Information for a Healthy Oregon:

Statewide Report on Health Care Quality

September 2009

Partner *for* Quality Care

September 24, 2009

We are proud to present this groundbreaking, statewide report, Information for a Healthy Oregon. It is the most comprehensive report on the quality of primary care to date and establishes a baseline against which we can measure progress toward improving health care in Oregon.

Through the collective effort of hundreds of people, including patients, practitioners, employers and purchasers of health care, health plans and policymakers, we have built the necessary infrastructure to enable ongoing measurement and monitoring of the health care system's performance. This report is the product – and proof – of the cooperation of many dedicated individuals and organizations committed to improving health care quality and, ultimately, the health care system.

We know there are challenges ahead, but we ask you to pause with us for a moment to reflect on what we have already accomplished together:
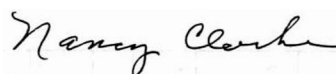
- Integrated claims information from Oregon's largest health plans, representing care given to 1.7 million patients
- Created the only existing comprehensive directory of primary care practitioners in the state, representing 308 clinics in 130 medical groups
- Produced 2,212 individual reports for adult primary care practitioners across the state
- Developed a secure website for primary care practitioners so they may see details about how numbers were computed and provide us with feedback

In early 2010, the *Partner for Quality Care* initiative will post scores for individual clinics on its website. New measures on pediatric care and generic drug usage will be included in the next round of data collection. Quality improvement activities will continue to support clinics in their effort in improving systems of care, and the initiative will also continue to work with employers and consumer groups to engage patients in being more involved and informed in their health care.

Thank you to all the physicians, nurse practitioners, clinic leaders, patients, employers and health plans that contributed to Information for a Healthy Oregon. We are indebted to the expertise, wisdom, time, and resources that people have donated to this initiative to improve the quality of health care in Oregon.

Ralph Prows, MD
Board President
Oregon Health Care
Quality Corporation

Nancy Clarke
Executive Director
Oregon Health Care
Quality Corporation

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Introduction

Information for a Healthy Oregon: Statewide Report on Health Care Quality is the result of a collaborative effort among many individuals and organizations to understand and improve the health care system. For the first time in Oregon's history, there is an aligned measurement system to determine whether specific guidelines for recommended primary care are met consistently. Although many medical groups, health plans and purchasers have considerable experience in measuring care quality within their own populations and systems, this community-wide effort adds substantial value. It means that valid information is available for a much larger segment of our delivery system. A collaborative, consistent approach facilitates the ability to benchmark and compare care so that high performance can be identified and spread.

Research demonstrates that providing information about variation in care quality can lead to improvement, which is the purpose of this measurement collaborative. This baseline report illustrates areas of care that Oregon can be proud of, as well as important opportunities for improvement. The data suggest that for some measures, the benefit design, delivery system, purchaser and plan support, and patient engagement are working well together. But other measures clearly need attention. For some measures results show sizeable variation between highest and lowest performing clinics. The data also demonstrate that quality measurement is much more statistically robust when performed collectively across health plans, compared to organizations measuring quality independently.

The Methods and Demographics sections, with extensive discussions of the processes and technical details, are included in this report for several reasons. First, a fundamental principle guiding the Oregon collaborative is transparency. Sharing the methodology for such things as assigning patients to a primary care practitioner must be fair and well-understand.

Health plans submitting data for this report:

- CareOregon
- HealthNet of Oregon
- Kaiser Permanente
- LifeWise Health Plan of Oregon
- ODS Health Plans
- PacificSource Health Plans
- Providence Health Plans
- Regence BlueCross/Blue Shield of Oregon

In addition to the health plans listed, the following organizations contributed funding:

- ClearOne Health Plans Inc.
- Northwest Health Foundation
- Oregon Coalition of Health Care Purchasers
- Public Employees Benefit Board
- Regence Foundation
- Robert Wood Johnson Foundation
- United Healthcare

Second, Oregon has pioneered important innovations that can be useful to other communities. For example, the use of a secure, interactive web-portal that allows practitioners to provide detailed feedback on data is the first in the nation. And third, the thorough discussion of the strengths and limitations of this data are important to build trust, assure appropriate interpretation of the results, and inform efforts to collectively measure and improve health care quality.

This report represents the tireless work of many individuals representing practitioners, patients, purchasers, and health plans. They have come together to build this because everyone has a role in improving health care quality. Health plans can design benefit packages that eliminate financial and other barriers. Employers and purchasers of health care can promote a healthy environment and choose benefits that support health. Clinics and practitioners can develop systems to track important services and effectively reach out to patients in need of additional care. Patients can be an informed and involved partner in their health care.

Quality of Care Results

The data in the results section of this report come from the administrative claims of eight of Oregon's largest health plans, representing care given to nearly half of Oregon's patients during 2007. The 11 measures of primary care quality use nationally endorsed specifications and are widely accepted as indicators of important primary care processes. This statewide report summarizes information that has been provided in substantially more detail to 308 adult primary care practice clinics in Oregon. The clinics included in this report have four or more adult primary care practitioners, for a total of 2,212 practitioners (physicians, nurse practitioners, and physicians assistants), which is about two-thirds of the state's adult primary care practitioners.

Although this first report does not include the smaller practices that predominate in rural Oregon, all regions of the state are well represented; 62 percent of clinics are located outside the Portland metropolitan area. National comparisons are provided to suggest how Oregon performance compares to the rest of the nation, though with an important caveat. Data comparable to the Oregon information is not available at the clinic level, so the national benchmarks are from the voluntary HEDIS reporting system for health plans.

Diabetes Care

Managing diabetes care for patients is critical to maintaining quality of life. Patients with diabetes who do not receive regular recommended services are are at increased risk for other problems such as heart disease, kidney disease, blindness, and loss of limbs. According to the 2008 Oregon Department of Human Services report, "The Burden of Diabetes in Oregon," the prevalence of diabetes has steadily increased to 6.3%, an increase of over 35% in the last ten years. It is estimated that one out of 15 adults has been diagnosed with diabetes, a rate higher than the national average. Given the prevalence of diabetes in Oregon and the complications associated with it, measuring the quality of diabetes care is an important step toward improving the quality of health care for Oregonians.
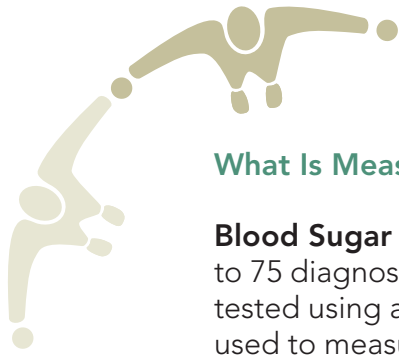
What Is Measured?

Blood Sugar Control (HbA1c) Test – Measures the percentage of patients ages 18 to 75 diagnosed with diabetes (type 1 and type 2) whose blood sugar control was tested using an HbA1c test by a practitioner at least once in 2007. HbA1c tests are used to measure blood sugar control over several months and give an indication of how well diabetes has been managed over the last two or three months.

Cholesterol (LDL-C) Test – Measures the percentage of patients ages 18 to 75 diagnosed with diabetes (type 1 and type 2) that had a test for cholesterol at least once during 2007.

Eye Exam – Measures the percentage of patients ages 18 to 75 diagnosed with diabetes (type 1 and type 2) that had an eye exam at least once during 2007. The eye exam is a retinal or dilated eye exam by an eye care professional (optometrist or ophthalmologist).

Kidney Disease Screening – Measures the percentage of patients ages 18 to 75 diagnosed with diabetes (type 1 and type 2) that had a kidney screening (urine macroalbumin) test or were treated for kidney disease (nephropathy) or who have already been diagnosed with kidney disease, at least once during 2007.

Why Are These Measures Important?

To effectively prevent and treat problems that may arise, patients, with the help of their practitioners, need to manage their diabetes by regulating their blood glucose and cholesterol levels, as well as monitoring eye and kidney functioning. Regular testing is necessary for managing diabetes properly.

