CHIA Data User Workgroup

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April 22, 2025

Agenda

- **Announcements:**
  - All FY2023 Case Mix Releases and FY2024 HIDD
  - Section VI (Datasets Requested) Case Application Update
  - MA APCD CY2023 Now Available for Request
  - Longitudinal Volume of Full Year Medical Claims by Release
  - CHIA's YouTube Video on Data Use Obligations
  - Two New Reports on Medical Cannabis in Massachusetts
  - New publication using the MA APCD
- **Data User Support Questions**
  - Master Patient Index Data Exclusion
  - Diabetes-Related Data
  - Gambling Diagnosis Codes
- **Q&A**

Announcements

FY2023 Case Mix Releases and Documentation

ALL FY2023 CASE MIX RELEASES ARE AVAILABLE

Before accessing the FY2023, review the case mix documentation and release notes. The documentation contains a data overview, including data element list, data dictionary, reference tables, and summary statistics. The release notes contain information directly submitted by hospitals explaining data anomalies. Remember to review documentation and release notes before accessing data.

Documentation and Release notes available at
https://chiamass.gov/case-mix-data

Case Mix Documentation

Hospital Inpatient Discharge Database (HIDD)

- FY23 Documentation Manual (PDF) | Word
- FY23 Release Notes (PDF) | Word

Emergency Department Database (EDD)

- FY23 Documentation Manual (PDF) | Word
- FY23 Release Notes (PDF) | Word

Outpatient Observation Database (OOD)

- FY23 Documentation Manual (PDF) | Word
- FY23 Release Notes (PDF) | Word

The Projected Data Release Schedule for FY2024 Hospital Inpatient Discharge Data is June 2025

Section VI (Datasets Requested) Case Mix Application Updated

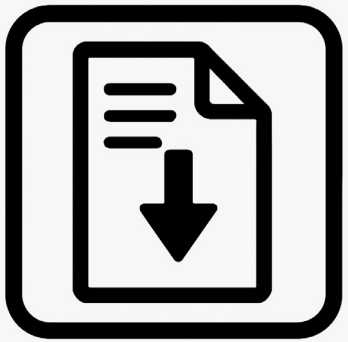
When submitting a data access request to CHIA, applicants should make sure they retrieve the most current version of the data request application form directly downloadable from the CHIA website. The application materials are subject to continuous refinement and updates. Downloading the most current application facilitates and ensures compliance with current submission standards. Section VI of the Case Mix Application was updated to reflect additional years of data available.

Update to Case Mix Application to Request Additional Years

Exhibit A: CHIA Non-Government Case Mix and Charge Data Application February2025

2. Specify below the dataset(s) and year(s) of data requested for this Project, and your justification for requesting *each* dataset. Data prior to 2004 is not available.

☐ **Hospital Inpatient Discharge Data** ☐2004 ☐2005 ☐2006 ☐2007 ☐2008 ☐2009 ☐2010 ☐2011 ☐2012 ☐2013 ☐2014 ☐2015 ☐2016 ☐ 2017 ☐2018 ☐2019 ☐2020 ☐2021☐2022 ☐2023
Describe how your research objectives require Inpatient Discharge data: Click here to enter text.
☐ **Outpatient Hospital Observation Stay Data** ☐2004 ☐2005 ☐2006 ☐2007 ☐2008 ☐2009 ☐2010 ☐2011 ☐2012 ☐2013 ☐2014 ☐2015 ☐2016 ☐ 2017 ☐2018 ☐2019 ☐2020 ☐2021 ☐2022 ☐2023
Describe how your research objectives require Outpatient Hospital Observation Stay data: Click here to enter text.
☐ **Emergency Department Data** ☐2004 ☐2005 ☐2006 ☐2007 ☐2008 ☐2009 ☐2010 ☐2011 ☐2012 ☐2013 ☐2014 ☐2015 ☐2016 ☐ 2017 ☐2018 ☐2019 ☐2020 ☐2021☐2022 ☐2023
Describe how your research objectives require Emergency Department data: Click here to enter text.



