Oregon All Payer All Claims Database (APAC)

An Overview

March 2018

Table of Contents

Executive Summary

Definition and Scope

The Oregon All Payer All Claims Database (APAC) is a large database that houses administrative health care data for Oregon's insured populations. In particular, APAC includes medical and pharmacy claims, non-claims payment summaries[1], member enrollment data, billed premium information, and provider information for Oregonians who receive coverage through commercial insurers as well as through public payers such as Medicaid and Medicare. At any point in time, the database contains data for approximately 3.4 to 3.9 million individuals – representing about 87% to 98% of Oregon's population[2].

The Oregon State Legislature established APAC in 2009 through House Bill 2009, which authorized the formation of a health care data reporting program to measure the quality, quantity, and value of health care in Oregon. This legislation was codified into the Oregon Revised Statutes for Health Care Data Reporting. Administrative Rules provide the guidelines for APAC's data collection, use, and release, and are periodically updated as needed. The database, which is operated by the Oregon Health Authority (OHA), is an integral component of the state's ongoing health care improvement efforts and provides access to timely and reliable data that are essential to improving health care quality, reducing costs, and promoting transparency.

Data Collection

APAC collects health care claims and other administrative data from commercial insurers and public payers. Data submitters include commercial health plans and third-party administrators (TPAs) with 5,000 or more covered lives in Oregon, all pharmacy benefit managers (PBMs) in Oregon, all coordinated care organizations (CCOs) in Oregon, any payer with a dual eligible special needs plans (SNPs) in Oregon, any payers that participate in Oregon's health insurance exchange, and all insurers providing group health insurance plans to PEBB and OEBB members. In addition, OHA provides data from Medicaid fee-for-service plans and coordinated care organizations (CCOs) and the Centers for Medicare and Medicaid Services (CMS) provides Medicare Parts A and B data. All data submitters follow an established method for reporting data to APAC, including a set of required data elements and file formats that are detailed in the Data Submission Instruction Memo. Data collection for APAC began in March 2011 and takes place quarterly.

Data Management

OHA maintains oversight and management of APAC, and contracts with Milliman, Inc., to collect and process the data. A critical part of Milliman's role is ensuring that APAC data are reliable and of good quality at all stages – from when the data enter the database, to when they are released via public reports or user data sets. To do this, Milliman performs three levels of data quality tests on data submitted to APAC – once upon submission, once after the files are accepted but not yet processed, and once on an annual basis to assess overall trends and accuracy in the data. After each level of data quality testing, Milliman communicates its findings to each data submitter and works to resolve any data issues identified. When necessary, the payer re-submits the files. After Milliman's three levels of validation are

[1] Payment information for health care services not billed on a claim and/or not reimbursed on a fee-for-service basis.

[2] Please note that about 1% of the people in APAC are not Oregon residents, but are included because they were covered by Oregon's Public Employees' Benefit Board (PEBB) or the Oregon Educators Benefit Board (OEBB). And while APAC contains data on 87%-98% of Oregon residents, only 78% to 80% of Oregonians have a health care claim in APAC.

complete, OHA implements two additional data quality tests. These include comparing APAC data to other state data sources to flag any large data discrepancies, and promoting the use of APAC data to the user community.

Data Privacy and Security

Because APAC contains protected health information (PHI), OHA and Milliman have built several layers of protections to ensure the privacy and security of the data from intake to release. All data are encrypted during transmission and storage, and are housed on secure servers within a secure data center. Access to the data is limited to a select number of authorized and qualified staff within OHA and Milliman. Furthermore, public reports and user data sets are subject to the privacy standards and regulations of the Health Insurance Portability and Accountability Act of 1996 (HIPAA), which protects the privacy and security of individuals' personal health information. Individuals interested in using APAC data must complete a multi-step vetting process through which OHA determines whether they will use the data appropriately and maintain data privacy and security.

Data Uses

APAC's legislative framework permits the use of the database to inform activities related to health care operations, treatment, payment, public health, and research. OHA and other Oregon state agencies use APAC to fulfill legislative mandates for information that can inform the development and evaluation of health policies, as well as to guide and assess programmatic efforts to improve health access, outcomes, and costs. APAC is also used by external, non-state users to study population health issues and drive health system improvements. More information on current and past APAC uses can be found in the APAC Use Case document.

Data Release

OHA has implemented a streamlined data release process designed to ensure the appropriate use of APAC data and to maintain data privacy and security. Four types of APAC data are available to users: Summarized data and Public Use, Limited, and Custom data sets. **Summarized data** are generated by request only. Because Summarized data show counts or aggregated totals only, this type of APAC data is usually requested by individuals who would like analytic support from OHA. Summarized data offer the lowest level of detail, and do not contain protected health information (PHI) or patient-level data. Because creating these reports is not OHA's primary function, the requester must clearly outline the parameters of the data request – including what summarized data elements to include and how to stratify the data. **Public Use data sets** contain claim level detail, but do not contain PHI or any combination of data elements that may directly identify any person. These data sets cannot be linked to external data sets and are grouped into seven "pre-made" files, and users will receive all data elements within each requested file. **Limited data sets** offer a higher level of detail than Public Use data sets and contain PHI, although they exclude direct identifiers such as patient name or address. Limited data sets can be linked to other external data sets, as long as this is explicitly approved by OHA. As with Public Use data sets, Limited data are organized into seven files; in contrast to the Public Use data sets, however, these files are not "pre-made" for users. Rather, in compliance with federal privacy laws regulating the release of PHI, requesters must identify and provide justification for the specific data elements needed within these files, and only the minimum necessary data elements required for the project will be approved and provided. **Custom data sets** may include any of the data elements that APAC collects, whether that element is included in the Public Use or Limited data set specifications or not; however, direct identifiers such as patient name or address are only released under special circumstances that comply with HIPAA requirements, and may require specific approvals in addition to OHA review. Custom

data sets can be linked to other external data sets, as long as this is explicitly approved by OHA. As with Limited data sets, only the minimum necessary data elements required for the project will be approved.

