Introduction

The Minnesota All Payer Claims Database (MN APCD) is a state repository of health care claims data that is derived from medical providers’ billing records sent to insurance companies, plan administrators and public payers. Because of the completeness of data and its geographic richness for the state, these data offer an unprecedented opportunity for Minnesota to learn more about what types of services are provided across the state, how much they cost, and what outcomes are achieved.

The Minnesota APCD emerged from the 2008 State Legislative session as part of a forward-thinking package of health care reforms. More recently, the MN APCD’s purpose and legislative mandate were redirected to a research and analytic agenda that could inform health care planning and public policy decisions.

This publication provides an overview of the MN APCD, including its contents and structure, the history of the database, and how the data are currently used.
What is Minnesota’s All Payer Claims Database?

Minnesota’s All Payer Claims Database (MN APCD) systematically collects and integrates medical claims, pharmacy claims, and eligibility and provider files from private and public payers. There are three distinct advantages of these data:

1. The data represent the single most comprehensive view of health care in Minnesota, containing claims for about 89 percent of Minnesotans with coverage;
2. The data include health care claims managed by virtually all private and public payers, a unique distinction among claims databases in the country; and
3. The data cover the spectrum of care delivery, from inpatient, to outpatient and long-term care settings.

The data also identifies the place of service where the patient was seen, such as a hospital, a doctor’s office, an urgent care clinic or an ambulatory surgery center.

Data collection for the MN APCD is performed by a private contractor (currently Onpoint Health Data) selected through a competitive procurement process. The Minnesota Department of Health (MDH) provides oversight and management of the data collection effort. MDH researchers are currently the primary analytic users of the data.

Protecting individual privacy in the MN APCD is of paramount importance. Before any information leaves data submitters’ systems, members’ names, dates of birth and addresses are converted into meaningless groups of letters and numbers that cannot be decoded or reversed. The MN APCD does not collect — in any form — Social Security Numbers, genetic information, telephone numbers, photographs or notes from conversations between patients and caregivers.

What are health care claims data?

Every time a person receives a medical service, the doctor, hospital, clinic or lab (to name just a few) generates a claim or request for payment. The claim lists standardized codes for each service and where and when it was provided. Like an “Explanation of Benefits” sent to a member, the claim shows submitted charges, allowed amount, payment to provider and patient responsibility, or deductibles and other cost-sharing. As is typically the case, the specific claim does not include payments outside the insurance and remittance process, including incentives, withholds or shared savings. The claim does not include test results, “signs and symptoms” or notes of conversations between doctor and patient.

Medical claims cover the period of 2009 through June 2015; unique lives are based on average monthly reports for 2013; insured Minnesotans were estimated using data from the 2013 Minnesota Health Access Survey; and Self-insured Commercial payers include third-party administrators.
History of the MN APCD

Minnesota is one of twelve states with APCDs that are currently collecting data (see Figure 1). Four states, including Virginia, Connecticut, Rhode Island, and Arkansas, are in the early stages of data collection. Hawaii, California and New York are initiating development of their APCDs, while 21 additional states are considering APCD legislation. Each state’s APCD reflects the unique perspective, needs, and priorities of that state, ranging from concern about value in health care to interest in making thoughtful policy decisions. Initial uses of an APCD typically evolve as the database matures.

Minnesota was one of the first adopters of an APCD. Minnesota’s APCD (“MN APCD”) is truly an “All Payer” claims database because it incorporates data from Medicaid and Medicare as well as from commercial payers – thus permitting a rich and systematic analysis of health care delivery for the state. As one of a very few states, Minnesota data include claims from self-insured employers, making the data uniquely comprehensive and complete.

Legislative Authority

The MN APCD emerged as an essential component of the health care reform package enacted by a bi-partisan Minnesota State Legislature and signed by Governor Tim Pawlenty in 2008. The reform package made investments in public health, expanded access to insurance coverage, authorized the establishment of health care homes, and set the stage for payment reform and price and quality transparency. Among other things, the reforms sought to enhance transparency in the value of health care. In particular, the Provider Peer Grouping (PPG) initiative was created to enable comparisons among providers on aspects of quality and costs of care. The MN APCD was built to provide the data needed to develop the analyses relevant to health care reform.