MA APCD CY2023 Now Available

CY2023 MA APCD is now available and includes medical, pharmacy and dental claims incurred between January 1, 2021, and December 31, 2023. It includes a six months of run-out (paid claims through June 30, 2024). In addition to claims data, the release includes associated member eligibility, providers, products, and benefit plans. Applicants already approved for MA APCD CY2022 who require CY2023 should submit to CHIA a completed Exhibit B (*Certificate of Continued Need and Compliance*) of the DUA. Afterwards, you will receive an invoice (if applicable) for the requested data. Upon payment of the invoice the order for the data will be placed. As with case mix data, before accessing the MA APCD remember to review documentation on the releases available at: https://www.chiamass.gov/ma-apcd/

Documentation and Release notes available at https://chiamass.gov/ma-apcd

Before accessing the CY2023 MA APCD, review the documentation guide and release notes for important highlights and updates to the data. For example, in this release, CHIA's substance use disorder filter was updated to include fourteen new codes within the ranges in the 2018 CMS SUD filter.

MA APCD Calendar Year 2023 Documentation

- MA APCD CY 2023 Documentation Guide
- MA APCD CY 2023 Release Notes
- MA APCD Government Data Specifications Workbook
- MA APCD Non-Gvnt. Data Specifications Workbook (Limited Data Set-LDS)
- MA APCD CY 2023 MPI Data Exclusion Overview
- MA APCD Master Patient Index

Longitudinal Volume of Full Year Medical Claims by Release

CY 2023 Full Year Medical Claim Lines

Incurred Year	CY2023 Medical Claim Lines
2024	six month runout 135,335,323
2023	343,239,275
2022	350,109,998
2021	354,569,826
2020	43,419,884
2019	8,057,459

Year	CY2023 Member Eligibility Records
2024	43,970,570
2023	49,832,265
2022	51,426,027
2021	43,441,033
2020	4,121,108

CY 2022 Full Year Medical Claim Lines

Incurred Year	CY2022 Medical Claim Lines
2023	six month runout 135,362,987
2022	342,359,491
2021	352,895,906
2020	301,226,192
2019	52,526,570
2018	7,706,777

Year	CY2022 Member Eligibility Records
2023	47,061,386
2022	47,109,872
2021	46,116,036
2020	42,975,820
2019	4,154,717

CY 2021 Full Year Medical Claim Lines

Incurred Year	CY2021 Medical Claim Lines
2022	six month runout 126,915,069
2021	345,019,160
2020	299,084,644
2019	335,073,601
2018	49,802,859
2017	5,535,039

Year	CY2021 Member Eligibility Records
2022	40,918,377
2021	42,693,785
2020	45,441,788
2019	48,296,785
2018	4,345,545

