APRIL 2008 TRENDWATCH

Physician Ownership and Self-referral in Hospitals: Research on Negative Effects Grows

Physician self-referral – when physicians own the facilities to which they refer patients - has long been a concern in health care because of the potential for conflicts to arise between the needs of the patient and the financial interests of the physician. Though banned in most instances, physician ownership and self-referral has been an increasing trend in the hospital setting. This TrendWatch examines the growing body of research looking at: 1) whether the financial incentives facing physician-owners are influencing hospital referral decisions; and 2) the broader impact of self-referral on health care costs, quality and access.

Physician-owned hospitals tend to be smaller and newer, and focus on select

services such as cardiac, orthopedic and surgical care. As a result they are often referred to as "limited-service," "niche" or "specialty" hospitals. A growing number are expanding their range of services in response to regulatory and legislative pressures and may call themselves "fullservice" hospitals; however, the research to date has focused on cardiac, orthopedic and surgical hospitals.

Since self-referral is the dominant issue raised by these facilities, much of the research on limited-service hospitals is likely to be applicable to other types of physician-owned hospitals. This research has found that physician ownership may be influencing referral decisions. Physician-owned hospitals are associated with increased referral rates and higher utilization. Physician-owners seem inclined to shift patient referrals to their own facilities. It also is well documented that physician-owned hospitals focus on the more profitable services and/or less complex, higher income and better insured patients.1

These behaviors may damage the health care system at large by adding costs and by weakening the health care safety net as community hospitals see their mix of patients becoming more complex and less well financed. Evidence on quality of care has been mixed, with new concerns emerging about the ability of these facilities to deal with complications requiring emergency care.²

Number of Physician-owned Hospitals Increasing Rapidly

The number of physician-owned, limited-service hospitals has risen dramatically since the early 1990s. The number of these facilities tripled between January 1990 and March 2003, and grew rapidly between 2002 and 2004.³ Their growth slowed somewhat from 2004 to 2006 due to a government-imposed moratorium on physician self-referral to new specialty hospitals. But since the moratorium ended, rapid



The number of physician-owned, limited-service hospitals continues to grow.

Chart 1: Number of Physician-owned, Limited-service Hospitals, 2000-2007



Source: American Hospital Association analysis of state surveys and CMS data, 2007. Number of facilities per year is based on the Medicare certification date

growth has resumed. As of 2007, the AHA estimates that there are about 180 such hospitals in the country, with an additional 85 facilities currently in development.⁴

The location of physician-owned, limited-service hospitals strongly correlates to states' Certificate of Need (CON) laws or requirements, which govern construction of new and expansion of existing health care facilities. CON rules require evidence that a community need exists for the additional capacity before it can be built.5 Ninety-six percent of physician-owned, limited-service hospitals that opened between 1990 and 2003 are located in states without CON laws.6 The distribution of physician-owned, limitedservice hospitals is uneven - most are located in the South and Southwest.7 Texas has the highest number of these facilities by far – approximately 70 as of 2007.8

Most states have some physician-owned, limited-service hospitals...

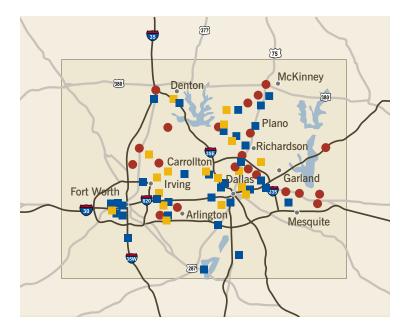
Chart 2: Estimated Number of Physician-owned, Limited-service Hospitals* in the U.S., 2007

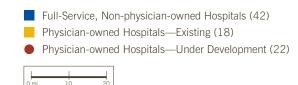


Source: American Hospital Association analysis of state surveys and CMS data, 2007. *Includes facilities established and under development as of second quarter 2007.

...but might Texas foretell the future national landscape?

Chart 3: Community Hospitals and Existing and Planned Physician-owned Hospitals in North Texas





Source: AHA survey of states and hospital systems. Excludes rehabilitation, long-term care and psychiatric hospitals.

