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CareOregon: Transforming the Role of a Medicaid Health Plan from Payer to Partner

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Issues Research, Inc.

ABSTRACT: CareOregon, a Portland, Oregon-based nonprofit Medicaid health plan, developed two innovative programs to help optimize care for its enrollees: a patient-centered medical home initiative in safety-net clinics and a multidisciplinary case management program for members at high risk of poor health outcomes. To implement these programs, the health plan emphasizes the use of learning communities through which independent providers can acquire, share, and practice techniques to achieve three goals: improve population health, enhance the patient experience of care, and reduce the rate of increase in the per capita cost of care. These goals are the focus of the Triple Aim, an Institute for Healthcare Improvement initiative that is helping CareOregon define and reach its goals. By partnering with health care providers to create and pursue a common vision for improving primary care delivery, CareOregon is transforming its role from payer to integrator of care on behalf of its members.

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OVERVIEW

CareOregon, a nonprofit Medicaid health plan based in Portland, Oregon, is one of 15 health care organizations that the Institute for Healthcare Improvement (IHI) identified as prototypes for its Triple Aim initiative, a program that fosters innovative approaches to improving population health and patients' experience of care while lowering the per capita cost of care (or at least reducing the rate of cost increase).[1] The Commonwealth Fund is studying several of these organizations to learn how they are engaging in the Triple Aim and what lessons their experience holds for others who wish to undertake or promote transformation in health care delivery.[2]

The organizing principle of the Triple Aim is that simultaneously pursuing these three objectives enables health care organizations to identify and fix problems that lead to poor coordination and inefficient delivery of care. It also

helps health care organizations focus attention on and redirect resources to those activities that will have the greatest impact on health. In many cases, these health care organizations play the role of "macro-integrator"—a term coined by IHI to describe entities and coalitions that bring stakeholders and resources together to pursue a shared vision of an optimized system of care for a defined population.

CareOregon is carrying out the Triple Aim's unifying "macro-integrator" function by implementing two innovative programs for low-income individuals and families:

- **CareSupport,** started in 2004, provides centralized case management and care coordination services to the health plan's members who are at highest risk for poor health outcomes. Multidisciplinary care management teams operating from CareOregon's Portland headquarters help these patients find critical community-based resources, resolve difficult behavioral issues and self-management problems, and improve their ability to follow a treatment plan.
- **Primary Care Renewal,** which supports the transformation of safety-net clinics into patient-centered medical homes that organize care around primary care-based teams of medical and behavioral health professionals. A team-based approach to assessing and addressing patients' needs enables individual providers to more systematically and proactively identify and address patient needs across the patient population. Clinics participating in the medical home initiative, which started in 2007, receive funding from CareOregon to support their efforts.

While CareOregon is in the midst of its transformation and still has more work to do to achieve its goals, its efforts are already demonstrating results. For example, the CareSupport program has yielded savings of $400 per member per month (or $5,000 per year) in the year following a member's enrollment, while maintaining or slightly improving patients' quality of life. Likewise, the implementation of patient-centered medical homes in safety-net clinic pilot sites has been associated with greater continuity of care and improved health screening and chronic care management (such as a 7 percent increase in the proportion of patients with controlled blood pressure and diabetes, respectively, during one year, with the best-performing clinics exceeding national benchmarks). Early results indicate that costs are somewhat lower for dual-eligible patients receiving care in medical-home pilot sites, although it is too soon to draw firm conclusions about this experience.

Based on these promising results, CareOregon expanded the Primary Care Renewal program from a pilot project at six clinics of five safety-net provider organizations reaching 6,000 CareOregon enrollees to 16 of these safety-net providers' clinics caring for nearly 45,000 enrollees (35% of CareOregon's membership). Drawing on its experience with CareSupport, it is working with the clinics to increase their capacity for case management. In addition, the health plan is partnering with other organizations to strengthen local primary care capacity by spreading the medical home model to safety-net clinics. Collectively, the clinics participating in this initiative care for 189,000 patients across the state.

This case study describes the circumstances that led CareOregon to develop its CareSupport and Primary Care Renewal programs and the lessons learned from their implementation in the context of the Triple Aim initiative. Both programs have yielded innovations that may be transferrable elsewhere. For example, when building medical homes to ensure that its patients have continuous, long-term relationships with care teams, one safety-net clinic that relies on rotating medical residents has empanelled patients to nurses rather than doctors. This approach could be applied in communities that are experiencing physician shortages or in clinics that rely on volunteer physicians. The health plan's CareSupport program has made benefit exceptions to help meet nonmedical needs that impair the health of enrollees, illustrating the role Medicaid health plans can play in integrating services to address both medical and nonmedical determinants of health for vulnerable populations.

ORGANIZATIONAL BACKGROUND

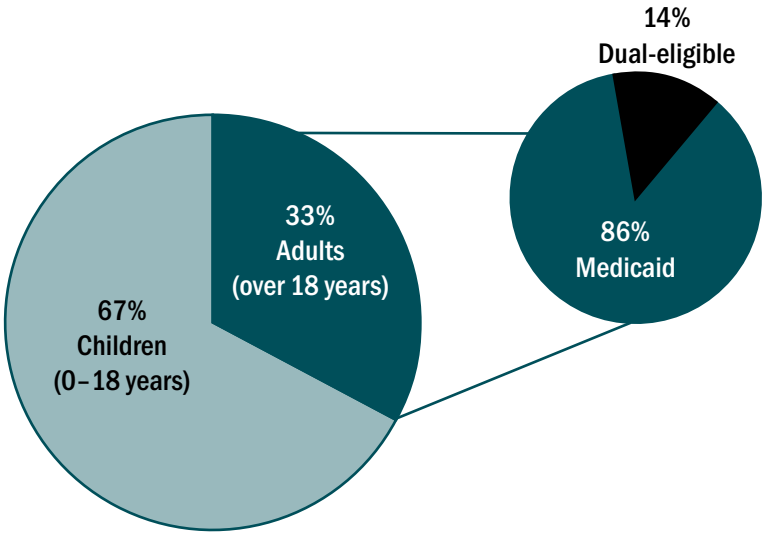
CareOregon is a nonprofit Medicaid managed health care plan that serves almost 128,000 low-income Oregon residents, representing nearly one-third of the state's Medicaid enrollees. Two-thirds of the health plan's members are children (Exhibit 1). More than 5,700 adults who are dual-eligible for services through Medicare and Medicaid are enrolled in CareOregon's Medicare Advantage Special Needs Plan; over half of these dual-eligible members are under age 65. CareOregon's network includes 950 primary care providers who work in community health centers, academic health centers, and large health systems, as well as small and large group practices. The health plan contracts with 3,000 specialists, 33 hospitals and 14 public health departments. Eighty-three percent of its members live in the Portland metropolitan area.

CareOregon was founded in 1993 by three safety-net providers—the Multnomah County Health Department, the Oregon Primary Care Association, and the Oregon Health Sciences University—shortly before Oregon received a Medicaid waiver that enabled the state to expand the number of low-income residents it covered.[3] Under the waiver, the state shifted Medicaid enrollees into managed care programs, eliminated cost-based payments to providers, and limited benefits to a prioritized list of services.[4] Managed care organizations competed to provide coverage for 120,000 new Medicaid enrollees, but many of these plans left the market by 2000, as the state ran into difficulty financing the program and health plan profits dwindled. CareOregon remained and saw its membership rolls rise.[5]

Finding community-based providers willing to care for large numbers of Medicaid patients has proved to be challenging given that Medicaid reimbursement rates in Oregon are as much as 45 percent below those paid by commercial health plans. Consequently, close to half of CareOregon enrollees continue to receive their care from contracted safety-net providers that are oriented by mission to serve this population. (On average, CareOregon members make up 40% to 50% of the patient population in these clinics.) This concentrated care-delivery network has made it possible for CareOregon to pursue changes that benefit a large proportion of its members by working with a small number of core providers.

Many patients in the Medicaid program have complex health problems. Almost two-thirds of CareOregon's adult members suffer from at least one of 12 common chronic health conditions such as diabetes, depression, or chronic heart failure. Nearly 30

Exhibit 1. CareOregon Membership by Age and Coverage



Note: Membership as of February 2010.
Source: CareOregon.

percent of adults (and 55% of the dual-eligible members) suffer from three or more of these chronic conditions.[6] Many of these conditions are exacerbated by psychosocial difficulties—including unsafe housing and emotional distress—and language barriers. One-third of CareOregon enrollees do not speak English as a first language. These complex needs often manifest in frequent use of the hospital emergency department (ED): 8 percent of CareOregon's Medicaid members (and the same percentage of dual-eligible members) made four or more visits to the ED in the last 12 months.

Caring for this population often requires providers to devote time and resources to understand the barriers this population faces in adhering to treatment plans and to address social needs that fall outside of the traditional scope of medical care. Without such efforts, vulnerable patients may suffer adverse health outcomes. To overcome these challenges in an environment where primary care providers for Medicaid patients are already in short supply, CareOregon developed the CareSupport and Primary Care Renewal programs, which are described in the following sections.

Stage I: CareSupport—Starting the Transformation Journey

CareOregon's transformational effort began in 2003, when the health plan found itself on the verge of bankruptcy. The financial crisis, prompted in part by declining state reimbursements, "forced us to confront who are we and what is our core value in the world," says David Labby, M.D., Ph.D., CareOregon's medical director. "Out of that came the whole notion that we needed to move from simply paying claims to looking at improving population health as not only a health strategy, but as a business strategy," he says.

