DEPARTMENT OF HEALTH

Minnesota All Payer Claims Database Healthcare Utilization Public Use File: A User Guide

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MNAPCD
All Payer Claims Database

Background

The Minnesota Department of Health (MDH) maintains the Minnesota All Payer Claims Database (MN APCD), a repository of healthcare claims data that supports statewide analyses of healthcare costs, quality, and utilization. Under legislative mandate, MDH releases publicly available summary information from the MN APCD in the form of public use files (PUFs). PUF data are delivered in spreadsheets with aggregated records that prevent the identification of individual members, providers, and health plans. Currently available MN APCD PUFs, derived from medical and pharmacy claims, contain summary data on healthcare services, healthcare utilization, primary diagnoses, provider specialties, members, and prescription drugs.[1] This document introduces the Healthcare Utilization PUF, illustrates how to interpret PUF records, and includes technical instructions for users who wish to further aggregate PUF records.

Public use file overview

The Healthcare Utilization PUF was derived from MN APCD medical claims submitted by insurers. Each record in the PUF aggregates claims information by utilization category, payer type (commercial, Medicare, or Minnesota Health Care Programs) and an additional set of stratifying variables representing the member's age group, sex, and county of residence. The Healthcare Utilization PUF can be used to study variation of high-level categories of medical services across payer types and within or across combinations of the additional stratifying variables. Expenditure variables include the medical providers' collective charged amounts as well as the separate amounts paid by the insurer and member and their total for medical costs.

MDH developed this PUF in partnership with Onpoint Health Data and welcomes questions and feedback from users at: health.APCD@state.mn.us.

Design of the public use file

Definition of utilization category

Utilization categories represent high-level groupings of common healthcare services. Medical claims are assigned to a utilization category based primarily on claim reported place of setting and type of setting. For example, a medical claim with type of setting reported as "Provider" and place of setting reported as "Acute inpatient or hospital" is assigned to the utilization category "Hospital Inpatient Professional Services'. These assignments are detailed in the "Data Dictionary" tab of the Healthcare Utilization PUF. The following utilization categories appear in the PUF:

- Ambulance
- Ambulatory Surgery
- Durable Medical Equipment (DME)
- Emergency Department
- Home Health
- Hospice

- Hospital Inpatient Professional Services
- Hospital Outpoint
- Lab
- Inpatient Non-acute
- Inpatient Non-acute Professional Services
- Pharmacy[2]
- Clinic/Office
- Outpatient
- Other

Definition of encounter

Utilization counts in the PUF are provided for both services and encounters. An encounter is a collection of one or more healthcare services (e.g., a procedure) provided to a member during a single visit or inpatient stay. An encounter may occur across one or more days. For example, a single encounter in the "Emergency Department" utilization category could include new patient emergency department services and diagnostic imaging procedures. The combination of services in any given encounter can thus vary and is not distinguishable in the PUF. Data on individual services can be found in the MN APCD Healthcare Services PUF.

Data elements

In addition to stratification by utilization category and payer type, PUF records are further stratified by:

- Member's age group
- Member's sex
- Member's county of residence

Five age groups (years) are identified in the PUF, based on member age at the time of the medical claim: (1) 18 and younger, (2) 19 to 44, (3) 45-64, (4) 65 to 74, and (5) 75 and older. Member sex (male or female) is similarly based on the information reported at the time of the medical claim. Member county of residence represents the county associated with a member's ZIP code using information reported on the member's eligibility data.

Exclusions from the public use files

Medical claims submitted to the MN APCD include duplicate and denied claims as wells as other claims with various types of deficiencies that detract from their analytic usefulness. The Minnesota Department of Health (MDH) removes duplicate and denied claims as well as claims that fail a number of tests—including whether the claim was filed on behalf of an in-state resident and reported a positive total amount paid.

The Healthcare Utilization PUF excludes claims for non-Minnesota residents, orphaned claims (i.e., reversal claims that result in negative paid amounts), denied claims, claims with missing or invalid place of setting or type of setting codes, claims with a reported sex code of "U" (unknown), and those that are missing county information based on the member's reported ZIP code.

After claims were aggregated to produce a preliminary or "full" version of the PUF, records with counts <11 were redacted to prevent identification of individual members, providers, or payers. Approximately 1% of claims and 1% of total paid amount from the MN APCD are redacted from the Healthcare Utilization PUF.

