#### VIEWPOINT

### **Patient Referrals**

# A Linchpin for Increasing the Value of Care

# Zirui Song, MD, PhD Department of Medicine, Massachusetts General Hospital, Boston, Massachusetts; Department of Health Care Policy, Harvard Medical School, Boston, Massachusetts; and National Bureau of Economic Research,

## Thomas D. Sequist, MD, MPH

Cambridge

Massachusetts.

Department of Health Care Policy, Harvard Medical School, Boston, Massachusetts; Division of General Medicine and Primary Care, Department of Medicine, Brigham and Women's Hospital, Boston, Massachusetts; and Partners Healthcare System, Boston, Massachusetts.

#### Michael L. Barnett, MD

Department of Health Care Policy, Harvard Medical School, Boston, Massachusetts; and Division of General Medicine and Primary Care, Department of Medicine, Brigham and Women's Hospital, Boston, Massachusetts.

Corresponding Author: Zirui Song, MD, PhD, Department of Medicine, Massachusetts General Hospital, 55 Fruit St, Boston, MA 02114 (zsong@partners.org). The success of accountable care organizations (ACOs) under global payment may depend in part on a common yet poorly understood clinical decision: the patient referral in the outpatient setting. Fundamental to collaboration among physicians and other health care professionals, patient referrals have been largely ignored in the payment reform debate.

Referral rates in the United States more than doubled from 1999 to 2009, with about 10% of outpatient visits resulting in a consultation or visit to another physician. Referrals seem to be both underused and overused, with clinical information often poorly transferred between physicians and frequent confusion between primary care physicians and specialists over the specialist's role. Yet little is known about referrals. By systematically measuring and evaluating referrals in their physician networks, ACOs may be able to better target efforts to improve care coordination and reduce spending.

Referrals may be driven by a number of factors. Physician knowledge gaps due to specialization create a natural demand for referrals. Time pressures on outpatient clinicians may intensify this demand, because

# Much can be learned from examining patterns of physician referrals within a single organization.

referrals may be used as a substitute for the additional time needed to thoroughly evaluate patient concerns. Physician concerns about malpractice may also encourage referrals as a means of defensive medicine. Additionally, patient preferences can play a role in the demand for referrals. By assuming shared savings and shared risk collectively under a global budget, physicians in an ACO share the consequences of each other's referral decisions.

Referrals affect clinical volume. Through consultations and office visits, referrals lead to services at the consultant's discretion. In previous studies on geographic variations in Medicare spending, underlying rates of outpatient office visits were 1.3 times greater in highest-spending areas compared with lowest-spending areas. For instance, within 30 days of an acute myocardial infarction, 81% of beneficiaries saw a cardiologist and 42% saw another medical specialist in the highest-spending regions compared with 70% and 23%, respectively, in the lowest-spending regions. Similarly, inpatient specialist consultations were 2.4 times greater in highest-spending areas. The percentage of Medicare patients seeing a double-digit

number of physicians was 3.0 times greater in the same comparison, correlating with imaging, diagnostic tests, and minor procedures used on the order of 1 to 3 times as frequently.<sup>3</sup> Surveys of primary care physicians suggest that for a patient with a given clinical profile, the largest variation in clinical decision making between high- and low-spending regions was in the likelihood to refer.<sup>4</sup>

Referrals also affect prices. Given fee differences across private payers, shifting referrals from more expensive to less expensive clinicians and health care organizations may garner price discounts. Among early ACOs in Massachusetts, initial savings measured through claims were largely achieved by referring patients to physicians and facilities that charged lower prices, consistent with early efforts by these ACOs to control referral patterns.<sup>5</sup>

In addition, referrals may affect quality. Fragmentation of care increases with the number of physicians a patient sees, reflecting the challenges in communication and teamwork among physicians in a complex delivery system. Medicare beneficiaries with chronic

diseases such as heart failure or diabetes see a median of 8 to 10 physicians in a year, and the typical primary care physician needs to coordinate care with hundreds of other physicians for a panel of patients. Poor continuity of care is associated with more preventable hospitalizations, complications of

chronic illness, and higher costs per episode of inpatient care

Given their meaningful influence on the volume, cost, and quality of care, referrals should be better evaluated and managed by ACOs. This could be accomplished in 3 stages.

First, organizations could measure the baseline prevalence and variation of referrals within their physician network and to outside physicians and other clinicians. Such measurement would help organizations understand both the extent to which referrals are a part of routine care and the distribution of referral intensity (generated and received) across physicians in their organization.

