

Context for Understanding the National Demonstration Project and the Patient-Centered Medical Home

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ABSTRACT

This article introduces a journal supplement evaluating the country's first national demonstration of the patient-centered medical home (PCMH) concept. The PCMH is touted by some as a linchpin for renewing the foundering US health care system and its primary care foundation.

The National Demonstration Project (NDP) tested a new model of care and compared facilitated and self-directed implementation approaches in a group-randomized clinical trial. The NDP asked what a national sample of 36 highly motivated family practices could accomplish in moving toward the PCMH ideal during 2 years within the current US health care payment and organizational system. Our independent evaluation used a multimethod approach that integrated qualitative methods to tell the NDP story from multiple perspectives and quantitative methods to assess and compare aspects that could be measured. The 7 scientific reports presented in this supplement explain the process, outcomes, lessons, and implications of the NDP.

This introductory article provides context for making sense of the NDP. Important context includes the evolution of the PCMH concept and movement, the roots of the NDP and how it developed, and both what is valuable and what is problematic about family medicine and primary care.

Together, the articles in this supplement show how primary care practices and the concept of the PCMH can continue to evolve. The evaluation depicts some of the early effects of this evolution on patients and practices, and shows how the process of practice development can be understood and how lessons from the NDP can inform ongoing and future efforts to transform primary care and health care systems.

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INTRODUCTION

This article and the journal supplement it introduces are about the promise of primary care, the growing frustrations of not meeting that promise, and the strategies recently envisioned to try to rediscover the lost promise. The supplement, which follows up on an earlier report,¹ weaves together different threads about one recent particular part of the story, the implementation and evaluation of the National Demonstration Project (NDP) of the patient-centered medical home (PCMH).

SEVEN REPORTS THAT TOGETHER TELL A STORY

The NDP tested a new model of care and compared facilitated and self-directed approaches to implementing this model in a group-randomized clinical trial. The NDP asked what a national sample of 36 highly motivated family practices could accomplish in moving toward the PCMH ideal during 2 years within the current US health care payment and organizational system. The project was independently evaluated using a multi-

method approach that integrated qualitative methods to tell the NDP story from multiple perspectives and quantitative methods to assess and compare aspects that could be measured. Collectively, the 7 reports/articles in this supplement, listed in Table 1, explain the process, outcomes, lessons, and implications of the NDP.

The first report² explains the multimethod approach required to evaluate the NDP. The use of both quantitative and qualitative methods in a clinical trial in which practices were randomized to facilitated and self-directed implementation approaches enabled an evolving intervention to be comprehensively assessed and understood in a changing environment. Ongoing feedback allowed the intervention team to adapt their approach to emerging insights.

The next report³ portrays how the NDP unfolded as seen by the independent evaluators. This article shows how the concept of a new model of practice, the personal medical home, changed as the TransforMED implementation organization, the PCMH movement, and the health care system evolved together during a turbulent time in American health care.

The third report⁴ examines the degree to which the wide range of NDP model components were implemented. This article also compares facilitated and self-directed practices on 3 practice-level outcomes: the proportion of the NDP model components implemented, the practices' capability to make and sustain change, and an aggregate measure of the patient's experience with the practice.

The fourth report⁵ brings to life the journeys experienced by the facilitated and self-directed practices during the NDP. This article uses case descriptions to explain variations in time, strategy, and resources that enabled or limited practice development.

The fifth report⁶ assesses the effect of the NDP intervention on patients and on the process of patient care. Two complementary categories of quality of care were assessed: patient report of multiple domains of their experience of health care and medical record-based measures of care for specific conditions and categories of care.

The sixth report⁷ describes new ways of understanding and approaching the practice development process. This article aims to provide insight for those who are planning and implementing change.

The closing report⁸ examines policy and practice implications of the NDP for those attempting to develop primary care and the health care system to improve health care, and ultimately the health, of the people they serve.

