The Medical Home Model of Primary Care: Implications for the Healthy Oregon Act

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Executive Summary

The Healthy Oregon Act of 2007 establishes the Oregon Health Fund Board (OHFB) and charges it with developing a comprehensive health care reform plan for the state. The Act directs the Board to reform the current health care system so that it covers all Oregonians, while improving equity, efficiency, safety, effectiveness, quality and affordability of care. The bill specifically calls for a revitalization of primary care, with an increased focus on prevention, wellness, and disease management and requires that the Board explore proposals to expand access to primary care medical homes.

While there are significant problems with the entire health care system in Oregon, there are specific challenges in the primary care sector that must be addressed by any effort to improve health care delivery. A primary care workforce shortage, as well as decreasing access to primary care providers, makes it difficult for many Oregonians to seek regular primary care and receive recommended primary care and preventative services. In addition, primary care physicians are facing overwhelming workloads, but are paid substantially less than specialists. Evidence shows that an effort to overcome these challenges and strengthen the primary care core in Oregon can lead to a system that better meets the needs of the population. Research has demonstrated better health outcomes and lower per capita costs for states and countries with strong primary care systems.

Many health care organizations and professional associations see the primary care medical home as a vital component of primary care renewal. While a number of slightly different definitions have been proposed, the primary care medical home can generally be characterized as a primary care practice which provides the following to its patients: a continuous relationship with a physician; a multidisciplinary team that is collectively responsible for providing for a patient's longitudinal health needs and making appropriate referrals to other providers; coordination and integration with other providers, as well as public health and other community services, supported by health information technology; an expanded focus on quality and safety; and enhanced access through extended hours, open scheduling, and/or email or phone visits. While there have been few large-scale demonstrations of medical homes, a growing evidence base demonstrates that these core features can lead to higher patient satisfaction, better health outcomes, and lower overall costs.

One of the major barriers to the implementation of the medical home model is the current reimbursement structure. Most physicians are currently paid on a fee-for-service basis, which rewards providers for higher volume rather than for using resources effectively to maximize health. In addition, providers are currently reimbursed only for office visits and cannot bill for email or phone communication with patients or for providing care coordination services. A number of different payment mechanisms have been proposed to encourage primary care providers to become more patient-centered and to provide the resources that practices need to transform into true medical homes. In order to more closely align reimbursement policies with the goals of the medical home, funding mechanisms must be transparent, provide services for coordination of care, improve access and care management, reward providers for improving health outcomes and

quality and decreasing cost; and must support transitional and start-up costs associated with transformation, including investments in health information technology. A number of payment models have been proposed to support the medical home, including pay-for-performance and pay-for-process, comprehensive prospective payments for providing medical home services, fee-for-service reimbursement for medical home services, one-time grants and specific support for case management, and disease management services. Most organizations have agreed that effective payment reform will need to combine traditional fee-for-service payments with bundled payments for providing medical home services and a bonus based on performance.

There are a number of key systems and cultural and policy barriers that must be addressed in any effort to transform primary care practices across the state into patient-centered primary care medical homes. These challenges include inadequate funding of primary care, dilution of financial incentives across purchaser organizations, an absence of a common vision among primary care providers, premature expectations of progress, habituation to misaligned incentives, resistance to change, and a public that is accustomed to an open health system. Fortunately, there are many organizations in both the private and public health care sectors in Oregon and across the nation that have invested resources in medical home initiatives and demonstration projects to learn how the medical home model can be implemented in real world settings. Many of these efforts are described in the ***Medical Home Initiatives and Demonstration Projects*** section of the full paper. These efforts have resulted in important tools and lessons that can inform the work of the Oregon Health Fund Board.

In its efforts to encourage system changes and move towards providing a primary care medical home for all Oregonians, the Oregon Health Fund Board should consider the following steps:

#1 – ***Encourage and reward efforts to inform providers of the need for primary care reform and the characteristics of a patient-centered medical home.***

#2 – ***Develop a standard definition of medical home and standard measures to determine whether primary care providers meet this definition. This definition should be broad enough to allow for innovation and encompass various models that provide medical home services to their patients.***

#3 – ***Coordinate lessons from current demonstrations of medical home models in Oregon and encourage more demonstrations.***

#4 – ***Consider specific support for demonstration projects targeted at small practices and rural providers.***

#5 – ***Consider specific support for demonstration projects targeted at high need or vulnerable populations.***

#6 – ***Develop a sustainable financing model that supports medical home services.***

#7 – *Partner with other purchasers of health care to develop a uniform set of standards or common measures of clinical performance outcomes.*

#8 – *Consider how best to provide adequate funding for technical support, education, and dissemination of best practices to support patient-centered primary care practice re-design.*

Introduction

Passed in 2007, the Healthy Oregon Act establishes the Oregon Health Fund Board (OHFB) and tasks it with developing "a comprehensive plan" for health reform in Oregon.[1] The Act creates the Oregon Health Fund Program, the goal of which is to provide Oregonians with universal access to high-quality health care while containing system-wide costs. Meeting the goals outlined in the Healthy Oregon Act will require an efficient and effective system for delivering primary care. One way to accomplish this, as specified by the Act, will be to require that every participant in the new program has a "primary care medical home".

The aim of this paper is to provide the OHFB and the public with information on the current status of the primary care system in Oregon as well as an overview of the role for medical homes in this environment. It looks within Oregon, as well as to other states and coalitions, to examine the defining characteristics of primary care homes and draw lessons from efforts to integrate medical home programs into delivery systems. Medical homes will likely play a large role in the new Oregon Health Fund Program, and this report offers key opportunities for the OHFB to consider as the group develops a plan for delivery system reform.

The Primary Care System Envisioned by the Healthy Oregon Act

The ambitious goals of the Healthy Oregon Act will require significant changes in the financing and delivery of health care in Oregon. The Act lays out a series of core principles on which the Oregon Health Fund Program must be based, which include "expanding access, equity, education, efficiency, economic sustainability, aligned financial incentives, wellness, community based care, and coordination of care (Sect 3, 1-15)". The bill calls for a greater emphasis on preventative care, chronic disease management, health promotion and wellness, which are hallmark features of a strong primary care core. Furthermore, the Act specifies that all participants in the Oregon Health Fund Program should have a primary care home and that payment incentives must be restructured to reward more effective and efficient provision of care. Given these requirements, delivery system redesign must begin with a renewal of the primary care system, which includes efforts to provide more Oregonians with primary care medical homes.

Challenges Facing the Primary Care System

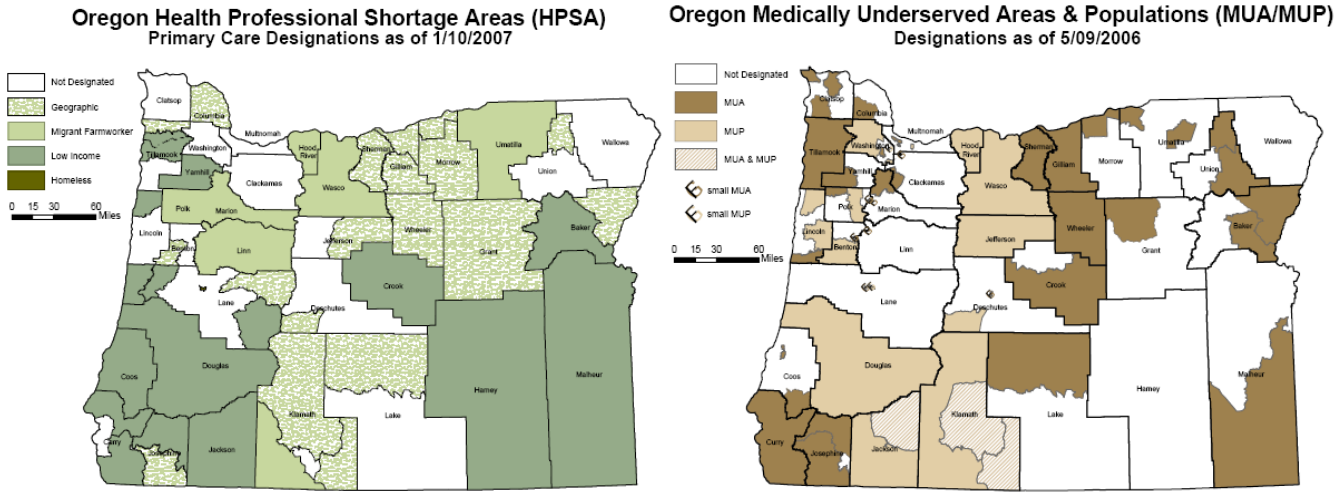
By many accounts, the medical system in Oregon is not sustainable. In its *Road Map for Health Care Reform*, the Oregon Health Policy Commission found that the number of uninsured Oregonians is rising; health care costs are increasing rapidly; service delivery is fragmented; and the current system fails to consistently provide high-quality, prevention-oriented health care to Oregonians.[2]

[1] Enrolled Senate Bill 329, The Healthy Oregon Act. June 2007.
[2] Oregon Health Policy Commission. Road Map for Health Care Reform. March 2007.

