All Payer All Claims (APAC)

HPA Data Profile

Oregon's All Payer All Claims (APAC) database contains information about Oregon's insured population and the health care services they receive — such as diagnoses, visits, and payments made. The information comes from administrative records kept by insurers (also known as payers).

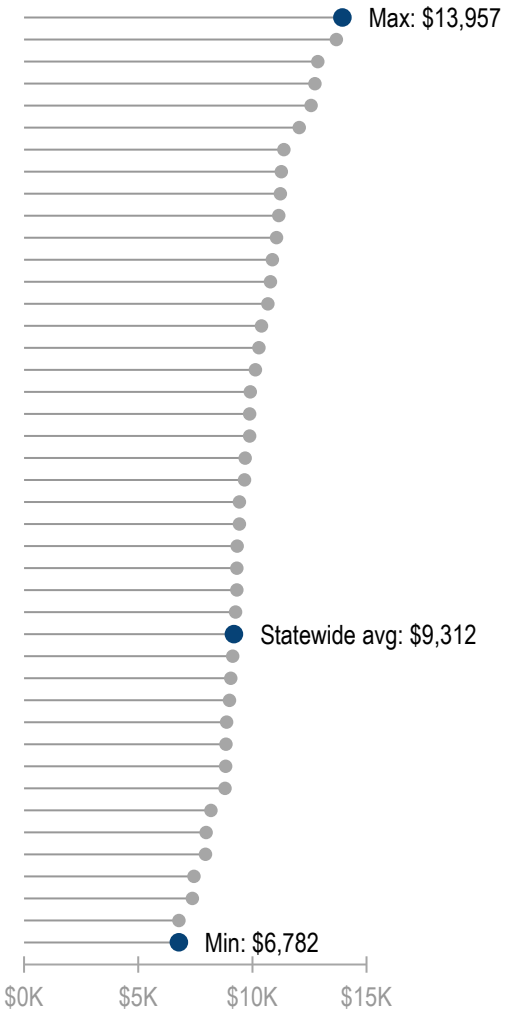
APAC is a unique resource for statewide health care improvement efforts. With data collected from all major public and private payers, APAC is the most comprehensive database on health care costs, quality, and utilization in Oregon.

A few examples of the things APAC data can tell us include:

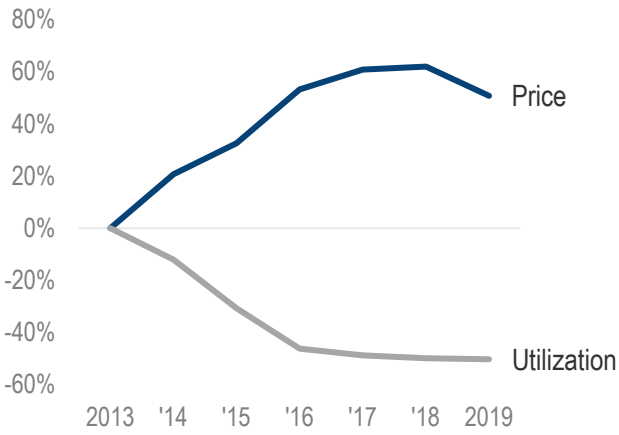
Did you know?

APAC is one of several All-Payer Claims Databases (APCDs) in the country, with many more in development. Other states use these initiatives in similar ways as Oregon: to inform new policies around health care cost, quality, and access; to evaluate existing programs; and to bring transparency to the health care system.

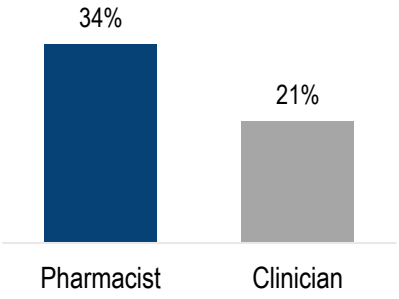
The median price of a normal delivery varied widely across Oregon hospitals in 2021.