The articles in this supplement, like the NDP itself, must be understood in context. This context includes the evolution of the PCMH concept and movement, the roots of the NDP, and the value of and problems with family medicine and primary care.

EVOLUTION OF THE PCMH CONCEPT AND MOVEMENT

The PCMH, like primary care, is rooted in the long tradition of generalist healers.⁹⁻¹⁸ These healers base their technical approaches on ongoing relationships and local knowledge of individuals, families, and communities.

Table 2 displays a time line of the evolution of the more recent PCMH concept and movement. The PCMH is a political construct⁴³ that includes new ways of organizing and financing care, while attempting to remain true to the proven value of primary care.⁴⁴ The

medical home idea began with the American Academy of Pediatrics' call for a model to organize the care of children with complex health care needs.¹⁹⁻²² The idea was taken up later by other medical organizations developing models of revitalized primary care.^{28,32,36} The PCMH continues to evolve in the context of other national movements calling for transformative changes in health care organization.^{27,45,46}

A joint statement initially made by 4 medical professional organizations³⁵ that have been joined by a growing number of others³⁶ articulates principles for the PCMH. These principles are summarized

Table 1. Evaluation of the AAFP's First Patient-Centered Medical Home National Demonstration Project

1. Jaén CR, Crabtree BF, Palmer RF, et al. Methods for evaluating practice change toward a patient-centered medical home. *Ann Fam Med*. 2010;8(Suppl 1):s9-s20.²
2. Stewart EE, Nutting PA, Crabtree BF, Stange KC, Miller WL, Jaén CR. Implementing the patient-centered medical home: observation and description of the National Demonstration Project. *Ann Fam Med*. 2010;8(Suppl 1):s21-s32.³
3. Nutting PA, Crabtree BF, Stewart EE, et al. Effect of facilitation on practice outcomes in the National Demonstration Project model of the patient-centered medical home. *Ann Fam Med*. 2010;8(Suppl 1):s33-s44.⁴
4. Nutting PA, Crabtree BF, Miller WL, Stewart EE, Stange KC, Jaén CR. Journey to the patient-centered medical home: a qualitative analysis of the experiences of practices in the National Demonstration Project. *Ann Fam Med*. 2010;8(Suppl 1):s45-s56.⁵
5. Jaén CR, Ferrer RL, Miller WL, et al. Patient outcomes at 26 months in the patient-centered medical home National Demonstration Project. *Ann Fam Med*. 2010;8(Suppl 1):s57-s67.⁶
6. Miller WL, Crabtree BF, Nutting PA, Stange KC, Jaén CR. Primary care practice development: a relationship-centered approach. *Ann Fam Med*. 2010;8(Suppl 1):s68-s79.⁷
7. Crabtree BF, Nutting PA, Miller WL, Stange KC, Stewart EE, Jaén CR. Summary of the National Demonstration Project and recommendations for the patient-centered medical home. *Ann Fam Med*. 2010;8(Suppl 1):s80-s90.⁸

AAFP = American Academy of Family Physicians.



in the Supplemental Appendix, available online only, at http://annfammed.org/cgi/content/full/8/suppl_1/s2/DC1. The Patient-Centered Primary Care Collaborative³⁶ has brought together partners from large national employers, primary care physician associations, health care benefits companies, and patient and health care quality associations to advocate for and advance the PCMH. Recent federal and state legislation also is promoting the PCMH.⁴⁷

Currently, hundreds of PCMH demonstration projects are being conducted around the country.^{36,40,41} Some of these projects include various attempts at different ways of paying for primary care for recognized PCMH practices or, on occasion, for particular components of the PCMH.⁴⁸ Amidst a measurement/accountability culture and widely perceived need to control costs, a tool developed by National Committee on Quality Assurance (NCQA)³⁷ has become the de facto standard for recognition as a PCMH, despite concerns about its focus on technical aspects of practice that can be easily measured⁴⁹ and the potential for unintended consequences from implicitly devaluing relationship aspects of primary care that are essential but more difficult to measure.^{1,44,50}