All data requesters must first complete the APAC-2 form (Pre-Application) and submit it to OHA for review. Those requesting Limited or Custom data sets must also complete the more extensive APAC-3 form (Application) when prompted by OHA. All data requests must be reviewed and approved by OHA, and certain requests may also require reviews from the Department of Justice and/or OHA's Data Review Committee (DRC). After their request is approved, users must execute a Data Use Agreement (DUA) and pay OHA for the cost of producing the data sets. APAC's data request website provides more information on these data sets – including the application process, costs, and specific data elements for each.

Looking Ahead

Moving forward, OHA is seeking new ways to expand APAC's reach and further its ability to inform health care improvement efforts. As Oregon's health system evolves, APAC will evolve as well.

More detailed information on APAC's history, purpose, and scope is provided in the sections below.

Introduction

The Oregon All Payer All Claims Database (APAC) is a large database that houses administrative health care data for Oregon's insured populations. In particular, it includes medical and pharmacy claims, non-claims payment summaries[3], member enrollment data, billed premium information, and provider information for Oregonians who are insured through commercial insurance, Medicaid, and Medicare. The Oregon State Legislature established APAC in 2009 as a tool to measure health care costs, quality, and utilization, and designated the Oregon Health Authority (OHA) to operate the database. An integral component of the state's ongoing health care improvement efforts, APAC provides access to timely and reliable data essential to improving quality, reducing costs, and promoting transparency.

This document provides an overview of APAC – including its history, purpose, and scope – and highlights its utility as a tool for understanding the cost, quality, and utilization of health care in Oregon.

Scope of APAC

What is Included

Since 2011, APAC has collected information on health insurance enrollment, health care utilization, and spending from Oregon's major health care payers. APAC has about 78 to 96 million annual claims for calendar years 2011 to 2016[4], including from 42 to 51 million annual medical claims and from 36 to 46 million annual pharmacy claims. At any point in time, the database contains data for approximately 3.4 to 3.9 million individuals – representing about 87% to 98% of Oregon's population. Please note that about 1% of the people in APAC are not Oregon residents, but are included because they were covered by Oregon's Public Employees' Benefit Board (PEBB) or the Oregon Educators Benefit Board (OEBB). And while APAC contains data for 87%-98% of Oregon residents, only 78% to 80% of Oregonians have a health care claim in APAC.

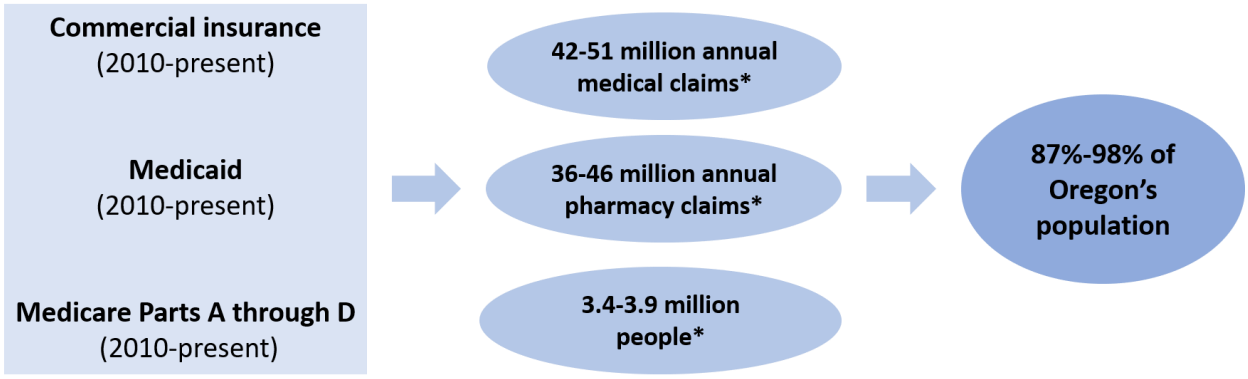
The database contains claims and other administrative data for those covered by the following types of insurance:

- Commercial insurance, including the Public Employees' Benefit Board (PEBB) and the Oregon Educators Benefit Board (OEBB);
- Medicaid fee-for-service plans and coordinated care organizations (CCOs); and
- Medicare Parts A, B, C, and D.

[3] Payment information for health care services not billed on a claim and/or not reimbursed on a fee-for-service basis.

[4] 2011-2016 are the calendar years of data available for request.

APAC at a Glance



*Based on 2011-2016 data (data available for request).

APAC contains the following types of data:

- Paid medical and pharmacy claims – includes diagnoses, service utilization, and spending for medical and pharmacy services;
- Member enrollment information – includes basic demographic information on enrollees of commercial, Medicaid, and Medicare plans;
- Provider information – includes provider identifiers, locations, and specialties; and
- Premium information – includes the total premium amounts billed to members of fully-insured, Medicare Advantage (Part C), or stand-alone prescription drug plans for each month of coverage.

