Where Do I Send Thee? Does Physician-Ownership Affect Referral Patterns To Ambulatory Surgery Centers?

There is reason for concern that physician-owned facilities will contribute to a further unraveling of the fragile safety net.

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ABSTRACT: For more than three decades, Congress has struggled with potential financial conflicts of interest when physicians share in financial gain from nonprofessional services. This study asks the question: Are physicians who are leading referrers to physician-owned ambulatory surgery centers (ASCs) more likely to send Medicaid patients to hospital outpatient clinics than other patients? The comparison group is physicians who are leading referrers to non-physician-owned ASCs, using data from two metropolitan areas. Findings indicate that physicians at physician-owned facilities are more likely than other physicians to refer well-insured patients to their facilities and route Medicaid patients to hospital outpatient clinics. [*Health Affairs* 27, no. 3 (2008): w165–w174 (published online 18 March 2008; 10.1377/hlthaff.27.3.w165)]

THE DEFICIT REDUCTION ACT (DRA), passed by Congress in January 2006, represents another chapter in the thirty-plus-year history of congressional concern and involvement about potential financial conflicts of interest when physicians receive payment for nonprofessional services. Among the DRA's provisions was a continued suspension of participation of new physician-owned specialty hospitals in Medicare. On 8 August 2006, the Centers for Medicare and Medicaid Services (CMS) allowed the suspension to expire.

■ **Background.** Recent congressional unease about physician financial conflict

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DOI 10.1377/hlthaff.27.3.w165

of interest has focused on specialty hospitals, but historically, Congress has also turned its attention to physicians' ownership of laboratories, imaging centers, pharmacies, and other facilities. One concern is whether physician-ownership leads to unfair competitive advantages relative to non-physician-owned facilities.[1] At issue is whether physician-owners refer more-lucrative patients to their own facilities and less-lucrative patients to their competitors. A second issue is that when physicians receive payment for nonprofessional services, they have added incentives to induce demand for these services, without the constraint of their own time as they would when they provide services in their own offices.[2] Proponents of physician ownership see direct ownership of facilities leading to more-efficient management and scheduling.

This paper examines the first of these concerns: physicians' referral patterns when physicians own health care facilities. Current law prohibits physicians from referring their patients to facilities that they own in ten different categories. One exception to current law is the "whole hospital" exception, which allows physicians who have ownership interest in an entire hospital to refer patients there.[3] Another exception is ambulatory surgery centers (ASCs), where the rationale for the exemption is that ASCs deliver services at a lower cost than hospitals.[4]

ASCs play an important and growing role in the U.S. health care delivery system. An estimated 3,800 ASCs were operational in 2003, with more than 40 percent of them owned by physicians and another 40 percent owned in joint physician-hospital or physician-corporate ventures.[5] These ASCs competed with 3,998 hospital outpatient departments.[6] From 2000 to 2006, the number of ASCs grew 55 percent, and total Medicare payments to ASCs rose 13.3 percent per year.[7]

This paper explores how physician-ownership of ASCs affects referral patterns to ASCs. For a set of Pennsylvania physicians and ASCs, we analyzed whether physicians who are leading referrers to ASCs are more likely to send Medicaid and uninsured patients to hospital outpatient departments and refer privately insured patients to physician-owned facilities. We compared the referral patterns of "high referrers" to physician-owned ASCs, a proxy for physician-ownership, with patterns for physicians who are "high referrers" to non-physician-owned ASCs.

■ **Previous studies.** In recent years, several researchers and organizations have assessed differences in patients treated among physician-owned specialty hospitals and general hospitals. Studies by the Government Accountability Office (GAO), the Medicare Payment Advisory Commission (MedPAC), the CMS, Jean Mitchell, and Leslie Greenwald and colleagues have measured differences in patient mix in numerous ways: (1) diagnostic mix, (2) severity of illness, (3) payer mix, and (4) comorbidities. The consensus of these studies is that patients treated in physician-owned specialty hospitals are not as severely ill as patients cared for in general hospitals and that specialty hospitals treat fewer Medicaid patients.[8]

One previous study examined referral patterns of physicians, but it only analyzed data on Medicare patients. Greenwald and her colleagues found that "own-

ership by physicians is positively related to the likelihood of referring patients to a specialty hospital."[9] This probability increased as the ownership share of the physician rose.