THE NDP IN CONTEXT

In 2002, 7 national family medicine organizations launched the Future of Family Medicine Project with a goal to “develop a strategy to transform and renew the discipline of family medicine to meet the needs of patients in a changing health care environment.”^{28(p 54)} Project participants conducted research, developed 7 reports, and acted on their recommendations.^{28,29,51-55} While reaffirming the “core values of continuing, comprehensive, compassionate, and personal care provided within the context of family and community,”^{28(p 511)} a major focus of the project’s research and policy development was a “New Model” of practice⁵¹ to accompany recommended health care system changes. The features of this new model⁵¹ emphasize a personal medical home that involves redesigned practices and can be seen online.²⁸ The report also asserts

that a “financially self-sustaining national resource will be implemented to provide practices with ongoing support in the transition to the New Model of family medicine.”^{28(p 54)}

In 2005, this new national resource was launched as a wholly-owned subsidiary of the American Academy of Family Physicians, called TransforMED.⁵⁶ In the fall of that year, an invitation was widely distributed inviting family practices to participate in a national demonstration project of the “New Model” of family medicine. In March 2006, 36 participating practices were announced and randomized to facilitated and self-directed intervention groups. In June 2006, the NDP project began. Its focus was on assessing the ability of practices to make transformative changes with help from a TransforMED facilitator or on their own. This project did not include payment reform, 1 of the 7 principles of the PCMH (Supplemental Appendix).

The authors of the current article were engaged early in this process as an independent evaluation team, funded by the American Academy of Family

Table 2. A Brief History of the Patient-Centered Medical Home

Year	Event
1967	The AAP introduces the medical home concept to coordinate care for children with multiple needs (expanded model with 13 elements was introduced in 2002) ^{19,22}
1992	Barbara Starfield summarizes the evidence for the essential attributes of primary care for a high-functioning health care system ²³ (updated in 1998 ²⁴ and 2005 ²⁵)
1996	The Institute of Medicine “advocates development and sustained support of means to make primary care available to all Americans, ^{26(p1)} and notes: “First, primary care is the logical basis of an effective health care system. Second, primary care is essential to reaching the objectives that constitute value in health care.” ^{26(p52)}
2001	The Institute of Medicine <i>Crossing the Quality Chasm</i> report calls for transforming a “fundamentally flawed” US health care system ²⁷
2004	In the Future of Family Medicine Project, 7 family medicine organizations propose a “New Model” of care, the “personal medical home.” ^{28,29}
2005	TransforMED is created as a subsidiary of the AAFP to test the “New Model.” (The model evolves to encompass PCMH features, ³⁰ but includes no payment reform—a key tenet of the PCMH)
2005	The Commonwealth Fund proposes a “2020 vision of patient-centered care” ³¹ (and later begins funding pilot programs)
2006	The ACP proposes the advanced medical home, which includes principal care as well as primary care ³²
2006	Medical home demonstration projects within Medicare are called for in the Tax Relief and Health Care Act, to be implemented by 2010. ³³
2006	The NDP is launched ³⁴
2007	Four organizations (AAFP, AAP, ACP, AOA) jointly issue a statement on the PCMH in February ³⁵
2007	The Patient-Centered Primary Care Collaborative is launched in March ³⁶
2007	The NCQA launches a tool—Physician Practice Connections—Patient-Centered Medical Home (PPC-PCMH)—which preemptively become the de facto standard for recognition as a PCMH ³⁷
2008	WHO declares 2008 the year of primary health care ^{38,39}
2009	Multiple pilot projects are in process and early findings begin to be published ^{1,40-42}
2009	Incorporation of the PCMH in federal and state reform legislation increases, and the number of demonstration projects and individual practice and system efforts grows

AAP = American Academy of Pediatrics; AAFP = American Academy of Family Physicians; ACP = American College of Physicians; AOA = American Osteopathic Association; NCQA = National Committee on Quality Assurance; NDP = National Demonstration Project; PCMH = patient-centered medical home; WHO = World Health Organization.

