
Leading Indicators for Oregon's Health Care Transformation
Quarterly Data from the All-Payer, All-Claims Reporting Program



Oregon
Health
Authority

September 25, 2015

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Office of Health Analytics

This report and data tables used to prepare all graphs are available <http://www.oregon.gov/oha/OHPR/RSCH/Pages/dashboards.aspx>
Please direct questions and comments about this report to Stacy DeLong, Office of Health Analytics – Stacy.DeLong@state.or.us



Executive Summary

This is the second report in a series presenting leading indicators for Oregon's health system transformation. It uses data from the Oregon Health Authority's All-Payer, All-Claims Reporting Program (APAC) to examine how well Oregon's health system transformation is achieving its goals.

In the last five years, Oregon embarked on transformation of its health system to achieve the triple aim of better health, better care, and lower costs. Oregon created coordinated care organizations (CCOs) to serve Oregon Health Plan members and opened the Oregon Health Plan to more adult Oregonians as allowed under the Affordable Care Act (ACA). This year, Oregon spread the coordinated care model to Public Employees Benefit Board (PEBB) plans, and will expand the model to Oregon Educators Benefit Board (OEBB) plans in 2016.

Key goals of health system transformation include:

- Increasing enrollment, ensuring more Oregonians have health care coverage.
- Optimizing utilization, ensuring Oregonians receive the right care, in the right place, at the right time.
- Containing spending, making health care more sustainable.

This report builds on the first Leading Indicators report with more complete enrollment data and a first look at health care utilization and spending under the ACA. It focuses on changes in enrollment, utilization, and spending between 2013 and 2014, the first year of expanded coverage under the ACA. Highlights include:

- From June 2013 to June 2014, enrollment in commercial plans, Medicaid, Medicare Advantage, and OEBB and PEBB plans increased by 15 percent. As of June 2014, 422,549 more individuals had health care coverage than in June 2013. Enrollment in Medicaid increased by 363,267 people.
- In the first half of 2014, the number of emergency department visits per 1,000 member months among Medicaid, Medicare Advantage, and PEBB members decreased from the first half of 2013.
- In the first half of 2014, per member, per month spending on Medicaid and OEBB members decreased in all spending categories.

All data for this report are from APAC. Oregon is one of 11 states with an all-payer claims database. The legislatively created database can help policymakers understand how well health system transformation is achieving its goals across Oregon. Oregon's major health payers began reporting payments made to providers to APAC in 2010. As of June 2014, APAC contains information about enrollment, utilization, and spending for 81 percent of Oregon's four million residents.

This quarterly report will continue to guide policymakers with data on leading health system indicators. It will help Oregonians understand where we are and where we are heading as health system transformation progresses and the coordinated care model spreads across the health care system.



About this Report

This report presents three types of indicators that show how well health system transformation is achieving its goals:



Enrollment: Number of people with health care coverage.

This report includes data on enrollment in commercial, Medicaid, Medicare Advantage, Oregon Educators Benefit Board (OEBB), and Public Employees' Benefit Board (PEBB) coverage.

To provide a comparison of enrollment across years, this report shows the number of unique people enrolled in coverage in June of each year.



Utilization: Use of health care and services by individuals.

This report includes information about utilization of care and services in primary care, emergency department, inpatient hospital, and mental health care settings.

To provide a standard measure of how frequently members use care and services, this report shows number of visits or admissions to each setting per 1,000 member months.



Spending: Dollars paid to health care providers by health care payers and members.

This report presents total spending and spending in six health care categories by type of coverage.

To provide a standard measure of spending across types of coverage, the report also shows spending per member per month (PMPM).

This report presents utilization and spending in the first half of each calendar year from 2011 to 2014. Due to regular claims lag, utilization and spending data for the second half of 2014 are not yet sufficiently complete to report. In the absence of complete data for 2014, showing data from the first half of each year accounts for seasonal variation in utilization and spending and allows for comparison over time. Data for the second half of 2014 will be "filled in" with future data submissions to APAC and covered in future reports.

For additional details on indicators, data completeness thresholds, and timeframes used in this report, see the Glossary and Methodology sections at the end of the report.

What's New in this Report?

This report builds on the *Leading Indicators* report published April 30, 2015 with more complete enrollment data, updated utilization and spending data, and new demographic indicators.

More complete enrollment data: This report presents combined enrollment in Medicaid coordinated care organizations (CCOs), other Medicaid managed care, and Medicaid fee for service coverage. The prior report presented Medicaid enrollment data for CCOs only. For detailed information about CCOs, see OHA's Health System Transformation Reports at www.oregon.gov/oha/metrics/pages/index.aspx.

A first look at utilization and spending under the Affordable Care Act (ACA): This report presents utilization and spending data from the first half of calendar year 2014, which was the first year of expanded coverage under the ACA. The first report presented utilization and spending data through calendar year 2013.

New demographic indicators: This report presents new data on demographic factors that can affect health care utilization and spending. It includes change in age distribution of members with different types of coverage before and after the ACA, and differences in types of coverage between rural and urban areas.

Leading Indicators for Oregon's Health System Transformation from the All-Payer, All-Claims Reporting Program



This report uses data from Oregon's All-Payer, All-Claims Reporting Program (APAC) to examine the outcomes associated with Oregon's health system transformation.

In the last five years, Oregon has embarked on transformation of its health care system to achieve the Triple Aim: better health, better care, and lower costs. Oregon created coordinated care organizations (CCOs), opened the Oregon Health Plan to more adult Oregonians as allowed under the Affordable Care Act, and spread the coordinated care model to public employees' coverage (PEBB), with plans to spread the model to coverage for educators (OEBB).

Among its important goals, Oregon's health system transformation is intended to:

Increase **enrollment**, ensuring more Oregonians have health care coverage.

Optimize **utilization**, ensuring Oregonians receive the right care, in the right setting, at the right time.

Contain **spending**, making health care more sustainable.

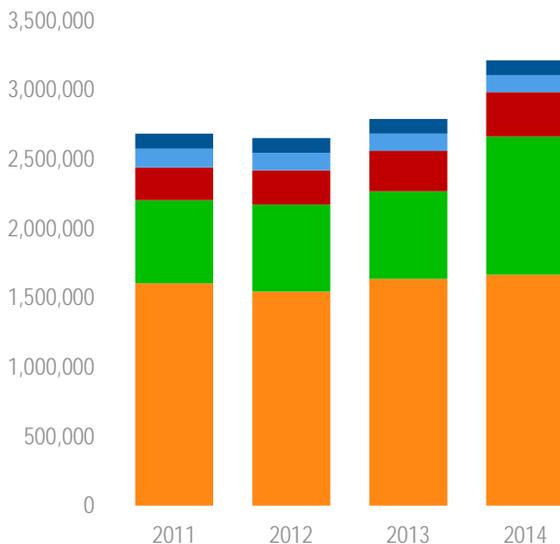
Information in this report can help policymakers understand how well health system transformation is achieving its goals.