In the commercial insurance market, the prices of inpatient services have increased over time, *while utilization has decreased.*



People who receive a contraceptive prescription from a pharmacist are more likely to continue use for 12 months *compared with prescriptions from clinicians*



Regular reporting

OHA publishes several regular reports and data dashboards that use APAC data:

Hospital Payment Report

The *Hospital Payment Report* is an interactive dashboard that shows the amounts commercial insurance companies pay different hospitals in Oregon for common procedures each year. The dashboard allows users to compare the median price of more than one hundred different procedures across Oregon's 60 hospitals. The dashboard also shows the price variation of procedures *within* each hospital, and how median payments have changed over time.

The dashboard is published every year in July on the Hospital Reporting Program webpage. View the 2022 dashboard.

Payment Arrangements

Beginning in 2018, Oregon became one of just a few states that collects a valuable type of information from insurance payers in its database: How they pay health care providers outside the normal "fee-for-service" model. (Learn more about this type of data and why it's important in Appendix A on page 11). OHA publishes an annual dashboard that tracks the different types of payment arrangements that health insurers use to pay the providers in their networks.

Oregon's Health Care Payment Arrangements is published annually on the APAC webpage. View the 2022 dashboard.

Primary Care Spending

The *Primary Care Spending Report* is an annual report to the Legislature. It describes how much different health care payers spend (as a percentage of total spending) toward primary care each year. This report includes both claims-based and non-claims-based (i.e., not directly tied to the provision of health care services) payments made to health care providers.

The report is published annually on the APAC webpage as an interactive dashboard and short executive summary. View the 2022 dashboard.

In addition to the above reports, Oregon's Health Care Cost Growth Target and Health Care Market Oversight programs also rely heavily on APAC data and regularly publish reports that use APAC data. Learn more in the APAC in Action section on pages 8-9.

About the data

This section includes some helpful information about where APAC data come from, what types of information are available, and important things to keep in mind when using these data. To learn more, visit the APAC website.

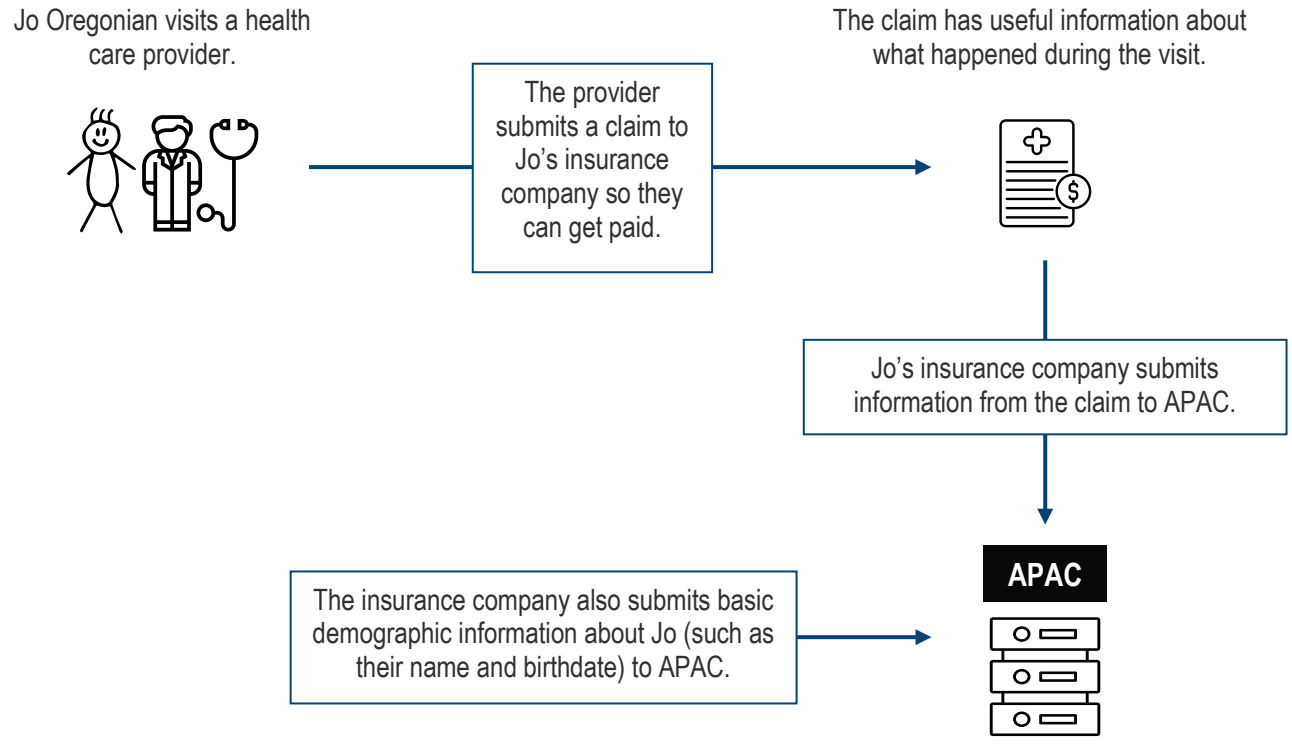
Health care insurers submit data to APAC. Every time a patient visits a health care provider or fills a prescription, the provider submits invoices (called *insurance claims*, or just *claims*) to the patient's insurance company (or *payer*) so that they can get paid.