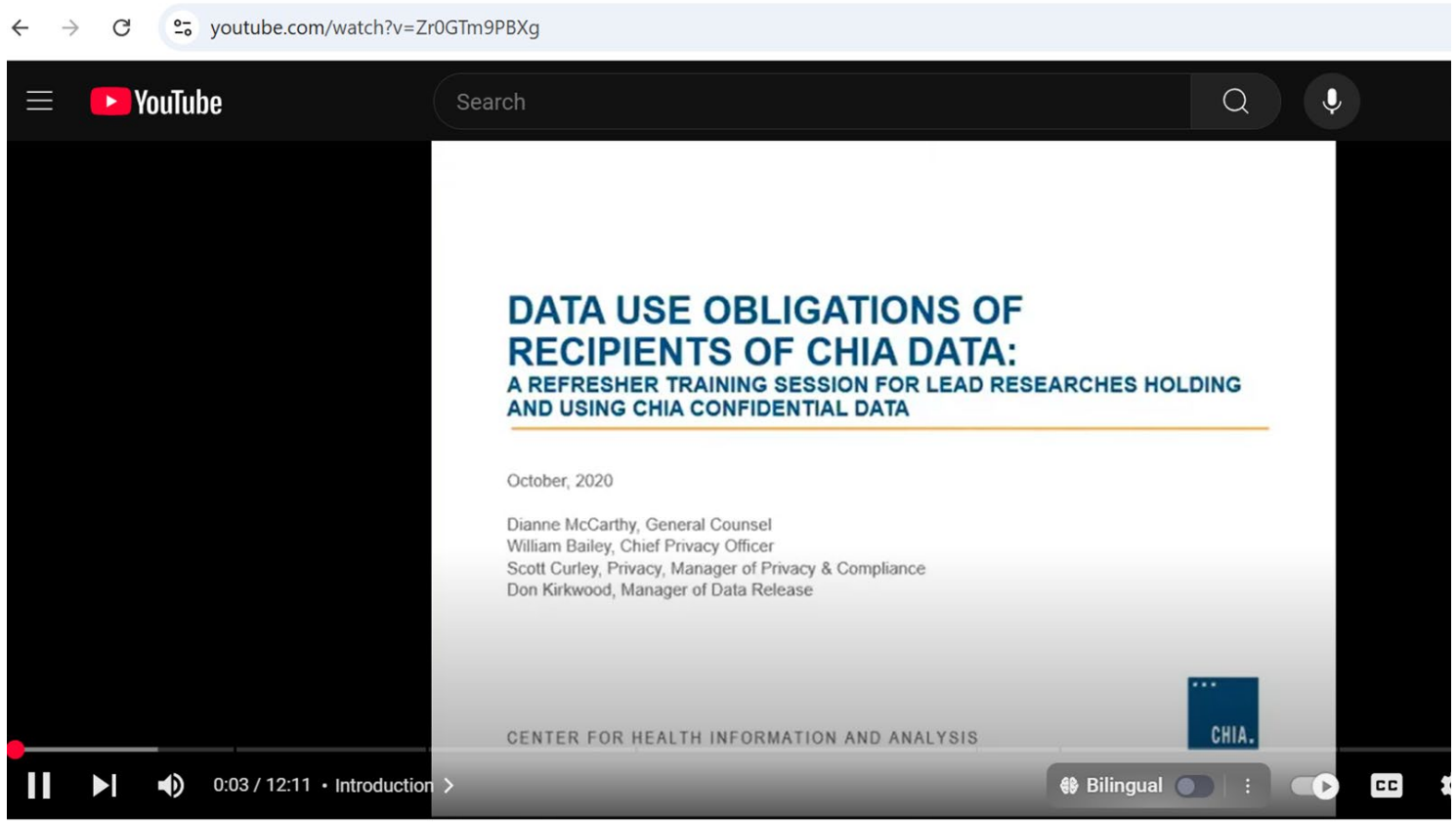
Each release contains three full years of data, with partial volume for earlier years and a six-month run out of the latest year. Keep in mind, medical claim line volume for a given year can change after adjudication due to retroactive adjustments, denials, or resubmissions made by payers during the claim reconciliation process. Additionally, provider billing corrections or late submissions may result in new claim lines being added or existing ones being modified, thereby altering the final adjudicated volume.