While the whole health care system is not performing adequately, there are many unique problems in the primary care system that prevent even those with health insurance and a regular doctor from consistently receiving high-quality, cost-effective care.

Workforce shortage in primary care – There are 63 primary care physicians for every 100,000 residents in Oregon, representing about one-third of the physician workforce.[3] If these physicians were ideally distributed and all worked a full-time clinical schedule, this would result in a panel size of about 1,600 patients per primary care physician. Proposals for primary care reform suggest a panel size of between 1,000-2,000 patients per full time provider, with smaller panel sizes when physicians provide care to many complex patients with chronic conditions.[4,5] Given the current numbers of physicians and distribution of primary care providers, an ideal panel size is unattainable in much of the state. Consequently, significant portions of the Oregon population live in a primary care Health Professional Shortage Area (defined as a local population to primary care physician ratio of greater than 3,500:1) or are "medically underserved" (Figure 1).[6]

Figure 1: Primary Care Shortage Areas and Underserved Populations in Oregon



Decreasing access to primary care providers – As the shortage of primary care physicians becomes more pronounced, patient access to primary care providers suffers. According to a national survey of patients' experiences, the percentage of patients who could not schedule timely appointments with their physician increased between 1997 and 2001. During the same period, patients also reported increased problems reaching their medical provider on the phone and being able to get to their physician's office when it

[3] Health Resources and Services Administration. State Health Workforce Profiles: Oregon. 2000.
[4] Gorrol AH, Berenson RA, Schoenbaum SC, et al. Fundamental Reform of Payment for Adult Primary Care: Comprehensive Payment for Comprehensive Care. Journal of General Internal Medicine. 2007;22(3):410-415.
[5] Labby D. Personal communication about the CareOregon primary care renewal demonstration project.
[6] Oregon Division of Health System Planning. Charts compiled using data from HRSA.

was open.[7] Access is further hindered by an increasing number of primary care practices that are closed to new patients, most often those covered through Medicare, Medicaid or Workers' Compensation. In 2006, 18.1% of Oregon's family or general medicine practices reported they were completely closed to new Medicare patients, 25.6% reported they were closed to new Workers' Compensation patients, and 14.9% reported they were closed to new Medicaid patients.[8]

Overwhelming workload for primary care providers – In the last several decades, evidence-based guidelines for management of chronic diseases and preventive care have generated an ever-increasing and complex workload for primary care providers.[9] Primary care providers do not have the resources and support they need to provide high-quality care in this new environment. For example, a recent study found that primary care providers would have to spend 10.6 hours per day (27% more time than is currently available on average for patient care) just to provide a 2,500 patient panel with all of the recommended care for ten chronic conditions.[10]

Needed care falling through the cracks – Given this overwhelming workload, it is not surprising that the quality of primary care is not ideal. On average, patients receive about 55% of the health care recommended by current guidelines.[11] Another study found that patients visiting their family physician were up to date on only 55% of screening tests, 24% of immunizations, and 9% of habit-related health counseling.[12]

Inadequate and inequitable reimbursement – Despite the growing and complex responsibilities associated with providing primary care, primary care physicians are paid substantially less than other physicians and have slower rates of salary growth despite similar work hours. The median income of primary care physicians is roughly half that of specialists, and the income gap is widening.[13] This income differential is cited as one of the reasons that fewer and fewer medical students are choosing to go into general primary care.[14] Furthermore, the majority of providers in the United States are paid on a fee-for-service basis, creating a system that rewards acute treatment of disease, rather

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[7] Strunk BC, Cunningham PJ. Treading Water: Americans' Access to Needed Medical Care, 1997-2001. Washington, DC, Center for Studying Health System Change. 2002.
[8] Oregon Physician Workforce Survey, Office for Oregon Health Policy and Research. May 2007.
[9] Bodenheimer T, Grumbach K. Improving Primary Care: Strategies and Tools for a Better Practice. Chapter 1: The Primary Care Home. McGraw Hill Companies Inc. 2007.
[10] Ostbye T, Yarnall KS, Krause KM, et al. Is There Time for Management of Patients with Chronic Disease in Primary Care? Annals of Family Medicine. 2003;1:149-155.
[11] Recommended health care includes chronic care, acute care and preventive care. McGlynn EA, Asch SM, Adams J, et al. The Quality of Health Care Delivered to Adults in the United States. New England Journal of Medicine. 2003;6:63-71.
[12] Stange KC, Flocke SA, Goodwin MA, et al. Direct Observation of Rates of Preventive Service Delivery in Community Family Practice. Preventive Medicine. 2000;31:167-176.
[13] Bodenheimer T, Berenson RA, Rudolf P. The Primary Care-Specialty Income Gap: Why it Matters. Annals of Internal Medicine. 2007;146(4):301-307.
[14] American College of Physicians. The Impending Collapse of Primary Care Medicine and Its Implications for the State of the Nation's Health Care. January 2006. Available: http://www.acponline.org/hpp/statehc06_1.pdf

than efforts to keep patients healthy, prevent costly diseases, and effectively manage chronic conditions.

Primary care providers are the backbone of the health care system. About one-third of physicians in Oregon practice primary care and they account for about half of all physician visits.[3,15] If adequately supported, these providers can deliver the majority of health care required by their patients in a low-cost, efficient way. However, if system changes are not implemented, the primary care system will remain unable to achieve these goals.

If health reform is to create sustainable change, it must include the primary care system. One model for primary care reform is the medical home model included in the Healthy Oregon Act. The Oregon Academy of Family Physicians, the Oregon Primary Care Association, and a number of national groups have endorsed this model.[16] The Oregon Health Policy Commission and the Public Employees' Benefits Board have also proposed moving towards the medical home model.[2]

The Medical Home Model of Primary Care

The concept of a "medical home" was initially proposed by the American Academy of Pediatrics in 1967 and has evolved over the last several decades. As health care has grown increasingly complex, fragmented, and disorganized, the medical home model represents a strategy for strengthening the primary care system's ability to deliver care that is patient-centered, evidence-based, and coordinated.[17] In short, a medical home is a regular source of medical care that delivers the services needed to achieve optimal individual and population health.

Many professional organizations have developed definitions that specify the characteristics of a medical home (see Appendix A). At the beginning of 2007, the four largest professional associations representing primary care practitioners, the American Academy of Family Physicians (AAFP), the American Academy of Pediatrics (AAP), the American College of Physicians (ACP) and the American Osteopathic Association (AOA), agreed on a set of core features of a "Patient-Centered Medical Home" model. These groups have joined with employers, consumer advocacy and other stakeholder groups to form the Patient-Centered Primary Care Collaborative to promote this model nationwide.[18] The core features include the following:

- ***Personal Physician –*** Every patient has an established and continuous relationship with a personal physician.

[15] Graham R, Roberts RG, Ostergaard DJ, et al. Family Practice in the United States. JAMA. 2002;288:1097-1101.
[16] American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, American Osteopathic Association. Joint Principles of the Patient-Centered Medical Home. March 2007.
[17] American College of Physicians. The Advanced Medical Home: A Patient-Centered, Physician-Guided Model of Health Care. ACP Policy Monograph; 2006.
[18] Patient-Centered Primary Care Collaborative. http://www.pcpcc.net

- ***Physician Directed Medical Practice*** **-** Physician directs a coherent team of providers who are collectively responsible for the patient's longitudinal health needs. Roles within the team are assigned to maximize the efficient use of resources and responsiveness to patient needs.
- ***Whole Person Orientation* –** Medical home assumes responsibility for providing for all of the patient's health care needs, including acute care, preventative, disease management services, and end of life care. The medical home provides direct care when possible and arranges for appropriate referrals to other providers.
- ***Coordinated and/or Integrated Care*** **-** Care received from the medical home is coordinated/integrated with care received from other providers and organizations, as well as with services provided within a patient's community, including public health, mental health, and behavioral health services. Coordination allows patients to receive appropriate care when and where they need it. Registries, information technology, information exchange, and other resources are utilized by the medical home to establish and facilitate coordination.
- ***Quality and Safety* –** Medical homes focus on quality improvement and safety, through physician participation in performance measurement and improvement efforts, use of clinical decision-support technology, and clinical standards and guidelines built on evidence-based medicine. Patients participate in shared decision-making, quality improvement efforts and practice evaluation.
- ***Enhanced Access*** – Patient access to both office-based and non-office based care is expanded through mechanisms such as longer hours, group visits, open scheduling, phone and email visits, and other web-based communication. [16, 19]

Many primary care practices currently strive to provide their patients with a regular source of care and at least some of the "medical home" set of services; however, very few providers are able to offer their patients a true patient-centered medical home. For instance, a recent national patient survey found that about 80% of patients have a regular source of care, but only 27% report that their provider meets four indicators of improved access to care, a necessary component of the medical home.[20] Oregon has a strong primary care base on which to build, but those involved in all aspects of health care delivery will need to rethink the way care is delivered in order for reforms to successfully provide all Oregonians with medical homes.

