NYS All Payer Database 2018 Stakeholder Meeting

May 16, 2018
Today’s Agenda

Commissioner’s Welcoming Remarks
Demonstration of APD Public Website
Panel Presentation on APD Dashboards
NYS APD Update
Lunch and Networking
APCD: 2018 National Landscape
APD Data Integration / Technical Update
SPARCS Evolution and the APD
Facilitated Discussions
Closing Remarks / Next Steps

Meeting Materials
✓ Informational Sheet
✓ Power Point Slide Deck
✓ Facilitated Discussion Instructions
✓ Speaker Biographies
✓ Registered Organizations
✓ Index Comment Cards

Commissioner’s Welcoming Remarks

Howard A. Zucker, M.D., J.D.
Commissioner of Health
Introducing the
NYS Health Connector
Welcome to the NYS Health Connector

Powered by the All Payer Database
Threading together different types of data

- Using different tools to tell a story
- Creating usable information
- Presenting quick facts
- Integrating cost and quality
Panel Discussion
Panelists

Garra Lloyd-Lester
Suicide Prevention Center of New York State
Suicide Prevention Community Initiatives

Linda Weiss
New York Academy of Medicine
Center for Evaluation and Applied Research

Stephen Goins
New York State Department of Health
Division of Information and Statistics
Office of Quality and Patient Safety
Purpose of the Annual Stakeholder Meeting

• Bring together internal and external stakeholders of the NYS APD project for an update on:
  • Progress
  • Current status
  • Future plans
• Elicit feedback and engagement from participants
Who’s here today?

- Consumers
- Researchers
- Academics
- Organizations
- Issuers
- Vendors
- Government

Please refer to the handout “Registered Organizations” for a detailed list of who is here today either in person or via WebEx.
Meeting Logistics and Reminders

- There is a 1 hour break for lunch and networking.
  - Refer to the Information Sheet for lunch options and pre-ordered food pick up information
- Please let APD program staff know if there are updates to your contact information
- Please silence cell phones and electronic devices
- Please limit side conversations during presentations
- Phone lines will be muted throughout today’s meeting
- If WebEx participants have any difficulty hearing today’s presenters, please use the Chat function to let organizers know
All Feedback Welcome!

- Index cards are available on the tables for written feedback.
- Please place completed cards in the designated box at the registration desk.
- WebEx attendees can submit feedback via the Chat function.
Facilitated Discussion Feedback

- Consumers
- Researchers
- Policy Makers and Community Groups

** Using de-identified datasets

Please draw out ideas throughout the day to be ready for the 2:30 session.
All Payer Database Update
The vision of the APD is to provide policymakers, researchers and consumers with the most comprehensive health database in New York State to achieve the triple aim of improving patient experience; improving population health; and reducing the costs of health care.
NYS Priorities and the APD

• Aligned with NY State Department of Health’s Mission Statement:
  
  The Department of Health protects the health, productivity and well-being of all New Yorkers by promoting public health and patient safety, by reducing health disparities and by assuring access to affordable, high quality health services

• Aligned with the Triple Aim:
  
  Improve population health, improve quality and reduce costs
The “All Person” Database

• The NYS APD is more than just a claim database, it is being designed as a robust, integrated, research system for improving population health
  – Health and Health-related Data
  – Insured and Un-Insured
## Three Main APD Components

### Data Intake and Acquisition
- Encounters
- Member
- Provider
- FFS Claims
- Reference
- Non Claim Based Data

### Warehousing
- Master Patient Index
- Master Provider Index
- Point in Time Storage

### Analytics
- Data Enrichments
- Limited Identifiable
- Public Use Files
Size and Scope of the NYS APD

- New York State Estimated Population = 19.7 million
- Anticipate 1.0 - 1.2B claims processed per year

<table>
<thead>
<tr>
<th>Program</th>
<th>Estimated Beneficiaries</th>
<th>Estimated Quarterly Encounter/FFS Claims Submissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicaid (Managed Care &amp; FFS claims)</td>
<td>6,300,000</td>
<td>~72,000,000</td>
</tr>
<tr>
<td>Child Health Plus</td>
<td>306,000</td>
<td>~1,135,000</td>
</tr>
<tr>
<td>Qualified Health Plans</td>
<td>234,000</td>
<td>~3,150,000</td>
</tr>
<tr>
<td>Essential Plan</td>
<td>680,000</td>
<td>~15,000,000</td>
</tr>
<tr>
<td>Medicare FFS claims (2014, 2015, 2016)</td>
<td>3,180,000</td>
<td>Yearly file</td>
</tr>
<tr>
<td>Commercial</td>
<td>4,500,000</td>
<td>TBD</td>
</tr>
<tr>
<td>Commercial (Self-Insured)</td>
<td>4,500,000</td>
<td>TBD</td>
</tr>
</tbody>
</table>

~1 billion encounters/claims per year
Setting the Vision
- Selected data warehousing/analytic vendor
- Contract signed and executed
- Secured ACA grant, Medicaid matching, & state funding
- Held design & requirements sessions
- Started data acquisition for QHP