FULL CALENDAR YEAR LONGITUDINAL MEDICAL CLAIMS

CY 2021	CY 2022	CY 2023
With 6-Month Runout of 2022	With 6-Month Runout of 2023	With 6-Month Runout of 2024
		2023
	2022	2022
2021	2021	2021
2020	2020	
2019		

CHIA's YouTube Channel

Data users should review CHIA's short 12-minute YouTube video by CHIA's Legal Unit on the Data Use Obligations of Recipients of CHIA Data: A Refresher Training Session for Lead Researchers Holding and Using CHIA Confidential Data at: https://www.youtube.com/watch?v=Zr0GTm9PBXg

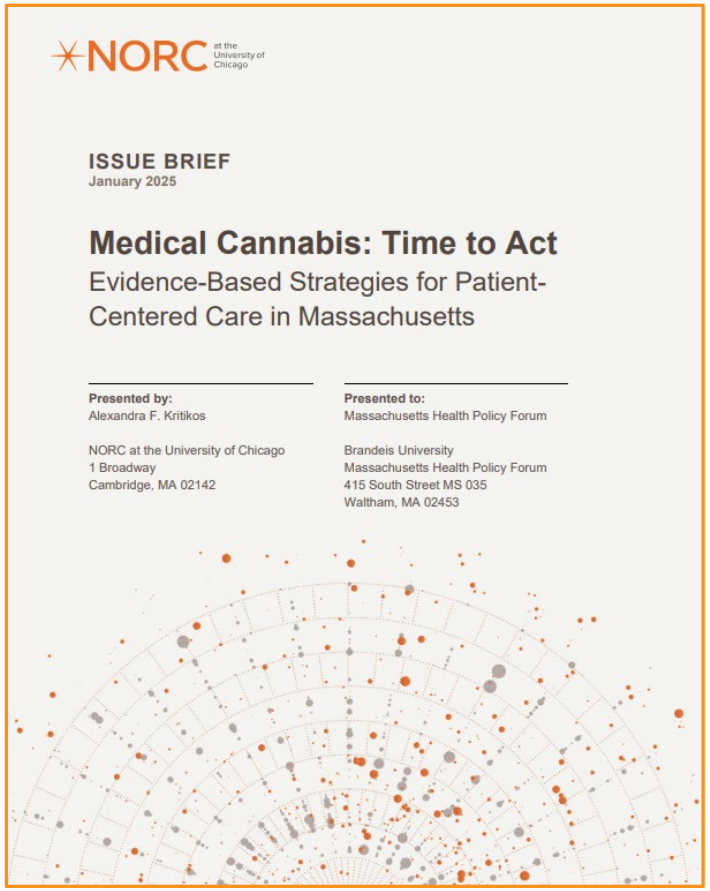


Data Use Obligations of Recipients of CHIA Data

Alert: Two New Reports on Medical Cannabis in Massachusetts

Medical Cannabis: Time to Act. Available at: https://www.norc.org/content/dam/norc-org/pdf2024/Medical%20Cannabis%20Time%20to%20Act%20Evidence-Based%20Strategies%20for%20Patient-Centered%20Care%20in%20Massachusetts.pdf

Review and Assessment of the Massachusetts Adult-and Medical-use Cannabis Industries. Available at: https://masscannabiscontrol.com/wp-content/uploads/2025/02/Review-and-Assessment-of-the-Massachusetts-Adult-and-Medical-Use-Cannabis-Industries.pdf


NORC at the University of Chicago

ISSUE BRIEF
January 2025

Medical Cannabis: Time to Act
Evidence-Based Strategies for Patient-Centered Care in Massachusetts

