

CHIA USER WORKGROUP

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CENTER FOR HEALTH INFORMATION AND ANALYSIS



Agenda

- Announcements:
 - APCD Release 9.0/10.0 Updates
 - FY20 Case Mix Release Projections
 - Data Release and Application Update
- Website Updates
- Application Reminders
- User Support Questions
 - Longitudinal availability of race/ethnicity data
 - Unknowns in race/ethnicity data
 - Source of admission codes compared to ED flags
 - ED flags compared to revenue codes
- Q&A

MA APCD Release 9.0/10.0

- Available **Late Fall / Early Winter**
- Applicants with *approved projects* that require updated APCD data (Release 9.0/10.0) should submit to CHIA a completed Exhibit B (*Certificate of Continued Need and Compliance*) of the Data Use Agreement. After submitting a completed Exhibit B you will receive an invoice (if applicable) for the requested data. Upon payment of the invoice the order for the data will be placed.
- **Release 9.0/10.0** includes data on services from January 2015 – December 2020 with six months of claim runout.

Case Mix FY20 Release

CURRENT RELEASE TIMEFRAMES FOR EACH FILE:

- Inpatient (HIDD)
Available for request
- Emergency Department (ED)
Available for request
- Outpatient Observation (OOD)

Mid-Fall 2021

- Applicants with *approved projects* that require newly available year(s) of Case Mix Data (e.g., FY 19) should submit to CHIA a completed Exhibit B (*Certificate of Continued Need and Compliance*) of the Data Use Agreement. After submitting a completed Exhibit B you will receive an invoice (if applicable) for the requested data. Upon payment of the invoice the order for the data will be placed.



Data Release and Application Updates

Due to Governor Baker's emergency actions to limit the spread of COVID-19 CHIA's workforce will be remote, for now. This arrangement will limit CHIA's ability to produce and deliver data extracts. At this time, CHIA is releasing data and providing extracts to requestors.

During this time, CHIA will continue to accept and review data applications for both Case Mix and All-Payer Claims Database (MA APCD) datasets. Review committees, DRC and DPC, will continue their meetings remotely as necessary.

Due to CHIA's physical office being closed, applications will be accepted without a fee. After receipt of the application, CHIA will issue an invoice which will allow applicants to remit payment online.

If you are a Data User that has a CHIA hard drive in your possession, please keep the hard drive at this time while CHIA's physical office is closed.

Website Release Updates

- Updates on the production of APCD and Case Mix databases and status of data requests are now posted to CHIA's website!
 - **Aim #1** is to provide weekly or bi-weekly status update on CHIA data products as they are in development.
 - **Aim #2** is to provide applicants with information about expected fulfillment status for individual data requests.
 - Request IDs will be communicated to Data Requestors via email.
- Please visit <http://www.chiamass.gov/status-of-data-requests/> to see the current status of releases.

APPLICATION REMINDERS

Fee Waiver Request Reminders

1. If you're submitting a request for a fee waiver, remember to include the fee remittance form in your application package on IRBNet.
2. Remember to submit supporting documentation (if required).
3. If you're requesting a financial hardship waiver, remember to submit information detailing your project's financial situation (examples: project budget, grant funding, organizational / departmental funding). Also request to pay a specific price that you reasonably believe you're able to afford to contribute.
4. CHIA generally does not offer full financial hardship fee waivers. We expect all applicants to have made an attempt to find funding to cover the full cost of the data fees.
5. Fee waiver requests can take some time to process – especially financial hardship requests.

USER QUESTIONS

Question: The MA APCD pharmacy claims has a diagnosis code field. If I wanted to determine pediatric asthma rates and the types of medications asthmatics take, would the pharmacy claims diagnosis code field suffice to determine asthma diagnosis, or would I have to apply for the both the medical claims data and pharmacy claims data to obtain asthma diagnosis from medical claims?