Developing the Building Blocks
- Published APD regulations & guidance manual
- Approved by IRB as research system
- Held design & requirements sessions
- Build & testing phases
- Developed Master Indexes (Patient/Provider)
- Internal soft releases of APD Analytics Portal & Operational Data Store (ODS)
- Started data acquisition for Essential Plan (EP)

Realizing the Vision
- Integrate commercial data
- Publish data release policy
- Expansion of state users
- Release additional functionality
- Develop sustainability plan
- Expand research agenda

Strengthening the Core
- Launch APD public website
- Launch APD analytic portal (sign-in)
- Onboard DOH users
- Mature Master Indexes (Patient/Provider)
- Release additional functionality
- Establish APD Advisory Group

Aiming Higher
- Integration with other data systems/sources

May 2016

2017

May 2018

2019

May 2020
Strengthening the APD Core

1. APD Environment & Security
2. Data Intake & Acquisition
3. Regulation
4. Governance
5. Protecting Privacy
6. Data Access
7. Data Release
8. Analytic Portal
Strengthening the APD Core

APD Environment & Security
• Login and access with role-based controls applied
• Use of Master Indexes
APD Connection Points

- Secure desktop access
- Secure portal access
- Secure data transfer
Security - APD Environment

- NYS ITS Security Guidelines & Policies
- System Security Plan Workbook (SSP)
  - National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53 Recommended Security Controls for Federal Information Systems
  - CMS Policy for the Information Security Program (PISP)
  - CMS Information Security (IS) Acceptable Risk Safeguards (ARS)
  - CMS Minimum Security Requirements
- 3rd Party Penetration Tests
  - APD Analytic Portal (sign-in required)
  - APD Public Web
Strengthening the APD Core

Data Intake & Acquisition
Connecting Health Data Over Time

**Public & Private Benefit Package Data**
- Qualified Health Plans (QHP) & Essential Plans (EP)
- Medicaid Managed Care Plans
- Medicaid Fee for Service (FFS)
- Child Health Plus
- Medicare
- Commercial Plans

**Public & Private Member Enrollment Data**
- QHP & EP Members Enrolled
- Medicaid Managed Care Members Enrolled
- Medicaid FFS Members Enrolled
- Child Health Plus Members Enrolled
- Medicare Members Enrolled
- Commercial Plan Members Enrolled

**Public & Private Encounter/Claims Data**
- QHP & EP Encounters
- Medicaid Managed Care Plan Encounters
- Medicaid FFS Claims
- Child Health Plus Encounters
- Medicare FFS Claims
- Medicare Encounters
- Commercial Plan Encounters
- Hospital Discharge (SPARCS)

**Provider Data**
- National Plan and Provider Enumeration System (NPPES)
- New York State Provider Network Data System (PNDs)
- NYS DOH Health Facilities Information System (HFIS)
- Primary Care Physician Panel Data

**Public Health Registries**
- Vital Statistics Mortality Data
- Vital Statistics Birth Data
- Vital Statistics Marriage & Dissolutions Data
- Discussions w/other NYS DOH Registries

**Other Non-Claims Data**
- Electronic Health Records (SHIN-NY)
- Functional Assessment Data
- Survey Data
- Social Determinants of Health Data

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Initial Load
Future
# Data Sources and Year Spans within the APD

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Year Spans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Discharge (SPARCS)</td>
<td>1982 to present</td>
</tr>
<tr>
<td>Medicaid</td>
<td>2014 to present</td>
</tr>
<tr>
<td>Child Health Plus</td>
<td>2014 to present</td>
</tr>
<tr>
<td>Qualified Health Plan</td>
<td>2014 to present</td>
</tr>
<tr>
<td>Essential Plan</td>
<td>2016 to present</td>
</tr>
<tr>
<td>Vital Statistics Mortality</td>
<td>2007 to present</td>
</tr>
</tbody>
</table>
Encounter Intake System (EIS) – Operations Update

- **October 2017**: lifted FIFO processing method constraint and implemented ICD-10 Codes update
- **March 2018**: updated Universal Billing Code Modifiers
- **May 2018**: four new NCPDP edits (production deployment scheduled for May 31, 2018)
- **APD Technical Documents** published to the NYS DOH APD Website: Standard Companion Guides and Tier 2 Edit Disposition Spreadsheet
- Created dedicated APD email for issuers’ technical / encounters related questions: APDIntake@health.ny.gov
Encounter Intake System (EIS) – Data Collection Update

• **June 2017**: began accepting Essential Plan (EP) encounter data, for services beginning January 2016

• **April 18, 2018**: health plan issuers were sent a reminder to submit all encounter data to the APD, including Part 2 data, SAMHSA Substance Use Disorder Data

• Commercial issuers will be provided updated timeframe for initiation of encounter intake in **September 2018**. We will provide at least 6 months notice prior to the start date.
Strengthening the APD Core