What is a claim?

A claim is a request for payment that a medical provider sends to a payer (i.e. a health insurance company or health care program) for services rendered by the provider. A claim includes information about the patient's diagnoses, the procedure(s) performed by the provider, the amount the payer and patient will pay for the service(s) under a health insurance plan, and – in the case of paid claims – the final amount paid.

In September 2017, APAC became one of just two APCDs in the nation to collect information on alternative payment methods (APMs)—that is, non-claim payments that payers make to health care providers. While payers most frequently reimburse providers on a fee-for-service basis, some have begun to adopt APMs in an effort to curb health care costs. These APMs—such as capitation, in which a provider receives a fixed amount per member, per month to provide care to a health plan's enrollees—represent a small but growing share of health care payments in Oregon. As health care payment models across the nation continue to shift away from traditional fee-for-service arrangements—and towards capitated arrangements, provider performance incentives, and other alternative payment strategies—APAC will be able to shed light on the prevalence of different health payment methods in Oregon. In other words, capturing these "non-claims" payments in APAC will provide a more comprehensive look at the full universe of health care spending

What is Not Included[5]

APAC does not include the following:

- Data from commercial health plans with fewer than 5,000 covered lives;
- Data on individuals insured through federal programs including Tricare, Federal Employees Health Benefits Program, Department of Veterans Affairs, and the Indian Health Service;
- Data on uninsured populations and other individuals who pay out of pocket;
- Data for other types of insurance such as workers' compensation and stand-alone dental or vision policies; and
- Claims related to alcohol and drug treatment.

History and Governance

When it was Established

The Oregon State Legislature first established APAC in 2009 through House Bill 2009[6], which authorized the formation of a health care data reporting program to measure the quality, quantity, and value of health care in Oregon. This legislation was codified into the Oregon Revised Statutes for Health Care Data Reporting[7]. Administrative Rules[8] provide the guidelines for APAC's data collection, use, and release, and are periodically updated as needed. Data collection for APAC began in March 2011 with commercial, Medicaid, and Medicare Parts C and D data from calendar year 2010[9]. Medicare Parts A and B data from calendar year 2010 and onwards were added to the database in 2013.

As defined in Oregon's statutes, the purpose of APAC is to:

- Help determine health care resource allocation
- Identify the demands for health care
- Help health care policymakers make informed choices
- Evaluate the effectiveness of intervention programs in improving health outcomes
- Compare the costs and effectiveness of various treatment settings and approaches
- Provide information to consumers and purchasers of health care
- Improve the quality and affordability of health care and health care coverage
- Assist in furthering state health policies
- Evaluate health disparities

Data Management and Governance

The Oregon Health Authority (OHA), a state agency focused on health system improvement, operates and manages APAC. Its policy-making and oversight body is the Oregon Health Policy Board (OHPB), a Governor-appointed citizen board focused on population health and health access improvement. In 2014, OHA convened the APAC Technical Advisory Group (TAG), an independent group that includes

[5] As of March 2017, OHA has reversed its internal policy of redacting claims lines related to genetic testing, as well as claims lines related to HIV/AIDS. These claim lines may now be included in future approved data requests.
[6] House Bill 2009, Sections 1200-1202: Health Care Data Reporting.
[7] Oregon Revised Statutes for Health Care Data Reporting, ORS 442.464, 442.466, and 442.993.
[8] Oregon Administrative Rules, OAR 409-025-0100 to 409-025-0170.
[9] The 2010 data are incomplete compared to subsequent years; therefore, 2011 is the first year of APAC data available for use.

providers, researchers, and APAC data submitters. The TAG advises APAC staff on additional data collection needs, measure specifications, and data validation processes.

APAC Functions

Providing Comprehensive Data to Increase Transparency

APAC is a unique resource for statewide health care improvement efforts. With data collected from all major public and private payers, APAC is the most comprehensive database on health care costs, quality, and utilization in Oregon. For example, while other data sets collect the amounts charged for health care services covered by commercial insurance, APAC is the only health data set in Oregon that contains the charged amount *and* the paid amount. This distinction is significant, as charged amounts and paid amounts often differ based on the reimbursement arrangements negotiated between the provider and the payer. Understanding the amounts that were actually paid for health care services, rather than just the amount charged, provides a more accurate and useful understanding of health care prices and spending.

Reporting price data and other information from APAC helps increase transparency in Oregon's health care system and informs policy and programmatic changes. OHA provides information from APAC to health care industry stakeholders – including providers, insurers, purchasers, and legislators – through public reports, with more detailed data sets available to qualified users. For example, OHA has launched a series of legislatively-mandated[10] annual Hospital Payment Report that use APAC data to shed light on the variation in hospital prices for commercial inpatient and outpatient procedures among Oregon hospitals. The state's efforts to improve health care price transparency through APAC were recognized in the national Report Card on State Price Transparency Laws, an assessment conducted by Catalyst for Payment Reform and HCI[3]. Due to its data collection and reporting through APAC, Oregon was ranked fourth in the nation for its performance in health care price transparency[11].