[19] Robert Graham Center. The Patient Centered Medical Home: History, Seven Core Features, Evidence and Transformational Change. November 2007.
[20] Beal AC, Doty MM, Hernandez SE, et al. Closing the Divide: How Medical Homes Promote Equity in Health Care. The Commonwealth Fund. June 2007.

Benefits of the Medical Home

There is a substantial body of evidence supporting the value of a health care system built around a robust primary care core:

- States with a higher percentage of primary care providers have better health outcomes on a variety of measures while areas with more specialists have higher per capita costs and lower quality.[21,22,23]
- Countries with a strong primary care system have better health outcomes and lower per-capita costs than countries with weak primary care.[24]
- Improved access to primary care results in decreased hospitalization rates for ambulatory care sensitive conditions.[25,26]
- Patients with primary care physicians as their regular source of care have lower health care costs than those who list specialists as their regular source of care.[27]

The abundance and diversity of evidence on the positive effect of primary care lends support to the theory that any of a number of policy options to strengthen the primary care system would likely improve health system performance.[28] However, a distinction must be made between simply providing patients with access to the existing primary care system versus making structural changes in the delivery system to achieve the level of service called for by most definitions of medical home. While there have been few large-scale demonstrations of medical homes, there is growing evidence that demonstrates the benefits of the core features of the Patient Centered Medical Home model in achieving better health outcomes, higher patient satisfaction, and lower overall costs.

Continuity of Care – A comprehensive review of studies evaluating continuity of care found that continuity of care, usually measured as seeing the same provider over time, is consistently associated with a number of positive effects including improved delivery of preventive services, decreased emergency room utilization, decreased hospitalization

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[21] Shi L. Primary Care, Specialty Care and Life Chances. International Journal of Health Services. 1994:24:431-458.
[22] Shi L, Macinko J, Starfield B, et al. Primary Care, Social Inequalities and All-Cause, Heart Disease and Cancer Mortality in US Counties, 1990. American Journal of Public Health. 2005;95:674-680.
[23] Baicker K, Chandra A. Medicare Spending, the Physician Workforce, and Beneficiaries' Quality of Care. Health Affairs. Web Exclusive. 2004.
[24] Macinko J, Starfield B, Shi L. The Contribution of Primary Care Systems to Health Outcomes Within Organization for Economic Cooperation and Development (OECD) Countries, 1970-1988. Health Services Research. 2003;38:831-865.
[25] Backus L, Moron M, Bacchetti P, et al. Effect of Managed Care on Preventable Hospitalization Rates in California. Medical Care. 2002;20:315-324.
[26] Bodenheimer T, Fernandez A. High and Rising Health Care Costs. Part 4: Can Costs be Controlled While Preserving Quality? Annals of Internal Medicine. 2005;143:26-31.
[27] Franks P, Fiscella K. Primary Care Physicians and Physician Specialists as Personal Physicians. Health Care Expenditures and Mortality Experience. *Journal of Family Practice.* 1998;47:105-109.
[28] Starfield B, Shi L, Macinko J. Contribution of Primary Care to Health Systems and Health. Milbank Quarterly. 2005;83(3):457-502.

rates, and increased patient satisfaction.[29] In addition, strong, continuous physician-patient relationships have been associated with lower costs of care.[30]

Team-Based Approach to Care **–** A significant body of literature supports both short-term and long-term benefits of care delivered by a multidisciplinary team, especially for patients with chronic disease. For instance, studies of patients with diabetes have reported higher patient satisfaction, improved quality of life, better health outcomes, and decreased cost of care when patients are treated by a team, rather than by a single physician.[31]

Coordination of Care – A wealth of evidence exists to show that care management programs and other strategies to coordinate the care of patients with complex medical conditions can improve quality and reduce costs. This type of care management has been widely embraced across the country. However, the disease-specific approach is impractical in patients with multiple chronic conditions. Further, carved-out disease management programs duplicate services that could be delivered by a single, trusted medical home. A variety of studies have shown that various care coordination strategies (e.g. health care teams including full time RNs or care managers dedicated to care coordination) can improve care in certain populations of complex patients, such as children with special health care needs.[32] The goal of a medical home model is to provide person-based coordination of an individual's health care needs at the level of their primary provider, rather than coordination based on a specific disease or condition.

Health Information Systems – Health information systems such as electronic medical records will form the basis of many quality improvement efforts, including efforts to manage the health of populations at the primary care level. In addition, such systems will become essential as primary care providers are asked to generate practice and individual-level data under pay-for-performance financing models. Early studies of the implementation of electronic medical records have shown that such systems can reduce primary care practice costs and provide data that improves the quality of care.[33,34]

Improved Access **-** A recent national survey found that patients who are seen by a provider meeting four indicators of improved access to care (regular source of care, easy phone access, weekend/evening access and efficient, on-time visits) received better care

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[29] Saultz JW, Lochner J. Interpersonal Continuity of Care and Care Outcomes: A Critical Review. Annals of Family Medicine. 2005;3:159-166.

[30] Robert Graham Center, The Patient Centered Medical Home: History, Seven Core Features, Evidence and Transformational Change, November 2007.

[31] National Diabetes Education Program. Team Care: Comprehensive Lifetime Management of Diabetes. Available: http://ndep.nih.gov/diabetes/pubs/TeamCare.pdf

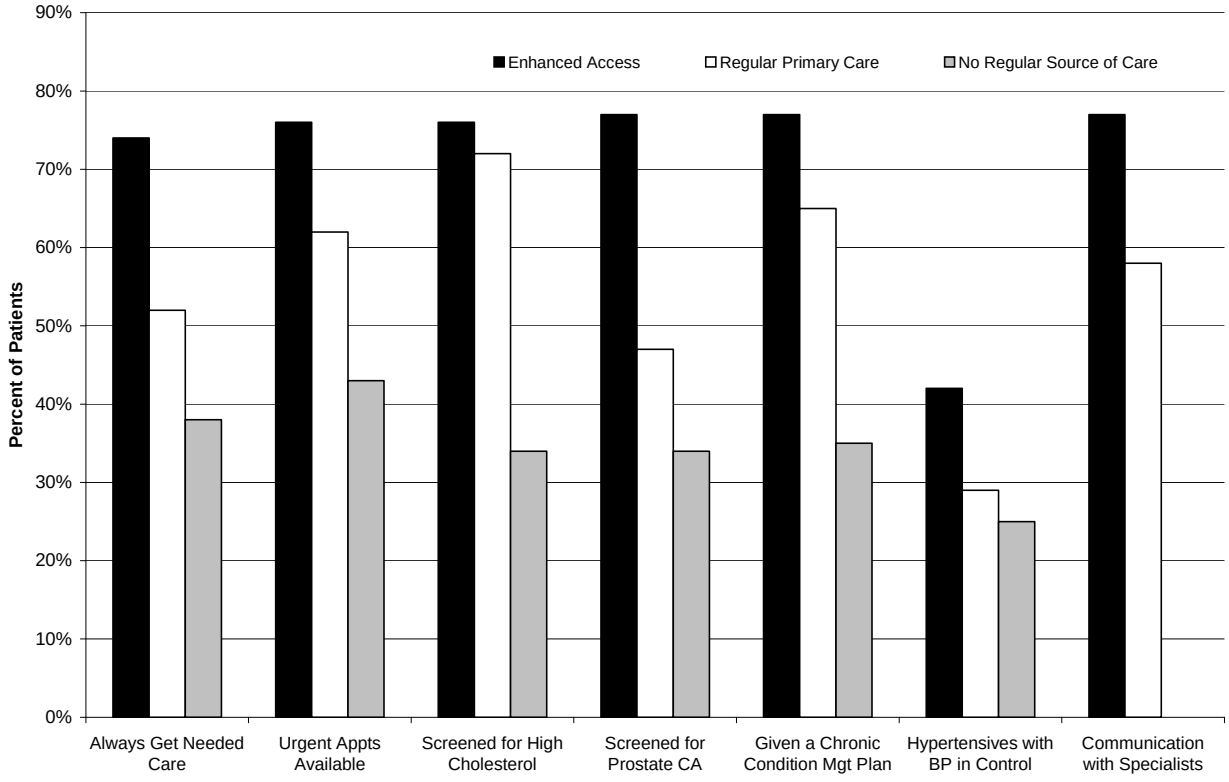
[32] Wise PH, Huffman LC, Brat G. A Critical Analysis of Care Coordination Strategies for Children With Special Health Care Needs. Technical Review No. 14. AHRQ Publication No. 07-0054. Rockville, MD: Agency for Healthcare Research and Quality. June 2007.