Physician Self-referral Associated with Higher Utilization and Costs

Physicians significantly influence a patient's course of treatment, often including where they receive care. When physicians have a financial stake in a health care facility, there is potential for the medical needs of the patient to be in conflict with the financial interests of the physician. When physicians refer patients to hospitals they own, they not only receive professional fees for providing the services, they share in the earnings of the facility, and typically see the value of their ownership share in the facility increase over time.

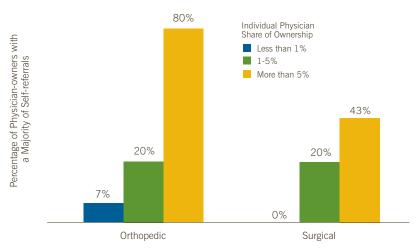
Physician ownership influences where physicians direct their patients for services and may drive up the referral rates for those services.⁹ Research has found that the likelihood of physicians referring patients to a specialty hospital increases with the proportion of the physician's ownership in the hospital.¹⁰ Federal statute generally prohibits physician self-referral, but an exception known as the whole-hospital exemption permits physicians who have an ownership interest in an entire hospital and are authorized to perform services there to refer patients to that hospital.¹¹

The entrance of physician-owned, limited-service hospitals into communities is associated with significant growth in volume and spending.¹² A recent study found that the entry of physician-owned orthopedic hospitals drove up market area utilization of complex spinal fusion surgical procedures by 121 percent between 1999 and 2004. By the end of the study period, 91 percent of these procedures were being performed in physicianowned specialty hospitals as opposed to in competing full-service hospitals.¹³

Furthermore, the opening of a specialty hospital raises utilization more than an existing facility adding the same amount of new capacity. For example, the rates of revascularization, coronary

Physician ownership influences where physicians refer patients for care.





Source: Greenwald, L., et al. (2006). Specialty versus Community Hospitals: Referrals, Quality, and Community Benefits. *Health Affairs*, 25(1), 106-118.

Note: Based on ownership data from Tucson, AZ, Fresno, CA, Hot Springs, AR, Oklahoma City, OK, Rapid City, SD, and Dayton, OH.

Physician-owned, limited-service hospitals drive up procedure volumes.

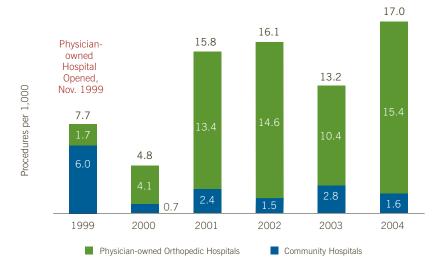
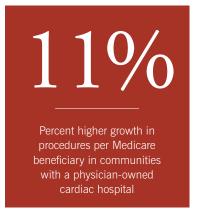


Chart 5: Number of Complex Spinal Fusion Procedures per 1,000 Workers with Diagnosed Back/Spine Disorders Receiving Treatment in Oklahoma City, 1999-2004

Source: Mitchell, J.M. (2007). Utilization Changes Following Market Entry by Physician-owned Specialty Hospitals. *Medical Care Research and Review*, 64(4), 395-415.

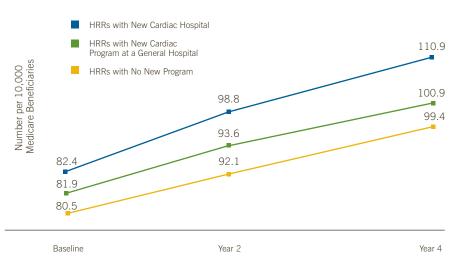
artery bypass graft (CABG) surgery and percutaneous coronary intervention (PCI) for Medicare beneficiaries were higher in areas after the opening of cardiac hospitals compared to areas with new cardiac programs at community hospitals or areas with no new programs.¹⁴ The Congressional Budget Office estimates that fewer services are used when physicians do not have the financial incentives to order more services via self-referral.¹⁵

Analysis of Medicare cost reports found that in fiscal year 2006, 57 percent of physician-owned, limitedservice hospitals had margins at or above 10 percent. In contrast, just 17 percent of other acute care hospitals had margins of 10 percent or more.¹⁶ These gains for investors contribute to increasing systemwide health costs.