Diabetes Care Exceeds National Average

For many years the Oregon community, including practitioners, health plans, public health, and the Oregon Diabetes Coalition, has made a concerted effort to improve care for diabetic patients. Graph 1 shows that median clinic scores that are higher than the national HEDIS median.
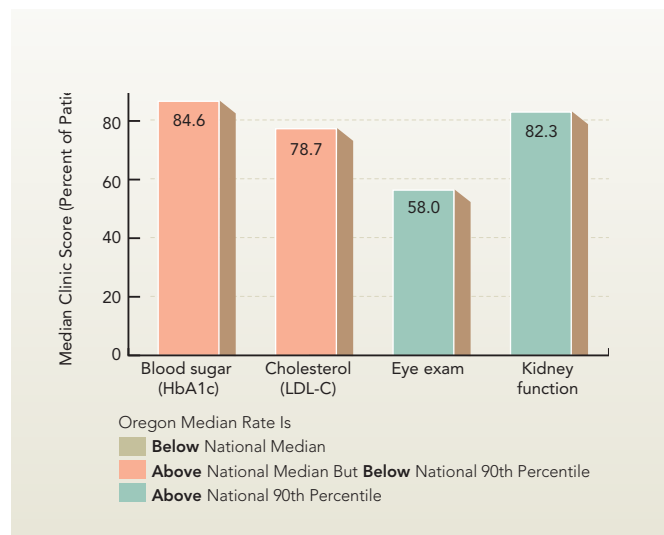
Graph 1: Oregon Diabetes Care Compared to National Standards

On average, clinics are assuring that over 80% of the patients with diabetes they see have their blood sugar control checked at least once a year. Clinics checked low density lipid cholesterol ('bad' cholesterol) annually for 76% of their patients. The clinic scores for the proportion of patients with diabetes receiving annual eye exams and kidney disease screening is better than the top 10% of health plans nationwide. However, across the nation, only one-third of patients receive recommended annual eye exams. Even though clinics in Oregon provide better eye exam care when compared to the nation, over 40% of patients with diabetes at Oregon clinics were still in need of an eye exam. This highlights an opportunity to improve the percentage of diabetes patients receiving recommended annual eye exams above the current 58%.

Table 1: Summary of Diabetes Scores and Benchmarks

Measure	Number of Clinics	Median Clinic Score	Lowest Clinic Score	Highest Clinic Score	National 90th Percentile	National Median (50th percentile)	ABC Benchmark*
Diabetes Measures							
Blood sugar (HbA1c)	214	84.6	50.0	96.4	84.7	78.1	93.5
Cholesterol (LDL-C)	214	78.7	45.7	94.2	80.0	73.2	90.3
Eye exam	214	58.0	18.5	84.5	45.9	33.9	78.2
Kidney function	214	82.3	55.9	97.8	79.6	64.7	94.3

For a detailed description of the ABC Benchmark see the Methods section.

Oregon clinics clearly perform well on diabetes care when compared to national benchmarks derived from health plan quality measures. This may reflect investments in quality improvement activities to improve diabetes care in Oregon over the last 10-15 years. Many health plans track diabetes care and issue care reminders. Medical groups are investing in information systems including electronic health records and registries and often begin quality improvement work with diabetes. Other important stakeholders, including the American Diabetes Association, Oregon Department of Human Services, Public Health Division, Acumentra, and independent practice associations, have led collaborative improvement efforts to educate and engage patients.

Opportunities for Improvement

While these Oregon diabetes measures compare favorably with national benchmarks, significant opportunities for improvement exist. Large numbers of Oregonians with diabetes did not receive these basic recommended services, especially for eye exams, and some clinics have surprisingly low performance on multiple measures. Continued work is needed by all stakeholders. Practitioners and clinics must continue to build reliable systems for tracking and delivering diabetes

care and patients can take increasingly active roles in self management. Future measurement and reporting initiatives will need to address not only if recommended services are done, but also how effectively blood sugar and LDL are being treated.

Other Chronic Conditions

What Is Measured?

Use of Appropriate Medications for People with Asthma – Measures the percentage of patients ages 5 to 56 with persistent asthma in 2006 and 2007 who were appropriately prescribed and who filled long-term controller medication for asthma during 2007. Patients are defined as having persistent asthma because of four or more asthma medication dispensing events, at least one emergency department visit with asthma as the primary diagnosis, at least one acute patient discharge with asthma as the principal diagnosis, or at least four outpatient asthma visits. The asthma definition for this measure is relatively restrictive causing small denominator sizes for many clinics.

Antidepressant Medication (short term – 12 weeks) – Measures the percentage of patients ages 18 and older diagnosed with a new episode of major depression during 2007 who were prescribed an antidepressant medication, and who remained on the medication for 12-weeks after the diagnosis as determined by prescription fills. The definition of a new major depression episode for this measure is restrictive, causing many patients treated for depression not to be included, and very small denominator sizes for many clinics.

Antidepressant Medication (long term – 6 months) – Measures the percentage of patients ages 18 and older diagnosed with a new episode of major depression during 2007 who were prescribed an antidepressant medication, and who remained on the medication for at least 180 days (6 months) as determined by prescription fills. The definition of a new major depression episode for this measure is restrictive, causing many patients treated for depression not to be included and very small denominator sizes for some clinics.

Cholesterol Test for People with Heart Disease – Measures the percentage of patients ages 18 to 75 who had at least one LDL cholesterol screening test in the year after they were discharged from the hospital for the following procedures or conditions: heart attack (acute myocardial infarction), CABG (coronary artery bypass graft), PTCA (percutaneous transluminal coronary angioplasty), stroke, or aneurysm.

Why Are These Measures Important?

These measures represent recommended care for whether patients with heart disease regularly check their cholesterol, whether patients with asthma receive proper medication to manage their condition, and whether people with major depression receive appropriate antidepressant medication for an adequate period of time. When properly managed and monitored, patients with these chronic conditions can prevent associated complications of the disease and reduce unnecessary costs such as hospitalization, resulting in increased longevity and increased quality of life.

According to the 2008 Oregon Department of Human Services report, "Burden of Asthma," approximately 9.9% of adults and 8.3% of children in Oregon have asthma. This means that more than 355,000 Oregonians are affected by the disease. In fact, Oregon has a higher burden of asthma than the U.S. overall and is among the top five states with the highest percent of the adult population with asthma. Medication can help patients who have asthma manage the condition and prevent symptoms, medical visits, hospital visits and death. Patients with chronic, persistent asthma should be taking long-term controller medications to manage the condition. Unfortunately, many patients do not understand that two types of medications are important for managing their disease, and only take the medication that makes them feel better immediately.

Major depression can affect eating, sleeping, overall health, and general outlook. People with depression often have a more difficult time managing other chronic illness, making it even more important that depression be identified and effectively treated. About 13 million American adults suffer from depression each year, and depression costs employers more than $30 billion annually in lost productivity (NCQA State of Health Care Quality 2008). Appropriate treatment can help most people who suffer from depression, and most patients with major depression and on prescribed antidepressants should be on medication for at least six months for appropriate treatment.

One in three American adults have some form of cardiovascular disease (heart disease) and two people die of cardiovascular disease every minute (NCQA State of Health Care Quality 2008). In Oregon, heart disease is the leading cause of death, accounting for 7,262 deaths or approximately 23% of the state's deaths in 2002. (National Vital Statistics Report 2004). Screening and managing blood cholesterol levels in patients with cardiovascular conditions are highly effective in reducing harm caused by this disease.
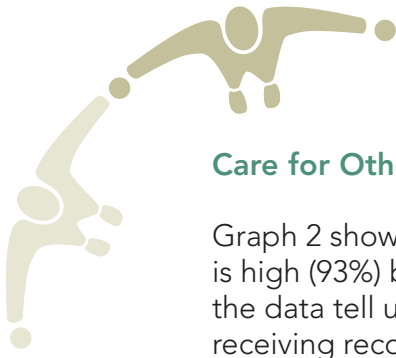
Care for Other Chronic Conditions Comparable to the Nation

Graph 2 shows that Oregon's performance on use of appropriate asthma medication is high (93%) but is below the national median. While Oregon's rate seems good, the data tell us that there are still patients identified with persistent asthma are not receiving recommended controller medications.

Oregon clinics' scores also are similar to the national median in adherence to treatment by patients with major depression (Table 2). Oregon's results are consistent with performance nationwide where 40 to 50 percent of patients diagnosed with major depression stop antidepressant therapy within three months of diagnosis. This represents an important area where care for people with depression and/or the accuracy of coding for major depression can be improved.

Graph 2 shows Oregon clinics' scores are similar to the national median in cholesterol screening for patients with heart disease. Overall, 84% of patients with a history of heart disease had their cholesterol checked at least once during 2007.