At the time, the health plan did not fare well on quality measures. In 2003, the health plan was ranked in the bottom quartile of all Medicaid plans for some measures in the State of Oregon's initial HEDIS (Healthcare Effectiveness Data and Information Set) quality evaluation; its member satisfaction ratings were average compared with other Medicaid plans in Oregon.[7]

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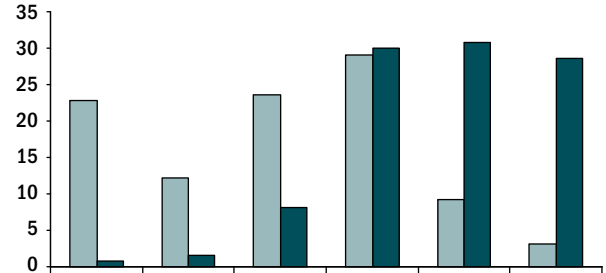
>
> David Labby, M.D., Ph.D.,
> CareOregon's medical director

In response, the health plan's board revised its mission statement so that "high quality"— rather than simply "quality"—would be one of its objectives. "That new inflection in the mission statement set us on a journey to find out what high quality and high performance was," David Ford, CareOregon's CEO, says. For ideas and guidance, the health plan looked to the Institute of Medicine, which not long before released its landmark report, *Crossing the Quality Chasm: A New Health System for the 21st Century*. Later, it turned to the Institute for Healthcare Improvement, which helped the health plan define its goals through participation in IHI's Triple Aim initiative.

CareOregon's initial strategy was to focus on patients with a high burden of psychosocial and medical risk, a group that accounted for nearly one-third of the plan's health care spending (Exhibit 2). Many of these patients need personalized support with drug regimens and lifestyle changes to improve health—especially after hospital discharge—needs that exceed the capacity of the average CareOregon health clinic to provide them. Examples of such patients include:

- pregnant mothers on methadone;
- homeless individuals with severe mental illness or substance abuse;
- patients who are dual-eligible for Medicare and Medicaid and have complex social risk factors;
- patients with congestive heart failure and other chronic conditions;

Exhibit 2. The CareSupport Program Focuses on Patients with Multiple Co-Morbid Conditions Who Account for a High Percentage of the Plan's Total Spending



	Non Users	Healthy Users	Low	Mod	High	Very High
% of Members	23%	12%	24%	29%	9%	3%
% of Total Dollars	1%	2%	8%	30%	31%	29%

Source: CareOregon. Measured between April 1, 2002 and March 31, 2003. Includes members with >4 months enrollment only.

- patients transitioning from hospitals to skilled nursing facilities or home; and
- patients who have been admitted to the hospital for a psychiatric illness.

To support these patients, especially during transitions between health care providers and institutions, CareOregon created CareSupport, a multidisciplinary case management service, which it runs in a centralized fashion from its Portland headquarters. The CareSupport teams, which include a registered nurse acting as the case manager, a care coordination assistant, and a social worker (all of whom are employed by CareOregon), are assigned to dedicated panels of patients, according to the primary care practice that treats them. The teams facilitate communication and understanding between providers and patients, identify barriers to self-care, locate community resources, and assist patients with complex mental health or psychosocial issues. The CareSupport teams tend to share information with providers via telephone, e-mail, or fax, but it is not uncommon for case managers to join the providers in multidisciplinary team meetings when needed to discuss particular patients' needs (Exhibit 3).

The CareSupport team members use motivational coaching with patients who are resistant to change, a technique that involves helping patients to define their goals and then to identify and take a series of small steps to build confidence in achieving those goals. Team members also reach out to patients who don't show up for appointments; identify community support to address poverty, isolation, depression, mental illness, and substance abuse; provide guidance to patients who are having difficulty navigating the health care system; promote the medical home relationship; reinforce the treatment plan; and support self-management tasks. Most contacts with the CareSupport team are by phone, but about 10 percent of the interactions take place in person at the practice sites.

Clinical pharmacists also serve as resources to the teams. They may review individual medication regimens and provide guidance to the case managers. They also provide pharmacy recommendations directly to primary care providers and specialists and participate in multidisciplinary clinical rounds to give input into the care plan of members with complex medical conditions.

The case management program is purposefully not disease-specific. "It is a holistic biopsychosocial model," says Rebecca Ramsay, B.S.N., M.P.H., senior manager of CareSupport and clinical programs. "And while philosophically that has made perfect sense to us,

Exhibit 3. Role of CareSupport Case Management Team Members

Team Member	Role
Registered nurse case manager (RN)	• Monitor assigned populations of patients to identify risk situations before crises occur • Assist patients by encouraging, teaching, and coordinating services • Assist providers by supporting their treatment plans when working with patients and sharing critical patient information
Behavioral health case managers (Social Worker)	• Assist patients with mental health, substance abuse, inadequate social supports, and behavioral challenges
Health care guides (Health Guide)	• Engage and develop strong, ongoing relationships with patients while performing tasks important to improving patients' health, such as scheduling appointments, arranging transportation, or connecting patients with community resources, shelter, food, and clothing. The role is filled by a paraprofessional who is supervised by a clinician.

the challenge it posed from the very beginning is what kind of criteria do you use in order to determine who is appropriate for case management and who isn't," she says.

CareOregon's goal is to identify people who are: 1) at risk for or experiencing a functional health decline because of lack of appropriate supports or self-management; 2) using the health care system ineffectively or inappropriately; and, 3) experiencing a significant health-related transition in life, such as a hospital discharge to home with an advanced disease. It uses several methods to do so.

The first method is a predictive modeling technique (using the Ambulatory Care Groups case-mix system developed at Johns Hopkins University) to identify high-risk patients. Because the model relies on claims data, it does not identify some important risk factors in the population CareOregon serves, including homelessness, self-management deficits, and social isolation. To ensure the health plan identifies patients with such risks, CareOregon also takes referrals from providers, caseworkers and members, and gathers information from health risk assessments, emergency department records, and authorizations for durable medical equipment, among other sources of information.

"We needed to fill in the gaps and build additional reports, assessment tools, and referral patterns because our goal was to cast as broad a net as possible to decrease the possibility our high-risk patients would fall through the cracks," Ramsay says.

Following a standardized methodology for selecting patients has made assessment more reliable and consistent, Ramsay says. It also has reduced the time required for assessment, as well as its cost, by two-thirds. The number of health care professionals required to perform the assessments dropped from six in 2006 to two in 2008, while the time required to perform assessments dropped from 360 minutes per week to 120 minutes. (The assessment tool used by the CareSupport teams—the Clinical Assessment Questionnaire—can be found in Appendix B.)

Patients who have been identified as high-risk are evaluated by the health plan using the MacColl Institute's Chronic Care Model,[8] which helps to distinguish barriers to medical stability, medical home relationship, medical services access, self-management capability, and social support.

If the health plan deems that the patients' risk factors are modifiable, they are assigned to CareSupport teams, which use standardized care plans that define what risk factors are modifiable, what personal/interpersonal strengths the member brings,

measures for determining an adequate solution, and an action task list.[9]

CareSupport averages 750 members in its complex case management program at any given time and about 1,600 members over the course of a year. The yearly number has increased since the program began. CareSupport serves an additional 3,000 members for brief interventions.

Exhibit 4 describes an example care plan for a patient, Lois (not her real name), and demonstrates how the CareSupport team uses a holistic approach to address the medical and social needs of the vulnerable population the health plan serves.[10]

CareOregon also uses specialized care teams to address discrete, high-risk situations. For example, a transitional care team focuses on dual-eligible patients who are transitioning from one care setting to another. This team uses the evidence-based care transitions intervention developed by Eric Coleman, M.D., to reduce the risk of preventable readmissions.[11] During the 30 days immediately following discharge from a hospital or skilled nursing facility, the team focuses on medication management and reconciliation; development of a patient-owned health record; ensuring medical care follow-up; and educating the patient to monitor his/her health status and recognize signs and symptoms of a worsening condition.

"We also focus on empowering the patient to become a good advocate for him- or herself, assess the adequacy of social support and home safety, and ensure that the necessary durable medical equipment and pharmaceuticals are ordered and received in a timely manner," Ramsay says. The transitional care team intervention has led to a decrease in the 30-day hospital readmission rate for the dual-eligible population, from 19 percent to 17 percent between February 2007 and February 2008. (By way of comparison, the national 30-day readmission rate was 18.6% among Medicare beneficiaries in 2007.[12]) These results suggest that the intervention is starting to reduce readmissions, but there is more work to be done.

Another specialized care team focuses on families with children admitted to the neonatal intensive care unit, as well as pregnant women who have been

Exhibit 4. Example Care Plan

Patient	Challenges	CareSupport Team Recommendations
Lois, 48-year-old homeless female, living in a shelter by the coast Chronic obstructive pulmonary disease, hypertension, newly diagnosed diabetes mellitus, recent pneumonia, history of chronic alcohol abuse, heavy tobacco use	5–6 recent hospitalizations for recurrent pneumonia and hypoglycemia, oxygen saturation levels very low on admission. Often left against medical advice. Missed pulmonology consult due to transportation challenges Discouraged and skeptical	Move member from coast to Portland for access to stable living situation and medical home (RN) Make benefit exception to pay for skilled nursing facility to stabilize her medical status (RN) Assign to primary care doctor and arrange transportation (Health care guide) Case manager and state case worker find affordable group home; increase home caregiver supports (Social worker) Build on emerging relationship to overcome skepticism, explore self-care ability (Social worker)

hospitalized or admitted to the emergency department and pregnant women using methadone. This high-risk post-partum team, which is composed of a nurse, a licensed clinical social worker, and two health care guides, provides support and education to the women, with a goal of reducing unnecessary emergency department visits.

Stage II: Primary Care Renewal—Taking Transformation to the Front Line

While the CareSupport program seeks to address the needs of the high-risk patient population, which makes up approximately 5 percent of the health plan's membership, CareOregon's leaders believed the health plan would have a greater impact on improving population health, cost, and patient experience if it engaged primary care practices directly in these goals using a patient-centered medical home model. Finding a model adapted for safety-net communities was a challenge. "There aren't a whole lot of medical home pilots or projects out there that have the kind of population that we're serving, [nor] the wide variety of clinic infrastructures that we're dealing with," Ramsay says.