Regulation
Regulation Update

• **On August 3, 2017** the APD regulations were approved by the State’s Public Health and Health Planning Council (PHHPC)

• Section 350.2 of the regulation about data submission became effective **January 1, 2018**

Strengthening the APD Core

Governance and Protecting Patient Privacy
Governance Framework

Federal and State Legislation, Regulations, and Rules

Data Collection, Storage, Access & Release Policies and Practices (Patient Privacy)

Governmental Oversight

Data Governance Board and Oversight
Protecting Health Data

1. Names
2. Zip Codes (except first three)
3. All elements of dates (except year)
4. Telephone Numbers
5. Fax Numbers
6. Email Addresses
7. Social Security Numbers
8. Medical record numbers
9. Health plan beneficiary numbers
10. Account numbers
11. Certificate / license numbers
12. Vehicle identifiers and serial numbers, license plates
13. Device identifiers and serial numbers
14. Web Universal Resource Locators (URLs)
15. Internet Protocol Addresses
16. Biometric identifiers (fingerprints, voice prints, retinal scans)
17. Full face photographic images
18. Any other unique identifying number, characteristic or code

Protecting Patient Privacy

• The APD is designed to uphold the security and confidentiality of Personally Identifiable Information (PII) and Protected Health Information (PHI)

• APD data is housed in a single, secure, HIPAA-compliant data center and is encrypted both in transmission and at rest

• Following industry standards and Department policy, the APD Bureau has implemented a system of role-based access to ensure that internal APD data users only have access to the minimum amount of health information necessary to perform DOH-authorized functions
Protecting Patient Privacy

- The APD utilizes sophisticated de-identification methodologies to anonymize and protect APD data that is made available to the public via the NYS Health Connector and Health Data NY.

- As part of the Department’s commitment to the security and privacy of patient data, no users nor APD employees, will have access to claims containing: Patient Name; Patient Address; Social Security Number; or Phone Number.
Strengthening the APD Core

Data Access
Users connect from their Desktop via VPN w/ SQL Developer; SAS; or Tableau Desktop
Sandbox Option Available

Users connect via NY.Gov to the APD Analytic Portal
- Tableau Server
- Meta Data Manager
DOH Employee Data Access Request Form

- Process is in place for requesting access
- Users fill-out access request form
- Verification of appropriate data steward approval
- DUAs signed for appropriate program areas and the APD
- Introductory training class
Coordination of Data Access Policies Across the Department of Health

- Medicaid Data Access
- Hospital Discharge (SPARCS) Data Access
- New York State of Health (NYSOH) QHP & EP Data Access
- Vital Statistics Data Access
- Medicare Data Access
Role Based Access Control (RBAC)
## Data Identifiability Spectrum

<table>
<thead>
<tr>
<th>Level</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 5</td>
<td>Aggregate Data</td>
<td>Identifiably below threshold</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identifiably above threshold</td>
</tr>
<tr>
<td>Level 4</td>
<td>Managed Data</td>
<td>Reversibly masked data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Irreversibly masked data</td>
</tr>
<tr>
<td>Level 3</td>
<td>Exposed Data</td>
<td></td>
</tr>
<tr>
<td>Level 2</td>
<td>Masked Data</td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>Identifiable Data</td>
<td></td>
</tr>
</tbody>
</table>

Greater risk of re-identification

Greater effort, cost, time, and skill to re-identify

Potential for public release

Limited data

PHI data

Implementing Role Based Access Control

SPARCS
- Limited Identifiable
- Limited

Vital Statistics
- Limited Identifiable

APD Consolidated
- Limited Identifiable 1
- Limited Identifiable 2
- Limited Identifiable 3
- Limited Identifiable 4
Strengthening the APD Core

Data Release
External Data Release and Security

- Policies and procedures for the release of APD data sets to external users are still under development.
- Per regulation, APD data sets will only be released to external requestors when DOH has confirmed the completeness and accuracy of the underlying data.
- DOH will convene an APD Advisory Group in 2018 to solicit input regarding data release policies.
Key Data Release Decision Points

• What information will be shared and with whom?
• What restrictions will be on different types of data release and access?
• In what formats will data be released?
## Data Release Considerations

<table>
<thead>
<tr>
<th>Identifiable Data Files</th>
<th>Limited Use Data Files</th>
<th>De-Identified Data / Public Use Files</th>
<th>Suppression/Masking / Encryption of Sensitive Data</th>
<th>Standard Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom Reports</td>
<td>NYS Health Connector</td>
<td>Health Data NY / Open Data NY</td>
<td>Inter-agency Intra-agency Agreements</td>
<td>Data Use Agreements / MOUs</td>
</tr>
<tr>
<td>Authorized Use / Restrictions on Access</td>
<td>Legal and Financial Penalties</td>
<td>Citation Requirements</td>
<td>Fee Schedules / Licensing</td>
<td>Management of Requests / Dissemination</td>
</tr>
</tbody>
</table>
Unique Considerations on Release