Beginning in 2010, Oregon's major health care payers have reported payments made to health care providers to the APAC database. **With claims data from more than 3.2 million Oregonians in 2014, this database contains information about enrollment, utilization, and spending for 81% of Oregon's four million residents.**

Due to data limitations of APAC, this report excludes data for people with some types of public and commercial coverage. In addition, it excludes data for uninsured people. See Methodology for details.

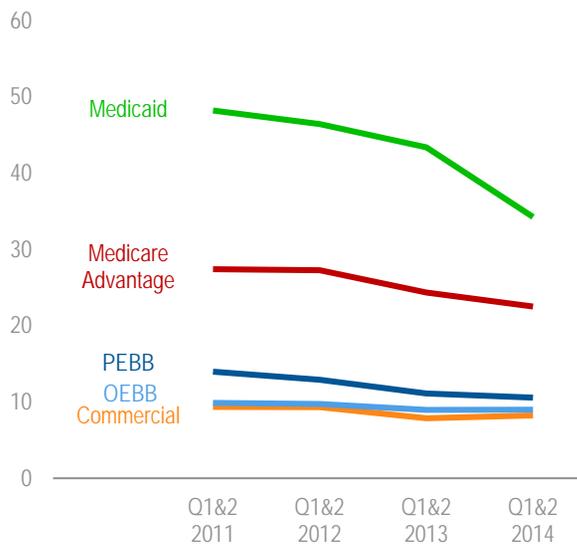
Enrollment

From June 2013 to June 2014, enrollment in **commercial**, **Medicaid**, **Medicare Advantage**, **OEBB**, and **PEBB** coverage increased by 422,549 people.



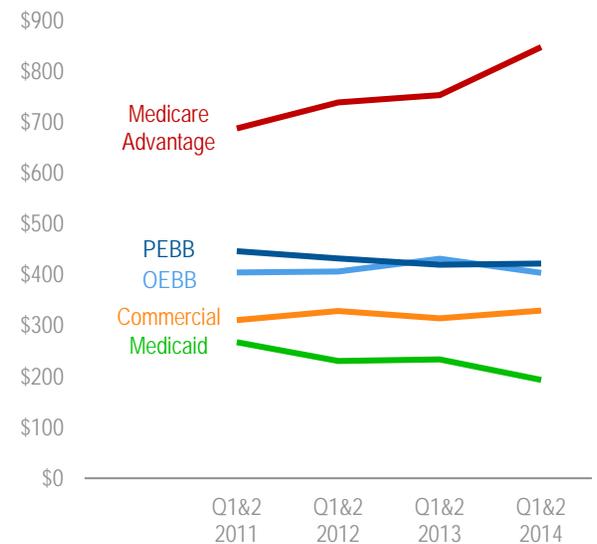
Emergency Department Utilization

In the first half of 2014, emergency department visits per 1,000 member months among **Medicaid**, **Medicare Advantage**, and **PEBB** members decreased from the first half of 2013.*



Spending

In the first half of 2014, total spending per member, per month on **Medicaid** and **OEBB** members decreased from the first half of 2013.*



* Due to regular claims lag, utilization and spending data beyond the first half of 2014 are not yet sufficiently complete to report.



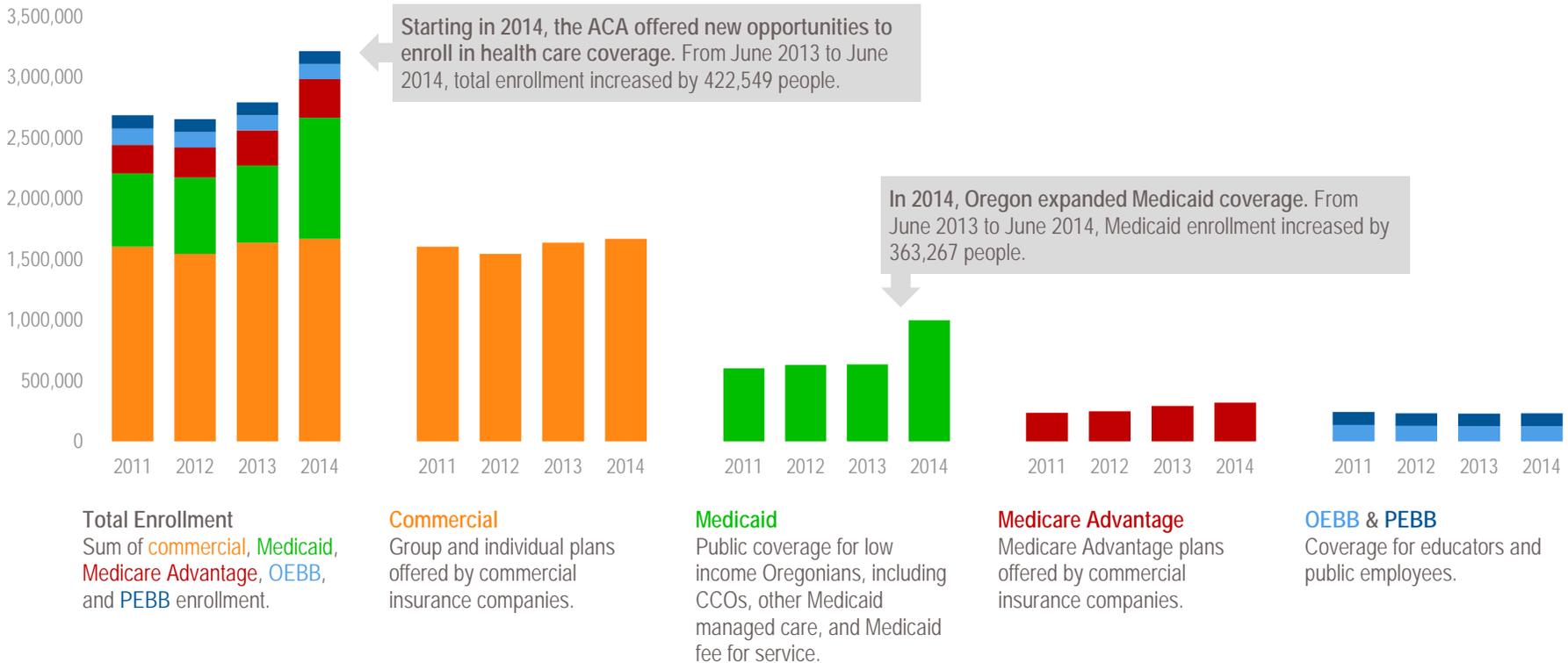
Enrollment: Increasing the Number of Oregonians with Health Care Coverage

