organizations, and care transition teams. In the short run, efforts aimed at increasing adherence to medication regimens will require funds to be allocated up front. Over time, there should be savings. Thus, the structure of reimbursement must create an inducement for investment (typically by providers) that is financed by the groups that will save (usually insurers).

Finally, there needs to be greater use of proven screening and assessment tools to identify and target the patients who are at the greatest risk for nonadherence. Treatment guidelines for chronic conditions, for instance, should recommend screening for depression, which can be an indicator of poor adherence. In addition, assessment tools can broadly predict a patient’s proclivity to adhere to treatment, which is valuable information for providers to use in encouraging adherence both at the point of prescribing and in follow-up contacts with patients.

Once the right patients are targeted, there is still a lot to learn about tailoring adherence interventions to individual patients. Although we know about many common features of adherence programs, it is more difficult to determine the best possible combination of such features for any given person. New investments in research, including efforts associated with the government’s expanded program of comparative-effectiveness research, could dramatically enhance the evidence base for effective adherence interventions. The bottom line is this: We’ve known for some time that improved adherence can lead to improvements in health outcomes and reductions in health care spending. What we haven’t known is where to start. With the new federal health care reform law moving into implementation, the existing movements toward deployment of HIT, improved coordination of care, and payment reform together create a desire and an infrastructure for improving health outcomes through improved adherence. Now we just need to get moving.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

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This article (10.1056/NEJMtp1002305) was published on April 7, 2010, at NEJM.org.


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Specialist Physician Practices as Patient-Centered Medical Homes

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During the past few years, widespread support has emerged for the patient-centered medical home (PCMH) model of health care delivery. The PCMH combines traditional concepts of primary care (a personal physician providing first-contact, continuous, and comprehensive care) with newer responsibilities to systematically improve the health of the medical home’s patient population (e.g., through the use of chronic disease registries, information technology, and new options for communication between patients and the practice). The framework for the model was created by the American College of Physicians (ACP), the American Academy of Family Physicians (AAFP), the American Academy of Pediatrics (AAP), and the American Osteopathic Association (AOA) and has been endorsed by the American Medical Association (AMA) and several medical specialty associations, including the American College of Cardiology, the American College of Chest Physicians, and the American Academy of Neurology. This model is a prominent component of the health care reform bill recently signed by President Barack Obama and is being tested in dozens of pilot projects around the country; it has been promoted by the Patient-Centered Primary Care Collaborative, a coalition of more than 500 large employers, consumer groups, health plans, labor unions, and physician and hospital organizations.
Some specialist physicians are raising concerns about the medical home’s implications for their practices. Proponents of the model advocate reforms that would increase payments to practices that qualify as medical homes; these payments might well come, directly or indirectly, from funds that would otherwise have been used to pay specialists. In addition, some specialists who see patients frequently for a chronic disease believe that their practice should be able to serve as the medical home for those patients. For example, in recent testimony before a Senate committee, a representative of the Alliance of Specialty Medicine criticized the planned medical home demonstration project of the Centers for Medicare and Medicaid Services (CMS) for excluding surgeons and argued that a urology practice may be the most appropriate PCMH for patients with prostate cancer or bladder-control problems. The AMA House of Delegates recently passed a resolution in support of permitting specialist practices to serve as medical homes. The ACP Council of Subspecialty Societies has produced a detailed statement arguing that specialist practices that provide long-term “principal care” for a chronic condition should be eligible to serve as medical homes. The goals defining the medical home are quite ambitious (see box). Research to date suggests that it will not be easy to meet these standards, even for primary care practices or multispecialty practices that include primary care physicians.

The extent to which specialist practices currently function as medical homes is unknown. Some evidence is provided by a recent telephone survey we conducted with leaders of medical practices consisting of 1 to 19 physicians. In this nationally representative study, which had an overall response rate of 63.4%, we surveyed leaders of 373 single-specialty cardiology, endocrinology, and pulmonology practices, which provide care for patients with chronic illnesses such as congestive heart failure, diabetes, and asthma. The survey included the following question: “In some cases, specialists also serve as primary care physicians for their patients. To the best of your knowledge, for approximately what percentage of patients, if any, do the physicians in your practice serve as primary care physicians as well as specialists?” A total of 81% of practices reported that their physicians serve as primary care physicians for 10% or less of their patients, only 12.5% that they serve as primary care physicians for more than 20% of their patients, and only 2.7% that they do so for more than 50% of their patients (see table). Among the three types of specialists, endocrinologists were significantly more likely than the others to report serving as primary care physicians. In all three specialties, practices consisting of one or two physicians were significantly more likely than larger group practices to report serving as primary care physicians.

How should these findings be interpreted? On the one hand, they suggest that even according to their own report, the overwhelming majority of specialists provide primary care for very few or none of their patients. On the other hand, a small minority of specialists report serving as primary care physicians for a substantial number of patients. Given the goals of the PCMH, it is clear that serving as a medical home requires much more than merely providing primary care. Nevertheless, some specialists who believe they act as primary care physicians for certain patients might want to develop the capacity to have their practices serve as medical homes for these patients.