Data submission began in mid-2009 and included de-identified claims data for dates of service beginning on January 1, 2008. Since that time, the State made significant investments in building the data system and infrastructure, developing risk adjustment methodologies and outlier adjustments, and constructing provider directories. MDH has also established analytic expertise to support a wide range of uses of the data.
In 2014, the Legislature made modifications to MDH’s authority to use data contained in the APCD. Beginning in 2014, the authorized uses of the APCD include six specific areas of inquiry, including:

- Health Care Home program evaluation;
- Hospital readmissions study;
- Regional variations in cost, quality, utilization and severity;
- State Innovation Model evaluation;
- Study of chronic pain treatments; and
- Utility of the data for considering the development of a state-based risk adjustment mechanism for the small group and individual health insurance market as an alternative to the federal approach.

Advisory Group on Data Use

The 2014 Minnesota Legislature also directed MDH to convene an Advisory Workgroup to discuss specific questions about expanded uses of the MN APCD. Workgroup members included leaders in the state’s health care conversation, such as public and private payers, academic researchers, consumer organizations, professional interest groups and public health organizations.

Over the course of six meetings, the Workgroup discussed opportunities and forwarded its recommendations to the Legislature in February 2015. The Report contained the following recommendations:

1. The Legislature should authorize MDH to develop a Public Use File(s) and summary tables that would not include provider or payer identifiers. Such files and tables should be made available to the public, if possible without cost, and with minimally necessary restrictions or barriers.

2. The Legislature should direct MDH to convene a public/private advisory group. Their role would be to advise on the general parameters for allowable data uses, including the types of information that might be available in data files, related privacy and security requirements, a plan to expand the use of the data over time and appropriate user fees.

3. MDH should establish a group of technical experts who have experience with creating and using claims data. This group would consider topics such as: data elements to collect; opportunities to link MN APCD data with other datasets; improving data quality and reporting about those improvements; methodologies for specific measures or analyses; public use file contents and summary tables; and suitability of de-identified data for expanded research and data validation initiatives.

4. MDH should continue its work to develop APCD quality reports.

5. MDH should report to the Legislature on ongoing work, data developments and APCD enhancements after year 1 of authorized expanded uses.

The full report is available at:
http://www.health.state.mn.us/data/apcd/allworkgroups.html

Development of Public Use Files

Considering the 2014 Workgroup’s recommendations, the 2015 Minnesota Legislature directed MDH to produce publicly available summary data tables by March 2016. In developing the Public Use Files, MDH consulted with the original workgroup and other potential users to determine the contents of the files and how to ensure that any data released struck the appropriate balance between transparency and the required protections for patients, providers and payers.

For more Information on the development and contents of the these files and how to obtain them can be found at: www.health.state.mn.us/data/apcd/publicusefiles/index.html
Data Sources, Scope and Covered Populations and Services

Data submitters to the MN APCD include commercial health plan companies, third party administrators, Medicaid and Medicare. See box below for a list of health plans or companies that are not required to submit data.

Submitted data are compiled from medical bills sent by providers to payers to request payment. The bills are usually submitted electronically and include codes that describe medical services such as hospital stays, outpatient clinics visits, MRIs, lab services, office visits, behavioral health services, therapies and durable medical equipment. Similar information is sent to the patient on an Explanation of Benefits after the payer has determined the eligibility and final payment amounts. None of this information includes test results, treatment outcomes or notes from private conversations between doctor and patient.

Currently, the MN APCD includes data for health care services delivered in 2009 through 2015 from more than 100 data submitters. The latest available full-year data is for 2014. It includes approximately:

- 4.3 million eligibility records per month
- 184 million medical claims
- 65 million prescription drug claims

State law (MN Stat. 62U.04) authorizes MDH to collect data from health plan companies and third party administrators (“data submitters”), both of which pay medical providers for the services they provide to patients. State Rules (MN Rules 4653.0100) give data submitters detailed instructions about how to organize the files and deadlines for submission.

State Rules also clarify which health care companies must submit data. Companies with less than $3 million in annual medical claims and/or $300,000 in annual pharmacy claims are exempt from data submission requirements of the MN APCD.

What type of health care services are not reported to the Minnesota APCD?

