ <u>Job offers</u>: 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 AMA's 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.

GENERAL RESULTS AND KEY FINDINGS

Overall the job market for new physicians appears to be good. Analysis of trends in variables pertaining to the physician job market reveals that opportunities for physicians entering practice in most specialties have improved or remained stable over the period the Center has been conducting this survey.

Unlike previous years, in 2007 demand for primary care physicians was comparable to specialists (non-primary care physicians).* Primary care physicians were as likely as specialists to have to change plans due to limited practice opportunities. They also received approximately the same number of job offers as specialists. Furthermore, the average annual increase in income between 2002 and 2007 was comparable for both generalists and specialists.

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:

- ➤ <u>Strongest relative demand</u>: dermatology, neurosurgery, pulmonary disease, urology, and gastroenterology.
- Weakest relative demand: thoracic surgery, plastic surgery, allergy and immunology, rheumatology, and physical medicine and rehabilitation.

There is a high degree of correlation in the relative demand for different individual specialties between different states. Despite the differences that exist between New York and other states, including the number and specialty mix of the physician supply, the demographic characteristics

^{*} Primary care (or generalists) specialties include: family medicine, general internal medicine, general pediatrics, and internal medicine and pediatrics-combined.

of the populations, and the health care delivery systems, the relative demand for physicians by specialty is very similar to other states.

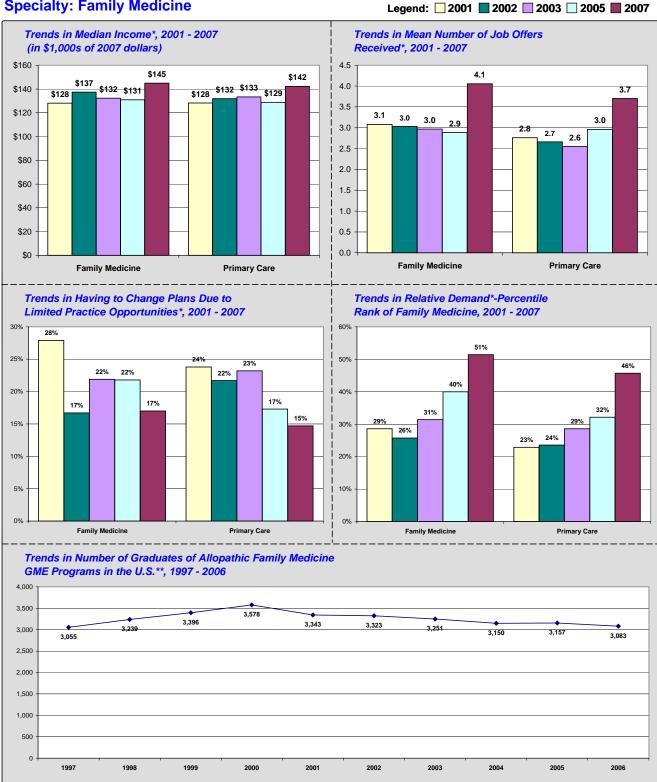
IMPORTANT NOTES

The number of responses by year for each specialty is indicated at the bottom of the page in the report. Care should be taken when interpreting outcomes based on small samples. The estimates may fluctuate from year to year.

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Specialty: Family Medicine



Number of responses: 2001: n = 111, 2002: n = 125, 2003: n = 101, 2005: n = 92, 2007: n = 56.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Internal Medicine-General

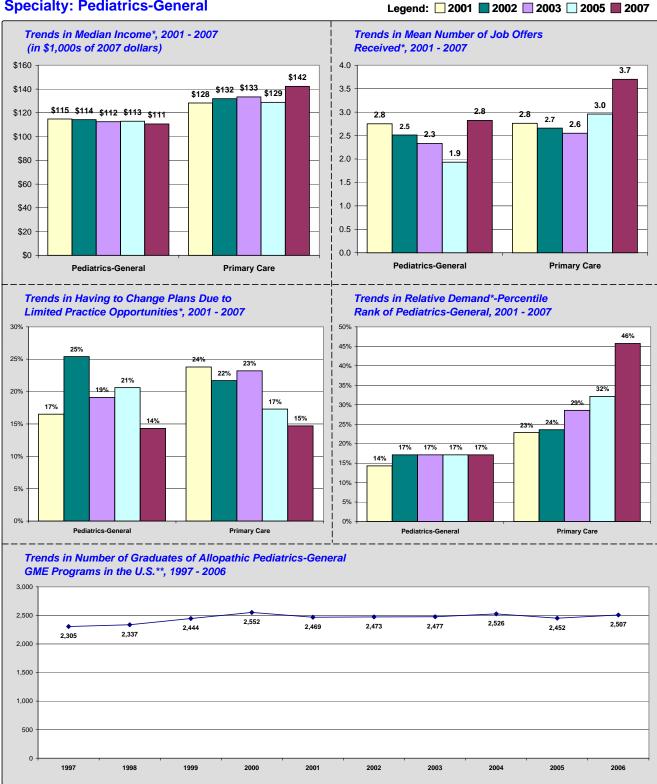


Number of responses: 2001: n = 295, 2002: n = 287, 2003: n = 268, 2005: n = 177, 2007: n = 180.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Pediatrics-General

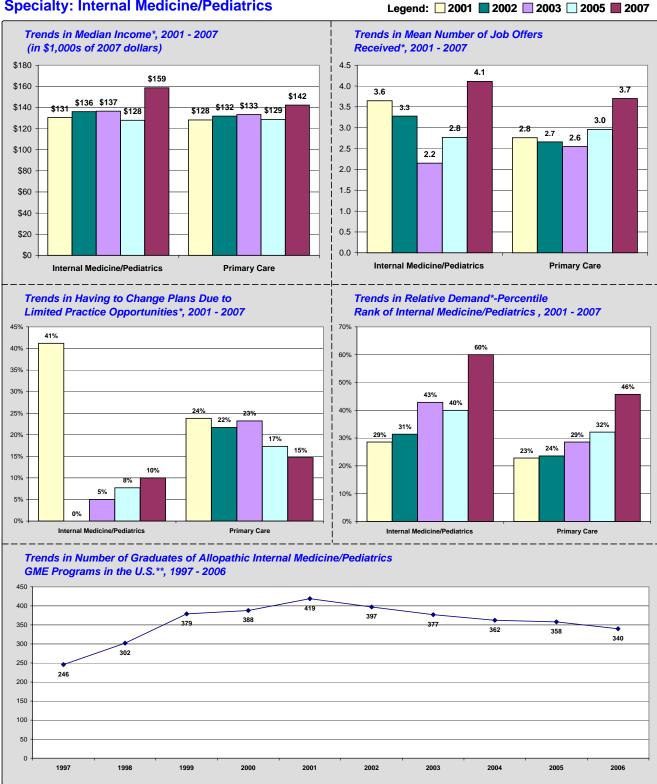


Number of responses: 2001: n = 140, 2002: n = 173, 2003: n = 138, 2005: n = 78, 2007: n = 78.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Internal Medicine/Pediatrics

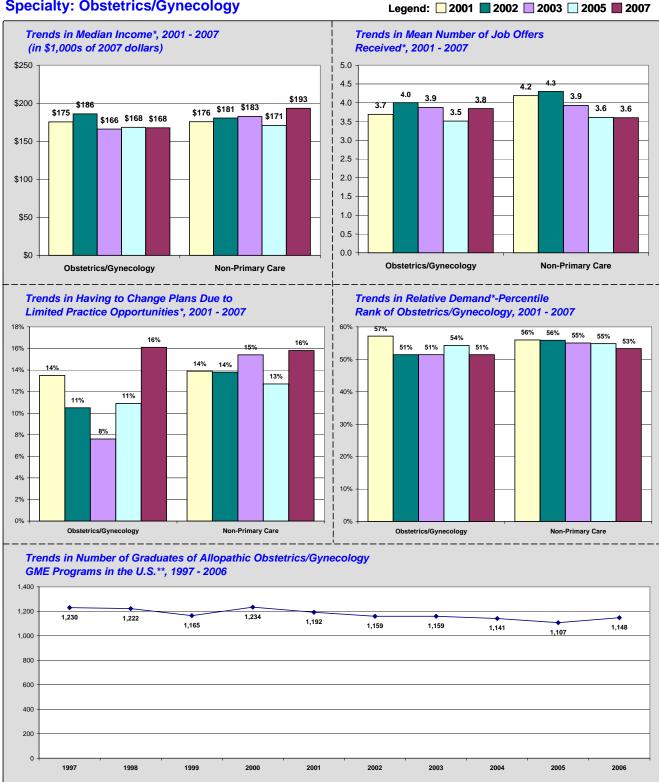


Number of responses: 2001: n = 19, 2002: n = 20, 2003: n = 22, 2005: n = 16, 2007: n = 12.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Obstetrics/Gynecology