[33] Miller RH, West C, Brown TM, et al. The Value of Electronic Health Records in Solo or Small Group Practices. Health Affairs. 2005;24(5):1127-1137.

[34] Jamtvedt G, Young JM, Kristoffersen DT, et al. Audit and Feedback: Effects on Professional Practice and Health Care Outcomes. Cochrane Database of Systematic Reviews. 2006 (2): CD000259.

than patients seen by other providers (Figure 2).[19] Limited access to care is a key driver of socioeconomic health care disparities, and improving access reduces or eliminates health disparities by race and insurance status across the seven measures shown in Figure 2.[35] There is evidence that a variety of strategies to improve access (e.g., group visits, communication by phone and e-mail, after-hours accessibility) may improve the efficiency, equity, and efficacy of primary care.[36]

Figure 2: Effect of Enhanced Access to Care



Source: Beal, et al., Commonweath Fund, June 2007.

Overall Demonstrations of the Medical Home Model – While medical homes have not been implemented in the U.S. on a large scale, a number of local demonstration projects have shown that the medical home model can produce tangible results.

The Southcentral Foundation in Alaska (see ***Medical Home Initiatives***) lead an implementation of a medical home model at the Alaska Native Medical Center which improved a variety of care measures over a 5-year period, including decreased overall

[35] Andrulis DP. Access to Care is the Centerpiece in the Elimination of Socioeconomic Disparities in Health. Annals of Internal Medicine. 1998;129(5):412-416.
[36] Bodenheimer T, Grumbach K. Improving Primary Care: Strategies and Tools for a Better Practice. Chapter 7: Alternatives to the 15-minute Visit. McGraw-Hill Companies, Inc. 2007.

and disease-specific hospitalizations, improved childhood immunization rates, decreased emergency room and provider visits, and decreased visits to specialists.[37]

Implementation of a care-management based medical home model at Intermountain Health Care in Salt Lake City resulted in significant health improvements, including improved glycemic control, decreased hospitalization rates and decreased death rates in elderly patients with diabetes, compared to patients at control clinics.[38]

The available evidence does not support the conclusion that there is one "right" model of primary care delivery. It does, however, show that redistribution of limited health care resources with investment to the medical home bundle of services can be an effective strategy for improving individual health, population health, and overall health system performance.

As the Oregon Health Fund Board works to integrate the medical home concept into the Oregon Health Fund Program, it will be important to consider the special needs of communities across the state. There may not be one model that works for everyone and the services provided by a medical home and the manner in which care is delivered will likely have to vary to meet the needs of specific populations, especially those considered to be vulnerable due to socioeconomic status, race or ethnicity, geographic location or chronic disease conditions. The resources dedicated to expanding primary care through the utilization of medical homes must be directed to help communities fulfill these individual needs while maximizing community health.

Provider Incentives and Financial Models

A critical barrier to the implementation of the medical home model is the current payment structure which supports only face-to-face office visits and limited reimbursement for case management services provided by nurses and other members of a care team.[39] Without changes in policy, primary care providers have little incentive to expand their activities to include optimal primary care functions such as care coordination or expanded access via extended hours, e-mail, or phone communication. In addition, physicians are not rewarded for reduced spending achieved through better disease management or for improving quality of care. Furthermore, there are few or no incentives to invest in electronic medical records, data collection systems, or other infrastructure changes to improve the quality and safety of care.

Researchers, professional societies and others have proposed a variety of mechanisms to finance a re-designed primary care system. While there is no clear consensus or evidence

[37] Eby D. Healthcare Transformation. Presentation at the Oregon Community Health meeting. Southcentral Foundation Alaska Native Medical Center. December 2006

[38] McConnell J, Dorr D, Radican K, et al. Creating a Medical Home Through Care Management Plus. Presentation at Academy Health Annual Meeting. April 10, 2007.

[39] American Academy of Pediatrics. The Medical Home: Policy Statement. Pediatrics. July 2002; 110(1): 184-186.

to support a single, best financing mechanism, there is general agreement on a number of key attributes, including the following:

- Payment reform is critical component of any effort to re-design primary care and promote the medical home model.
- Funding mechanisms must be transparent to providers, plans, and consumers.
- Funding mechanisms must provide reimbursement for services and activities not currently covered under traditional fee-for-service (FFS) payments. These include coordination of care, improved access, and care management.
- Funding mechanism must reward providers for improving health outcomes, improving quality of care, and decreasing cost through better preventative and disease management services.
- Payers must recognize that there are transitional and start-up costs associated with moving to a medical home model, including investments in health information technologies.
- Regardless of the payment mechanism, resources will need to be redirected to optimize the level of primary care service.

Medical homes have been implemented under a diverse range of financing structures from capitated managed care plans to staff model HMOs to traditional multi-payer FFS systems with bonuses and carved out payments for specific services. Below is a summary of a number of payment models that could be employed by health plans to support medical homes. A table comparing these models is shown in Appendix B.

Pay for performance – Pay-for-performance programs provide enhanced FFS rates and/or bonus payments to providers based on the achievement of specific clinical outcomes or benchmarks. *Example incentive*: Annual bonus payment to providers for meeting a clinical outcome goal, such as a target immunization rate or percent of diabetics in good glycemic control.

Pay for process – Pay-for–process programs are similar to pay-for-performance ones, but they include bonuses for meeting process benchmarks and indicators, rather than specific clinical outcomes. *Example incentive*: Annual bonus payment to providers for meeting a process goal, such as implementation of an electronic medical record (EMR) or maintaining a diabetic registry.

Comprehensive prospective payments – Prospective payments could be given on a per-client basis, risk-adjusted for patient mix, to cover the full range of medical home services. Payments could include disbursement guidelines to require a certain practice structure, staffing level or other practice characteristic (e.g. EMR for every patient) to receive the full payment. Unlike traditional capitated payments, prospective payment would not require providers to assume financial risk for non-primary care costs such as specialty and hospital care. *Example incentive*: Annual payment of $500 per enrolled patient for providing a predetermined package of primary care services, with guidelines as to the appropriate level of service.

FFS reimbursement for non-reimbursed activities – Billing codes could be created for activities other than face-to-face office visits, such as case management, telephone and e-mail encounters, and group visits, to allow physicians and other providers to bill for these services. *Example incentive*: Case management reimbursement codes with assigned relative value units (used to track physician productivity and performance) could generate revenue for primary care practices, allowing them to bill for services consistent with the medical home model.

One-time start-up grants/demonstrations and technical assistance – One-time payments and educational services could be provided by payers to assist providers, especially those in small or solo practices, with systems change. *Example incentives*: $5,000 one-time grant payment to a small practice to support the implementation of an EMR, educational course for providers on staffing models for a medical home practice, or training course for primary care case managers.

Carved out case management and disease management services – Health plan could sponsor case managers/disease managers assigned to specific providers and/or regions. Unlike traditional disease management, case managers hired by a health plan would work closely with primary care providers through a shared medical record and frequent communication. Physicians could refer complex patients to the case manager for additional support and patient education. Shared information systems would allow the physicians to manage overall care and work collaboratively with case managers. *Example incentive*: Physician refers a complex patient to a case manager, who develops an ongoing management plan and educational interventions and shares plans with the physician. Utilization of case management could improve practice efficiency through the off-loading of work, which would motivate physicians to utilize case management.

Mixed models – A number of organizations have proposed mixed financing models that retain FFS payments for in-person visits but add various prospective and bonus payments to support medical home services.[40,41,42] The most common additions in mixed financing models include:

- Prospective payments to cover a bundle of specific services consistent with the medical home model. *Example incentive*: $100-200 annual payment per patient for practices accredited as medical homes.
- Prospective payments to cover specific overhead costs or practice improvements. *Example incentive*: $10 annual payment per patient for practices with an EHR.
- Incentive/bonus payments for quality improvement. *Example incentive*: $80 annual bonus per patient for meeting quality benchmarks for diabetic care, $5 annual bonus per patient for establishing patient education programs.

[40] Kirschner N, Doherty R. A system in need of change; restructiring payment policies to support patient-centered care. American College of Physicians. October 2006.
[41] Spann SJ. Task Force Report 6. Report on financing the new model of family medicine. Annals of family medicine. 2004;2 supp 3:S1-S21.
[42] Bridges to Excellence Project. www.bridgestoexcellence.org

- Direct FFS reimbursement for currently non-reimbursed activities such as e-visits, telephone visits, etc.