Supporting Health Policy Efforts

Since its launch, APAC has helped state agencies, policymakers, and other stakeholders evaluate the impact of existing policies and identify the need for new innovations. For example, APAC is used to establish performance indicators and measure progress against the state's "Triple Aim" goals of improved health, increased quality of care, and lowered health costs. APAC will be an instrumental resource as OHA tackles one of its key goals, which is to address rising pharmaceutical costs. APAC also helps evaluate public health programs and initiatives, such as the interventions proposed in the State Health Improvement Plan (SHIP). Finally, state agencies use APAC to perform commercial health insurance rate reviews and other cost containment activities.

APCDs Across the Country

APAC is one of several state-led All Payer Claims Databases (APCDs) in the country, with many more in active development. States use these initiatives in much the same way as Oregon: to inform new policies and innovations for health care cost containment, quality improvement, and health access; to evaluate programs; and to bring transparency to the health care system.

[10] Senate Bill 900, passed during the Oregon State Legislature's 2015 session, mandates the annual reporting of median hospital payments from commercial payers for commonly-used inpatient and outpatient procedures.
[11] De Brantes F and Delbanco S. Report Card on State Price Transparency Laws – July 2016. Catalyst for Payment Reform and HCI.[3] Available at: https://www.catalyze.org/product/2016-report-card-state-price-transparency-laws/.

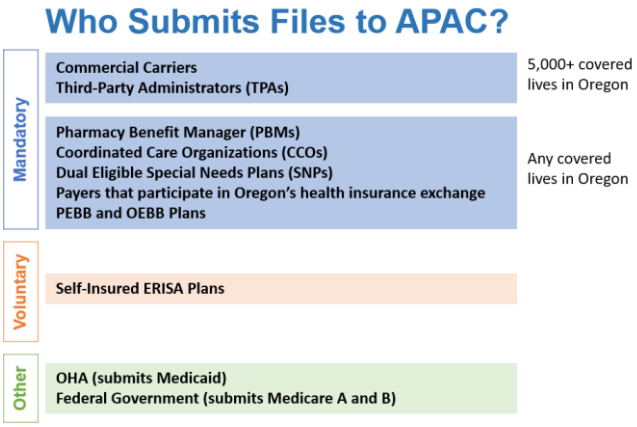
Answering Complex Questions

APAC offers answers to a myriad of questions about health care spending, quality, and utilization. Here are a few examples of the types of questions that APAC can help answer:

- What are the most prevalent diseases or health conditions among insured Oregonians? Is prevalence of certain diseases or conditions higher in certain areas of the state?
- What are the most common health care services among insured Oregonians? Does this vary across different geographic locations, age groups, or types of health care coverage?
- What are the most commonly issued prescription drugs?
- In what types of care settings (such as hospitals or emergency departments) are insured Oregonians receiving care? How does utilization and spending vary across care settings for the same services?
- How does health care utilization and spending vary among age groups?
- How has prescription drug spending changed over time?
- What health care services are associated with the highest spending, on average and in total?
- How do hospital payments vary across providers?
- How much are patients paying out of pocket for certain health care services?
- What are the gaps in health insurance coverage for members who have dis-enrolled and re-enrolled in a health plan?
- On average, how long after an individual enrolls in health insurance does he or she visit a health care provider for the first time?

APAC Data Collection

Data Submitters



Data submitters that are required by law to report data to APAC are referred to as "Mandatory Reporters." Mandatory Reporters include commercial insurance companies and licensed third-party administrators (TPAs) with 5,000 or more covered lives in Oregon, along with all pharmacy benefit managers (PBMs) in Oregon, all coordinated care organizations (CCOs) in Oregon, any payers with a dual eligible special needs plan (SNP) in Oregon, payers that participate in Oregon's health insurance exchange, and all insurers providing group health insurance plans to PEBB and OEBB members. APAC has approximately 78 Mandatory Reporters in 2018.

Other entities are not considered Mandatory Reporters but still submit data to APAC. Through a separate data collection process, OHA collects Medicaid data and submits them to APAC, including data from the state's coordinated care organizations (CCOs). In addition, APAC obtains Medicare Parts A and B data from the Centers for Medicare and Medicaid Services (CMS).

Due to the U.S. Supreme Court's March 2016 ruling in *Gobeille v. Liberty Mutual Insurance Company*, self-insured plans regulated by the federal Employment Retirement Income Security Act of 1974 (ERISA) are exempt from mandatory data submission to APAC or other APCDs across the country. Recognizing

the benefits of collecting data on these populations, APAC encourages self-insured ERISA plans to submit data to APAC voluntarily.

Format and Frequency

All data submitters follow an established method for reporting data to APAC, including a set of required data elements and formats for each file and data field. The full list of APAC data elements, along with detailed instructions for data submitters, is provided in the Data Submission Instruction Memo.

Data submissions for Appendices A-F take place quarterly, with each submission containing claims data for a reporting period of four quarters, or 12 calendar months. Each submission occurs one month after that reporting period ends. For example, data submitted on May 1, 2018 would include paid claims incurred during the last three quarters of 2017 (April-December) and the first quarter of 2018 (January-March). The next submission on July 31, 2018 would contain paid claims incurred during the last two quarters of 2017 (July-December) and the first two quarters of 2018 (January-June).