Health care claims contain information that can give researchers and policymakers a rare view into how the health care system is operating. For example, claims include information about:

- **Diagnoses, treatments, and procedures** that occurred at each visit;
- **The amount of money that was paid** by the insurer and by the patient for the services that occurred at a visit; and
- **Health care providers** and locations for the visit.

In addition to the claims data, payers submit **basic demographic information** about all the members enrolled in their health care plans, and the amount of money those members pay in **monthly premiums**.

Figure 1. Payers submit information from health care claims to the APAC database.



Payment Arrangement Files

In 2017, APAC also began collecting information about non-claims payments that payers make to providers as part of "alternative payment models" (or APMs). These data are called Payment Arrangement Files and are distinct from other APAC data in important ways.

Learn about Payment Arrangement Files in Appendix A on page 11.

Overview of data elements

The list below is not exhaustive, but gives an idea of the types of information in APAC:

Medical, pharmacy and dental claims, which include:

- Diagnosis and procedure codes
- Where the service occurred
- The line of business (Medicare, Medicaid, or commercial) that paid the claim
- The amount that was charged to the insurer (learn more in the box below)
- Payments made by the insurer
- Expected payments from patients (such as copayment, coinsurance, or deductible)

Enrollment and eligibility information, which includes:

- Member demographics that *don't* specifically identify a person, such as sex, age, race, ethnicity and primary language
- Member demographics that *do* specifically identify a person, such as date of birth, date of death, address, zip code and county
- The amount members pay in monthly insurance premiums

Detailed data dictionaries can be found on the APAC Data Request webpage.

> **The importance of amounts charged *and* paid**
>
> While other Oregon 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 amount charged *and the amount paid*.
>
> This is valuable information, because charged amounts and paid amounts often differ based on the arrangements negotiated between the provider and the payer. It can also help us understand cost burden for consumers (for example, is the amount that the patient is expected to pay increasing over time?).
>
> Understanding the amounts that were actually paid for health care services, rather than just the amount charged, provides a more accurate and useful picture of health care prices and spending.

Who is represented in APAC data

APAC contains enrollment information for most people in Oregon who have health insurance. In 2022, the APAC database represented about 98 percent of Oregon residents, or more than 4 million people. (According to the Oregon Health Insurance Survey, 97 percent of people were insured in 2023.)

Insured people in Oregon who are **not** represented in APAC include those who are covered by:

- very small (fewer than 5,000 covered lives) commercial insurance companies
- some "self-funded" health plans
- federal programs such as Veterans Affairs, Indian Health Services, or health insurance plans for federal employees

In addition to most insured people in Oregon, APAC also includes a small amount of data for people who live outside the state. That's because payers who provide coverage to state employees must submit data for all their members, some of whom live in other states such as Washington. In 2022, about one percent of people represented in APAC lived outside the state.