Median Clinic Score (Percent of Patients)

- Asthma medication: 92.6
- Depression medication 12 weeks: 68.3
- Depression medication 6 months: 48.8
- Heart disease cholesterol: 83.9

Oregon Median Rate Is

- **Below** National Median
- **Above** National Median But **Below** National 90th Percentile
- **Above** National 90th Percentile
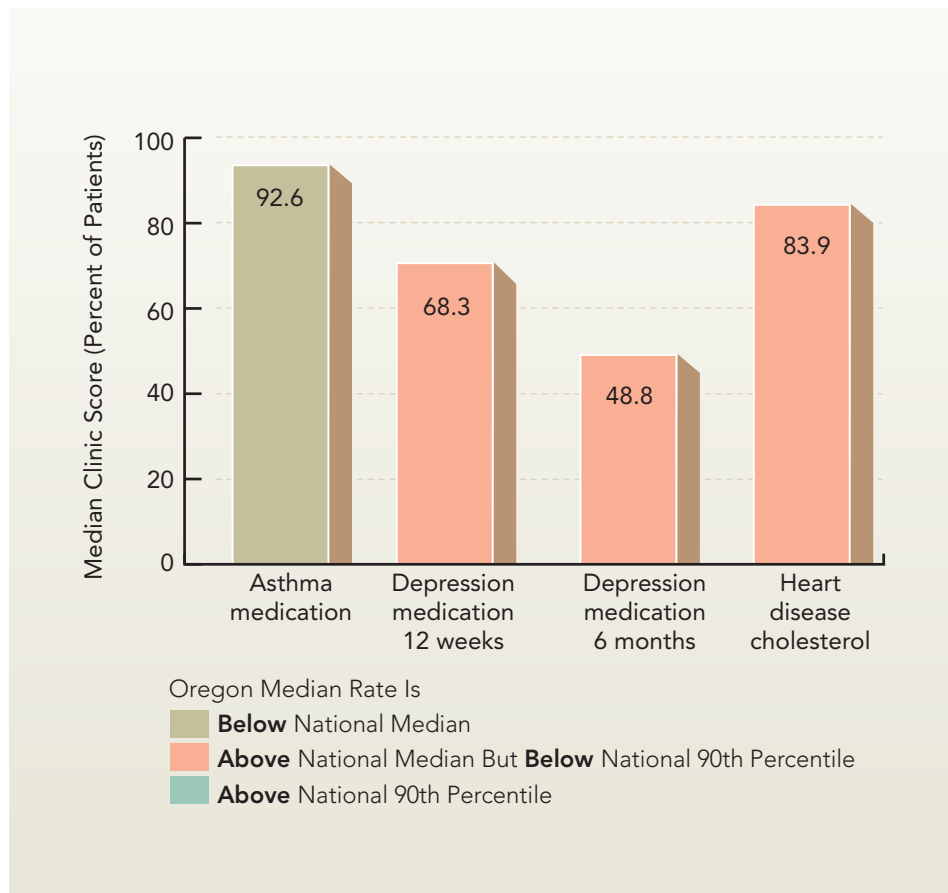
Graph 2: Oregon Chronic Conditions
Management Compared to National Standards

Table 2: Summary of Chronic Conditions Management and Benchmarks

Measure	Number of Clinics	Median Clinic Score	Lowest Clinic Score	Highest Clinic Score	National 90th Percentile	National Median (50th percentile)	ABC Benchmark*
Measures							
Appropriate asthma medications	59	92.6	76.0	100.0	95.5	93.0	97.8
Depression medications Short term (12 weeks)	43	68.3	48.6	84.0	70.2	63.8	82.9
Depression medications Long term (6 months)	43	48.8	32.3	64.0	55.1	47.3	67.5
Cholesterol test for people with heart disease	45	83.9	60.0	96.0	84.3	74.3	93.5

For a detailed description of the ABC Benchmark see the Methods section.

While diabetes has historically garnered the most attention in quality measurement and improvement, many other chronic conditions have significant morbidity, mortality and cost that can be reduced with effective management. These measures included in this report broaden the understanding of the care Oregonians with chronic conditions receive.

Opportunities for Improvement

Prescription fills for controller medications by patients with persistent asthma has some room for improvement. There may be many reasons patients are not filling appropriate asthma medication prescriptions, suggesting that practitioners, patients, health plans, and purchasers all have a role in improving these scores.

Maintenance of medication therapy for patients with major depression shows a large opportunity for improvement. There are likely many reasons to explain this performance that include inaccurate diagnosis or coding, practitioner and patient knowledge gaps regarding recommended care, patient choice to discontinue medication, and medication side effects. Improving care of major depression may be achieved by increasing the awareness of recommended care and use of tracking systems to support patients' continued use of antidepressant medication.

Cholesterol testing for patients with major vascular disease should be nearly universal and has significant opportunity for improvement by encouraging clinics and practitioners to increase their use of registries for tracking and outreach, and promoting better coordination of care among inpatient, primary and specialty care practitioners.

Quality of Care for Prevention

Preventive services help patients avoid disease or help find a disease early so it is easier to treat with less cost and improved outcomes. Patients sometimes do not receive or choose not to get recommended screening tests. *Partner for Quality Care* has measured the percentage of eligible patients who had screening tests for breast cancer, cervical cancer, and Chlamydia.

What Is Measured?

Chlamydia Screening – Measures the percentage of sexually active women ages 16 to 25 who had at least one test for Chlamydia infection during 2007.

Cervical Cancer Screening – Measures the percentage of women ages 21 to 64 who received one or more Pap smear tests to screen for cervical cancer during 2005, 2006 or 2007.

Breast Cancer Screening – Measures the percentage of women ages 40 to 69 who had a mammogram during 2006 or 2007.

Why Are These Measures Important?

Chlamydia is called a "silent" sexually transmitted disease (STD); three in four infected women and half of men do not realize they have the infection. Left untreated, Chlamydia can cause permanent organ damage and infertility. While 2.3 million Americans 14 to 39 years old have Chlamydia, less than half of sexually active women are screened for the disease. In 2002, Chlamydia infections remained the most commonly reported STD in Oregon (Oregon Department of Human Services, Sexually Transmitted Disease Program, Chlamydia Fact Sheet)

Cervical cancer can be prevented or detected early by regular Pap smear tests. Early detection is critical since cervical cancer rarely causes pain or symptoms until it is advanced and difficult to treat. Four of five women with a new diagnosis of cervical cancer have not had a Pap smear test in the last five years (American Cancer Society, Cervical Cancer, March 2008)

Breast cancer is the second leading cause of cancer deaths in women; an estimated 2,780 new cases were identified in 2006 in Oregon (Oregon State Cancer Registry, 2003-2007 Incidence Data Table). A mammogram can detect breast cancer years before the cancer can be felt. Catching breast cancer early can improve the quality of life and survival of affected women.
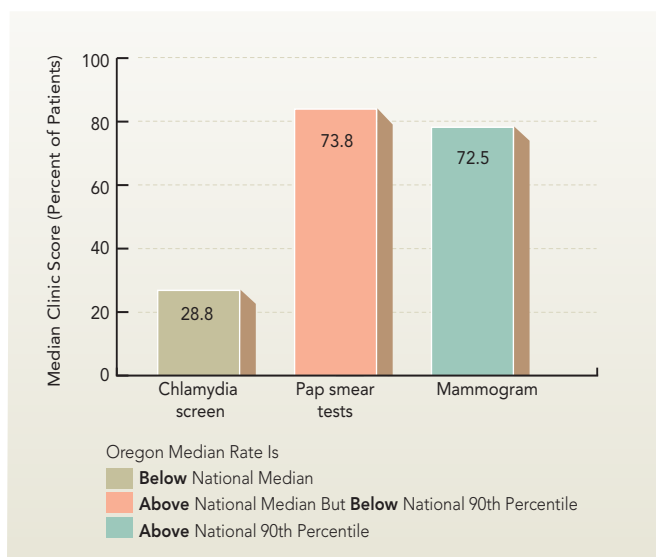
Mixed Results for Women's Health Prevention

The data show Oregon clinics perform well in the percentage of eligible patients receiving breast cancer screening (mammograms), and Oregon clinics perform similar to the national benchmark in percentage of eligible patients receiving cervical cancer screening (Pap smear tests). In Oregon, the data show that 73% of eligible women receive recommended Pap smear tests, suggesting that patients and practitioners are working together to ensure women get mammograms, and that most purchasers, employers and health plans design benefit packages to support this measure of prevention.