Presented by:
Alexandra F. Kritikos

NORC at the University of Chicago
1 Broadway
Cambridge, MA 02142

Presented to:
Massachusetts Health Policy Forum

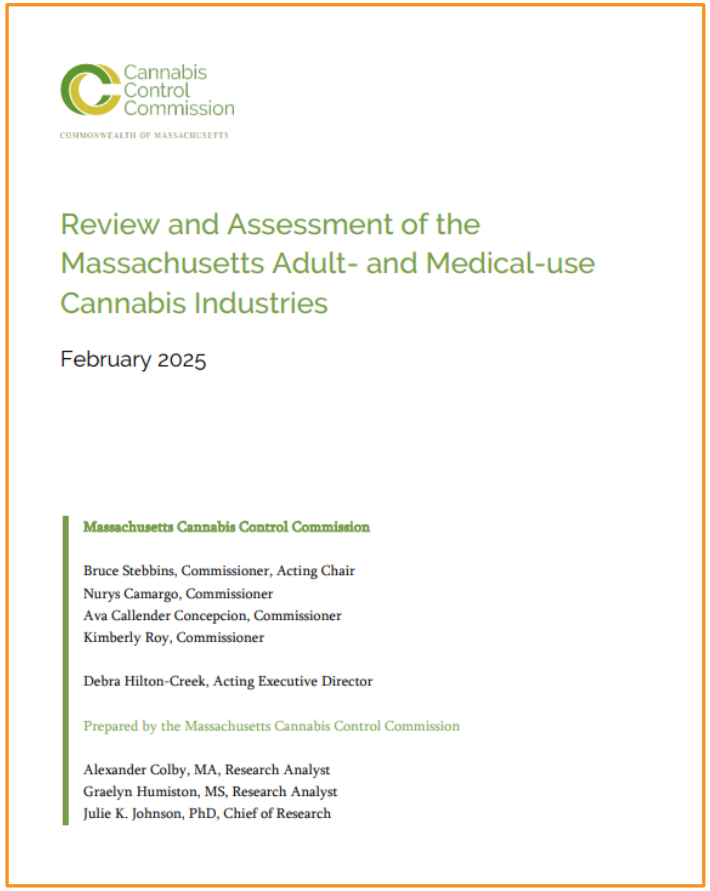
Brandeis University
Massachusetts Health Policy Forum
415 South Street MS 035
Waltham, MA 02453

NORC ISSUE BRIEF

An issue brief reviewing the Massachusetts medical cannabis program, its strengths, challenges, and opportunities for improvement. The review uses state-level data, interviews, academic literature, national trends, and comparative insights from other state medical cannabis programs.

CANNABIS CONTROL COMMISSION REPORT

A report providing an overview of the current state of adult-use and medical-use based on data from the Massachusetts Cannabis Industry Portal. The report includes literature reviews on the history of cannabis, the cannabis industry, and public health and safety for the industry, consumers, and the public.


Cannabis Control Commission
COMMONWEALTH OF MASSACHUSETTS

Review and Assessment of the Massachusetts Adult- and Medical-use Cannabis Industries

February 2025

Massachusetts Cannabis Control Commission

Bruce Stebbins, Commissioner, Acting Chair
Nurys Camargo, Commissioner
Ava Callender Concepcion, Commissioner
Kimberly Roy, Commissioner

Debra Hilton-Creek, Acting Executive Director

Prepared by the Massachusetts Cannabis Control Commission

Alexander Colby, MA, Research Analyst
Graelyn Humiston, MS, Research Analyst
Julie K. Johnson, PhD, Chief of Research

Data User Support Questions

Question: I have read CHIA's document on the Master Patient Exclusion process and understand that the MEMBERLINKEID generated to provide as a member's unique identifier across payers, time, and products is not created for all member data. What volume of records has a MEMBERLINKEID?

Answer: To ensure the utility of the MEMBERLINKEID (MEID) where the MA APCD consists of submissions from both the risk holder (payer) and, in some cases, an administrator where it was determined that in some circumstances this created a significant amount of duplication, the administrator data was excluded from the MPI. In other cases, some submitters' data was found to be of poor quality. Therefore, there are three categories of MPI exclusion:

CATEGORY 1: Complete Exclusion of Submitters

The first type of data exclusion are submitters with two key issues. First, the data from an administrator was deemed to contain a high level of duplication to the risk holder. Second, was the discovery that throughout the data submissions many unique individuals were found to appear under a single CHIA Organization ID (OrgID)/Carrier Specific Unique Member ID (CSUMID) therefore their inclusion would damage the MPI process.