Physicians and The Commonwealth Fund, and with the authority to publish findings without prior review by the sponsors. Using the methods overviewed by Jaén et al,² we embarked on describing the process, outcome, and lessons of the NDP, and provided early insights from ongoing analyses to TransforMED, to inform the continued evolution of their work with practices. A previous report shared early lessons with the larger health care community.¹

WHAT IS VALUABLE AND WHAT IS PROBLEMATIC ABOUT FAMILY MEDICINE AND PRIMARY CARE

Health care systems based on primary care have better quality,⁵⁷ lower cost,⁵⁷⁻⁵⁹ less inequality in health care and health,^{25,38,60-63} and better population health.^{25,59,64} These attributes of primary care emerge from synergy among the following factors, known as the 4 pillars of primary care^{13,24,26,65-68}:

- Easy access to first-contact care: accessibility as the first contact of patients with the health care system
- Comprehensive care: accountability for addressing a large majority of personal health care needs
- Coordination of care: integration and coordination of care in different settings, and across different domains that include acute and (often comorbid) chronic illnesses, mental health, disease prevention, and health promotion—guiding access to more narrowly focused care when needed
- Personal relationship over time: sustained partnership and personal relationship over time, with patients known in the context of their family and community (also known as continuity)

Among the many dysfunctions of the US health care system²⁷ is its lack of focus on primary care.⁶⁹⁻⁷¹ This devaluing of primary care has reduced its effectiveness to the point where the need for fundamental change is widely recognized.^{72,73} As others have noted, change is needed both within the primary care enterprise²⁸ and in the larger system in which it is embedded.^{28,70,74}

Primary care is the canary in the mine of the broken US health care system.⁶⁵ Although there are hopeful exceptions,^{17,75-77} the current payment system^{78,79} and (mis)conceptualizations about what represents quality in primary care^{66-68,80,81} have engendered what has been called a hamster-on-a-wheel approach to care.^{82,83} In this fragmented health care environment,⁸¹ the focus of primary care has been distracted from the fundamental need for relationships with patients, communities, and other parts of the health care system.^{84,85} Primary

care increasingly has narrowed the scope and place of its care, and diminished its availability at the times of patients' greatest need.⁸⁶⁻⁸⁸ In addition, primary care often has been physician- and practice-centric in its approach, and has not sufficiently used technology, a team approach, and patient enablement to foster access, integration of care, and development of relationships.⁸⁹⁻⁹⁴ These are among the problems that the "New Model" and the PCMH are intended to resolve.

A WAY FORWARD

The articles in this supplement demonstrate that it is possible for highly motivated, largely independent practices³ to implement most of the predominantly technological components of the PCMH.⁴ This implementation results in improved indicators of chronic disease care as assessed from medical records, but at the cost of reducing the quality of key attributes of primary care as rated by patients, at least over the 26 months of the NDP.^{4,6} The project's multimethod evaluation² also shows that understanding the process of developing practices' internal capabilities is critical to successfully managing change.^{5,7} As the PCMH continues to evolve, both practice and system reforms are needed to make it easier to integrate, personalize, and prioritize care for whole people, communities, and populations.⁸

To read or post commentaries in response to this article, see it online at http://www.annfammed.org/cgi/content/full/8/suppl_1/s2.