In stark contrast, Oregon's clinics' rates for Chlamydia screening are lower than the national median. This report identifies an important opportunity for improvement in the delivery and receipt of Chlamydia screening among young women ages 16-25 because more than 70% of eligible women with at least one clinic visit during 2007 did not receive the test. Reasons for these low rates on Chlamydia screening may include a lack of awareness and a lack of acceptance of the importance of the screening guideline among both patients and practitioners.

Oregon Median Rate Is

- **Below** National Median
- **Above** National Median But **Below** National 90th Percentile
- **Above** National 90th Percentile

Graph 3: Oregon Preventive Services Compared to National Standards

Table 3: Summary of Preventive Services and Benchmarks

Measure	Number of Clinics	Median Clinic Score	Lowest Clinic Score	Highest Clinic Score	National 90th Percentile	National Median (50th percentile)	ABC Benchmark*
Preventive Care Measures							
Chlamydia screen	143	28.8	1.5	75.9	44.5	32.9	52.5
Cervical Cancer Screen	261	73.8	47.4	92.2	78.5	73.8	83.6
Breast Cancer Screen	256	72.5	41.5	94.1	71.3	64.5	85.3

For a detailed description of the ABC Benchmark see the Methods section.
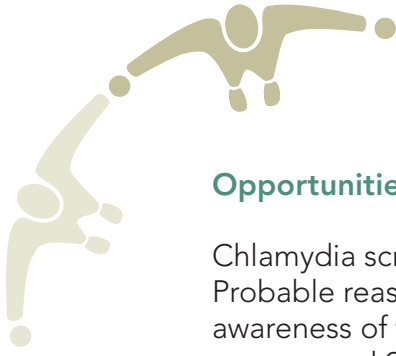
Opportunities for Improvement

Chlamydia screening performance offers a great opportunity for improvement. Probable reasons for this low performance include gaps in patient and practitioner awareness of the value of Chlamydia screening, the reluctance of practitioners to recommend STD screening to certain populations, and health plan benefit issues. In spite of extensive effort via patient education campaigns, health plan investment in quality improvement, and practitioner efforts to track and recommend cervical cancer screening, approximately one quarter of women did not receive a Pap smear test. Improvement in breast and cervical cancer screening rates are most likely to be improved by identification of patients lost to follow-up and better understanding of patient choice.

Variation of Care in Oregon

Excellence in the quality of care exists throughout the state, in large clinics and in small, in rural as well as urban areas. This report illustrates that there is room for improvement for everyone. By examining where variation exists, the initiative can see where education and quality improvement resources could be helpful and which high performing clinics can serve as models so that, ultimately, everyone receives high quality care.

Clinics' Quality Performance Varies

Clinic scores vary for each measure and for some measures there are large differences between the lowest and highest performing clinics. For example, the difference between the lowest and highest clinics' scores for Chlamydia screening is over 70 percentage points. The difference between the lowest and highest clinics' scores are over 20 percentage points for asthma and over 35 percentage points for heart disease. The wide variability may be the result of many

Graph 4: Range in Clinic Scores by Measure
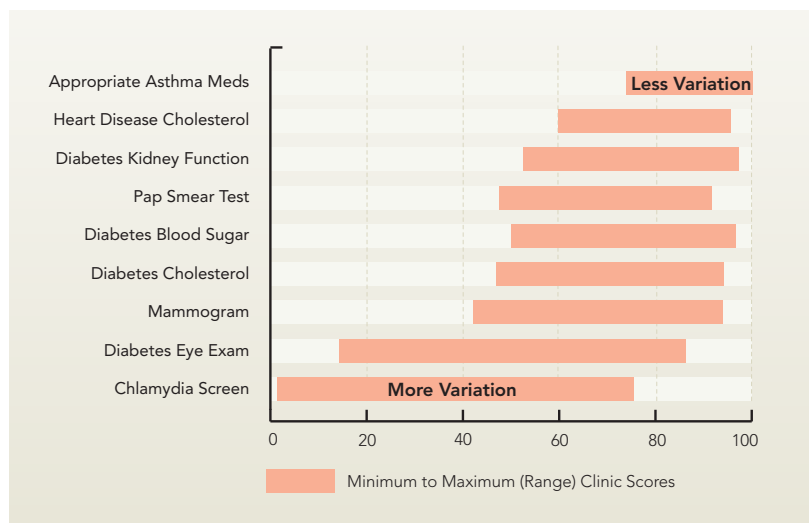
factors, including socio-economic status and patient preference. Variation likely also results from differences in practice characteristics such as practitioner awareness and investments in systems to measure and improve care.

Opportunities for Improvement

This variability indicates significant opportunity for improvement in many clinics. Additionally, despite the relatively high performance in diabetes care in Oregon, the variability between clinic scores reveals opportunity for improvement, particularly for ensuring all patients with diabetes receive recommended eye exams. Care for asthma and heart disease varies less between clinics. Variation likely results, in part, from differences in patient and practice characteristics. The high degree of variation presents a valuable opportunity for studying low performing practices to identify barriers to high quality care and for studying high performing practices to identify best practices for potential dissemination.

Graph 5: Distribution of Clinic Scores by Measure

Diabetes Blood Sugar Control (HbA1c)

Diabetes Cholesterol (LCL-C)

Diabetes Eye Exam

Diabetes Kidney Function

Breast Cancer Screen

Cervical Cancer Screen
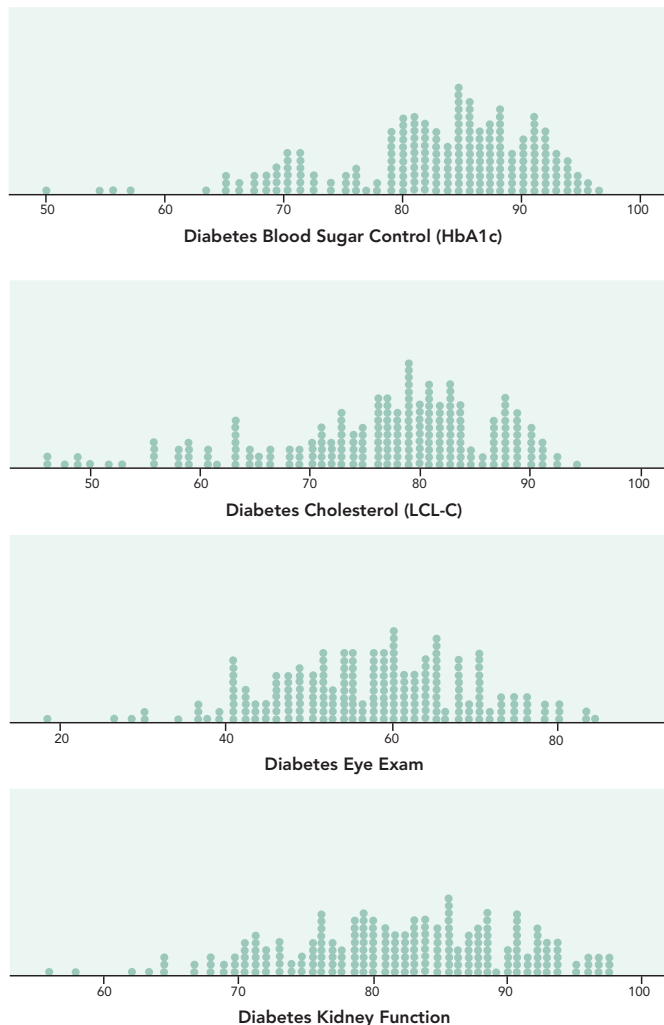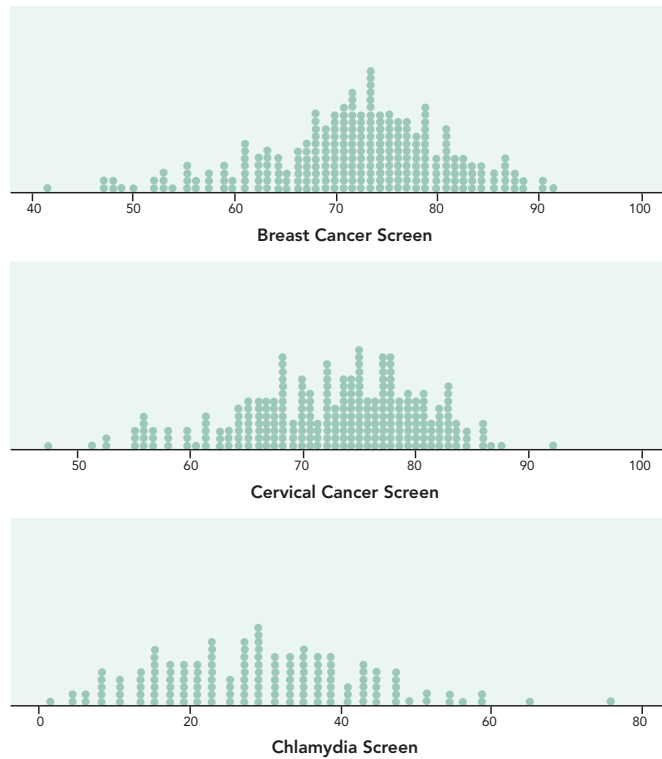
Chlamydia Screen

Health Care Quality by Region

Quality of care varies within different geographic regions of Oregon. For example, the clinics in the South Coast region have the highest levels of Chlamydia and breast cancer screening. Even though the range in care can be quite large across a measure such as Pap smear tests, many of the regions fall within a similar mid-range (Central, South Coast, Southern, and Willamette Valley all have similar Pap smear test rates).