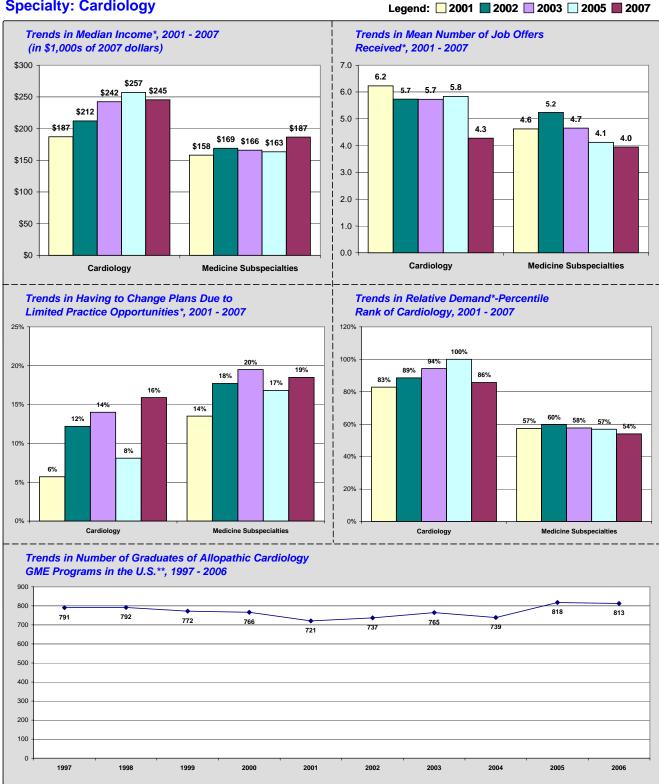


Number of responses: 2001: n = 98, 2002: n = 101, 2003: n = 89, 2005: n = 63, 2007: n = 62.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Cardiology

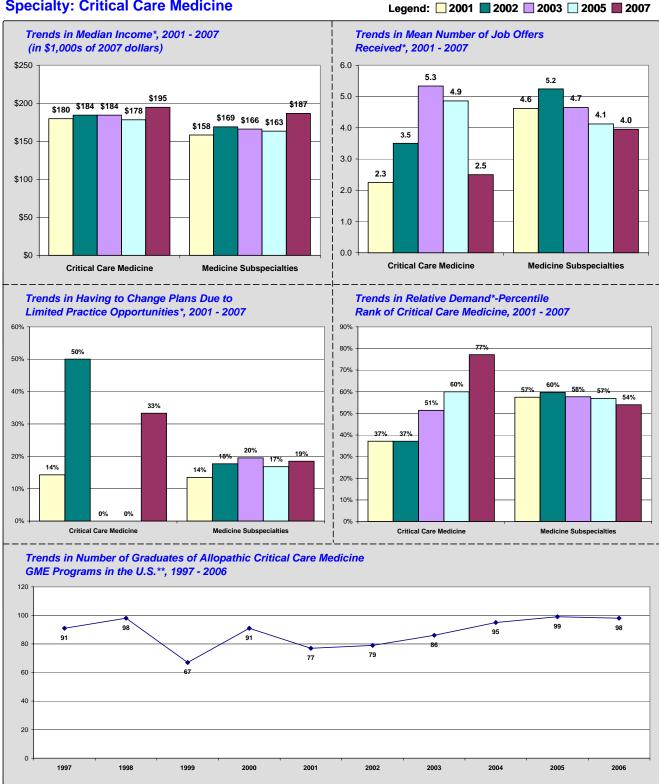


Number of responses: 2001: n = 35, 2002: n = 56, 2003: n = 53, 2005: n = 42, 2007: n = 48.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Critical Care Medicine

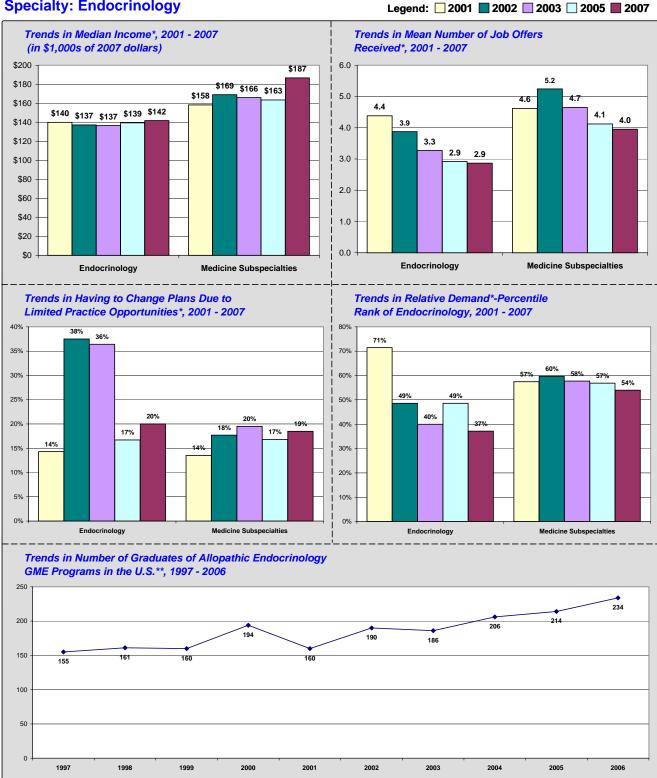


Number of responses: 2001: n = 8, 2002: n = 3, 2003: n = 4, 2005: n = 7, 2007: n = 7.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Endocrinology

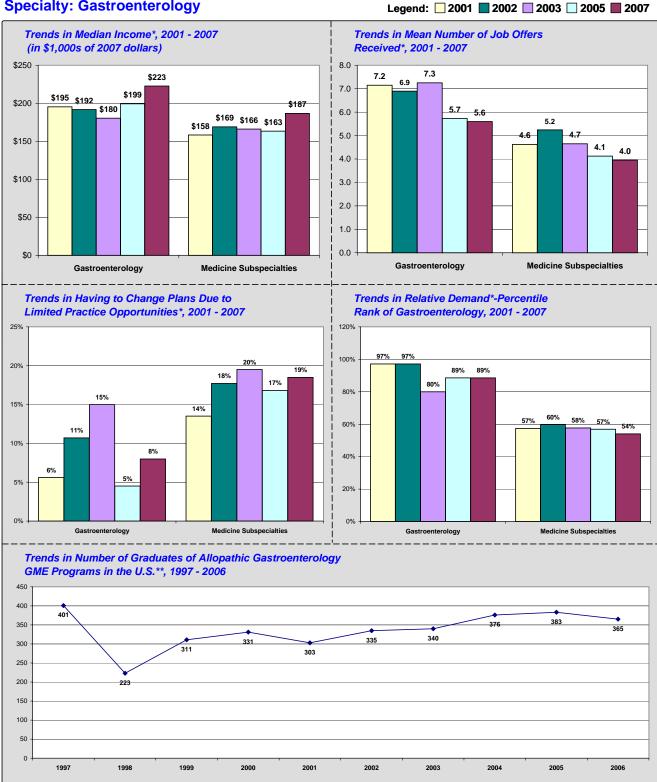


Number of responses: 2001: n = 14, 2002: n = 8, 2003: n = 13, 2005: n = 13, 2007: n = 15.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Gastroenterology

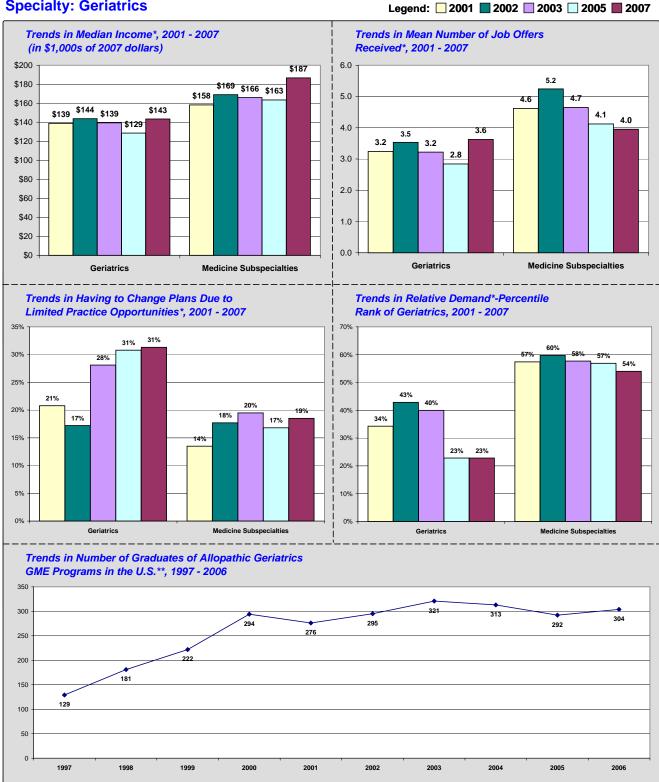


Number of responses: 2001: n = 20, 2002: n = 29, 2003: n = 21, 2005: n = 23, 2007: n = 25.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Geriatrics

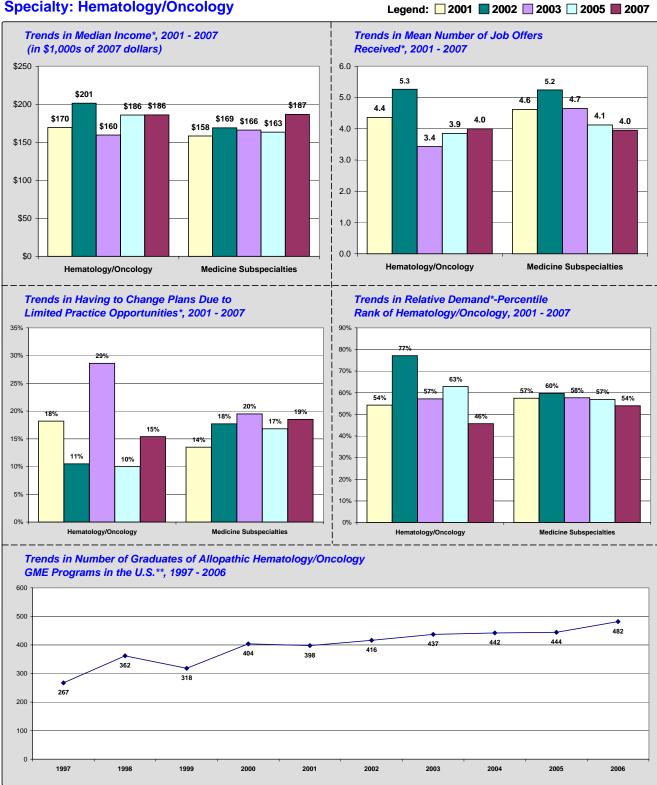


Number of responses: 2001: n = 25, 2002: n = 33, 2003: n = 34, 2005: n = 26, 2007: n = 16.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Hematology/Oncology