The Patient-Centered Primary Care Collaborative developed a mixed payment model, which the group believes could realign incentives to support the primary care medical home. The model maintains traditional FFS for face-to-face office visits combined with a monthly risk-adjusted prospective "care coordination payment" to cover the cost of services outside of the face-to-face visit and necessary investment in health information technology. The collaborative model also includes a performance payment that rewards medical homes that are able to delivery high quality and cost-effective care.[43]

At this time, there is no strong evidence to support a single, best financing model, although mixed models appear to be the most common in practice. This is likely because it is easier to build on top of current FFS reimbursement than to develop entirely new systems. Financing models employed successfully in Oregon and elsewhere are discussed below in ***Medical Home Initiatives.***

Barriers to Delivery System Change in Primary Care

There are a number of key systems and cultural and policy barriers that must be addressed in any effort to move towards a medical home model of primary care. It will be necessary for the Oregon Health Fund Board to address these challenges if primary care revitalization is going to be incorporated into statewide delivery reform, but it is not necessary to completely reinvent the wheel. There are a number of organizations and programs in the state and across the nation that have started to address these issues and develop innovative solutions from which important lessons can be drawn. Demonstration projects and other efforts to transform primary care practices into medical homes have been initiated by many different stakeholders in the health care industry – public and private purchasers, private insurance carriers and public insurance programs, individual health systems and clinics, professional organizations, and non-profit organizations have all been involved.

Some of the barriers to delivery system change are explored below, along with a description of some efforts to overcome these obstacles. More comprehensive efforts to implement the patient-centered medical home model in real world settings are discussed below in ***Medical Home Initiatives.***

Inadequate funding – One major barrier to establishing medical homes is inadequate funding for primary care, especially in the areas of preventative care, disease management and care coordination services. In demonstration projects where implementation of a medical home model has produced positive results, additional resources have been directed towards the primary care system. These resources are typically used to improve infrastructure, hire support staff, and allow providers to deliver

[43] Patient Centered Primary Care Collaborative. A New Physician payment System to Support Higher Quality, Lower Cost Care Through a Patient-Centered Medical Home. May 2007. Available: http://www.pcpcc.net/node/9

care outside of face-to-face visits. While multiple different funding mechanisms have been successfully employed, it is clear that quality and efficiency improvements in primary care will require a redistribution of financial resources.

Absence of common vision among primary care providers – While many leaders in primary care have embraced the concepts of the medical home model, it is not clear that a majority of practicing clinicians share this vision. In a 2006 physician survey, one-third of primary care providers felt that team-based care was cumbersome, and 21% felt it would increase medical errors.[44] Only 23% of primary care providers reported currently using an electronic medical record, and only 23% plan to implement an EMR in the near future. Less than half of respondents send their patients reminder notices for regular follow-up or preventive care. Fortunately, new efforts to build support for primary care reform among health care providers in Oregon could add needed grass-roots support for system reforms. Projects such as the Archimedes Movement, the Better Health Initiative, and the Oregon Health Reform Collaborative are working to build a unified vision of delivery system reform within the health care community.[45,46]

The medical home concept is also a significant part of the national dialogue on health reform and quality improvement. As discussed above, the Patient-Centered Primary Care Collaborative unites the major primary care physician associations, which together represent 330,000 primary care physicians, and major national employers, health benefits companies, trade association, academic centers and quality improvement associations around the medical home concept. The Collaborative supports a single set of core features of the medical home and works to promote and advance the patient-centered medical home on a national scale. The coalition held a national "Call-to-Action" summit focused on the medical home in Washington, DC in November 2007.[47]

Dilution of financial incentives – A large number of payers are involved in the financing of health care. In order for quality improvement incentives to be effective, they must be large enough to encourage primary care providers to change the way they practice. In a multi-payer market, if only a few payers provide modest financial incentives, incentives will be ineffective in creating change. The same will be true if many payers encourage different behaviors or outcomes. Organizations such as PEBB and the Oregon Health Care Purchasers Coalition are working to address this problem by trying to align payers around common quality improvement incentives in both the public and private sectors. Other states such as Minnesota have taken a similar approach, trying to align the incentives used by all public purchasers of health care.

Premature expectations of progress – Many proponents of primary care and the medical home model advise caution in expecting rapid progress. Experience shows that

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[44] Audet A, Davis, K and Schoenbaum SC, Adoption of Patient-Centered Care Practices by Physicians. Archives of Internal Medicine. 2006. 166(7):754-759.
[45] Oregon Health Reform Collaborative. http://www.oregonhealthreform.org/
[46] Archimedes Movement. http://www.archimedesmovement.org
[47] Patient-Centered Primary Care Collaborative. http://www.patientcenteredprimarycare.org/index.htm

investments in primary care systems can produce tangible results; however, they should be viewed as long-term investments, not short-term solutions to prevent budget problems in the next legislative cycle. While some demonstration projects have received results in a short time frame, this experience is not likely to be generalizable when a medical home model is implemented more widely. Efforts that focus on improving quality of care for one condition may see quicker results. However, the medical home concept requires system change that addresses all of a patient's needs, and this type of change does not occur quickly. Once a program is implemented, it can take years for system changes to become widespread and additional years to see cost and quality improvements. This is especially true in the management of chronic disease, where improvements in care are likely to prevent costly complications years or decades in the future. Likewise, the return on investment from preventative care may not be realized until significant time has lapsed.

Habituation to misaligned or absent incentives – The current health care system is not structured to advance the goals of improved quality, decreased cost, and enhanced efficiency. Providers are rewarded for increasing volume, while health plans control their costs by limiting and reducing benefits. Other than the beneficent desire of providers and plans to provide good care to patients and clients, there are few formal incentives to improve the quality of care, to coordinate care, or to make care more accessible. Everyone involved with health care has become accustomed to doing business under the current system with its absent and misaligned incentives. While "aligning incentives" seems an obvious solution, significant leadership and education will be needed to help habituated providers and administrators understand and embrace the vision of a health system centered on medical homes.

Lack of readiness for change – Nearly all of the research and demonstration projects surrounding medical home have been conducted in controlled environments where motivated and willing individuals became educated about health system re-design and created change, often after applying for grant funding to do so. Implementing widespread change of the primary care system will require change by those who have not been educated about system re-design and may not be motivated to change. Changing the way care is delivered and financed requires different skills than those needed to continue operating in the current system. Even with sufficient financial resources, those accustomed to the current system may need education, technical assistance and support to foster change. One model for providing such support at the health plan level is the PEBB "Council of Innovators" (see ***Medical Home Initiative***). At the practice level, CareOregon is developing expertise in supporting primary care re-design and professional societies such as the American Academy of Family Physicians have resources to help guide primary care practices through the re-design process.

An open system – The American health care system is often called an "open system." There are few restrictions on how patients access the health care system. For a medical home model to be most effective, the medical home should be the point of first contact for all non-emergent medical services. In communities where there is only one medical provider or a single hospital or health system, the open system problem is less severe. However, in urban areas with many specialists and hospitals, care can easily become

fragmented and disorganized. Patient education and frequent contact with clinic staff can help combat the open system problem, as can health plan efforts to link patients with a primary care provider and encourage a single access point through the medical home.

Medical Home Initiatives and Demonstration Projects in Oregon and Elsewhere

(This section does not provide an exhaustive list of innovations and initiatives, but seeks to describe examples of efforts initiated by a variety of stakeholder groups)