Who submits data to APAC

As described earlier, health care payers submit data to APAC. State law **requires** many payers to submit data to APAC. For example:

- Commercial insurers (such as Moda or Aetna) and licensed third-party administrators (TPAs)[1] with at least 5,000 members in Oregon
- Pharmacy benefits managers (companies that manage prescription drug benefits on behalf of health insurers) that provide services for people in Oregon
- Coordinated Care Organizations (also known as CCOs, which are plans that provide Medicaid coverage to people in Oregon)[2]
- Any payer that provides coverage through Oregon's Health Insurance Marketplace or to state government employees

In addition to the mandatory reporters listed above, self-funded health plans that are regulated by a 1974 federal law called "ERISA" may also submit to APAC. However, because of a Supreme Court decision in 2016, such plans are not required to submit data. Learn more about ERISA.

Finally, APAC receives data from the federal government for Medicare fee-for-service members (known as Medicare Parts A and B). However, this isn't required, and those data cannot be released to data users because of an agreement between OHA and the federal government.

Timing and frequency

APAC data are available back to calendar year 2011. **A full calendar year of APAC data becomes available to users thirteen months after the close of the year.**[3] For example, calendar year 2023 data will become available in January 2025. That's because claims data can have a long lag time: While sometimes a payer will process (pay) a claim (invoice) within a couple of months of the date of the service, other times it may take up to a year. And sometimes, claims will be adjusted after they are initially paid. This can happen, for example, if someone discovers an error in the bill. For these reasons, **it takes a year for claims data submitted to APAC to be considered final.** Read the box below for more details.

> **Data submission and lag**
>
> Payers submit claims data to the APAC database at the beginning of every quarter. Each submission contains claims from the previous four quarters. But the most recent three quarters are considered provisional and still subject to change.
>
> Each quarter's data is submitted several more times until they considered complete and final. (See the diagram in Appendix B on page 12 for a more detailed look at the data submission schedule.)
>
> Using a "rolling" data submission schedule like this means that data submitters and the APAC program don't need to individually track every claim that is updated or revised, which would be very complicated.

[1] TPAs provide administrative services for self-funded health plans (also known as self-insured health plans)
[2] In practice, the Oregon Health Authority submits data on behalf of CCOs. OHA also submits data for members who receive insurance through Medicaid but are not enrolled in a CCO (known as "fee-for-service" or FFS)
[3] Users can also request data on a different schedule than calendar years (for example fiscal years) but the 13-month data lag still applies

REALD and SOGI

What are REALD and SOGI?

REALD and SOGI[4] are types of standardized demographic information. REALD stands for: **R**ace, **E**thnicity **a**nd **L**anguage, **D**isability. SOGI stands for: **S**exual **O**rientation and **G**ender **I**dentity.

Collecting and analyzing data aligned with REALD and SOGI standards helps us identify and address health disparities, and support data justice in communities that are most affected by health disparities. Learn more on OHA's website.

REALD and SOGI data standards are not currently implemented in APAC

The demographic information in APAC is not currently REALD or SOGI compliant. That's primarily because commercial insurance companies—which submit about three-quarters of the claims in APAC—have not historically been required to collect REALD or SOGI demographic information. However, House Bill 3159, which was passed by the Oregon Legislature in 2021, and Senate Bill 966 (2023) will require all insurers to eventually collect demographic REALD and SOGI information from their members. Once that is implemented (OHA's current goal is by January 31, 2026), APAC will include REALD and SOGI data.

As of this publication, APAC does include *some* information on race, ethnicity, and language. However, race is reported as "unknown" for most people included in APAC (about forty eight percent). The majority of known race or ethnicity data comes from Medicaid and Medicare Advantage payers. APAC contains data on primary language for only around half of the people included in APAC; the remaining half are reported as unknown or missing.