The rate of procedures grows faster in areas where physician-owned, limited-service hospitals enter.

Chart 6: Number of Percutaneous Coronary Intervention Procedures per 10,000 Medicare Beneficiaries by Service in Hospital Referral Region (HRR)*



Source: Nallamothu, B.K. (2007). Opening of Specialty Cardiac Hospitals and Use of Coronary Revascularization in Medicare Beneficiaries. JAMA, 297(9), 962-968.

*Hospital referral regions are defined by the Dartmouth Atlas of Cardiovascular Health Care

(()) from the field " I'm strongly in favor of legitimately designed specialty hospitals in which a focus on a specific set of skills and procedures enables doctors and staff to maximize their efficiency, [but]...the greatest dangers arise when doctors have a direct financial interest in a specialty hospital." ¹⁷

Newt Gingrich, Former Speaker of the House (R-GA)

History of Limitations on Financial Arrangements between Physicians and Health Care Facilities

Over the last 30 years, Congress has passed a number of anti-kickback and patient referral laws to deter inappropriate physician referrals to health care facilities in which they hold a financial stake. Current law prohibits physician self-referral for 10 different service types:

- clinical laboratories;
- physical therapy;
- occupational therapy;
- radiology or radiation therapy services and supplies;
- durable medical equipment;
- parenteral and enteral nutrients;
- prosthetics;
- home health care services;
- outpatient prescription drugs; and
- inpatient and outpatient hospital services.¹⁸

However, the law includes a number of exceptions that permit physicians to refer Medicare or Medicaid patients to several types of physician-owned facilities, including ambulatory surgery centers (for surgical services only) and hospitals, as long as the physician's investment is in the whole hospital and not in a single department and the physician has privileges at that hospital.

In passing these laws, the record shows that Congress did not contemplate that the term "whole hospital" could be construed as anything other than a full-service institution.

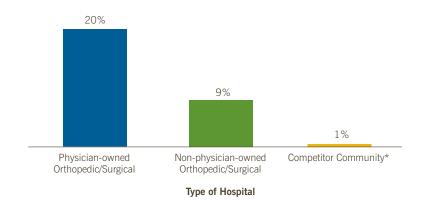
Seeking to stem the proliferation of specialty hospitals, Congress imposed an 18-month moratorium on physician self-referrals to new specialty hospitals in the *Medicare Prescription Drug, Modernization, and Improvement Act of* 2003.¹⁹ After the moratorium expired in June 2005, the Centers for Medicare & Medicaid Services announced that it was suspending the enrollment of new specialty hospitals into Medicare until February 2006, and the *Deficit Reduction Act of* 2005 further extended the suspension for six months.²⁰ This suspension has now expired, and the rapid proliferation of physician-owned hospitals has resumed.

Efficiency Claims Not Supported by Evidence

Some business experts assert that physician-owned specialty hospitals are very efficient because their concentrated focus leads to higher quality care and produces cost savings.²¹ However, two separate studies by the Medicare Payment Advisory Commission (MedPAC), an independent advisory panel to Congress, reject these claims. First, MedPAC found that heart, orthopedic and surgical specialty hospitals had higher inpatient costs per discharge than community hospitals.²² Second, MedPAC determined that higher costs in orthopedic and surgical hospitals are associated with low volume and low occupancy. These findings are inconsistent with claims that these focused hospitals are less costly than community hospitals.²³

Physician-owned, limited-service hospitals have higher than average costs.

Chart 7: Percent above National Average Medicare Cost per Discharge, Orthopedic/ Surgical Hospitals versus Competitor Community Hospitals, FY 2004



Source: Medicare Payment Advisory Commission. (August 2006). *Physician-ouned Specialty Hospitals Revisited*. Washington, DC. * Competitor community hospitals are in the same market as specialty hospitals and provide similar services.