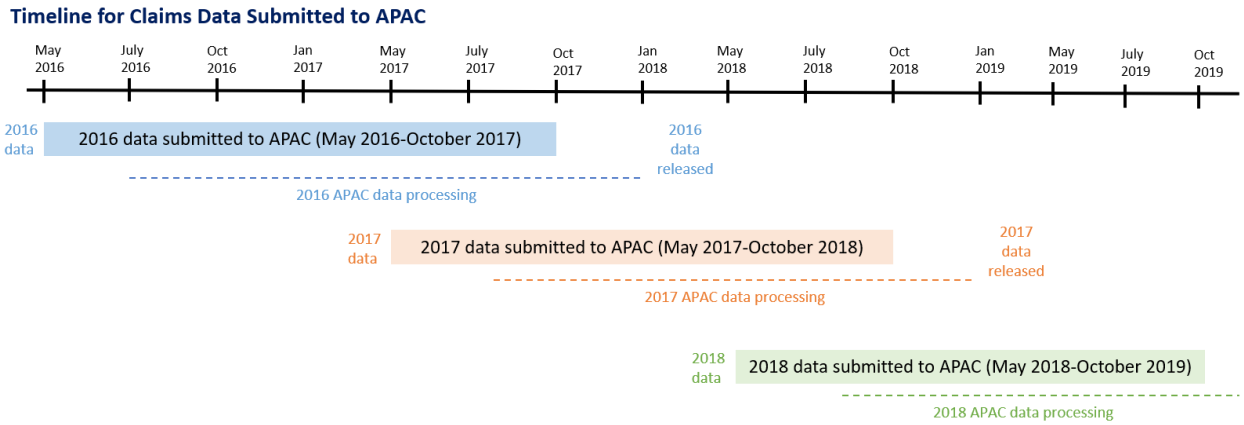
Each quarterly submission replaces (also known as "refreshes") the data previously submitted for that time period. For example, a payer's July 31, 2018 submission would include one *new* quarter of claims (April-June of 2018) as well as *replace* previously submitted claims for three quarters (July 2017-March 2018). Because of variations in claims lag and OHA's rolling 12-month submission schedule, APAC data are not considered complete—and thus not released—for approximately two years. For example, claims for calendar year 2015 were released in January 2017 – as soon as data from the fourth quarter of 2015 could be considered complete. This lag time helps ensure that the data are as complete and reliable as possible. The graphic below illustrates the timeline for APAC claims data submission and release.

The Life of a Claim

When a medical or pharmacy visit takes place, the provider submits a claim to the patient's insurer to bill for the service.

The insurer receives the claim, processes it, and pays it. This period of time is referred to as "claims lag" and can vary depending on the type of payer and provider. While some claims are paid within two months of the date of service, others can take up to 12 months or more. Furthermore, some claims require adjustments after they have been paid; for example, if the payer discovers an error in the claim.

Once the claim is paid, the payer submits it to APAC during its next quarterly submission. The claim is then processed by OHA and Milliman before the data can be released. OHA releases APAC data on an annual basis, once all data for a full calendar year are complete.



In 2017, OHA began collecting two additional files, Appendices G and H, annually in September.

Appendices G and H submissions contain data related to payment for medical care or contracts during the previous calendar year. For example, data submitted on September 30, 2017 included all payments made in calendar year 2016.

A schedule of APAC data submissions is available here.

Data Management

Data Quality Assurance

OHA maintains oversight and management of APAC, and contracts with Milliman, Inc., to collect and process the data. A critical part of Milliman's role is ensuring that APAC data are reliable and of good quality at all stages – from when the data enter the database, to when they are released via public reports or user data sets. Milliman performs three levels of data quality tests on data submitted to APAC.

1. At Level 1, Milliman checks each data file as soon as it is submitted to APAC, to confirm that the file is complete and there are no obvious errors such as missing data fields or incorrect formatting.
2. At Level 2, Milliman performs a quarterly audit of each payer's data submission after the files are accepted, but before the submission is processed—which helps keep inaccurate data out of the system. The Level 2 audit verifies whether all the files within the submission can tie together and whether the data are reasonable compared to previous submissions from that payer.
3. Level 3 checks occur annually and produce a comprehensive summary report which is sent back to each payer for validation. This Level 3 report includes a snapshot of the data submitted over the past year as well as year-over-year trends, and serves as another opportunity for data submitters to confirm that the data in APAC are accurate.

After each level of data quality testing, Milliman communicates its findings to each data submitter and works to resolve any data issues identified. When necessary, the payer re-submits the files.

In addition to the data validations performed by Milliman, OHA performs two additional levels of validation:

4. Level 4 validation annually compares fully-processed APAC data against other state data sources to make sure that discrepancies are identified and understood. These data sources include hospital discharge data, quarterly reports submitted by payers to the Insurance Division, disease registries, vital records, and others. If large data discrepancies are identified as part of Level 4 validations, OHA notifies Milliman, who works to investigate the issue – potentially requiring resubmission of data from data submitters.
5. Level 5 validation includes promoting APAC use! APAC data are summarized and shared publicly, through resources such as the Leading Indicators Report and the annually-updated Data User Guide.

Data Privacy and Security

Because APAC contains protected health information (PHI), OHA and Milliman have built several layers of protections to ensure the privacy and security of the data from intake to release. Data are encrypted during transmission and storage, and are housed on secure servers within a secure data center. Access

to the data is limited to authorized personnel only, namely a small group of OHA and Milliman staff who are designated data users. These staff must complete regular security trainings and can only access the data in a controlled environment. OHA also builds rigorous data privacy and security measures into its APAC data release process. Every data request passes through a multi-step vetting process through which OHA determines whether the requester will use the data appropriately and maintain data privacy and security. All public reports or user data sets are subject to the privacy standards and regulations of the Health Insurance Portability and Accountability Act of 1996 (HIPAA), which protects the privacy and security of individuals' personal health information. OHA reserves the right to deny any request for data that it deems inappropriate according to the guidelines provided in section 409-025-0160.3(d) of the Administrative Rule.