Learning from Mentors. To develop a blueprint, CareOregon officials visited the Southcentral Foundation in Anchorage, Alaska, a site that has patients with a somewhat similar disease burden and had committed to the idea of building medical homes emphasizing wellness and role redesign (see Appendix A for more detail). The Southcentral Foundation's medical group practice provides primary and behavioral health care to Alaska Natives and American Indians with funding from the Indian Health Service. It implemented a medical home model in 1999, organizing care around a team of providers, including a primary care provider, a nurse, a medical assistant, and a behavioral health specialist.

The Southcentral Foundation's primary care teams work together to ensure that appropriate preventive care and management of chronic conditions are provided. The work is distributed among the team members so that each operates at the highest level of his or her credentials. Case managers handle medication refills, chronic disease monitoring, and test result notifications. Physicians address acute complaints and deliver preventive medicine. Medical assistants handle point-of-care testing. Behavioral health consultants address acute mental health complaints and solve communication challenges, identify and help with parenting and family dysfunction, and support living optimally with chronic conditions.

The Southcentral approach—which stresses patient-centeredness and encourages easy access to care—has decreased hospitalizations, emergency department visits and visits to specialists, and increased immunization rates, among other screening rates.

Defining the Model. CareOregon officials were so impressed with the model of care they observed being

Exhibit 5. Care Redesign Principles Adopted from the Southcentral Foundation

1. *Patient-Driven Care:* Involving patients in the design and evaluation of care that takes into account patients' values, preferences, and needs.
2. *Team-Based Care:* Using teams to make care more efficient and ensure that all team members are practicing to the highest level of their credentials.
3. *Proactive Panel Health Improvement:* Assigning a panel of patients to a team of providers that proactively determines and meets preventive care needs.
4. *Integrated Behavioral Health:* Incorporating a behavioral health practitioner into the team to identify barriers to self-care and screen for and treat mood and behavioral issues.
5. *Barrier-Free Access:* Removing barriers that stand in the way of prompt and appropriate care, such as language, culture, attitude, time, and place.

practiced by the Southcentral Foundation that they determined to make it the touchstone for their own transformational efforts. They distilled the model into five basic design principles (Exhibit 5):

"We thought, morally, how could we not do it?" Ford says. Adopting such an approach would move primary care away from visit-based brief encounters in the office, which were often structured around the needs of the practice and the providers, to a model that was population-focused and built on continuous relationships between patients and providers. The health plan also expected that a team-based care model would allow medical groups to spend more time defining problems across the population and developing innovative strategies to help patients cope with those problems.

To interest providers in the idea, CareOregon organized a trip for 30 people who represented provider groups, lawmakers, and CareOregon staff and board members to visit the Southcentral Foundation in August 2006. "The whole point of taking people to Alaska was to get people fired up, to get the leadership really engaged, and to create a vision," Labby says. "You have to have some sort of engagement strategy for the people you're working with so that you can create some sort of collective will for transformation. Transformation is not something that you can mandate," he says.

After the trip, the health plan offered improvement funding ranging in aggregate from $1.3 million to $1.5 million annually to medical clinics that would participate in a medical home pilot project. The grants were an extension of CareOregon's CareSupport and System Innovation (CSSI) program, which the plan initiated in 2005 by offering financial support to hospitals, health care clinics, and other provider organizations willing to undertake improvement initiatives. Five provider organizations were selected for the initial demonstration, which started in 2007 (Exhibit 6).[13]

Exhibit 6. First Primary Care Renewal Pilot Sites

Organization	Description	Unique Characteristics
The Cornelius Center, part of the Virginia Garcia Memorial Health Center	A federally qualified health center that serves the migrant farm worker population.	Does outreach to migrant labor camps using "promotoras" or health promoters.
Central City Concern	A federally qualified health center. Patient population includes the homeless and patients with chemical dependencies.	Staff includes naturopathic practitioners and acupuncturists.
Oregon Health Services University Family Medicine at Richmond	A federally qualified health center lookalike that serves an urban population that is ethnically diverse. Includes a family medicine residency clinic.	Has a visiting psychiatrist and medical subspecialists (e.g., cardiology and dermatology) who visit the site.
Legacy Health	Hospital-based practice that serves an urban population. Has an internal medicine residency clinic.	Serves a high number of patients with mental health conditions. Has well-developed care management program.
Multnomah County Health Department	Operates 7 primary care clinics. One is specifically for the homeless; another specializes in care of HIV patients.	Largest federally qualified health center in the county. Serves an ethnically diverse population.

Exhibit 7. Performance Metrics

Triple Aim Component	CareOregon Measures
Population Health	Health plan-wide measures (stratified by Primary Care Renewal and non-Primary Care Renewal clinics): Avoidable ED visits Ambulatory care sensitive hospitalizations (ACSH) Multidimensional health status and health risk assessments for dual-eligible and high-risk adult Medicaid members HEDIS measures across a number of dimensions ACG conditions markers and predictive modeling risk scores
Experience of Care	Health plan-wide measures: CAHPS collected annually for Medicaid and Medicare members Primary Care Renewal (PCR) clinics: PCR patient experience of care survey Patient-centered care composite indicator 0-10 rating of "your health care team" Visits are well organized and running on time Clinician satisfaction survey Clinic team experience survey
Per Capita Cost	Health plan-wide measures (stratified by Primary Care Renewal clinics and non-Primary Care Renewal clinics): Total cost Medicaid adults PMPM Medicaid children PMPM Dual-Eligible PMPM Inpatient care for Medicaid adults, Medicaid children, and dual-eligible groups: Average Cost of Inpatient Care PMPM Inpatient admits per 1,000 members ED care Medicaid adults, Medicaid children, and dual-eligible groups Average Cost of ED Visits PMPM Number of ED visits per 1,000 members

These five partner organizations provide care to CareOregon enrollees at several clinical sites, among which six safety-net clinics (two from Multnomah County Health Department and one from each of the other organizations) were selected to serve as pilot sites for the medical home initiative. Altogether, these six pilot clinics care for 6,000 CareOregon enrollees. As a condition of participation in the first year of Primary Care Renewal, each of the clinics agreed to empanel a single care team to test the model and to adopt the five design principles (listed above).

Drawing on the Triple Aim Initiative. Around the same time that CareOregon launched the Primary Care Renewal project, the heath plan joined the Institute for Healthcare Improvement's Triple Aim initiative.

Participation in the Triple Aim initiative helped CareOregon to define and clarify the measures it would use to quantify changes to population health, per capita cost, and patient experience as a result of its improvement initiatives (Exhibit 7). It also helped CareOregon refine its approach, by narrowing the defined population of its projects to those for which individuals could be counted, per capita cost could be estimated, and

information about the variation in overall health of individuals was available.

In addition to changing the way the health plan defined its target population and long-term strategy, participation in the Triple Aim collaboration compelled CareOregon to be more reflective and disciplined about the process of making changes using metrics and data. "We've always been pretty flexible and nimble. We may try something and it doesn't seem to work quite well enough, so we tweak something around the edges or we go another direction, and you sort of have this ambling path," Ramsay says. "Now I find myself coaching my managers and supervisors to look at the results of what we tried and learn from it. It's really changed the way that we build and execute," she says.

Empowering the Primary Care Teams. CareOregon translated this approach to the providers working on the medical home pilot when it brought the teams together for a collaborative learning session, which focused on the design principles of the Southcentral Foundation's model and on process improvement techniques. "People didn't know how to improve," Labby says. "We thought that people needed to know the technical skills to do change." The training also covered workflow analysis and project management, among other topics.

An external consultant also worked with designated coaches at the pilot sites and with performance improvement coaches within CareOregon. Each site chose two people to be trained as performance improvement coaches. One was a staff member on the clinical team and the other was a staff person assigned to the primary care renewal project, such as someone working in quality improvement. These coaches in turn worked closely with the pilot clinic teams to support the medical home-building effort.

With that technical training in place, CareOregon gave the clinics wide latitude to develop a medical home that met agreed-upon principles. "Basically we said we're in the adaptive stage here. We don't know what these are going to look like when we're done. Take these principles and see how you can apply them. And so people sort of just stepped into it, and we basically had to give them the room and the resources to figure out what worked," Labby says.

Empanelling Patients to Care Teams. All of the clinics in the pilot assigned their patients to a care team, but the composition of the care teams differed by clinic. Most teams had a primary care provider, a medical assistant, a care manager, and a behavioral health practitioner. Some also had a team assistant, who performed clerical functions.

Because two of Legacy Health's clinics rely heavily on internal medicine resident physicians, its clinics empanelled patients and the physician to the nurse, rather than to the physician. That way, patients don't have to transition to a completely new care team every two or three years as residents rotated in and out of the teaching program. "They have some consistency across several years, many years in some cases, because they always know their nurse, even though the doctor may change," says Melinda Muller, M.D., Legacy Health's senior medical director of primary care.

All of the plans use their medical teams to "scrub" the schedule, a process that enables them to determine in advance what preventive and acute services will be needed by patients who are scheduled to be seen that day. Those decisions are made in morning and afternoon team huddles. The teams also make an effort to distribute work in an efficient way. "We're trying really hard to develop those roles in a way where everybody's working to the top of their license or their credentials, so that way the work is really being distributed in a way that the people can do what they do best," says Amit Shah, M.D., medical director of Multnomah County Health Department, which has since converted all of its seven clinics to the medical home model and assigned 99 percent of patients to a primary care physician.

Ensuring rapid access to care is also important, as that can prevent costly visits to emergency departments and help ensure early treatment of serious medical problems. Not all of the pilot clinics

have implemented advanced access scheduling models, however. (Advanced access seeks to meet daily demand for services with as little delay or waiting as possible.[14]) For example, a teaching hospital clinic has found it difficult to do so because of the unpredictable nature of resident physicians' schedules as they rotate on monthly assignments. This experience illustrates the challenges of adapting the medical home model to the real world settings in which safety-net clinics operate.