Enrollment in health care coverage increases the likelihood that a person will receive needed health care.¹ APAC includes data on the number of Oregonians enrolled in coverage over time, as well as:

- **Type of coverage.** Type of coverage represents who pays for care. Amounts paid for specific health care services can vary substantially across types of coverage. This report presents data on commercial, Medicaid, Medicare Advantage, OEGB, and PEBB coverage.
- **Age.** Age affects health care utilization and spending. Older members tend to use more health care and services than younger members.
- **Residence in a rural or urban area.** Residence in a rural area can affect access to health care. Across the United States, there are fewer total physicians and dentists per person in rural areas than in urban and suburban areas. Physician shortages can force members to travel farther in order to obtain needed services.²

The graphs below show 2014 changes in coverage under the Affordable Care Act. Enrollment is reported as number of unique people enrolled in coverage as of June of each year. Due to data limitations of APAC, the graphs exclude Medicare fee for service and some other types of public and private coverage.

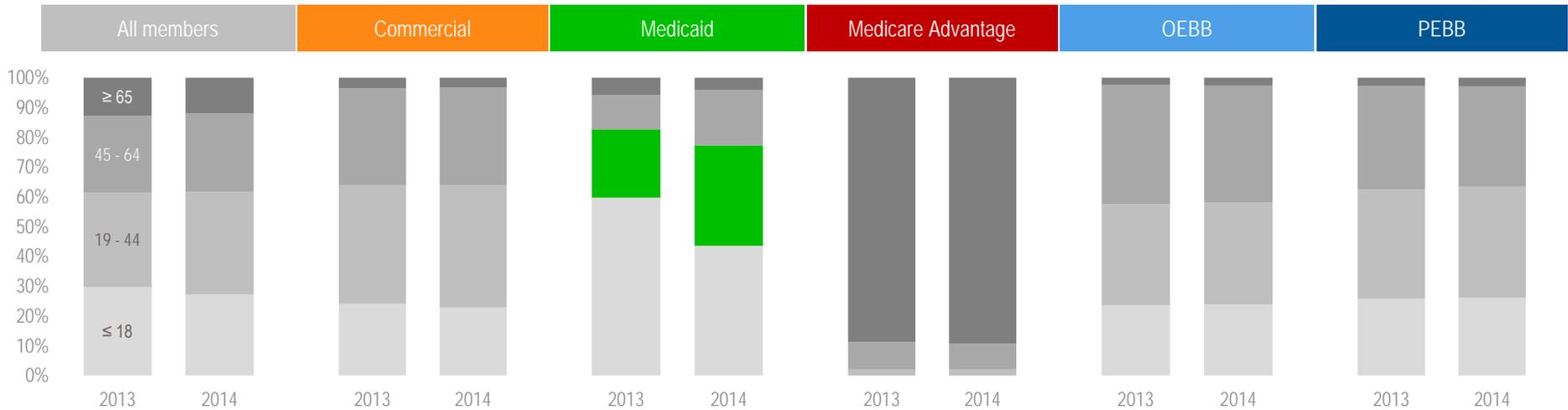
TYPE OF COVERAGE: Total enrollment increased from June 2013 to June 2014, driven by increased Medicaid enrollment.



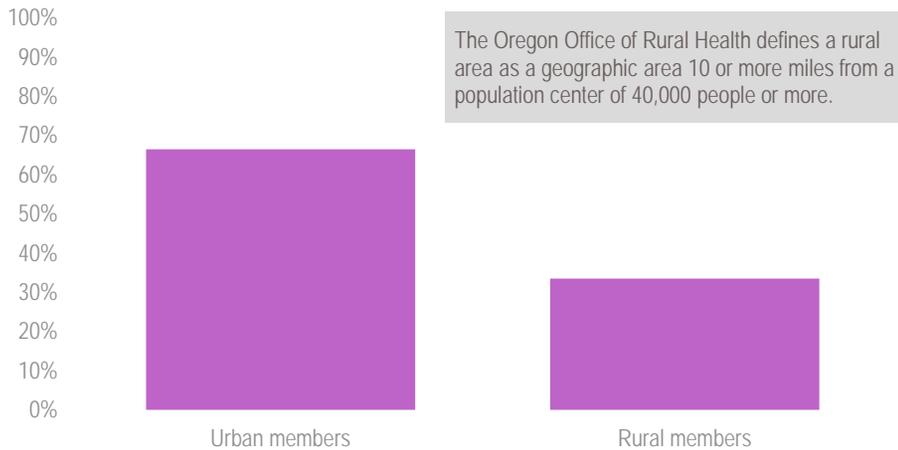


Enrollment: Increasing the Number of Oregonians with Health Care Coverage

AGE: From June 2013 to June 2014, the percentage of **Medicaid** members age 19 to 44 increased from 23% to 34%. Across other types of coverage, the percentage of members in each age category remained unchanged.

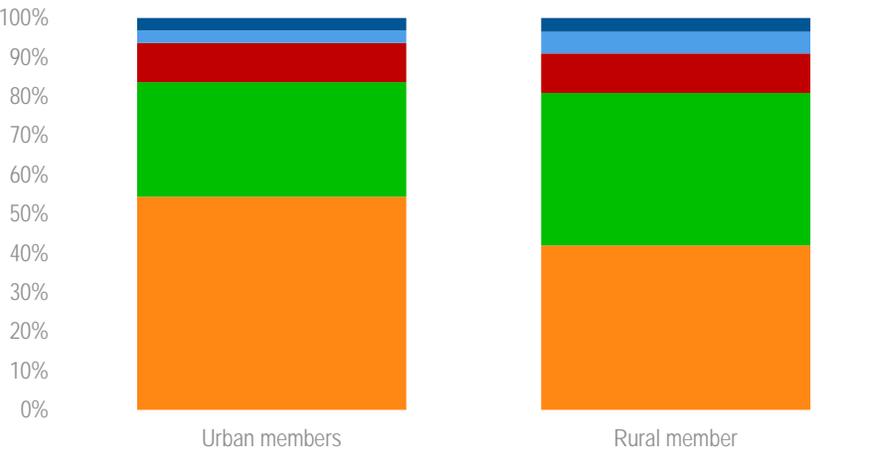


RURAL RESIDENCE: As of June 2014, 34% of members in APAC who were residing in Oregon lived in rural areas.* At the same point in time, 66% of members lived in urban areas.