• Linkages
• Downstream Sharing
  – Medicaid
  – Medicare
• Sensitive Data
  – Fetal Deaths
  – HIV/AIDS
  – Communicable Diseases
  – Mental Health Treatment
  – Substance Use Treatment

• Price/Payment Amounts
• Expanded Content
  – Non-claims based payments
  – Plan benefit design
  – Premium information
  – Clinical/EHR data
  – Registries
  – Social determinants of health
APD Advisory Group

• Per regulation, DOH is authorized to establish an APD Advisory Group to provide recommendations regarding data release policies, patient privacy and confidentiality, and other issues

• The APD Advisory Group is intended to:
  • Solicit input from all relevant public and private perspectives
  • Ensure that the needs of stakeholders are considered, and
  • Provide feedback to DOH on proposed activities related to the APD
APD Advisory Group

- The APD Advisory Group is anticipated to consist of a range of representatives, while remaining a relatively small and nimble group
- The APD Bureau intends to convene the initial meeting of the Advisory Group in 2018, with meetings scheduled on a quarterly basis

- NYS DOH
- Other state & local agencies
- Health insurers
- Health care facilities
- Health care practitioners
- Purchasers of health insurance or health benefits
- Academic institutions
- Health care consumers and advocates, and
- Health care researchers and professionals
Strengthening the APD Core

APD Analytic Portal
- What’s New
- Announcements
- Data Refresh Schedule
Training

- Introductory classes
- Advanced classes
- Quarterly schedule
Analytics

- Dashboards
- Search
- My Favorites
- My Reports
- Ad Hoc Reports
- SPARCS
- Vital Statistics
Dashboards

- High-level summaries
- Key metrics
Reports

• About the Report
• Metrics
• Selection Filters
• Stratification Variables
• Data Sources and References

About the Report

This report evaluates Inpatient (IP) hospital services by the Agency for Healthcare Research and Quality (AHRQ) Clinical Classification Software (CCS) diagnosis groupings.

The users can evaluate and compare CCS diagnosis specific IP utilization and charge information by selecting from the metrics, selection filters, and stratification variables described below. The report contains multiple views that can be used to evaluate utilization from multiple perspectives.

A detailed description of the metrics, selection filters, and stratification variables included in this report is also available in the documentation section of the AHRQ home page.

Data Sources and References

New York State SPARCS database is the data source used in this report. Further information regarding the SPARCS database can be found by clicking the following link: https://health.ny.gov/statistics/sparcs
Reports

Metrics
Users can select from six metrics using the select metrics drop down box. The metrics selected will be displayed in the charts and tables contained in each view. The metrics for IP utilization are:

A) Total Discharges
B) Total Charges ($)
C) Total Days
D) Average Charges per Day ($)
E) Average Charges per Discharge ($)
F) Average Length of Stay

Selection Filters
The selection filter drop down boxes can be used to limit the data displayed in the charts and graphs for the selected population. The selection filters that are available are:

A) Metric and Date: Top N CCS, Metrics, Time Period (Year, Quarter, Month), Specific Date
B) Patient Characteristics: Gender, Age Group, Race, Ethnicity, Primary Payer, Dual Eligibility, Patient County
C) Event Characteristics: Emergency Admit Status, Patient Disposition
D) Facility Characteristics: Teaching Facility, HSA, Facility County, Facility Name

Stratification Variables
The stratification filter drop down box enables the user to stratify the selected metric for the chosen population by each value of the selected stratification variable.

The user-specified stratification filters available are Age Group, Ethnicity, Facility County, Facility Name, Gender, HSA, Patient County, Patient Disposition, Primary Payer, Race.
Quarterly Release Schedule

Qrt. 1 Release
- NYS Health Connector
- APD Analytic Portal

Qrt. 2 Release
- NYS Health Connector
- APD Analytic Portal
- Operational Data Store (ODS)

Qrt. 3 Release
- NYS Health Connector
- APD Analytic Portal
- Operational Data Store (ODS)

Qrt. 4. Release
- NYS Health Connector
- APD Analytic Portal
- Operational Data Store (ODS)
Lunch / Networking
(12:30 to 1:30 pm)
All Payer Claims Database: 2018 National Landscape
About the APCD Council

The APCD Council is a learning collaborative of government, private, non-profit, and academic organizations focused on improving the development and deployment of state-based all payer claims databases (APCDs). The APCD Council is convened and coordinated by the Institute for Health Policy and Practice (IHPP) at the University of New Hampshire (UNH) and the National Association of Health Data Organizations (NAHDO).

Our Work

- Early Stage Technical Assistance to States
- Shared Learning
- Catalyzing States to Achieve Mutual Goals
Databases, created by state mandate, that typically include data derived from medical, pharmacy, and dental claims with eligibility and provider files from private and public payers:

- Insurance carriers (medical, dental, TPAs, PBMs)
- Public payers (Medicaid, Medicare)
Key National Issues

• Self-Funded Data
  • SCOTUS Ruling in *Gobeille v. Liberty Mutual* Insurance Company case

• Substance Use Disorder Claims
  • SAMHSA’s 42 CFR Part 2 Rule

• Federal Employee Health Benefits Plans
  • Office of Management and Budget
Welcome to the APCD Showcase where examples from state all-payer claims databases (APCDs) have been organized in order to provide stakeholders with tangible examples of APCD reports and websites. The examples have been organized by intended audience, and are also searchable by additional criteria. We invite you to explore the site and learn more about the value that APCDs provide to states and their stakeholders.

