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REFORMING HEALTH CARE

Medical Homes: Will They Improve Primary Care?

by Jill Bernstein, Deborah Chollet, Deborah Peikes, and G. Gregory Peterson

Medical homes are part of our nation's overall efforts to reform the health care system. Effective primary care, the cornerstone of the medical home concept, may enhance quality of care and reduce costs by improving prevention and continuity of care and reducing unnecessary treatment, avoidable hospitalizations, duplicative testing, and other inefficient care. For decades, medical homes have been a model for coordinating health care for children, particularly those with special health care needs. This brief looks at federal and state efforts to establish medical homes and notes considerations for policymakers seeking to improve access to services and the quality of care.

Supporting Effective Primary Care

The medical home model is built on evidence that a strong primary care system can improve quality.¹ Indeed, patients who visit the same primary care physician for their care are more likely to use recommended preventive services, such as mammograms, and less likely to be hospitalized.^{2,3} In addition, they have better health outcomes (specifically, they are less likely to die prematurely), and they are more likely to be satisfied with their care.^{3,4}

Research shows that greater access to primary care can also lower costs. For example, states with more primary care physicians per capita generally have lower costs and better health outcomes.^{5,6} Conversely, in areas with more specialists relative to the number of primary care physicians, overall medical spending per

ABOUT THIS SERIES

This brief is the sixth in a series highlighting issues related to health care reform that policy-makers may want to consider as they implement the federal health reform law. The list of series titles is on page 4. For more information, contact Deborah Chollet at dchollet@mathematica-mpr.com.

person is higher, but measures of effectiveness, quality, or patient satisfaction do not indicate better care.⁷

Do Medical Homes Work?

With few rigorous evaluations completed, whether and under what conditions medical homes actually improve quality of care and reduce costs is not known. At least two studies that are widely cited suggest the potential value of medical homes, although neither was done with sufficient methodological rigor to prove the success of medical homes:

- **North Carolina.** Since 1998, North Carolina has paid primary care practices \$2.50 per Medicaid patient per month above normal fees to coordinate patient care. In addition, it has paid \$3 per patient per month to network offices to provide case management across multiple practices. One analysis indicated this program saved the state as much as \$124 million in 2004.⁸
- **Geisinger Health System.** Geisinger is an integrated health care system in Pennsylvania that includes nearly 700 physicians in clinical practices, hospitals, and other medical facilities. In 2006, Geisinger began paying primary care physician practices at two sites a flat fee of \$1,800 per physician, plus \$5 per Medicare patient, to help finance components of a medical home, including expanded access to services and use of nurse care coordinators, care

WHAT IS A MEDICAL HOME?

A medical home is a source of comprehensive primary care that provides services ranging from preventive care to management of chronic illnesses. Medical homes promote a trusting, ongoing relationship between patients and their primary care providers, helping patients to manage their health care better. Ideally, medical homes use integrated data systems and performance reporting to continuously improve access to and quality of care, as well as communication with patients and other providers.⁹

management support, and electronic health records. Early results showed a 20 percent reduction in hospital admissions and a 7 percent reduction in total medical costs.¹⁰

Other evidence of cost savings from more efficient care and avoided hospitalizations is mixed. For example, in 10 of 15 sites of the Medicare Coordinated Care Demonstration Project, care coordination (which is one component of a medical home) increased total costs. Although a few sites were probably cost neutral, none generated savings. Across all sites, total expenditures increased by 11 percent.^{11, 12}

Overcoming Obstacles

Health care providers must overcome significant obstacles to convert a primary care practice to a medical home. Such obstacles include:

- **Limited time.** Many primary care physicians find it difficult to take on the additional responsibilities that a medical home requires. For example, physicians participating in TransforMED, a national medical homes demonstration project, cited time constraints as one of the main barriers to implementing medical home principles. As one provider described the problem, “We are trying to manage our day-to-day operations while at the same time improving the care we provide. We have a time and energy problem.”¹³
- **Requirements for health information infrastructure.** To meet the technological requirements of operating as a higher-level medical home, clinical practices need modern health information systems.¹⁴ However, only about 40 percent of larger practices

(with at least 20 physicians) currently use electronic medical records as is necessary to meet the definition of a higher-level medical home, and smaller practices are even less likely to use electronic records.¹⁵ Although both large and small practices need capital and expertise to develop and maintain the information systems that characterize higher-level medical homes, small practices may need to be more creative—for example, by sharing with other practices the costs of adopting and maintaining information systems.¹⁶