The Oregon Office of Rural Health defines a rural area as a geographic area 10 or more miles from a population center of 40,000 people or more.

RURAL RESIDENCE: As of June 2014, 39% of members in APAC who lived in rural areas had **Medicaid** coverage.* At the same point in time, only 29% of urban members had **Medicaid** coverage.



* A small share of members in APAC reside outside Oregon. These members are excluded from data in this graph.

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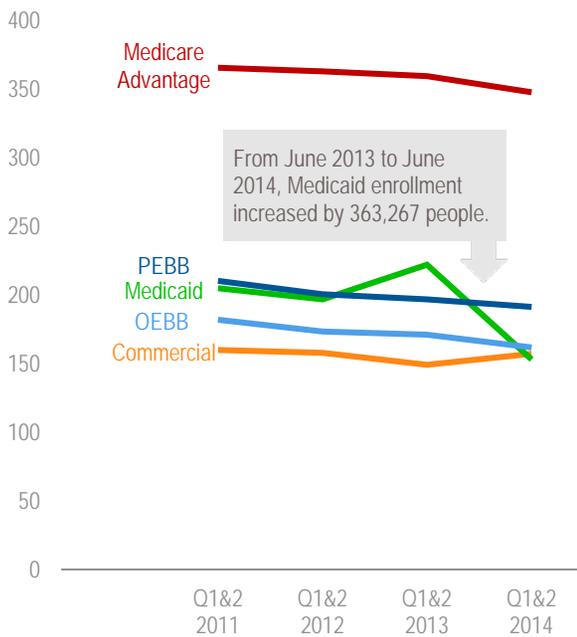
Utilization: Ensuring the Right Care, in the Right Setting, at the Right Time

Utilization of the right care, in the right setting, at the right time can reduce the need for more costly care and reduce health care spending. For example, timely utilization of primary and preventive care can reduce emergency department visits and other more costly forms of care.³

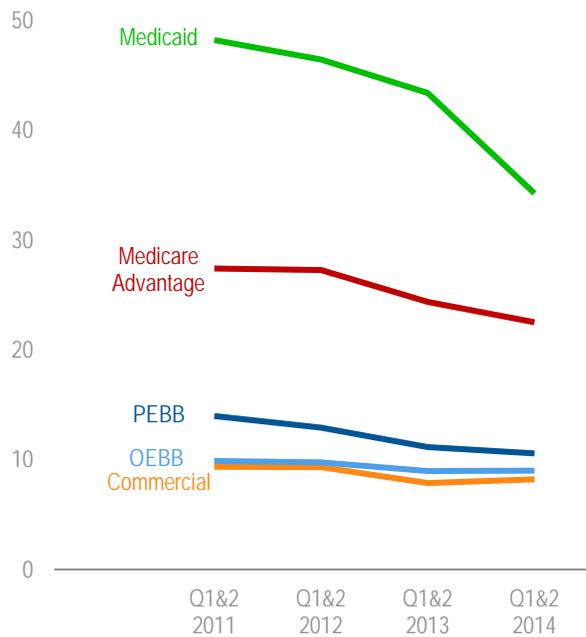
To provide a standard measure of utilization across types of coverage, the graphs below show number of admissions or visits per 1,000 member months to care settings of focus for Oregon's health system transformation. The graphs have different scales because the frequency of visits or admissions varies widely across settings. For example, primary care visits are far more frequent than emergency department visits per 1,000 member months. Using different scales helps clearly show changes over time.

As shown in the enrollment section of this report, total enrollment increased by 422,549 people from June 2013 to June 2014. Multiple factors can affect how new members use care, including their health status, knowledge about their health care coverage, experience with the health care system, and access to health care providers.⁴ OHA will continue to monitor utilization as new data are submitted to APAC and data for the 2014 calendar year become complete.

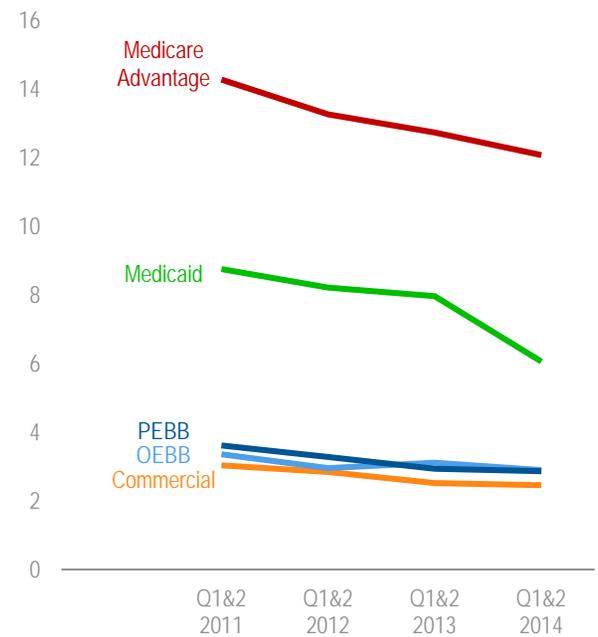
PRIMARY CARE VISITS: In the first half of 2014, the number of primary care visits per 1,000 member months among Medicaid, Medicare Advantage, OEBB, and PEBB members decreased from the first half of 2013.



EMERGENCY DEPARTMENT VISITS: In the first half of 2014, the number of emergency department visits per 1,000 member months among Medicaid, Medicare Advantage, and PEBB members decreased from the first half of 2013.



INPATIENT HOSPITAL ADMISSIONS: In the first half of 2014, the number of inpatient hospital admissions per 1,000 member months among members with all types of coverage decreased from the first half of 2013.*



* Inpatient hospital admissions in this graph exclude psychiatric hospital admissions and residential mental health admissions.



Spending: Making Health Care More Sustainable

Containing health care spending growth helps make increased coverage more sustainable and makes financial resources available for other important uses. Factors that affect total health care spending include health care enrollment, utilization, and the price of health care services.