■ **Expansion on previous work.** This paper expands on previous work in two ways. First, to our knowledge, this is the first study to compare ASCs' selection of patients for physician-owned ASCs with that of non-physician-owned ASCs in the same medical marketplace. Second, we analyze the actual referral patterns by payer status. Thus, the paper presents a more direct measurement how physician-ownership affects where a patient is sent for ambulatory surgery.

Study Data And Methods

The study sought a state with both large numbers of physician-owned ASCs and a requirement that all ASCs and hospital outpatient departments submit discharge abstracts. Pennsylvania was one of the few states that met this requirement. The Pennsylvania Health Care Cost Containment Commission provides discharge abstracts for all ambulatory/outpatient hospital surgeries in Pennsylvania through a public use file.

The commission divides the state into nine regions and sells data for each region separately. Because of budgetary limitations, we restricted our analysis to regions 1, 8, and 9—which roughly correspond to the Pittsburgh and Philadelphia metropolitan areas. We chose these areas because of the concentration of the state population and ASCs within these regions. Study data are for calendar year 2003.

■ **Types of facilities.** Pennsylvania discharges entailed 1,008,034 discharges from twenty-eight physician-owned ASCs, eighty hospital outpatient departments, six for-profit ASCs, and nine nonprofit ASCs. We aimed to examine facilities providing services to all patients at different types of ASCs, regardless of age or sex, thereby eliminating pediatric and women's hospitals. We also wanted ASCs that provided a broad range of services. Therefore, facilities that provided only cancer therapy, cosmetic, or eye surgery were not included in the analysis.

■ **Physician-ownership.** Identifying physician-ownership proved to be one of the most resource-intensive tasks of the study. Pennsylvania files do not indicate whether a hospital or facility is physician-owned. We worked with the Hospital Association of Pennsylvania, Highmark Blue Cross Blue Shield, and Independence Blue Cross Blue Shield to identify physician ownership. In addition, we made telephone calls to individual hospitals and ASCs and conducted Web searches to determine the ownership of facilities.

■ **Patients' characteristics.** The patient constitutes the unit of observation throughout the study. The discharge files include data on race and ethnicity, primary payer, diagnosis, procedure codes, source of admission, and referring physician ID. The database does not include measures of severity of illness or mortality risk.

■ **Study and comparison physician groups.** The study experimental group was physicians who accounted for the top 50 percent of referrals to physician-

owned ASCs. The comparison groups are those physicians who accounted, respectively, for the top 50 percent of referrals to outpatient departments, the top 50 percent of referrals to nonprofit ASCs, and the top 50 percent of referrals to for-profit ASCs.

■ **Identifying peer institutions.** In comparing the performance of physician-owned and non-physician-owned facilities, analysts must be able to identify peer institutions. One method would compare institutions delivering similar services in the same or similar communities. The flaw with this approach is that one common strategy of profit-seeking ASCs is to provide profitable services in affluent, well-insured communities. (Nonprofit as well as for-profit institutions may practice this strategy.) For this reason, our analysis did not define similar institutions in terms of narrow geographic locations, such as ZIP codes.

■ **Diagnostic groupings.** Since ASCs report their procedures as *International Classification of Diseases,* Ninth Revision (ICD-9), Healthcare Common Procedure Coding System (HCPCS), or *Current Procedure Terminology* (CPT) codes, we evaluated the descriptions and combined procedures into major diagnostic groupings. The ability to identify individual procedures also allowed us to assess if self-pay patients were uninsured or receiving services not covered by their insurance plan, such as cosmetic surgery.

■ **Ownership status and sociodemographic characteristics.** We used descriptive statistics to show the relationship between ASC ownership status and sociodemographic characteristics, diagnostic group, source of referral, and discharge status. All statistical analysis used SAS version 8.02. Because the study database is the universe of claims from ASCs in the Pittsburgh and Philadelphia metropolitan areas, differences between groups cannot be attributed to sampling error.

Study Findings

Physician-owned ASCs constituted a relatively small share of the ambulatory surgery market in 2003—less than 8 percent of ASC discharges in the study areas. Hospital-based facilities accounted for about 80 percent of discharges (Exhibit 1).