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References

- Nutting PA, Miller WL, Crabtree BF, Jaén CR, Stewart EE, Stange KC. Initial lessons from the first national demonstration project on practice transformation to a patient-centered medical home. *Ann Fam Med*. 2009;7(3):s54-s60.
- Jaén CR, Crabtree BF, Palmer RF, et al. Methods for evaluating practice change toward a patient-centered medical home. *Ann Fam Med*. 2010;8(Suppl 1):s9-s20.
- Stewart EE, Nutting PA, Crabtree BF, Stange KC, Miller WL, Jaén CR. Implementing the patient-centered medical home: observation and description of the National Demonstration Project. *Ann Fam Med*. 2010;8(Suppl 1):s21-s32.
- Nutting PA, Crabtree BF, Stewart EE, et al. Effect of facilitation on practice outcomes in the National Demonstration Project model of the patient-centered medical home. *Ann Fam Med*. 2010;8(Suppl 1):s33-s44.
- Nutting PA, Crabtree BF, Miller WL, Stewart EE, Stange KC, Jaén CR. Journey to the patient-centered medical home: a qualitative analysis of the experiences of practices in the National Demonstration Project. *Ann Fam Med*. 2010;8(Suppl 1):s45-s56.
- Jaén CR, Ferrer RL, Miller WL, et al. Patient outcomes at 26 months in the patient-centered medical home National Demonstration Project. *Ann Fam Med*. 2010;8(Suppl 1):s57-s67.
- Miller WL, Crabtree BF, Nutting PA, Stange KC, Jaén CR. Primary care practice development: a relationship-centered approach. *Ann Fam Med*. 2010;8(Suppl 1):s68-s79.
- Crabtree BF, Nutting PA, Miller WL, Stange KC, Stewart EE, Jaén CR. Summary of the National Demonstration Project and recommendations for the patient-centered medical home. *Ann Fam Med*. 2010;8(Suppl 1):s80-s90x.
- Berger J, Mohr J. *A Fortunate Man: The Story of a Country Doctor*. New York, NY: Rinehart and Winston; 1967.
- McWhinney IR. Beyond diagnosis: an approach to the integration of behavioral science and clinical medicine. *N Engl J Med*. 1972;287(8):384-387.
- McWhinney IR. The naturalist tradition in general practice. *J Fam Pract*. 1977;5(3):375-378.
- McWhinney IR. Primary care: core values. Core values in a changing world. *BMJ*. 1998;316(7147):1807-1809.
- McWhinney IR, Freeman T. *Textbook of Family Medicine*. 3rd ed. New York, NY: Oxford University Press; 2009.
- Pickles W. *Epidemiology in Country Practice*. Baltimore, MD: Williams & Wilkins; 1939.
- Stephens GG. *The Intellectual Basis of Family Practice*. Tucson, AZ: Winter Publishing Company; 1982.
- Loxterkamp D. Being there: on the place of the family physician. *J Am Board Fam Pract*. 1991;4(5):354-360.
- Loxterkamp D. *A Measure of My Days: The Journal of a Country Doctor*. Hanover, NH: University Press of New England; 1997.
- Fábrega H Jr. *Evolution of Sickness and Healing*. Berkeley, CA: University of California Press; 1998.
- Medical Home Initiatives for Children With Special Needs Project Advisory Committee. American Academy of Pediatrics. The medical home. *Pediatrics*. 2002;110(1, pt 1):184-186.
- Hughes JR, Grayson R, Stiles FC. Fragmentation of care and the medical home. *Pediatrics*. 1977;60(4):559.
- Malouin RA, Turner J. A review of the evidence for the medical home for children with special health care needs. *Pediatrics*. 2009;123(2):e369.
- Sia C, Tonniges TF, Osterhus E, Taba S. History of the medical home concept. *Pediatrics*. 2004;113(5 Suppl):1473-1478.
- Starfield B. *Primary Care: Concept, Evaluation, and Policy*. New York, NY: Oxford University Press; 1992.
- Starfield B. *Primary Care: Balancing Health Needs, Services, and Technology*. Rev ed. New York, NY: Oxford University Press; 1998.
- Starfield B, Shi LY, Macinko J. Contribution of primary care to health systems and health. *Milbank Q*. 2005;83(3):457-502.
- Donaldson MS, Yordy KD, Lohr KN, Vanselow NA, eds. *Primary Care: America's Health in a New Era*. Washington, DC: National Academy Press; 1996.