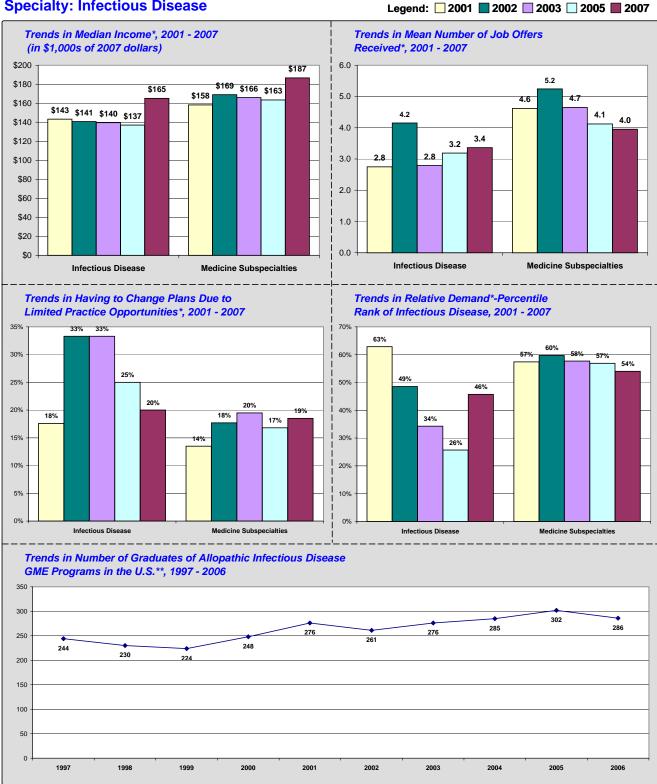


Number of responses: 2001: n = 11, 2002: n = 20, 2003: n = 21, 2005: n = 20, 2007: n = 27.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Infectious Disease

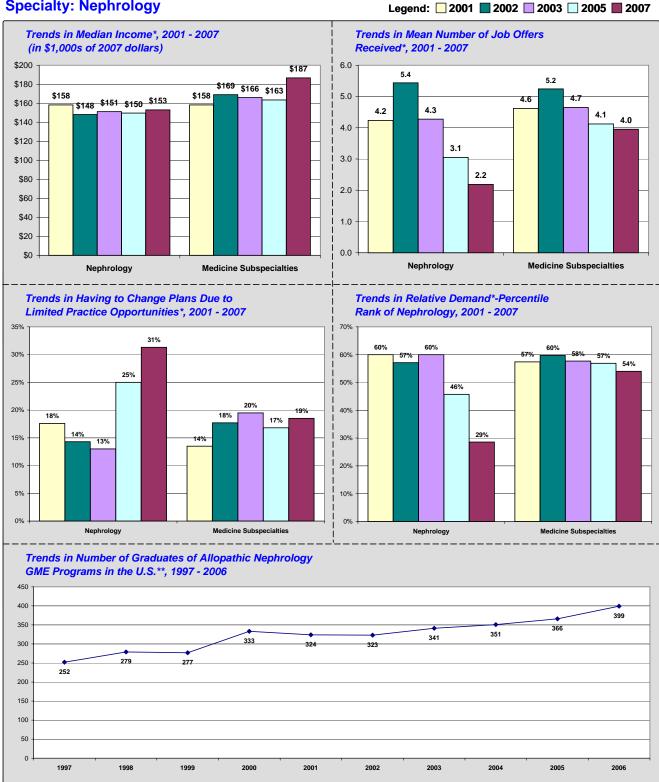


Number of responses: 2001: n = 17, 2002: n = 16, 2003: n = 19, 2005: n = 17, 2007: n = 13.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Nephrology

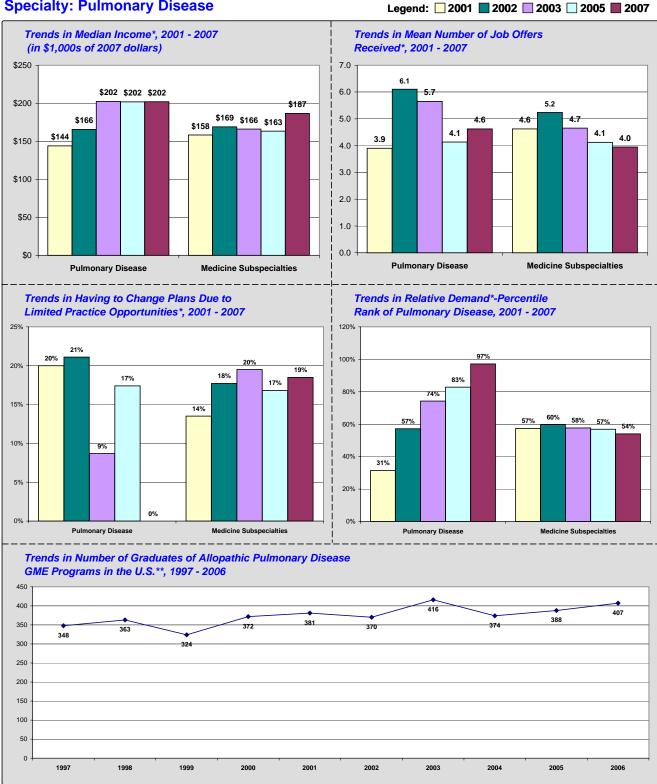


Number of responses: 2001: n = 18, 2002: n = 24, 2003: n = 25, 2005: n = 20, 2007: n = 17.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Pulmonary Disease

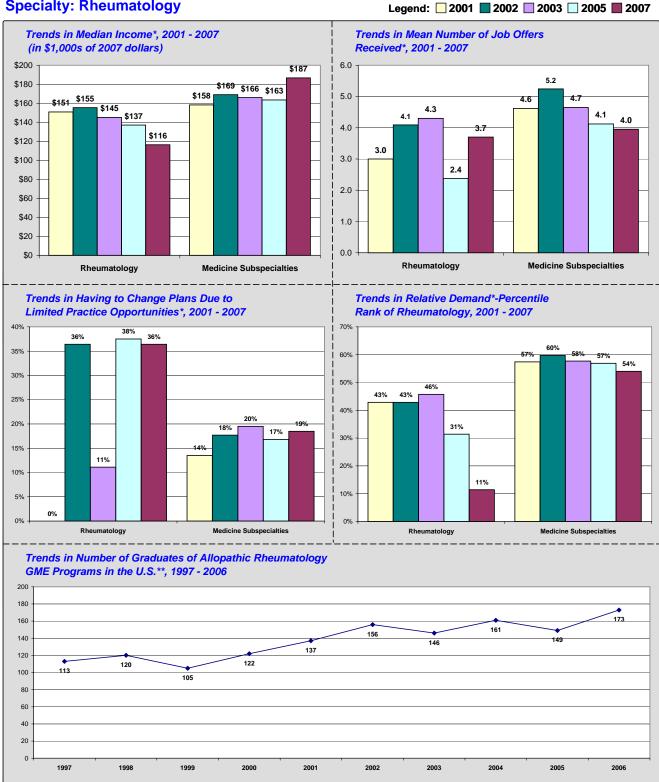


Number of responses: 2001: n = 12, 2002: n = 22, 2003: n = 24, 2005: n = 23, 2007: n = 17.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Rheumatology

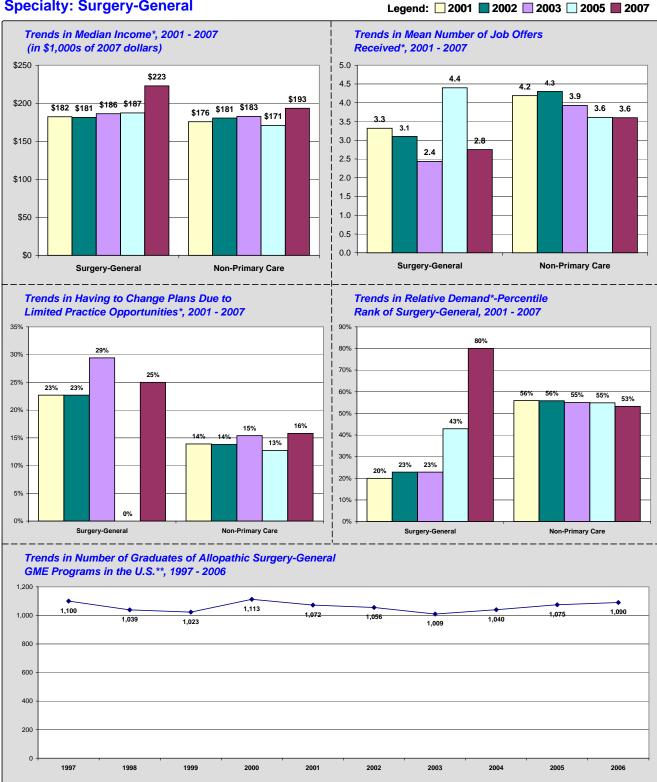


Number of responses: 2001: n = 2, 2002: n = 11, 2003: n = 10, 2005: n = 8, 2007: n = 11.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Surgery-General