- **Expansive criteria for a medical home.** Various professional groups have developed specific criteria by which a medical practice can qualify as a medical home. For example, the American Academy of Family Physicians developed 42 measures for the TransforMED demonstration project. Such a large number of measures made it difficult for some practices to meet the full definition of a medical home.¹³ The National Committee for Quality Assurance (NCQA) has developed a similarly expansive definition, but allows for practices to qualify at different levels. The NCQA definition requires all medical homes to have 5 of 10 core elements, including the ability to track referrals and use evidence-based care management guidelines for at least 3 medical conditions. A practice that takes on additional capabilities (such as e-prescribing) may qualify as a higher-level medical home.^{17, 18} Again, smaller physician practices generally have the most difficulty qualifying as medical homes and might need to be creative about working cooperatively with other practices—for example, linking with community-based health care extension services to obtain part-time care manager services when they cannot afford to hire a care manager full-time.¹⁶
- **Resistance from providers and consumers.** Transforming a primary care practice into a medical home can necessitate physicians changing fundamentally their way of practice. Instead of sequential one-on-one patient visits and physician autonomy, medical homes take a proactive population-based approach. In medical homes, physicians generally share responsibility with care managers and other providers, particularly for preventive services and chronic care. Even among the TransforMED practices that eagerly sought to become medical homes, some primary

care physicians found this transformation of their practice patterns and professional identity difficult to accept.¹⁹ Resistance can come from specialty physicians as well. Physicians in specialty practices have little incentive to communicate with medical-homes to help them coordinate care and might also resist efforts to manage referrals to specialty services.⁹ Finally, consumers may resist what they perceive as restricting their access to specialists or particular services and facilities.

Reflecting the difficulty of overcoming such obstacles, medical homes can take time to develop. For example, some practices participating in TransforMED were unable to implement all elements of a higher-level medical home within two years.^{13, 19}

Paying for Medical Homes

Converting a conventional medical practice to a medical home generally entails not only investment in electronic medical records and reporting systems, but cost for additional staff time. Consequently, many believe that building and sustaining medical homes will require paying primary care providers more.^{20, 21} Nevertheless, neither public nor private insurers explicitly reimburse many of the enhanced services envisioned for a medical home.⁷

No one approach to paying providers for maintaining a medical is generally accepted. Most fee-for-service payers add a flat per-member, per-month fee to their regular payments, unrelated to the provision of specific, additional services. For example, several current pilot projects pay between \$3 and \$10 per member per month to providers who undertake the expanded responsibilities of a medical home.²² In designing its Medicare medical home demonstration, the Centers for Medicare & Medicaid Services (CMS) expected to pay \$27 to \$100 per member per month, depending on the severity of the patient's illnesses and the level of medical home for which the practice qualified; these higher rates were intended to support the greater difficulty of coordinating care for seniors with multiple chronic illnesses.²³ In contrast, some fee-for-service payers have created new billing codes for medical home services.

Considerations for Policymakers

The concept of a medical home is central to current efforts to reduce the fragmentation, inefficiency, and uneven quality of care in the health care system. At

CHARACTERISTICS OF A MEDICAL HOME

In 2007, the national physician societies most involved in primary care agreed on characteristics that define a medical home:²⁴

- Each patient has an ongoing relationship with a primary care physician.
- The physician leads a team that collectively takes responsibility for patients.
- The physician takes a whole-person orientation, providing preventive services as well as care for both chronic and acute illnesses.
- Care is coordinated and facilitated by information technology.
- Care is of high quality; for example, it follows evidence-based care guidelines.
- Patients have enhanced access to care through systems such as open scheduling and expanded hours.
- Payment recognizes the added value that medical homes provide to patients.

this writing, 27 pilot projects are underway in 20 states, all of them including multiple stakeholders and many including state Medicaid agencies.^{25, 26} By one estimate, 44 states and the District of Columbia have passed more than 330 laws or have initiated activities related to patient-centered medical homes.²⁷

The federal Patient Protection and Affordable Care Act (P.L. 111-148), or PPACA, promotes medical homes in a variety of ways:

- It identifies having medical homes as one indicator of quality to be used in evaluating health plan performance. The health insurance exchanges will develop market-based payment incentives to encourage high-performing plans, including those that have medical homes. In addition, nonprofit plans that have medical homes may qualify as Consumer Operated and Oriented Plans (or CO-OPs), eligible for federal start-up loans and grants.
- It encourages the development of medical homes through research, demonstrations, and education. The Center for Medicare and Medicaid Innovation at CMS is charged with developing models that promote broad reforms of primary care payment and practice for defined populations for whom inadequate care leads to poor health outcomes

and avoidable cost. These models include patient-centered medical homes. The community-based collaborative care network program (charged with developing provider consortia to provide comprehensive, coordinated, and integrated health care to low-income populations) also will emphasize the development of medical home models.