Using Information Technology for Patient Management. The clinics vary in their experience with health information technology. The Multnomah County Health Department implemented an electronic health record (EHR) more than three years ago but had to develop additional infrastructure such as a data warehouse and reporting to facilitate patient-panel management. Clinical "dashboards" present access and clinical quality measures to the care team at the patient level, for use in identifying and conducting outreach to patients with uncontrolled diabetes, for example. "That made a huge difference" in the team's effectiveness, Shah says. On the other hand, another pilot clinic does not yet have an EHR, and not all of those who do have EHRs have fully developed registries to monitor the care of patients with chronic conditions.

Legacy Health, which is transitioning from one EHR system to another, has had to resort to a "workaround" to manually extract information from the EHR for proactive patient-panel management. "We actually are taking the data back out of the EMR and putting it on a piece of paper to put in front of the doctor's face at the time of the visit," Muller says. Though decidedly "low-tech," this approach has been one of the most effective things Legacy Health has done, she notes, enabling the team to use acute-care visits as an opportunity to identify and provide other needed chronic care, such as a blood test for diabetes or preventive services such as a mammogram.

Facing Barriers to Behavioral Health Integration. The degree to which behavioral health is integrated into primary care differs by clinic as well, in part because the state administers a separate Medicaid behavioral health care "carve-out" program that does not permit many of the clinics to bill for such services.[15] (Research on the effects of such behavioral health "carve-outs" is mixed, with some studies showing improvements and others showing deterioration in access to or quality of care.[16]) Legacy Health provides depression screening for patients when they start at the clinic and at least once per year. It also uses social workers and case managers to help patients better manage their chronic diseases. For more intensive needs, the clinic tries to connect patients to specialized mental health resources, but patients often face barriers to obtaining such care and there is lack of coordination among sectors.

Some clinics have received grants to provide those services, or exemptions to do so. Multnomah County Health Department is able to bill and get wraparound payment for mental health services that it provides to Medicaid patients because it is a certified mental health provider for Multnomah County, which controls the mental health carve-out program dollars for the county. For that reason, the Department has been able to expand its behavioral health staff to achieve the aims of behavioral health integration at each of its primary care clinic sites, according to Susan Kirchoff, director of clinical operations for the health department.

Using Payment Incentives. In the summer of 2008, CareOregon opened a dialogue with the safety-net clinics about how payment incentives could support their work implementing the medical home model. The health plan convened a steering committee of 10 organizational decision-makers from the clinics to develop consensus around an approach. "We said we've got dollars from CareOregon, but we want to use these dollars for leveraging improvement. We just don't want to pay for services," Labby says.

"The fundamental question for the group was: 'If you had more money, how would you use that money to get more improvement out of your system, and how would that be tracked?' In a certain sense

Exhibit 8. Performance Incentive Payments Made to Six Primary Care Renewal Pilot Sites in 2009

	Incentive Payments	Percent of Total
Tier I	$497,902	53%
Tier II	$374,660	40%
Tier III	$69,684	7%
Total	$942,246	100%

Source: CareOregon. The amount each clinic received was risk-adjusted for the patient population.

it was fairly easy, because the domain of things that people do measure and can measure is pretty small," Labby says. From this common set, the group selected measures that would lead to progress toward important goals, such as decreasing hospitalizations and emergency department use, and improving clinical metrics such as blood pressure levels to national benchmarks. "We could all agree that that's where we wanted to end up," Labby says.

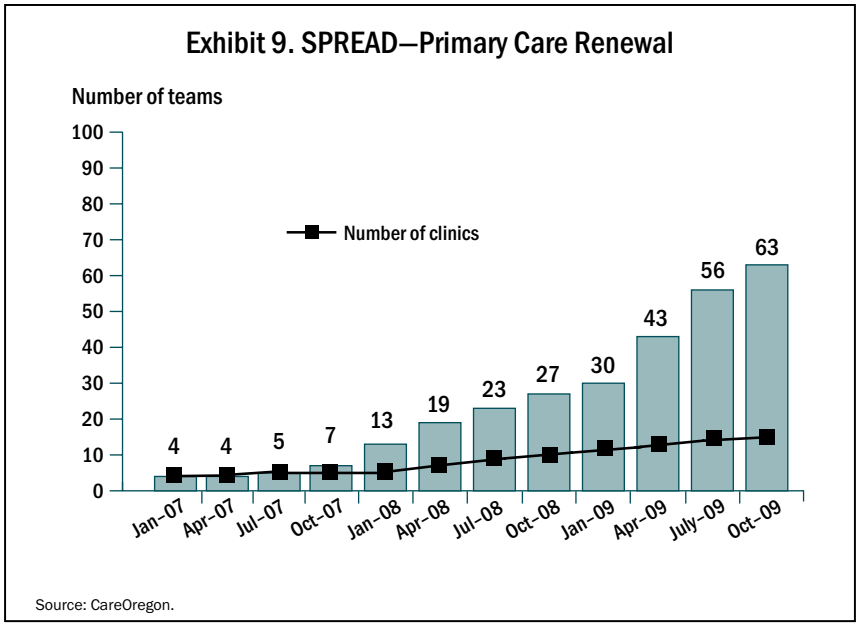
As a result of these discussions, CareOregon created a three-tiered payment system. The first tier rewarded providers for participating in the medical home collaborative, workgroups, and learning sessions, and for reporting data. The second tier paid providers for hitting targets on key metrics, including access to care and HEDIS clinical quality measures (e.g., percentage of active diabetic patients who had a hemoglobin A1c test in the last six months, percentage of female patients ages 21 to 64 who had had a pap smear in the last three years), and for full participation in the learning collaboratives. The third tier provided payment for decreasing ambulatory care–sensitive hospital admissions and emergency department visits and for achieving HEDIS clinical quality benchmarks at/or above the 90th percentile. Across all tiers, CareOregon made incentive payments of more than $942,000 to the six pilot sites in 2009 (Exhibit 8). For a typical clinic, this meant an additional $5 to $10 per patient per month. Those that reached the third tier would see a 15 percent increase in payment for primary care services on a per-member per-month basis.[17]

Integrating Case Management into Primary Care Medical Homes

To ensure that care management plays a significant role in the medical homes, CareOregon initially invested in training from 50 to 60 nurses, social workers, and medical assistants who were acting in that capacity in the medical homes. "We brought them together for a learning collaborative once a month for three to four hours . . . . [W]e did a bunch of group exercises, envisioning what the new world might look like and how we might get there. We brought in expert teachers to teach about aspects of care management. We focused a lot on building the competency of self-management support for patients with chronic illness," Ramsay says.

Although the health plan received positive feedback about the curriculum, the training may have been premature, as many of the participants had a hard time applying their newly acquired knowledge in their home clinics. "The clinic environment hadn't shifted quite enough for them to be able to use those new skills and abilities. The old work was still there for them," Ramsay says.

In response, the health plan will invite a care team from each of the five primary care renewal organizations to a learning collaborative that will focus on a discrete set of care management principles, Ramsay says. The health plan also is experimenting with stationing one of its in-house care managers at a pilot site to determine if this approach is effective. "The clinics are just now beginning to develop strategies for specific subpopulations (e.g., people with diabetes and/or depression and those who have used the emergency



department or are being discharged from the hospital and are at high risk). They have now built enough of an infrastructure so that they can begin to successfully take this on," Ramsay says. In instances where there may be overlap of services by CareSupport and the PCR organization, CareSupport will work closely with clinic staff to coordinate efforts to determine who can best help the patient, Ramsay says.

To help, CareOregon sends primary care renewal sites reports on their high-risk members with diabetes or depression and patients who have recently been in the emergency department. Later in 2010, CareOregon will send the sites a report on patients who have been discharged from the hospital.

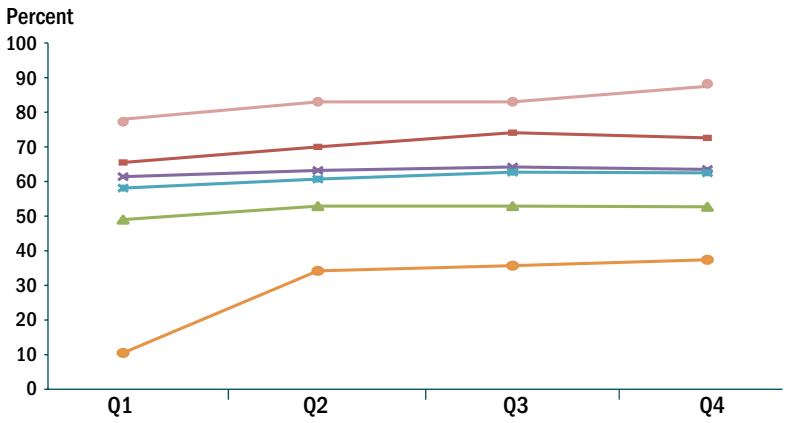
Spreading the Medical Home Model

From January 2007 to October 2009, the Primary Care Renewal project expanded its reach from a start-up group of four teams at the safety-net clinic pilot sites to 63 teams at 15 safety-net clinics affiliated with the five partner organizations (Exhibit 9). Together these 16 clinics care for 44,700 CareOregon members, including 18,463 adults (44% of all enrolled adults) and 26,307 children (31% of all enrolled children). Adults treated in these clinics represent those with the highest medical and social needs among CareOregon's membership, according to the health plan.