27. Institute of Medicine. Committee on Quality of Health Care in America. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press; 2001.
28. Martin JC, Avant RF, Bowman MA, et al; Future of Family Medicine Project Leadership Committee. The future of family medicine: a collaborative project of the family medicine community. *Ann Fam Med*. 2004;2(Suppl 1):S3-S32.
29. Bucholtz JR, Matheny SC, Pugno PA, David A, Bliss EB, Korin EC. Task Force Report 2. Report of the task force on medical education. *Ann Fam Med*. 2004;2(Suppl 1):S51-S64.
30. TransforMED. The TransforMED patient-centered model. <http://www.transformed.com/transformed.cfm>. Accessed Sep 7, 2009.
31. Davis K, Schoenbaum SC, Audet AM. A 2020 vision of patient-centered primary care. *J Gen Intern Med*. 2005;20(10):953-957.
32. American College of Physicians (ACP). The advanced medical home: a patient-centered, physician-guided model of health care. 2006. http://www.acponline.org/advocacy/where_we_stand/policy/adv_med.pdf. Accessed Jul 5, 2009.
33. Chokshi DA. Ensuring progress in primary care—what can health care reform realistically accomplish? *N Engl J Med*. 2009;361(20):e43.
34. TransforMED. National Demonstration Project 2008. <http://www.transformed.com/ndp.cfm>. Accessed May 3, 2010.
35. American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP), American College of Physicians (ACP), American Osteopathic Association (AOA). Joint principles of the patient-centered medical home. February 2007. <http://www.aafp.org/pcmh/principles.pdf>. Accessed May 3, 2010.
36. Patient-Centered Primary Care Collaborative. Web site. <http://www.pcpc.net/>. Accessed Feb 2, 2009.
37. National Committee on Quality Assurance (NCQA). Physician Practice Connections—Patient-Centered Medical Home. 2008. <http://www.ncqa.org/tabid/631/Default.aspx>. Accessed May 3, 2010.
38. Chan M. Primary health care as a route to health security. *Lancet*. 2009;373(9675):1586-1587.
39. Chan M. Return to Alma-Ata. *Lancet*. 2008;372(9642):865-866.
40. Crosby JB, Grundy P, Rogers E, Patient Centered Primary Care Collaborative. *Proof in Practice. A Compilation of Patient Centered Medical Home Pilot and Demonstration Projects*. Washington, DC: National Committee for Quality Assurance; 2008. http://www.pcpc.net/files/PilotGuidePip_0.pdf. Accessed May 3, 2010.
41. Sugarman J. *Medical Home Digest*. New York, NY: Commonwealth Fund; 2009.
42. Larson EB. Group Health Cooperative—one coverage-and-delivery model for accountable care. *N Engl J Med*. 2009;361(17):1620-1622.
43. Robert Graham Center. The Patient Centered Medical Home: history, seven core features, evidence and transformational change. 2007. <http://www.graham-center.org/online/graham/home/publications/monographs-books/2007/rqcmo-medical-home.html>. Accessed Mar 12, 2010.
44. Stange KC, Nutting PA, Miller WL, et al. Defining and measuring the patient-centered medical home. *J Gen Intern Med*. 2010;25(6):601-612.
45. Institute of Medicine. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare*. Washington, DC: The National Academies Press; 2003.
46. Institute of Medicine. *Insuring America's Health: Principles and Recommendations*. Washington, DC: National Academies Press; 2004.
47. Patient-Centered Primary Care Collaborative. Legislative Issues. 2009. <http://www.pcpc.net/content/legislative>. Accessed Jan 3, 2010.
48. Berenson RA, Rich EC. How to buy a medical home? Policy options and practical questions. *J Gen Intern Med*. 2010;25(6):619-624.