Attractive Amenities, But Concerns about Quality

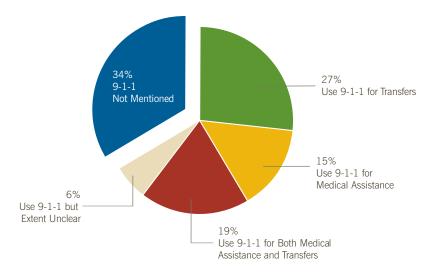
Most physician-owned specialty hospitals are new facilities, with amenities attractive to patients such as private rooms, quiet and comfortable surroundings, gourmet meals and accommodations for families.24 Physicians enjoy the lifestyle benefits afforded by limited-service hospitals, such as the ability to perform more procedures in a shorter amount of time, freedom from emergency department/on-call responsibilities, a more predictable schedule free from interruption from emergency cases, and the opportunity to share in facility profits.25 Some physician-owners and nurses employed by these facilities also believe that focusing on a limited set of procedures improves the quality of care they deliver.26

Yet, evidence does not support that belief. In fact, cardiac specialty hospitals, which typically treat less sick patients, were found to have the same outcomes for CABG surgery as less specialized hospitals for inpatient mortality, 30-day post-discharge mortality, emergency department (ED) visits leading to rehospitalization, and hospital readmission within 30 days post-discharge. However, for patients with greater comorbidity, 30-day post-discharge mortality was worse at cardiac specialty hospitals.²⁷

CMS did find that physician-owned specialty hospitals' rates for inpatient mortality and mortality 30 days postdischarge were significantly lower than those of competitor hospitals. However, this same study found that patients of cardiac specialty hospitals were significantly more likely to be readmitted shortly after discharge for the same condition or a complication of that condition than patients of competitor

Two-thirds of physician-owned hospitals use 9-1-1 as part of their emergency response procedures.

Chart 8: Percent of Physician-owned, Limited-service Hospitals by 9-1-1 Usage, 2007



Source: Office of Inspector General. (January 2008). Physician-owned Specialty Hospital's Ability to Manage Medical Emergencies: Washington, DC.

hospitals. This finding was consistent across different severity levels and types of conditions.²⁸

Many physician-owned hospitals also lack the ability to deal appropriately with patient complications or emergencies that may arise during the course of care.²⁹ The recent deaths of two patients experiencing complications following elective surgery at physicianowned, limited-service hospitals have raised concerns of lawmakers. Neither hospital was equipped to respond to these complications; no physicians were on duty at the time of the emergency and both called 9-1-1 for assistance.³⁰

A recent study by the Department of Health and Human Services' Office of the Inspector General (OIG) suggests

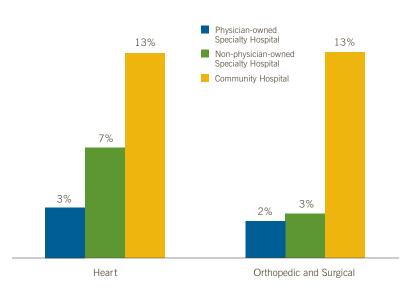
most physician-owned, limited-service hospitals are not equipped to handle medical emergencies. Two-thirds of physician-owned hospitals use 9-1-1 as a part of their emergency response procedures, including 34 percent that use 9-1-1 for medical assistance to stabilize a patient. According to Medicare regulations, 9-1-1 may not be used as a substitute for the hospital's own ability to provide an adequate initial response to the emergency needs of their patients. About one-quarter of physician-owned hospitals lack policies regarding the management of medical emergencies, while less than one-third have physicians on-site 24 hours a day, seven days a week.31

Access to Physician-owned Hospitals Is Limited for Certain Populations

Unlike community hospitals, which typically treat diverse groups of patients, specialty hospitals tend to treat only a small share of Medicaid patients and rarely treat patients who cannot pay for their care.³² Medicaid beneficiaries comprise 13 percent of a community hospital's patients, but only 3 percent of limited-service heart hospitals' patients, and only 2 percent of orthopedic/surgical hospitals' patients.³³ Physician-owned, limited-service hospitals also are less likely to treat racial and ethnic minorities.³⁴

Physician-owned hospitals treat a smaller share of Medicaid patients.