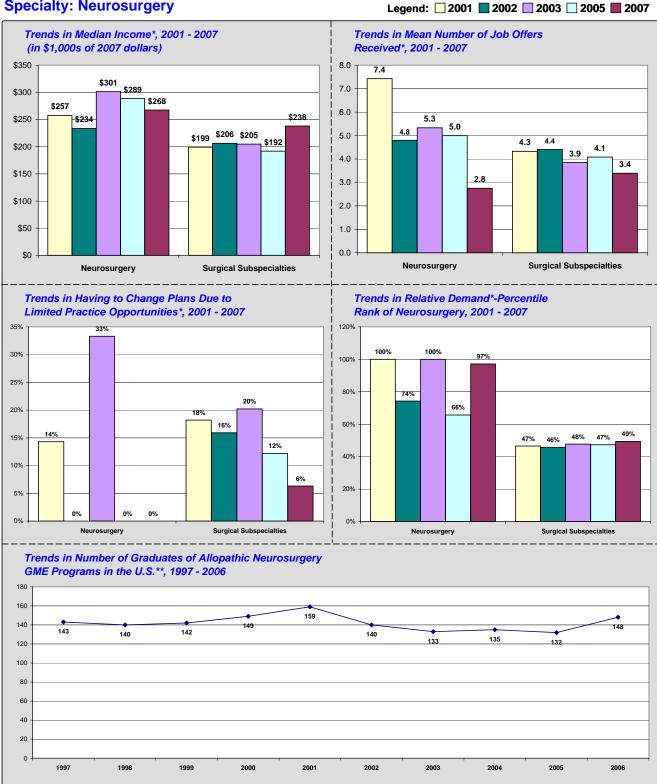


Number of responses: 2001: n = 27, 2002: n = 31, 2003: n = 22, 2005: n = 17, 2007: n = 6.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Neurosurgery

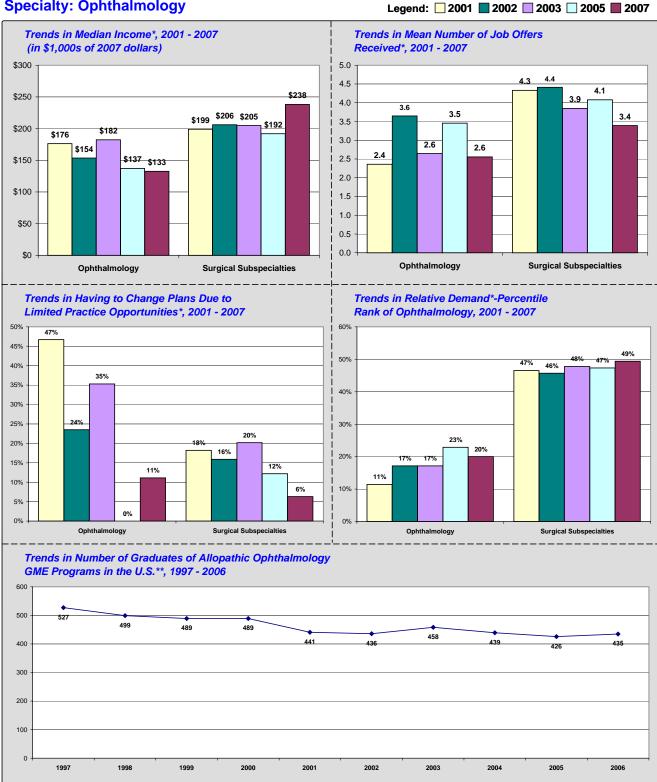


Number of responses: 2001: n = 7, 2002: n = 6, 2003: n = 3, 2005: n = 4, 2007: n = 4.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Ophthalmology

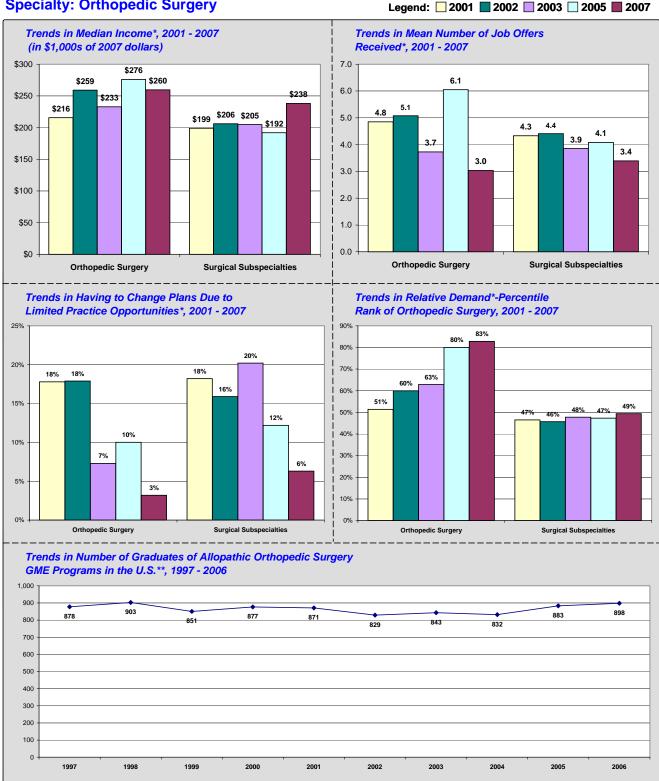


Number of responses: 2001: n = 18, 2002: n = 22, 2003: n = 20, 2005: n = 12, 2007: n = 10.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Orthopedic Surgery

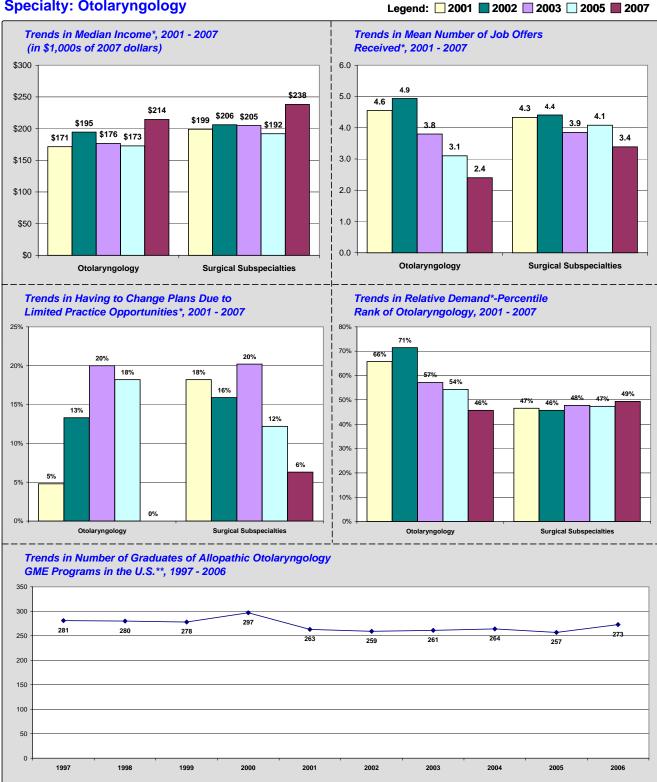


Number of responses: 2001: n = 46, 2002: n = 42, 2003: n = 45, 2005: n = 21, 2007: n = 33.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Otolaryngology

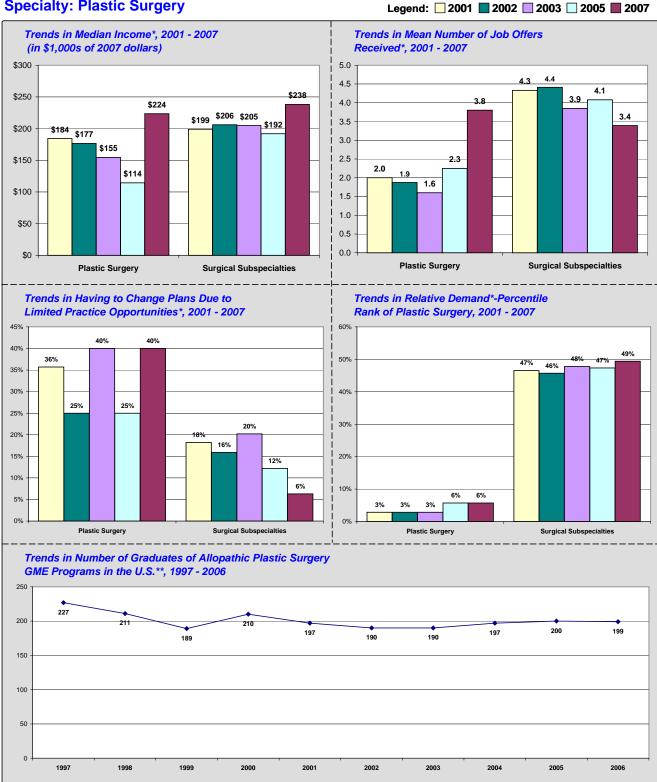


Number of responses: 2001: n = 21, 2002: n = 17, 2003: n = 15, 2005: n = 11, 2007: n = 5.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