Things to remember when interpreting APAC data

Purpose of administrative data

While there are many benefits to APAC data, it's important to remember that the *reason these data are collected* by payers is for the administration of health insurance plans. The purpose of claims is to receive payment. A claim might show that a person received a certain type of lab test so the provider can get paid for that lab test, but the claim will not describe the results of that test, because that information is not relevant to being paid. Similarly, insurers only collect demographic information that they need for their business purposes, such as to identify a member (name, date of birth), establish premiums (location, age) or determine covered services (age, sex designated at birth).

Although provider information is captured in claims data, the information is complex

It's very challenging to identify specific providers and locations across APAC data. Providers are identified in claims data in two ways, each of which presents a different challenge:

1. **Provider identifiers that are unique to each payer.** Payers use a unique code to identify each provider they work with. However, those identifier codes are not standardized *across* payers.

[4] SOGI data collection standards were established by rulemaking completed in July 2024

2. **National Provider Identifiers (NPIs).** NPI codes *are* standardized across payers, but sometimes identify a facility or provider group, rather than a single provider. Learn more about NPIs.

Claims are not visits

A single health care visit might generate multiple claims. For example, suppose a person visits an emergency department for a condition. A provider examines their condition, blood is drawn and sent to a laboratory for tests, an X-ray and MRI are completed, and treatment is provided. Such a visit might generate claims from multiple entities: The emergency department facility, laboratory, imaging service, and each provider who delivered a service. Also, some people are covered by more than one insurer. In that case, each insurer will receive claims for the same visit.

Other sources of Medicaid claims data

OHA has another database, the Medicaid Management Information System (MMIS), that stores claims and enrollment data from Medicaid payers. OHA submits Medicaid data from MMIS to APAC. The data fields in APAC are different than how the data are stored in MMIS, so the process requires reformatting the data to "fit" into the APAC database. For that reason, the Medicaid administrative data that are stored in MMIS may be different than the data stored in APAC. **If users are interested in analyzing *only* Medicaid data, they should use MMIS rather than APAC. However, if they want to *compare* administrative data across different payers (for example Medicaid versus commercial) then it's recommended to use APAC. Learn more in the MMIS data profile.**

Requesting APAC data

To request APAC data, please submit a general data request form on the Health Analytics Data Request webpage. After you've submitted the form, somebody from the APAC program will contact you with next steps. This section provides some information about what the next steps will be, depending on the type of APAC data you are requesting. To learn more, visit the APAC Data Requests webpage.

> **OHA staff are here to help!**
> You are encouraged to schedule a consultation with the APAC team before requesting data. Email: apac.admin@odhsoha.oregon.gov.

There are two types of data products

Depending on your research question and how you plan to use APAC data, you may need to request either 1) Public use data or 2) Limited data. Which type of data you need depends on your research question. The main difference between the two is the level of detail:

1) **Public use datasets are premade and only include certain fields.** The data are at the statewide level only. They exclude any data elements that might allow users to identify a person, such names, birth dates, or ZIP codes. Files are created by year of service and have many millions of rows of data. Public Use data cannot be linked to other datasets.

   If you are requesting a public use dataset, then after you've submitted the Health Analytics request the APAC team will ask you to sign a data use agreement and submit payment. (The cost depends on what you are requesting; learn more on the APAC

website.) Once those items are received, your request will be processed. The processing normally takes about 2-4 weeks.

2) **Limited data are created for specific requests.** As custom files, they are usually smaller and more detailed than public use datasets. Limited data sets may contain personal health information (PHI) and can be linked to other datasets (with permission from the APAC program).

   If you are requesting a limited dataset, the process is more involved and can take 3-6 months. APAC offers consultations for anyone requesting APAC data, and it is highly recommended that new limited dataset requesters schedule a consultation in order to ask questions and refine their request.

APAC may offer an incentive (for example, priority processing or waiver of fees) to data requesters whose project aims to eliminate health inequities stemming from historical and contemporary racial injustices and the inequitable distribution of resources and power. Learn more about this option and how to apply here.