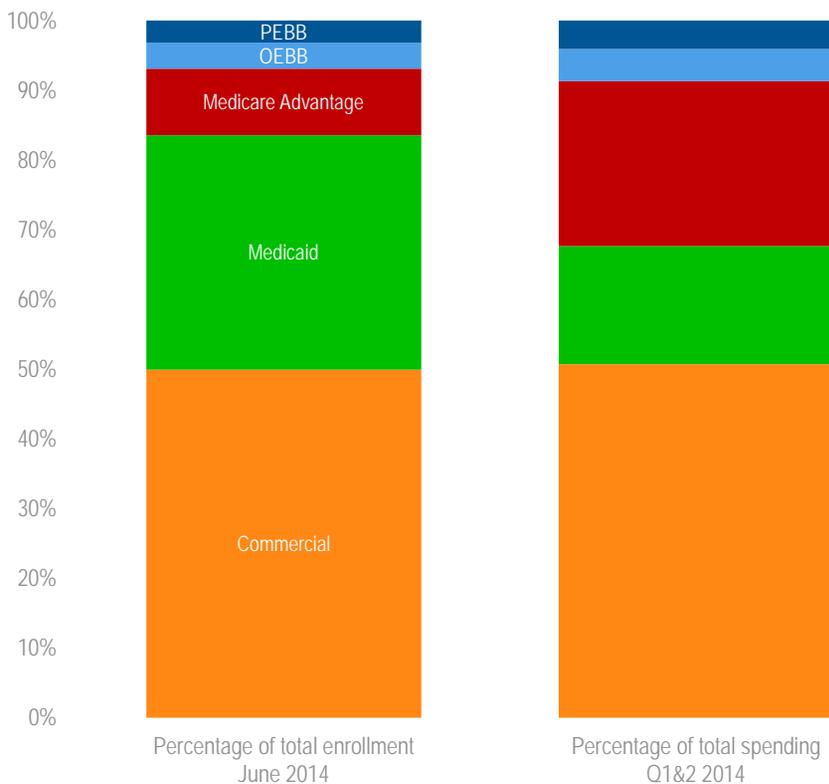
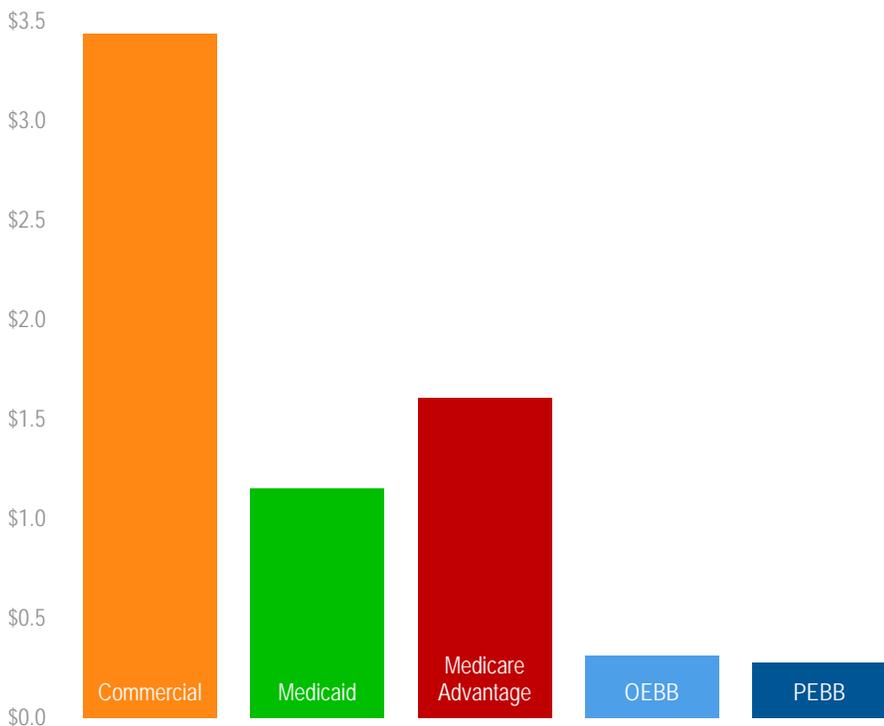
The graphs below show total spending by type of coverage in the first half of 2014. Spending represents dollars paid to health care providers by each type of coverage, and by members in the form of copays, coinsurance, and deductibles. Due to data limitations of APAC, the graphs exclude some types of spending, such as pay-for-performance payments, capitation payments, and payments to providers under other non-claims-based payment systems, as well as other non-claims-based spending.

TOTAL SPENDING (\$ BILLION): In the first half of 2014, total spending on **commercial** members was more than twice total spending on **Medicare Advantage** members, the group with the next highest total spending.

Total spending on **commercial** members was three times total spending on **Medicaid** members.

TOTAL SPENDING AND TOTAL ENROLLMENT: **Medicaid** members accounted for 34% of total enrollment as of June 2014, but only 17% of total spending in the first half of 2014.

Medicare Advantage members accounted for 10% of total enrollment as of June 2014, but 24% of total spending in the first half of 2014.





Spending: Making Health Care More Sustainable

Per-member, per-month (PMPM) spending represents the average amount paid for health care services in a month for members with a specific type of coverage. PMPM spending provides a standard measure of spending across types of coverage. Total PMPM spending is defined as: (total paid by payers + total paid by patients) / total months of enrollment in each calendar year. Due to data limitations of APAC, PMPM spending in this report exclude some types of spending, such as pay-for-performance payments, capitation payments, and other payments to providers under other non-claims-based payment systems, as well as other non-claims-based spending.

Total PMPM Spending: What's Included?

Primary Care: Services provided during visits to a primary care provider, including preventive exams and well-baby exams.

Emergency: Visits to the hospital emergency department.

Inpatient: Care provided at a hospital or other inpatient facility where the patient stays overnight, including visits to specialists.