The health plan would like to see 200,000 Medicaid patients being cared for in a primary care medical home in Oregon over the next few years, a goal that will require broader participation by other Medicaid providers and health plans in the state. Toward this end, CareOregon is partnering with the Oregon Primary Care Association to serve as one of five regional coordinating centers for the Safety-Net Medical Home Initiative sponsored by The Commonwealth Fund and the Northwest Health Foundation. The project is led by Qualis Health and the MacColl Institute for Healthcare Innovation. The national demonstration project aims to help 68 community health centers in five states become high-performing patient-centered medical homes.[18] In Oregon, the partner organizations in the Safety-Net Medical Home Initiative together serve 189,000 patients.

As part of this project, CareOregon will facilitate the clinical transformation of primary care sites across the state by creating learning communities that provide training, identify best practices, and help sites overcome barriers to achieving their goals. "We are

Exhibit 10. Primary Care Renewal Pilot Sites
Quality of Care Metrics for 2009



	Q1	Q2	Q3	Q4
Pediatric immunizations	78%	83%	83%	87.5%
Diabetes patients w/HbA1c test	66%	70%	74%	72.6%
Hypertensive patients with blood pressure <140/90	58%	61%	63%	62.5%
Female patients with pap test within last 3 years**	61%	63%	64%	63.5%
Diabetes patients w/HbA1c < 8	49%	53%	53%	52.7%
Patients screened for depression screening within 1 year	11%	34%	36%	37.4%

Data represent a weighted six-month rolling average for six pilot clinic sites except as follows: *Quarterly immunization rates were reported by one clinic only.[19] **Pap testing was reported by five clinics.
Source: CareOregon.

participating in the Qualis program with a number of other safety-net organizations in order to help them move to the medical home model, both in terms of sharing what we know and in terms of learning how to provide meaningful assistance in this transformation," Labby says. Through this process, CareOregon hopes to identify:

- best practices;
- necessary foundational training;
- the benefits of on-site versus distance consulting and technical assistance; and
- how to engage leadership to build their capacity to lead change.

"One of the huge benefits of the Qualis initiative is the opportunity to network with and learn from other safety-net organizations around the nation," Labby says. "It creates a national learning network, which is just beginning to emerge."

TRIPLE AIM RESULTS

Population Health. The six pilot safety-net clinics participating in the Primary Care Renewal program have demonstrated improvements on health screenings and chronic care management metrics (Exhibit 10), which can lead to improved health outcomes. The following results represent the change in rates from the first quarter to the fourth quarter of 2009 based on a rolling six-month weighted average recalculated each quarter (which tends to smooth out improvements over time):

- a 10.8 percent increase in the proportion of diabetic patients receiving HbA1c testing to measure their blood sugar control;
- a 7.6 percent increase in the proportion of diabetic patients with blood sugar under control (HbA1c <8);
- a 7.6 percent increase in the proportion of hypertensive patients with blood pressure under control (<140/90);

Exhibit 11. Quality Metrics for Six Primary Care Renewal Sites: Fourth Quarter 2009

	No. of Clinics Reporting	Care-Oregon Target*	No. of Clinics Meeting Target	Q4 Range of Results	National Medicaid HEDIS 2009 Benchmarks	
					Average	90th Percentile
CHRONIC CARE						
Percent of diabetic patients who received HbA1c test	6	87%	1	58%–88%	80.5%	89.3%
Percent of diabetic patients with HbA1c <8	6	67%	1	39%–73%	44.1%	45.6%
Percent of hypertensive patients with blood pressure <140/90	6	52%	6	57%–91%	55.8%	66.6%
PREVENTIVE CARE						
Percent of female patients with pap test in last 3 years	5	75%	0	51%–71%	66.0%	79.5%
Percent of patients screened for depression within 1 year	6	50%	3	42%–75%	NA	NA
Percent of pediatric patients fully immunized by age 2 (HEDIS Combo 3)[19]	1	77%	1	88%	67.6%	80.6%

HEDIS = Healthcare Effectiveness Data and Information Set. *CareOregon targets are based on national benchmarks and were agreed to by the Primary Care Renewal Steering Committee. The committee reached consensus on targets when national benchmarks were unavailable.
Sources: CareOregon and the National Committee for Quality Assurance.

- a 3.4 percent increase in the proportion of female patients screened for cervical cancer (pap test within three years) among five clinics;
- a 12.2 percent increase in the proportion of young children who were up-to-date on immunizations at one clinic[19]; and
- a more than threefold increase in the proportion of patients screened for depression within one year.

A report for the fourth quarter of 2009 indicates that the best-performing sites are exceeding the targets set by CareOregon and national benchmarks on several measures (Exhibit 11). Despite these gains, these results indicate that significant work remains to be done to realize the potential of the medical home model for improving care for patients with chronic conditions.

To help ensure that implementation of the CareSupport program did not have a deleterious effect on patient health, CareOregon conducted a one-time survey of patients' health status and health-related quality of life using the Health Utilities Index–Mark 3 (HUI3). The HUI3 instrument assesses the burden of disease using eight attributes: vision, hearing, speech, mobility, dexterity, cognition, emotion, and pain/discomfort.[20,21] The HUI3 overall utility function score represents a continuum ranging from death to perfect health (plotted on a scale from 0 to 1). At baseline the CareSupport intervention cohort had much worse functioning than the general U.S. population (e.g., mean HUI3 scores of .19 for women and .20 for men compared with U.S. average scores of .83 for women

and .85 for men), reflecting their status as a high-risk population.

The results suggested that rather than harming health-related quality of life, the program may have had a slightly positive effect. Four months after enrollment into CareSupport, patients had a mean change in HUI3 score of .05, which CareOregon considers clinically important, though the difference was not statistically significant relative to the mean change in score of those not enrolled in CareSupport. Two attributes demonstrated marked improvement over the four-month period: emotion (mean change was statistically significant) and cognition (mean change was clinically important). "This assessment had face validity because much of what the CareSupport program provides is emotional support, connection to a medical home and mental health services, if necessary, and problem-solving coaching, which can improve decision-making—one dimension of the HUI3 cognition score," Ramsay says. She notes that because of the high disability burden of its population, a more reasonable goal may be to slow the decline in the score or stabilize it, rather than improve it.

In addition, CareOregon has just begun to use the Patient Activation Measure, which quantifies the attitudes, knowledge, skills, and confidence that patients have in managing their own health.

Patient Experience. CareOregon surveys patients in the medical homes to assess their experience of care. The mean score for health care teams, on a scale of 0 to 10 (with 10 being the best care team possible), was 8.41. When asked whether they "usually or always" got all aspects of patient-centered care, 80.2 percent of patients responded yes, while 19.8 percent responded no.[22]

CareOregon instituted two new measures of access to gauge patient experience in medical homes (Exhibit 12), neither of which could be easily measured by the clinics at the start of the pilot program. Nevertheless, by the fourth quarter of 2009, four of the six clinics were able to achieve the target of 80 percent of patients seeing a provider on their own care team.

> "People didn't know how to improve."…"We thought that people needed to know the technical skills to do change."
>
> David Labby, M.D., Ph.D.,
> CareOregon's medical director

However, none of the four clinics reporting results were able to meet the target of scheduling appointments for 65 percent of patients within three days of their request.

Improving performance on these types of access metrics requires the clinics to tackle a complex set of issues, according to Labby. "Historically, safety-net clinics have not focused on these types of access measures for many reasons, including the level of effort involved in reducing the backlog of appointments, which needs to happen before access to the same providers and appointments within zero to three days can be proactively implemented."

CareOregon will start tracking the number of days between discharge from a hospital and the first follow-up appointment with a primary care physician for patients in the CareSupport program, as well as patient satisfaction ratings.

Per Capita Cost. Within the CareSupport case management program, CareOregon reports that it has observed a $400 per member per month cost savings in the year following a member's enrollment (Exhibit 13). This amounts to approximately $5,000 per member per year, or between $5 million and $7 million per year in total cost savings. The CareSupport program has an annual budget of $2 million that does not include the cost of care provided to members.

Analysis of costs among dual-eligible CareOregon members suggests that the Primary Care Renewal program reduced costs below what they otherwise would be for these members (Exhibits 14 and 15). The analysis looked at patients who were

Exhibit 12. Access Metrics for Six Primary Care Renewal Sites: Fourth Quarter 2009

	No. of Clinics Reporting	Target	No. of Clinics Meeting Target	Q4 Range for Results
Percent of appointments (per month) when patients see provider on own team	6	80%	4	52%–89%
Percent of appointments (per month) scheduled within three days of the request	4	65%	0	27%–46%

Source: CareOregon.

dual-eligible for Medicare and Medicaid during two periods: the 17-month start-up period from January 2007 through May 2008 and the subsequent 16-month period of spread from June 2008 through September 2009. Between these periods, the median of monthly costs of care fell by 9 percent, or $89, among those treated in medical home pilot clinics, in contrast to a slight increase among those treated in other sites. Approximately two-thirds of that decrease was attributable to a decline in inpatient cost and utilization.

CareOregon did not observe the same pattern of reduced cost or utilization between the medical home pilot sites and non-medical home pilot sites for the Medicaid population during this time period, but the plan wouldn't necessarily expect to see such a shift so soon in the process of transformation, according to Debra Read, M.P.H., CareInnovations program evaluation coordinator at CareOregon. Read is hesitant to attribute the shift in cost for the dual-eligible population entirely to the medical home initiative, as other factors such as CareSupport interventions may have contributed to the results. Hence, additional experience and data are needed before definitive conclusions can be drawn about the costs of the program for both populations.[23]

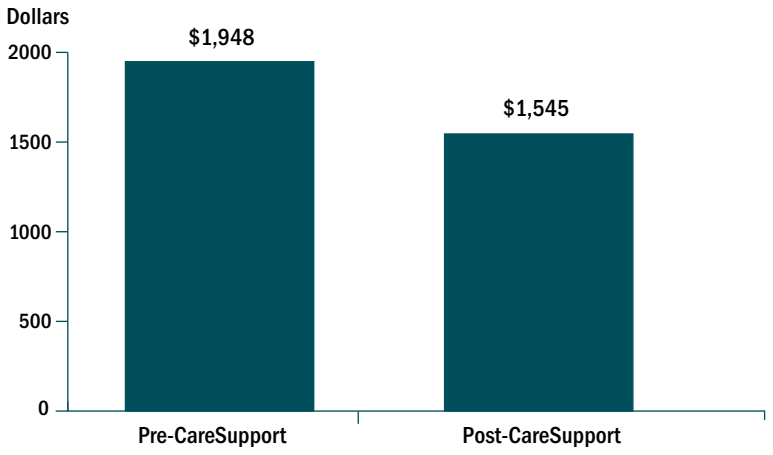
Insights and Lessons Learned

The Triple Aim initiative has helped CareOregon refine its approach to care management for vulnerable low-income patients and improve its partnership with safety-net providers to build primary care-based medical homes. It did so by helping CareOregon identify and overcome barriers to measuring and achieving its aspirational goals. Not only did CareOregon need assistance in refining its methods for collecting and analyzing data, so too did the clinics that joined the patient-centered medical home initiative.