The planned CMS medical home demonstration, which had been on hold pending passage of health care reform legislation, would permit specialty practices to serve as medical homes unless they are specifically excluded (as surgical specialties are). Practices would be required to meet the PCMH standards developed by the National Committee for Quality Assurance. The reform bill passed by the House would have per-

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**Essential Functions of a Patient-Centered Medical Home.**

- Provide each patient with an ongoing relationship with a personal physician who is trained to provide first-contact, continuous, and comprehensive care.
- Provide care for acute and chronic conditions, preventive services, and end-of-life care, or arrange for other professionals to provide these services.
- Coordinate care across all elements of the health care system, with coordination facilitated by the use of registries and information technology.
- Provide enhanced access to care through systems such as open scheduling, expanded hours, and new options for communication between patients and the practice’s physicians and staff.

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Adapted from the American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians, and the American Osteopathic Association.
mitted specialist practices providing “principal care” to qualify as medical homes; it defined “principal care physicians” as specialists who address “the majority of the . . . needs of patients with chronic conditions requiring the specialist’s . . . expertise.” The recently passed reform law does not include a reference to “principal care physicians.” Its definition of the medical home states that medical homes must include “personal physicians” (Sec. 3502c). Personal physicians are not defined, and the law elsewhere refers to medical homes as providing primary care. “Primary care” is defined as “the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs” (Sec. 3502f). The law also requires that medical homes meet criteria similar to those set out in the PCMH model jointly developed by the ACP, the AAFP, the AAP, and the AOA.

Should policymakers encourage some specialist practices to serve as medical homes? Four questions might be used to guide decision making. First, what does it mean to provide patients with comprehensive care? Is a specialist who provides care directly related to his or her specialty but refers patients to other specialists for most or all of their other health care needs really providing medical home services? Second, are some types of specialists, such as cardiologists, endocrinologists, and pulmonologists, more likely to be able to provide care for patients with a wider range of problems than other types of specialists, such as urologists or neurologists? Third, will specialists be willing or able to fundamentally redesign their practices so that they can provide the range of services required to function as a medical home? Even primary care practices will find it difficult to make such changes; will it be efficient for specialists to attempt it in order to provide a medical home for only a small percentage of the patients they see? Fourth, from the perspective of the health care system as a whole, is it an efficient allocation of resources for specialists to spend their time trying to function as primary care physicians?

It would be excessively rigid to prevent specialists who want their practices to serve as medical homes from pursuing this goal. But specialist-based medical homes should be required to meet the same standards as primary care–based medical homes, including the requirements for providing first-contact, continuous, and comprehensive care and for using systematic processes to improve the health of the practice’s patients.

The medical group survey discussed in this article was supported by a grant from the Robert Wood Johnson Foundation. The foundation had no role in the writing of this article.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

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This article (10.1056/NEJMp1001232) was published on April 21, 2010, at NEJM.org.

1. Joint principles of the patient-centered medical home. Washington, DC: American Academy of Family Physicians, American Academy of Pediatrics, American College of...
Engaging Specialists in Performance-Incentive Programs

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During the debate over U.S. health care reform, there were widespread calls for increasing “value” in the health care system — calls reflecting concerns about suboptimal health outcomes and rapidly growing health care costs. The health care reform law contains funding for pilot projects to test new ways of increasing our return on health care spending, including global capitation, bundled payments, and medical homes, as well as reduced payments for readmissions. All these options would require the quality of care to be measured and incentives (financial or otherwise) provided to physicians in an effort to improve performance.

Until now, the most common form of performance-based incentives for physicians has been pay-for-performance programs devised by private payers and, more recently, Medicare. Over the past decade, such programs have grown in number and intensity, shifting their focus from clinical processes to outcomes. However, most programs have focused on primary care physicians rather than specialists. In a year-long survey initiated in July 2004, 27.8% of primary care physicians reported receiving some compensation that was based on quality metrics, as compared with only 17.8% of medical specialists and 12.6% of surgeons.1 Yet specialists are responsible for a large and growing proportion of patient care. The proportion of all office visits that were visits to generalists (physicians in family practice, general medicine, pediatrics, or obstetrics–gynecology) dropped from 66.2% in 1980 to 57.5% in 2004, whereas the proportion consisting of visits to specialists grew from 33.8 to 42.5%.2 Thus, to have a meaningful impact on the quality of care, pay-for-performance programs and newer-generation quality-incentive programs must engage more specialists.

Engaging specialists in such programs is challenging for several reasons. First is the obvious challenge of developing a menu of meaningful metrics for each of the dozens of medical, surgical, and pediatric specialties. The relevance and validity of each metric must be supported by strong evidence. National societies with broad representation from a given field should agree that each metric reflects the quality of care and is applicable to many patents. As specialties beget subspecialties, these demands become even more challenging. Control of low-density lipoprotein (LDL) cholesterol may be an appropriate performance goal for a general cardiologist but may not accurately capture the quality of the care delivered by an electrophysiologist. Glucose control in patients with diabetes may be an appropriate measure for most endocrinologists, but not for thyroid specialists. This increasing degree of subspecialization requires similar increases in the specialization of performance metrics if they are to have validity and gain acceptance. This requirement makes the task of developing metrics and engaging specialists more complex. The Physician Consortium for Performance Improvement sponsored by the American Medical Association has generated 266 performance measures for specialists to date, but many of these measures have not been endorsed by the National Quality Forum, and there remain substantial barriers to progress in developing such measures.3

Second, determining which of a patient’s multiple physicians should be held accountable for particular outcomes can be difficult, especially when the patient has complex medical needs. If a patient is followed by both a primary care physician and a cardiologist, who is responsible for the control of the patient’s LDL cholesterol levels? In reality, both physicians are, and both should be accountable for the coordination necessary to achieve control. As patients live longer and benefit from the evolution of medi-