Answer: The diagnosis code field in the pharmacy claims data has a 1% filing threshold. Of the 869,524,971 pharmacy claim lines in MA APCD Release 8.0, only 0.7% (n=5,804,916) have data in the pharmacy claim’s diagnosis code field. If you query the pharmacy claims pediatric population (age < 18 years) by ICD-10-CM diagnosis code for asthma (‘J45’), the results would have less than 2,000 patients per year. However, if you query the medical claims for Massachusetts pediatric patients with an asthma diagnosis, there are consistently over 110,000 distinct patients per year (see Figure 1 below). If you link those asthma patients in the medical claims table to the pharmacy claims to determine use of albuterol sulfate inhaler (national drug code 59310057922), 66% of pediatric asthma patients have a prescription for albuterol (see Figure 2 below). Your best option would be to link the medical claims to the pharmacy claims. Always keep in mind that rates will be lower using the MA APCD due to reduction in the submission of self-insured data.

Fig. 1 Massachusetts Pediatric (Age < 18) distinct Asthma Patients by Gender and Year of Service in Medical Claims

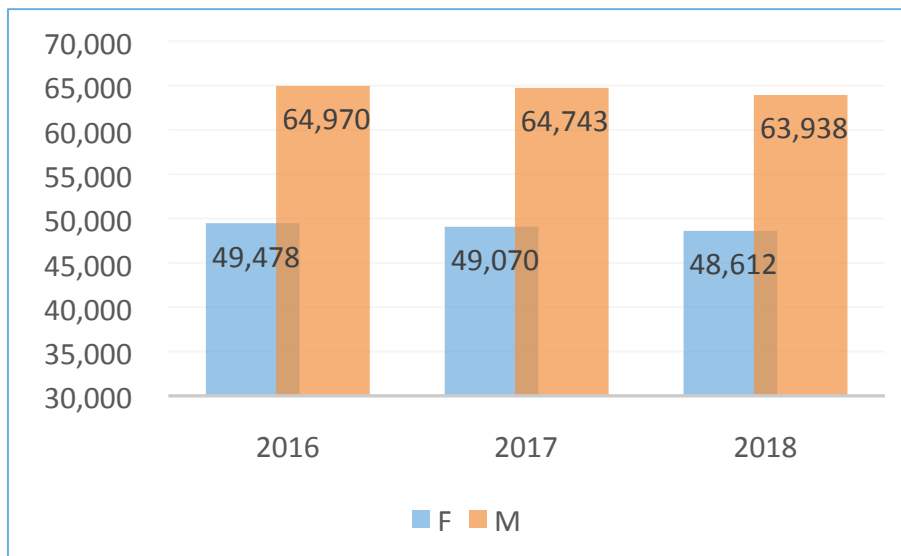
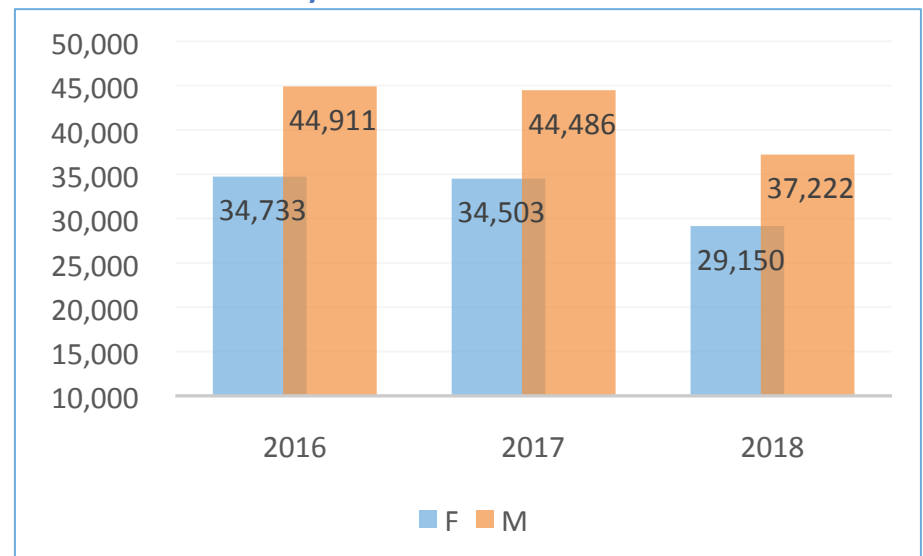


Fig. 2 Medical Claims Pediatric Asthma Patients with Pharmacy Claims for Albuterol Sulfate



Question: I am interested in applying for the MA APCD to study alternative payments models. Both the medical claims and the pharmacy claims have a field for payment arrangement type where the carrier reports the value that defines the contracted payment methodology for this claim line. One of the coding options is bundled payment. Has the bundled payment coding option been used by the carriers on any of the claim lines?

