Comments on David Johnson, “Overview of BEA’s New Health Care Satellite Account”

Ernst R. Berndt, MIT and NBER
BEA Advisory Committee Meeting
Friday, November 14, 2014
Some History: I

• In 1964 Anne Scitovsky proposed “an index which would show changes, not in the cost of such items of medical care such as drugs, physicians’ visits, and hospital rooms, but in the average costs of the complete treatment of individual illnesses, such as, for example, pneumonia, appendicitis, or measles”. This approach was implemented on an illustrative basis for five medical conditions in 1967.
Some History: II

• “The average consumer of medical care is not as interested in the price of a visit or a hospital day as he is in the total cost of an episode of illness.”
  
Some History: III

- Martin Feldstein (1969,1970) has noted that in the 1950s and 1960s the BLS health care price indexes appeared to have *understated* medical price inflation, in large part because physicians’ “customary” pricing in an environment of extensive price discrimination began to change as the proportion of patients covered by Medicare insurance increased.
Some History: IV


• But nobody to date has calculated disease-episode based price indexes for 18 major diseases over time... until now...
Selected BLS and BEA research

- “Feasible methods to estimate disease based price indexes,” Bradley, *Journal of Health Economics*, 2013
- Calculating Disease-Based Medical Care Expenditure Indexes for Medicare Beneficiaries: A Comparison of Method and Data Choices, Hall and Highfill, BEA Working Paper, 2014
- "Implications of Utilization Shifts on Medical-Care Price Measurement" Abe, Dunn, Eli Liebman and Adam Shapiro, *Health Economics*, Forthcoming
Well done!

• So Kudos to the diligent researchers at the BEA (and BLS)!!!

• This is a very significant achievement, and represents a substantial amount of work and resources over an extended time period.

• Also is very satisfying to those of us academics who have labored in this area but have moved on to other research topics – rewarding to see ideas translated into official national statistics.
Big Advantages of Disease Episode-based Price Index

• Although not yet implemented, using a disease episode-based price index provides a more natural way to introduce quality adjustment

• Also allows for external validation by checking with medical practitioners and clinicians
Most Interesting Finding

- Aizcorbe and Highfill find disease-based price indexes and PCE price index grew at very similar rates between 1980-1987, disease-based grew slower than PCE price index 1987-1997, and disease-based grew more rapidly than PCE price index 1997-2006 – due primarily to increases in utilization (number of procedures used) per treatment episode
Examples of utilization changes

- Decreases in utilization
  - Shift from inpatient to outpatient
  - Shift from outpatient and inpatient to doctor’s office
  - Shift to drugs with cost offset (e.g., depression)

- Increases in utilization
  - Increased use of high technology imaging
  - Shift or increased use of more costly branded drugs (e.g., for high cholesterol)
  - Shift to more procedures per office visit
Plan for release of first version of Health Satellite Account in Dec. 2014

- *Survey of Current Business (SCB)* article with tables with nominals, reals, and associated price indexes for disease-based measures for 2000-2010 period with 2 alternatives
  - Alternative 1: Based on the Medical Expenditure Panel Survey (MEPS)
  - Alternative 2: Based on blended results using MEPS, MarketScan® claims data, and Medicare claims data
  - Detailed tables will be available to download from the BEA website
MEPS Data

- Administered by Agency for Healthcare Research and Quality (AHRQ)
- Nationally representative panel sample
- Encounter level data
- Civilian non-institutionalized population
- All sources of healthcare spending
- Coverage, utilization and expenditures from Household Component files reconciled with medical providers
Commercially-insured patients from the MarketScan® Data from Truven Health

- More than 2 million enrollees in each year
- Sample period 2000-10
- Convenience sample → application of population weights using MEPS

Selection of patient-level sample population:
- Not in a capitated plan
- Has a drug benefit plan
- Included only if the individual is enrolled for the full year
Medicare Claims Data

- Medicare Fee-for-Service medical care claims (5 percent random patient-level sample of enrollees)
  - Approximately 2 million enrollees each year
  - No prescription drug claims until Part D implementation in 2006
  - Prescription drug expenditures per episode imputed using MEPS data for 2000-2010 sample period
- Selection of patient-level sample population:
  - Excludes Medicare Advantage enrollees
  - Application of population weights using MEPS
Trends in disease-based price indexes are less volatile using the Blended index.
Some Questions

• How sensitive are findings to choice of episode grouper?
• How confident about reliability of MEPS weights?
• Do utilization changes make sense to the medical provider/insurer community?
• Some examples of utilization increases:
  – Combination highly active anti-retroviral therapy (HAART) for treatment of HIV-AIDS
  – Increasing use of combination therapies in treating various cancers
  – Increased use of statins (but now most off-patent) for cardiovascular patients
Schedule and Future Work

**Schedule**

- December release of SCB article with 2000-2010 estimates
- SCB release of updated data for Health Care Satellite Account for 2011 and 2012 (Spring 2015)
- CNSTAT expert meeting (Spring/Summer 2015)

**Future work**

- Creating a longer time series and current estimates
- Evaluate the impact on Industry and Income accounts
- Evaluate spending data for nursing homes
- Continue to evaluate data sources – MEPS, MarketScan®, Medicare, along with Medicaid and others
- Evaluate quality adjustment
- Evaluate impact of severity