

Tracking Report

RESULTS FROM THE COMMUNITY TRACKING STUDY • NO.17 • JUNE 2007

Exodus of Male Physicians from Primary Care Drives Shift To Specialty Practice

By Ha T. Tu and Ann S. O'Malley

An exodus of male physicians from primary care is driving a marked shift in the U.S. physician workforce toward medical-specialty practice, according to a national study by the Center for Studying Health System Change (HSC). Two factors have helped mask the severity of the shift—a growing proportion of female physicians, who disproportionately choose primary care, and continued reliance on international medical graduates (IMGs), who now account for nearly a quarter of all U.S. primary care physicians. Since 1996-97, a 40 percent increase in the female primary care physician supply has helped to offset a 16 percent decline in the male primary care physician supply relative to the U.S. population. At the same time, primary care physicians' incomes have lost ground to both inflation and medical and surgical specialists' incomes. And women in primary care face a 22 percent income gap relative to men, even after accounting for differing characteristics. If real incomes for primary care physicians continue to decline, there is a risk that the migration of male physicians will intensify and that female physicians may begin avoiding primary care—trends that could aggravate a predicted shortage of primary care physicians.

WORKFORCE SHIFTS TOWARD MEDICAL SPECIALTIES

While there is an ongoing debate about the adequacy of the overall U.S. physician supply, there is general agreement that the existing physician workforce is not choosing specialties or practice locations in sync with the nation's medical needs.¹ Physician-to-population ratios vary greatly across the country. And in areas with many low-income residents or rapid population growth, the supply of physicians has not kept pace.² Among U.S. physicians who work 20 or more hours a week providing direct patient care, only 37 percent specialize in primary care—internal, family, pediatric or geriatric medicine—a much lower proportion than in other developed countries, such as the

TABLE 1: **Distribution of Patient-Care Physicians Across Specialty Areas, 1996-97 to 2004-05**

	1996-97	2000-01	2004-05
Primary Care Physicians	38.9%	39.8%	36.7%*#
Medical Specialists	32.2	35.1*	37.6*#
Surgeons	28.9	25.1*	25.7*

* Change from 1996-97 is statistically significant at $p < .05$.

Change from 2000-01 is statistically significant at $p < .05$.

Source: HSC Community Tracking Study Physician Survey

Netherlands, Denmark, the United Kingdom and Spain.³

As the U.S. population ages and many of the 76 million baby boomers develop multiple chronic conditions, an adequate supply of primary care physicians will be critical to meet the nation's health care needs. Over the last decade, however, the supply of medical specialists, such as cardiologists and gastroenterologists, has increased significantly, with concurrent reductions in the supply of both primary care physicians and surgeons, according to HSC's nationally representative Community Tracking Study (CTS) Physician Survey (see Data Source). The proportion of medical specialists grew from 32.2 percent in 1996-97 to 37.6 percent of all patient-care physicians in 2004-05, while the proportion of primary care physicians decreased from 38.9 percent to 36.7 percent (see Table 1). Likewise, the proportion of surgeons declined from 28.9 percent to 25.7 percent.

Overall, from 1996-97 to 2004-05, there has been a modest increase in the physician population relative to the general U.S. population (see Supplementary Table 1). During this time, however, the number of primary care physicians per capita has fallen slightly, as the number of male primary care physicians declined substantially, from 39.3 per 100,000 people in 1996-97 to 33.0 per 100,000 in 2004-05. Without the increase in the supply of female primary care physicians—from 12.1 per 100,000 people in 1996-97 to 17.0 per 100,000 in 2004-05—a larger reduction in the primary care workforce relative to the population would have occurred.

WOMEN SHORE UP THE PRIMARY CARE WORKFORCE

The increasing presence of women is one of the most notable physician workforce trends. Women accounted for a quarter of all patient-care physicians in 2004-05, up from 18 percent in 1996-97 (see Table 2). Female physicians are much more prevalent in primary care—more than one in three primary

care physicians is a woman, compared with 22 percent of medical specialists and 17 percent of surgeons. And, among female physicians in 2004-05, half practiced in primary care, one-third in medical specialties, and only 17 percent in surgical specialties (see Table 3).