Choose from the categories below or See all Case Studies >
Compare the Costs & Quality of Healthcare Procedures in Maine

Know What to Expect Before You Receive Care

find the cost of a procedure

more information. better decisions.

CompareMaine shows the average cost of common healthcare procedures at different facilities in Maine. The average cost represented on this
Use Data to Answer Health Care Questions

One of CIVHC’s primary goals is to increase transparency through data analytics and reports to ultimately advance health care in Colorado. Interactive health care data and reports can help consumers, communities, organizations, policy makers and other stakeholders identify ways to reduce variation in spending and improve care.

Use the interactive CO APCD information below to shop for health care services and identify opportunities for health and health care improvement in your community. While we’re finishing some of the reports, check out the new measures we have planned.

- **Shop for Care** *(COMING SOON)* Search prices and quality at different facilities for common elective services
- **Statewide Measures:**
  - **Cost of care:** Find out how much care costs by payer in your area compared to the rest of Colorado and more
  - **Utilization of services:** Explore how use of hospital services, pharmacy fills, ER visits and more varies across Colorado
  - **Condition prevalence:** Identify which areas of Colorado have higher rates of chronic conditions like

**Quick Links**

- Get Data
  - CO APCD Overview
  - Public Data
    - Interactive Data
      - Shop for Care
    - Statewide Measures
  - Publications
- Custom Data
- My Data Login
Arkansas All-Payer Claims Database and the Profiles of Individuals Registered for Medical Marijuana

A 2017 amendment to the Arkansas Healthcare Transparency Initiative Act added several new data elements to the Arkansas All-Payer Claims Database (APCD), including medical marijuana qualifying patient data. The figures below offer a preliminary look into the conditions, coverage sources, and demographics of individuals registered for medical marijuana. The Arkansas Medical Marijuana Amendment of 2016 lists 19 qualifying conditions (QCs) and symptoms for which a patient may qualify for medical marijuana. The conditions listed below are not necessarily the condition for which an individual qualified for medical marijuana. Rather, they are the types of conditions experienced, as captured by medical claims in the APCD.

Cancer types seen in individuals registered for medical marijuana

Individuals registered for medical marijuana grouped by coverage source

Individuals registered for medical marijuana by age

Arkansas All-Payer Claims Database, released July 2018. ACHI is a research, education, and policy organization that serves to improve the health of Arkansans.
Virginia Chronic Conditions

**CHRONIC CONDITIONS IN VIRGINIA**

Chronic conditions, such as heart disease, cancer, stroke, and type 2 diabetes, are common, costly, and chronic, often preventable. According to the Centers for Disease Control and Prevention (CDC), chronic conditions are responsible for 7 of 10 deaths among Americans each year and account for 66% of the nation’s healthcare costs.

Among the roughly 3 million Virginians with commercially driven care in Virginia last year, 38.9% had paid health insurance claims indicating the enrollee had a chronic condition.

**Top Chronic Conditions in 2015**

1. Hypertension
2. Asthma
3. Diabetes with CAD
4. Chronic Musculoskeletal Disorders
5. Gastrointestinal Disorders

*Estimated for over 65% of individuals with a chronic condition.

Although chronic conditions affect people of all ages, the risk of chronic illness increases with age.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Chronic Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-29</td>
<td></td>
</tr>
<tr>
<td>30-34</td>
<td></td>
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<tr>
<td>35-39</td>
<td></td>
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<tr>
<td>40-44</td>
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<tr>
<td>45-49</td>
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<tr>
<td>50-54</td>
<td></td>
</tr>
<tr>
<td>55-59</td>
<td></td>
</tr>
<tr>
<td>60-64</td>
<td></td>
</tr>
</tbody>
</table>

Although one-half of the population had at least one chronic condition by the age of 45.

The average allowed amount of dollars spent to directly pay care for individuals without a chronic condition was roughly four times the average allowed for individuals defined as non-chronic.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Average Allowed Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>$6,144</td>
</tr>
<tr>
<td>Chronic Musculoskeletal Disorder</td>
<td>$5,928</td>
</tr>
<tr>
<td>Gastrointestinal Disorder</td>
<td>$9,826</td>
</tr>
<tr>
<td>Hypertension</td>
<td>$3,317</td>
</tr>
<tr>
<td>Asthma</td>
<td>$3,313</td>
</tr>
<tr>
<td>Non-Chronic</td>
<td>$1,415</td>
</tr>
</tbody>
</table>

**VIRGINIA HEALTH INFORMATION**

101 W. 6th Street, Richmond, VA 23219

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Massachusetts Enrollment Trends

OVERALL MARKET

Between September 2015 and September 2017, overall health insurance coverage in Massachusetts showed steady growth. Enrollment in private and employer-sponsored insurance experienced growth of 51,729 people (1.3%) during this period, with approximately 4.4 million private and employer-sponsored policyholders as of September 2017. The total number of insured residents grew by 2.1% from the prior year during this period. Enrollment in publicly funded programs, including Medicare Advantage, Medicare FE, MassHealth Direct (Medicaid), and Other Medicaid, grew by 1.7% from the prior year during this period.

