Newly released study of Wisconsin physicians provides comprehensive data to aid policy makers in addressing health policy issues

The Wisconsin Area Health Education Centers (AHEC) Program has just released the 2012 Wisconsin Physician Workforce Report, providing for the first time a comprehensive look at the current physician workforce in Wisconsin. The report is the result of a collaboration led by Nancy Sugden, Director of the Wisconsin AHEC Program at the UW School of Medicine and Public Health. Partners on the project included the Wisconsin Department of Workforce Development and the Department of Safety and Professional Services. The authors are members of the Wisconsin Health Workforce Data Collaborative (WHWDC).

The study provides comprehensive data from Wisconsin, which will be of great value to policy makers grappling with workforce issues in this state.

Key findings of the study include:

**Number of physicians**
- As of March 2012, there were over 14,700 active physicians based in Wisconsin (excluding trainees - medical residents and fellows), or a rate of 258.4 physicians per 100,000. The average age of these physicians is 50.9 (slightly lower than the national average).
- An estimated total of 13,670 physicians provide patient care in Wisconsin, including those based in neighboring states and providing care here on a regular basis, or a rate of 240.0 physicians per 100,000.
- There are 5,600 physicians in primary care specialties (family medicine, general internal medicine, pediatrics and geriatrics) in Wisconsin, of which about 5,200 provide patient care. Of that patient care total, 72% provide primary care in ambulatory settings available to the general public, or a rate of 66.3 primary care patient care physicians per 100,000. The remainder of the primary care physicians who provide patient care are hospitalists (18%), or spend more than half their time in a subspecialty practice or providing care in nursing homes or correctional facilities.
- Some physicians in other specialties do spend part of their time with patients providing primary care, particularly specialists in OB/GYN and occupational medicine, and those in primary care specialties who have subspecialized in areas such as addiction medicine, pain medicine, sleep medicine and sports medicine. Overall, there are about 3,800 full time equivalent physicians providing primary care for the general public, or a statewide population to primary care physician ratio of about 1,500:1.

**Where they trained**
- Medical education:
  - 30% of Wisconsin’s physicians are graduates of the state’s two medical schools (UWSMPH or MCW)
  - 24% are graduates of medical schools in neighboring states (Illinois, Iowa, Michigan and Minnesota)
  - 26% are graduates of other medical schools in the U.S. or Canada
  - 18% are international medical graduates
- Residency:
  - Approximately 38% completed their residency training in Wisconsin; the remainder came to Wisconsin to practice after completion of the residency in another state.

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Distribution and current shortages

- About 40% of physicians practicing in the state are located in greater Milwaukee and the Madison area. The other 60% are distributed relatively evenly on a regional basis, in proportion to the population, with the exception of northwest Wisconsin, where there are fewer cities of moderate size with hospital facilities. Within regions, however, maldistribution is evident. In the far northern tier of counties and the southwest corner of the state, where there are many small rural communities, the proportion of physicians relative to the population is much lower than in other areas of the state.
- Communities of 2,500 or less have a population to primary care physician ratio averaging 3,432:1, compared to a low of 862:1 in communities with a population of 10,000 to 50,000. Wisconsin also has well-documented shortages of primary care physicians in inner city neighborhoods in Milwaukee and several other cities, and shortages of mental health services in many areas of the state.
- As of July 2012, the Health Resources and Services Administration (HRSA) estimated that Wisconsin needs at least 228 additional primary care physicians to reach the target population to provider ratio of 2,000:1 in rural and urban areas where shortages have been documented. For mental health shortage areas, HRSA estimates that an additional 145 psychiatrists are needed in underserved areas to achieve the target ratio of 10,000:1 for psychiatrists.

Projections of future supply

- A simple projection of future physician supply in Wisconsin suggests an increase to over 14,800 physicians in 2020 and then a decrease to about 13,600 physicians in 2030 as retirements begin to outpace the production of new physicians.
- With the population increases expected in Wisconsin over the next two decades, the projected number of physicians would result in an overall rate of 208.2 physicians per 100,000.
- This projection is based on anticipated physician retirements, estimates of turnover and recruitment based on recent patterns, current enrollment levels at the state’s two medical schools, and the current retention rate of medical school graduates (37.8%). The projection assumes there will be no change in the number of residency positions and that the rate of retention from residency will be about the same as it is at present (47.2%).
- An expansion in the number of medical school graduates will not begin to affect the number of practicing physicians in Wisconsin until sometime after 2020, and the impact will be modest if current retention levels do not change.
- The number of residency positions is a key factor in recruiting new physicians to practice in the state. Without an expansion of residency training positions in specialties of highest need, Wisconsin faces increasing difficulty attracting and retaining physicians in those specialties.

Estimating future physician requirements

- Most current estimates of the number of physicians needed are based on utilization rates in the year 2000. Many changes in the organization of healthcare delivery are anticipated in the next few years, making estimates of demand based on past utilization patterns very unreliable.
- Whatever the overall estimate is of future physician requirements, we will certainly see a shortage of primary care physicians if current patterns of specialty selection continue.
- Shortages in rural and underserved urban communities will persist without programs specifically designed to recruit, train and retain students who are most likely to practice in these areas.

Importance of current health workforce data and analysis efforts

- Maintaining the efforts of the Wisconsin Health Workforce Data Collaborative (WHWDC) and other organizations to collect and analyze data on the health workforce will be of critical importance for state agencies, academic programs and healthcare employers as they develop strategies to address emerging workforce issues, particularly in primary care.

The full Wisconsin Physician Workforce report, as well as data from recent surveys of the physician assistant and advanced practice nurse workforce, are now available on the AHEC website; a direct link to the physician survey report is at: http://www.ahec.wisc.edu/workforce

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