Taking Account...

Study explores health care spending growth sources

As medical expenditures in the United States continue to grow, the specific sources of growth loom as a critical issue for economists and policymakers. In a recent paper, Bureau of Economic Analysis (BEA) economists Abe Dunn and Eli Liebman and former BEA economist Adam Hale Shapiro offer a new analysis of the sources of growth at the disease level. Increasingly, economists and policymakers recommend that more analysis take place at the disease level, as opposed to the service level, to better assess spending and price issues.

The study decomposed commercial expenditure growth into four components using MarketScan data for 2003–2007: demographic shifts, service price growth, service utilization growth, and prevalence-of-treated-disease growth.

First, the authors estimated the growth attributable to demographic shifts, primarily an aging population. Second, they allocated expenditures into disease-level categories, allowing protocols, technologies, and prices relevant to treating diseases to vary uniquely over time.

Third, they broke down expenditures into expenditure per treatment and treated prevalence of a disease. For example, in the case of hypertension, they tracked the number of episodes of treatment for hypertension per capita as well as the expendi-ture per episode of treatment.

Fourth, they split expenditure per episode of treatment into service price and service utilization. Service price represents the payment for a specific service. Service utilization represents the quantity of services performed during an episode of treatment.

The study found that rising medical care expenditures per capita (that is, per commercially enrolled person) came from two primary sources: an increase in the prevalence of treated diseases (accounting for around one-third of the increase in expenditure growth) and an increase in service prices (accounting for about half of the increase in growth). The remaining increase was attributed to demographic shifts, in particular, a slightly aging commercially insured population.

Interestingly, the study found no aggregate growth stemming from service utilization per episode. In fact, service utilization may have fallen slightly for some conditions. While service price growth was a large contributor to expenditure growth, it is important to highlight that price growth did not greatly exceed inflation. After deflating price growth measures by the national personal consumption expendi-ture deflator, the authors found that growth in prevalence accounted for two-thirds of expenditure growth.

The three largest contributors to expenditure growth were orthopedics, gastroenterology, and endocrinology. These categories accounted for 33 percent of expenditures in 2003 but made up 40 percent of growth in 2003–2007. Each of the practice categories had large growth in service prices and the prevalence of treated disease. The category with the largest growth was preventive and administrative services, which grew 64 percent.

On the flip side, cardiology made up 12 percent of 2003 expenditures but accounted for less than 8 percent of the share in expenditure growth, reflecting a decline in the prevalence of heart disease and a decrease in service utilization. The decline in service utilization was driven by a shift from inpatient to outpatient services and from brand to generic drugs. These shifts may be indicative of greater efficiency, since fewer resources are necessary to treat each episode.

Digging deeper into the specific disease categories reveals some interesting patterns. Within cardiology and endocrinology services, there was a large increase in the prevalence of early-stage contributors to heart disease such as hypertension, diabetes, obesity, and hyperlipidemia.

However, there was a decline in the prevalence of ischemic heart disease. This may indicate that people are seeking treatment for heart disease at an earlier stage of illness. Indeed, there was a large increase in spending on preventive services across the entire sample.