MassHealth Direct: Primary medical coverage provided by Medicaid, with enhanced benefits for primary care, hospital stays, and select dental care. This category includes non-Medicaid-enrolled vendors such as MassHealth Limited, which only covers emergency services.

Senior Care Options (SCO), One Care, Program of All-Inclusive Care for the Elderly (PACE): Specified programs primarily for individuals with SCI, HIV/AIDS, and Medicaid coverage.

Total Massachusetts Enrollment

September 2015 - September 2017

Source: MAHCO, Supplemental data: Massachusetts Health Connector, DCH

Notes: Enrollee counts exclude members of small groups, military administration, and certain public programs, as well as those with primary coverage through Virginia Medicaid or TRICARE. This report does not include enrollees in other state or federal programs who have enrolled under the Massachusetts Medicaid or Medicare program. "MassHealth" refers to those who are enrolled in SCO, One Care, or PACE. For more information see the Health Connector's annual report for more details.
Minnesota Pharmacy Spending and Utilization

Introduction

Prescription drugs offer important treatment options to providers and patients for addressing acute and chronic conditions. Yet, although many innovative prescription drug offerings and clinical trials offer economic benefits to patients, the steady increase in prescription drug spending has raised concerns about patient safety and affordability. This increase is due to generally higher prescription drug costs and other factors, such as demographic changes and increased use of prescription drugs. This report offers data on prescription drug spending and utilization in Minnesota from 2009 to 2013 using the Minnesota All-Payer Claims Database (MNAPC). This database is a comprehensive repository of health care expenditures derived from health care provider billing records.

Key Findings

- **Spending in 2013 on all prescription drugs for Minnesotans with insurance coverage reached in the MNAPC was about $74.8 billion.**
- **Prescription drug spending in pharmacy and medical clinics accounted for approximately 20 percent of total health care consumption in that year.**
- **Between 2009 and 2013, prescription drug spending rose 26.6 percent, with medical claims rising for more than one half (53.1 percent) of this growth.**
- **The greater use of medical claims in drug spending resulted in pharmacy claims being tied to higher cost-per-package (more than 200 percent) and pharmacy cost-per-ingredient (13.5 percentage points between 2009 and 2013).**
- **Across the four-year study period, Minnesota's prescription drug spending grew at an average of 0.2 pharmacy claims and 2.5 medical claims per year for prescription drugs.**

Future issue briefs will further explore spending and use of prescription drugs in Minnesota:

- **Groupings of drugs by their functions (therapeutic category).**
- **Whether they are brand, generic, or specialty drugs.**
- **Channels of distribution and payment.**
- **Geography of type of prescribing providers.**
- **Variations in spending, use, cost by geographic location.**
Potentially Preventable Emergency Room Visits

Introduction
A potentially preventable emergency room visit is when a patient goes to an emergency room for a health condition that could have been treated in a non-emergency setting or prevented by keeping them healthier earlier on. Treatment in an emergency room is generally more expensive than a primary care visit. When people have fewer barriers to good health in their communities, and when they can easily access high quality primary care and follow-up, they are less likely to end up in the emergency room. (Patients experiencing a medical emergency should always seek emergency care.)

Key Findings

- In Rhode Island, we could potentially save $90 million annually by preventing non-emergency visits to emergency rooms.
- Chest pain is one of the top reasons for potentially preventable emergency room visits, and the most expensive. Better access to primary care and disease management could help prevent these visits.
- Upper respiratory infections, low back, and abdominal pain are common, potentially preventable, reasons Rhode Islanders go to the emergency room.

Discussion
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Data Consolidation, Integration, & Master Data Management (MDM)
APD Consolidation & Integration: Concept

- Issuers & Plans
- Member
- Provider
- Claims
APD Consolidation & Integration: Member

Longitudinal Demographics
- Race
- Ethnicity
- Language
- Gender
- Select Address Attributes

Longitudinal Coverage
- Detailed Coverage Segments
- Continuous Coverage Spans
- Member Months

Member Contains – SPARCS, Medicaid, QHP, EP, CHP; Medicare in Next Release
APD Consolidation & Integration: Providers

**Individuals**
- Individual Practitioners
- Race
- Ethnicity
- Language
- Gender
- Addresses
- Specialties
- Taxonomies
- Alt Identifiers

**Organizations**
- Businesses
- Non-Location Dependent Providers
- Addresses
- Alt Identifiers

**Sites**
- Physical Locations for Services
- Addresses
- Alt Identifiers

Provider Contains – Medicaid, NPPES, HFIS, PNDS, and Licenses
APD Consolidation & Integration: Claims