Other important data considerations

The MN APCD includes medical claims for Medicare, Minnesota Health Care Programs, and most commercial plans. The MN APCD was not designed to include claims for healthcare covered by Tricare, Veterans Affairs, the Indian Health Service, Workers' Compensation, or for care provided to Minnesotans without health insurance. It also does not include claims for services provided by plans that do not cover general medical care, such as accident-only, vision, or dental plans. In addition, data from certain low-volume carriers (less than $3 million in medical claims or less than $300,000 in pharmacy claims) are exempt from submission to the MN APCD. Lastly, it should be noted that claims data are only as accurate as the coding on submitted claims.

In a decision released on March 1, 2016, the U.S. Supreme Court upheld a lower court's ruling that self-insured health plans could not be required to submit claims data to a state's APCD (Gobeille v. Liberty Mutual Insurance Co.). The court found that requiring self-insured plans to submit medical and pharmacy claims was preempted by the Employee Retirement Income Security Act (ERISA). The decision does not prohibit the voluntary submission of self-insured plan data to the MN APCD. The effect of this decision was to substantially reduce the volume of commercial claims and enrollment that ERISA-subject self-insured plans reported to the MN APCD. The Healthcare Utilization PUF, because its claims data span data from 2016 and later, will include members whose commercial insurers stopped submitting data early in the year. As a result, the Healthcare Utilization PUF will tend to understate counts for the commercial coverage for the population it represents. Estimates of cost distributions within the commercially insured group —means and medians—should not be greatly affected.[3] However, estimates of total counts and spending amounts for all Minnesotans will be affected as a result.

Interpreting public use file data

The table below includes two rows from the Healthcare Utilization PUF with a utilization category of "Emergency Department" for patients residing in Carlton County. The first row is based on individuals with commercial health plans that report data to the MN APCD, and shows that in 2022, there were 344 females, aged 19–44 years, who had an Emergency Department encounter. The total number of unique encounters was 560. The second row shows that there

were 1,459 unique Emergency Department encounters for 669 females, aged 19–44 years, with Minnesota Health Care Programs (MHCP) coverage.

Table 1. Sample records for Emergency Department utilization category.

Service year	County	Payer	Age group	Sex	Utilization category	Unique encounters	Unique members
2022	Carlton	Commercial	19 – 44 years	F	Emergency Department	560	344
2022	Carlton	MHCP	19 – 44 years	F	Emergency Department	1,459	669

User calculations

Using the same example from Table 1 (above), a sample calculation is illustrated in Table 2 (below). Suppose a user was interested in comparing Emergency Department use in the same county for members with the same age and sex across payers. A count of encounters per member could be calculated by dividing the count of unique encounters by the count of unique members. The example results below show 1.6 encounters per member for Commercial members compared to 2.2 encounters per member for Minnesota Health Care Program members among members with at least one Emergency Department visit. This calculation is appropriate even considering the unreported data for some commercial members, with the assumption that healthcare utilization patterns for commercial enrollees with data in the MN APCD is similar to utilization patterns for commercial enrollees whose plans have not reported data to the MN APCD.

Table 2. Sample records with Emergency Department utilization category, with calculation.

Service year	County	Payer	Age group	Sex	Unique encounters	Unique members	Encounters per member
2022	Carlton	Commercial	19 - 44 years	F	560	344	1.6
2022	Carlton	MHCP	19 - 44 years	F	1,459	669	2.2

[1] At this time, all PUFs are available free of charge to the user community. PUFs may be downloaded online by completing a survey form: https://survey.vovici.com/se/56206EE333F13F0F.

[2] Prescriptions drugs administered in medical settings, such as hospitals, infusion centers, nursing homes, or other medical offices, are reflected in medical claims. See the MN APCD Prescription Drug PUFs for prescription drug information reflected in pharmacy claims data.

[3] Note, however, that coverage by self-insured plans will be underrepresented among coverage by all commercial plans. To the extent that the medical expenditures incurred by participants in self-insured plans are different from those of participants in other commercial plans, the expenditure data reported for participants in commercial plans will provide biased estimates of the expenditures of participants in all commercial plans.

Minnesota Department of Health
Health Economics Program
PO Box 64882
St. Paul MN 55164-0882
(651) 201-4520
www.health.state.mn.us/healtheconomics

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