

Public Use Files from the MN APCD

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 **Minnesota**
Department of Health

HEALTH ECONOMICS PROGRAM

 MN APCD

Development of the Public Use Files

2014

- The legislature created an APCD Advisory Group to inform future uses of the MN APCD. The Advisory Group expressed broad support for widely available information in the form of “Public Use Files”

2015

- The MN State Legislature acted on the Advisory Group’s recommendations and directed MDH to develop Public Use Files (PUFs) from the MN APCD.

Development of the Public Use Files

The MN State Legislature specifically required that Public Use Files from the MN APCD:

- Consist of summary data
- Be made available to the public at no (or minimal) cost
- Be available for web-based download by June 2019
- Protect the identities of patients, providers and payers
- Be updated at least annually with the most recent data available
- Include documentation that clearly explains the data's characteristics and limitations
- Be derived solely from the MN APCD

Development of the Public Use Files

The legislative direction also included:

- Reconvening the MN APCD Advisory Group to discuss various aspects of the PUFs, including principles and options for guardrails that would protect the identities of patients, providers and payers
- Provided for a deliberative process that would begin with a first release of data by March 1, 2016 and continue with public and user feedback on the nature of the files through June 30, 2019

Development of the Public Use Files

November 2015

- Meeting with APCD Advisory Group to discuss PUF development

December 2015 - February 2016

- Seek input from potential users to develop framework for initial PUFs

February 2016

- Share findings and proposed designs with APCD Advisory Group

March 2016

- Release initial PUF Designs

April 2016

- User webinar to introduce the PUFs

September 2016

- User survey to gather first impressions and begin to prioritize future development

What did users and potential users hope to accomplish with the PUFs?

- **Utilization by payer or diagnostic groups**
- **Variation in health care expenses**
 - Health care costs across MN
 - Proportion of spending for diagnosis by various sub-categories (example: primary care vs specialist)
- **Inform their community health assessments**
- **Compare with other data sets**
- **Identify disease incidence patterns across MN**

What do the PUFs retain from the MN APCD? What do they lose?

Similarities

- Based on the same set of records as the MN APCD
- Subject to the same identity protections for individuals
- Subject to the same rigorous quality assurance processes

Differences

- PUFs do not provide identifiable information on providers or payers
- Some small segments of the population included in the MN APCD are rolled up in the PUFs to prevent re-identification; some are removed entirely
- PUFs are aggregated and therefore do not provide the same level of analytic flexibility as a larger, more detailed dataset.

What are the MN APCD Public Use Files?

- **Three files that provide summarized, aggregated claims data from the MN APCD**
- **Include data for insured Minnesota residents who received health care services**
- **Are classified as public data and are freely accessible to the public**
- **Structured to provide meaningful information in a manageable file size while protecting privacy**
- **Focused on three themes:**
 - Health Care Services – the volume and cost of health care services used by Minnesotans
 - Primary Diagnoses – the prevalence and cost of primary diagnoses among Minnesotans who received health care services
 - Health Care Use – the volume and cost of health care service use by covered Minnesotans, categorized by setting in which the service was provided

Common Features among Current PUFs

- **Contains medical claims data from CY 2013**
 - Does not include pharmacy claims
- **Aggregates by geography and age**
 - Geography aggregated into 3-digit ZIP codes
 - Age aggregated into 3 age groupings
 - Children and Youth: <18 years
 - Adults: 18-64 years
 - Older Adults: 65+ years
 - Generally results in a total of 48 segments (16 ZIP codes x 3 age groups)
 - Small ZIP codes are sometimes blended to cause redaction