**Initial Release Contains**
- Medicaid, QHP, EP, CHP
- APD Category of Service
- MMCOR
- Optum Symmetry

**Upcoming**
- Medicare
- Total Cost of Care
- Price Transparency

Claims Contains – Medicaid, QHP, EP, CHP Encounters; Medicare in Next Release
APD Consolidation & Integration: Issuers & Plans

Initial Release Contains:
- Lines of Business
- Products
- Issuer and Plan Relationships
- Point of Entry
- Medicaid Managed Care & FFS, QHP, EP, CHP

Upcoming:
- Benefit Information

Issuers & Plans – Medicaid Managed Care, FFS, QHP, EP, and CHP
APD Consolidation & Integration: Enhancements & Standardizations

- Member & Provider MDM IDs
  - Informatica Deterministic Matching Rules
    - Enhanced by Address Doctor Standardization
    - Varying Match Strictness (Fuzzy, Normal, and Conservative)

- Claims
  - Symmetry – Optum Episodic Grouping Software
  - MMCOR
  - APD Category of Service
Master Data Management - Approach

1:1 Goal
Every Member, Provider, Facility, and Organization is represented by only 1 MDM ID

Look for Source of Truth data as foundation of deterministic matching rules

Build DPE agnostic deterministic matching rule

Matches are automatically merged via transitive property

Automated rules seamlessly merge records together

Manual rule highlight potential matches requiring further review

Maturity Model with an End-Goal of successful integration & feedback loop with Stakeholders

First iteration of matches err on the side of false negatives over false positives
Master Member Index

- Medicaid
- CHP
- EP
- QHP
- SPARCS
- Vital Statistics
- Mortality

Informatica Matching

APD Member
MDM ID
Master Member Index – Individual Rules

Data Source & System Agnostic

- System Agnostic: non-weighted attributes & match rules that produce consistent matching output regardless of data source
- Output by rule, merged by transitive property of equality.
  - If record A matches to B, and record B matches to C, then A matches to C
- 38 of our 70 deterministic match rules are illustrated to the right
Master Member Index
# Master Provider Index – Individual Rules

<table>
<thead>
<tr>
<th>Rule No.</th>
<th>Source</th>
<th>Rule Type</th>
<th>Strength</th>
<th>NPI</th>
<th>MMIS ID</th>
<th>LIC NUM</th>
<th>PROV_TYPE</th>
<th>FULL NAME</th>
<th>ADDRESS_LINE1</th>
<th>CITY</th>
<th>FIRST NAME</th>
<th>LAST NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PNDS, CMS, T_PROV</td>
<td>AUTO</td>
<td>EXACT</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<td></td>
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<tr>
<td>3</td>
<td>PNDS, CMS, T_PROV</td>
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<td>EXACT</td>
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<tr>
<td>6</td>
<td>PNDS, CMS, T_PROV</td>
<td>MANUAL</td>
<td>EXACT</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Pre edits done on all data sources:
- Invalid PFIs and Opcerts are blanked out.
- Address Line 1 and Line 2 are concatenated into ADDR_LINE1.
- ";" is changed to AND.
- 6 characters PFIs by padding left 0's.

Start

Pull data from HFIS and match on PFI 1.0

Pull data from PNDS 1.1

Match to Address (fuzzy), PFI and Opcert on HFIS Data 1.2

Match found 1.3

Pull out PNDS records that matched HFIS Data 1.3

Match found

Assign MDM ID to records 1.4

Pull out PNDS records that matched HFIS. Run remaining PNDS records and merge with T_PROV and CMS records 2.1

Match to the Site name (fuzzy) and Address on PNDS, T_PROV and CMS 2.2

Assign MDM ID to the grouped records 2.5

Match found 2.4

Manual merge to HFIS on Site name and Address 3.1

Finish

Create a manual review file 3.3

Match found 3.2

These records did not match on HFIS

No

To determine if records should be merged

Yes

Rule set 1

Separate tables for OHIP and NYSOH

Rule set 2

Rule set 3

End

Rule set 1

Matched records are removed from the input table

Yes

Each record on HFIS is assigned an MDM ID

Yes
Quality Reports, Next Steps, & Lessons Learned

Next Steps
APD MDM Maturation Process
- Iterative review
- Begin manual merge/unmerge process
- Begin working with data sources to further maturation

Lessons Learned
- A degree of human interaction is still required for merging/unmerging of records
- Data can be dirty, but with persistence, dedication, and an iterative approach a successful MDM process can exist
SPARCS Evolution and the APD
What is SPARCS?

