Agenda

- Agency work since 2013
- Agency initiatives and priorities for 2015-7
- MA APCD update
  - Data availability
  - Uses by state agencies
  - Master Data Management
WHO WE ARE
We envision a transparent health care system where reliable information empowers people and informs decision-making.
CHIA collects and disseminates a wealth of reliable data and products

Data collection & information hub

Policymakers
Payers & Providers
Employers
Researchers
People of Massachusetts
CHIA has been investing in a network of activities to maximize the value of our data
PLANS FOR 2015-2017
Establish and promote

**CHIA Statistics**

as the standard for measuring the performance of the Massachusetts health care system
Support the **Legislature** and other state agencies with CHIA information and analysis
Establish and promote specific Continuing Studies of health system performance
Seek efficient ways to maximize the benefit of our data assets
Other CHIA activities in 2015

- Behavioral Health Task Force
- Quality Measure Reporting
- Risk-adjusted Total Claims Expense
- Key Population Utilization and Cost Indicators
- MassHealth data collection and enhancement
- Provider-level Measures of Spending Growth
- Continued Support of the Betsy Lehman Center
CHIA’S ALL PAYER CLAIMS DATABASE

MA-APCD
MA APCD Scope

- **Adjudicated claims from commercial and public payers**
  - Medicare data available to state agencies only

- **CY 2009-13 available; annual releases**

- **Generally all medical, pharmacy, and dental claims for all MA residents** with some exceptions:
  - Federal program – FEHBP, VA, DOD
  - A few self-insured programs
  - Very small carriers
  - Self Pay
  - Workers’ Compensation, Auto Insurance

* Out of state lives as well. Snow birds, students, out of state residents enrolled in health plans with MA situs.
MA APCD Metrics

- Over 12,000 files are submitted to CHIA each year with close to 300 million claim lines
- More than 500 data elements
- CHIA applies approximately 1500 edits to the data
- Last release of data was more than 2 TB of data
More APCDs Since 2013

Interactive State Report Map

Source: APCD Council
What Makes the MA APCD Unique

- “Administrative Simplification”
  - Data quality/completeness has consequences for payers
- Comprehensive
  - Details on plan design and provider characteristics
  - Public and private payers
  - Self insured plans
- Accessible to broad variety of users
- Development and maintenance done “in-house”
Update on “Administrative Simplification”

- Connector/Risk Adjustment for ACA: Metal Level, Actuarial Value, QHP
- Division of Insurance: NAIC Code
- Health Policy Commission: Total Medical Expense
- Group Insurance Commission: GIC ID
- CHIA for TME, Cost Trends & Relative Price: Attributed PCP, TME Org ID
- Connector and DOI: Monthly Premium, Employer ZIP, Family Size
- Connector, DOI and GIC: Market Category Code
- Connector, CHIA and DOI: Employer Contribution

MA APCD

Payers
Connector Risk Adjustment

- Connector Needs Assessment Summer/Fall 2012
- New Data Elements Specified Fall 2012/Winter 2013
- First Simulation May 2013

- Quarterly Simulations 2013-14
- Final Simulation Q1 2015
- First Run Data Lockdown April 30, 2015
- First Settlement 2015
What We Have Learned

- ACA brought new concepts that needed to be specified by the MA APCD
- Need for transparency and ongoing data validation by carriers
  - Member Month Tracker
  - SAS programs shared
  - Extracts to carriers for auditing/analysis
- Operational issues needed to be addressed
  - Privacy, security of data flows
  - Timing – 60 days from submission to scores released
Division of Insurance

- DOI Goal: to source HMO quarterly reports from MA ACPD
- Work funded under ACA Cycle 3 Rate Review grant
- Validation process
  - CHIA develops business rules to apply to MA APCD
  - Compares MA APCD results with carrier submissions to DOI
  - Engage with carriers individually to understand differences
    - Resubmissions from certain carriers
    - Modification of business rules
Example of a Business Rule

MASSACHUSETTS RESIDENTS - APCD MEMBERSHIP AND CODE MAPPING

OrgID: HD002 = 295
Medical Coverage: ME018 = 1
MemberMA: 1
Coverage Type: ME029 = UND
Primary Insurance Indicator: ME028 = 1
Fully Insured Member: ME073 = 1

APCD Submission Month: 2013-06

Insurance Type (ME003): 16 (SC, HM, MO)
Special Coverage (ME031): N/A (CC, N/A, N/A)
Market Category (ME030): IND, OTH, IND, OTH, OTH, GSA, OTH, OTH

Membership Count:
- HMO - Medicare Advantage Choice
- HMO - Individual
- HMO - Group
- HMO - Medicaid
What We Have Learned

- Inconsistent specifications in DOI reporting
- Some carriers had misinterpreted MA ACPD Submission Guides
- MA APCD submissions were missing some lines of business and/or accounts
- MA APCD needed new data elements, notably situs
The Problem

- 80 organizations submit to the MA APCD
- Different membership IDs – how can you track John Smith as he moves between carriers and even between plan designs within a carrier?
- Can’t share direct identifiers like SSNs, DOBs, etc.
- Several use cases:
  - Linking carve out programs
  - Tracking cohorts over time regardless of carrier
  - Movers’ analyses
Solution: Master Patient Index

- Probabilistic model
  - Low tolerance for false positives
  - Minimize false negatives
  - No manual reviews

- Elements: Name, SSN, DOB, Address, Gender, Subscriber SSN, Carrier ID, etc.