Since the mid-1990s, there has been little change in the distribution of female physicians among the categories of primary care, medical specialties and surgical specialties. Instead, the migration of male physicians toward medical specialties and away from primary care and surgical specialties has largely been responsible for the specialty shifts in the overall physician population. A 40 percent increase in the supply of female primary care physicians helped to offset a 16 percent decrease in the supply of male primary care physicians relative to the U.S. population.

Female physicians are much more likely than their male counterparts to practice in pediatrics: Nearly one in six female physicians is a pediatrician, compared with one in 17 male physicians; and women account for about half (49%) of all pediatricians. Women also are more likely than men to practice in obstetrics-gynecology: Women make up more than one-third of the obstetrician-gynecologist workforce, while accounting for only 10 percent of the workforce in other surgical specialties. Obstetrician-gynecologists are able to meet some of the primary care needs of healthy women during their childbearing years.⁴

In patterns that have remained consistent since the mid-1990s, female primary care physicians tend to be younger than their male counterparts (44.2 vs. 50.9 average age in 2004-05) and have correspondingly fewer years in practice (11.6 vs. 18.3

Data Source

This Tracking Report presents findings from three rounds of the HSC Community Tracking Study Physician Survey, a nationally representative telephone survey of physicians involved in direct patient care in the continental United States. The sample of physicians was drawn from the American Medical Association and the American Osteopathic Association master files. To participate in the survey, respondents had to be active, nonfederal, office- or hospital-based physicians practicing in the 48 contiguous states who spent at least 20 hours a week in direct patient care. Residents and fellows, as well as radiologists, anesthesiologists and pathologists, were excluded. The 1996-97 and 2000-01 surveys each contain information on about 12,000 physicians, while the 2004-05 survey includes responses from more than 6,600 physicians. The response rates ranged from 52 percent to 65 percent. Physicians were asked to report their incomes for the last full year prior to the initial fielding of each survey (e.g., respondents to the 1996-97 survey were asked to report their 1995 incomes). As a result, the timeframe for income estimates differs from the timeframes for other measures.



CTSONline, a Web-based interactive system for results from the CTS Physician Survey, is available at www.hschange.org.

TABLE 2: Distribution of Patient-Care Physicians, Male vs. Female, 1996-97 to 2004-05

	1996-97	2000-01	2004-05
All Patient-Care Physicians			
Male	82.0%	76.4%*	74.8%*
Female	18.0	23.6*	25.2*
Primary Care Physicians			
Male	76.4	69.1*	66.0*#
Female	23.6	30.9*	34.0*#
Medical Specialists			
Male	81.5	78.2*	77.7*
Female	18.5	21.8*	22.3*
Surgeons			
Male	90.2	85.7*	83.2*
Female	9.8	14.3*	16.8*

* Change from 1996-97 is statistically significant at $p < .05$.
Change from 2000-01 is statistically significant at $p < .05$.
Source: HSC Community Tracking Study Physician Survey

TABLE 3: Distribution of Physician Specialty Type by Sex, 1996-97 to 2004-05

	1996-97	2000-01	2004-05
Male Physicians			
Primary Care Physicians	36.3%	35.9%	32.4%*#
Medical Specialists	32.0	35.9*	39.0*#
Surgeons	31.7	28.1*	28.6*
Female Physicians			
Primary Care Physicians	51.1	52.3	49.5
Medical Specialists	33.1	32.5	33.4
Surgeons	15.8	15.2	17.1

* Change from 1996-97 is statistically significant at $p < .05$.
Change from 2000-01 is statistically significant at $p < .05$.
Source: HSC Community Tracking Study Physician Survey

average years), but they are more likely than men to be board-certified (94.4% vs. 88.3%). Over time, the proportion of both male and female primary care physicians with board certification has increased substantially, likely reflecting efforts by physician educational commissions to improve the qualifications of the physician workforce and the increased availability of board certification among various specialties.

Over the past decade, average hours worked on all medically related activities by primary care physicians have declined—53.8 hours a week in 1996-97 vs. 51.4 hours a week in 2004-05.⁵

Women in primary care worked fewer hours on average than men (46.9 hours vs. 53.6 hours a week in 2004-05), but women's average work hours have held steady over time while men's hours have declined (from 55.7 hours per week in 1996-97), so the gender gap in hours worked has narrowed somewhat. Interestingly, for physicians of both genders, the average hours spent in direct patient care has increased by one hour over this same time period.