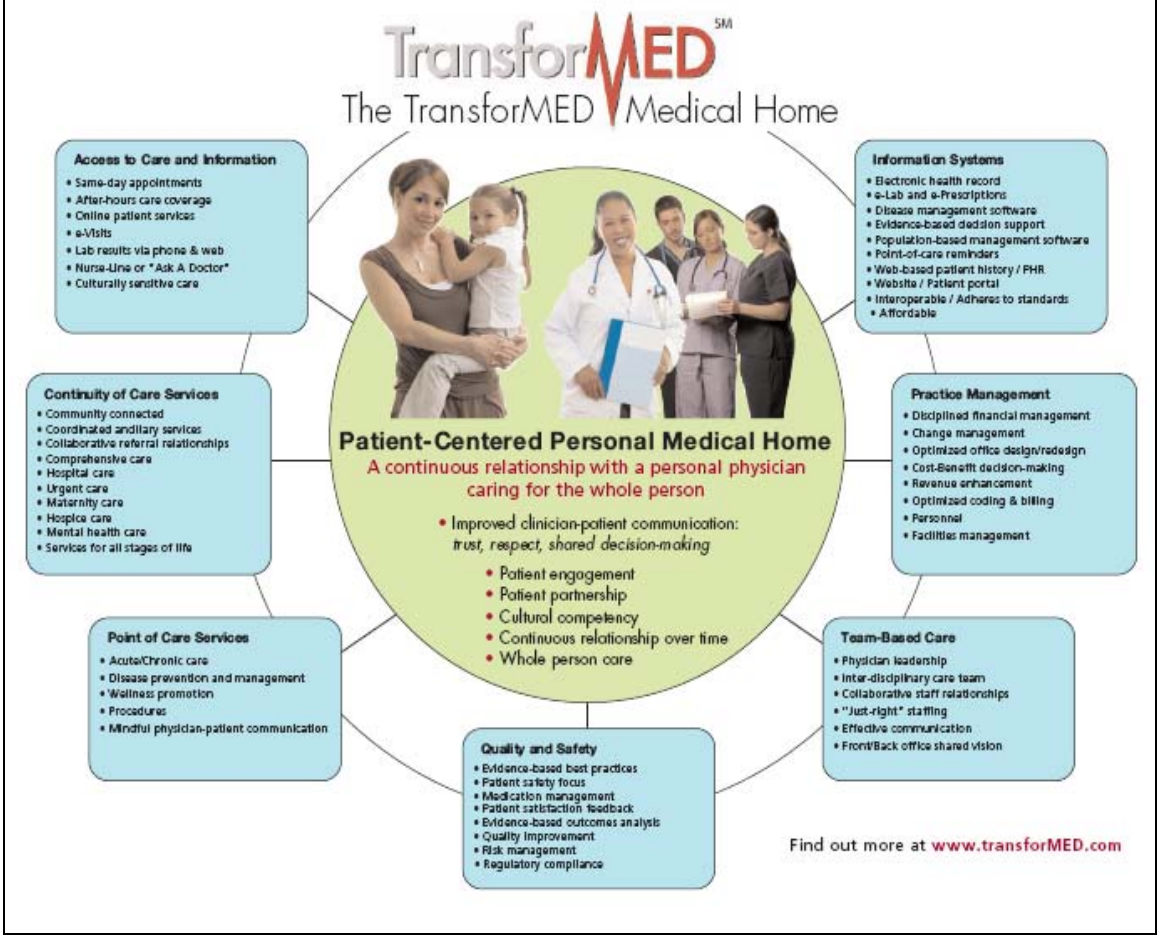
National Organizations

National Committee for Quality Assurance – Before practitioners can be rewarded for providing medical home services to their patients, it is necessary to develop standards and metrics by which the characteristics of a medical home can be measured. The National Committee for Quality Assurance (NCQA) developed the Physician Practice Connection (PCC) tool to recognize practices that "use information to improve the quality of care delivered to patients". The tool evaluates a practice's ability to use systems to track patients' treatments and conditions; manage patient care over time; support patient self-management; utilize electronic prescribing; track and follow up on lab results, imaging tests, and referrals; measure performance and efforts to improve performance; and move towards interoperable information systems. Recently, the NCQA updated the PCC so that it can be used to measure the degree to which a practice exemplifies "patient-centered primary homeness." New measures capture patient communication by telephone and email, in addition to in-person visits, expanded access, care management, availability of culturally and linguistically appropriate services, and the overall patient experience. The tool can now be used to qualify and recognize primary care medical homes and measure the degree to which the characteristics of a medical home are associated with higher quality care.[48]

TransforMED – In 2006, TransforMED, an affiliate of the AAFP, launched a 24-month national demonstration project. Thirty-six sites were selected across rural, suburban, and urban settings to redesign their practices based on the TransforMED Medical Home Model (Figure 3). Central Oregon Family Medicine, PC, a medium size practice (4-6 physicians) in Redmond, OR was one of the practices selected. Eighteen of the practices are undergoing self-directed reform, whereas the other 18 are participating in a facilitated process that includes frequent site visits, message boards, blogs, conference calls, electronic seminars, and collaborative meetings. Real-time evaluation of all sites is being lead by The Center for Research in Family Medicine and Primary Care and is looking at patient satisfaction, physician and staff satisfaction and quality of life, clinical process and outcome measures, and financial impact on practice revenues and physician income. Lessons and best practices will be published in peer-reviewed journals so that other practices can learn from the demonstration project.[49]

[48] Pawlson G. Executive Vice President, National Committee for Quality Assurance. Assessing the Patient-Centered Medical Home. Presentation at Patient-Centered Primary Care Collaborative Call-to-Action Summit. Washington, DC. November 7, 2007.
[49] TransforMED. http://www.transformed.com

Figure 3: TransforMed Medical Home Model



State Level

Q-Care in Minnesota - In 2006, Minnesota's governor signed an executive order to increase the impact of value-based purchasing efforts in the state. The executive order requires all state purchasers of health care to include a common set of "Q-Care" quality standards in their contracts with health plans and providers. Purchasers must also implement financial incentives (pay-for-performance) to achieve specific quality improvement targets. The initial Q-Care effort focuses on quality improvement in four areas: diabetes care, cardiovascular care, hospital care, and preventive care. At the primary care level, incentives will encourage the attainment of specific clinical targets, such as glycemic and cholesterol control for patients with diabetes, blood pressure control for cardiovascular patients, and rates of immunizations and disease screening in eligible populations. To encourage the use of Q-Care standards more widely, the state is partnering with private purchasers and local governments. The effort is being coordinated through the Governor's "Health Cabinet" and the State Center for Health Care Purchasing Improvement, which was established in 2006.[50] While these efforts in Minnesota are not specifically looking to establish a medical home model of care, payments based on quality improvement could provide additional revenue needed to support changes in the primary care system.

[50] QCare. http://www.health.state.mn.us/healthinfo/qcare.html

Community Care of North Carolina – The North Carolina Department of Health and Human Services has built community health networks to deliver primary care to the state's Medicaid population. There are currently fourteen networks in the state, which include physicians, hospitals, pharmacists, local health departments, social service agencies, and other safety net and community-based providers. The state pays networks a per-member/per-month (PMPM) fee to manage care for a group of enrollees and hire case managers and medical management staff to support primary care physicians in the networks. The networks create the infrastructure to allow small practices to share case managers, while larger provider groups may be assigned their own support staff.[51] Primary care physicians in the networks are paid an additional PMPM payment to provide medical home services, including quality improvement and disease management efforts.[52] Each network has established medical and administrative committees that are tasked with developing tools to help providers in the network implement disease management services, manage high-risk patients and high-cost services, and build accountability among providers. Leading physicians from each network work together to establish clinical guidelines and best practices in different care areas and have established initiatives in the areas of asthma disease management, congestive heart failure disease management, diabetes disease management, emergency room, pharmacy management, and case management of high-risk and high-cost patients. These initiatives have resulted in significant cost savings for the state Medicaid program and improved health outcomes.[48]

Purchaser Level

Public Employees' Benefit Board (PEBB) – PEBB designs, purchases, and administers health care and other benefits for state employees and their dependents. PEBB is the largest employer-based purchaser in the state of Oregon, covering 120,000 lives. In 2004, PEBB decided to use its purchasing power to encourage delivery system reforms that improve the quality and affordability of health care. They developed a 2007 Vision for a "new state of health", which included the following principles: provision of evidence-based medicine; a focus on improving quality and outcomes; promotion of consumer education, healthy behaviors, and informed choice; alignment of market incentives; transparency at all levels of the system; and affordability. PEBB used these guiding principles to develop a value-based purchasing initiative and issued a request for proposals (RFP) for vendors interested in providing health benefits under this new plan.

Applicants were scored on technical criteria across seven dimensions that PEBB decided were closely aligned with the plan's ability to provide high-quality and high-value care to its enrollees. Heavy weight was given to vendors' ability to meet quality criteria in the domains of medical home (25% of score) and evidence-based care (20% of total score). Examples of technical criteria in the primary care area included systems measures

[51] North Carolina Community Care. North Carolina Community Care Fact Sheet. October 2007. Available: http://www.communitycarenc.com/WordDocs/CCNC%20AT%20A%20GLANCE.doc

[52] Dobson LA. Former Assistant Secretary, North Carolina Department of Health and Human Services. Improving Medicaid Quality and Controlling Costs by Building Community Networks of Care. Presentation at Patient-Centered Primary Care Collaborative Call-to-Action Summit. Washington, DC. November 7, 2007.

