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How Managed Care Growth Affects Where Physicians Locate Their Practices

Editor's note: Managed care has had a profound effect on physician practice. It has altered patterns in the use of physician services, and consequently, the practice and employment options available to physicians. But managed care growth has not been uniform across the United States, and has spawned wide geographic disparities in earning opportunities for generalists and specialists. This Issue Brief summarizes new information on how managed care has affected physicians' labor market decisions and the impact of managed care on the number and distribution of physicians across the country.

Three studies examine the impact of managed care on physicians' location choices

Polsky, Escarce and colleagues used the American Medical Association (AMA) Physician Masterfile to determine where physicians practice and the specialty they choose to practice. The AMA Physician Masterfile provides current and historical data on all allopathic physicians in the U.S. The studies used data on HMO penetration (the percentage of people insured by HMOs in a market) to discern the effect of managed care on physicians' choices.

- The studies analyzed the individual practice decisions of both newly graduating and established physicians, and the cumulative effect of those decisions on the geographical distribution of physicians in metropolitan areas.
 - The investigators adjusted for other factors that might explain physician location decisions, including area population characteristics (such as age distribution and poverty rate), health system factors (such as the index of Medicare physician fees) and previous contact with an area (for example, having gone to medical school in the state).
 - The investigators defined a physician market as a metropolitan area. They excluded nonmetropolitan areas, due to the difficulty of defining local markets for rural physicians and because of the poor quality of data on HMO penetration in rural areas.
 - Physicians were categorized as generalists, (general internists and pediatricians, family physicians, and general practitioners); medical/surgical specialists (internal medicine and pediatric subspecialists, dermatologists, neurologists, general and subspecialty surgeons, obstetricians/gynecologists, and psychiatrists); and hospital-based specialists (radiologists, pathologists, anesthesiologists, and emergency physicians).
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Practicing physicians do not relocate in response to managed care

The investigators examined the probability, over a four-year period, that established physicians relocated their practices or left patient care altogether. The study included practicing physicians in 1992, 1993, 1994 and 1995. For physicians who relocated their practices, the investigators also assessed the impact of HMO penetration on the destination choices.

- Only 2-3% of established physicians relocated in a given year. Physicians in early career (40 years old or younger) were twice as likely as physicians in mid-career (41-55 years old) to relocate their practices. Hospital-based specialists were most likely to relocate their practices or leave patient care over a four-year period.
- Decisions to relocate or leave patient care seemed to be unaffected by changes in HMO market penetration for generalists, hospital-based specialists, and mid-career medical/surgical specialists. Increases in HMO penetration increased the probability that medical/surgical specialists in early career relocated or left patient care, but the effect was small.
- Among physicians who did relocate, most tended to avoid markets with higher levels of HMO penetration than their original markets.
- High relocation and switching costs may explain the limited impact of changes in HMO penetration on physicians' decisions to relocate their practices or leave patient care. The subset that did relocate often moved to a market with a similar level of HMO penetration. This suggests that, while physicians' styles of medical practice may adapt to changes in market conditions, learning new practice styles is costly.

New physicians avoid high HMO penetration markets

Because they are still establishing their practices, new physicians are especially responsive to changes in health care financing and delivery. Unlike established physicians, new physicians do not face high relocation costs. Thus, the investigators identified physicians who completed residency or fellowship between 1989 and 1994, and examined their practice location decisions 2½ years later in the 98 largest metropolitan areas of the U.S.

- Early in the study period, new generalists were more likely to locate in high penetration markets than low penetration markets. But this changed with time, and by the end of the study, new generalists were slightly less likely to locate in high penetration markets.
 - New specialists were much less likely to locate their first practice in high penetration markets than low penetration markets. The likelihood of choosing the high-penetration areas declined with time.
 - New specialists were much less likely than new generalists to establish their first practice in high penetration markets. This is consistent with the notion that HMOs decrease the demand for specialists' services relative to the demand for generalists' services.
 - After adjusting for other population and health system variables, HMO penetration had a small negative effect on practice location for generalists but a strong negative influence on practice location for specialists.
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HMO growth has slowed increase in numbers of specialists across markets

It appeared likely that the cumulative impact of physicians' labor market choices would be to change the overall distribution of physicians across market areas with different rates of HMO penetration. The investigators estimated the impact of HMO penetration on the change in numbers of generalists and specialists, and the change in total numbers of physicians between 1987 and 1997 in metropolitan areas.

- Across 316 metropolitan areas, HMO penetration rose from an average of 14% in 1986 to 28% in 1996.
- After adjusting for population and health system characteristics, faster HMO growth led to smaller increases in the numbers of medical/surgical specialists and total physicians. The investigators estimated that a 10% increase in HMO penetration between 1986 and 1996 reduced the rate of increase in medical/surgical specialists by 10% and reduced the rate of increase in total physicians by 7.2%.
- Growth in HMO penetration did not affect the number of generalist physicians or hospital-based specialists. However, faster HMO growth led to larger increases in the proportion of physicians who were generalists.

POLICY IMPLICATIONS

These results support the notion that HMOs reduce the market's demand for physicians' services, particularly for specialists. The findings imply that during the past decade, there has been a redistribution of physicians from metropolitan areas with high HMO penetration to low-penetration areas.

- The available evidence suggests that migration of established physicians has played a minor role in the geographical redistribution of the physician workforce. This redistribution has been mediated mainly through the impact of HMOs on the initial practice location choices of new physicians.
 - HMO penetration could also affect the retirement decisions of older physicians. The investigators are currently studying physicians aged 55 to 74 to discern the impact of managed care on the likelihood of retiring.
 - These studies excluded rural areas. If the findings were generalizable to rural areas, HMO growth in metropolitan areas during the past decade may have led to larger increases in the availability of physicians in nonmetropolitan areas. More research is needed to clarify whether the migration of specialists to small towns and rural areas has accelerated in recent years.
 - Any redistributive effect of HMOs can persist only as long as there are wide geographic differences in HMO penetration. If HMOs become equally prevalent in every market area, avoiding high penetration areas will become more difficult. Continued growth in HMOs and other strict managed care arrangements may eventually result in marked reductions in physicians' hours of work and incomes, and drastically alter the economic returns to entering the medical profession and to specialization.
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This Issue Brief is based on the following articles: D. Polsky, P.R. Kletke, G.D. Wozniak, J.J. Escarce. HMO penetration and the geographic mobility of practicing physicians. *Journal of Health Economics*, September 2000, vol. 19, pp. 793-809; J.J. Escarce, D. Polsky, G.D. Wozniak, P.R. Kletke. HMO growth and the geographical redistribution of generalist and specialist physicians, 1987-1997. *Health Services Research*, October 2000, vol. 35, pp. 825-848; J.J. Escarce, D. Polsky, G.D. Wozniak, M.V. Pauly, P.R. Kletke. Health Maintenance Organization penetration and the practice location choices of new physicians. *Medical Care*, November 1998; vol. 36, pp. 1555-1566.

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