Despite this narrowing of the gender gap in average work hours, the fact that female physicians—a growing contingent of the workforce—work fewer hours than male physicians needs to be taken into account when physician workforce estimates, including physician-to-population ratios, are calculated. And it is not only women, but also younger physicians in general, who are working fewer hours as they seek more controllable lifestyles. Adequately accounting for these trends is important in improving the accuracy of workforce projections.

IMGs BOLSTER PRIMARY CARE FOR NOW

Nearly one-fourth of the primary care physician workforce is composed of international medical graduates, whose share of the primary care workforce has remained stable at just more than 24 percent since 2000-01, after increasing from 20.7 percent in the late-1990s. Although primary care IMGs tend to be slightly older than their U.S.-trained counterparts (50.1 vs. 48.1 average age in 2004-05), they average fewer years in practice (14.8 vs. 16.4 years) and are less likely to be board-certified (84.4% vs. 92.2%). Primary care IMGs have historically served in lower-income and medically underserved areas at rates higher than U.S.-trained primary care physicians,⁶ thus helping to address some of the gaps in access to care for these populations.

IMGs continue to practice in primary care at higher rates than U.S.-trained physicians (42.0% vs. 35.4% in 2004-05). However, IMGs, like U.S.-trained physicians, have steadily migrated into medical specialties in recent years, leading to a substantial decline in the proportion of IMGs practicing in primary care since 2000-01 (42.0% of IMGs in primary care in 2004-05 vs. 47.1% in 2000-01).

PRIMARY CARE INCOMES LAG; WOMEN FARE WORST

In 2003, net income for primary care physicians averaged approximately \$146,000—an increase of 8.4 percent over 1995 income. After adjusting for inflation, however, primary care physician net income actually declined by 10.2 percent over the eight-year period. During that time, medical specialists, whose baseline incomes were already higher than those of primary care physicians, kept pace with inflation, while surgeons lost ground—8.2 percent net income decline—but remained the highest earning of the three physician specialty categories.⁷

On average, female primary care physicians earned about

Declining real incomes for primary care physicians, both in absolute terms and relative to the declines experienced by other physician specialties, have made careers in primary care less attractive.

30 percent less than their male counterparts in 2003—average reported net income of \$114,316 vs. \$162,934 (see Supplementary Table 2). Male-female income gaps also were substantial for medical specialists (22.8%) and surgeons (30.8%), but the primary care gap is particularly relevant since primary care income levels are substantially lower than those of specialists.

Male-female income gaps persisted even after controlling for personal and practice characteristics, including specialty, years of experience, board certification, IMG status, average hours worked, practice setting, proportions of Medicaid and capitated revenue, and practice ownership status. This finding is consistent with earlier research.⁸

However, factors affecting choice of practices that offer more flexible hours or less on-call time, which might translate into income differences for men and women, are not captured in the CTS Physician Survey data. So, the impact of such factors on the income gap cannot be determined.

Adjusted incomes (controlling for personal and practice characteristics) revealed a 22 percent gender gap in 2003 for primary care physicians—a gap that has widened since 1995, when it was 16 percent. In contrast, women in the medical specialties have reduced the income gap considerably relative to their male counterparts.

POLICY IMPLICATIONS

Female medical school graduates have traditionally chosen primary care at much higher rates than men,⁹ and this has helped to counteract some of the decline in the proportion of male graduates pursuing primary care. However, women still constitute a smaller proportion of the active physician workforce and work fewer hours on average, likely because of competing child-care responsibilities. Therefore, the increase in female primary care physicians cannot make up, on a one-to-one basis, for the departure of men from the field.

Primary care also has counted on international medical graduates as a source of new physicians. IMGs, in particular foreign citizens working in the U.S. on temporary visas, still practice in medically underserved areas at higher rates than do U.S.-trained physicians. A continued influx of IMGs, along with the increased presence of women, into primary care may have

helped to mask the severity of the trends that are discouraging physicians from choosing primary care careers.

Declining real incomes for primary care physicians, both in absolute terms and relative to the declines experienced by other physician specialties, have made careers in primary care less attractive to medical students and residents.¹⁰ If real incomes for primary care physicians continue to decline, there is a risk that the exodus from primary care will accelerate and trigger or aggravate a workforce shortage. Given that female physicians earn substantially less to begin with, their continuing commitment to primary care in the face of declining real incomes is striking, but it is uncertain how long such constancy can be sustained.