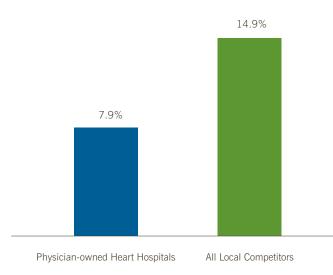
Chart 9: Median Percent of Medicaid Patients by Service and Hospital Type, FY 2004



Source: Medicare Payment Advisory Commission. (August 2006). Physician-owned Specialty Hospitals Revisited. Washington, DC.

Community hospitals have a more diverse patient mix.

Chart 10: Racial and Ethnic Minorities as a Percent of Total Medicare Discharges by Hospital Type, 2002



Source: Medicare Payment Advisory Commission. (May 2005). Medicare Admissions by Type of Hospital and Race. Washington, DC

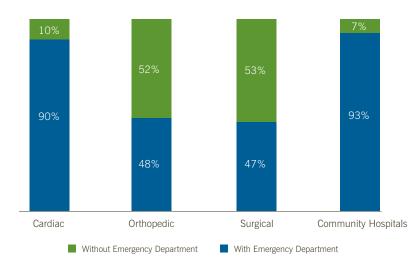
20/0 Proportion of Medicaid patients at physician-owned orthopedic

at physician-owned orthopedic hospitals compared to 13% for community hospitals

The majority of physician-owned, limited-service hospitals do not have EDs, which may partially account for these differences. Hospitals lacking EDs have more control over the types of cases admitted because they do not have the obligation under the Emergency Medical Treatment and Labor Act to screen and stabilize all patients regardless of ability to pay. About half of all physicianowned hospitals have EDs, but more than half of those EDs have only one emergency bed.35 While a single ED bed may meet state requirements for a hospital to have an ED, there are doubts about whether these "EDs" can safely provide emergency care.

While about half of physician-owned hospitals have an emergency department...

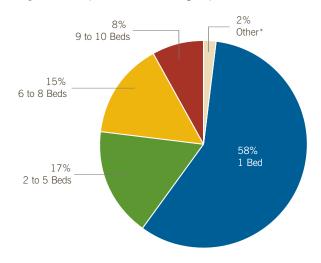
Chart 11: Percent of Hospitals by Emergency Department Presence, Physician-owned Specialty Hospitals versus Community Hospitals, 2007



Source: Office of Inspector General. (January 2008). Physician-owned Specialty Hospital' Ability to Manage Medical Emergencies. Washington, DC.

... the majority have only one emergency bed.

Chart 12: Percent of Physician-owned, Limited-service Hospitals with Emergency Departments by Number of Emergency Beds, 2007



Source: Office of Inspector General. (January 2008). Physician-owned Specialty Hospitals' Ability to Manage Medical Emergencies. Washington, DC.

*One hospital with an emergency department shares the emergency beds of an adjacent hospital.

77%

Percent of limited-service hospitals with no emergency department (ED) or only one ED bed

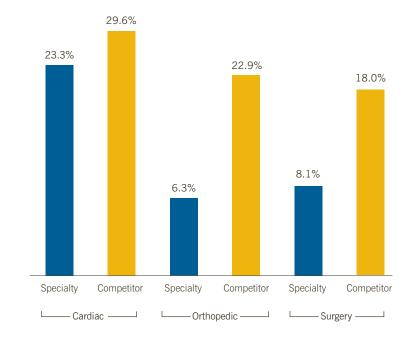
Patient Selection Compromises Community Hospital Mission

Physician-owners have both the ability and financial incentive to direct patients to or away from the facilities in which they have an ownership interest. As such, these facilities tend to specialize in well-reimbursed services, serve fewer high-acuity patients, and treat fewer low-income and uninsured patients. Physician-owned hospitals largely focus on cardiac and orthopedic services: cardiac services can account for 25 to 40 percent of a community hospital's net revenue, and orthopedics is often the most important source of revenue for community hospitals that do not have cardiac departments.³⁶ In addition to limiting their services to the more lucrative specialties, physician-owned specialty hospitals tend to treat patients who are healthier, have less severe illnesses and reside in ZIP codes with higher socioeconomic status.³⁷

These selection practices place fullservice hospitals at a disadvantage because they depend on a balance of services and patients to support the broader needs of the community. The current payment system does not explicitly fund standby capacity for emergency, trauma and burn services, nor does it fully reimburse hospitals for care provided to Medicaid and uninsured patients. Community hospitals rely on cross-subsidies from the well-reimbursed services targeted by physician-owned hospitals to support

Community hospitals treat patients with more severe conditions.

