Minnesota's All-Payer Claims Database
Frequently Asked Questions

- February 2015 -

What is an All-Payer Claims Database or APCD?

The APCD Council, a learning collaborative that focuses on improving the development of APCDs, define All-Payer Claims Databases as large-scale databases that systematically collect medical claims, pharmacy claims, and eligibility and provider files from private and public payers. APCDs include data from all settings of care and permit the systemic analysis of health care delivery. As in Minnesota, they often also include information on actual transaction prices, the payments made by health plans and health plan members for their care.

How many APCDs are operated, nationwide?

Currently, ten other states are collecting and releasing APCD data or reports, including Massachusetts, Tennessee, Utah, Colorado, Kansas, Maryland, Oregon, Vermont, New Hampshire, and Maine. Four states are starting up APCDs: Virginia, Connecticut, Rhode Island, and Arkansas. Fourteen more states have expressed strong interest in further exploring options to start an APCD or expand statewide from a regional project.

With data from Medicaid and Medicare as well as from commercial payers, Minnesota's APCD is one of a few in the nation that is truly an "All Payer" claims database.

Who is required to submit data to the MN APCD?

According to state regulations, a health plan company or a third-party administrator (TPA) must submit data to the APCD if total claims for MN residents exceed $3 million per year. Pharmacy benefit managers are also required to submit data if total claims for MN residents exceeds $300,000 per year.

Who runs the MN APCD?

The Minnesota Department of Health is legislatively directed to collect data for the APCD. MDH issues regulations describing requirements for data submission. Legislative authority to conduct this work can be found in Minnesota Statutes, Section 62U.04.

How many payers submit data into the MN APCD?

Currently, over 100 different sources submit medical, pharmacy and enrollment data to the APCD. The number of organizations submitting data into the APCD has been increasing over time, as MDH has worked with health plan companies and TPAs to understand and comply with submission requirements.

Six payers alone submit about 80% of the claims volume (HealthPartners, Medica, Blue Cross Blue Shield of Minnesota, UCare, The Centers for Medicare & Medicaid Services, and the Department of Human Services). A detailed list of payers is included as an appendix table to this FAQ.

APCD Payer Annual Participation History

Year	2010	2011	2012	2013	2014
Data Submitters	32	30	83	90	105

Note: 2014 is part-year estimate

What types of data are included in the MN APCD?

APCD data for MN's residents with health insurance includes:

- All medical and health services insurance claims paid by a health plan company or TPA, including
  - Commercial products and
  - Managed care data for Medicaid and Medicare
- Medicare fee for service data
- Medicaid and other state fee for service claims

How current is the data in the MN APCD?

The MN APCD contains historical data dating back to January 1, 2008. New data is added to the system continuously throughout the year. Data submitters have the option to submit new claims on a monthly or six-month schedule.

Claims are considered "final" and ready for use for analysis three months after the date of service for Medicare and commercial claims, and six months after the date of service for Medicaid/Public Program claims. These periods are known as "run-out periods" and refer to the average amount of time it takes for a claim to be fully adjudicated by the payer.

Due to the lengthier process required to obtain Medicare data from the Centers for Medicare and Medicaid Services (CMS), Medicare claims are generally one year to 18 months older than the commercial and Medicaid data. For example, the current data extract includes claims paid through September, 2013 for commercial and Medicaid, and calendar year 2012 for Medicare claims. For more information on the process of obtaining Medicare data, please visit the Research Data Assistance Center (ResDAC) website at: http://www.resdac.org/. MDH currently obtains their CMS data through the State Agency Data Request process (http://www.resdac.org/cms-data/request/state-agency).

