MA TO TM SPILLOVERS AND OUR PRIORITY AREAS

Austin Frakt

September 26, 2016

I. Literature Review on MA to TM Cost Spillovers:

1. "Managed care and medical expenditures of Medicare beneficiaries," by Michael Chernew, Philip DeCicca, and Robert Town (Journal of Health Economics, 2008)

The authors use an instrumental variables (IV) approach and 1994–2001 Medicare Current Beneficiary Survey data to estimate that each percentage point increase in Medicare HMO market penetration leads to a one percent decrease in annual, per capita TM spending. The spending reduction is for both inpatient and outpatient care and is concentrated among TM beneficiaries with at least one chronic condition.

Their instrument for Medicare HMO market penetration is the county-level government payment rate to plans. Higher payment rates attract plans into markets and permit more generous benefits, which increases market penetration. During the study period, those county-level plan payments were divorced from TM spending (the outcome variable), making them valid (exogenous) instruments for the analysis.

2. "The spillover effects of Medicare managed care: Medicare Advantage and hospital utilization," by Katherine Baicker, Michael Chernew, and Jacob Robbins (Journal of Health Economics, 2013).

Using a similar IV approach as Chernew, DeCicca, and Town, the authors examined the relationship between greater MA enrollment and hospital utilization in the following year. Their analysis focused on five states represented in 1999-2009 Healthcare Cost and Utilization (HCUP) State Inpatient Databases (SID)—Florida, New York, California, Arizona, and Massachusetts—which account for almost half of all MA enrollees.

They found higher MA penetration associated with reduced TM and commercial market hospital costs and utilization. A 10 percentage point increase in MA penetration is associated with a about a 4.5% decrease in overall and TM-specific hospital costs and a commensurate shortening of length of stay. In addition, preventable hospitalization rates are lower when MA market penetration grows. Their (non-IV) OLS specification is conservative, obtaining a smaller spillover.

The size of the estimated spillover to TM would offset more than 10% of increased payments to Medicare Advantage plans. But, the manner in which Medicare pays for hospital care (prospectively based on diagnosis related groups (DRGs)) means that it could only recoup spillover savings for services bundled into DRG payments over time, as payment rates are adjusted.

3. **"Medicare Payments and System-Level Health-Care Use: The Spillover Effects of Medicare Managed Care," by Katherine Baicker and Jacob Robbins (American Journal of Health Economics, 2015.**

The authors extended prior work, focusing on 1999-2011. Their models include one year lags of MA market penetration and, as in earlier work, market penetration is instrumented with MA payment rates.

They found that a 10 percentage point increase in MA market penetration associated with decreases of 7.3% in hospital days and 9.1% in nonsurgical hospital days and increases of 5.5% in outpatient visits and 8.9% in outpatient surgical visits. For beneficiaries with chronic conditions the results are a bit larger. And, with a model that includes MA market penetration squared, they estimated that the spillover to hospital days is maximized when penetration is at 18%. OLS results are conservative, showing a smaller spillover effect.

In total, the authors calculate a $252 per TM beneficiary per year in spillover savings for every 10 percentage points in higher MA market penetration, though as noted above, the savings would have to be recouped in DRG payment updates over time.

4. **"Medicare Managed Care Spillovers and Treatment Intensity," by Kevin Callison (Health Economics, 2016).**

Like prior studies, Callison uses 2003-2009 SID data and MA payment rates as an instrument for market penetration to examine the relationship between MA market penetration and TM-financed treatment intensity for patients hospitalized with AMI. He finds that a 1 percentage point increase in MA market penetration is associated with a 0.94% reduction in TM hospital costs for AMI patients, a 2.2% reduction in the number of inpatient procedures, a 2.4% reduction in the probability of receiving an angioplasty, a 2.4% reduction in the probability of ventilator utilization, and a 1.8% increase in the probability of mortality. (This mortality finding is at odds with prior work relating MA penetration to mortality and hospitalization by Afendulis, Chernew, and Kessler.) As in prior studies, OLS (non-IV) estimates are conservative in their estimation of a spillover effect.

5. **"Recent Growth In Medicare Advantage Enrollment Associated With Decreased Fee-For-Service Spending In Certain Counties," by Garret Johnson, Jose Figueroa, and Ashish Jha (Health Affairs, 2016)**

The authors bring the spillover literature up to date with an analysis of the association of changes in county-level MA market penetration with changes in county-level TM spending between 2007 and 2014. Changes are measured over two year periods and MA market penetration is lagged by a full period (i.e., 2007-2009 MA penetration change predicts 2009-2011 TM spending change, etc.). Unfortunately (for analytic purposes), the ACA tied MA payments directly to TM spending, so the authors could not use the IV approach exploited in prior studies. However, an OLS approach, which the authors used, has underestimated the spillover in prior work, as discussed above.

> A spillover was observed only for counties in the highest quartile of baseline MA market penetration (>17.2). In those counties, a 10% increase in penetration was associated with a $154 annual decrease in TM spending per beneficiary. The results suggest a threshold effect, by which spillovers only occur (or are detectable with OLS methods) when MA market penetration is sufficiently large. The estimated spillover accounts for 11% of the recent slowdown in TM spending and more than offset the payment to MA plans above TM costs.

All these findings are consistent with a larger, older literature that documents a spillover between commercial market (not MA) managed care and TM spending. Here's a summary of a small subset of that literature from Baicker, Chernew, and Robbins (this is a direct quote from that paper):

> [Robinson (1996)] finds that hospital expenditures grew 44% less rapidly in markets with high HMO penetration (15.2%) compared with low penetration (0.6%) […]. Gaskin and Hadley […] find hospitals in areas with high HMO penetration (40% of the population enrolled in HMOs) had a 25% slower growth rate in costs than hospitals in low penetration areas (5% of the population enrolled in HMOs). […]
>
> Baker finds a concave relationship between managed care penetration […] and both Traditional Medicare Part A and Part B FFS spending. Part A and Part B expenditures are increasing in HMO penetration until a maximum is reached at 16% and 18% penetration, respectively, after which they are decreasing in penetration.

II. What Has This Got to Do With Our Four Priority Areas?

1. Sustainability of ACA and MACRA price updates and future Health Care Productivity: No direct relationship.

2. Transitioning from short term to long range projections: To the extent we think MA penetration will grow, shrink, level off and the timing thereof, this could relate in some way to short/long term projections and thereby impact the transition, depending on how that's done.

3. Shifting services—Parts A, B and D: One would have to dig deeper into how MA causes TM savings, but it appears as if it decreases hospitalization and, perhaps, shifts care to the outpatient setting. Therefore, if MA grows, that could further impact A to B shifts. Part D has not been examined in this context, but it should!

4. Reflecting uncertainty—high, low and the alternative scenarios: One might hypothesize different MA growth trajectories and get different high/low answers.