Chart 13: Percent of Discharges in Major/Extreme* Severity Categories, 2003



Source: Centers for Medicare & Medicaid Services. (May 2005). Study of Physician-owned Specialty Hospitals Required in Section 507(c)(2) of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003. Washington, DC.

Note: Competitor hospitals include community hospitals within 20 miles of a specialty hospital.

* Severity based on APR-DRG system. "Major/extreme" severity of illness categorizations are characterized by multiple serious diseases and the interactions between the disorders. "Moderate" or "Minor" severity classifications (not shown) typically do not have complicating secondary diagnoses.

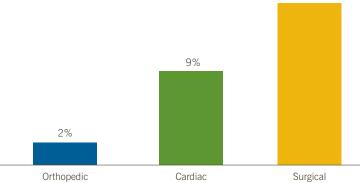
these and other essential but underreimbursed health services.³⁸ Revenue lost to specialty hospitals can lead to staff cuts and reductions in subsidized services such as inpatient psychiatric care, as well as lower operating room utilization, which decreases efficiency, strains resources and increases costs.³⁹

(()) from the field "They take the elective cases, but not the emergencies... then the rest of us have our calendars filled with emergencies. Many of us can't make a living that way."⁴⁰ General Surgeon, INTEGRIS Southwest Medical Center The movement of physician practices to limited-service hospitals without EDs also has reduced community access to emergency specialty care.⁴¹ As physicianowners become less reliant on admitting privileges at community hospitals, they are less willing to provide on-call specialty coverage to community hospital EDs. Last year, 55 percent of hospitals experienced gaps in specialty ED coverage.⁴² Additionally, those physicians that continue providing ED coverage face a greater financial and lifestyle burden.⁴³

Specialty hospitals have high expected profits due to the mix of cases they treat.



Chart 14: Percent above National Average Profitability Due to Favorable Case Mix



Source: Medicare Payment Advisory Commission. (March 2005). *Physician-ouned Specialty Hospitals*. Washington, DC. Note: Favorable case mix is due to selection of DRGs and patient severity.

Research Refutes Claims of Physician-owned Hospitals

Physician-owned, limited-service hospitals have the potential to impact patients, communities, community hospitals and the health system as a whole. Though little research to support or refute the advertised benefits of specialty hospitals existed when they were first created, the growing body of research does not support the claims that these facilities deliver more efficient or higher quality care. Rather research shows that physician ownership results in financial incentives for physicians to steer more complex and costly patients to community hospitals while referring less complex, well-insured patients to their own facilities. These selection practices compromise community hospitals' ability to offer essential services such as emergency and trauma services and uncompensated care.

Medicare Payment Changes Do Not Address Broader Issues with Physician Self-referral

Beginning in fiscal year 2007, Medicare began making changes to the inpatient prospective payment system to lessen the ability of facilities to profit from favorable selection of service types and patients. These revisions were designed to more accurately reflect the costs associated with different types of services and patient acuity levels. While these changes will lessen the incentives for selection within the Medicare inpatient population, they do not address the broader issues posed by the physician-ownership model. The conflict of interest created by self-referral would still exist, and physician-owners would still have incentives to steer patients to their own facilities, increase referral rates and avoid low-income patients.

