Do Physician-Owned Specialty Hospitals Increase Medicare Expenditures?

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Several studies to date have explored the physician ownership / Medicare expenditure association. Considering those studies that employ some degree of methodological rigor, the results of those studies are mixed. Two studies found no association, one study found a positive association, and a fourth study actually found a negative association.

- The first of these studies was conducted by Research Triangle International under contract to the Centers for Medicare and Medicaid Services (CMS). The CMS study is especially noteworthy because they were able to measure actual physician ownership shares through site visits to 13 specialty hospitals, and link those ownership shares to Medicare claims data through the Medicare provider identifier; no other study has done this. The CMS study found that the incentive for physicians to refer to hospitals in which they have an ownership stake depended more on the size of the ownership stake rather than the fact that they were owners (Greenwald et al. 2006). Given that ownership shares on average were very low, the CMS study found that referral patterns were not significantly affected by the entry of specialty SHs into the market.

- Using a different methodology, the CMS study essentially reached the same conclusions as a parallel study conducted by the Medicare Payment Advisory Commission (MedPAC). The MedPAC study used a “difference in difference” model to examine the effect of cardiac specialty hospitals on changes in Medicare cardiac treatment costs from 1996 to 2002. The study found no statistically significant findings in utilization rates between hospital referral regions (HRRs) with and without cardiac specialty hospitals.

- Barro, Huckman, and Kessler (2006) analyzed Medicare claims data from 1993, 1996, and 1999, using a matched case control panel design with fixed HRR effects. Their main findings were that hospital expenditures for patients treated in HRRs with specialty hospital entry (“entry HRRs”) experienced roughly 3% slower growth compared to patients treated in HRRs without specialty hospitals (“control HRRs”). Under the reasonable assumption that entry HRRs would have retained their 1993-1996 trend in expenditures and outcomes in the absence of entry, they found that specialty hospital entry leads to both a reduction in expenditures of at least 7% and at least a 4% reduction in mortality. The results were robust to several different specification tests.

- Nallamothu et al. (2007) reached somewhat different conclusions when focusing exclusively on the effects cardiac specialty hospitals. Using Medicare claims data
from 1995 to 2003, they find that rates of change for total revascularization were higher in HRRs after cardiac hospitals opened when compared with HRRs where new cardiac programs opened at general hospitals and HRRs with no new programs. Four years after their opening, the relative increase in adjusted rates was more than two-fold higher in HRRs where cardiac hospitals opened when compared with HRRs where new cardiac programs opened at general hospitals and HRRs with no new programs. The study does not adequately control for the likelihood that specialty hospitals are more likely to enter areas with higher than average pre-entry levels of utilization and expenditure.

- Two studies by Jean Mitchell reach conclusions somewhat similar to those of Nallamothu et al., although Mitchell’s methods differ substantially. One study analyzed workers compensation claims in Oklahoma, finding that the entry of orthopedic specialty hospitals was followed by substantial increases in market area utilization for complex fusion surgery (Mitchell 2007). The study is descriptive and thus severely limited by its lack of statistical controls; differences in case, baseline trends, and endogenous entry are not addressed. An earlier study by Mitchell (2005) reached similar conclusions using state-level data from Arizona, although again the study is severely hampered by its assumption that physician owners can be identified simply as high-volume SH users.

**New Study by HECG**

A new study conducted by the Health Economics Consulting Group uses rigorous methodology to “break the tie” between the two most complete studies to date—Nallamothu et al. and Barro et al. The study examines Medicare per capita expenditures at the county level and MSA level (nationwide), spanning the eight-year time period from 1998 to 2005. An up-to-date and comprehensive list of physician-owned specialty hospitals was obtained, including full-service general hospitals owned by physicians, specialty surgical hospitals, and women’s hospitals. The study uses a fixed-effects panel data estimation with instrumental variables to account for the likely bias introduced by the likelihood that physician-owned specialty hospitals are more likely to open in high-growth / high-demand markets (i.e., specialty hospital presence is endogenous to expenditures).

- After controlling for other variables that are likely to affect expenditures (especially age and sex), the study found a small negative (-2%) association between physician-owned hospital presence and Medicare expenditures per capita at the county level, and no association between physician-owned hospital presence and Medicare expenditures per capita at the metropolitan area (MSA) level. These results were extraordinarily robust to changes in model specification and estimation technique.

- The HECG study, using different definitions of geographic markets and also making an important adjustment for endogenous entry, found essentially no effects of physician-owned hospitals on Medicare expenditures. This study tips the scales much
more in the direction of “no effects”—offering evidence consistent with CMS, MedPAC, and Barro et al. Policy makers should take the opportunity to reassess the evidence on this issue.

The Health Economics Consulting Group LLC is a group of academic health economists and health services researchers providing research consulting services in a number of subject areas in health economics. For more information, visit www.hecg-llc.com. Contact: John E. Schneider, PhD Phone: 319 / 331-2122 E-mail: Jeschneider@hecg-llc.com

References