(percent of primary care providers with an EMR), process measures (patient satisfaction surveys and care management programs) and financial/outcome measures (implementation of pay-for-performance and other incentive structures). The other dimensions used to score vendor applications included evidence-based care, member self-management, service integration, infrastructure, transparency, and managing for quality.[53]

PEBB received nineteen responses to their RFP and ultimately selected four vendors to provide health benefits: Kaiser Permanente, Regence BCBS, Providence Health, and Samaritan Health. Contract renewal will be contingent on the plans' ability to demonstrate improved performance and at least incremental change in reaching the high rating criteria established in the RFP. In order to achieve a high rating on the medical home dimension, plans will have to be able to document that all enrollees are offered a medical home, require providers to report on preventative and screening services, measure outcomes for enrollees with certain target conditions, and demonstrate that a large percent of their primary care physicians have access to EMRs. In addition, the vendors agreed to participate alongside PEBB representatives on a "Council of Innovators" to focus on continued quality improvement and review and make recommendations regarding implementation of the 2007 Vision.[54] The Council provides a unique opportunity for public and private representatives to work together to explore options for encouraging primary care revitalization centered around the medical home model, as well as larger delivery and quality improvement reforms.

Oregon Health Care Purchasers Coalition (OHCPC) – The OHCPC is a non-profit organization of public and private purchasers of health care (including PEBB), working to improve purchasers' ability to buy high-value health care for their employees. The OHCPC seeks to use the joint purchasing power of the public and private membership to change the way health is delivered and improve health outcomes across the state. In 2007, the OHCPC started to use eValue8, an evidence-based survey tool which collects and compiles information from health plans on hundreds of process and outcome measures. Eight Oregon plans agreed to submit data to eValue8, and data was collected and evaluated in the areas of plan profile, consumer engagement, provider measurement, prevention and health promotion, pharmaceutical management, chronic disease management, and behavioral health. While the tool does not specifically measure a plan's ability to offer its enrollees a medical home, many of the desired characteristics of a medical home are captured in the other dimensions. In this first year, results were used for quality improvement efforts – plans were able to compare their own performance with other plans in the state and nation and the OHCPC members were given the opportunity to meet and discuss results with each participating plan. In the future, OHCPC will seek opportunities to increase the number of plans that participate in the survey and release

[53] PEBB Vision for 2007. http://pebb.das.state.or.us/DAS/PEBB/vision.shtml
[54] Aron Consulting. PEBB Guiding Principles and RFP Preferences. November 16, 2004. Available:http://egov.oregon.gov/DAS/PEBB/docs/Word/2PEBBVisionRFPGuidingPrinciplesRevised111204.doc

results to a wider audience.[55] By providing a standard set of measures by which quality and performance can be evaluated and plan performance can be differentiated, eValue8 can help purchasers make value-based purchasing decisions. The eValue8 process also helps plans to realize the importance of consumer engagement and health promotion strategies identify areas for improvement.

Plan/Health System Level

Southcentral Foundation "Alaska Model" – The Alaska Native Medical Center (ANMC), owned and managed by the Southcentral Foundation, is a group medical practice and tertiary referral hospital in Anchorage, Alaska. The center serves Alaska natives in a large area of southwest Alaska. The medical center is supported by funds from the Indian Health Service, as well as payments from insured patients through Medicaid, Medicare, and private insurers. The primary care system of the ANMC has served as a model and illustration of ways in which the medical home can be used to improve health care. The model is built on the values of the community it serves, which include a holistic approach to health and the importance of strong relationships between providers and patients. Small primary care teams are formed around the patient, which include the patient's family and primary care provider, as well as support from a medical assistant, nurse, and behavioral health specialist. Consultations with specialists frequently occur as brief phone conversations. Providers and others on the patient care team also provide a number of visits and checkups over the phone in addition to in-person visits. The increased efficiency and quality improvements achieved at ANMC are discussed above.

Regence Blue Cross Blue Shield – Regence is a not-for-profit insurer providing coverage for Oregonians across the state. As a traditional insurance company operating primarily as a preferred provider organization, Regence has two major lines of business: traditional insured clients and administrative only clients who are self-insured by large employers. Regence has four pilots underway that are helping providers build provider capacity to provide medical home services to their enrollees. The first is the Clinical Performance Improvement Pilot Program, which was designed to create partnerships with physician groups to improve quality of care. Regence provided grants to seven practices in 2006 and five practices in 2007 and criteria for selection included the intention to implement the patient-centered chronic care model. Most of the projects have focused on improving quality of care for patients with diabetes. In addition, Regence has worked with physicians at Oregon Health and Science University (OHSU) to evaluate a reimbursement system tied to quality improvement of patients with diabetes. In the model, reimbursement is provided for group visits, remote care and team case management. Regence has also worked with a number of primary care practices to use patient-satisfaction surveys to direct patient improvement plans and to build provider capacity using health information technology. Regence is currently planning a more comprehensive pilot to develop Primary Care Home Collaboratives in Oregon and Washington.

[55] Thorne J. Administrator, Public Employees' Benefit Board. Value-Based Health Care Purchasing. Presentation at Oregon Health Fund Board Delivery System Committee. November 15, 2007. Wilsonville, OR.

At the national level, the Blue Cross Blue Shield (BCBS) Association and more than twenty BCBS companies, including Regence in Oregon, recently announced a partnership with the Patient-Centered Primary Care Collaborative to develop a medical home demonstration project. The Patient-Centered Primary Care Collaborative will be sponsoring the companies' design of alternative models of patient-centered medical homes. The companies will also explore options for aligning provider incentives with the goals of a medical home and integrating quality improvement and care management into the primary care home model. Patients will be educated about the benefits of a medical home and be given the opportunity to receive care through a medical home site.[56]

Samaritan Health System – Samaritan is a not-for-profit health system covering three counties in southeast Oregon. Samaritan owns five hospitals and has over 200 employed physicians. The health system has a strong sense of community mission and community involvement. It also operates four insurance products: a Medicaid managed care plan, a Medicare managed care plan, self-insurance for its employees, and a contract with PEBB for state employees. Samaritan has just completed the implementation of an EMR and is actively considering how to develop measurement systems and payment incentives to support quality improvement in primary care. One step the plan has adopted is uniform productivity-based payment for its providers, regardless of patient insurance status. There have been no formal efforts to re-design primary care practices in a medical home model, though Samaritan is considering how to implement performance improvement measures under its contract with PEBB.

CareOregon– CareOregon is the largest Medicaid managed care plan in Oregon. It is currently operating a medical home demonstration called the Primary Care Renewal Project at five safety-net clinics in the Portland area. The demonstration is providing grant support and technical assistance to these clinics, with the goal of re-designing primary care practice using Southcentral Foundation model (see above). The focus of the demonstration project includes restructuring primary care teams to provide increased support and patient management from nurses, medical assistants, and on-site behavioral health experts. Technical assistance focuses on quality improvement and performance measures at each practice. If the project is successful in the first year, CareOregon may investigate alternative reimbursement mechanisms to continue supporting these re-designed practices.

The five safety-net demonstration clinics participating in the CareOregon Primary Care Renewal Project are Legacy Emmanuel Internal Medicine, Oregon Health Sciences OHSU Richmond Family Health Center, Old Town Clinic, Multnomah County Mid-County Health Center, and Virginia Garcia. While each of the clinics is taking a different approach to the project, common features include empanelment of patients with small primary care teams, implementing team-based care with increased support from RNs, case managers and medical assistants, "scrubbing" charts before visits to identify care needs, "max-packing" visits to deliver all needed services (including prevention) at each

[56] BCBSA Demonstration Project Press Release. November 7, 2007. Available: http://www.pcpcc.net/node/50

visit, and outreach to patients in need of disease management or preventive services. There is a strong focus on quality improvement and performance improvement at each site, as well as an effort to move towards population-based care management.

Kaiser Permanente – Kaiser Permanente is the largest non-profit health plan in the country and serves its enrollees with an integrated health delivery system designed to provide and coordinate care across all of patients' health needs. All Kaiser members select a single primary care provider to serve as their personal physician and enrollees are encouraged to access their physicians through phone and email encounters, as well as office visits. In addition, every Kaiser patient has an electronic medial record and all care provided by any Kaiser provider is documented within the system. Members can access some of the information in their medical record, including appointments, medical conditions, lab results and vaccination records, through the Kaiser website.

Provider/Clinic Level

OHSU Care Management Plus Project – The Care Management Plus Project is a medical home demonstration project operated by a research team at OHSU. The team piloted this primary care model at Intermountain Health in Utah and is now developing similar programs in the General Internal Medicine practice at OHSU and in other practices around the state; currently, over 40 clinics have adopted or are adopting the program. The Care Management Plus model enhances the primary care team by designating care managers as a primary contact in the medical home for patients with complex needs and older adults. The program (development and dissemination funded by The John A. Hartford Foundation) trains care managers to help patients set goals, achieve lifestyle changes, and follow individualized treatment programs. Information technology use is assessed and recommendations are made to enhance use of IT to better meet the longitudinal needs of patients; a freely available tool is provided on the website. Care managers go through a specific training, which has been developed by the Care Management Plus Project. While grant support is used to train care managers, manager salaries are supported by their associated clinic. Care managers work with several (5-10) providers on a referral basis to coordinate the care of complex patients and assist with patient self-management. Data from Care Management Plus at Intermountain Health in Utah is discussed above.[57] The program has compared its additional functionality with the NCQA Physician Practice Connection tool, and found that the differential approach of a care manager can help meet a number of the specifications of the tool. The research team also has informaticians who map the expected functionalities of electronic health records from the Certification Commission for Health Information Technology to better support the specific longitudinal needs of patients with complex illnesses.