Common Features among Current PUFs

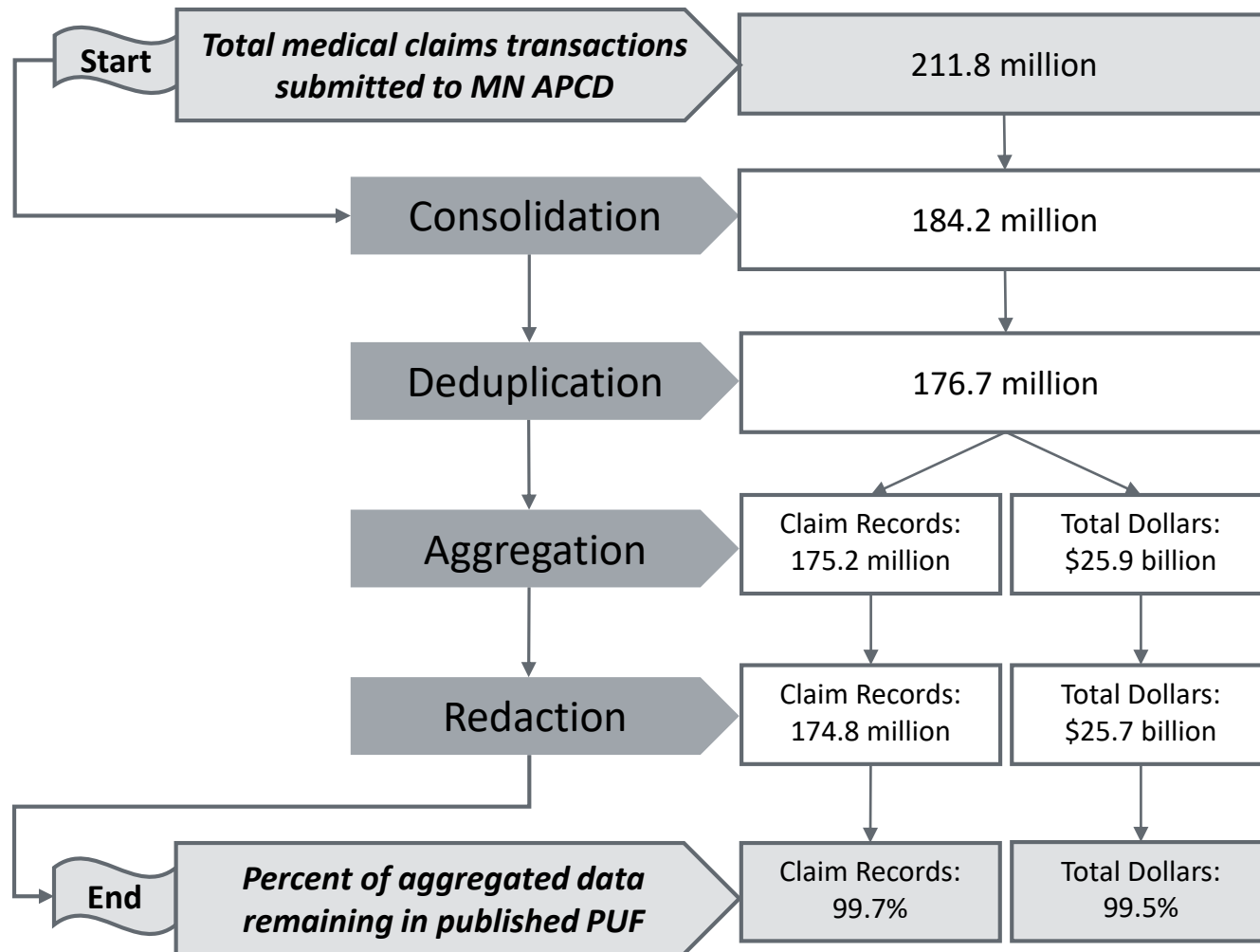
- **Protected against re-identification**
 - Data rolled up into higher level of aggregation where necessary due to small cell contents
 - Records with <11 patients are “redacted” and rolled up into a larger group if possible
 - Redaction occurs at geography level first, then age group
 - If the record still has <11 patients after 2 rounds of redaction, it is not included in the published PUF
 - PUFs do not include records associated with <20 health care providers or <4 distinct payers
 - Degree of redaction differs by file because data is distributed across different numbers of categories.

PUF Derivation Process

How a health care transaction becomes a published record:

- **Consolidation** – combining multiple versions of a claim that may be submitted by a single insurance company or other payers
- **Deduplication** – resolving duplicate records from multiple payers into a single, simplified claim record
- **Aggregation** – grouping and summarizing de-duplicated claim records into the PUF format, with each line of data representing all records for each combination of PUF data elements
- **Redaction** – protecting potentially re-identifiable information first by eliminating geographic detail, then age group detail, and as a last resort, removing records completely – with the goal of retaining as much data as possible in the PUF while providing necessary identity protections to patients, providers and payers

Data Redaction Example: Primary Diagnoses, 2013



Primary Diagnoses PUF, cont'd

Primary Diagnoses: Total Paid (in millions)				
Region	Age Group	Raw PUF (pre-redaction)	Published PUF (post-redaction)	Percent of raw data remaining in Published PUF
Minneapolis (ZIP 554)	Age <18	\$710	\$710	100%
Minneapolis (ZIP 554)	Age 18-64	\$3,020	\$3,020	100%
Minneapolis (ZIP 554)	Age 65+	\$1,455	\$1,455	100%
Northeast (ZIP 556)	Age <18	\$4	\$3.2	80%
Northeast (ZIP 556)	Age 18-64	\$32	\$29	91%
Northeast (ZIP 556)	Age 65+	\$32	\$29	91%
<i>% of total dollars remaining in published PUF after redaction: 99.5%</i>				