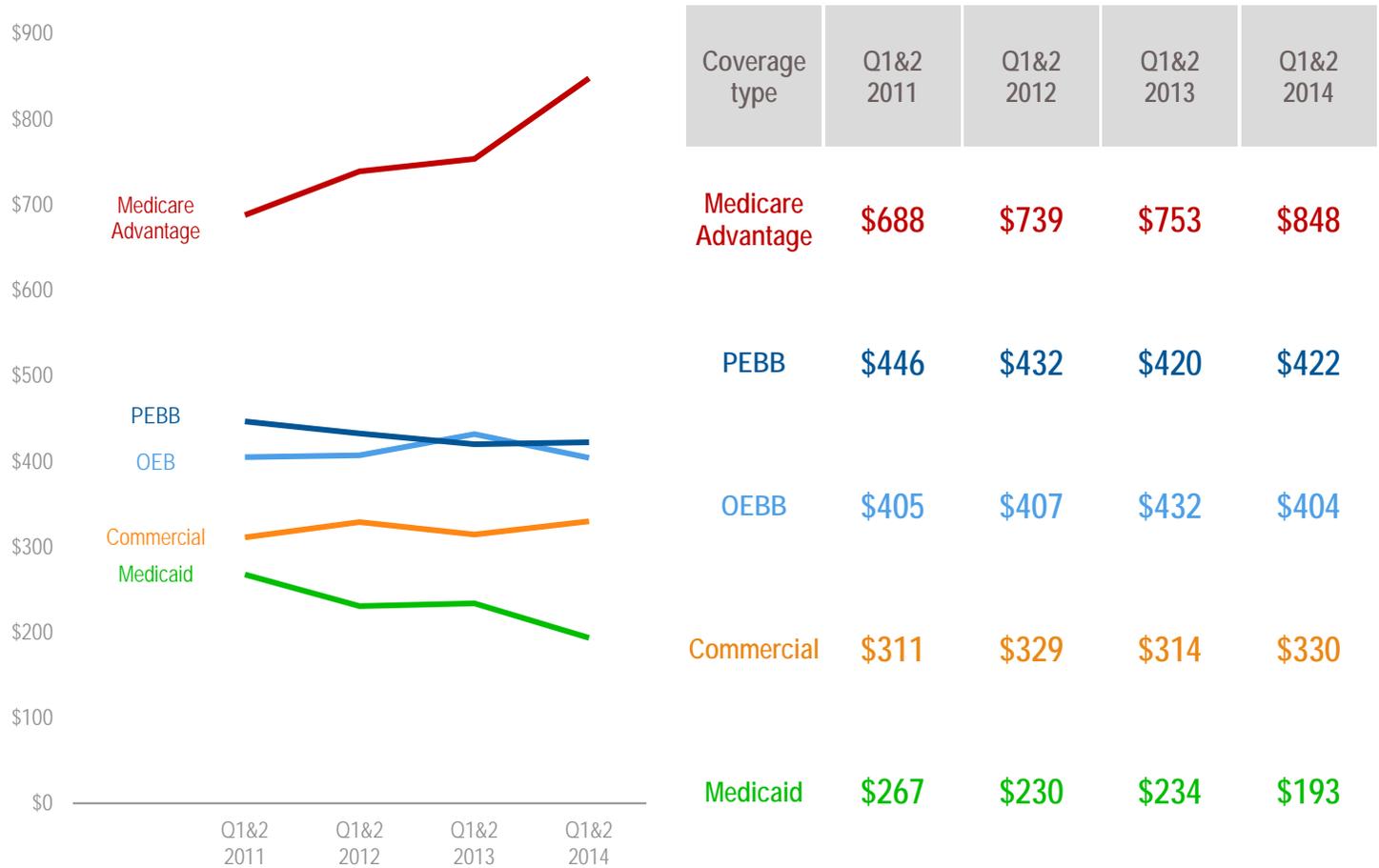
Outpatient: Care provided at a hospital, clinic, or other facility where the patient does not stay overnight.

Ancillary: Includes private duty nursing, ambulance and non-emergency transportation, dental care, durable medical equipment, and supplies.

Pharmacy: Prescription drugs where at least part of the cost is paid by a payer.

PMPM SPENDING: In the first half of 2014, total PMPM spending on **Medicaid** and **OEBB** members decreased from the first half of 2013.

Total spending on **commercial** and **PEBB** members increased by less than 5%.



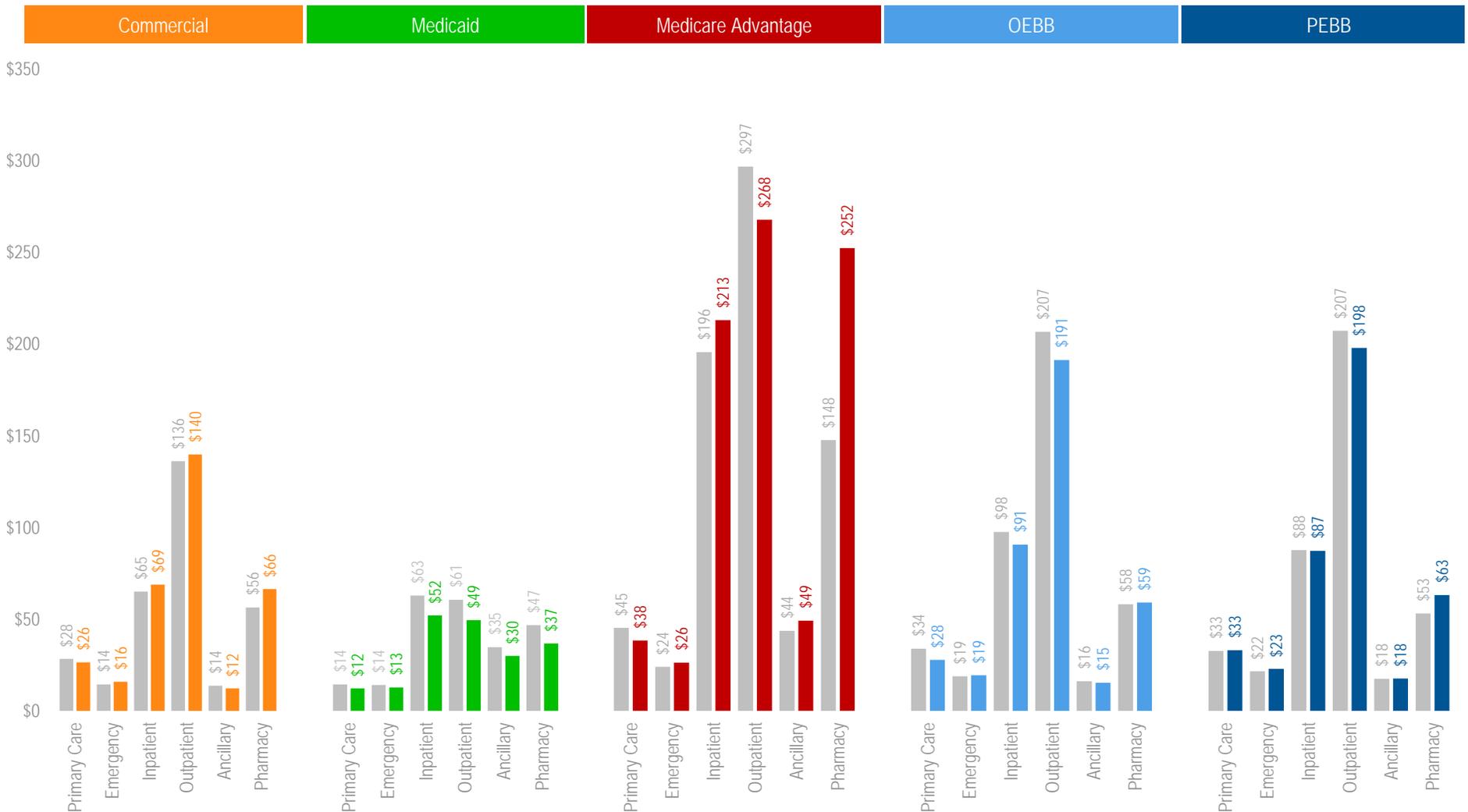


Spending: Making Health Care More Sustainable

The graphs below show per-member, per-month (PMPM) spending on six health care service categories that make up total spending. Due to data limitations of APAC, the graphs exclude some types of spending, such as pay-for-performance payments, capitation payments, and other payments to providers under other non-claims-based payment systems, as well as other non-claims-based spending.