■ **ASC patients' coverage status.** In a state where 10 percent of the population is uninsured, all categories of ASCs treated few self-pay/indigent patients in 2003. Nearly 4 percent of patients treated by physician-owned ASCs were self-pay/indigent patients, a figure that is less than for hospital-based facilities (3 percent). Moreover, a closer examination of services received by such patients in physician-owned ASCs revealed that most procedures were cosmetic surgery, such as liposuction and breast augmentation. The implication is that these patients were not indigent patients but self-pay patients who paid for services that were not covered by their insurance plans. In Pennsylvania, where Medicaid covers 11 percent of the population, a higher share of patients were Medicaid patients in hospital outpatient departments than in physician-owned ASCs (8 percent versus 3 percent).[10] Medicare patients accounted for roughly equal shares of total patients in the above facilities.

EXHIBIT 1
Comparison Of Physician-Owned Ambulatory Surgery Centers (ASCs) With Hospital Outpatient Departments And Other ASCs, Pennsylvania, 2003

Category	Hospital outpatient department	Not-for-profit ASC	For-profit ASC[a]	Physician-owned ASC	Total[b]
Number of ASCs	80	9	6	28	138
Number of discharges	802,959	23,153	21,009	86,387	1,008,038
Payer mix (%)					
Self-pay, indigent	2.9	0.4	0.9	3.5	2.8****
Medicare	31.1	33.9	45.7	30.5	30.9****
Medicaid	8.2	5.9	1.2	3.4	7.9****
Blue Cross/commercial	57.0	59.2	63.8	43.5	57.5****
Other[c]	0.8	0.6	0.9	0.3	0.9****
Sex (%)					
Female	56.5	55.6	57.1	58.0	56.1****
Male	43.5	44.4	42.8	42.0	43.9****
Average age (years)	52.3****	46.4****	61.7****	56.8****	52.8****
Race and ethnicity (%)					
African American	13.3	4.8	1.3	3.6	12.0****
White	81.0	90.6	50.3	84.6	79.8****
Other[d]	5.7	4.6	48.4	11.8	8.2****
Hispanic	2.6	0.8	0.5	0.6	2.4****
Source of admission (%)					
Physician referral	78.5	72.3	100.0	99.7	80.5****
Clinic referral	5.1	13.8	0.0	0.0	5.3****
Hospital transfer	0.1	9.1	0.0	0.0	0.3****
Other[e]	16.3	4.8	0.0	0.7	13.9****
Discharge status (%)					
Discharged home	84.8	61.7	99.9	99.3	86.3****
Hospital	0.1	0.0	0.0	0.0	0.1****
Skilled nursing facility	2.3	0.0	0.0	0.0	1.9****
Other[f]	12.8	38.3	0.1	0.7	11.6****

SOURCE: Pennsylvania Health Cost Containment Commission, Outpatient File, 2003.

NOTE: Significance derived through chi-square tests.

[a] ASCs owned by for-profit corporations with no publicly identified physician ownership.

[b] Includes visits to women's hospital outpatient departments, pediatric outpatient departments, cancer ASCs, and eye and cosmetic ASCs.

[c] Includes commercial automobile, workers compensation, government, and unknown.

[d] Includes Asian/Pacific islander, American Indian/Alaska Native, and unknown.

[e] Includes health maintenance organization (HMO) referral, transfer from another type of institution, emergency room, court/law enforcement, and unknown.

[f] Includes discharged to another type of institution, discharged to home health, left against medical advice, died, discharged to other outpatient service, and unknown.

****$p < 0.001$

■ **Other patient characteristics.** African Americans constituted 16 percent of the population in the study regions in 2003. Nearly 4 percent of patients cared for in physician-owned ASCs were African Americans, compared to 13 percent in hospital outpatient departments. Few Hispanics resided in the Pittsburgh and Philadelphia metropolitan areas, and very few Hispanics received care at ASCs. Physician referrals were the source of admissions for virtually all patients in physician-owned and for-profit ASCs. In hospital outpatient departments, nonphysician referrals ac-

counted for about one in five patients. In nonprofit ASCs, nonphysician referrals accounted for nearly one in three patients treated.