Table 4: Variation in Clinic Preventive Scores by Region

Region	Mammogram		Pap Smear test		Chlamydia Screening	
	Number of Clinics*	Average Score	Number of Clinics*	Average Score	Number of Clinics*	Average Score
Central	24	70.7	24	71.0	8	34.3
Eastern	12	70.1	12	68.5	7	30.9
North Coast	9	68.7	9	64.1	2	20.6
Portland Metro	108	71.5	108	76.1	67	29.2
South Coast	8	73.7	8	70.7	3	40.7
Southern	28	69.7	29	70.8	12	25.1
Willamette Valley	67	73.6	71	70.4	44	29.3

*Number of clinics only includes clinics with at least 25 patients for the measure.

Denotes region with highest average
Denotes region with lowest average

Table 5: Variation in Clinic Diabetes Management Scores by Region

Score	Number of Clinics*	Blood Sugar Control Screen Average Score	Cholesterol Screen Average Score	Eye Exam Average Score	Kidney Function Average
Central	18	80.6	76.2	51.5	79.7
Eastern	11	80.3	72.3	49.3	82.4
North Coast	6	76.8	66.9	48.2	78.5
Portland Metro	93	84.7	78.7	60.9	83.8
South Coast	6	77.4	71.3	52.6	77.7
Southern	22	80.2	74.0	55.9	80.4
Willamette Valley	58	82.8	76.1	57.3	81.0

Denotes region with highest average
Denotes region with lowest average

For diabetes measures, the more metropolitan areas of the state, and especially Portland Metro, have higher scores on average. Nonetheless, some less dense areas in the state have above average scores on diabetes measures (e.g., Central). Eye exam rates are higher within Portland metro and the Willamette Valley corridor, which may be due to easier access to eye care services.

Opportunities for Improvement

The patterns in variation suggest that patient care varies across the state and within each geographic region. Variation in care is likely not due to geography alone. The variation across the regions of Oregon may be due to variations in patient socioeconomic status, access to and availability of care and services, payer type, patient out-of-pocket expenses, practice structure, and systems of care focused on improving the quality of care for prevention services and management of chronic disease. The high degree of variation in care between regions presents a valuable opportunity to learn about high performing clinics in each region to identify relevant and achievable best practices. Every region has an opportunity to improve by reducing the variation between clinics.

High Achieving Clinics

The ABC benchmark is used to identify performance levels already achieved by "best-in-class" clinics within Oregon. For each measure, 10 to 15 high achieving clinics were identified using the ABC benchmark standard (See Tables 1-3) derived from Oregon data. These clinics represent small and large practices in rural and urban Oregon. These "best-in-class" clinics will provide a better understanding of what works and is achievable in providing quality care. Learning more about these clinics and disseminating information to others will be future work for *Partner for Quality Care.*

Value of Collaboration

Better Together: Eight health plans' cooperation increases data accuracy

Oregon's largest health plans agreed to submit their claims data to a single, neutral data vendor for the purpose of computing scores for health care quality. As a result of having claims in the data set from multiple health plans, the health care quality scores generated are more reliable and useful. Graph 6 shows the number of clinics that individual health plans can reliably measure using just their own data versus the number of clinics that *Partner for Quality Care* initiative can reliably measure using pooled claims data. These clinics have 25 or more patients with diabetes in the measures. For example, if the largest health plan in Oregon used only its data to compute quality scores for the diabetes measures, it would have reliable scores for 145 clinics, whereas, the *Partner for Quality Care* initiative is able to report on 214 clinics reliably. In fact seven of the eight contributing plans would be able to report measures for less than 35 clinics. By creating comprehensive data in a community-wide initiative, more robust information about the quality of care in clinics is available.
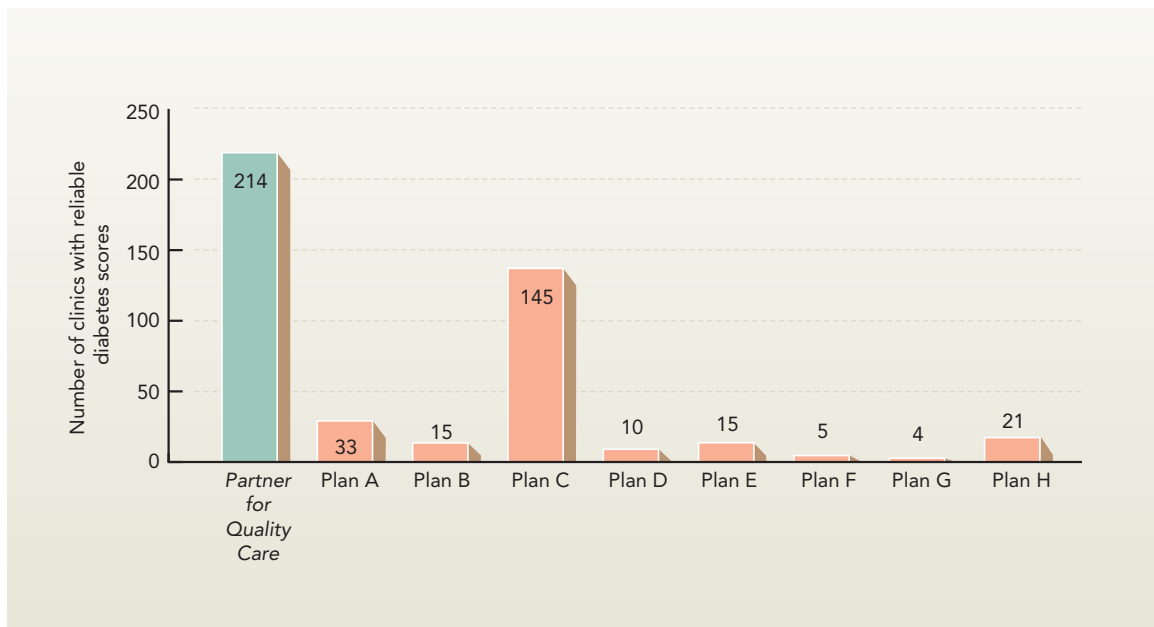
Graph 6: Collaborative Measurement vs. Individual Plan Measurement

Patients Seeing Other Practitioners

One step involved in processing administrative claims data requires assigning each individual patient to a primary care practitioner included in the *Partner for Quality Care* directory (See Methods for a detailed description of this process). Frequently, it is not possible to attribute a patient to a primary care practitioner. This may happen for many reasons including: the patient only receives care from specialists or from emergency rooms; the patient's primary care practitioner works in a practice with less than four practitioners, and therefore, is missed in this data; or the patient saw a practitioner who is no longer practicing. The table below shows rates for the patient population including both patients who are attributed and those un-attributed to an adult primary care practitioner in this data.

Un-attributed patients had lower scores on every measure except Chlamydia. Many of the un-attributed patients likely saw specialists or do not have a primary care practitioner managing their prevention and chronic disease. Un-attributed female patients could be receiving gynecologic care from family planning clinics and obstetrics-gynecology specialists who may be more aware of the recommended guidelines for Chlamydia screening. Examining further characteristics of un-attributed patients may shed light on aspects of the delivery system that are barriers to providing quality care and inform planning for "medical homes."