- Services by plans that don’t cover general medical care, e.g., accident-only
- Workers’ Compensation
- Medicare Supplemental/ Medigap plans
- Veterans Affairs
- Indian Health Service
- Tricare
- Uninsured

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1 A Third Party Administrator, or “TPA,” usually pays claims, tracks member eligibility and deductibles and provides record-keeping services. A health insurance company holds risk for medical services in that it accepts a fixed amount of money (a “premium”) to provide all covered services. A self-insured organization hires a TPA for a set fee to pay providers’ bills for covered services and manage members’ eligibility and patient payment responsibilities. Other TPA services can include provider network design, employee wellness programs or disease management.
Data Management

As permitted by state law, MDH obtained the services of a data aggregation manager through a competitive bidding process and selected Onpoint Health Data to securely collect, check and aggregate the data submitted by payers. Throughout data collection and aggregation processes, the MN APCD maintains ongoing quality assurance processes. In collaboration with MDH, Onpoint establishes standards for incoming files and uses a proprietary process to examine several hundred aspects of data quality at intake and in the data aggregation process. For example, each cell in a submitted file is checked to ensure that the size and type of information conforms to the established specification. Each file is also reviewed to establish that the data submitter has met the state’s expectations for the number of times a particular data cell has information.

The data aggregation manager confirms that the files meet established standards through automated checking when the files arrive. Once the files meet MDH’s standards, the data are organized into a format that might be used by researchers and analysts.

Files that fail to meet all minimum standards are rejected in their entirety. Under State Rules, data submitters are required to correct such errors and resubmit until the file passes. Health plans can request variances for the submission of data elements that are either not retained by them or retained at insufficient quality to meet the submission standards.

In addition to requiring robust data quality efforts by its data vendors, MDH is conducting a series of data quality strategies aimed at assessing the robustness of the MN APCD and seeking opportunities for continuously improving the quality of data submitted by payers of health care services:

- In Spring of 2016, MDH will release its first annual data quality report which documents the volume, consistency and stability of data reported to the MN APCD.

*Extraction–transformation–loading (ETL) refers to the extraction of data from multiple sources, transforming and loading into a data warehouse.

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**FIGURE 2: Data Collection and Uses**

**MDH & Data Aggregation Vendor**

- Secure Data Collection Process/Tools
- Secure ETL: Initial Data Checking
- Secure Production Environment
- MDH Data Quality Assurance Reviews

**Current Uses**
- Health Care Home
- Evaluating SIM
- Hospital Readmissions
- Pain Management Study
- Study Variation
- Risk Adjustment

**Potential Future Uses**
- Research
- Population Health
- Health Policy
- Quality Improvement

**Ongoing** Quality Assurance Process

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All reports prepared from the MN APCD include metrics of quality for the studies in question. In support of several recent research studies, including assessments of pediatric health care, study of insurance market risk adjustment, and analysis of prescription drug trends, independent contractors employed by MDH evaluated the quality of MN APCD data and found it to be a high quality, reliable data source for their projects.

Current Uses of the Data

The 2014 law authorized MDH to use the MN APCD for a series of state agency-sponsored analytic projects that advance the state health care system’s ability to understand and target responses to emerging priorities. Reports currently in development include an evaluation of the Health Care Home program; an assessment of the State Innovation Model testing grant; utility of the data in supporting an alternative state-based risk adjustment methodology for plans sold in the state health benefit exchange; and analysis of state health trends by population demographics and region.

Current and Upcoming MN APCD Reports:

In January 2016, MDH issued “Chronic Conditions in Minnesota: New Estimates of Prevalence, Cost and Geographic Variation for Insured Minnesotans, 2012” that examines chronic disease prevalence and spending for Minnesota residents with health insurance in 2012.

In July 2015, MDH issued “An Introductory Analysis of Potentially Preventable Health Care Events in Minnesota” that provides a baseline for the volume and associated spending of potentially preventable health care events in Minnesota in 2012.

These events comprise emergency department visits, hospital stays and hospital readmissions that could have potentially been prevented with timely access to primary care, better care coordination, and prescription management; improved health care literacy by patients; and better coordination across providers and between patients, their families, providers, and social support services.

MDH is also finalizing three additional reports that will evaluate prescription drug usage and cost, the prevalence and costs of low-value medical services, and variations in pediatric care in Minnesota. These reports are expected in spring, 2016.

The full text of these reports and other publications prepared using the MN APCD is available at the MN APCD website: www.health.state.mn.us/healthreform/allpayer/publications.html

Additional information about Minnesota APCD is available at: www.health.state.mn.us/data/apcd/index.html

Contact Information

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