■ **Major diagnostic groups.** Diagnostic groups ranged from the removal of benign skin lesions to hand and wrist disorders, such as carpel tunnel syndrome (Exhibit 2). The common thread for all of these procedures is that they can be safely performed in a variety of settings. For most ASCs, the largest common diagnostic groupings were cataract surgery and gastrointestinal (GI) disorders and testing, including colonoscopies and endoscopies. For all nonhospital-based facilities, cataract surgery was consistently one of the top procedures performed. Since the CMS limits the procedures performed in an ASC, hospital outpatient departments can perform a much broader range of services, so the major diagnostic groups could vary greatly among the different types of facilities. Yet the largest diagnostic group for hospital outpatient departments remained the same, GI disorders and testing (31 percent). Hospital-based facilities differed in that the second most common type of procedure performed related to skin disorders (13 percent), including suturing,

EXHIBIT 2
Percentage Of Visits For Selected Major Diagnostic Groups, Top 100 Ambulatory Surgery Center (ASC) Services Compared With Hospital Outpatient Surgery Centers And Other ASCs, Pennsylvania, 2003

Group	Hospital outpatient department (%)	Not-for-profit ASC (%)	For-profit ASC (%)[a]	Physician-owned ASC (%)
Back disorder	4.1	6.2	4.3	6.9
Benign neoplasm (skin)	–[b]	–[b]	–[b]	1.5
Breast surgery	2.6	–[b]	–[b]	1.7
Cardiac catherization	2.8	–[b]	–[b]	–[b]
Cataract surgery	6.0	23.0	34.4	13.3
Cosmetic surgery[c]	–[b]	–[b]	–[b]	4.9
Diagnostic procedures	–[b]	3.0	9.3	11.1
Ear disorder	–[b]	15.1	–[b]	–[b]
Eye surgery (other than cataract and glaucoma)	–[b]	–[b]	2.6	2.7
Female reproductive	4.2	–[b]	–[b]	–[b]
Fetal procedures	2.6	–[b]	–[b]	–[b]
Gastrointestinal disorder/testing	31.4	30.8	33.2	46.1
Hand/wrist disorders	–[b]	2.9	1.7	4.7
Injection/infusion	10.8	–[b]	–[b]	–[b]
Joint disorder	3.9	2.7	4.0	2.1
Male reproductive	–[b]	–[b]	1.3	–[b]
Nasal disorder	–[b]	–[b]	–[b]	–[b]
Pain control	–[b]	3.5	–[b]	–[b]
Skin disorder	13.0	4.3	–[b]	–[b]
Tonsillectomy/adenoidectomy	–[b]	3.2	–[b]	–[b]
Urinary tract disorder	–[b]	–[b]	2.7	–[b]

SOURCE: Pennsylvania Health Cost Containment Commission, Outpatient File, 2003.

[a] ASCs owned by for-profit corporations with no identified physician ownership.

[b] Less than 0.5 percent. (For some procedures, the ASC may not be authorized to perform the procedure.)

[c] Does not include any type of breast surgery.

wound debridement, and excision of lesions and foreign bodies. For-profit or physician-owned ASCs do not commonly perform these types of procedures.

■ **Physician referral.** We sought evidence that financial rewards from physicians' ownership of ASC facilities might affect patterns of referral of less lucrative patients. An ideal analysis would investigate the referral patterns of physician-owners of ASCs. Unfortunately, no public information identifies physician-owners. Our approach, a second-best one, analyzed referral patterns for physicians who accounted for the top 50 percent of patient referrals to physician-owned ASCs and determined if there was a pattern for these physicians to refer better-insured patients (commercial/Blue Cross and Medicare) to physician-owned facilities, and lower-paying patients (Medicaid and self-pay/indigent) to outpatient departments (Exhibit 3). We then conducted a similar analysis for physicians who were high referrers to hospital outpatient departments, nonprofit ASCs, and other for-profit ASCs.