Table 6: Comparison of Patient Score by Attribution to an Adult Primary Care Practitioner

Measure	Attributed Patient Rates (%)	Un-Attributed Patient Rates (%)
Diabetes Blood Sugar Control	86.5	74.1
Diabetes Cholesterol Screen	81.0	67.9
Diabetes Eye Exam	63.9	46.3
Diabetes Kidney Function	85.2	78.1
Asthma Medication	91.8	90.4
Depression Medication – Acute (12 weeks)	67.1	66.3
Depression Medication – Chronic (6 months)	46.9	46.2
Heart Disease Cholesterol	80.0	74.2
Chlamydia Screen	27.9	29.6
Cervical Cancer Screen	75.3	67.9
Breast Cancer Screen	74.2	62.4

Conclusions

Information for a Healthy Oregon: Statewide Report on Health Care Quality is the result of a collaborative effort to understand and improve Oregon primary care health systems. This baseline report provides the first multi-plan assessment of whether specific guidelines for recommended primary care are met consistently. Three conclusions are important to call out.

First, Oregon has much to be proud of in the quality of care delivered, but also room to improve. The data suggest that for some areas of care Oregon exceeds national averages (e.g., several diabetes measures), and for others, Oregon's health systems are underperforming (e.g., Chlamydia screening). Second, the data do not suggest that there are large differences in the quality of care based on geography. However, data do reveal that a high degree of variation exists among clinics. While a number of factors may contribute to the variation in quality (e.g., access to and availability of care and services, patient socioeconomic status, practitioner infrastructure, etc.), the high degree of variation presents an opportunity to identify and learn how to improve the quality of care for all Oregonians. Finally, the data clearly demonstrate that a collaborative approach to measurement that pools information from multiple sources results in considerably more useful information compared to organizations measuring alone.

This report provides results for clinics. However, no individual practitioner or clinic, health plan, or patient is responsible for improving the quality of care. Rather, everyone has a role in improving health care quality, such as:

- Clinics develop systems to track important services and effectively reach out to patients in need of additional care. For example, a clinic uses a registry to contact patients in need of services or for improving blood sugar control.

- The employer/purchaser provides a healthy environment. For example, the patient completes a risk assessment and gets reminders and support to get care that works.

- Health plan benefits are designed to eliminate financial and other barriers. For example co-pays for mammograms are absent or small and excluded from deductible requirements.

- The patient does his or her part to be an informed, active and engaged partner. For example, a patient with asthma knows how different medications work to keep him or her healthy and partners with a practitioner to help manage the medications.

Understanding and spreading high performance requires examining and improving best practices of all stakeholder groups.

Clinic, Practitioner and Patient Characteristics

Quality Measured for Urban and Rural Clinics
Data include two-thirds of adult primary care practitioners

Information for a Healthy Oregon includes region-wide information about care provided in 2007 by Oregon's adult primary care practices with four or more practitioners. This report presents performance information for care provided by 2,212 practitioners (physicians, nurse practitioners and physicians assistants) in 308 adult primary care practice sites (clinics) from 120 medical groups located throughout Oregon (See Map). This represents over two-thirds of practicing adult primary care practitioners in Oregon. Medical groups range in size from 1 clinic to 38 clinics. To be included in this report, clinics must have at least 25 patients appropriate for a measure (e.g., for a diabetes measure, a clinic must have at least 25 patients diagnosed with diabetes and between 18 and 74 years old.) Characteristics of clinics, practitioners and insurance type of patients included in quality measurement reporting are listed in Tables 7-9.

Table 7: Clinic Locations by Region

Clinic Locations by Region	Number of Clinics	Percent
Central Oregon	30	10
Eastern Oregon	13	4
North Coast	12	4
Portland Metro	118	38
South Coast	7	2
Southern Oregon	40	13
Willamette Valley	88	29

Table 8: Practitioner Types in Clinics

Practitioner types in Clinics:	Number of Practitioners	Percent
Nurse practitioners and physician assistants	426	19
Physicians	1786	81

Table 9: Patient Insurance Types in Clinics

Patient Insurance types in Clinics:	Number of Attributed Patients	Percent
Medicaid	16,157	5
Commercial	313,586	95

North Coast 57 / 12

Portland Metro **1032** / 118

Willamette Valley **580** / 88

Central Oregon **161** / 30

South Coast **64** / 7

Eastern Oregon **64** / 13

Southern Oregon **254** / 40

Practitioners / Clinics
included in *Partner for Quality Care* Initiative
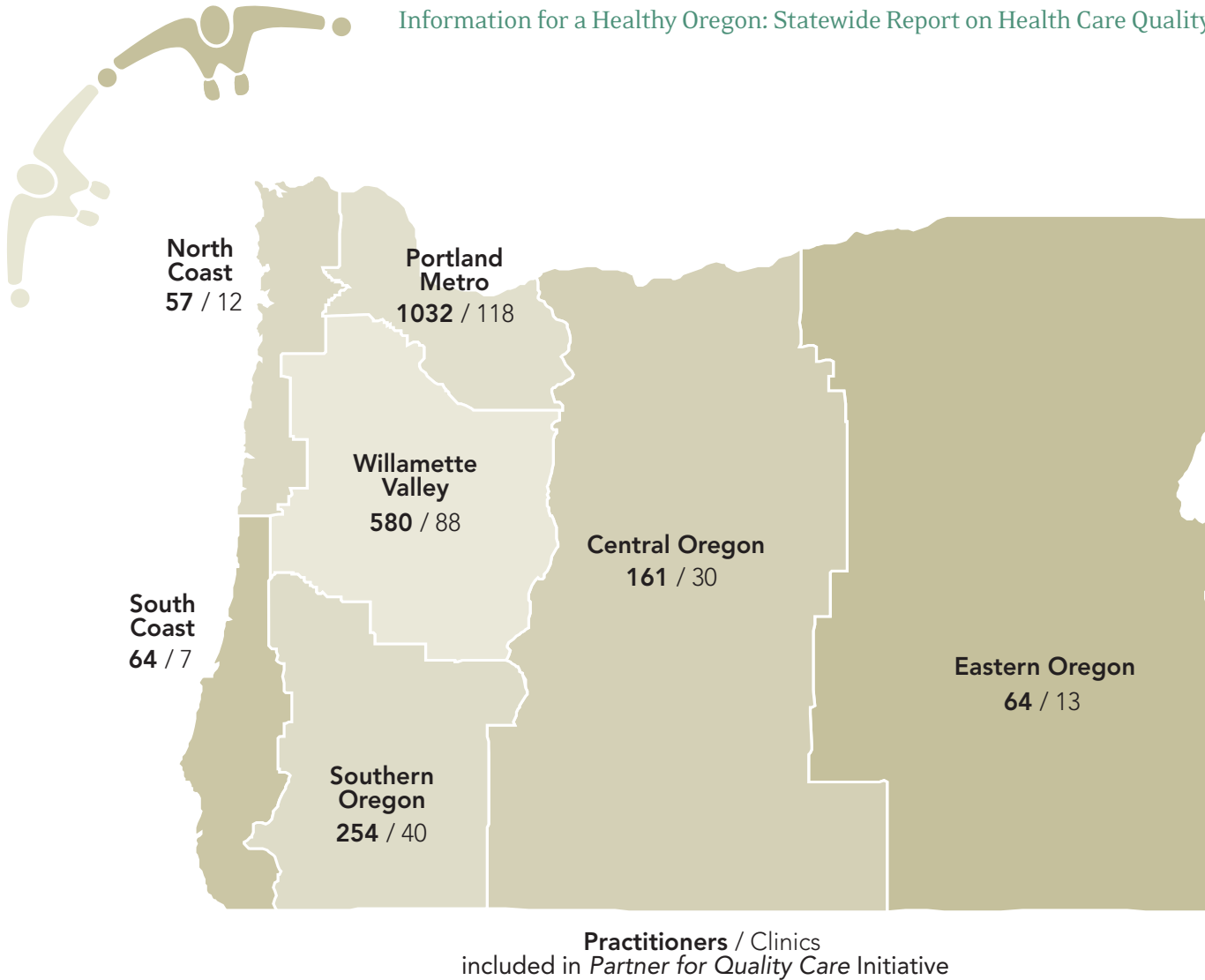
Map 1: Oregon Clinics and Practitioners by Region

Methods

Partner for Quality Care engaged in a multi-faceted approach to include recommendations, expertise and feedback from practicing physicians, nurses, and medical group administrators with a focus on improving the initiative and ultimately patient care. Many of the methods used were based on extensive work and recommendations by both the Clinical Work Group and Measurement and Reporting Team comprised of practicing physicians, physician leaders, nurse leaders, health plan analysts and administrators, and consumers.