APAC in action

The APAC Use Case Document demonstrates the breadth of ways APAC data have been used by researchers and policymakers across categories like population health, health care spending, utilization, and more. This section highlights a few additional examples:

Helping policymakers and the public understand the impact of health care consolidation

Nationally over the past decade, there has been a trend toward health care entities (such as hospitals, health insurance companies, and health care provider groups) combining into larger, consolidated companies. Policymakers know that this type of consolidation can result in higher prices for consumers with no improvements to quality or outcomes.

To promote transparency around proposed business deals, and to monitor impacts after they occur, the Oregon Legislature created the Health Care Market Oversight (HCMO) program in 2021. HCMO analyzes APAC and other data sources to make sure such business deals support—and don't hurt—Oregon's health care goals across four domains: cost, equity, access and quality.

The program's analytical framework identifies a list of specific analyses and data sources that may be used within each domain. APAC is the only data source listed across *all four* domains, demonstrating the breadth of insights that the database can provide. Just a few examples of possible analyses within each domain that would use APAC data include:

- **Cost:** Annual spending growth (overall and by major spending category)
- **Access:** The share of health care services the entity provides in a geographic region
- **Equity:** Whether the entity's patient population is representative of the community
- **Quality:** Quality measures such as hospital readmissions or medication safety

The exact analyses conducted for each business deal will vary based on the nature of the health care entities involved (for example, an analysis of a deal involving a dental clinic would use different measures than a deal involving emergency department providers). Explore the reports for completed reviews to learn the many ways APAC data have supported this important work.

Evaluating outcomes of a new law intended to improve access to birth control

In 2016, Oregon became the first state in the nation to allow pharmacists to prescribe hormonal contraceptives (such as a pill, patch, or ring). One goal of this policy was to reduce barriers to accessing contraceptives, such as requiring an appointment at a health clinic or having a regular health care provider. This is important, because contraceptives must be used *consistently* to be effective—and studies have shown that as few as 22 percent of people receive timely refills without a break in contraceptive coverage.

In 2022, researchers from Oregon Health & Science University (OHSU) published results of a study using APAC data on whether people who received a prescription from a pharmacist had higher rates of 12-month continuous contraceptive use, compared with people who received a prescription from a health care clinician. The researchers analyzed APAC data from 2016-2018. Some of the data elements used in their analysis included:

- Prescriptions for different types of contraceptives and the number of days dispensed
- What type of provider (pharmacist or clinician) prescribed the contraceptive
- Demographics of the patients (such as age and geography)
- Type of insurance (commercial coverage)

The researchers also used claims data to *exclude* cases where the patient was not capable of becoming pregnant by looking at things like diagnosis codes for menopause or procedure codes for tubal ligation.

The analysis found that pharmacist prescriptions were associated with continuous contraceptive use: 34 percent of people who received a prescription from a pharmacist were continuing their method after 12 months, compared with 21 percent who received a prescription from a clinician. However, fewer than one percent of contraceptive prescriptions were written by a pharmacist. Compared with their peers, women who lived in urban areas, had commercial coverage, or were between the ages of 25-34 were more likely to get a prescription from a pharmacist.

This use of APAC data provides policymakers and health care researchers with evidence that allowing pharmacists to prescribe contraception is a good strategy for improving access to contraception, but also that the strategy is not widely used across Oregon.

Supporting a law to limit “surprise billing” for Oregon consumers

In 2018, Oregon became one of the first states in the nation to pass a law protecting health care consumers from surprise billing. “Surprise bills” occur when a person is unknowingly treated by an out-of-network provider. This might happen, for example, if a person has surgery at a hospital that is in their health insurance network, but one member of the care team (such as the anesthesiologist) is not part of the network. The patient doesn’t know the anesthesiologist is out-of-network until they receive a bill from the hospital requiring payment for the “out-of-network” service. Surprise medical billing used to be a common problem and could cause people to go into debt and lose trust in the health care system.