ENDNOTES

- 1 Medicare Payment Advisory Commission. (August 2006). *Physician-owned Specialty Hospitals Revisited*. Washington, DC.
- 2 Office of Inspector General. (January 2008). Physician-owned Specialty Hospitals' Ability to Manage Medical Emergencies. Washington, DC.
- 3 Medicare Payment Advisory Commission. (August 2006). Physicianowned Specialty Hospitals Revisited. Washington, DC., and Government Accountability Office. (April 2003). Specialty Hospitals: Information on National Market Share, Physician Ownership, and Patients Served. Washington, DC.
- 4 AHA estimates are derived from state surveys and the Centers for Medicare & Medicaid Services data.
- 5 Government Accountability Office. (October 2003). Specialty Hospitals: Geographic Location, Services Provided, and Financial Performance. Washington, DC., and Mitchell, J.M. (2007). Utilization Changes Following Market Entry by Physician-owned Specialty Hospitals. *Medical Care Research* and Review, 64(4), 395-415.
- 6 Government Accountability Office. (April 2003). Specialty Hospitals: Information on National Market Share, Physician Ownership, and Patients Served. Washington, DC.
- 7 Medicare Payment Advisory Commission. (March 2005). Physician-owned Specialty Hospitals. Washington, DC.
- 8 AHA estimates are derived from state surveys and the Centers for Medicare & Medicaid Services data.
- 9 Greenwald, L., et al. (2006). Specialty versus Community Hospitals: Referrals, Quality, and Community Benefits. *Health Affairs*, 25(1), 106-118
- 10 Greenwald, L., et al. (2006). Specialty versus Community Hospitals: Referrals, Quality, and Community Benefits. *Health Affairs*, 25(1), 106-118.
- 11 Iglehart, J.K. (2005). The Emergence of Physician-owned Specialty Hospitals. *New England Journal of Medicine*, 352(1), 78-84.
- 12 Stensland, J., & Winter, A. (2006). Do Physician-owned Cardiac Hospitals Increase Utilization? *Health Affairs*, 25(1), 119-129.
- 13 Mitchell, J.M. (2007). Utilization Changes Following Market Entry by Physician-owned Specialty Hospitals. *Medical Care Research and Review*, 64(4), 395-415.
- 14 Nallamothu, B.K. (2007). Opening of Specialty Cardiac Hospitals and Use of Coronary Revascularization in Medicare Beneficiaries. *JAMA*, 297(9), 962-968.
- 15 Orszag, P.R. (2007). Letter to The Hon. Sam Johnson. Washington, DC. Congressional Budget Office.
- 16 American Hospital Association, 2007.
- 17 Gingrich, N. (2005, November 12). A Health Threat We're Not Treating. *The Washington Post*, p. A25.
- 18 Iglehart, J.K. (2005). The Emergence of Physician-owned Specialty Hospitals. *New England Journal of Medicine*, 352(1), 78-84.
- 19 Medicare Payment Advisory Commission. (March 2005). Physician-owned Specialty Hospitals. Washington, DC.
- 20 Bricker & Eckler LLP. (2007). Federal Regulation of Specialty Hospitals. Columbus, OH. Accessed at: http://www.bricker.com/legalservices%5Cpractic e%5Chcare%5Claws%5Cspecialtymoratorium.asp.
- 21 Herzlinger, R.E. (2004). Consumer-Driven Health Care: Implications for Providers, Payers, and Policymakers. San Francisco, CA: John Wiley & Sons. As cited in Hwang, C.W., et al. (2007). Comorbidity and Outcomes of Coronary Artery Bypass Graft Surgery at Cardiac Specialty Hospitals Versus General Hospitals. Medical Care, 45(8), 720-728., and Medicare Payment Advisory Commission. (March 2005). Physician-owned Specialty Hospitals. Washington, DC.
- 22 Medicare Payment Advisory Commission. (March 2005). Physician-owned Specialty Hospitals. Washington, DC, and Medicare Payment Advisory Commission. (August 2006). Physician-owned Specialty Hospitals Revisited. Washington, DC.
- 23 Medicare Payment Advisory Commission. (August 2006). *Physician-owned* Specialty Hospitals Revisited. Washington, DC.