49. National Committee on Quality Assurance (NCQA). Planned Evolution of PPC-PCMH Requirements. 2009. <http://ncqa.org/tabid/631/Default.aspx>. Accessed Jun 15, 2009.
50. O'Malley AS, Peikes D, Ginsburg PB. Qualifying a physician practice as a medical home. Policy Perspective: Insights into Health Policy Issues. No. 1, December 2008. <http://www.hschange.com/CONTENT/1030/#ib1>. Accessed Jul 8, 2009.
51. Task Force 1 Writing Group, Green A, Graham R, et al. Task Force 1. Report of the task force on patient expectations, core values, reintegration, and the new model of family medicine. *Ann Fam Med*. 2004;2(Suppl 1):s33-s50.
52. Jones WA, Avant RF, Davis N, Saultz J, Lyons P. Task Force Report 3. Report of the task force on continuous personal, professional, and practice development in family medicine. *Ann Fam Med*. 2004;2(Suppl 1):s65-s74.
53. Dickinson JC, Evans KL, Carter J, Burke K. Task Force Report 4. Report of the task force on marketing and communications. *Ann Fam Med*. 2004;2(Suppl 1):s75-s87.
54. Roberts RG, Snape PS, Burke K. Task Force Report 5. Report of the task force on family medicine's role in shaping the future health care delivery system. *Ann Fam Med*. 2004;2(Suppl 1):s88-s99.
55. Spann SJ; Task Force 6 and the Executive Editorial Team. Report on financing the new model of family medicine. *Ann Fam Med*. 2004;2(Suppl 3):s1-s21.
56. TransforMED. TransforMED—Transforming medical practices. <http://www.transformed.com/>. Accessed Jan 3, 2010.
57. Baicker K, Chandra A. Medicare spending, the physician workforce, and beneficiaries' quality of care. *Health Aff (Millwood)*. 2004;(Suppl Web Exclusives):W184-W197.
58. Greenfield S, Nelson EC, Zubkoff M, et al. Variations in resource utilization among medical specialties and systems of care. Results from the medical outcomes study. *JAMA*. 1992;267(12):1624-1630.
59. Lewin S, Lavis JN, Oxman AD, et al. Supporting the delivery of cost-effective interventions in primary health-care systems in low-income and middle-income countries: an overview of systematic reviews. *Lancet*. 2008;372(9642):928-939.
60. Starfield B. Primary care and equity in health: the importance to effectiveness and equity of responsiveness to people's needs. *Humanity Soc*. 2009;33(1&2):56-73.
61. Rohde J, Cousens S, Chopra M, et al. 30 years after Alma-Ata: has primary health care worked in countries? *Lancet*. 2008;372(9642):950-961.
62. Ferrer RL. Pursuing equity: contact with primary care and specialist clinicians by demographics, insurance, and health status. *Ann Fam Med*. 2007;5(6):492-502.
63. Beal AC, Doty MM, Hernandez SE, Shea KK, Davis K. Closing the divide: how medical homes promote equity in health care: results from The Commonwealth Fund 2006 health care quality survey. 2007. <http://www.commonwealthfund.org/Content/Publications/Fund-Reports/2007/Jun/Closing-the-Divide--How-Medical-Homes-Promote-Equity-in-Health-Care--Results-From-The-Commonwealth-F.aspx>. Accessed Jun 13, 2009.
64. Starfield B, Shi L, Grover A, Macinko J. The effects of specialist supply on populations' health: assessing the evidence. *Health Aff (Millwood)*. 2005;(Suppl Web Exclusives):W5-97-W5-107.
65. Stange KC, Jaén CR, Flocke SA, Miller WL, Crabtree BF, Zyzanski SJ. The value of a family physician. *J Fam Pract*. 1998;46(5):363-368.
66. Stange KC. A science of connectedness. *Ann Fam Med*. 2009;7(5):387-395.
67. Stange KC. The generalist approach. *Ann Fam Med*. 2009;7(3):198-203.
68. Stange KC, Ferrer RL. The paradox of primary care. *Ann Fam Med*. 2009;7(4):293-299.