Are there types of health insurance claims not included in the MN APCD?
The following types of health insurance policies or sources of coverage are excluded by administrative Rule:

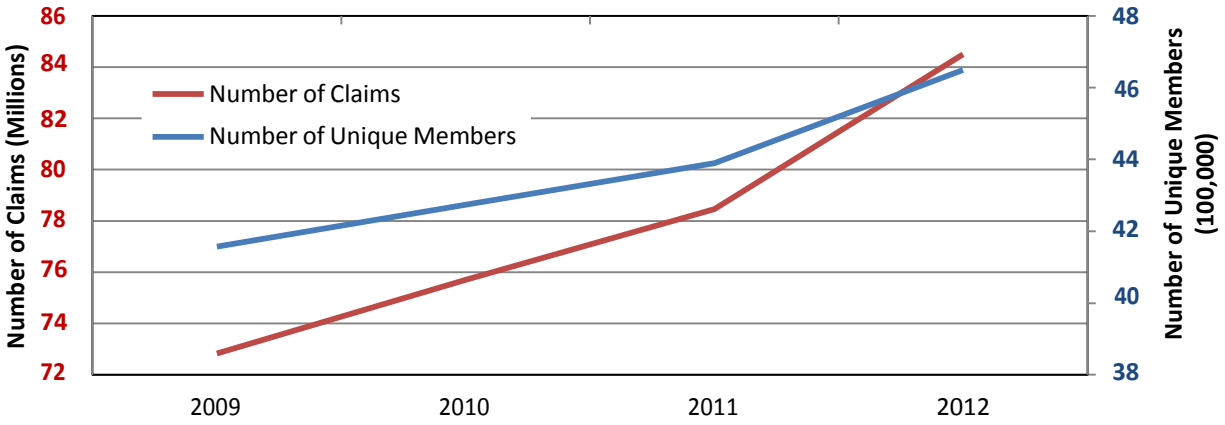
- Hearing, dental, vision, or disability-only;
- Auto medical or accident-only;
- Insurance supplemental to liability;
- Long term care or Workers Compensation;
- Medicare Supplemental and Medigap;
- Veterans Affairs, Indian Health Service, Tricare;
- Carriers with less than $3 million in annual medical and/or $300,000 in annual pharmacy claims
- Non-Minnesota residents

The APCD also does not include information about people without health insurance.

How much information does the MN APCD contain?
Minnesota's APCD captures enrollment and claims for approximately 85% of the state's population and a greater share of those with coverage. Over time, Minnesota's APCD has grown larger and become more inclusive. MDH continues to work with health plan companies and pharmacy benefit managers to increase the completeness of the data.

For calendar year 2012, the MN APCD contains approximately 84 million claims for an estimated 4.6 million unique member IDs.

Four Year History of APCD Medical Claims and Enrollment (by date of service)



*The MN APCD collects de-identified member information; the number of covered lives is equal to or less than the number of Unique Member IDs.

What types of information are included in the APCD?
Records in the APCD include information about diagnoses, procedures, and duration of treatment, as well

as de-identified demographic information (age, gender, geography) and high-level health plan product information. Information about prices paid for services is also included. The APCD does not include direct patient identifiers, such as social security number, name, or address.

Does the MN APCD contain patient names or identifying information?

The APCD does not collect patient identifiers such as social security number, name, or address. All data are encrypted using up-to-date industry standard encryption algorithms. The encryption of identifying information happens before the data are submitted, ensuring only encrypted values reach the database. Since the encryption is a one-way process (performed by the health plan submitting the data) it cannot be decrypted by data users. For example, after encryption, the name *Jane R Doe* might look something like this: *z3x@K57#*.

How is the information in the MN APCD protected?

Data in the MN APCD are protected physically, technically and administratively. Data are housed on secure servers that are not accessible through the internet. Access controls to the data are strictly limited to minimally necessary staff with appropriate training and clearance. Analysts are prevented from intentionally or unintentionally removing detailed information from the storage environment. State of the art software and hardware solutions are in place to further protect the data.

Notably, the MN APCD has been certified as a Qualified Entity by the Centers for Medicare & Medicaid Services (CMS). To achieve this certification, CMS conducts an on-site audit to verify that the organization adheres to strict data management and security standards (https://www.qemedicaredata.org).

Can care be traced over time with data encrypted in this way?