Participation in the patient-centered medical home initiative requires a significant commitment of time and effort as primary care sites work to adopt and transition to new care models. Establishing a compelling vision and model for change and then empowering primary care clinics by providing improvement resources, consensus-based financial incentives, and freedom to innovate in achieving goals helped to persuade providers of the worthiness of the effort, though many would acknowledge the program—especially health information technology modifications it requires—consumed more time than they initially anticipated.

Nonetheless, by facilitating this process of change, CareOregon has built a collaboration that is transforming the role of the health plan to promote greater system integration in a way that appears to be benefitting patients, providers, and payers. "The

Exhibit 13. PMPM Cost for Members Enrolled in CareSupport



Source: CareOregon. Note: Average cost for CareSupport enrolled members (N=1991) during the time period of Jan. 1, 2007 and May 31, 2008. Pre-CareSupport = claims paid for 12 months prior to enrollment in CareSupport and Post-CareSupport = claims paid for 12 months following enrollment in CareSupport.

Triple Aim has strongly reinforced our commitment to helping build the capacity for change with the health care delivery system through education and technical assistance, or what the Triple Aim calls the 'learning system,'" Labby says.

While achieving its long-term goals remains far off, it has implemented critical components recommended by the Triple Aim initiative, including:

- Employing a focus on medically and socially complex patients;
- Redesigning primary care services and structures;
- Using predictive modeling techniques to ensure resources are deployed to high-risk individuals;
- Rewarding health care providers for their contributions to producing health; and
- Developing a system for ongoing learning and improvement.

One of CareOregon's goals is to use individual patient experiences to develop care management solutions for the population. But accomplishing this goal has required extensive training staff in competencies, such as motivational interviewing skills. "To develop some literacy with motivational interviewing…has required a complete culture change in our program," Ramsay says. It requires "leaving behind our close-ended clinically oriented assessment questions and adopting an open-ended spirit of inquiry with our members, which we have found time and time again results in deeper, richer, more meaningful information that we can use to help our members."

As the example of Lois shows (Exhibit 4), care plans developed through the CareSupport program may include interventions to help meet patient's nonmedical needs, such as assistance with transportation or help finding housing, when such actions are designed to result in improved health care outcomes. This example points out that a holistic and flexible approach is needed to achieve the goal of population health improvement for vulnerable populations, one that transcends the traditional medical model and expands the role of health plans and the limitations of the traditional health benefit design structure.[24]

Building practical improvement capacity and implementing the medical home pilot project has developed a greater sense of community and collegiality among participants that can help to spread best

Exhibit 14. Median of Monthly Costs per Dual-Eligible CareOregon Member Treated at Primary Care Renewal Pilot Sites Versus Other Sites: 2007–2009

	Jan. 2007–May 2008	June 2008–Sept. 2009	% Change
PCR sites	978.81	890.36	-9.0%
Non-PCR sites	987.84	999.45	+1.2%

Source: CareOregon.

practices. "If you want to know how to do care management for diabetes, you go to the Legacy Clinics, because they've been doing it for years and they know how to do it. If you want to know how to do [patient] empanelment, you go to Amit Shah at Multnomah County, because he's got that down. Everybody's got something they're good at, right? And so it really creates, I think, a comfort with each other, then a real respect among the organizations," Labby says.

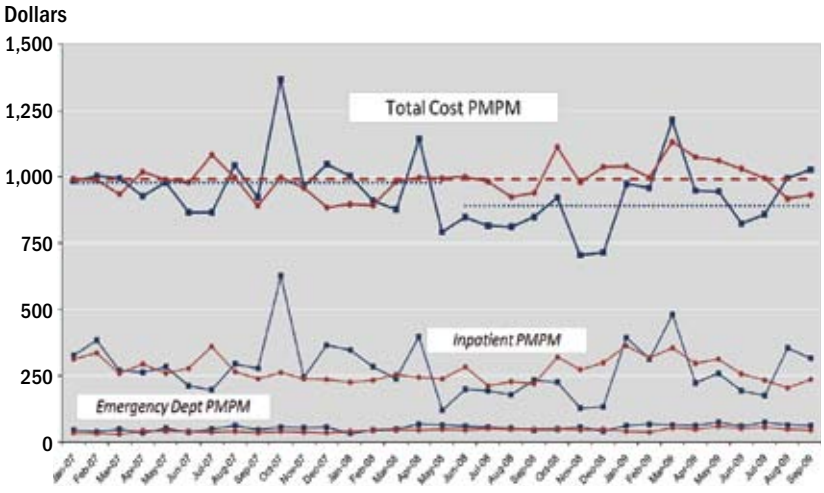
The broader the learning community is, the more flexibility it allows for providers and clinics to develop skills in the order each prefers. Some clinics may want to address open access first, while others prefer to work on empanelling patients to care teams. Having a large group of participants enables some clinics to act as mentors on some topics and seek guidance on others.

Ramsay considers the collaboration with sites one of the most valuable outcomes. "The partnership that we've developed with our network—particularly with these five [medical home pilot site] organizations—is very different from my perspective than it was, certainly, three of four years ago," she says. "That partnership is so vital to transformation, and it just seems to keep building. We keep building more and more neural networks between ourselves."

Indeed, the groups that CareOregon originally organized now meet independently to solve problems they identify in the community, including treatment for chronic pain. "They're not just coming to these meetings and talking to each other. They're visiting each other. They're calling each other. It's become a community practice. We don't try to control any of that, but it happens organically. It's very exciting to see," Labby says.

Despite the progress that CareOregon has made, several challenges to realizing the benefits of greater care integration remain. As an open network

Exhibit 15. Dual-Eligibles: Cost Per Member Per Month (January 2007–September 2009)



Note: PMPM = per member per month.

that contracts with independent providers, the health plan has difficulty ensuring coordination between specialists and primary care physicians, and between hospital and primary care for patients who are not in the CareSupport program or in one of the primary care medical home pilots. This lack of integration creates risks for poor outcomes. State Medicaid payment policy inhibits the ability to promote the integration of behavioral health and primary care. And the lack of formal integration impedes measurement. The plan lacks individual patient information on some key clinical metrics such as diabetes outcomes and blood pressure control that are measured through laboratory values or recorded in the medical record, for example.

CareOregon is likely to encounter other site-specific challenges as it attempts to spread this model to other practices in its network. Among those challenges are the lack of electronic health record systems to facilitate management of patients with chronic conditions at clinics and limited financial and leadership resources to devote to practice restructuring within safety-net clinics.

Another challenge is finding a way to extend the Primary Care Renewal program to include physicians in private practice. Greater payer participation in such programs will ultimately help, Labby believes. "One of our challenges is that we have at least 50 percent of our members seen in practices that aren't primarily Medicaid practices. So that if we're going to transform primary care, there has to be broader payer and even state engagement in being committed to new models. And fortunately, there is that conversation happening in the state. There's been a lot of work over the last two years around asking the question: What should the health system for Oregonians look like? And there's now even a multipayer initiative called the Health Leadership Task Force, which is gearing up to do some sort of medical home initiative that will involve the commercial plans. We can't help our members globally unless the community moves."

The interest is there from providers, Labby says. "That's why this whole multi-stakeholder, multipayer initiative is key. If we can get everybody pitching in, then we can help more practices," he says.

CONCLUSION

CareOregon's model for achieving the goals of the Triple Aim may have broad appeal for those serving the safety-net community. Its use of multidisciplinary care teams to coordinate care for members who are at the highest risk for poor health outcomes shows promise as a means of helping patients whose multiple co-morbid chronic conditions are exacerbated by social needs. CareOregon's efforts to develop and support a patient-centered medical home model that is viable and effective in safety-net clinics is already serving as a model for others to follow. Much of that work is the result of the health plan's unique collaboration with its providers and its financial and educational support of their efforts to reorganize care delivery models. Whether this approach can be translated to payers in competitive commercial markets remains to be seen.

For a complete list of case studies in this series, along with an introduction and description of methods, see *The Triple Aim Journey: Improving Population Health and Patients' Experiences of Care, While Reducing Costs,* available at www.commonwealthfund.org.

APPENDIX A. THE SOUTHCENTRAL FOUNDATION: MODELING THE TRIPLE AIM FOR HEALTH CARE ORGANIZATIONS

The Southcentral Foundation (SCF) in Anchorage, Alaska, is one of 15 health care organizations that served as prototypes for the Institute of Healthcare Improvement's Triple Aim initiative, which focuses on improving population health and the patient experience of care while also reducing or controlling increases in the per capita cost of care.

The Southcentral Foundation's care model—known as the Nuka Model of Care—demonstrates a method of redesigning primary care services to achieve the objectives of the Triple Aim. The nonprofit foundation, which provides primary care to approximately 55,000 Alaska Natives and American Indians, embarked on a redesign of its care model soon after taking over management of health care services from the federal government in 1998.