Accessing the PUFs

- **PUF request process designed to provide streamlined access while simultaneously building a user community**
 - Form asks the user to provide contact information and acknowledge the Data Disclaimer and copyright of code suppliers
 - The MN APCD team at MDH will coordinate with the user to transmit the requested file(s)
- **Building a user community will:**
 - Allow MDH to provide technical assistance to users
 - Keep users updated on future PUF releases
 - Share findings and lessons learned among users
 - Find out what users want from future PUFs
- **MDH will continue to reach out to the user community with questions and requests for feedback**

Current Users of PUFs

Organization	# Requestors
Agency/regulator	8
Consumer/patient	2
Payer/insurance	1
Health care provider	20
Media	3
Researcher	24
Other	21
Total	79

Users not required to disclose how they will use data

One published article by the MPLS/STP Business Journal

Users include:

- Other APCDs across the country
- Health care technology entrepreneurs
- Advocacy organizations for patients and employers
- Consultants

What are requesters saying?

- **Only 30% said they were able to accomplish their goals**
- **Those who said ‘No’ to accomplishing goals were consistent among all files**
- **Furthermore, those who said ‘No’, typically followed up with:**
 - Need for more detailed/granular data;
 - Referred to other states (example: Colorado)
 - Wanted additional geographic information (county, 5zip, health service area)

What other research questions would requesters like to address with the PUFs?

- Ability to compare commercial vs. government programs
- Utilization of mental health and dental service among poor/children
- Count of CPT and modifiers across all payer types; specialty and site of service mix by CPT and modifier combinations
- Amount of patient cost sharing by provider specialty and CPT codes
- Availability, utilization and payment by provider specialty

When asked “how would you prioritize”?

Highest priorities

- Include provider specialties for health services
- Release multiple years of data to look at changes over time
- Add PUFs grouped by specific disease conditions
- Add PUFs where you have the ability to examine price variation across the state for a specific procedure

When asked “how would you prioritize”?

Lowest priorities

- Separate payments amounts to show patient’s out-of-pocket share
- Include primary payer information
- Change the geographic grouping to health service area
- Add PUFs detailing prescription drug costs
- Add PUFs which identify the type of service provided

Other Survey Results

- Majority of respondents heard about the files from a colleague/friend
- Responses to the survey were received from health care providers, NPOs, universities, state and local agencies, and insurance companies
- Most respondents described their primary role as policy planners, researchers, or analysts
- About 30% of those who responded to the survey attended the webinar on April 28, 2016

Future Directions for the PUFs

- Continue to seek feedback from users, potential users and the APCD Advisory Group to inform future PUF releases
- Conduct additional surveys targeted to broader audiences interested in Health Care Systems
- Update the current PUFs at least annually
- Develop options for expanding the PUFs to include additional years of data and additional topics of interest for users

Resources for Users

PUF documentation available on [MN APCD website](http://www.health.state.mn.us/healthreform/allpayer/publicusefiles/index.html)

[\(<http://www.health.state.mn.us/healthreform/allpayer/publicusefiles/index.html>\)](http://www.health.state.mn.us/healthreform/allpayer/publicusefiles/index.html)

- Overview of the PUFs
- A detailed description of each PUF, including:
 - Data dictionary – describes each data element included in the PUF
 - Summary statistics – shows summary totals from the pre-redaction PUF, for purposes of comparison to the final published file
 - Derivation document – describes the process through which the PUF was developed from the MN APCD
- [PUF Data Request Form](http://www.health.state.mn.us/healthreform/allpayer/publicusefiles/requestform.pdf)
[\(<http://www.health.state.mn.us/healthreform/allpayer/publicusefiles/requestform.pdf>\)](http://www.health.state.mn.us/healthreform/allpayer/publicusefiles/requestform.pdf)
available for download on [MN APCD website](http://www.health.state.mn.us/healthreform/allpayer/publicusefiles/request.html)
[\(<http://www.health.state.mn.us/healthreform/allpayer/publicusefiles/request.html>\)](http://www.health.state.mn.us/healthreform/allpayer/publicusefiles/request.html)

Resources for Users

If you have questions or would like to join the MN APCD mailing list, email health.apcd@state.mn.us

Or contact:

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- **Users may obtain code descriptions for the MN APCD PUFs from the following sources:**
 - CPT codes through the [American Medical Association \(http://www.ama-assn.org/ama\)](http://www.ama-assn.org/ama)
 - HCPCS codes through [CMS \(https://www.cms.gov/Medicare/Coding/MedHCPCSGenInfo/index.html\)](https://www.cms.gov/Medicare/Coding/MedHCPCSGenInfo/index.html)
 - Revenue codes through the [American Hospital Association \(http://www.aha.org/\)](http://www.aha.org/)
 - ICD-9 through the [Centers for Disease Control \(http://www.cdc.gov/nchs/icd/index.htm\)](http://www.cdc.gov/nchs/icd/index.htm)