Measures

The Measurement and Reporting Team identified principles for measure selection and the first set of Oregon measures. The measures are a subset of the national Ambulatory Quality Alliance Starter Set endorsed by both the Institute of Medicine and the National Quality Forum. The 11 measures are computed using the Healthcare Effectiveness Data and Information Set (HEDIS) specifications developed and maintained by the National Committee for Quality Assurance (NCQA). HEDIS measures of care are used by health plans and communities to describe achievement on many important dimensions of health care and service.

Information for a Healthy Oregon presents measures that represent the care received by certain patients within Oregon who have chronic disease or are eligible for women's health preventive screenings. This report includes measures for asthma, cardiovascular disease, diabetes, depression, and prevention screenings. These measures are based on administrative claims sent by medical groups to health plans for payment. Claims data tell that a medical test was billed, but not its value or outcome. Additional information from claims can be derived such as emergency room visits, hospitalizations, and prescription fills. The results reflect whether practitioners within clinics recommend care and the patients follow through with the recommendation.

For a more detailed description of the measures and the specifications used to compute the measures, see Quality of Care sections in this report and the Appendix. Measures will continue to be tested and added or deleted as the effort matures.

Calculating Rates

Rates were calculated at the clinic level and reported as percentages. A minimum threshold of 25 patients per clinic was established for inclusion in the measure calculation. Clinic level rates were calculated as follows:

$$\text{Rate} = 100 \times \frac{\text{Number of eligible patients who met the measure specification}}{\text{Number of eligible patients}}$$

NCQA's HEDIS definitions for the eligible population (denominator) consists of patients who satisfied all specified criteria, including age, diagnosis, continuous health plan enrollment, and event or anchor date enrollment requirements. Clinic level rates were first calculated for each clinic and then an overall clinic rate average for Oregon was calculated.

National Benchmarks

The National Committee for Quality Assurance (NCQA) annually publishes a report entitled The State of Health Care Quality. Nationwide, most health plans voluntarily report information on the achievement of their patients to NCQA creating a Healthcare Effectiveness Data and Information Set (HEDIS). HEDIS measures of care are used to describe achievement on many important dimensions of health care and service. Oregon's clinic-level medians are presented and compared to national HEDIS medians (50th percentile) and national top 10% (90th percentile) from 2007. The benchmark rates include only administrative claims data. Comparing all Oregon clinics to a benchmark set by a data system that represents voluntarily participating health plans is not ideal. However, it is the only large database available at this time.

Achievable Benchmark of Care (ABC)

The ABC benchmark, developed at the University of Alabama at Birmingham, indicates the mean rates of best performing Oregon clinics providing care to at least 10% of the patient population. The achievable benchmark for each measure was calculated using data from this initiative. The ABC provides an objective method for identifying benchmark performance levels already achieved by "best-in-class" clinics within Oregon. For detailed information, see the website: http://main.uab.edu/show. asp?durki=14503.

Practitioners

The Quality Corp medical director oversees the quality measurement and reporting process and quality improvement activities of the initiative. While all committees include a representative from each stakeholder group, the initiative worked hard to involve practitioners in the decisions that most affected them. Four listening session with over 40 physicians and clinic managers were conducted to get feedback on the measurement process, report design and distribution. Additionally, physicians and other primary care practitioners are represented at all levels of decision-making, and include representation from these professional organizations:

- Oregon Medical Association
- Oregon Academy of Family Physicians
- Oregon Chapter of the American College of Physicians
- Medical Society of Metropolitan Portland
- Oregon Center for Nursing
- As well as several medical groups and independent practice associations (IPAs)

Practitioner Directory

Partner for Quality Care worked with medical groups to create an Oregon practitioner directory that includes rosters of physicians, nurse practitioners and physician assistants and maps them to the clinics and medical groups where they practice. *Partner for Quality Care* used this medical group-supplied information to link practitioners to the appropriate clinic(s) to create clinic-level and medical group-level results. In Information for a Healthy Oregon, a clinic is defined as a doorway or place with a physical address that patients identify as where they receive care.

Practitioner Reports for Quality Improvement

Medical group managers, quality improvement directors and/or medical directors were identified to receive reports and updates from the initiative. In response to feedback from practicing primary care practitioners, reports and communications from *Partner for Quality Care* were sent to medical group administrators for initial review. Administrators were then asked to distribute reports to practitioners.

Results at the practitioner and medical group level were mailed to each medical group, but not shared with the public. Medical groups were given the option to view these data along with patient level information through a secure online system. This report includes summaries of clinic-level data for clinics with at least 25 patients included in a measure and therefore is not directly comparable to the medical group reports.

The physicians, nurses and medical group administrators who helped design this effort emphasized that providing clinic, practitioner and patient-level detail to medical groups is essential if claims information is to be valid, trusted and useful. In response, *Partner for Quality Care* and Milliman created a secure web portal to deliver results and patient-level information to medical groups and practitioners to improve the quality of patient care. Medical groups must go through a verification process to obtain a username and password to access the system to maintain the highest security and confidentiality. This secure portal and delivery of patient-level data derived from claims for quality improvement and better patient treatment is one of the first in the nation. Privacy and security of this information is of the highest concern. Reporting of this information complies with Health Insurance Portability and Accountability Act (HIPAA) regulations.

Patients

The data set began with 1.7 million patients who were members of at least one health plan. Of those, 20% were members of more than one plan during 2005-2007. Eligible patients had to be continuously enrolled in a health plan or managed care Medicaid during the measurement period with no more than a 45 day gap in enrollment and have at least one claim for medical care during that time period. Within the aggregate data, Quality Corp was able to cross-walk patients between multiple health plans during the time period. This feature increased the number of eligible patients counted as continuously enrolled in the initiative.

Despite having over 106 million billing claims aggregated together, some practitioners and clinics have only a small number of patients for some measures. In the aggregation process, patients were 'lost' (about 30%) because only patients who were continuously enrolled in health plans during the measurement period were counted. Additionally, some patients were not captured in the measures because: 1) their condition may not have been coded in a claim, 2) they are not members of a participating health plan, or 3) they don't meet the strict inclusion criteria for asthma and depression, or 4) they were treated by a practitioner in a clinic with less than four practitioners. The effect of these issues is even more striking when examining data from a single plan.

Continuous Enrollment

NCQA HEDIS performance measures require continuous enrollment in a health plan as part of eligibility criteria. These criteria were developed to ensure that patients are enrolled long enough to have an opportunity to receive quality care and establish a relationship with a primary care practitioner.

Excluding patients who did not experience continuous enrollment can result in enrolled patients being excluded from a measure. A 45 day gap in enrollment is allowed, but this may not adequately address enrollment concerns for some patients who cycle on and off health plans and Medicaid as their eligibility changes. The continuous enrollment criteria reduced the eligible patient population by approximately 30% depending on the measure.

Assigning Patients to Practitioners (Attribution)

Assigning the correct patients to practitioners was an important part of developing accurate quality measurement reporting. The general consensus among the *Partner for Quality Care* Clinical Work Group and Measurement and Reporting teams was that the method chosen must be fair, consistent and transparent. The Clinical Work Group discussed potential methods for attributing patients to an adult primary care physician (PCP).

Patients were assigned to a primary care practitioner contained in the *Partner for Quality Care* practitioner directory. If a patient only received care from a specialist, urgent care clinic, or a primary care practitioner in a medical group with less than four practitioners they were not assigned a primary care practitioner (unattributed). The logic model for attribution then follows the following formula:

- Use the health plan designated PCP when that exists and the information is kept up to date.

- If a PCP is not designated by the health plan, use the PCP the patient has seen the most across the measurement period (2005-2007).

- If there is a tie, use the most recently seen PCP. A patient will be attributed to a single primary care physician (PCP).

In addition, if a claim did not specify the correct CPT codes or practitioner, the patient was not attributed. Un-attributed patients for the cervical cancer screening measure might include healthy young women that only receive care from an Ob-gyn. Overall, there was a 45% loss of patients who were unattributed to a primary care practitioner (Table 10). This rate of loss is similar to the rate found in the California CPPI and Puget Sound Health Alliance initiatives. This presents an opportunity to explore the reasons patients are unattributed and how their medical care varies from the attributed group.

While this method attributes fewer patients overall (smaller denominator sizes), it resulted in physicians confirming 95% accuracy of the patients assigned to them.

The number of patients in each measure was further reduced due to the diagnosis requirements for chronic conditions and age ranges. Detailed descriptions of the measures are included in the Appendix.