69. Starfield B. Is US health really the best in the world? *JAMA*. 2000; 284(4):483-485.
70. Sandy LG, Bodenheimer T, Pawlson LG, Starfield B. The political economy of U.S. primary care. *Health Aff (Millwood)*. 2009;28(4): 1136-1145.
71. Geyman JP. *Health Care in America: Can Our Ailing System be Healed?* Boston, MA: Butterworth-Heinemann; 2002.
72. Bodenheimer T. Primary care—will it survive? *N Engl J Med*. 2006; 355(9):861-864.
73. Bodenheimer T, Grumbach K, Berenson RA. A lifeline for primary care. *N Engl J Med*. 2009;360(26):2693-2696.
74. Fisher ES. Building a medical neighborhood for the medical home. *N Engl J Med*. 2008;359(12):1202-1205.
75. Mullan F. *Big Doctoring in America: Profiles in Primary Care*. Berkeley, CA: University of California Press; 2002.
76. Aarendonk D, De Maeseneer J. Quality in Primary Care: official journal of the European Forum for Primary Care. *Qual Prim Care*. 2008;16(3):145-146.
77. Solberg LI, Hroschikowski MC, Sperl-Hillen JM, Harper PG, Crabtree BF. Transforming medical care: case study of an exemplary, small medical group. *Ann Fam Med*. 2006;4(2):109-116.
78. Goroll AH, Berenson RA, Schoenbaum SC, Gardner LB. Fundamental reform of payment for adult primary care: comprehensive payment for comprehensive care. *J Gen Intern Med*. 2007;22(3):410-415.
79. Goroll AH. The future of primary care: reforming physician payment. *N Engl J Med*. 2008;359(20):2087, 2090.
80. Heath I, Rubenstein A, Stange KC, van Driel M. Quality in primary health care: a multidimensional approach to complexity. *BMJ*. 2009; 338:b1242.
81. Stange KC. The problem of fragmentation and the need for integrative solutions. *Ann Fam Med*. 2009;7(2):100-103.
82. Berger E. The patient-centered medical home: a solution to "hamster health care" or a drain on emergency care? *Ann Emerg Med*. 2008;52(6):654-657.
83. Morrison I, Smith R. Hamster health care. *BMJ*. 2000;321(7276): 1541-1542.
84. Starfield B. New paradigms for quality in primary care. *Br J Gen Pract*. 2001;51(465):303-309.
85. Loxterkamp D, Kazal LA Jr. Changing horses midstream: the promise and prudence of practice redesign. *Ann Fam Med*. 2008;6(2):167-170.
86. American College of Physicians. *The Impending Collapse of Primary Care Medicine and Its Implications for the State of the Nation's Health Care: A Report From the American College of Physicians*. Philadelphia, PA: ACP; 2006.
87. Sandy LG, Schroeder SA. Primary care in a new era: disillusion and dissolution? *Ann Intern Med*. 2003;138(3):262-267.
88. Loxterkamp D. Border crossings: on the boundary of the physician-patient relationship. *J Am Board Fam Pract*. 1998;11(6):487-489.
89. Bodenheimer T, Grumbach K. *Improving Primary Care: Strategies and Tools for a Better Practice*. New York, NY: Lange Medical Books/McGraw-Hill; 2007.
90. Geyman JP, Hart LG. Primary care at a crossroads: progress, problems, and future projections. *J Am Board Fam Pract*. 1994;7(1):60-70.
91. Showstack J, Rothman AA, Hassmiller SB, eds. *The Future of Primary Care*. San Francisco, CA: Jossey-Bass; 2004.
92. Safran DG. Defining the future of primary care: what can we learn from patients? *Ann Intern Med*. 2003;138(3):248-255.
93. Hsu C, Phillips WR, Sherman KJ, Hawkes R, Cherkin DC. Healing in primary care: a vision shared by patients, physicians, nurses, and clinical staff. *Ann Fam Med*. 2008;6(4):307-314.
94. Loxterkamp D. Benefits of continuity of care. *Fam Med*. 2009; 41(5):312.