PMPM SPENDING: In the first half of 2014, PMPM spending on **Medicaid** members decreased from the first half of 2013 in all spending categories.

PMPM spending on prescription drugs for **Medicare Advantage** members increased 71 percent from the first half of 2013 to the first half of 2014.



Claim: Communication from a medical provider to a health insurance plan or health care program requesting payment for services rendered by the provider. A claim includes information about the patient's diagnoses, the procedures performed by the provider, the amount the payer and patient will pay for the service under a health insurance plan, and in the case of a paid claim, the amount paid by the payer.

Claims lag: Delay between the time care occurs and the time the claim is processed and reported by the health insurance plan. A claim may take weeks or months to process, meaning that claims data submitted to APAC for recent calendar quarters may not yet be sufficiently complete to report spending, utilization, or other metrics. Claims with a high dollar amount, such as inpatient claims, tend to take more time for providers and plans to reach agreement.

Coverage: The health insurance plan or health care program that pays doctors, hospitals, and other health care providers for care and services received by a person with health care coverage. Types of coverage in this report include:

- **Commercial:** Group and individual health insurance plans offered by commercial health insurance companies, as well as group health insurance plans offered by employers that self-insure (self-insured employers set aside funds to pay for health care, rather than buying group coverage from a commercial insurance company). Data for some types of commercial coverage are not included in APAC. See Methodology for details about types of coverage that are not included in APAC.
- **Medicaid:** Health coverage for low-income Oregonians. Medicaid coverage includes coordinated care organizations (CCOs), other Medicaid managed care, and Medicaid fee for service (FFS). Medicaid is funded by a mix of state and federal resources. Since 2014, Oregonians with incomes at or below 138 percent of the federal poverty level have been Medicaid eligible, and the waiting list for the Medicaid has been eliminated.

Medicaid includes the following types of coverage.

- **Medicaid coordinated care organizations (CCOs):** Local organizations that deliver care and coverage for Medicaid members. They cover physical, mental, and dental health care using global budgets that grow at a fixed rate. CCOs are accountable for the health outcomes of populations they serve. As of June 15, 2014, 85 percent of

people with physical health care coverage through Medicaid were enrolled in a CCO.

- **Other Medicaid managed care:** Includes physician care organization (PCO) and fully capitated health plan (FCHP) coverage. PCOs and FCHPs cover physical health care only. As of June 15, 2014, less than 1 percent of people with physical health care coverage through Medicaid were enrolled in other Medicaid managed care.
- **Medicaid FFS:** Pays claims for Medicaid members not enrolled in CCOs or other Medicaid managed care. Under Medicaid fee for service, the state Medicaid program pays health care providers directly. As of June 15, 2014, 14 percent of people with physical health care coverage through Medicaid were enrolled in Medicaid FFS.⁵

See Methodology for details about Medicaid data used in this report. For detailed information about CCOs, see OHA's Health System Transformation Reports at www.oregon.gov/oha/metrics/pages/index.aspx.

- **Medicare Advantage:** A type of Medicare health plan offered by a commercial insurance company that covers hospital, nursing facility, and home health care, as well as services and supplies. The federal Medicare program pays a fixed amount each month per enrolled member to the companies offering Medicare Advantage plans.
- **Oregon Educators Benefit Board (OEBB) and Public Employees Benefit Board (PEBB):** Boards that contract with commercial health insurance companies to provide health insurance plans for educators and public employees, and contribute the employer share of premiums for covered employees. OEBB and PEBB became part of the Oregon Health Authority in 2009.

Health care spending categories: The following categories of health care spending are used in this report.

- **Ancillary:** Includes psychiatric hospital and residential care, private duty nursing, ambulance and non-emergency transportation, dental care, durable medical equipment, and supplies.
- **Emergency:** Visits to the hospital emergency department.

- **Inpatient:** Care provided at a hospital or other inpatient facility where the patient stays overnight.
- **Outpatient:** Care provided at a hospital, clinic, or other facility where the patient does not stay overnight, including visits to specialists.
- **Pharmacy:** Prescription drugs where at least part of the cost is paid by a payer.
- **Primary Care:** Services provided during visits to a primary care provider, including preventive physical exams and well-baby exams.

See Methodology for additional information about health care spending categories used in this report.

Member months: Total number of months within a given calendar year that the enrolled members of a health insurance plan have health coverage. For example, if one member was enrolled in a plan for all 12 months of 2013 and another member was enrolled for only 10 months, total member months equal 22. To provide standard measures of utilization and spending across types of coverage or insurance plans, total spending or total utilization is often divided by member months.

Per member, per month (PMPM): Spending on care for members of a health plan divided by member months. Dividing spending by member months provides a comparable measure of spending across types of coverage. For a comparable measure of utilization across types of coverage or health plans, counts of total primary care visits, emergency department admissions, or other services used are divided by thousand member months.

Data Sources

All data for this report are from the All Payer All Claims reporting program (APAC). The following data suppliers report enrollment and claims data to APAC.

- **Commercial insurance companies:** Offer group, individual, and, Medicare Advantage health insurance plans, and contract with OEBC and PEBC to offer plans for educators and public employees.
- **Pharmacy benefit managers (PBMs):** Work with commercial insurance companies to administer pharmacy benefits.
- **Third party administrators (TPAs):** Administer health insurance plans for self-insured employers (employers that set aside their own funds to pay claims, rather than buying group coverage from a commercial insurance company).
- **Medicaid:** The Oregon Health Authority reports data for Medicaid CCOs, other Medicaid managed care, and Medicaid FFS to APAC. For detailed information about CCOs, see OHA's Health System Transformation Reports at www.oregon.gov/oha/metrics/pages/index.aspx.

Data Completeness and Timeframes

Due to regular claims lag, data submitted to APAC for recent calendar quarters may not yet be sufficiently complete to report on health care utilization, spending, or other metrics. Claims data for a given quarter are considered sufficiently complete to report if they reflect at least 95 percent of predicted health care spending for that quarter (statistical models based on historical data are used to predict health care spending and assess data completeness in any quarter). At the time this report was published, claims data through the second quarter of 2014 were sufficiently complete to report on utilization and spending. Data for subsequent quarters will be "filled in" with future submissions and covered in future reports.