Data Use

Oregon State Agencies - Mandated by Statute

OHA and other Oregon state agencies use APAC data to inform policy development and evaluation as mandated by the Oregon State Legislature. Below are just a few examples of ways in which state agencies are using APAC to meet legislative requirements.

Allowed Uses for APAC Data

- **Treatment activities,** such as the provision, coordination, or management of health care by a health care provider
- **Payment activities,** including reimbursement for care, determination of eligibility or coverage, billing, or collection management
- **Health care operations,** such as quality assessment, improvement activities, provider or health plan performance, business planning and development including cost management
- **Public health activities,** such as surveillance and interventions by a public health authority
- **Research** that has received approval from an Institutional Review Board (IRB) or patient consent

OHA's Health Policy and Analytics Division engaged the Lewin Group in using APAC data to create a report designed to assist policymakers in evaluating the effectiveness of ongoing efforts to promote and sustain an adequate health care workforce in Oregon. In particular, the report provided a thorough overview of various incentives offered by the state (as described in House Bill 3396 of the 2015 Legislative Session) to recruit qualified health care providers statewide, including in rural and medically underserved areas, and subsequently evaluated the effectiveness of these incentives. By using APAC data, the study found evidence that Oregon's incentive programs did increase the size and longevity of the provider workforce in rural areas. Based on Lewin's analysis, several incentive programs have a recruiting effect (they attract new providers into the area), others have a retention effect (they keep providers in the area longer), and others have both a recruiting effect and a retention effect. Lewin's report also provided a number of recommendations that have the potential to improve the analysis and evaluation of Oregon's provider incentive programs in the future. More information on this study is available here.

OHA and the **Department of Consumer and Business Services (DCBS)** used APAC to create a report on primary care spending in Oregon, as mandated by Senate Bill 231 of the 2015 Legislative Session. Specifically, APAC data were used to identify claims-based medical spending allocated to primary care by major commercial payers, health plans contracted by the PEBB and OEBB, and Medicaid; these data were then combined with other non-claims based spending information. The annual report provides a statewide snapshot of the percentage of total medical spending allocated to primary care across multiple payers, and summarizes the level of primary care spending among individual plans as both a

percentage of total medical spending and on a per-member, per-month (PMPM) basis. The report and its methodology offer an innovative measurement strategy that Oregon policymakers can use to gradually close the gap in primary care spending across all payers. The 2017 report is available here.

In 2016, **OHA** launched the first in a series of annual Hospital Payment Reports showing variations in payments made to hospitals from commercial payers in Oregon for common procedures including medical, surgical, diagnostic, and pregnancy services. For each procedure, the report provides a hospital-to-hospital comparison of the median paid amount for the most common procedures, and the range of paid amounts. The purpose of the annual report, which the Oregon State Legislature mandated in Senate Bill 900, is to bring increased price transparency to the health care market.

On behalf of **DCBS**, the Oregon Health Care Quality Corporation (Q Corp) has used APAC data to produce quality and cost reports about commercial insurers offering individual and small group plans in Oregon. This project was funded through the U.S. Department of Health and Human Services' Cycle III and Cycle IV grants to inform and improve health insurance rate review activities. DCBS uses these reports to supplement the information that insurers currently submit during the rate review process. Over time, these reports – and APAC data – are expected to replace some of the information currently submitted for rate review, thereby decreasing the reporting burden for insurers. Information from these reports will also be released publicly through the DCBS website, thus promoting increased transparency in the market.

OHA's Health Policy and Analytics Division used APAC data to support an analysis of the Basic Health Plan (BHP) program in Oregon, an insurance affordability program established by the Affordable Care Act. The BHP program offers coverage in lieu of Marketplace coverage for individuals with incomes between 138-200 percent of the federal poverty level (FPL), as well as for individuals with incomes up to 200 FPL who are lawfully present in the U.S. but who do not qualify for Medicaid due to their immigration status. Per Legislative mandate and by request of DCBS, OHA used APAC data to develop an estimated comparison, at an aggregate level, of provider reimbursement levels from Medicaid and commercial payers in Oregon in 2015. This information will be used to inform the estimated financial impact of a BHP program as required by House Bill 4017 of the 2016 Legislative Session. The study was submitted to the Oregon Legislature in advance of the 2017 Legislative Session.

Oregon State Agencies - Not Mandated by Statute

Oregon state agencies are also using APAC in a variety of non-state mandated ways to measure existing policies and programs and to inform future initiatives. Below are a few examples.

In addition to supporting state policy and programmatic efforts, **OHA** uses APAC data to publish reports that inform the public's understanding of important health care issues. For example, OHA has a Leading Indicators Report showing the state's progress in health care transformation, based on indicators for enrollment, utilization, and spending.

Under contract with **OHA**, researchers at Portland State University (PSU) used APAC data in their evaluation of the Patient Centered Primary Care Home (PCPCH) program. In particular, PSU used the data to assess the impact of the PCPCH program as a whole in terms of expenditure and utilization outcome measures, and to examine outcomes for PCPCH practices that are deemed exemplary based on one or more of the six PCPCH core attributes. Initial evaluations have demonstrated progress towards Oregon's goals of achieving the Triple Aim among early adopters of this program. PSU has also used

APAC to help provide longer term evidence of PCPCH program success and to explore the considerable variation in implementation at the practice level to better understand how program success is being achieved and how it might be improved.