The 2018 law made it illegal in Oregon for providers to bill patients for out-of-network services provided at in-network facilities (such as the anesthesiologist example above). Because an out-of-network provider does not have an agreement for how much they can charge a patient's insurance plan (learn more in the box at right) **the law also used APAC data to standardize the prices that could be charged and paid between out-of-network providers and insurance plans.** Specifically, reimbursement for out-of-network services would be based on the median amount that commercial insurers paid for that service to in-network providers in calendar year 2015, adjusted for geographic variation. This was an important part of Oregon's law because it provided transparency and predictability for everybody involved: health care providers, insurance plans and patients.

The policies established in Oregon in 2018 created momentum and helped pave the way for a federal law, the No Surprises Act, which protects people in all states from surprise billing.

Insurance networks 101

When a provider is **in-network** with a health insurance plan, it means they have an agreement to accept the insurance payment as full payment. The patient might be responsible for a copay or deductible, but they won't be billed any additional charges from the provider.

An **out-of-network** provider has no such agreement with the insurance plan. Some plans cover a small portion of out-of-network charges, while others pay nothing. Before Oregon's law went into effect in 2019, the **patient** would be responsible for paying the balance of the bill.

If the patient was never informed that the provider was out-of-network, such a bill would come as a very unwelcome surprise!

Appendix A

Payment Arrangement Files

Background: Paying for quality instead of quantity

As described in this data profile, the APAC database includes information from health care invoices, or *claims*. Claims data are an excellent way to understand health care utilization under traditional *fee-for-service* payment models. Fee-for-service (or FFS) means that health care providers are paid a specific amount for each service they provide. Insurers and providers negotiate on what those specific amounts will be, resulting in big differences in the amounts paid for the same services across various regions, providers, and insurance plans.

In the fee-for-service model, a provider submits claims to the patient's insurance plan to be reimbursed for the services they provided. The more tests providers run or surgeries they perform, the more they are paid. As such, the FFS model can encourage health care providers to do more—sometimes unnecessary and expensive—procedures. In recent years policy makers and industry leaders have highlighted the negative effects of paying for volume instead of paying for value, such as health care costs increasing without increases in quality.

Some insurers (also known as *payers* because they pay for health care services) use **alternative payment methodologies** (or APMs), a term that encompasses all non-FFS payments. Unlike the FFS model, alternative payment methodologies are designed to incentivize high-quality procedures that lead to improved health outcomes. One common type of APM are **value-based payments** (VBPs), which include financial incentives to health care providers to focus on the *quality* of services and patients' *health outcomes*. An example of a VBP might be a bonus payment to a clinic if they increase the number of patients receiving a screening for depression and include a follow-up plan in the patients' medical charts.

There's a wide range of APM and VBP models. Some models might still *mostly* follow the traditional FFS payment model but include some extra payments for care coordination or quality reporting. On the other end of the spectrum are "integrated finance and delivery" models, where providers are prepaid a set budget and must demonstrate high-quality care for their patients. Learn more about VPB models and Oregon's efforts to advance the use of these models in the health care system.

Payment arrangements and APAC

In addition to submitting claims data to APAC, since 2018, payers are also required to annually submit information about the types of alternative payment models that they have arranged with their provider networks. This information is stored in "Payment Arrangement Files" within the APAC database and is separate and unique from regular claims-based APAC data.

Accessing Payment Arrangement Files

OHA publishes an annual dashboard that allows users to explore APAC Payment Arrangement data. The dashboard shows the percentage of total payments that coordinated care organizations (or CCOs, which are Oregon's Medicaid health plans) and commercial health insurance carriers paid toward different types of value-based payment models. The dashboards are published on the APAC program webpage.

Appendix B

Understanding APAC data submission schedule and lag

Page 5 of this profile explained the timing and frequency of APAC data. The illustration below illustrates an example of when a calendar year (2023) of data is final and available to data requesters.

