RESEARCH LETTERS

The Role of Care Coordinators in Improving Care Coordination: The Patient's Perspective

he prevalence of chronic illness and increasing life expectancy is forcing all nations to consider models of care delivery that achieve desired outcomes at affordable costs. Nearly half of all Americans live with 1 chronic condition. One in 4 patients with a chronic condition will see at least 3 physicians, and the typical primary care physician coordinates care with 229 other physicians in 117 different practices. People with chronic conditions are at high risk of poor care coordination, leading to test duplications, medical errors, and adverse health outcomes.

Promising solutions to improve care coordination include providing easy access to care when patients need it, establishing a stable relationship and effective communication between patients and their primary care practice, and using multidisciplinary care teams that include care coordinators to manage the care plan.

To date, little is known about the impact of various approaches to improving care coordination from the patient's perspective. Using data from a 2010 survey of adults in 11 countries, we report on what effects having a care coordinator, better access to primary care, and strong health care provider—patient communication have on care coordination.

Methods. Data come from the 2010 Commonwealth Fund International Health Policy Survey, a representative survey of 19 738 adults across 11 countries. A detailed description of the survey and methods are described elsewhere. The telephone survey was conducted from March to June 2010 among random samples of adults 18 years or older. The final analytic sample is limited to 11 207 adults who reported seeing more than 1 physician in the past year because these patients are more likely to have complex health care needs and to experience care coordination problems. The data are weighted to reflect the distribution of the adult population in each country.

The survey measured whether respondents had a care coordinator, accessible care, and a strong health care provider–patient relationship. Outcomes included communication failures about test results and between patients' regular health care provider, specialists, post–emergency department (ER) visits, and hospitalizations, and reports that care was poorly organized or coordinated. We estimated the independent effects of having a care coordinator, accessible care, and a strong health care

provider–patient relationship controlling for country of residence, health status, income, age, sex, and length of time with physician. Data were analyzed using STATA statistical software (version 11.1; StataCorp).

Results. Having a care coordinator reduces the risk for all nonacute and postacute coordination problems independent of accessible care and a strong health care provider—patient relationship (**Table**). Patients with a care coordinator were less likely than patients without one to say their care was poorly organized and coordinated, their test results or medical records were not available at their scheduled appointment, they received conflicting information from different physicians, someone failed to follow up about their test results, and that their regular physician and a specialist were not sharing information about their care (P < .001 for all comparisons).

Among hospitalized patients, those lacking a care coordinator were more likely to report that no one made arrangements for a follow-up visit with a physician after discharge and that their regular physician was not informed about the care they received while they were hospitalized or had an ER visit (P<.001 for all comparisons).

Having accessible care was also associated with lower rates of experiencing coordination gaps. At the same time, patients with a strong health care provider—patient relationship had about half the odds of experiencing coordination gaps related to medical records or repeated tests and the lack of follow-up after a hospital and/or ER discharge.

Comment. Results show that a patient-centered approach that includes easy access and communication with health care providers, a care coordinator, and a positive patient-provider relationship is a promising strategy for reducing coordination problems among patients with complex health care needs. How can this patient-centered strategy be more widely spread among primary care practices?

The Patient-Centered Medical Home (PCMH) model provides a strong framework for practice transformation. Although this model of care is spreading (as of December 2011, there were 3060 accredited PCMH practices [e-mail communication; National Committee for Quality Assurance President Margaret E. O'Kane, MHA; December 6, 2011]), many practices do not have the infrastructure to meet medical home criteria. The Affordable Care Act includes a number of provisions to support the development of medical homes, such as awarding state grants to establish community health teams that will contract with primary care practices to support 24-hour care management and support following hospital discharge, among other services.