Also under contract with **OHA**, the Oregon Health & Science University's Center for Healthcare System Effectiveness (CHSE) is used APAC data to evaluate the adoption and spread of the state's Coordinated Care Model (CCM) and its impact on spending, utilization, and quality in different market segments. This work is part of OHA's self-evaluation efforts under the State Innovation Model (SIM) grant. CHSE also examined whether changes in spending and utilization observed in the Medicaid context are spreading to the non-Medicare commercial and Medicare fee-for-service populations.

In late 2015, the **High Cost Prescription Drug Workgroup** (chaired by Representative Robert Nosse) requested APAC data to provide insight on prescription drug cost and trend information across all payers. The request was targeted at helping to identify recent utilization and cost trends for both brand and generic drugs, as well as specific drugs with the highest cost impact on payers, and the corresponding medical condition "categorization" of these highest cost impact drugs. Data provided through APAC assisted the Workgroup in determining a potential definition of "high cost" prescription drugs.

The Department of Human Services (DHS)'s Office of Payment Accuracy and Recovery (OPAR) uses APAC to identify Oregon Health Plan members with unreported third-party insurance and update the Oregon claims payment system (MMIS) accordingly to ensure that Medicaid claims are appropriately paid and denied. APAC provides OPAR with a timely and streamlined method of contacting other insurance companies or pharmacy benefit managers to obtain policy information and update MMIS.

APAC data continues to be used by **OHA's Public Health Division** to conduct public health surveillance to describe the burden of asthma, arthritis, cancer, heart disease, diabetes, stroke, and other related diseases.

DHS's Oregon Enterprise Data Analytics uses APAC data to examine factors affecting school performance in Oregon. In particular, the study aims to understand the ways in which high mobility rates and low family resources impact student performance, as well as whether student outcomes correlate to Medicaid and private insurance coverage. This study will support the development of a report for Oregon's Department of Education.

External Data Users

Through its data release process, OHA also shares APAC data with qualified external, or non-state, users. The following examples of OHA-approved research studies highlight some of the ways in which external entities are using APAC data to inform their work and help solve complex problems.

The **Department of Obstetrics & Gynecology at the Oregon Health & Science University (OHSU)** is conducting a policy analysis using APAC data to assess Oregon's statewide policy to restrict elective deliveries prior to 39 weeks completed gestation – known as the "hard-stop policy." Implemented in 2011, the hard-stop policy was intended to limit early term elective deliveries to improve the quality of care and health outcomes for Oregon's maternal and infant population. OHSU aims to answer key policy questions about the impact of the hard-stop policy, such as whether the policy achieved its primary goal of reducing early elective deliveries, if the policy reduced the costs of delivery and neonatal care, and if the policy translated to improvements in the health of mothers and babies.

The **Oregon Health & Science University's Center for Healthcare System Effectiveness (CHSE)** is using APAC data to measure changes in the quality of care due to the integration of behavioral and physical health care. This study aims to develop new metrics to track care integration through claims data and to identify what is working and why.

The Dermatology Department at **Brigham and Women's Hospital** in Massachusetts is using APAC data to estimate the occurrence, treatment, and cost of care for skin cancer. This research includes a state-by-state analysis, utilizing data from APCDs across the country as well as from CMS. The results will generate comprehensive data regarding the economic impact of skin cancer and will provide patients, physicians, healthcare administrators and policymakers with information they need to optimize skin cancer prevention and control efforts.

Researchers at **Colorado State University** are using APAC data to further understand how wildfire smoke affects Oregonians, as well as which demographics might be at greatest risk for an adverse event during a wildfire event. The study aims to determine if increasing particulate matter attributed to wildfire smoke is associated with an increase in asthma claims, prescription fills for inhalers, or cardiovascular claims such as myocardial infarction.

Data Release

OHA has implemented a streamlined data release process designed to maintain data privacy and security when sharing APAC data with requesters and to ensure that the data are used appropriately. Four types of APAC data are available to requesters: Summarized data and Public Use, Limited, and Custom data sets. Individuals interested in obtaining any of these data sets must complete a data request, receive approval from OHA, execute a Data Use Agreement, and pay OHA for the cost of producing the data sets. More information on these data sets – including the application process, costs, and specific data elements for each – can be found on APAC's data request website.

Timeframe for APAC Data Requests
(From application submission to receipt of data)

Summarized data: 2-4 weeks
Public Use data sets: 2-4 weeks
Limited data sets: 2-4 months
Custom data sets: 2-6 months

Summarized Data

Summarized data show counts or aggregated totals only and this type of APAC data is usually requested by individuals who would like analytic support from OHA. Summarized data offer the lowest level of detail and do not contain protected health information (PHI) or patient-level data. Because creating these reports is not OHA's primary function, the requester must clearly outline the parameters of the data request – including what summarized data elements to include and how to stratify the data. Summarized data are generated by request only.

Public Use Data Sets

Public Use data sets contain claim level detail, but exclude PHI and any combination of data elements that directly identify any person. Public Use data sets cannot be linked to external data sets and the data

are organized into seven "pre-made" files based on the type of health care service: Episodes of Care[12], All Medical Claims, Hospital Inpatient Claims, Emergency Department Claims, Ambulatory Surgery Claims, Ambulatory Outpatient Claims, and All Pharmacy Claims. Requesters may request one of these files, and will receive all data elements included in each requested file.