EXHIBIT 3
Distribution Among Payers, For Physicians Who Accounted For The Top 50 Percent Of Physician Referrals To Hospital Outpatient Departments, Not-For-Profit Ambulatory Surgery Centers (ASCs), For-Profit ASCs, And Physician-Owned ASCs In Pennsylvania, 2003

Category	Hospital outpatient department (%)	Not-for-profit ASC (%)	For-profit ASC (%)[a]	Physician-owned ASC (%)
Top 50% of referrals to physician-owned ASCs				
Total (n = 26,249)	8.7	0.0	0.2	91.3
Medicaid (n = 368)	44.6	0.0	0.0	55.4
Uninsured/self-pay (n = 447)	1.6	0.0	0.0	98.2
Commercial/Blue Cross (n = 17,321)	7.9	0.0	0.0	92.1
Medicare (n = 7,969)	9.1	0.0	0.0	90.8
Top 50% of referrals to hospital outpatient departments				
Total (n = 336,527)	95.5	1.7	0.5	2.0
Medicaid (n = 26,526)	97.6	1.0	0.3	0.2
Uninsured/self-pay (n = 12,026)	98.0	0.1	0.1	1.8
Commercial/Blue Cross (n = 191,789)	95.5	1.5	0.3	2.3
Medicare (n = 103,103)	94.5	2.6	0.9	1.9
Top 50% of physician referrals to not-for-profit ASCs				
Total (n = 17,712)	27.8	54.7	4.4	1.2
Medicaid (n = 1,578)	41.5	26.4	0.4	0.1
Uninsured/self-pay (n = 110)	44.6	23.6	5.5	10.0
Commercial/Blue Cross (n = 9,601)	23.8	56.9	1.3	1.6
Medicare (n = 6,293)	30.3	59.2	9.9	0.6
Top 50% of physician referrals to for-profit ASCs				
Total (n = 10,148)	20.0	5.7	73.9	0.3
Medicaid (n = 154)	38.3	0.0	61.0	0.7
Uninsured/self-pay (n = 19)	31.6	0.0	63.2	0.0
Commercial/Blue Cross (n = 6,151)	20.4	1.5	77.7	0.3
Medicare (n = 3,710)	18.8	13.1	67.7	0.3

SOURCE: Pennsylvania Health Cost Containment Commission, Outpatient File, 2003.

[a] ASCs owned by for-profit corporations with no identified physician ownership.

Referrals to physician-owned ASCs. For the top 50 percent of physician referrals to physician-owned ASCs, there were strikingly few referrals for Medicaid or self-pay/indigent patients: 1.4 percent and 1.8 percent of all referrals, respectively (percentages are not shown in Exhibit 3). When these proxy physician-owners made referrals, they directed about 45 percent of Medicaid patients to hospital outpatient departments and 55 percent to the physician-owned ASC. Eight percent of commercial patients were referred to a hospital outpatient department. In contrast, these same proxy physician-owners sent 92 percent of commercial/Blue Cross patients, 91 percent of Medicare patients, and 98 percent of self-pay/uninsured patients to a physician-owned ASC. A closer examination of self-pay patients indicates that these patients most often received cosmetic surgery, which suggests that the patients received a service not covered by their health plan and probably had some sort of insurance coverage.

Referrals to hospital outpatient departments. For the top 50 percent of physician referrals to hospital outpatient departments, regardless of payer, patients were virtually all treated in the outpatient department (Exhibit 3). The percentage ranged from 95 percent of Medicare patients to 98 percent of uninsured/self-pay patients. Top-referring physicians at nonprofit ASCs referred 45 percent of their uninsured/self-pay patients and 42 percent of Medicaid patients to an outpatient department. In contrast, 24 percent of commercial/Blue Cross patients and 30 percent of Medicare patients were referred to an outpatient department. Top referrers to for-profit ASCs referred 38 percent of Medicaid and 32 percent of uninsured/self pay patients to for-profit ASCs. In contrast, 20 percent of commercial patients and 19 percent of Medicare patients were referred to an outpatient department.

■ **Summary.** To summarize, the difference between referring the likely highest-paying payer (commercial/Blue Cross) and the lowest-paying payer (Medicaid) to a hospital outpatient department was thirty-six percentage points for top-referring physicians at physician-owned ASCs. The respective figure for hospital outpatient surgical centers was minus two percentage points, which means that hospital outpatient referrers were actually more likely to send a commercial/Blue Cross patient than a Medicaid patient to a nonhospital facility. For physicians who were top referrers to for-profit ASCs, the difference between commercial/Blue Cross and Medicaid was eighteen percentage points, and that figure was seventeen percentage points at nonprofit ASCs.