- 12,000 manual matches

- Filters to address twins, father/son’s sharing first and last names, etc.
Result: Member Enterprise ID

- 19 digit number
- Assigned by the system to each “entity group”
- No embedded intelligence in the number
- Appears on the Member Eligibility and Claims files
## Entity Group Simplified Example

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>DOB</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC Record 1</td>
<td>Charles M Smith</td>
<td>18 Main Street</td>
<td>12/12/94</td>
</tr>
<tr>
<td>MC Record 2</td>
<td>Charles Smith</td>
<td>18 Main St</td>
<td>12/12/95</td>
</tr>
<tr>
<td>MC Record 3</td>
<td>CM Smith</td>
<td>18MainSt</td>
<td>12/12/94</td>
</tr>
<tr>
<td>ME Record 1</td>
<td>Charlie Smith</td>
<td>19 Main St</td>
<td>12/2/94</td>
</tr>
<tr>
<td>ME Record 2</td>
<td>Charles Smith</td>
<td>18 Main</td>
<td>12/12/94</td>
</tr>
<tr>
<td>PC Record 1</td>
<td>Charles N Smith</td>
<td>18 Main Street</td>
<td>12/12/84</td>
</tr>
</tbody>
</table>
Analysis by Michael Barnett of Harvard Medical School: Persistence of MEID in R 2.1

Table 1: Assembling a cohort from APCD ME file

<table>
<thead>
<tr>
<th>Step</th>
<th>Exclusion Applied</th>
<th>Unique Hash IDs</th>
<th>Unique Patient IDs</th>
<th>Benchmark estimate: 2010 MA census</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Raw member eligibility file</td>
<td>37,237,926</td>
<td>11,636,953</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Any eligibility segment present in 2011 or after, excluding zero-confidence IDs</td>
<td>16,046,880</td>
<td>7,548,024</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Has a Massachusetts zipcode for address</td>
<td>14,667,091</td>
<td>6,433,084</td>
<td>6,547,629</td>
</tr>
<tr>
<td>4</td>
<td>Limiting to ages 21-64</td>
<td>9,516,665</td>
<td>4,007,340</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Limit to insurance with medical coverage</td>
<td>4,657,858</td>
<td>3,424,888</td>
<td>3,530,263</td>
</tr>
<tr>
<td>6</td>
<td>Has any coverage in 2011</td>
<td>3,875,246</td>
<td>3,202,902</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Limit to at least 9 months of coverage with any insurer in 2011</td>
<td>2,640,025</td>
<td>2,480,848</td>
<td></td>
</tr>
</tbody>
</table>

- **Major question:** how long can we follow MEIDs over time?
  - Given universal health care in MA, at least 90% if not more residents should be continuously insured during the year
- **Moving from steps 5-7, lose 28% of MEIDs**
Barnett Analysis: Persistence of MEID

Despite lack of persistent with MEID, remaining cohort appears to reflect general non-elderly MA population

- Population skews away from those most likely to change insurance

- Fewer:
  - Young people
  - Healthier people (not shown)
  - MassHealth MCO

<table>
<thead>
<tr>
<th>9 months of coverage in 2011 - unique EID</th>
<th>Benchmark Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>2,480,848</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1,346,622</td>
<td>54</td>
</tr>
<tr>
<td>Male</td>
<td>1,134,207</td>
<td>46</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21-29</td>
<td>474,922</td>
<td>19</td>
</tr>
<tr>
<td>30-39</td>
<td>538,394</td>
<td>22</td>
</tr>
<tr>
<td>40-49</td>
<td>624,549</td>
<td>25</td>
</tr>
<tr>
<td>50-59</td>
<td>584,740</td>
<td>24</td>
</tr>
<tr>
<td>60-64</td>
<td>258,243</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OrgID</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>291</td>
<td>849,828</td>
<td>34</td>
</tr>
<tr>
<td>296</td>
<td>61,833</td>
<td>2</td>
</tr>
<tr>
<td>300</td>
<td>285,751</td>
<td>12</td>
</tr>
<tr>
<td>3156</td>
<td>434,299</td>
<td>18</td>
</tr>
<tr>
<td>8647</td>
<td>161,267</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>687,870</td>
<td>28</td>
</tr>
</tbody>
</table>
### MA State Innovation Model ("SIM") Grant