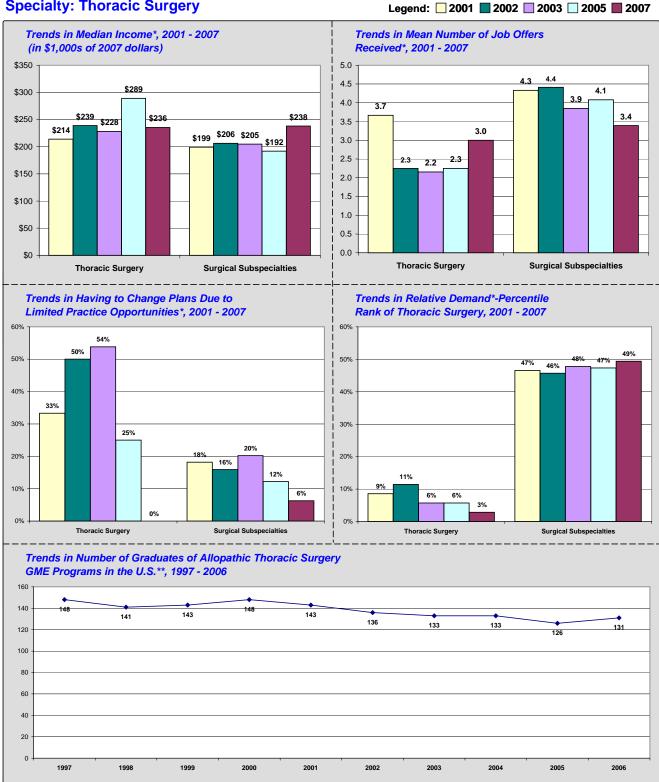
Specialty: Plastic Surgery



Number of responses: 2001: n = 14, 2002: n = 10, 2003: n = 8, 2005: n = 8, 2007: n = 5. *Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Thoracic Surgery

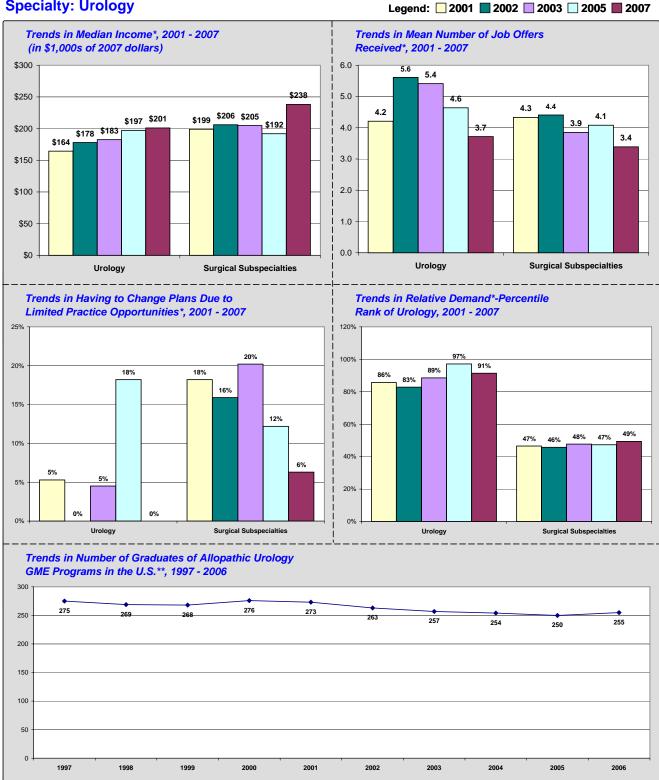


Number of responses: 2001: n = 9, 2002: n = 8, 2003: n = 14, 2005: n = 4, 2007: n = 3.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.



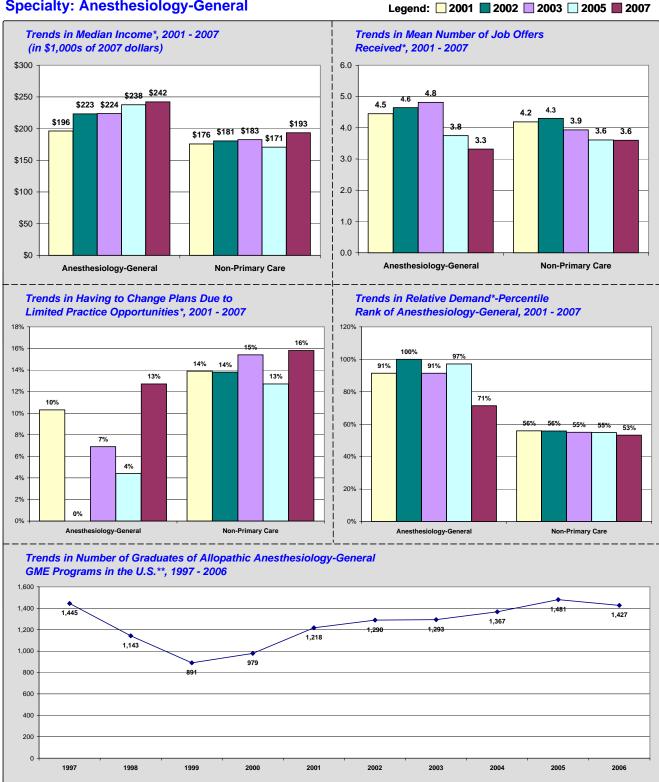


Number of responses: 2001: n = 20, 2002: n = 19, 2003: n = 23, 2005: n = 11, 2007: n = 9.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.



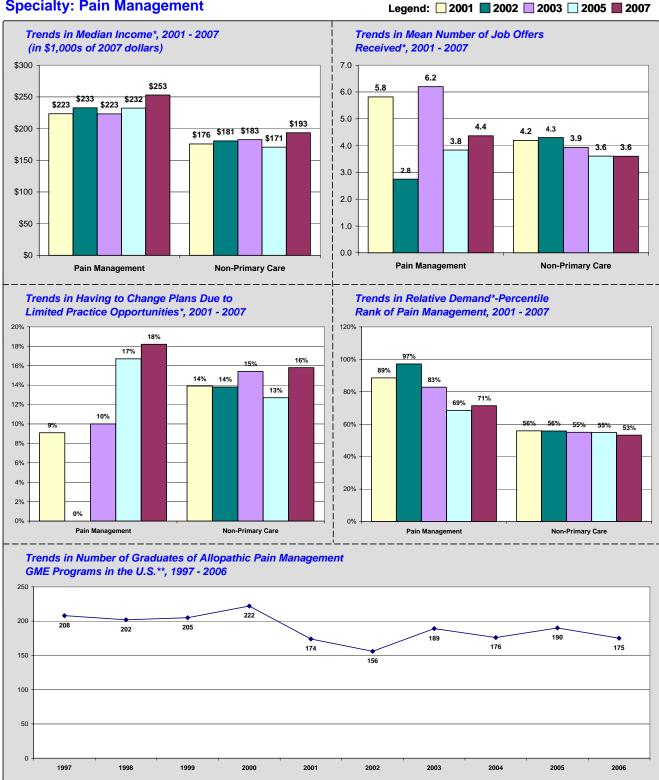


Number of responses: 2001: n = 43, 2002: n = 54, 2003: n = 62, 2005: n = 49, 2007: n = 59.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Pain Management

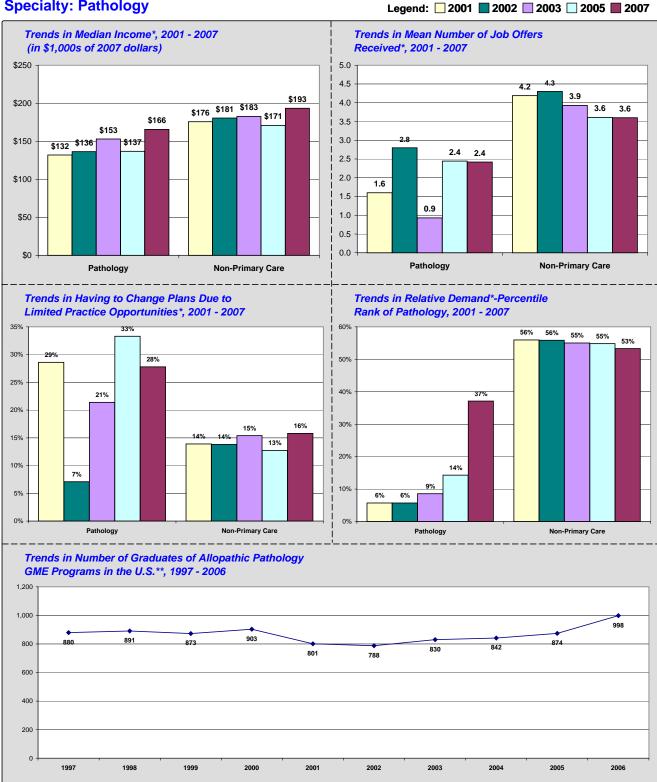


Number of responses: 2001: n = 12, 2002: n = 13, 2003: n = 10, 2005: n = 7, 2007: n = 12.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Pathology