Answer: The payment arrangement type field in the medical claims data and pharmacy claims data contains 10 coding options (see Table 1 below). To date, the bundled payment coding option has not been used on any claim lines in the MA APCD. In the pharmacy claims for MA APCD Release 8.0, 3 of the 10 available payment arrangement coding options are used (see Table 2). In the medical, 9 of the 10 available coding options are used (see Table 3).

Table 1. Coding Options for Payment Arrangement Type

Value	Description
01	Capitation
02	Fee for Service
03	Percent of Charges
04	DRG
05	Pay for Performance
06	Global Payment
07	Other
08	Bundled Payment
09	Payment Amount Per Episode (PAPE) (MassHealth)
10	Enhanced Ambulatory Patient Grouping (EAPG) (MassHealth)

Bundled Payment

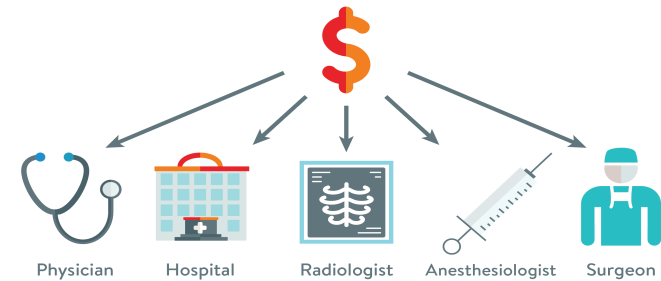


Table 2. Payment Arrangement Type Codes in Pharmacy Claims

Value	Description	Percent of Claim Lines	Percent of Charges
01	Capitation	0.08%	0.03%
02	Fee for Service	50.98%	43.24%
07	Other	48.94%	56.72%

Table 3. Payment Arrangement Type Codes in Medical Claims

Value	Description	Percent of Claim Lines	Percent of Charges
01	Capitation	4.26%	1.55%
02	Fee for Service	58.66%	63.54%
03	Percent of Charges	1.64%	3.18%
04	DRG	18.63%	20.21%
05	Pay for Performance	0.07%	0.07%
06	Global Payment	0.75%	0.70%
07	Other	5.88%	3.58%
09	Payment Amount Per Episode (PAPE) (MassHealth)	1.82%	0.01%
10	Enhanced Ambulatory Patient Grouping (EAPG) (MassHealth)	1.17%	0.91%
	Blank	7.13%	6.24%

Pediatric Patient Migration Patterns

Question: What is the difference between the MA APCD and case mix's g data for analyzing care seeking trends in out migration of Massachusetts patients to surrounding states and in migration of pediatric patients from states to Massachusetts?

Answer: Since case mix is not impacted by the reduction in self-insured claims, case mix provides more population-based data for analyzing in migration of pediatric patients from surrounding states to Massachusetts hospitals. For example, the case mix hospital inpatient discharge date for FY2016 to FY2020 shows that for the five hospitals with the highest pediatric (Age < 18 years) inpatient volume (see Table 1 below), Boston Children's Hospital and Massachusetts General Hospital increasingly treat the highest proportion of out of state residents (see Table 2 below). Since the MA APCD is not limited to health care facilities in Massachusetts and case mix is , the MA APCD provides better information for analyzing the out migration of Massachusetts pediatric patients to other states, with hospitals in Rhode Island and New Hampshire providing the highest volume of out of state care to Massachusetts pediatric patients.