Limited Data Sets

Limited data sets offer a higher level of detail than Public Use data sets and contain PHI, although they exclude direct identifiers such as patient name or address. Limited data sets may be disclosed for research, health care operations, or to a public health authority for public health purposes. Limited data sets can be linked to other external data sets, if explicitly approved by OHA. As with Public Use data sets, Limited data are organized into seven files: Episodes of Care[7], All Medical Claims, Hospital Inpatient Claims, Emergency Department Claims, Ambulatory Surgery Claims, Ambulatory Outpatient Claims, and All Pharmacy Claims. In contrast to the Public Use data sets, however, these files are not "pre-made" for users; rather, in compliance with federal privacy laws regulating the release of PHI, requesters must identify and provide justification for the specific data elements needed within these files, and only the minimum necessary data elements required for the project will be approved and provided.

Custom Data Sets

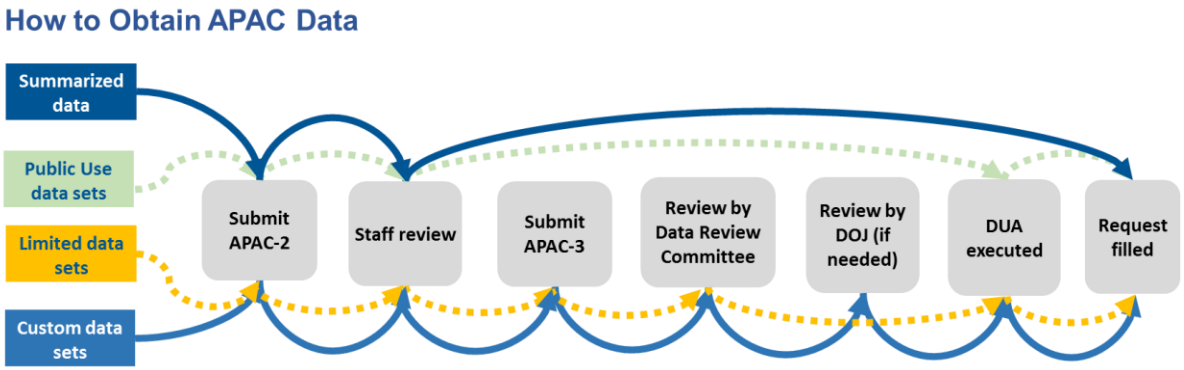
Custom data sets may include any of the data elements that APAC collects, whether that element is included in the Public Use or Limited data set specifications or not; however, the list of requested data elements is subject to scrutiny during the application review process. Direct identifiers such as patient name or address are only released in compliance with HIPAA requirements, and may require specific approvals such as patient consent and review by an Institutional Review Board (IRB) and/or Oregon's Department of Justice (DOJ). Custom data sets can be linked to other external data sets, as long as this is explicitly approved by OHA. As with Limited data sets, only the minimum necessary data elements required for the project will be approved and provided.

Data Application Process

To begin the application process for any APAC data set, requesters should complete the APAC-2 form (Pre-Application) and submit it to OHA. This form prompts requesters to indicate which type of data they need and how they intend to use the data. For Summarized data and Public Use data sets, OHA typically reviews and processes the data request upon receipt of the completed APAC-2 form.

For Limited and Custom data sets, OHA typically reviews the completed APAC-2 form and follows up with a more robust application – the APAC-3 form (Application). This form directs requesters to provide more details about their intended use of the data, the qualifications of all individuals who will be working with the data, and the measures that they will take to ensure data privacy and security. If the completed APAC-3 form passes OHA's initial review, it is sent to the Data Review Committee (DRC) for further evaluation. The DRC is an advisory body that evaluates requests for Limited and Custom data sets (as well as other research requests unrelated to APAC) and helps determine whether applications comply with state and federal guidelines for data use. The DRC reviews data applications monthly, and its meeting schedule can be found on the DRC website. Some applications (such as those requesting direct identifiers) may also require review by the DOJ. After the application passes through these reviews, OHA makes the final determination to grant or deny the data request.

[12] The Episodes of Care file contains all medical and pharmacy claims. If you request the Episodes of Care file, you do NOT need to request any other data set.



The release of APAC Limited or Custom data sets is subject to HIPAA standards and regulations and must meet all the provisions outlined in Section 409-025-0160 of the Administrative Rule. Data users approved to receive PHI must demonstrate safeguards for ensuring data privacy and security. Furthermore, data users (with the exception of those receiving Summarized data only) must execute a Data Use Agreement with OHA that outlines terms and conditions protecting against the misuse of APAC data.

Finally, reimbursement of OHA costs is required for all types of APAC data. Costs vary based on the type of data set requested; costs for Public Use and Limited data sets are listed on the APAC-2 and APAC-3 forms, respectively, while costs for Summarized data and Custom data sets will depend on the scope of the request.

Looking Ahead

Moving forward, OHA is seeking new ways to expand APAC's reach and further its ability to inform health care improvement efforts. As Oregon's health system evolves, APAC will evolve as well.

For more information about APAC, including upcoming and future developments, please visit APAC's website: http://www.oregon.gov/oha/HPA/ANALYTICS/Pages/All-Payer-All-Claims.aspx

For questions related to the APAC initiative, please contact OHA at APAC.Admin@dhsoha.state.or.us.