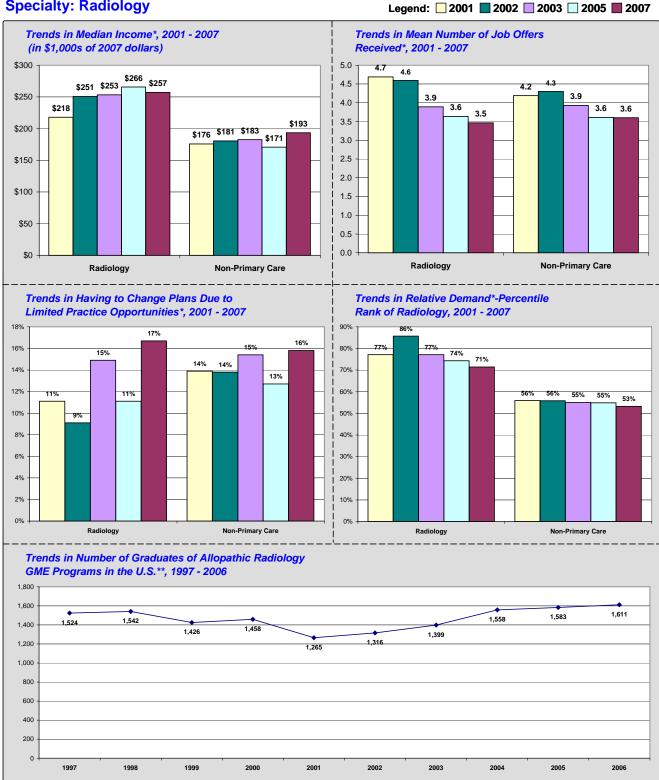


Number of responses: 2001: n = 23, 2002: n = 19, 2003: n = 17, 2005: n = 12, 2007: n = 21.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Radiology

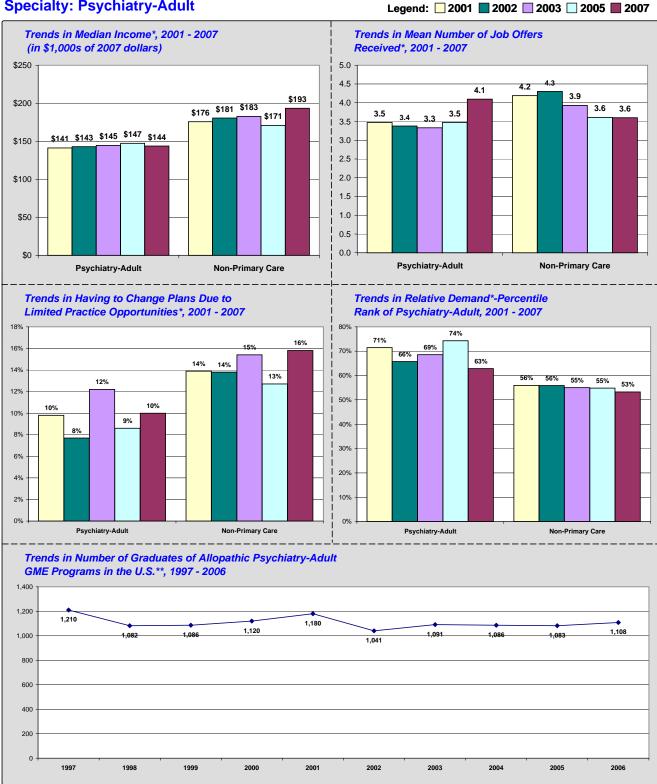


Number of responses: 2001: n = 54, 2002: n = 64, 2003: n = 53, 2005: n = 44, 2007: n = 47.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Psychiatry-Adult



Number of responses: 2001: n = 57, 2002: n = 60, 2003: n = 58, 2005: n = 39, 2007: n = 46.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.





Number of responses: 2001: n = 24, 2002: n = 22, 2003: n = 23, 2005: n = 17, 2007: n = 15.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Allergy & Immunology

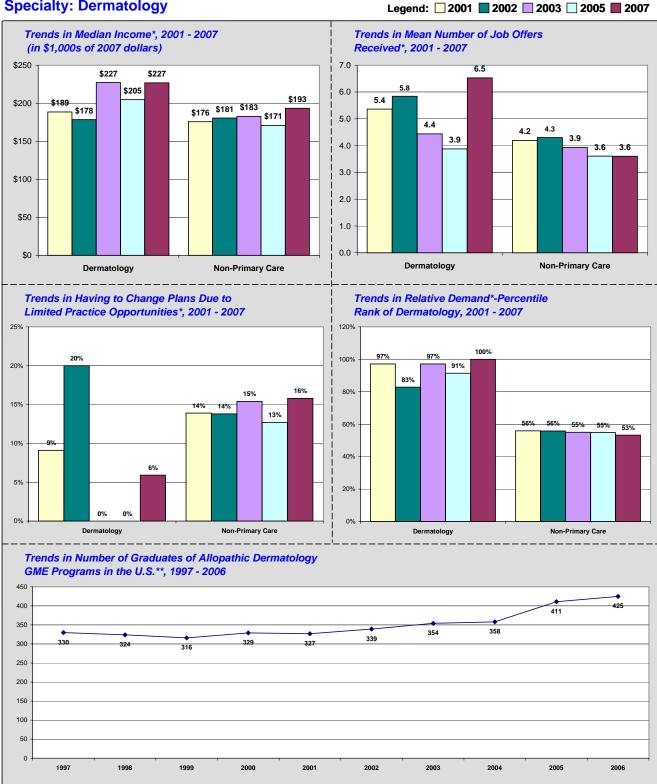


Number of responses: 2001: n = 4, 2002: n = 11, 2003: n = 10, 2005: n = 6, 2007: n = 6.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Dermatology

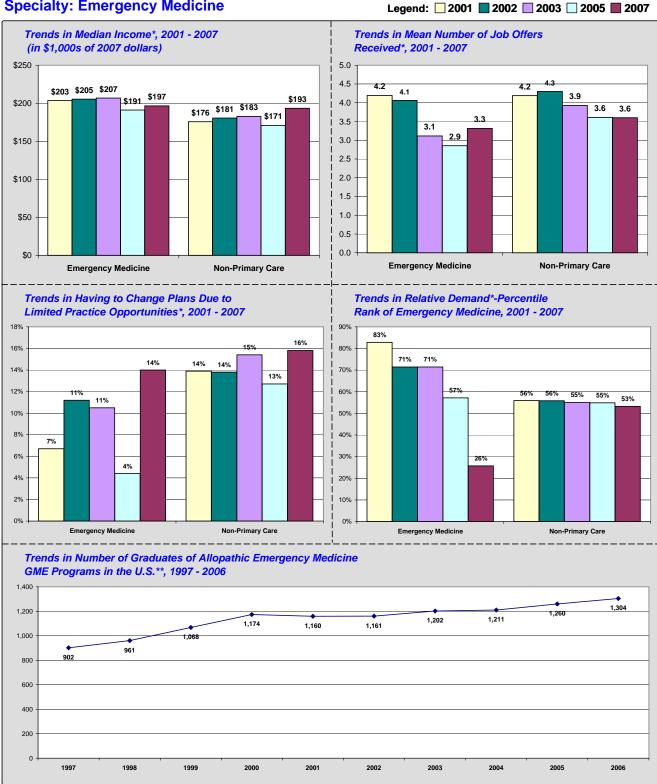


Number of responses: 2001: n = 22, 2002: n = 26, 2003: n = 26, 2005: n = 17, 2007: n = 18.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Emergency Medicine

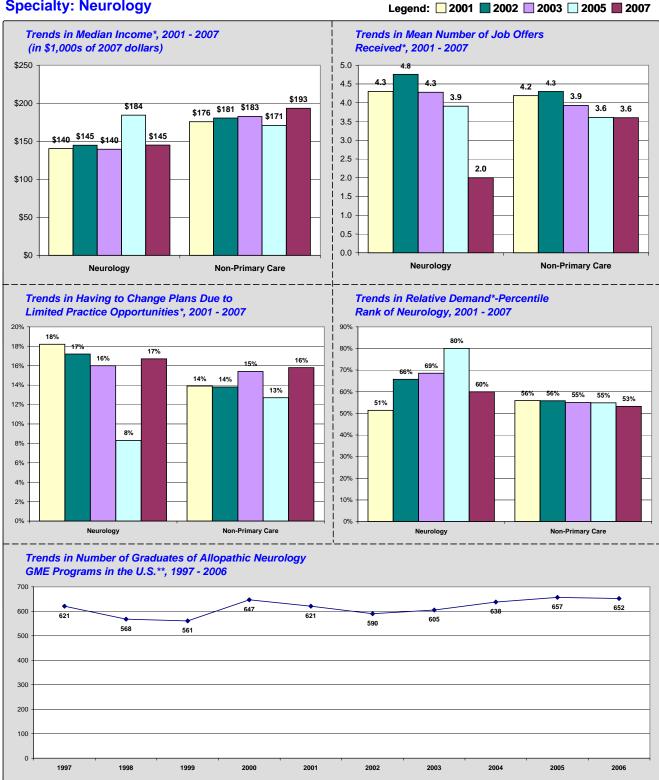


Number of responses: 2001: n = 107, 2002: n = 119, 2003: n = 118, 2005: n = 72, 2007: n = 88.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