Table 10: Summary of Patient Attribution to Practitioner by Measure

Measure	Attributed Patients	Un-Attributed Patients	Percent Un-Attributed
Asthma Medication	5,767	3,987	40.9
Depression Medication	3,945	2,182	35.6
Cholesterol Screen	3,921	3,292	45.6
Diabetes Measures	31,150	19,246	38.2
Breast Cancer Screen	126,719	94,082	42.6
Cervical Cancer Screen	144,341	113,956	44.1
Chlamydia Screen	13,900	149,88	51.9

Data

The clinic results included in Information for a Healthy Oregon are based on health care claims supplied by 8 health plans. By sharing data with *Partner for Quality Care*, the data include information from 106 million tests, diagnoses, and services provided by physicians and other practitioners in Oregon during 2005-2007. The data represents care provided to nearly 1.7 million commercial and some managed care Medicaid patients. Medicare data was not available. For future reporting rounds, *Partner for Quality Care* is working to increase the proportion of Medicaid patients.

Validation

Claims data were submitted by health plans and data suppliers to the data services vendor, Milliman. Milliman worked with each data supplier to validate the submitted data. There were two levels of validation – one that ensured the correct transmission of the data and another that ensured measure results were consistent between Milliman and the data supplier. Once validated, the data were aggregated for measure calculation.

Medical Group Pre-Testing

Four medical groups engaged in a data validation process before final reports to physicians were created and delivered. Random selections of data were downloaded for review. Over 225 records were compared with medical groups' electronic medical record systems. Milliman then reviewed the claims history for any patient records where a discrepancy was noted. Discrepancies were discussed with clinics and used to refine the methods for assigning patients to practitioners and some data coding. Measures were recalculated after validation for final review.

Advantages and Limitations of Administrative Claims Data

Claims data reflect information submitted by practitioners to payers as a part of the billing process. While not all medical care shows up in billing data, it does include useful information about diagnoses and services provided. Using claims data, for example, one can measure 'care processes' such as "What percentage of patients with diabetes were given an HbA1c test at least once during the measurement year?" However, one cannot measure actual blood sugar control such as "What is a patient's HbA1c level?"

While administrative claims data may have limitations for quality improvement, they provide basic information for a very large segment of the Oregon health care delivery network. For accurate measurement and comparison across the state, large

data sets are essential. The advantage of *Partner for Quality Care* is the claims are aggregated across the eight largest health plans in Oregon, assembling the most comprehensive set of claims to date. Additionally, the data include a comprehensive representation of medical groups with 4 or more adult primary care practitioners throughout the regions of Oregon.

Currently, claims data are the only type of high volume data readily available in electronic format. Claims data are also relatively inexpensive for assessing care quality relative to other data sources such as assembling structured data from electronic medical records or chart abstraction. Over time, *Partner for Quality Care* intends to expand the report to reflect data from other sources, such as electronic medical records and laboratory values.

Claims data also have limitations such as timeliness (data are from 2005-2007) and completeness. For example, data in this report do not include a clinic's entire patient population, such as uninsured patients, patients who pay for their own health care services, Medicare patients, or patients served by a plan or Medicaid provider that did not participate in the initiative. Fortunately, *Partner for Quality Care* is actively working with additional data suppliers to fill in some of these gaps for future reports. Some measures include only a small proportion of patients with these conditions. This is because the denominators for these measures were designed to include only patients with a very high likelihood of needing the services being measured; therefore the care of many of the patients with asthma, depression and vascular disease is not addressed by this measure.

Another limitation is that not every clinic within a given medical group was included in the calculations due to an insufficient numbers of patients for each measure (less than 25 for a measure). Further, small medical groups (with less than 4 practitioners) are not represented. Additional limitations with claims data in this initiative include: information that would exclude patients from the denominator for clinical reasons are not always available; and clinics have many billing workarounds that prevent accurate capture of data. Billing work-arounds sometimes include billing from a practitioner who was different than the person who actually provided care. For example, women who have had a hysterectomy with no residual cervix do not need pap smears and women with hysterectomies prior to 2005 were likely included in the denominator. We estimate this error lowers the measured cervical cancer screening performance and are currently working with a medical group to investigate further. With help from medical groups, the data will become more timely, accurate and useful for future reports. Despite these limitations, the initiative provides the most comprehensive quality reports available in Oregon because data suppliers have come together to pool data for quality improvement.

Appendix

Partner for Quality Care: Oregon Quality Measures Description

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
Asthma: Use of appropriate medications for people with persistent asthma	Dispensed at least one prescription for a preferred therapy during 2007. Preferred asthma medications include anti-asthmatic combinations, antibody inhibitor, inhaled steroid combinations, inhaled corticosteroids, leukotriene modifiers, mast cell stabilizers, and methylxanthines	**Asthma is defined by:** Patients 5–56 years of age during 2006 and 2007 who were identified as having persistent asthma because of at least four asthma medication dispensing events, at least one ED visit with asthma as the primary diagnosis, at least one acute patient discharge with asthma as the principal diagnosis, or at least four outpatient asthma visits. Exclude from the eligible population all members diagnosed with emphysema or COPD
Coronary Artery Disease: Cholesterol management (LDL test) for patients with cardiovascular conditions	Had at least one LDL-C test during 2007.	**Coronary artery disease is defined by:** 1. Patients 18-75 years discharged alive for AMI, CABG, or PTCA on or between Jan 1 – Nov 1 of 2006 ; or 2. Patients 18-75 years who had a diagnosis of any ischemic vascular disease (IVD) during the 2006 and 2007. Note: AMI and CABG are from inpatient claims only
Diabetes: HbA1C testing	Had at least one HbA1c test performed during 2007.	**Diabetes is defined by**: 1. Patients 18-75 years who were dispensed insulin or a hypoglycemic, anti-hyperglycemic on an ambulatory basis;
Diabetes: LDL-C test	Had at least one LDL-C screening test done during 2007.	2. Patients who had two face-to-face encounters with different dates of service in an outpatient setting or non-acute inpatient setting with a diagnosis of diabetes; or,
Diabetes: Eye exam (retinal) performed	Had an eye screening for diabetic retinal disease. This includes those diabetics who had a retinal or dilated eye exam by an eye care professional (optometrist or ophthalmologist) during 2007	3. Patients with one face-to-face encounter in an acute inpatient or emergency room setting with a diagnosis of diabetes. **Exclusions:** Patients with gestational diabetes, steroid-induced diabetes, or polycystic ovaries.
Diabetes: Evidence of nephropathy assessment, treatment, or prevention	Screening for nephropathy or evidence of nephropathy during 2007. Evidence of nephropathy includes a nephrologist visit, a positive urine macroalbumin test as documented by claims, or treatment with ACE inhibitor/ARB therapy.	

Measure Name	Numerator: Definition for Compliance of Measure	Denominator: Definition of Condition and Exclusions
Depression: Antidepressant medication management: acute phase	Patients who remained on an antidepressant medication for at least 84 days (12 weeks) as determined by prescription fills.	**Depression is defined by:** Patients aged 18 and older diagnosed with a new episode of major depression during 2007 and prescribed antidepressant medication.
Depression: Antidepressant medication management: continuous phase	Patients who remained on an antidepressant medication for at least 180 days (6 months) as determined by prescription fills.	**Exclusions:** Patients who had an acute inpatient stay with a principal diagnosis of mental health or substance abuse during the 245 days after the episode start date treatment period. Patients with brief depressive reaction are excluded since the diagnosis includes grief reaction.
Breast cancer screening	Women who had a mammogram during 2006 or 2007.	**Women eligible for breast cancer screening include:** Women 40-69 years **Exclusions:** Women who had a bilateral mastectomy or 2 separate mastectomies billed in 2005-2007.
Cervical cancer screening	Women who had a Pap test during 2005, 2006 or 2007.	**Women eligible for a Pap test include:** Women 21-64 years. **Exclusions:** Women who had a hysterectomy billed in 2005-2007.
Chlamydia screening	Women who had a Chlamydia test during 2007.	**Women eligible for a Chlamydia screen include:** Sexually active women 16-25 years. Sexually active women are identified by either having filled a prescription for contraceptives in 2007 or had at least 1 claim with a code to identify sexually active women. **Exclusions:** Women who had a pregnancy test during the measurement year followed within 7 days by either a prescription for Accutane or an x-ray are excluded.

Partner *for* Quality Care