Minnesota state law requires the encryption of all personally identifiable information. Information from all data sources are encrypted using the exact same process, generally producing the ability to trace care across payers and deliver system settings. While exact matching of members over time and across payers is associated with significant challenges, new technology and statistical techniques have helped accomplish this in a vast majority of cases.

How does MDH ensure that data in the MN APCD are of high quality?

MDH contracts with a vendor to perform data collection, processing, quality assurance, and aggregation. The vendor produces regular data extracts of cleaned data for MDH and performs basic services that ensure consistency of the data. As part of this work, the vendor and MDH conduct over 500 quality assurance checks that include, among others, the following:

- Accuracy of dates of service spans;
- Validity of data identifying submitters and providers;
- Consistency of record layout and counts;
- Consistency with MN-established health care claims threshold levels;
- Degree of duplicate records; and
- Variation in claim volume trends and payment patterns.

How does the data contractor manage problems with data submissions?
MDH's contracted vendor reviews data submitters' files according to standards established in the data submission guide, including by assessing each record's alignment with established format, frequency and consistency criteria. Files that do not meet minimum standards, are typically rejected by the intake system, resulting in troubleshooting efforts by MDH and its vendor in partnership with data submitters. For example, the data submission guide for the claims file specifies a 100% completion rate to submit the gender of members. A file with fewer than 100% of the fields with a valid value would be rejected and returned to the submitter for correction.

Data submitters that don't succeed in submitting the required variables in a way that meets the minimum thresholds may request a variance to MDH for (temporary) lowered thresholds. Both the data aggregation vendor and MDH work closely with individual submitters to correct errors and address systematic problems as they arise. Under this system, only data that has already met certain data quality checks is allowed to be processed for inclusion in the MN APCD.

Certain types of data quality checks are outside of the authority of MDH and its contractor. For example, MDH does not attempt to verify accuracy of medical coding by providers or their clinic staff, or assess accurate recording of diagnoses during the encounter; those activities typically require complex chart review. MDH's data aggregation vendor does, however, ensure that submitted diagnosis codes are valid and populated to the state-mandated thresholds.

MDH conducts additional benchmarking and validation activities once the vendor completes its rounds of quality analysis. Examples include:

- Comparing the APCD to other data sources (e.g., Minnesota Hospital Discharge Data, Birth and death records; and data summaries from alternative sources);
- Validating summary statistics with individual facilities in the state; and
- Performing a range of logic checks of summary claims data.

What happens when problems with the data are identified?
When routine data quality checks or additional validation efforts by researchers and MDH staff identifies data errors or apparent inconsistencies, MDH's data aggregation vendor works quickly to identify and address the root cause of the problem. Often times, this involves working directly with the data submitter to verify that their submitted information is correct, and if not, ensure resubmission of data to correct the problem.

Generally, data problems are corrected before the incorrect data ever is aggregated to the APCD through "data extract". Other times, workaround solutions are created so that the usability of the data is not affected.

Is there a publically available report on data quality that I can access?
MDH has engaged with the vendor Fair Health to independently assess and demonstrate the completeness and quality of data in the MN APCD. This project will inform development of additional quality analytics and processes to continuously monitor and improve the APCD. Fair Health will issue two independent, public-facing reports on APCD data quality. MDH is anticipating that the first public report will be available in early 2015.

In addition, MDH is working with its data collection and aggregation vendor on developing a report on data trends, consistency and quality assurance of each individual data extract. MDH anticipates that this report will also be available in early 2015, with biannual updates occurring thereafter. MDH will make all reports available when they are finalized and will seek input from the public on what additional information to routinely track and report on.

Do other states use appointed groups to oversee the quality of the data?

Some states rely on advisory committees to assist with improving the quality, completeness and design of the data. Massachusetts established a technical advisory committee that is responsible for providing insight about the design and operation of the APCD. Colorado, maintains an APCD Advisory Committee and Committees on Data and Transparency with a focus on measurement methodology.