Specialty: Neurology

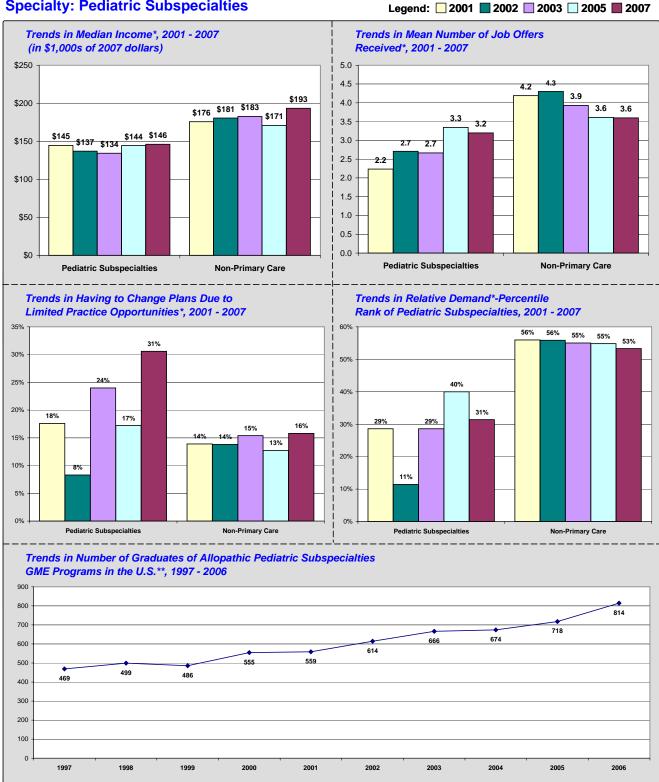


Number of responses: 2001: n = 18, 2002: n = 31, 2003: n = 28, 2005: n = 13, 2007: n = 15.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

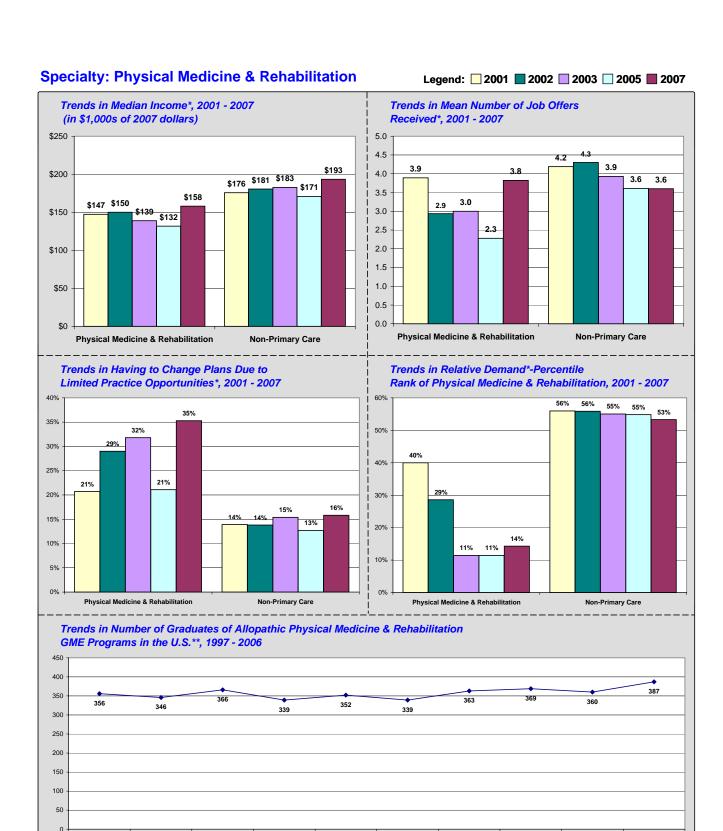




Number of responses: 2001: n = 18, 2002: n = 24, 2003: n = 28, 2005: n = 30, 2007: n = 39.

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.



2001

2002

2004

2005

Number of responses: 2001: n = 30, 2002: n = 34, 2003: n = 26, 2005: n = 22, 2007: n = 17.

1997

^{*}Source: CHWS, Survey of Residents Completing Training in New York, 2001 - 2007.

^{**}Source: JAMA Medical Education Editions, 1998 - 2007.

APPENDI	X A. Methodo	logy Used to	Measure Re	lative Demand

A-1

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 the 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 2002 is 26% (i.e., family medicine had a relative rank equal to or better than 26% of the 35 specialties that were ranked), and the percentile rank of obstetrics/gynecology was 52%, this *does not* imply that demand for ob/gyn was twice as strong as for family medicine. The scale is only ordinal.

To measure demand by specialty and develop a ranking of specialties based on demand, a composite demand score was computed by taking a weighted average of the ranks (i.e., where each specialty stood among all specialties) scored by each specialty on each variable used to measure demand (or demand indicator). 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 is 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 is 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:

- ✓ <u>diff</u>: 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 (neurosurgery) ranked #1 and the specialty with the highest percentage of respondents reporting difficulty (plastic surgery) ranked #35.
- ✓ <u>chpln</u>: 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 (general anesthesiology) ranked #1 and the specialty with the highest percentage of respondents reporting difficulty (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 (gastroenterology) ranked #1 and the specialty with the fewest job offers (pathology) 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 (general anesthesiology) ranked #1 and the specialty with the least positive assessment of the regional job market (thoracic surgery) ranked #35.
- ✓ <u>nat_mrkt</u>: 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 (child and adolescent psychiatry) ranked #1 and the specialty with the least positive assessment of the national job market (thoracic surgery) ranked #35.
- ✓ <u>inc_trnd</u>: 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 (critical care medicine) ranked #1 and the specialty with the least positive assessment of the national job market (neurosurgery) ranked #35.

SUMMARY OF RANKS ON DEMAND INDICATORS

SOMINART OF KANK	0.1.2.						Median	Overall	Percentile
Specialty	<u>diff</u>	<u>chpln</u>	offrs*	reg_mrkt	nat_mrkt	inc_trnd*	Rank	Rank	Rank**
Family Medicine	27	23	25	21	18	32	25.0	27	26%
Internal Med-General	34	28	31	27	25	24	27.5	29	20%
Pediatrics-General	28	24	32	28	30	29	29.0	30	17%
IM & Peds (Comb)	26	17	24	23	24	34	24.0	25	31%
Ob/Gyn	20	11	18	17	19	23	18.5	18	51%
Cardiology	7	7	4	4	8	9	7.0	5	89%
Critical Care Med	22	32	28	14	22	1	22.0	23	37%
Endocrinology	25	29	17	12	12	33	21.0	19	49%
Gastroenterology	8	8	1	8	3	5	5.0	2	97%
Geriatrics	29	21	22	24	20	20	21.5	21	43%
Hematology/Onc	13	16	11	15	10	10	11.0	9	77%
Infectious Disease	14	25	21	22	16	21	21.0	19	49%
Nephrology	19	19	9	16	7	28	17.5	16	57%
Pulmonary Disease	18	22	5	19	27	17	17.5	16	57%
Rheumatology	23	31	19	20	17	27	21.5	21	43%
Surgery-General	30	26	27	31	28	11	27.0	28	23%
Neurosurgery	1	3	2	29	21	35	12.0	10	74%
Ophthalmology	24	30	29	32	32	8	29.0	30	17%
Orthopedic Surgery	11	20	8	18	23	15	15.0	15	60%
Otolaryngology	9	13	12	13	15	16	13.0	11	71%
Plastic Surgery	35	34	34	34	34	3	34.0	35	3%
Thoracic Surgery	32	35	30	35	35	22	31.0	32	11%
Urology	5	2	7	11	9	14	8.0	7	83%
Anesthesiology-Gen	2	1	13	1	2	6	4.0	1	100%
Pain Management	4	4	16	7	6	2	5.0	2	97%
Pathology	33	27	35	33	33	26	33.0	34	6%
Radiology	6	5	10	9	13	4	7.5	6	86%
Psychiatry-Adult	10	9	20	3	5	19	14.5	13	66%
Psych-Child & Adol	15	10	6	5	1	7	6.5	4	91%
Allergy & Immun	21	18	26	30	26	13	23.5	24	34%
Dermatology	12	14	3	2	4	18	8.0	7	83%
Emergency Medicine	3	6	15	6	11	30	13.0	11	71%
Neurology	16	15	14	10	14	25	14.5	13	66%
Pediatric Subspecs	17	12	33	25	31	31	31.0	32	11%
Phys Med & Rehab	31	33	23	26	29	12	24.5	26	29%

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

The following example illustrates how the demand score was calculated for family medicine in New York in 2002:

Median Rank_{FP} = median (diff, chpln, offrs, offrs, reg_mrkt, nat_mrkt, inc_trnd, inc_trnd)

Median Rank_{FP} = median (27, 23, 25, 25, 21, 18, 32, 32)

Median Rank_{FP} = 25.0***

***With a median rank of 25.0, family medicine ranked 27 out of 35 specialties. The percentile rank is computed as:

%rank_{FP} = { 1 - (Rank_{FP} / #specs) + (1 / #specs) } where "#specs" is the

number of specialties being ranked. In New York in 2002, there were 35 specialties being ranked, so the percentile rank of family medicine is:

%rank_{FP} =
$$\{ 1 - (27/35) + (1/35) \} \simeq 26\%$$
.