Much can be learned from examining patterns of physician referrals within a single organization. In an analysis of referral rates across 120 primary care physicians for 3 common diagnoses (abdominal pain, back pain, headache) from 2007-2011 in a large multispecialty group practice in Massachusetts, adjusting for patient demographics, comorbidities, and clustering of referrals within individual physicians, there was a greater than 5-fold variation in the average referral rate be-

E1

Copyright 2014 American Medical Association. All rights reserved.

tween the lowest and highest quintiles of physicians, robust to adjustments for patient comorbidity. Other organizations may find similar variations in these and other diagnoses. Such information could be used to start a conversation similar to that encouraged by the Choosing Wisely Campaign from the American Board of Internal Medicine, whereby ACOs might begin to assess the proportion of referrals that resulted in high- or low-value care within their organizations.

Second, ACOs could create information technology capabilities to track referrals and provide physicians an electronic alternative to the traditional face-to-face referral visit. At San Francisco General Hospital, a system that required referrals to undergo an electronic specialist review enabled the hospital to clinically address 20% of primary care physician-initiated referrals through electronic correspondence alone. Interventions such as electronic "curbside" consultations may provide invaluable convenience in a time-pressured primary care environment. In addition, real-time specialty input may offer reassurance to primary care physicians who have clinical questions or have concerns about malpractice risk.

Despite these potential benefits, electronic referral systems, to be sustainable, will require payment mechanisms that reward primary care and specialist physicians for using e-referrals. The time or costs saved by replacing a traditional visit would need to be passed on to clinicians in a tangible way, such as through a larger surplus share under risk contracts or increased capacity to provide other services, focus on higher-risk patients, or complete paperwork. A framework for medicolegal responsibility in the electronic curbside con-

sult will need to be established as well, likely requiring the input of state medical boards and other governing bodies.

Third, using referral data, clinicians, health care organizations, and payers could work together to develop quality improvement efforts that increase the value of referrals. This may include individualized reports to physicians showing their referral rates relative to other physicians, which some commercial payers have begun to provide in ACO contracts. Similarly, institutional consensus guidelines could be developed that help physicians recognize when a referral is likely to be unnecessary or of low value. Where consensus is not possible-given the idiosyncratic role that physician and patient factors may play in the value of any specific referral—organizational leaders can nevertheless motivate physicians to think more critically about the costs and benefits of downstream services generated by the referral. The practice or clinic could initiate regular care coordination meetings between primary care physicians, specialists, nurses, and staff to design their own guidelines or recommendations by discussing the common clinical features of patients within their panel who would and would not benefit from a referral.

#### **Conclusions**

Slowing health care spending is challenging. Global budget and other ACO contracts may be a necessary first step, but they are blunt instruments for improving collaboration across specialties. Understanding the causes and consequences of referrals may help ACOs improve the value of teamwork and collaboration among colleagues who previously worked in silos.

#### ARTICLE INFORMATION

**Published Online:** July 3, 2014. doi:10.1001/jama.2014.7878.

Conflict of Interest Disclosures: All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Dr Barnett reported serving as a consultant to a start-up, Ginger.io, which has no relationship to this research. No other authors reported disclosures.

**Funding/Support:** This work was supported by National Institute on Aging grant F3O AGO39175.

Role of the Sponsor: The National Institute on Aging had no role in the preparation, review, or approval of the manuscript or the decision to submit the manuscript for publication.

#### REFERENCES

1. Barnett ML, Song Z, Landon BE. Trends in physician referrals in the United States, 1999-2009. *Arch Intern Med*. 2012;172(2):163-170.

- 2. Mehrotra A, Forrest CB, Lin CY. Dropping the baton: specialty referrals in the United States. *Milbank Q.* 2011;89(1):39-68.
- 3. Fisher ES, Wennberg DE, Stukel TA, Gottlieb DJ, Lucas FL, Pinder EL. The implications of regional variations in Medicare spending, part 1: the content, quality, and accessibility of care. *Ann Intern Med*. 2003;138(4):273-287.
- 4. Sirovich B, Gallagher PM, Wennberg DE, Fisher ES. Discretionary decision making by primary care physicians and the cost of U.S. Health care. *Health Aff (Millwood)*. 2008;27(3):813-823.
- **5**. Song Z, Safran DG, Landon BE, et al. Health care spending and quality in year 1 of the alternative quality contract. *N Engl J Med*. 2011;365(10):909-918
- **6**. Pham HH, Schrag D, O'Malley AS, Wu B, Bach PB. Care patterns in Medicare and their implications for pay for performance. *N Engl J Med*. 2007;356 (11):1130-1139.

- 7. Barnett ML, Sequist TD. Understanding variation in PCP referral patterns in a large multispecialty practice group. In: Abstracts from the 37th Annual Meeting of the Society of General Internal Medicine; April 24-26, 2014; San Diego, CA. *J Gen Intern Med*. 2014;1(29):5241-5242.
- **8**. Kim-Hwang JE, Chen AH, Bell DS, Guzman D, Yee HF Jr, Kushel MB. Evaluating electronic referrals for specialty care at a public hospital. *J Gen Intern Med*. 2010;25(10):1123-1128.

JAMA Published online July 3, 2014

**E2**