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## Supply of Pharmacists in Work Force Has Improved, Government Says

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BETHESDA, MD 27 March 2009—A new report from the federal government states that the shortage of pharmacists in the work force has eased in recent years, with the situation now a "moderate shortfall" rather than a "dynamic shortage."

Whereas vacancy rates in the early 2000s were 8% or higher, the overall rate as recently as 2004 was about 5%, the Bureau of Health Professions reported in its newest assessment of the pharmacist work force, *The Adequacy of Pharmacist Supply: 2004 to 2030*.

**Less of an undersupply.** Rising salaries for pharmacists are one reason the vacancy rate has decreased, the bureau said. Higher pay has drawn some inactive pharmacists back into the work force, spurred some practicing pharmacists to work more hours, and prompted others to delay retirement. With higher labor costs, some pharmacies have reduced the number of hours they are open and decreased the number of pharmacists on staff.

Another reason for the lower vacancy rate is pharmacies' and pharmacists' increased use of pharmacy technicians and technology, which has improved medication-dispensing efficiency.

A third reason is an expansion in the activities performed by pharmacy technicians, reducing the amount of time pharmacists spend dispensing medications. More states allow technicians to compound medications and call physician offices for prescription-refill authorization, for example.

The bureau had characterized the shortage in 2000 as dynamic because it seemed to have been caused by a rapid increase in the demand for pharmacists and a constraint on the ability to increase the supply.

**On the mark.** Pharmacist work-force experts Katherine K. Knapp and Douglas J. Scheckelhoff called the latest federal assessment accurate.

Knapp, who has been monitoring the pharmacist work force for two decades and was a contributing writer for the bureau's earlier report, said the shortage situation around 2000 was probably the worst ever.

At hospitals today, said Scheckelhoff, vice president of ASHP's Office of Professional Development, the shortage is "not nearly as acute a situation" as in 2000.

In 2000, an estimated 8.9% of full-time-equivalent (FTE) hospital pharmacist positions were unfilled, according to ASHP's annual national survey. Scheckelhoff said other data suggested an even higher percentage.

He said the most recent ASHP national survey, conducted in summer 2008 and not yet published, put the vacancy rate at about 6%.

**Supply and demand.** The numbers of active and FTE pharmacists have increased much more than had been projected in 2000, the bureau admitted.

Part of the earlier projection was based on data suggesting that U.S. pharmacy schools would produce about 7000 new graduates annually in 2000–05. Output by new pharmacy schools would increase this number "by only a few hundred," the bureau had said.

Instead, the bureau stated in its more recent report, released early this year, pharmacy schools produced 9100 new graduates in 2005.

Knapp, dean of Touro University College of Pharmacy in Vallejo, California, said the sensitivity analysis of the bureau's new projection on FTE pharmacists suggests that work patterns will influence the size of the work force more than educational capacity or retirement.

Pharmacists' decision to work 10% more hours would increase the number of FTE pharmacists more than a 20% increase in the number of new graduates or a two-year delay in retirement.

But the report, Knapp said, was prepared at least a year ago, before emergence of the current economic downturn.

"We can only guess what people will do," she said. No one knows how the downturn may change the projections in the report.

Then there is the demand side. Knapp said if growth in prescription drug use drops to near zero in response to the economy, "there's no guarantee that all these pharmacists will have positions available to them."

**Near future.** About 24% of the 191,200 FTE pharmacists in 2004 worked in hospitals, according to the bureau's analysis of data from the survey conducted by the Midwest Pharmacy Workforce Research Consortium.

That percentage still holds five years later, Scheckelhoff said.

"But there are so many factors that could change over time, it's hard to say whether that will go up or down," he said.

ASHP, Scheckelhoff said, will continue to collect data annually on the hospital pharmacy work force.

In addition to vacancy and turnover rates, he said ASHP now collects data on pharmacist and pharmacy technician credentials.

**Crystal ball.** As part of the current assessment, the bureau developed the Pharmacist Supply and Requirements Model to examine the adequacy of the pharmacist supply in the future.

Using that model, the bureau predicted that the numbers of pharmacists in the work force in the coming years will be sufficient to serve the nation's growing and aging population only if the public's use of prescription drugs remains at the current level ([see](#) figure).

But use is likely to grow, the bureau said, as new medical advances expand the range of diseases that medications can treat and new preventive medications become available.

There will be a surplus of pharmacists only if the population's use of prescription drugs grows at a low rate, the bureau predicted.

The model's base year was 2004, at which time there were about 226,000 pharmacists in the work force, with roughly 85% of them working full-time.

Predictions about the pharmacist work force have been known to be wrong, however.

The Pew Health Professions Commission in 1995 had predicted a surplus of 40,000 pharmacists in 10 years.

By 2005, the commission said, integrated health systems, combining primary, specialty, and hospital services, would provide efficient care to 80–90% of insured Americans.

One result of this transformation in the delivery of health care would be a surplus of pharmacists from the automation and centralization of drug-dispensing activities.

Scheckelhoff said the commission had assumed that the role of pharmacists would not change much in the future. Also, he said, the commission had assumed that pharmacies' adoption of automation would supplant the pharmacists practicing the traditional role of medication dispensers.

"I think what has happened instead," Scheckelhoff said, "is that pharmacists' roles have expanded in many different arenas."

And, while the use of automation has grown considerably in nearly all pharmacy settings, it has replaced some technical activities and improved safety but has not supplanted pharmacists, he said.