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

APPENDIX B. Specialty Comparison Groups

SPECIALTY COMPARISON GROUPS

Specialty	Comparison Group*
Family Medicine	Primary Care
Internal Medicine-General	Primary Care
Pediatrics-General	Primary Care
Internal Medicine/Pediatrics	Primary Care
Obstetrics/Gynecology	Non-Primary Care
Cardiology	Medicine Subspecialties
Critical Care Medicine	Medicine Subspecialties
Endocrinology	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
Surgery-General	Non-Primary Care
Neurosurgery	Surgical Subspecialties
Ophthalmology	Surgical Subspecialties
Orthopedic Surgery	Surgical Subspecialties
Otolaryngology	Surgical Subspecialties
Plastic Surgery	Surgical Subspecialties
Thoracic Surgery	Surgical Subspecialties
Urology	Surgical Subspecialties
Anesthesiology-General	Non-Primary Care
Pain Management	Non-Primary Care
Pathology	Non-Primary Care
Radiology	Non-Primary Care
Psychiatry-Adult	Non-Primary Care
Psychiatry-Child & Adolescent	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	. 2007 NY	Resident Exit Survey	Instrument
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pen only.		University at Albany, School of Public Health											
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PLEASE DO NOT WRITE IN THIS AREA

Additional SubChief Resident	ical Practice (in Non-Training position)	
. Specialty you	2. If subspecializing/doing	
are COMPLETING	additional fellowship:	
in 2007	Specialty you are ENTERING	
(select only one)	(select only one)	
O	Allergy and Immunolog	√
0	Anesthesiology (Genera	,)
	Anesthesiology–Pain	
	Other Anesthesiology	
	Dermatology	. , , , ,
	Emergency Medicine	
O	Family Medicine	
	Internal Medicine (Gene	eral)
O	Cardiology	
	Critical Care Medicine	
	Endocrinology and M	etabolism
O	Gastroenterology	
	Geriatrics	
O	Hematology/Oncolog	§Y
O	Infectious Disease	
	Nephrology	
O	Pulmonary Disease/CC	CM
	Rheumatology	
	Other Internal Medici	
	Internal Medicine and P	ediatrics (Combined)
	Neurology	
	Nuclear Medicine	
	Obstetrics and Gynecol	
	Obstetrics and Gynec	cology (Subspecialty)–specify:
	Pathology (General)	
	Pathology (Subspecia	llty)-specify:
	Pediatrics (General)	
	Pediatrics (Subspecia	
	Physical Medicine and F	
	Preventive Medicine/Pul	olic Health/Occupational Medicine
	Psychiatry	h Davidalatur
	Child and Adolescen	
	Other Psychiatry Subs	pecialty-specity:
	Radiology (Diagnostic)	
	Radiology (Therapeutic)	
	Surgery (General)	
	Cardio-Thoracic Surge	ery
	Neurological Surgery	
	Ophthalmology	
	Orthopedic Surgery	
	Otolaryngology	
	Plastic Surgery	
	Urology	
	Other Surgical Subsp	: - 14 · · · · · · · · · · · · · · · · · ·

C. FUTURE PLANS	○ Yes, and I have accepted an offer
In your upcoming position, how many hours	Yes, and mave accepted an oneYes, but I declined the offer(s) and am still searching
per week do you expect to spend in each of	(Skip to Question 26)
the following activities?	○ No, but I have not actively searched yet
None 1-9 10-19 20-29 30-39 40-49 50-59 60+	(Skip to Question 26)
$lackbox{} lackbox{} lackbox{$	No, I have not yet been offered a practice position
Direct Patient Care O O O O O	(Skip to Question 26)
Research O O O O O O	
Teaching O O O O O O	D. PRACTICE PLANS
Administration O O O O O	
Community Service O O O O O	If you have accepted a position in Patient
Continuity service C C C C C C C	Care/Clinical Practice please answer the following
14. Where is the location of your primary activity	questions, if not, skip to Question 26.
	questions, it not, stup to encoulon 20.
after completing your current training position?	18. Which best describes the type of Patient
○ Same City/County as Current Training	Care Practice you will be entering?
○ Same Region within New York State—but	Principal Secondary
Different City/County	PracticeSetting Practice Setting(s)
Other Area within New York State	(mark only one) (mark all that apply)
Other State	(mark only one) (mark all that apply)
Outside of U.S.	OSolo Practice
O Don't know yet	○○ Partnership (2 person)
15. If you are going on for additional	O Group Practice
training/fellowship, please answer the following:	OOHospital—Inpatient
A. Why are you subspecializing/continuing	OO Hospital—Ambulatory Care
training? (mark all that apply)	OO Hospital—Emergency Room
 ○ To further your medical education 	
	O
 Unable to find a job you are happy with 	OO Nursing Home
O Unable to find any job	○Other:
○ To stay in the U.S. (i.e., due to visa status)	10
Other (specify):	19. What level of ownership will you have in your
 Question does not apply 	upcoming practice?
B. If you are leaving the state to continue your	○ None, I will be an employee
training, do you plan to return to NY to	 None currently, but I may have the option to
practice when your training is complete?	become a partner in the future
○ Yes ○ Don't know yet	 I will be a partner, but will not have any capital
O No Question does not apply	invested in the practice
16. Do you have an obligation or visa requirement	O I will be an owner/partner (i.e., will have capital
to work in a federally designated Health	invested and own a financial stake in the practice)
Professional Shortage Area?	
O Yes O No	
17. If you are planning to enter or have considered	20. A. What is the zip code ← Principal Practice
entering patient care/clinical practice:	of the principal Zip Code
A. Have you actively searched for a job?	practice address at
	Which voll will be
○ Yes	working (if zip is
O No, not yet (Skip to 17C)	unknown please
O No, I will be self-employed (Skip to 17C)	give city/town and
B. Which of the following	state)2
approaches have you (Ised Effective	66666
used in your job search? <u>asea</u> <u>Encetive</u> (mark all (mark	$ \ \bigcirc \ \bigcirc \ \ \ \ \bigcirc \ \ \bigcirc \ \ \ \bigcirc \ \ \ \ \bigcirc \ \ \bigcirc \ \ \ \bigcirc \ \ \ \ \bigcirc \ \ \ \ \ $ \ \ \bigcirc \ \ \ \ \ \ \ \ \ \ \ \ \ \
Which one did you that apply) only one)	8888
find most effective?	99999
Third party representation (recruitment	
agencies/headhunters, online or otherwise)	
Independent search activity on the Internet	City/Town State
(direct to employers)	,
	B Is this principal practice address located
Print/Traditional want ad responses	B. Is this principal practice address located
(journals, newspapers, trade publications)	in a federally designed Health
Residency program announcements/career fairs O	Professional Shortage Area?
Other (specify):	○ Yes ○ No ○ I don't know
	Page 3

please indicate the main reason why.	what is your level of satisfaction with your salary/compensation?
(mark only one) ○ Overall lack of jobs/practice opportunities	○ Very Satisfied ○ Not Too Satisfied
in New York	○ Somewhat Satisfied ○ Very Dissatisfied
☐ Lack of jobs/practice opportunities in New York	
due to visa status	E. EXPERIENCE IN JOB MARKET
 Lack of jobs/practice opportunities in desired 	(If you are going into patient care or have
locations in New York	considered going into patient care, please
 Lack of jobs/practice opportunities in desired 	complete the following.)
practice setting (e.g., hospital, group practice, etc.)	
in New York	26. Did you have difficulty finding a practice
○ Inadequate salary/compensation offered in New York	position you were satisfied with?
Cost of malpractice insurance in New YorkLack of employment opportunities for spouse/	◯ Yes ◯ No ◯ Haven't looked yet
partner in New York	(Skip to Question #29)
Proximity to family	A. If Yes , what would you say was the
○ Climate	main reason? (mark only one)
O Never intended to practice in New York	Overall lack of jobs/practice opportunities
Other (specify):	○ Lack of jobs/practice opportunities due to visa status
04	 Lack of jobs/practice opportunities in desired locations
21. How many years do you expect to be at	☐ Lack of jobs/practice opportunities in desired practice
your principal practice?	setting (e.g., hospital, group practice, etc.)
\bigcirc 1 \bigcirc 2 \bigcirc 3 \bigcirc 4 \bigcirc 5 or more	 Inadequate salary/compensation offered
22. Which best describes the demographics of	Lack of employment opportunities for spouse/partnerOther (specify):
the area in which you will be practicing?	Other (specify).
O Inner City	27. Did you have to change your plans
Other Area within Major City	because of limited practice opportunities?
○ Suburban	○ Yes ○ No ○ Haven't looked yet
○ Small City (population less than 50,000)	(Skip to Question #29)
○ Rural	28. How many offers for employment/practice
02 H	positions did you receive (excluding
23. How will you be compensated at your principal practice:	fellowships, chief residency and other
• •	training positions)?
Salary without IncentiveSalary with Incentive	○ None ○ 2 ○ 4 ○ 6–10
Fee for Service	01 03 05 0 Over 10
Other (specify):	
24. Expected Gross Income during first year of	29. What is your overall assessment of practice opportunities in your specialty , and within
practice:	50 miles of the site where you trained?
B. Anticipated Additional	·
A. Base Salary/Income Incentive Income	Many Jobs Very Few Jobs
○ Less than \$70,000 ○ None	○ Some Jobs ○ No Jobs
\$70,000−\$79,999\$80,000−\$89,999\$5,000−\$9,999	○ Few Jobs ○ Unknown
<pre>\$80,000-\$89,999</pre>	30. What is your overall assessment of practice
\$100,000 \$77,777 \$15,000 \$14,777 \$100,000 \$109,999 \$15,000 \$19,999	opportunities in your specialty nationally?
\$110,000-\$119,999 \$20,000-\$24,999	○ Many Jobs ○ Very Few Jobs
\$120,000-\$129,999 \$25,000-\$29,999	○ Some Jobs ○ No Jobs
\$130,000-\$139,999 \$30,000-\$34,999	○ Few Jobs ○ Unknown
\$140,000-\$149,999 \$35,000-\$39,999	
\$150,000-\$174,999 \$40,000-\$44,999	
\$175,000-\$199,999 \$45,000-\$49,999	THANK YOU FOR COMPLETING
○ \$200,000 – \$224,999 ○ \$50,000 and over	THIS IMPORTANT SURVEY.
\$225,000—\$249,999	THIS IMPORTANT SURVEY.
○ \$250,000 and over	
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