- 24 Centers for Medicare & Medicaid Services. (May 2005). Study of Physicianowned Specialty Hospitals Required in Section 507(c)(2) of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003. Washington, DC.
- 25 Casalino, L.P., Devers, K.J., & Brewster, L.R. (2003). Focused Factories? Physician-owned Specialty Facilities. *Health Affairs*, 22(6), 56-67., and Greenwald, L., et al. (2006). Specialty versus Community Hospitals: Referrals, Quality, and Community Benefits. *Health Affairs*, 25(1), 106-118.
- 26 Centers for Medicare & Medicaid Services. (May 2005). Study of Physician-owned Specialty Hospitals Required in Section 507(c)(2) of the Medicare Prescription Drug, Improvement, & Modernization Act of 2003. Washington, DC.
- 27 Hwang, C.W., et al. (2007). Comorbidity and Outcomes of Coronary Artery Bypass Graft Surgery at Cardiac Specialty Hospitals Versus General Hospitals. *Medical Care*, 45(8), 720-728.
- 28 Centers for Medicare & Medicaid Services. (May 2005). Study of Physician-owned Specialty Hospitals Required in Section 507(c)(2) of the Medicare Prescription Drug, Improvement, & Modernization Act of 2003. Washington, DC.
- 29 Government Accountability Office. (October 2003). Specialty Hospitals: Geographic Location, Services Provided, and Financial Performance. Washington, DC., and Office of Inspector General. (January 2008). Physician-owned Specialty Hospitals' Ability to Manage Medical Emergencies. Washington, DC.
- 30 Office of Inspector General. (January 2008). *Physician-owned Specialty Hospitals' Ability to Manage Medical Emergencies.* Washington, DC.
- 31 Office of Inspector General. (January 2008). *Physician-owned Specialty Hospitals' Ability to Manage Medical Emergencies*. Washington, DC.
- 32 Government Accountability Office. (October 2003). Specialty Hospitals: Geographic Location, Services Provided, and Financial Performance. Washington, DC., and Medicare Payment Advisory Commission. (March 2005). Physician-owned Specialty Hospitals. Washington, DC.
- 33 Medicare Payment Advisory Commission. (August 2006). *Physician-owned Specialty Hospitals Revisited*. Washington, DC.
- 34 Medicare Payment Advisory Commission. (May 2005). *Medicare Admissions* by Type of Hospital and Race. Washington, DC.
- 35 Office of Inspector General. (January 2008). *Physician-owned Specialty Hospitals' Ability to Manage Medical Emergencies*. Washington, DC.
- 36 Casalino, L.P., Devers, K.J., & Brewster, L.R. (2003). Focused Factories? Physician-owned Specialty Facilities. *Health Affairs*, 22(6), 56-67.
- 37 Cram, P., Vaughan-Sarrazin, M.S., & Rosenthal, G.E. (2007). Hospital Characteristics and Patient Populations Served by Physician Owned and Non Physician Orthopedic Specialty Hospitals. *BMC Health Services Research*, 7(155)., and Mitchell, J.M. (2005). Effects of Physician-owned Limited Service Hospitals: Evidence From Arizona. *Health Affairs*, Web Exclusive.
- 38 Lesser, C.S., Ginsburg, P.B., & Felland, L.E. (2005). Initial Findings From HSC'S 2005 Visits: Stage Set for Growing Health Care Cost And Access Problems. Washington, DC: Center for Studying Health Systems Change., and Mitchell, J.M. (2005). Effects of Physician-owned Limited Service Hospitals: Evidence From Arizona. Health Affairs, Web Exclusive.
- 39 McManis Consulting. (2004-2005). *Impact of Physician-owned Limited-service Hospitals*. Greenwood Village, CO.
- 40 McManis Consulting. (2004-2005). *Impact of Physician-owned Limited-Service Hospitals*. Oklahoma, OK.
- 41 McManis Consulting. (2004-2005). *Impact of Physician-owned Limited-service Hospitals*. Greenwood Village, CO.
- 42 American Hospital Association. (July 2007). The 2007 State of America's Hospitals – Taking the Pulse. Washington, DC.
- 43 Center for Studying Health Systems Change. (August 2005). Market Changes Set Stage for Growing Health Care Cost and Access Problems. Washington, DC, and O'Malley, A.S., Draper, D.A., & Felland, L.E. (2007). Hospital Emergency On-call Coverage: Is There a Doctor in the House? Washington, DC: Center for Studying Health Systems Change.

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