<table>
<thead>
<tr>
<th>What is our goal?</th>
<th>How do we do it?</th>
<th>How does SIM help us get there?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Triple Aim: Better population health, better experience of care, lower costs</td>
<td>Payment Reform</td>
<td>• Medicaid’s Primary Care Payment Reform Initiative</td>
</tr>
<tr>
<td></td>
<td>Delivery system transformation</td>
<td>• The Group Insurance Commission’s value based purchasing initiative</td>
</tr>
<tr>
<td></td>
<td>Cost and quality accountability</td>
<td>• <strong>Provider portal to the MA APCD</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Adoption of the Health Information Exchange</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Data infrastructure for LTSS Providers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Electronic referrals to community resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Access to pediatric behavioral health consultation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Linkages between primary care and LTSS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Technical assistance to primary care providers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• HIE functionality for quality reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Statewide quality measurement and reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Payer and provider focused learning collaboratives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Rigorous evaluation</td>
</tr>
</tbody>
</table>
MA APCD Provider Portal Work Streams

- Product design
  - Stakeholder engagement

- Data Assessment
  - Master Practitioner Index
Product Content Matrix: Provider Portal Survey Summary

Higher

More Challenging

Effort

Less Challenging

Lower

Perceived Value

Where MY patients are seeking care

- Total Cost of Care
- Standardized Costs

- Specialist quality metrics
- High/low cost providers
- Practice pattern variation
- Services new patients received from previous providers

Episode-Based Efficiency (ETGs)

More

Higher

Quality - Process Measures

Cost of Care (not charges)

Future

Concepts for Entry Level Product

Patient Utilization - Office, ED, Admits

Patient Conditions/Prevalence

Patient Utilization - Condition Populations

Coordination & Referral

Patient Demographics

Provider Performance

Patient Characteristics

Episode-Based Efficiency (ETGs)

Total Cost of Care

High Volume Specialty Providers

Quality - Coordination of Care

High Volume Facilities

Quality - Outcomes

Quality - Process Measures

Patient Risk Scores

Where MY patients are seeking care

- Total Cost of Care
- Standardized Costs

- Specialist quality metrics
- High/low cost providers
- Practice pattern variation
- Services new patients received from previous providers

Episode-Based Efficiency (ETGs)

More

Higher

Quality - Process Measures

Cost of Care (not charges)

Future

Concepts for Entry Level Product

Patient Utilization - Office, ED, Admits

Patient Conditions/Prevalence

Patient Utilization - Condition Populations

Coordination & Referral

Patient Demographics

Provider Performance

Patient Characteristics
Engaged Stakeholders Around Entry Level Product
Master Practitioner Database

Provider File in MA APCD

BORIM

GIC

NPPES from CMS
SIM Grant Conclusions Report in Draft Form

- Interest and value in the provider portal product filling gaps in the provider organizations’ information
- “Unified payer report” valuable in terms of physicians managing patient panels
- Mock-up had “moderate value”
- CHIA was able to create a Master Practitioner Index at the billing provider level
However, for providers generally wanted:

- More recent data than is available from adjudicated claims
- Data linked with patient names which would require patient consent
- Information at the rendering physician level

Changes to claims adjudication processes on the part of providers and payers would be needed to achieve this
Data Release Regulations
957 CMR 5.00

- Statute and patient privacy regulations determine who is may receive what type of information and under what conditions:
  - Payers, providers, and researchers receiving de-identified data
  - Payer and providers receiving data with direct patient identifiers for treatment and care coordination
  - All other requests
Applying for CHIA Data (Non-Government Applicants)

1. Prepare
   - Review documents
   - Ask questions
   - Formulate request

2. Submit
   - Submit data request

3. Review & Consult
   - Technical specialist review & consultation

4. CHIA Compliance
   Review & Approval
   - CHIA Legal reviews
   - Executive Director approves

5. Sign Agreement
   - Agreements signed prior to release of data extract

6. Data Released
   - IT processes data extract
   - Extract shipped
Data Release Committee

- Includes representatives from health care plans, health care providers, health care provider organizations, and consumers

- Committee reviews whether the application is in the public interest

  Uses that serve the public interest include, but are not limited to:
  1. health cost and utilization analysis to formulate public policy;
  2. studies that promote improvement in population health, health care quality or access;
  3. health planning and resource allocation studies; and
  4. studies directly tied to evaluation or improvement of Massachusetts state government initiatives
  \[957 \text{ CMR 5.06(10)(d)}\]

- DRC makes non-binding recommendations to CHIA’s Executive Director regarding whether applicants have met the criteria for release
How to Access CHIA Data

- Regulations, application forms and fee information are on the web:
  - Hospital Data: [www.chiamass.gov/hospital-data/](http://www.chiamass.gov/hospital-data/)

- CHIA staff are available to assist in application process:
  - Hospital Data: casemix.data@state.ma.us
  - APCD: apcd.data@state.ma.us

- Monthly User Group is a good place to learn more. Schedule available at: [www.chiamass.gov/ma-apcd-case-mix-workgroup](http://www.chiamass.gov/ma-apcd-case-mix-workgroup)

- Sign up for email announcements/updates by emailing: chia.newsletter@state.ma.us