Discussion

■ **Role of patients' payer status.** This study analyzed more than one million discharge abstracts from hospital outpatient departments and ASCs located in the Pittsburgh and Philadelphia metropolitan areas. Our most important findings pertain to physicians who referred many patients to physician-owned ASCs. These physicians referred very few Medicaid patients at all—about 1.2 percent of their total

referrals. However, when these physicians referred a Medicaid patient, that patient was referred to the physician-owned ASC about 55 percent of the time and to the outpatient department about 45 percent of the time. In contrast, this same set of physicians referred other patients—commercial/Blue Cross, Medicare, and self-pay/indigent—90–98 percent of the time to the physician-owned facility.

We examined self-pay/indigent patients more closely and found that most surgery obtained at the physician-owned ASCs was for cosmetic surgery. The implication of this finding is that these patients probably had insurance but sought a service not covered by their health plan.

When we examined the top 50 percent of physician referrals to hospital outpatient departments, nonprofit ASCs, and for-profit ASCs, we found much smaller differences in where these physicians referred their patients according to payer status. For example, physicians who were major referrers to hospital outpatient departments referred more than 95 percent of their patients covered by Medicaid, Medicare, and commercial/Blue Cross to a hospital outpatient department.

Some of the referral pattern may reflect the payment structure of Medicaid. Only 70 percent of physicians accept any Medicaid, while almost all accept fee-for-service (FFS) Medicare and private insurance.[11] It appears that most referrals of self-pay/indigent patients from high-volume referring physicians were for patients receiving cosmetic surgery.

■ **Study limitations.** There are a number of limitations to the study. First, because there are no publicly available data on which physicians are owners of an ASC, we were unable to directly identify these owners. Our proxy measurement of ownership was the set of physicians who accounted for 50 percent of the referrals to physician-owned ASCs. Second, study data are from just one state (and confined to an area roughly corresponding to the Philadelphia and Pittsburgh metropolitan areas). Third, this study did not analyze the cost or quality of care, nor whether favorable selection by physician-owned facilities actually jeopardizes the financial health of non-physician-owned facilities, and the delivery of safety-net services in those facilities. Fourth, the database does not include any measures of severity of illness or mortality risk. One possible source of risk selection is for doctors to refer sicker patients to hospital outpatient departments and healthier patients to physician-owned ASCs. Nevertheless, this study clearly shows that physicians who were heavy referrers to physician-owned ASCs were far more likely to send their lower-paying Medicaid patients to hospital outpatient clinics, and their higher-paying private and Medicare patients to physician-owned ASCs. This pattern of referrals was more pronounced than for other physicians who were leading referrers to hospital outpatient departments, nonprofit ASCs, and for-profit ASCs.

■ **Segregation by payer status.** It was not the objective of this study to investigate access to care for the uninsured and Medicaid populations. Most striking, however, was the conspicuous absence of these patients in ASC settings. Just as 11 a.m. on a Sunday morning might be the most segregated hour of the week in the United

States, perhaps ASCs are the most payer-segregated component of our health care system.

■ **Congressional concern.** If insurer payments to hospitals and ASCs reflected the actual cost of production, and Medicaid fees and payments for care of the uninsured were equivalent to payments for other insured groups, there would be little debate over physician-ownership.[12] However, this is not the current U.S. health care system. Congressional concern over physician-owned facilities may reflect a belief that continued growth of such facilities will contribute to a further unraveling of an already fragile safety net. The worry is that physician-owned facilities will siphon off profit centers that have traditionally cross-subsidized care for uninsured and Medicaid patients, as well as unprofitable services such as burn treatment. The findings from this paper are consistent with that fear.

The authors thank Barbara Rothenberg from the Blue Cross and Blue Shield Association for her contribution to the study design and analysis. The authors received funding from the Blue Cross and Blue Shield Association. The views expressed in this paper are those of the authors and do not represent the views of the American Medical Association.

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