- It provides funding for training and continuing-care programs for primary care physicians to foster the growth of medical home strategies, including programs to be offered by health extension agents—that is, local, community-based health workers who will assist primary care practices with quality improvement or system redesign, incorporating the principles of a patient-centered medical home.
- It calls for an independent evaluation of medical homes that coordinate care for Medicaid beneficiaries with chronic conditions, to be completed by January 2017. The evaluation will consider the effect of medical homes on reducing hospital admissions, emergency room visits, and admissions to skilled nursing facilities. The secretary of Health and Human Services will develop an interim survey and report (by January 2014) on the nature, extent, and use of medical homes in state Medicaid programs.

States that use medical homes to coordinate care for Medicaid beneficiaries with chronic conditions will have an important role to play in the evaluation of medical home models. PPACA charges states with reporting (as necessary for the interim evaluation) on processes they have developed and lessons they have learned about providing coordinated care through medical homes. States that hope to understand how medical homes affect residents' access to services and quality of care, and how they might be improved, will want to plan information systems to monitor their performance—whether serving Medicaid beneficiaries or offered through plans in a health insurance exchange.

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Notes

¹See, for example, Beal, A., M. Doty, S. Hernandez, K. Shea, and K. Davis. "Closing the Divide: How Medical Homes Promote Equity in Health Care: Results from the Commonwealth Fund 2006 Health Care Quality Survey." New York: The Commonwealth Fund, June 2007.

²Blewett L., P. Johnson, B. Lee, and P. Scal. "When a Usual

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- Source of Care and Usual Provider Matter: Adult Prevention and Screening Services." *Journal of General Internal Medicine*, vol. 23, no. 9, 2008, pp. 1354–1360.
- ³Starfield, B., and L. Shi. "The Medical Home, Access to Care, and Insurance: A Review of Evidence." *Pediatrics*, vol. 113, no. 5, 2004, pp. 1493–1498.
- ⁴Franks, P., and K. Fiscella. "Primary Care Physicians and Specialists as Personal Physicians: Health Care Expenditures and Mortality Experience." *Journal of Family Practice*, vol. 47, no. 2, 1998, pp. 105–109.
- ⁵Baicker, K., and A. Chandra. "Medicare Spending, the Physician Workforce, and Beneficiaries' Quality of Care." *Health Affairs* Web Exclusive, April 2004. Available at [<http://content.healthaffairs.org>]; and Medicare Payment Advisory Commission. "Report to Congress: Reforming the Delivery System." Washington, DC: MedPAC, June 2008.
- ⁶Starfield, B., L. Shi, and J. Macinko. "Contribution of Primary Care to Health Systems and Health." *The Milbank Quarterly*, vol. 83, no. 5, 2005, pp. 457–502.
- ⁷Medicare Payment Advisory Commission 2008.
- ⁸Lodh, M. "ACCESS Cost Savings—State Fiscal Year 2004 Analysis." Phoenix, AZ: Mercer Government Human Services Consulting, March 2005. This estimate might not be accurate, as it was calculated by comparing actual expenditures with projected expenditures based on 2000–2002 data.
- ⁹Fisher, E. "Building a Medical Neighborhood for the Medical Home." *The New England Journal of Medicine*, vol. 359, no. 12, 2008, pp. 1202–1204.
- ¹⁰Paulus, R., K. Davis, and G. Steele. "Continuous Innovation in Health Care: Implications of the Geisinger Experience." *Health Affairs*, vol. 27, no. 5, 2008, pp. 1235–1245.
- ¹¹Peikes, D., A. Chen, J. Schore, R. Brown. "Effects of Care Coordination on Hospitalization, Quality of Care, and Health Care Expenditures Among Medicare Beneficiaries: 15 Randomized Trials." *JAMA*, vol. 301, no. 6, February 2009, pp. 603–618.
- ¹²Reflecting this uncertainty, the Congressional Budget Office did not score medical homes as affecting total medical expenditures, although some state officials assume that it will. See Congressional Budget Office. "Health Care Reform and the Federal Budget." Washington, DC: June 2009. Also, West Virginia Health Care Authority. "Health Care Financing in the State of West Virginia: An Analysis and Projection of the Current System and Potential Transformations. Draft." Charleston, WV: WVHCA, August 2009.