Table. Effects of Care Coordinators, Accessible Care, and Health Care Provider—Patient Relationships on Problems With Care Coordination and Transition in Care Among Adults in 11 Countries, a 2010, Logistic Regression

Base: Adults Seeing Multiple Physicians	Patient Has a Care Coordinator ^b		Patient Has Accessible Care ^c		Patient Has a Strong Health Care Provider–Patient Relationship ^d	
	0R	P Value	0R	P Value	0R	P Value
In the past 2 years care was poorly organized or coordinated Nonacute care coordination problems	0.47	.001	0.53	.001	0.53	.001
Test results or medical records were not available at scheduled appointment	0.52	.001	0.52	.001	0.52	.001
Received conflicting information from different physicians	0.65	.001	0.60	.001	0.60	.001
Physicians ordered test that was unnecessary because test had already been performed	0.75	.001	0.64	.001	0.47	.001
Sometimes, rarely, or never had someone follow up to give blood tests, radiographs, or other test results	0.43	.001	0.63	.001	0.44	.001
The specialist did not have basic medical information from your regular physician about the reason for your visit or test results (among those who saw or needed to see a specialist in past 2 y and has regular physician or place of care)	0.57	.001	0.71	.001	0.58	.001
After you saw the specialist your regular physician did not seem informed and up to date about the care you got from the specialist (among those who saw or needed to see a specialist in past 2 y and who had regular physician or place of care)	0.64	.001	0.71	.001	0.64	.001
Postacute care coordination problems when left hospital						
Someone did not make arrangements or make sure you had follow-up visits with physicians or other health care professionals	0.50	.001	0.69	.005	0.80	.04
Physicians or staff at usual place of medical care did not seem informed and up to date about care received in hospital	0.40	.001	0.72	.04	0.57	.001
After hospital emergency department visit, physicians or staff at usual place of medical care did not seem informed and up to date about the care received in hospital	0.54	.001	0.58	.001	0.53	.001

^aThe 11 countries include Australia, Canada, France, Germany, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom, and the United States. All regression models control for health status, length of time with a physician, income, age, sex, and country of residence (estimates not shown), as well as accessible care, strong patient—health care provider relationship, and care coordinator.

The practice of medicine is changing rapidly. As the United States considers delivery and payment reforms made possible by the Affordable Care Act and many concurrent innovations in the private sector, physicians engaged in practice redesign efforts should evaluate whether adding care coordinators as part of a care team could improve care coordination and ultimately reduce the overuse of services, medical errors, and poor health outcomes for their most complex patients.

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- Schoen C, Osborn R, Squires D, Doty MM, Pierson R, Applebaum S. How health insurance design affects access to care and costs, by income, in eleven countries. *Health Aff (Millwood)*. 2010;29(12):2323-2334.
- Wu S, Green A. Projection of Chronic Illness Prevalence and Cost Inflation. Santa Monica, CA: RAND Corp; 2006.
 Partnership for Solutions. Chronic Conditions: Making the Case for Ongoing
- Partnership for Solutions. Chronic Conditions: Making the Case for Ongoing Care. Baltimore, MD: The Johns Hopkins University; 2007.
- Pham HH, O'Malley AS, Bach PB, Saiontz-Martinez C, Schrag D. Primary care
 physicians' links to other physicians through Medicare patients: the scope of
 care coordination. *Ann Intern Med.* 2009;150(4):236-242.
- National Quality Forum. Preferred Practices and Performance Measures for Measuring and Reporting Care Coordination. Washington, DC: National Quality Forum; 2010.
- Abrams M K, Nuzum R, Mika S, Lawlor G. Realizing Health Reform's Potential: How the Affordable Care Act Will Strengthen Primary Care and Benefit Patients, Providers, and Payers. New York, NY: The Commonwealth Fund;

^b Care coordinator (regular physician or someone in physician's practice always or often helps patient coordinate or arrange the care the patient receives from other physicians/places).

^cAccessible care (patient is able to get same-/next-day appointment, and it is very or somewhat easy to get evening/weekend care without going to the emergency department and telephone physician's practice during normal business hours).

dStrong patient-provider relationship (when care or treatment is needed, medical staff "always" knows important information about your medical history, gives you an opportunity to ask questions about recommended treatment, spends enough time with you, involves you in decisions about care, and explains things in a way that is easy to understand).