Does the Growth in Cost Per Case Really Explain More of Spending Growth than Treated Prevalence?

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The rapid growth in spending on medical care has generated interest in understanding the drivers of that growth. Official statistics on spending for medical care published by the CMS typically include a split of spending growth into price and non-price factors.[1] Applying official price indexes from the BLS to spending estimates from the National Health Expenditure Accounts (NHEA), their analysis concludes that in 2009 60% of the spending growth was due to price factors and the rest to utilization, their analysis suggests that price growth plays less of a role in the historical data. Academic studies have applied similar decompositions to patient-level data to assess the relative importance of price vs. utilization. Similar to the NHEA analysis, some have focused on types of service (Bundorf et al, 2009) and split spending growth into price per service vs number of services. Others have used concepts related to the conditions being treated (rather than the type of service received). For example, Thorpe and colleagues (2004) and Roehrig and Rousseau (2011) use "cost per case" vs. "treated prevalence" to do the split for disease categories and then aggregate up; others do similar things using cost per episode as the "price" (Dunn, Liebman and Shapiro, 2012).

A closely-related literature is devoted to improving the price indexes that are used in the official statistics (Berndt et al, 2000). Rather than tracking the price of specific services, which is the current practice of the BLS, the improvement in the price indexes, advocated by many health economists, involves tracking the expenditures for treating a disease, which accounts for the various shifts in treatment patterns over time and is believed to be a more precise estimate of the "true" price of treatment. In these studies, refining the way that price is measured is the goal which, implicitly, affects the split between price and utilization. A familiar result is that price indexes based on services tend to show faster price growth than those based on cost per case—for a given growth in spending, splits based on services will attribute more to price than splits based on cost per case. .

[1] "Price factors accounted for 60 percent of the 4.6 percent change, while non-price factors accounted for the remaining 40 percent." In latest update through 2010: http://content.healthaffairs.org/content/30/1/11.full

The available evidence on the relative importance of price versus utilization is mixed: some have found that utilization is the main driver (Thorpe et al, 2004; Bundorf et al, 2009) butwhile others find the opposite (Roehrig and Rousseau, 2011). While the decomposition methods used in existing studies are very similar, the data sources and time periods are different and can yield different results. The two types of data that have been used in these decomposition studies are survey data (notably the Medical Expenditure Panel Survey (MEPS)MEPS survey) and commercial claims data, both of which contain the patient-level information with which to measure cost per case.

In this study, we begin by reviewing the available results from these studies to better understand the reasons for the differing results. Our explorations of the differences in measured price growth across these studies suggest that the type of data that one uses matters. Among the work done for recent time periods, studies that use the MEPS Medical Expenditure Panel Survey (MEPS) survey generally show substantially faster price growth than those based on claims data. As such, they tend to attribute more of the spending growth to price growth. In contrast, available studies that used claims data tend to show slower price growth and attribute a smaller role for price. Little can be said about studies of earlier time periods, owing to lack of alternative data sources. More work is needed to better understand the features of these data sources that yield the conflicting conclusions.

Of course, the available studies cover different patient populations and, so, are not strictly comparable. To level the playing field, we focus on two types of patients for which survey and claims data exist. For patients with commercial insurance coverage, we compare decompositions using (i) a selection of patients with commercial insurance from the MEPS survey, and (ii) claims data from the MarketScan Research Database. For patients with Medicare coverage, we compare decompositions that use the following data sources: (i) the Medicare Current Beneficiary Survey (MCBS), (ii) Medicare claims data for the MCBS patients, (iii) patients in the MEPS survey that have Medicare coverage, and (iv) Medicare patients who also have private insurance reported in the MarketScan Research Database.

Our hope that is these comparisons will shed light on the usefulness of survey vs claims data ~~these differing data sources~~ for documenting the relative importance of price vs utilization in driving spending growth and for constructing price indexes.

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~~Chart 1. Decomposition of Real Per Capita Spending Growth for patients with ESI, 2003-5~~

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