Health care utilization and spending tend to vary throughout the year. To control for seasonality and allow for comparison of utilization and spending over time, this report compares utilization and spending in the first half of each year from 2011 to 2014.

Enrollment is reported as number of unique people with coverage in June of each year from 2011 through 2014. APAC data suppliers submit data on months in which each member is enrolled in coverage along with claims data. Unlike utilization and spending data, enrollment data is not subject to claims lag.



What's Not Included in this Report

A February 2015 study estimated there were 3.6 million Oregonians with coverage as of June 30, 2014.⁶ This report includes data for 3.2 million unique people with coverage in June 2014, with the caveat that a small number of people are counted more than once (see below). This means that the report includes data for 88% of Oregonians with health care coverage and 81 percent of Oregon's population in June 2014. The report excludes data for people with the following types of coverage:

- Medicare fee for service (FFS): Pays claims for Medicare enrollees not enrolled in a Medicare Advantage plan. OHA obtains Medicare FFS data from the federal Centers for Medicare and Medicaid Services, but has not yet obtained data for 2014. These data will be included in future reports.
- TRICARE: Coverage for active duty military service members, National Guard and Reserve members, and their families.
- Veterans Administration: Coverage for people who served in the active military service.
- Indian Health Service: Provides federal health services to American Indians and Alaska Natives.
- Some types of commercial coverage: Accident policies, dental insurance, disability policies, hospital indemnity policies, long-term care insurance, Medicare supplemental insurance, specific disease policies, stop-loss plans, student health insurance, vision-only insurance, workers compensation, and coverage from commercial carriers and TPAs with fewer than 5,000 enrollees in Oregon.
- Some types of Medicaid coverage: Medicaid coverage for certain low-income Medicare-eligible individuals, emergency medical care, and other types of Medicaid coverage.

Spending data in this report excludes payments not based on claims. These include pay-for-performance payments, capitation payments, and other payments to health care providers under alternative payment arrangements, as well as other non-claims-based spending.

The report excludes data from alcohol and drug treatment claims. Federal law requires excluding data on alcohol and drug treatment that could be linked to a specific person.

In addition, the report excludes data on care and services received by people who pay out of pocket, including the uninsured. Paying out-of-pocket for health care and services does not generate claims, so spending and utilization of out-of-pocket payers cannot be reported using data from APAC.

Enrollment

Enrollment is reported as number of unique people enrolled in each type of coverage in June of each year. The number of people enrolled in each type of coverage changes throughout the year as people lose or gain coverage, or move from one type of coverage to another. To allow for comparison of enrollment across years, enrollment is reported as number of unique people enrolled at the same time each year.

People with more than one type of coverage are counted more than once. A small number of people are enrolled in more than one type of coverage at the point in time when enrollment was counted, and are counted once for each type of coverage they were enrolled in.

- Counted more than once: People enrolled in Medicaid and Medicare Advantage, commercial coverage and Medicaid, or commercial coverage and Medicare Advantage.
- Counted once: People enrolled in one or more health insurance plans of the same coverage type (for example, two commercial plans).

Utilization

To provide a standard measure of how frequently members in each type of coverage use important care and services, the report shows total visits and admissions to the following settings per 1,000 member months. 1,000 member months = total months of coverage for all members in the calendar year / 1,000.

- Emergency Visits: Visits to the hospital emergency department.
- Primary Care Visits: Visits to a primary care provider.



- Inpatient Admissions: Hospital or other inpatient facility admissions where the patient stays overnight. In this report, the inpatient hospital admissions graph excludes acute inpatient mental health and residential mental health admissions.

Spending

Total per-member, per-month (PMPM) spending is defined as:

$$\frac{\text{total paid by coverage} + \text{total paid by patients} + \text{coordination of benefits}}{\text{member months}}$$

- Paid by coverage: Amount paid by the patient's health insurance plan or health care program to a provider for services.
- Paid by patients: Patient's responsibility to pay for services. In some cases, patient's responsibility to pay may differ from what the patient actually paid to the provider.
- Coordination of benefits: Amount paid by a health insurance plan other than the patient's primary coverage. Not all claims have coordination of benefits.

Spending is reported by six service categories called Health Cost Guidelines (HCGs). HCGs are based on diagnosis codes, procedure codes, and other claims information. HCGs do not overlap: each dollar is reported in only one category. HCGs include:

- Ancillary: Includes private duty nursing, ambulance and non-emergency transportation, dental care, durable medical equipment, and supplies.
- Emergency: Visits to the hospital emergency department.
- Inpatient: Care provided at a hospital or other inpatient facility where the patient stays overnight. Includes acute inpatient mental health and residential mental health spending.
- Outpatient: Care provided at a hospital, clinic, or other facility where the patient does not stay overnight. Includes outpatient mental health spending.
- Pharmacy: Prescription drugs where at least part of the cost is paid by a payer.
- Primary Care: Services provided during visits to a primary care provider, including preventive physical exams and well-baby exams.

Spending on health care differs from the cost of providing health care:

- Spending: Amount paid by payers and patients for health care services.
- Cost: Expense of providing health care services, including supplies, labor, and overhead.

Spending is reported in this report because it is more accurately captured in claims data.



1 Hadley, Jack. "Sicker and Poorer—The Consequences of Being Uninsured: A Review of the Research on the Relationship between Health Insurance, Medical Care Use, Health, Work, and Income." *Medical Care Research and Review* 60 (2003): 3S - 75S.

2 Rural Health Reform Policy Research Center. *The 2014 Update of the Rural-Urban Chartbook*. <https://ruralhealth.und.edu/projects/health-reform-policy-research-center/pdf/2014-rural-urban-chartbook-update.pdf>

3 For example, see Kronman, Andrea C. et al. "Can Primary Care Visits Reduce Hospital Utilization Among Medicare Beneficiaries at the End of Life?" *Journal of General Internal Medicine* 23 (2008): 1330 - 1335.

4 Allen, Heidi et al. "New Medicaid Enrollees in Oregon Report Health Care Success and Challenges." *Health Affairs* 33 (2014): 292 – 299.

5 Oregon Health Authority. Oregon Health Plan: Coordinated Care, Managed Care and Fee for Service Enrollment for June 15, 2014.
<http://www.oregon.gov/oha/healthplan/pages/reports.aspx>

6 Oregon Health and Science University. *Impacts of the Affordable Care Act on Health Insurance Coverage in Oregon: County Results/Statewide Update*.
<http://www.ohsu.edu/xd/research/centers-institutes/center-for-health-systems-effectiveness/upload/Health-Insurance-Coverage-in-Oregon-County-Results.pdf>