1) **Southcentral patients, whom the organization refers to as customer–owners, define the needs, goals, and values that direct the system's focus.** As a result of this customer focus, Southcentral providers place greater emphasis than they did before on identifying and addressing Alaska Native health priorities in cancer, obesity, domestic violence, child abuse and child neglect, substance abuse, dental care, and suicide prevention. Doctors and care team members are also trained to recognize that while they provide expertise, explain options, and make recommendations, it is the patient—the customer–owner—who is in control and makes the most critical decisions about his or her care.

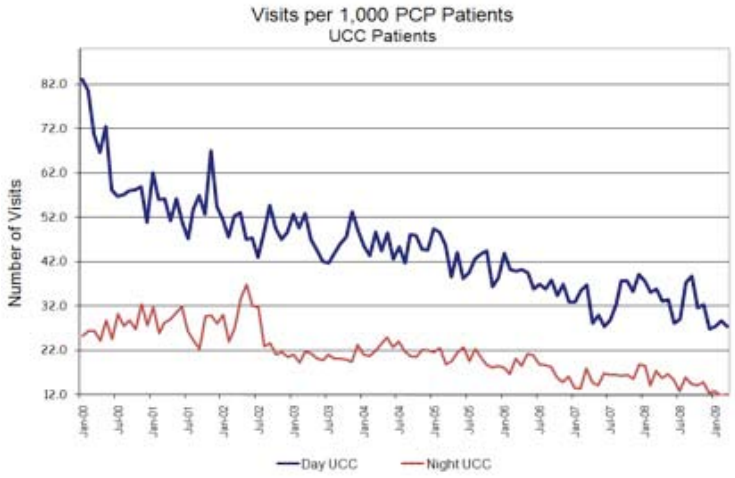
2) **Care is provided through a medical home.** Patients select a family physician, pediatrician, or internist who serves on a team with a full-time nurse case manager, one or two medical assistants, an administrative assistant, and a behavioral health specialist. The team works together to ensure that appropriate preventive care and management of chronic conditions are provided.

   The care team distributes work so that each member operates at the highest level of his or her credentials: nurses focus on care coordination, handle medication refills, chronic disease monitoring, and test result notifications. Physicians address acute complaints and deliver preventive medicine. Medical assistants handle point-of-care testing. Behavioral health consultants address acute mental health complaints and solve communication challenges, identify and help with parenting and family dysfunction, and support living optimally with chronic conditions.

3) **The system provides same-day access to patients.** Fifty percent to 80 percent of appointment slots are open at the start of a given day and teams are encouraged to handle what they can by phone or e-mail. Southcentral Foundation attempts to be as accommodating as possible; if a customer requests an appointment by 4 p.m. and can arrive by 4:30 p.m., he or she will be seen the same day. Prior to the redesign, 85 percent of care was provided in urgent care settings, waits for acute visits were hours long, and waiting times for nonurgent appointments took more than a month. In addition, few could identify their physicians, much less see their chosen physician.[25]

   Following care redesign, access to specialists also improved through a series of efforts, including the use of clearly-written interdepartmental service agreements, which lay out in detail the expectations between a given primary care practice and specialty group on such things as clinical standards and protocols that will be followed; methods for referring patients and communicating and reporting back about their care; and writ-

Exhibit A1. Visits by Southcentral Foundation Patients to Urgent Care Centers



Source: Southcentral Foundation.

ten commitments to providing service within defined response times. Performance measures hold both sides accountable for ongoing fulfillment of these commitments.

4) **Team members receive extensive training on Southcentral's philosophy and processes, including training in process improvement.** All 1,400 staff members participated in a three-day training, which helps to create a common culture and language around communication and values. New hires receive this training as well. Nearly 100 individuals have been trained as examiners for the National Malcolm Baldrige Quality Award, which helps to ensure that employees throughout the organization have the skill set required for creating and managing continual innovation and change. The care teams also receive feedback on the more than 75 performance measures that SCF tracks at the individual, practice, and system level. The performance data are shared in an "unblinded" manner, meaning integrated care team and provider data are shown by team and name and are compared with national benchmarks. Clinician mentors are used to ensure continual attention to improving outcome and process measures.

RESULTS

The redesign has improved the consistency and continuity of relationships between providers and customer–owners and their families; has provided same-day access to patients over a period of 11 years; and has led to better management of chronic conditions. As a result:

- Urgent care and emergency department visits dropped by more than 40 percent from 1999 to 2001 and have continued to decline by more than 25 percent since 2001. (See Exhibit A1.)
- Daytime urgent care visits dropped from 82 visits per 1,000 (primary care physician) customers in January 2000 to 27 visits per 1,000 in January 2009, a 67 percent decline. The visits declined by 40 percent in the first two years, which Douglas Eby, M.D., M.P.H., SCF's vice president of medical services, attributes to the implementation of same-day access and a well-designed primary care platform. He attributes subsequent

improvement to more effective partnerships between care teams and customers, which allow for better chronic condition management, better self-care, and a focus on difficult issues such as violence and substance abuse. (See Exhibit A1.)

- Primary care visits to the clinic have decreased by 20 percent, while phone and e-mail clinical interactions have increased significantly.
- Hospital days and admissions decreased by 25 percent within the first three years of the program; the numbers dropped an additional 20 percent over the ensuring eight years, resulting in a 40 percent decrease from 1999.
- Visits to specialists dropped by 60 percent from January 2000 to November 2005. The rate of visits to specialty clinics per 1,000 primary care patients dropped from approximately 285 visits to 115 visits. Note: the population Southcentral Foundation serves suffers from a disproportionate disease burden compared with other Americans. A variety of social factors, including poverty, unemployment, and cultural dislocation contribute to these disparities.[26]
- A survey of patients in each of the recent years has found a sustained 91 percent rated their overall care favorably.
- By implementing same-day access, the backlog of patients waiting for behavioral health services dropped from 1,300 to nearly zero in 2007—and the quality and appropriateness of referrals improved greatly.
- More than three-quarters of the quality measures for which national comparisons may be made are at or above the 75th percentile on HEDIS (Healthcare Effectiveness Data and Information Set) results reported by the National Committee for Quality Assurance.

Southcentral Foundation Facts

Employees: 1,400

Geographic service area: Southcentral Alaska, an area that includes Anchorage, the Matanuska-Susitna Valley, and 60 rural communities stretching well out into the Bering Sea. The area is more than 1,000 miles end-to-end and is 500 miles wide. Most of the rural communities are not on the road system and getting "weathered in" for days is not unusual.

Services provided: Primary care, obstetrics/gynecology, pediatrics, dentistry, optometry, physical therapy, behavioral health (including residential and day treatment programs), complementary medicine, traditional healing, home-based services, and education.

Annual outpatient visits per year: about 250,000 (including dental, optometry, etc.)

Number of physicians and dentists: 80

Number of nurse practitioners, physician assistants, and certified nurse-midwives: 50

Hospital: The Alaska Native Medical Center, a 150-bed hospital, which is jointly owned and managed by the Alaska Tribal Health Consortium.

Funding: 45 percent comes from an Indian Health Service Block Grant, 45 percent from Medicare, Medicaid, and private insurance. The remaining 10 percent comes from contracts, philanthropy, grants, and research.

Sources: Personal communication with Douglas Eby, vice president of medical services for the Southcentral Foundation; and K. Gottlieb, I. Sylvester, and D. Eby, "Transforming Your Practice: What Matters Most," *Family Practice Management*, Jan. 2008 15(1):32–38.

APPENDIX B. CARESUPPORT'S CLINICAL ASSESSMENT QUESTIONNAIRE

Name / ID# / DOB / Coverage / Referral Source. *ACG/DOS*
HCG / Date of Interview:

Clinical Assessment Questionnaire Interview

Introduce yourself. **Ask mbr how they prefer to be addressed?**

(i.e. Joe –Joseph; Kathy–Kathryn?)

Verify & Record Phone & Address:
Addr:
Ph:

Is this your own home, apartment? **Is it a facility?**

*** Beginning in October remind our members about Flu Vaccines. ***

A. Medical Home

We have you assigned to PCP_____, correct?
PCP:

And assigned to Clinic_____, correct?
Clinic:

Last appt date?
Next appt date?
How often?

Do you have any specialists or other Providers? What do you see them for?

Which provider do you usually see? Why?

Can you tell me about your relationships with your PCP / other Providers?

Do you have trouble getting to your Appts? Transportation?

If the clinic is closed and you need help, did the clinic give you a phone number to call for advice?

Did you have to stay in the hospital in the last year? What for?

How many times did you use the ED in the past year? What for?

Advanced Directive

Do you know what an Advanced Directive is? Have you made an Advanced Directive? If either answer is no, make sure member understands the following:

It is a legal document that addresses End-of-Life Issues; it is used in cases when you are too sick to speak for yourself about the medical care you want to receive. It helps the doctors and your families follow your wishes.

Would you like me to send you the paperwork to look over? Yes / No?

B. Self-Management

ADL's

What is your HT_____WT_____

Do you have any difficulties with any of the following activities?
Getting dressed? (Describe details here)
Bathing? (Describe details here)
Preparing meals? (Describe details here)
Eating—any dental problems? (Describe details here)
Shopping for groceries? (Describe details here)
Doing laundry? (Describe details here)
Chores: washing dishes, sweeping the floor? (Describe details here)
Difficulty going up or down stairs? (Describe details here)
Have you fallen in the past year? (Describe details here)
What caused the fall? Does your PCP know about it?
(Describe details here)

Medication List

How do you keep track of your medicines? Pill dispenser?

Do you have any trouble getting your meds filled? Any trouble with how your medicine makes you feel, side effects?

List Medicines: (Include Herbals, OTC.) **Why you are taking them?**

DME

Do you have any equipment such as a cane, walker, or a wheelchair?

Does any of this equipment need repair?