• An all payer hospital discharge data research system established in 1979 as a cooperative between the health care industry and government

• One of the largest, and most comprehensive hospital discharge data sets in the country

• One of the most widely used data sets in DOH, containing inpatient, emergency department, ambulatory and hospital outpatient claim level data from 1982 through 2017

• A research system containing patient demographic, diagnoses, procedures and charges for all acute care hospital discharges, emergency room visits and ambulatory surgery stays
Many Uses of SPARCS Data

- Financial, Rate Setting (e.g., APR-DRG Service Intensity Weights)
- Supporting System Transformation Models
- Developing and Evaluating Policy
- Epidemiology
- Health Planning/Resource Allocation
- Quality of Care Assessment
- Research
- Surveillance
- Utilization Review

- Linkages with other data sets (Vital Statistics, Registries, etc.)
- AHRQ Healthcare Cost and Utilization Project (HCUP)
- AHRQ Quality, Efficiency and Patient Safety Measures (i.e. IQI, PQI/PDIs, PSIs)
Why Include SPARCS in the APD?

- It is a comprehensive, all payer research system that is ready to be expanded
- It contains administrative claim data from facility billing departments prior to billing
- Post-adjudicated APD claim data may be compared to pre-billing data to ascertain data quality and completeness
- The *Gobeille* Supreme Court decision limited the ability of APCDs to collect employer-based claim data, this data is included in SPARCS
- The self-pay/uninsured are collected as part of SPARCS
Why Modernize SPARCS?

- Research System Expansion
- Reduce Silos
- Interwoven Health Data
- Technological Advances
- Enhanced Data Security
- National Standards
- Master Data Management (MPI)
- Robust Relational Analytical Schemas
- Powerful Advanced Analytics
- Enhanced, More Secure Data Release
- Enhanced Visualizations
## SPARCS and APD

<table>
<thead>
<tr>
<th>Payment and Price</th>
<th>Covered Population</th>
<th>Submitters</th>
<th>Member</th>
<th>Health Related Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPARCS Hospital Discharge Data</td>
<td>• Pre-Billing Charges • Expected Payer</td>
<td>• Insured • Uninsured /Self-Pay</td>
<td>• Article 28 Facilities</td>
<td>• Patient Demographics at Time of Admit/Visit</td>
</tr>
<tr>
<td>APD Claims &amp; Encounters</td>
<td>• Charges • Prices • Payments</td>
<td>• Insured</td>
<td>• Issuers / Managed Care Plans</td>
<td>• Health Plan Enrollment Information / Member Months</td>
</tr>
</tbody>
</table>
The Future of SPARCS

• The synergy of SPARCS into the APD will result in an improved research system for powerful analytics

• Data will be improved in terms of:
  – Quality
  – Quantity
  – Security/Privacy Protections
  – Timeliness

• The synergy will produce better analytics to achieve the triple aim of better care, better outcomes at lower costs.
SPARCS Contact Information

SPARCS data submission questions
SPARCS.submissions@health.ny.gov

General SPARCS questions
apd.sparcs@health.ny.gov

SPARCS Website
https://www.health.ny.gov/statistics/sparcs
Facilitated Discussions
(Refer to Handout)
Facilitated Discussions

- See Facilitated Discussions handout
- Color paper and markers at each table
- One idea/sketch or comment per sheet
- Bring forth ideas generated throughout the day
Topics, Types, Ease of Use

• What topics, visualizations, and stories would you like to see on the NYS Health Connector?

• How can we make the site more useful to you?

** Using de-identified datasets
Summarizing Today’s Feedback

• Summary of facilitated discussions will be posted to NYS Health Connector
• All comments received via WebEx chat will be incorporated into post meeting materials
• Please remember to fill out the index card with any feedback on today’s meeting
• Will announce publication of summarized feedback through APD Listserv
Concluding Remarks
Looking Ahead...

✓ Strengthen the Core
✓ Realize the Vision
✓ Aim Higher

Realizing the Vision
- Integrate commercial data
- Publish data release and governance policy
- Expansion of state users
- Release additional functionality
- Develop sustainability plan
- Expand research agenda

Strengthening the Core
- Launch APD public website
- Launch APD analytic portal (sign-in)
- Onboard internal to DOH users
- Mature Master Indexes (Patient/Provider)
- Release additional functionality
- Establish APD Advisory Group

Aiming Higher
- Integration with other data systems/sources
Some Year 3 Strategic Objectives

- Technical Build and Enhancements to Analytical Data Model
- Continue to Build Out and Enhance the NYS Health Connector
- Mature Master Data Management - Patient/Provider
- Continue Data Acquisition – Commercial, Medicare
- Strengthen and Mature Data Governance, Access and Release Policies and Procedures
- Develop Research Briefs and Reports
- Sustainability planning – pricing, licensing
- Strengthen and build out communication pathways with all stakeholders
GROWING A HEALTHIER NEW YORK
WITH THE ALL PAYER DATABASE

STEP 1
Combine a range of anonymous health-related data in a safe and secure way.

STEP 2
Analyze data to understand New York’s healthcare delivery system.

STEP 3
Use actionable insights to transform care delivery and improve population health.

STEP 4
Empower consumers through the All Payer Database by providing easy-to-use health-related information to support all New Yorkers in making informed decisions to create healthier communities.

nysapd@health.ny.gov
FIND OUT MORE – STAY IN TOUCH

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