What steps are needed before the data are ready to be used for analysis?

MDH is currently using the data in a number of analytic projects. This work builds on efforts by MDH's aggregation vendor and its staff to perform extensive validation activities to verify that the data is of high quality.

Part of this validation effort includes performing "deduplication" of claims, and verifying that individual identifiers can be linked across different types of coverage and records. In some cases, such as for Medicare Part D data, MDH receives the same claims from multiple sources. Even prior to this process, MDH's data aggregation vendor assigns a "unique ID" to each individual represented in the data, based on a probabilistic matching of numerous data elements to establish that record's uniqueness. This "unique ID" is the basis for following an individual throughout different payers and encounters in the data. After this validation is complete, research using the data extract can begin.

How is the information currently being used?

At this point the MN APCD can only be used for limited applications that meet criteria defined by the Minnesota Legislature. Currently MDH in partnership with others is:

- Evaluating the state's Health Care Home program and the State Innovation Model grant initiatives.
- Studying service provision for chronic pain management for a 2015 legislative report: http://www.health.state.mn.us/divs/hpsc/hep/20150120ChronicPainProceduresMn.pdf.
- Assessing the feasibility of using the data for state-based risk adjustment in the individual and small group market.
- Conducting research in the variation of health care costs, quality, utilization and illness burden, including by considering demographic and geographic factors.

Can users other than MDH access the data in the MN APCD?

As of July 2014, Minnesota statutes limit the use of the data to staff at MDH or organizations working under contract with MDH to conduct research on its behalf. Recognizing the potential contributions research by others using the APCD could make to health policy development, the 2013 legislature directed MDH to convene a work group in 2014 to weigh in on the question of expanded use of the data.

The work group finalized its work at the end of 2014 and submitted a report to the Legislature in February 2015 with a series of recommendations:

- Authorizing MDH to develop a Public Use File(s) and summary tables, excluding provider and patient identifiers, that would be made available to the public free of cost and with minimal barriers;
- Directing MDH to convene a public/private advisory group to shape the APCD's broader uses including data structure, access, data expansion, and privacy/security;
- Establishing a technical advisory group to make recommendations regarding operational and structural changes to ensure data quality, accuracy, timeliness, and usability.

The full report is available online: www.health.state.mn.us/healthreform/allpayer/workgroup.html

Where can I find out more information about the MN APCD?

MDH maintains a website with information about the MN APCD. It contains basic background information, this document, detail about a workgroup that is considering recommendations on a framework for potential future use, as well as information about the data collection requirements. The website can be accessed here: http://www.health.state.mn.us/healthreform/allpayer/

What have other states done with APCD data?

Each state with an APCD uses the information in ways unique to its own population and needs. These states benefit from knowing more about the care system, how often and where residents access care, and trends in population health.

Initial uses of APCDs have been to publish results allowing the public to compare variation in disease burden and health care quality and to allow consumers a better understanding of statewide variations in the amounts paid for health care. For example, states have used these data to report on chronic disease burden and geographic variations. Others are considering use of the data for rate review and risk adjustment. A few states are looking for ways to use the data to help consumers make informed choices about health care, including about provider-specific prices. Several states with existing APCDs are exploring opportunities to broaden the user community to include state human services agencies; insurance departments; health policy and planning; and health insurance exchanges as well as academic researchers. Some examples of use cases by other states are available online at APCD Showcase: http://www.apcdshowcase.org/.

When other states determine how to use APCD data, how do they manage potential organizational conflict of interest on governance or advisory boards?

In other states, legislation or rules typically define the membership of a data release/review/use committee. Each member represents a specific stakeholder community, including but not limited to trade organizations, advocacy groups, researchers and health policy experts. Under participationagreements signed at the outset, committee member must disclose conflicts when the individual member has a self-interest or personal financial stake as well as the conflicts stemming from the member's role as an employee or representative of an entity named in the rule.

Committee members are usually required to sign non-disclosure agreements as well. Recognizing potential conflicts of interest, advisory committees typically act in advisory role.