Is there any equipment that you feel you need?

Support

Now I'd like to understand how well you are managing over all.

Is your living situation stable or is it at risk in any way?

Are your utilities—heat/phone/electricity—okay?

Do you live alone, OR who lives with you?

In an emergency, how would you get help quickly?

What kind of contact do you have with friends and family?

If member has a caregiver, how many hours per week? Paid by state/self?

Do you have a State Caseworker? Know how to contact? Where ph# is?

C. Medical Status

Pain

When you take pain Rx—what can you do that you otherwise would avoid doing? (i.e., I can walk 6 blocks, or clean my kitchen.)

On a scale of zero to ten, where no pain equals zero, and the worst pain imaginable equals 10, how would you rate your pain without medicine? With meds?

w/meds	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
w/o meds	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Diabetes

Have you been diagnosed with Diabetes?

How often do you test your blood sugars? What is your glucose average?

What do you do if your glucose is high or if it is low?

If your glucose is > 400 or < 60, do you have someone at home who can help you?

Do you have enough supplies to test as often as your doctor wants?

When was the last time you had your eyes checked by an eye doctor?

When was the last time you had your urine tested?

Verify member checks feet for cuts & sores, and has been told it's safer not to walk around barefoot.

Cardiac

Have you ever been told that you had a Heart Attack, Congestive Heart Failure, High Blood Pressure, or High Cholesterol?

Do you get swelling in your legs, edema, and do you take a water pill?

Has your doctor explained the need to weigh yourself to check for water retention?

Are you having any chest pain? Has there been any change since your last visit to your doctor?

What was your last Blood Pressure reading?

Do you know your last Cholesterol reading?

Respiratory

Do you have any problems with your breathing? Have you been told that you have Asthma, COPD, Emphysema, or other breathing problems?

Do you smoke? Note issues with ETOH/Drugs here in this section:

What are your thoughts about quitting Tobacco?

Do you awaken coughing or wheezing at night? How Often?

Do you have trouble breathing if you lie flat in bed? How often?

Do you sleep in a recliner chair, or on pillows? (# of pillows___?)

How far can you walk or how many minutes can you walk w/o shortness of breath?

How far could you walk a year ago?

Do you use oxygen? Y/N ? how often ? hrs p/day ? flow rate ?

Do you use other equipment like a CPAP, BIPAP, or Nebulizer? How Often?

Do you have trouble falling/staying asleep, or sleeping too much?

D. Mental Health

Anxiety–GAD-2 Screening tool (GAD = Generalized Anxiety Disorder)

Staff: Don't read the following reference info (for CO staff only).

Anxiety-GAD-2 Screening Tool (In one study, asking these 2 questions from the 7 questions that make-up the GAD-7 scale, was as effective in screening for anxiety disorders as the entire GAD-7, which is a validated tool). JAMA April 23/30/2008 Vol 299, No. 16.

May I ask about your mood? Have you had any mood changes lately?

Do you have trouble concentrating on things, such as reading or watching TV?

Over the past two weeks have you been bothered by the feeling of not being able to stop or control worrying? (#___ of times?)

PHQ-2 Questionnaire (first 2 questions of the PHQ-9)

Over the last 2 weeks, how often have you been bothered by:

0	**1**	**2**	**3**	**Little interest or pleasure in doing things?**
0	**1**	**2**	**3**	**Feeling down, depressed, or hopeless?**

Rating Scale

Not at all	several days	>1/2 days	Nearly Daily
0	**1**	**2**	**3**

Do you see a therapist or counselor? On meds?

Are you satisfied with the way they are helping you?

If not receiving care, do you feel that you would like to see someone?

E. Conclusion

Are you taking any other medications that we haven't talked about?

Do you have a health goal that you'd like to be working on? **(MENU OF OPTIONS)**

What things do you do that you enjoy—hobbies/activities, etc.? **(AFFIRMATIONS)**

Concluding Thoughts

Identify tone—willingness to engage—strengths.

Actions Taken

Healthwise Handbook
Advanced Directive
Smoking Cessation Referral
Benefits Covered / Noncovered
Transportation Assist
Referral to Health Education
Flu Shot Education
Disease Self-Management
Advice Line Discussed
Eligibility Verification

Notes

1 D. M. Berwick, T. W. Nolan, and J. Whittington, "The Triple Aim: Care, Health, and Cost," *Health Affairs*, May/June 2008 27(3):759–69.

2 Information on CareOregon was gathered from interviews and email communication with organizational leaders and providers (listed in the acknowledgments section), documents provided by CareOregon, and presentations at the Institute for Healthcare Improvement seminar, *The Triple Aim: Optimizing Health Care Resources for the Good of a Population,* October 29–30, Boston, Mass. Other sources are noted below.

3 At the time of the Oregon Health Plan's creation, the program defined low-income as below the federal poverty level. The income eligibility was increased for children [200 percent of FPL] and pregnant women [185 percent of FPL].

4 T. Bodenheimer, "The Oregon Health Plan—Lessons for the Nation. Second of Two Parts," *New England Journal of Medicine*, Sept. 4, 1997 337(10):720–23.

5 While these providers do continue to treat CareOregon patients, their organizations are structurally independent of the health plan.

6 CareOregon estimated the prevalence of chronic conditions using Johns Hopkins ACG (Adjusted Clinical Groups) software, which generates chronic condition markers based on the presence of certain diagnoses, records of prescription medication dispensing, or both, in members' claims data.

7 Oregon Health Plan, *Evaluations and Comparative Assessments of Managed Care Plans*, http://www.oregon.gov/DHS/healthplan/managed-care/evaluation.shtml; Oregon Department of Human Services, *2003 CareOregon CAHPS Report*, May 2004.

8 http://www.improvingchroniccare.org/index.php?p=The_MacColl_Institute&s=93.

9 Non-modifiable risk factors vary by case; however, the most common reason a member's risk factors are considered non-modifiable is he or she is not engaged or willing to take necessary actions to stabilize or improve his or her health situation, according to Ramsay.

10 K. Davis and C. Schoen, *Health and the War on Poverty* (Washington, D.C.: Brookings Institution, 1978).

11 E. A. Coleman, C. Parry, S. Chalmers, et al., "The Care Transitions Intervention: Results of a Randomized Controlled Trial," *Archives of Internal Medicine,* Sept. 25, 2006 166(17):1822–28. A manual for using this model can be found at http://www.caretransitions.org.

12 G. Anderson, *The Benefits of Care Coordination: A Comparison of Medicare Fee-for-Service and Medicare Advantage, A Report Prepared for the Alliance of Community Health Plans* (Baltimore: Johns Hopkins Bloomberg School of Public Health, 2009).

13 Since 2007, the annual grants for clinics participating in Primary Care Renewal have ranged from a total of $1.3 to $1.5 million.

14 M. Murray and D. M. Berwick, "Advanced Access: Reducing Waiting and Delays in Primary Care," *Journal of the American Medical Association,* Feb. 26, 2003 289(8):1035–40.

15 For a history of efforts to overcome the challenges of the mental health "carve out," see: D. Labby, M. Spofford, J. Robison et al., "The Economics of Depression in Primary Care: Defragmentation in the Oregon Medicaid Market," *Administration and Policy in Mental Health and Mental Health Services Research,* Jan. 2006 33(1):39–42.

16 R. G. Frank and R. L. Garfield, "Managed Behavioral Health Care Carve-Outs: Past Performance and Future Prospects," Annual Review of Public Health, 2007 28:303–20.

17 For additional information on how CareOregon structured the payment incentives, contact the health plan.

18 Qualis Health, The Patient-Centered Medical Home Project, http://www.qhmedicalhome.org/index.cfm.

[19] The one clinic that reported the pediatric immunization measure does a complex monthly audit of the state immunization registry to identify and track clinic patients receiving immunizations outside of clinic visits. Having this process in place allowed the clinic to easily report this measure on a quarterly basis. Two other clinics providing pediatric care report this measure annually to the federal Health Resources and Services Administration. They did not find it cost-effective to report this measure on a quarterly basis for the purposes of the medical home initiative, Labby says.

[20] J. Horsman, W. Furlong, D. Feeny et al., "The Health Utilities Index (HUI): Concepts, Measurement Properties and Applications," *Health and Quality of Life Outcomes*, Oct. 2003 1:1–13.

[21] R. T. Meenan, D. Feeny, D. Labby et al., "Using Health-Related Quality of Life Assessments to Evaluate Care Support Within Medicaid," *Journal of Case Management,* 2008 9(2):42–50.

[22] Both surveys were internally developed and based loosely on Consumer Assessment of Healthcare Providers and Systems (CAHPS) instruments. They were administered using a convenience sample over a three-week period that began in April 2009 and ended in May 2009.

[23] During the evaluation period, CareOregon observed an increase in the cost of emergency department visits that was due in part to increases in Medicaid fees set by the State of Oregon, according to Read.

[24] Davis and Schoen, *Health and the War on Poverty,* 1978.

[25] M. Murray, T. Bodenheimer, D. Rittenhouse et al., "Improving Timely Access to Primary Care: Case Studies of the Advanced Access Model," *Journal of the American Medical Association*, Feb. 26, 2003 289(8):1042–46.

[26] http://info.ihs.gov/Disparities.asp.

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The aim of Commonwealth Fund–sponsored case studies of this type is to identify institutions that have achieved results indicating high performance in a particular area of interest, have undertaken innovations designed to reach higher performance, or exemplify attributes that can foster high performance. The studies are intended to enable other institutions to draw lessons from the studied institutions' experience that will be helpful in their own efforts to become high performers. It is important to note, however, that even the best-performing organizations may fall short in some areas; doing well in one dimension of quality does not necessarily mean that the same level of quality will be achieved in other dimensions. Similarly, performance may vary from one year to the next. Thus, it is critical to adopt systematic approaches for improving quality and preventing harm to patients and staff.