Table 1. FY2016 to FY2020 MA Hospitals with the Highest Pediatric (Age < 18 years) Inpatient Volume

Organization Name	2016	2017	2018	2019	2020
Boston Children's Hospital	13,674	12,945	12,343	11,956	10,868
Brigham and Women's Hospital	6,544	6,525	6,477	6,534	6,534
Baystate Medical Center	6,439	6,134	6,166	6,326	6,092
Massachusetts General Hospital	6,669	6,398	6,499	6,577	5,853
Beth Israel Deaconess Medical Center	5,482	5,344	5,413	5,591	5,454

Table 2. FY2016 to FY2020 Proportion of MA Pediatric (Age < 18 years) Inpatient Volume by Patient State of Residency

Organization Name	Patient State	2016	2017	2018	2019	2020
Boston Children's Hospital	MA	71.0%	70.0%	68.4%	68.8%	72.0%
Boston Children's Hospital	Non-MA	29.0%	30.0%	31.6%	31.2%	28.0%
Brigham and Women's Hospital	MA	95.6%	95.9%	95.8%	95.7%	96.2%
Brigham and Women's Hospital	Non-MA	4.4%	4.1%	4.2%	4.3%	3.8%
Baystate Medical Center	MA	96.1%	96.3%	96.0%	95.8%	95.3%
Baystate Medical Center	Non-MA	3.9%	3.7%	4.0%	4.2%	4.7%
Massachusetts General Hospital	MA	93.0%	93.4%	92.6%	92.4%	93.6%
Massachusetts General Hospital	Non-MA	7.0%	6.6%	7.4%	7.6%	6.4%
Beth Israel Deaconess Medical Center	MA	97.2%	96.3%	97.0%	96.7%	96.8%
Beth Israel Deaconess Medical Center	Non-MA	2.8%	3.7%	3.0%	3.3%	3.2%

Continued

Answer continued: When comparing the proportion of out of state patient volume to Massachusetts hospitals regardless of age, the pediatric hospitals (Shriners’s and Children’s) and specialty hospitals (Dana Farber and Mass Eye and Ear) have the highest proportion of out-of-state patients. See Table 3 below.

Table 3. Top 25 FY2019 and FY2019 Hospitals with the Highest Proportion of Non-MA Patient Volume (All Ages)

Hospital Name	FY2019 Hospital Inpatient Volume	FY2019 Percent MA Residents	FY2019 Percent Non-MA Residents	FY2020 Hospital Inpatient Volume	FY2020 Percent MA Residents	FY2020 Percent Non-MA Residents
Shriners Hospitals for Children Springfield	122	43%	57%	74	46%	54%
Shriners Hospitals for Children Boston	111	32%	68%	115	48%	52%
Massachusetts Eye and Ear Infirmary	1,166	71%	29%	1,025	73%	27%
Boston Children's Hospital	13,832	69%	31%	12,496	73%	27%
Dana-Farber Cancer Institute	1,567	68%	32%	1,421	75%	25%
Steward Holy Family Hospital	10,503	80%	20%	10,258	82%	18%
Fairview Hospital	980	85%	15%	862	85%	15%
Anna Jaques Hospital	7,111	85%	15%	6,145	85%	15%
Brigham and Women's Hospital	48,386	85%	15%	44,231	87%	13%
Massachusetts General Hospital	54,377	86%	14%	50,785	87%	13%
Lahey Clinic - Burlington Campus	22,883	87%	13%	20,854	88%	12%
Southcoast Hospitals Group - Charlton Memorial	15,440	88%	12%	14,405	89%	11%
New England Baptist Hospital	8,160	89%	11%	6,921	91%	9%
Steward Merrimack Valley Hospital	2,816	92%	8%	2,355	91%	9%
Nantucket Cottage Hospital	573	91%	9%	565	92%	8%
MetroWest Medical Center - Framingham	7,803	79%	21%	8,161	92%	8%
Steward Saint Anne's Hospital	9,855	91%	9%	9,012	92%	8%
Saint Vincent Hospital	19,194	89%	11%	17,621	92%	8%
Lawrence General Hospital	11,867	93%	7%	9,592	94%	6%
Lowell General Hospital	17,065	93%	7%	15,714	94%	6%
Martha's Vineyard Hospital	1,177	94%	6%	1,143	94%	6%
Beth Israel Deaconess Medical Center	40,705	93%	7%	36,191	94%	6%
Tufts Medical Center	17,434	92%	8%	16,401	94%	6%
MetroWest Medical Center - Leonard Morse	3,840	83%	17%	2,990	94%	6%
Sturdy Memorial Hospital	7,831	94%	6%	7,246	94%	6%

Question: Do the linkage variables between the medical claims to the product file or between the member eligibility to the product file require the addition of any date fields? When we attempt linkage, the results appear to have lots of duplicate product records associated with the linkage. Should one assume that is the result of duplicate product submissions?