An example of a data release review committee policies and procedures manual can be found online at the Center for Improving Value in Health Care: (http://www.civhc.org/getmedia/13204cf0-0cb8-4415-8dde-06214136c42e/CIVHC-DRRC-Policies-and-Procedures-2-3-12.pdf.aspx/)

If governance bodies in other states play an advisory and not decision-making role, who ultimately makes the decision about whether a proposed use is allowed?
In Massachusetts, the final decision about whether to approve a data use application rests with the agency's executive director. Massachusetts has prepared a flow chart describing its data release process here: http://www.mass.gov/chia/docs/p/apcd/release2/data-release-regulation-flowchart-final-pdf.pdf

In Colorado, as authorized under state rule, the final decision rests with the APCD Administrator.

Where can I obtain additional information about documentation for APCDs in other States? Not all states provide sources of information with a focus on their APCD activity. Those with more dedicated web pages include:

- Massachusetts: http://www.mass.gov/chia/researcher/hcf-data-resources/apcd/
- Colorado: http://www.civhc.org/All-Payer-Claims-Database.aspx/
- Oregon: http://www.oregon.gov/oha/OHPR/RSCH/Pages/apac.aspx
- Vermont: http://gmcboard.vermont.gov/vhcures
- Maine: https://mhdo.maine.gov/
- New Hampshire: https://mhdo.maine.gov/
- Rhode Island: http://www.health.ri.gov/partners/collaboratives/allpayerclaimsdatabase/
- Kansas: http://www.kdheks.gov/hcf/data_consortium/default.htm
- Utah: http://health.utah.gov/hda/apd/index.php

Appendix Table: Claims Submissions to the MN APCD, 2012

Payer Name	Submitter Type	Number of Claims
Commercial		
Blue Cross and Blue Shield of Minnesota	INS	20,909,110
HealthPartners Inc.	INS	14,089,240
Medica Health Plans	INS	8,392,286
Comprehensive Care Services, Inc.	TPA	3,921,536
PreferredOne Administrative Services	TPA	3,152,831
MMSI, Inc.	TPA	2,324,914
UnitedHealthcare Insurance Company	INS	2,294,762
Aetna Life Insurance Company	INS	1,643,836
Connecticut General Life Insurance Company	INS	1,522,463
Health Care Service Corporation - Illinois	INS	1,428,382
Cigna Health and Life Insurance Company	INS	919,646
PreferredOne Insurance Company	INS	720,980
UMR-CPS	TPA	543,116
PreferredOne Community Health Plan	INS	326,913
Federated Mutual Insurance Company	INS	262,846
Time Insurance Company	INS	149,578
MeritCare	TPA	128,295
United Healthcare Services, Inc.	TPA	126,253
OTHER - TPA	TPA	229,847
OTHER - INS	INS	145,598
Subtotal		63,232,432
Medicare FFS		
MDH - CMS Facility and Professional Data	GOV	38,304,071
Subtotal		38,304,071
Medicare Advantage		
UCare	INS	7,765,879
Blue Cross and Blue Shield of Minnesota	INS	5,919,135
Medica Health Plans	INS	5,738,370
HealthPartners Inc.	INS	2,705,147
Humana Insurance Company	TPA	1,845,305
PrimeWest Health	INS	366,443
South Country Health Alliance	INS	244,173
Other TPA	TPA	78,682
Other INS	INS	100,623
Subtotal		24,763,757
Medicaid FFS		
State of MN Department of Human Services	GOV	30,919,015
Subtotal		30,919,015

UCare	INS	11,312,462
Blue Cross and Blue Shield of Minnesota	INS	4,974,950
Medica Health Plans	INS	4,012,357
HealthPartners Inc.	INS	3,035,369
PrimeWest Health	CBP	1,071,870
South Country Health Alliance	CBP	1,017,626
Itasca Medical Care	CBP	274,309
Subtotal		25,698,943
Total Claims		**182,918,218**