Figure 1. Each data submission includes four quarters (12 months) of data

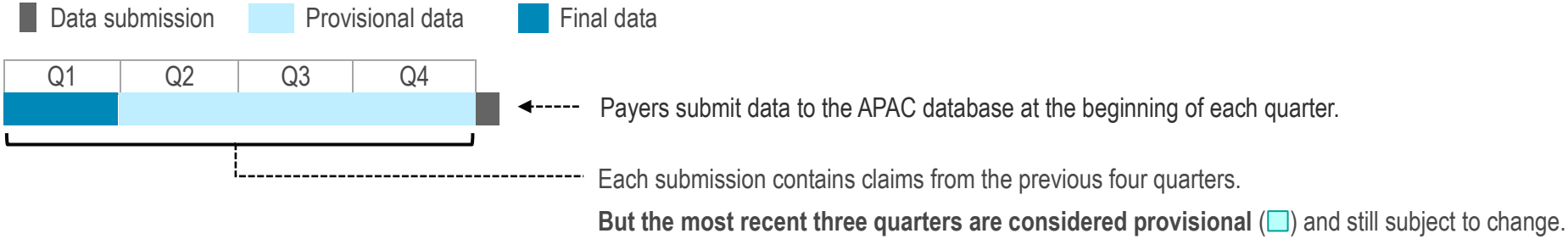
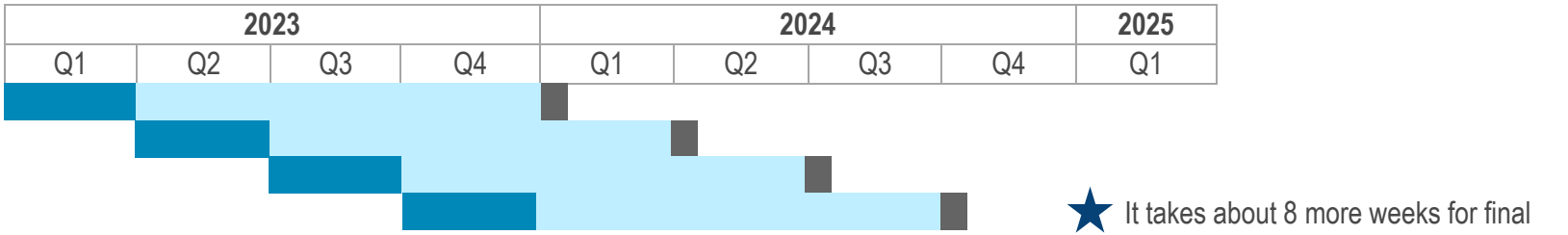


Figure 2. All four quarters of CY 2023 are final (■) by the October 2024 (Q4) data submission



★ It takes about 8 more weeks for final data to be cleaned, organized, and ready for data users, so **calendar year 2023 data are available for request by January 2025.**

Quick Facts

Name	All Payer All Claims database
Acronym	APAC
Summary	Administrative (claims and enrollment) health care data from most health care payers in Oregon
Data type	Administrative
Populations	Insured people in Oregon
Frequency	Annual datasets
Available since	2011
Required?	Yes (HB 2009 in 2009)
Regular reporting	Three annual data dashboards use APAC data: *Hospital Payment Report*, *Oregon's Health Care Payment Arrangements*, and *Primary Care Spending Report*. Learn more on page 2 of this profile.
Website	www.oregon.gov/oha/HPA/ANALYTICS/Pages/All-Payer-All-Claims.aspx
Data requests	Submit a general data request form on the Health Analytics Data Request webpage. The APAC team will then contact you with next steps, which depend on the type of dataset you are requesting.
Security level[5]	Level 3
Data dictionary?	Yes (available on APAC program webpage)
REALD and SOGI	Not currently implemented, however OHA is updating rules that will require insurers to submit REALD and SOGI information soon (goal January 31, 2026). Learn more on page 6 of this profile.
Suggested citation	Oregon Health Authority. (YYYY). All Payer All Claims Reporting Program. [Data analytic views, version #]. Salem, Oregon: Oregon Health Authority

[5] Learn more: https://www.oregon.gov/das/policies/107-004-050.pdf