- ¹³Sullivan, D. "TransforMED Tries to Rebuild Family Medicine." *Family Practice Management*, May 2007. Available at [http://www.aafp.org/fpm/2007/0500/p21.html].
- ¹⁴NCQA defines nine Physician Practice Connections[®] standards for a patient-centered medical home, including ten must-pass elements, which can result in one of three levels of recognition. Health Information Technology is not required for the lowest level of recognition. See: NCQA. PPC-Patient-Centered Medical Home. Available at [http://www.ncqa.org/tabid/631/default.aspx].
- ¹⁵Rittenhouse D., L. Casalino, R. Gillies, S. Shortell, and B. Lau. "Measuring the Medical Home Infrastructure in Large Medical Groups." *Health Affairs*, vol. 27, no. 5, 2008, pp. 1246–1258.
- ¹⁶Meyers, D., and C. Clancy. "Primary Care: Too Important to Fail." *Annals of Internal Medicine*, vol. 150, no. 4, February 2009, pp. 272–273.
- ¹⁷National Committee for Quality Assurance. "Standards and Guidelines for Physician Practice Connections—Patient-Centered Medical Home." Washington, DC: NCQA, 2008.
- ¹⁸National Committee for Quality Assurance. "PPC-PCMH Content and Scoring Summary." Available at [http://www.ncqa.org/tabid/631/Default.aspx].
- ¹⁹Nutting, P., W. Miller, B. Crabtree, C.R. Jaen, E. Stewart, K. Stange. "Initial Lessons from the First National Demonstration Project on Practice Transformation to a Patient-Centered Medical Home." *Annals of Family Medicine*, vol. 7, no. 3, May/June 2009, pp. 254–260.
- ²⁰However, one recent study of small primary care practices (with 2 to 20 physicians) found little difference in total operating costs between those that had many elements of a medical home and those that did not. See: Zuckerman, S., K. Merrell, R. Berenson, D. Gans, W. Underwood, A. Williams, S. Erickson, and T. Hammons. "Incremental Cost Estimate for the Patient-Centered Medical Home." Report No. 1325. New York: The Commonwealth Fund, 2009.
- ²¹American College of Physicians 2007; and Goroll, A., R. Berenson, S. Schoenbaum, and L. Gardner. "Fundamental Reform of Payment for Adult Primary Care: Comprehensive Payment for Comprehensive Care." *Journal of General Internal Medicine*, vol. 22, no. 3, 2007, pp. 410–415.
- ²²Bailit, M. "National Reimbursement Models and Alignment with Washington State Initiatives." Presentation to the Washington Primary Care Coalition, September 15, 2008; and Iglehart, J. "No Place Like Home—Testing a New Model of Care Delivery." *New England Journal of Medicine*, vol 359, no. 12, 2008, pp. 1200–1202.
- ²³Maxfield, M., D. Peikes, R. Shapiro, H. Pham, A. O'Malley, S. Scholle, P. Torda. "Design of the CMS Medical Home Demonstration: Draft." Princeton, NJ: Mathematica Policy Research, October 2008.
- ²⁴American College of Physicians. "Joint Principles of the Patient-Centered Medical Home," 2007. Available at [http://www.medicalhomeinfo.org/Joint%20Statement.pdf]. The American Academy of Family Physicians, American Academy of Pediatrics, American College of Physi-

- cians, and the American Osteopathic Association jointly released these principles in March 2007; together, these organizations represent approximately 333,000 physicians.
- ²⁵Patient-Centered Primary Care Collaborative. "Pilots and Demonstrations." Available at [http://www.pcpc.net/pcpc-pilot-projects].
- ²⁶National Academy for State Health Policy. "State Involvement in Multi-Payer Medical Home Initiatives." November 2009. Available at [http://www.nashp.org/sites/default/files/MedHomes_State_Chart_11-2009.pdf].
- ²⁷Patient-Centered Primary Care Collaborative. "Pilots and Demonstrations." Available at [http://www.pcpc.net/federal-and-state-government].

ABOUT THE AUTHORS

Jill Bernstein consults with private- and public-sector organizations on matters related to health insurance coverage, health care cost and quality, and access to care. She holds a Ph.D. in sociology from Columbia University.

Deborah Chollet, a senior fellow at Mathematica, conducts and manages research on private health insurance coverage, markets, competition, and regulation. She has a Ph.D. in economics from the Maxwell School of Citizenship and Public Affairs at Syracuse University.

Deborah Peikes, a senior researcher at Mathematica, conducts research on the effectiveness of medical homes; chronic care coordination and disease management; and integrating health and employment supports for beneficiaries with severe disabilities. She has a Ph.D. in public policy from Princeton University, where she currently teaches a graduate course on program evaluation.

G. Gregory Peterson, a research analyst at Mathematica, focuses on issues related to accountable care organizations, health informatics, and chronic care improvements for Medicare beneficiaries. He has an M.P.A. in public policy from Princeton University.

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