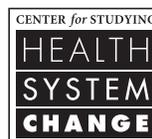
To encourage the right distribution of physicians to meet the nation's medical needs, policy makers may need to use Medicare and Medicaid payment rates to realign the price signals being sent to physicians. Primary care physicians, whose incomes tend to be highly dependent on office visits and cognitive services rather than procedures, cannot simply increase the number of procedures or tests that they deliver as a tool to offset stagnant or declining fees the way that some medical specialists can.

Policy makers, recognizing the pressures faced by physicians in specialties relying on cognitive services, did, in fact, incorporate increased payments for evaluation and management services as part of the most recent five-year update of Medicare relative values.¹¹ But the gains for primary care specialists are projected to be relatively small, in part because of the failure of the update process to identify many procedural services for which productivity trends should lead to a decline in relative values. For example, the most recent relative value update resulted in increases of only 5 percent for internal medicine and family practice. Moreover, some activities that primary care physicians are expected to perform, such as care coordination and patient education, continue as non-reimbursed services (separately from office visits).

Until such imbalances in physician payments are addressed, incomes for primary care physicians are likely to continue falling behind those of medical specialists, and maintaining a primary care physician workforce adequate to meet the needs of the U.S. population will become more challenging.

Notes

- Blumenthal, David, "New Steam From an Old Cauldron—The Physician-Supply Debate," *New England Journal of Medicine*, Vol. 350, No. 17 (April 22, 2004).
- Association of American Medical Colleges, <http://www.aamc.org/workforce>, accessed May 1, 2007.
- Macinko, James, Barbara Starfield and Leiyu Shi, "The Contribution of Primary Care Systems to Health Outcomes Within Organization for Economic Cooperation and Development (OECD) Countries 1970-1998," *Health Services Research*, Vol. 38 (2003).
- Henderson, Jillian T., and Carol S. Weisman, "Women's Patterns of Provider Use Across the Lifespan and Satisfaction With Primary Care Coordination and Comprehensiveness," *Medical Care*, Vol. 43, No. 8 (August 2005).
- Medically related activities are defined as time spent on administrative tasks, professional activities and direct patient care but not time spent on call when not treating patients.
- Mick, Stephen S., and Shoou-Yih Daniel Lee, "The Safety Net Role of International Medical Graduates," *Health Affairs*, Vol. 16, No. 2 (July/August 1997).
- Tu, Ha T., and Paul B. Ginsburg, *Losing Ground: Physician Income, 1995-2003*, Tracking Report No. 15, Center for Studying Health System Change, Washington, D.C. (June 2006). The timeframe for physician income is different from the timeframe for other measures (see Data Source).
- Hoff, Timothy J., "Doing the Same and Earning Less: Male and Female Physicians in a New Medical Specialty," *Inquiry*, Vol. 41, No. 3 (Fall 2004); Laine, Christine, and Barbara J. Turner, "Unequal Pay for Equal Work: The Gender Gap in Academic Medicine," *Annals of Internal Medicine*, Vol. 141, No. 3 (Aug. 3, 2004); Wallace, Amy E., and William B. Weeks, "Differences in Income Between Male and Female Primary Care Physicians," *Journal of American Medical Women's Association*, Vol. 57, No. 4 (Fall 2002).
- Brotherton, Sarah E., Paul H. Rockey and Sylvia I. Etzel, "U.S. Graduate Medical Education, 2004-2005: Trends in Primary Care Specialties," *The Journal of the American Medical Association*, Vol. 294, No. 9 (Sept. 7, 2005).
- Newton, Dale A., and Martha S. Grayson, "Trends in Career Choice by US Medical School Graduates," *The Journal of the American Medical Association*, Vol. 290 (2003); Schroeder, Steven A., "Primary Care at a Crossroads," *Academic Medicine*, Vol. 77, No. 8 (August 2002).
- Ginsburg, Paul B., and Robert A. Berenson, "Revising Medicare's Physician Fee Schedule," *New England Journal of Medicine*, Vol. 356, No. 12 (March 22, 2007).



Tracking Reports are published by the
Center for Studying Health System Change.