Answer: Each row in the product file represents a unique instance of a Product. Some payers have reported products on separate rows that differ only in aspects that are not specified in the Product File. Therefore, for some payers there may appear to be duplicate rows when, in fact, they are distinct products. Remember in the release the following is how Eligibility (ME) and Product (PR) tables are designed to be linked:

Product File Linkage



ME Key: LINKORGIDPR + PRODUCTIDNUMBER (or LINKINGPRODUCTID)
PR Key : ORGID + PRODUCTIDNUMBER (or LINKINGPRODUCTID)

The Product file also contains the Start and End Dates (PR009 and PR010) for each Product which describe the dates the Product was active with the payer and usable by eligible members. For Products that were still active, the End Date should be Null. For Products that were not active, but may still have claims being adjudicated against them, the End Date should be the End Date reported to the Division of Insurance or the date the license was terminated.

Some researchers use as a minimum key the combined Product file fields (OrgID + ProductIdNumber + StartDate) and relate back to the most recent associated submission year month in the medical claims or member eligibility file. Before querying the MA APCD, data users are advised to read the **MA APCD Documentation** and **MA APCD Release Notes** available online at:

<https://www.chiamass.gov/ma-apcd/>

These documents provide detailed information on the use of each file and information provided by the carriers on caveats associated with specific fields.

Where can I find past User Workgroup Presentations?

- <http://www.chiamass.gov/ma-apcd-and-case-mix-user-workgroup-information/>

MA APCD / Case Mix Meeting Presentations

2019 Presentations	
2019 MA APCD Presentations	2019 Casemix Presentations
MAAPCD Tuesday, November 26, 2019 <ul style="list-style-type: none"> • Presentation (PDF) Word 	Please Note: The Case Mix Workgroup Meeting for December 2019 was cancelled.
MAAPCD Tuesday, September 24, 2019 <ul style="list-style-type: none"> • Presentation (PDF) PPT 	Case Mix Tuesday, October 22, 2019 <ul style="list-style-type: none"> • Presentation (PDF) PPT
MAAPCD Tuesday, July 23, 2019 <ul style="list-style-type: none"> • Presentation (PDF) PPT 	Case Mix Tuesday, August 27, 2019 <ul style="list-style-type: none"> • Presentation (PDF) PPT



When is the next User Group meeting?

- The next User Group will meet Tuesday, August 24.

MA APCD Workgroup

Tuesday,
November 24, 2020 @ 3:00 p.m.

Join a Meeting

Case Mix Workgroup

Tuesday,
December 22, 2020 @ 3:00 p.m.

Join a Meeting

- <http://www.chiamass.gov/ma-apcd-and-case-mix-user-workgroup-information/>

Resultant Research Using CHIA Data

- <https://www.chiamass.gov/resultant-research-using-chia-data>



HEALTH INFORMATION AND ANALYSIS

CHIA DATA

ABOUT CHIA

MA APCD

Case Mix Data

Hospital and Other
Provider Data

Information for Data
Submitters

Public Records
Request

[CHIA Data](#) » [Resultant Research Using CHIA Data](#)

Resultant Research Using the MA APCD and CHIA's Case Mix Data

The table below contains a sample of external research publications using CHIA's MA APCD and Case Mix data (by year of publication). Case Mix specific research is highlighted in gray. If you have questions please email apcd.data@state.ma.us and/or casemix.data@state.ma.us.

Questions?

- Questions related to MA APCD:
apcd.data@state.ma.us
- Questions related to Case Mix:
casemix.data@state.ma.us

REMINDER: Please include your **IRBNet ID#**, if you currently have a project using CHIA data.

Call for Topics and Presenters

- If there is a **TOPIC** that you would like to see discussed at an MA APCD or Case Mix workgroup in 2020, contact Amy Wyeth [amy.wyeth@state.ma.us]
- If you are interested in **PRESENTING** at a MA APCD or Case Mix workgroup in 2020, contact Amy Wyeth [amy.wyeth@state.ma.us]
You can present remotely, or in-person at CHIA
- We may be reaching out to some data users with invitations to present, and hope you will consider this!