GreenField Health – GreenField Health is a redesigned medical practice in Portland. GreenField focuses on expanded access to care through e-mail and phone consultations with providers, same day appointments and improved work flow and practice design. GreenField supports its activities through traditional FFS insurance payments and an annual patient fee that provides about 50% of practice revenues. This fee supports

[57] OHSU Care Management Plus. www.caremanagementplus.org

clinician time to provide services that are not covered by insurance. It also supports a panel size of about 1,000 patients per full time provider. In addition to providing primary care, GreenField runs a consulting business to help other practices and medical systems with practice management and primary care redesign.

Oregon Primary Care Association (OPCA) – The Oregon Primary Care Association is working to build a more robust primary care model in community health centers in Oregon that meets the various needs of vulnerable populations. As part of these efforts, OPCA provides technical support and training to these clinics for implementing elements of the primary care home model and is working with the centers to measure the value of different elements of the model. Safety net clinics and community health centers may be uniquely positioned to provide patients with medical homes able to address health care and other social needs simultaneously. Many community health centers already offer enabling (non-medical) services, such as social case management, interpreter services, and transportation, tailored to meet the needs of the community they serve.

Key Considerations for the Oregon Health Fund Board

Below are eight steps for the Oregon Health Fund Board to consider that could encourage system change and build the state's capacity to provide all Oregonians with a primary care medical home.

#1 – ***Encourage and reward efforts to inform providers of the need for primary care reform and the characteristics of a patient-centered medical home.*** Support could build on efforts of ongoing initiatives such as the Better Health Initiative, Archimedes Movement, the Oregon Health Reform Collaborative, and the partnership between the Community Health Advocates of Oregon and the Oregon Primary Care Association.

#2 – ***Develop a standard definition of medical home and standard measures to determine whether primary care providers meet this definition. This definition should be broad enough to allow for innovation and encompass various models that provide medical home services to their patients.*** Current medical home definitions and metrics, such as the NCQA, PCC, or Medical Home Index developed for use in pediatric practices could serve as a starting point for this effort.[58]

#3 – ***Coordinate lessons from current demonstrations of medical home models in Oregon and encourage more demonstrations.*** Expansion and coordination of current demonstrations, as well as larger multi-payer local or regional demonstrations, could help build the knowledge and experiential base for the development of medical homes across Oregon.

[58] Cooley WC, McAllister JW, Sherrieb K, et al. The Medical Home Index: Development and Validation of a New Practice-level Measure of Implementation of the Medical Home Model. Ambulatory Pediatrics. 2003; 3:173-180.

#4 – ***Consider specific support for demonstration projects targeted at small practices and rural providers.*** There is little ongoing work to support the development of the medical home model in small practices and rural areas in Oregon, and these practices are likely to face unique challenges. Results of the AAFP TransforMED project may provide valuable data in this area.

#5 – *Consider specific support for demonstration projects targeted at high need or vulnerable populations.* Research has demonstrated that increased access to medical homes may decrease disparities in health outcomes, but the model will have to be tailored to meet individual and community needs. Such efforts could build on the current CareOregon demonstrations.

#6 – ***Develop a sustainable financing model that supports medical home services.*** Such a model could be based on the results of local demonstration projects or other national models.

#7 – ***Partner with other purchasers of health care to develop a uniform set of standards or common measures of clinical performance outcomes.*** This effort could build on the ongoing work of PEBB and the Oregon Health Care Purchaser's Coalition.

#8 – ***Consider how best to provide adequate funding for technical support, education and dissemination of best practices to support patient-centered primary care practice re-design.*** Primary care providers and health systems are likely to need specific assistance in multiple areas (e.g. practice redesign, staff training, and understanding new payment structures) as they work to implement the medical home model. This effort could build on current efforts such as the OHSU Care Management Plus, the CareOregon Primary Care Renewal Project, and the PEBB Council of Innovators.

Conclusion

Reforming the health care delivery system to revitalize primary care and promote the medical home model will require change at all levels of the system. Nevertheless, undertaking this change will likely provide significant improvements in the health of Oregonians, while also reducing the overall cost of health care delivery. Oregon has already begun implementing measures to reform its primary care system, and the OHFB can take advantage of these efforts as it works to develop a comprehensive reform plan for the state. Transforming the state's primary care practices into patient-centered primary care medical homes will be an important step in redesigning the health care delivery system to better serve the needs of people across the state. However, efforts in this realm will not be successful in isolation and must be seen as one part of a comprehensive effort to redesign the way health care is delivered and financed across the state.

Appendix A: Multiple Definitions of Medical Home

Joint Statement "Patient-Centered Medical Home" [16]	**AAFP "TransforMED model"** [59]	**ACP "Advanced Medical Home"** [17]	**AAP *"Medical Home"*** [15]	**OPCA "Primary Care Home"** [60]	**Commonwealth *"Medical Home"*** [19]
Personal physician	Personal Medical Home	Personal Physician	Long-term continuity	First point of access	Regular source of care
Physician-directed team practice	Team approach	Team Approach	Team-based care	Team-based care	
Whole person orientation – (comprehensive)	• Patient-centered care • Whole-person orientation • Consistent set of services	• Partnership with patients/families • Range of medical services	Comprehensive set of primary care services	Comprehensive and integrated care	• Patient-centered care
Integrated/Coordinated care across the health system, patient's community and culture	Integrated approach to care	Chronic Care model of care for all patients	• Coordination of subspecialty care and community resources • Cultural/developmental competence • Family-centered care	• Sustained patient/family-provider partnerships • Health system navigation and coordination • Cultural competence	
Improved access	• Elimination of access barriers • Re-designed offices	Improved access	24/7 Accessibility	Immediate access	• Evening/weekend access • Phone accessibility
Focus on Quality and Safety	• Focus on Quality and Safety • Data-based information systems • Electronic health record	• POC Evidence-based medicine and tools • Health information technology • Quality improvement programs	Confidential health record	Identifying and measuring process and outcomes measures	Efficient, well-organized, on-time visits
Payment that reflects value of services	Sustainable reimbursement	Revised reimbursement system		Working on multiple solutions	

[59] American Academy of Family Physicians. The New Model. TransforMed. www.transforMED.com. Accessed 7/3/07.
[60] Hostetler C. Testimony to the Oregon Senate Committee on Health Policy and Public Affairs. March 12, 2007

Appendix B: Comparison of Primary Care Financing Models*

	Pay for Performance	Pay for Process	Global Prospective Payments	FFS Payment for Non-Visit Services	One-Time Grants and Technical Assistance	Carved-Out Case Management	Mixed Models
Incentives and Impacts † [4]							
Includes Monthly per-patient payments	+/-	+/-	+	-			+
Includes Visit-based payments	+	+	-	+			+
Encourages providers to improve quality	+	+	+/-	-		+	+
Encourages providers to limit practice size	-	-	-	+		-	-
Encourages providers to care for complex patients	-	-	+	+		+	+/-
Encourages providers to re-design their practices	+/-	+	+/-	+	+		+/-
Supports adoption of infrastructure improvements (e.g. EHRs)	+	+	+	-	+		+
Increases requirements and responsibility of PCPs	+	+	+	-	-	-	+
Support of the Medical Home Principles ‡							
Personal Physician	-	-	+	-	-	-	+/-
Physician-directed Team Practice	+	+	++	++	-	+	+
Whole-person Orientation to Care	+/-	+	++	++	-	+/-	+
Care Coordination/Integration	-	++	+	+	+/-	+	+
Quality and Safety Improvement	++	+	+/-	-	+/-	+/-	+

* This table was compiled by the author based on reviewed literature and discussions with experts about the impact of various financing models.

† + Indicates that the financing model would encourage a certain provider/practice behavior, – indicates that the financing model would not encourage the behavior, and +/- indicates that the financing model may or may not do so, depending on specific policies adopted in designing the payment structure.

‡ + indicates that the financing model would support or strongly support (++) the development of a medical home characteristic in primary care practices, - indicates that the financing model would not have a strong impact on the development of a medical home characteristic, and +/- indicates that the model may or may not impact the development of a medical home characteristic, depending on specific policies adopted in designing the payment structure.