President: Paul B. Ginsburg

Contact HSC at:

600 Maryland Avenue, SW, Suite 550

Washington, DC 20024-2512

Tel: (202) 484-5261

Fax: (202) 484-9258

www.hschange.org

EXODUS OF MALE PHYSICIANS FROM PRIMARY CARE DRIVES SHIFT TO SPECIALTY PRACTICE

SUPPLEMENTARY TABLES

Supplementary Table 1: Number of Patient-Care Physicians per 100,000 People,* by Specialty Type and Sex, 1996-97 to 2004-05	<i>Physicians per 100,000 People</i>		
	1996-97	2000-01	2004-05
	All Patient Care Physicians		
All	131.9	133.8	136.2
Male	108.2	102.3	101.9
Female	23.7	31.5	34.3
Primary Care Physicians			
All	51.4	53.2	50.0
Male	39.3	36.8	33.0
Female	12.1	16.5	17.0
Medical Specialists			
All	42.5	47.0	51.2
Male	34.6	36.8	39.8
Female	7.9	10.2	11.4
Surgeons			
All	38.0	33.6	35.0
Male	34.3	28.8	29.2
Female	3.7	4.8	5.9
<p>*Based on U.S. Census data for the same year. Note: Significance tests not available for estimates reported in this table. Note: Only active, nonfederal, office- and hospital-based physicians who spent at least 20 hours a week in direct patient care are included. Residents and fellows, as well as radiologists, anesthesiologists and pathologists, are excluded. Ratios of physicians to the population differ from other published estimates from the AMA Masterfile, because the CTS Physician Survey only includes physicians who spend at least 20 hours per week in direct patient care. Source: HSC Community Tracking Study Physician Survey</p>			

EXODUS OF MALE PHYSICIANS FROM PRIMARY CARE DRIVES SHIFT TO SPECIALTY PRACTICE

SUPPLEMENTARY TABLES

		Average Reported Net Income		
		1995	1999	2003
Supplementary Table 2: Average Net Income from Practice of Medicine, by Specialty Type and Sex, 1995-2003				
All Patient-Care Physicians	Male	\$193,574	\$204,137*	\$221,536*#
	Female	122,880	129,537*	147,815*#
Primary Care Physicians	Male	144,070	151,013*	162,934*#
	Female	105,647	108,452	114,316*#
Medical Specialists	Male	190,779	208,072*	222,622*#
	Female	125,747	139,054*	171,847*#
Surgeons	Male	252,995	267,199	286,423*
	Female	172,823	181,115	198,210*
Inflation Adjusted Average Net Income (1995 Dollars)				
All Patient-Care Physicians	Male	\$193,574	\$186,739*	\$183,489*
	Female	122,880	118,497	122,429
Primary Care Physicians	Male	144,070	138,142*	134,951*
	Female	105,647	99,209*	94,683*#
Medical Specialists	Male	190,779	190,338	184,389
	Female	125,747	127,203	142,334
Surgeons	Male	252,995	244,425	237,233*
	Female	172,823	165,678	164,169
Regression-Adjusted Average Net Income**				
All Patient-Care Physicians	Male	\$188,206	\$197,053*	\$213,124*#
	Female	143,984	147,446	166,851*#
Primary Care Physicians	Male	147,999	150,878*	162,417*#
	Female	124,513	123,479	126,949
Medical Specialists	Male	189,920	204,397*	222,981*#
	Female	144,081	149,862	187,668*#
Surgeons	Male	244,062	254,083	273,378*
	Female	172,004	178,897	196,975*
Regression-Adjusted, Inflation-Adjusted Average Net Income** (1995 Dollars)				
All Patient-Care Physicians	Male	\$188,328	\$180,270*	\$176,286*
	Female	142,712	134,767*	139,022
Primary Care Physicians	Male	147,687	138,020*	134,558*
	Female	122,828	112,881*	106,209*#
Medical Specialists	Male	190,020	187,006	184,818
	Female	142,358	136,941	156,743#
Surgeons	Male	244,840	232,431	225,313*
	Female	171,926	163,526	162,997

* Difference from 1996-97 statistically significant at p<.05.
Difference from 2000-01 statistically significant at p<.05.
** Regression-adjusted means are derived from a multivariate model that controls for differences in physician characteristics, including sex, years of experience, number of medically related work hours, practice setting, ownership status, and selected practice characteristics (percentages of practice revenue from Medicaid and capitation).
Source: HSC Community Tracking Study Physician Survey