CATEGORY 2. Year-by-Year Exclusion of Submitters

The second type of data exclusion is removal of specific years for submitters rather than the entire data set by analyzing the submitters across all years and determining how often multiple members were submitted under the same OrgID/CSUMID combination within each year. In these cases, the majority of combinations were found to have been used over multiple individuals. Every year CHIA works with submitters to obtain the best possible data. Several of these submitters with improved data quality and are included in the MPI process in more recent years.

CATEGORY 3. Record Level Exclusion of Submitters

The third type of data exclusion is specific records for submitters rather than the entire years determined by analyzing the submitters across all years and determining how often multiple members were submitted under the same OrgID/CSUMID combination within a year. In these cases, only a few combinations were found to have been used over multiple individuals.

continued

Answer *(continued):* The MEID is based on date submitted in the member eligibility data. The table below shows the percent of member eligibility records for Massachusetts residents without MEIDs.

Percent of Member Eligibility Records for Massachusetts Residents without MEIDs

Year	CY23 Distinct MEIDs	CY23 Total ME Records	CY2023 Total ME Records without MEIDs	CY2023 Percent of Records without MEIDs	CY23 Total Distinct orgid/csumid	CY23 Distinct orgid/csumid without MEID	Percent
2021	6,316,896	39,960,748	11,069,123	28%	18,445,175	6,625,740	36%
2022	6,453,474	47,391,268	14,742,439	31%	19,404,535	6,932,110	36%
2023	6,795,850	45,703,990	13,415,120	29%	21,594,885	7,974,273	37%
2024	6,907,459	40,183,209	11,548,676	29%	22,039,091	7,966,472	36%

Year	CY22 Distinct MEIDs	CY22 Total ME Records	CY2022 Total ME Records without MEIDs	CY2022 Percent of Records without MEIDs	CY22 Total Distinct orgid/csumid	CY22 Distinct orgid/csumid without MEID	Percent
2020	6,261,728	39,881,133	9,929,312	25%	18,719,250	6,912,577	37%
2021	6,288,386	42,458,209	11,464,808	27%	18,635,462	6,849,561	37%
2022	6,347,083	43,324,314	15,190,869	35%	18,658,417	7,175,283	38%
2023	6,436,232	43,270,351	16,660,223	39%	21,122,241	8,455,057	40%

Year	CY21 Distinct MEIDs	CY21 Total ME Records	CY2021 Total ME Records without MEIDs	CY2021 Percent of Records without MEIDs	CY21 Total Distinct orgid/csumid	CY21 Distinct orgid/csumid without MEID	Percent
2019	6,399,235	45,259,884	11,866,423	26%	20,981,394	8,112,095	39%
2020	6,276,144	42,182,633	9,929,317	24%	18,738,085	6,912,582	37%
2021	6,255,872	39,250,175	11,464,858	29%	18,229,939	6,849,599	38%
2022	6,285,845	37,616,150	13,714,808	36%	18,510,329	7,094,898	38%

continued

Answer *(continued):* The table below shows the percent of all member eligibility records regardless state of residency without MEIDs.

Percent of Member Eligibility Records without MEIDs for all Records Regardless of State

Year	CY23 Distinct MEIDs	CY23 Total ME Records	CY2023 Total ME Records without MEIDs	CY2023 Percent of Records without MEIDs	CY23 Total Distinct orgid/csumid	CY23 Distinct orgid/csumid without MEID	Percent
2021	7,317,107	43,441,033	11,658,885	27%	20,211,514	7,153,040	35%
2022	7,529,733	51,426,027	15,454,373	30%	21,354,041	7,567,728	35%
2023	8,008,834	49,832,265	14,108,746	28%	23,722,958	8,650,827	36%
2024	8,161,965	43,970,570	12,248,000	28%	24,201,830	8,634,035	36%

Year	CY22 Distinct MEIDs	CY22 Total ME Records	CY2022 Total ME Records without MEIDs	CY2022 Percent of Records without MEIDs	CY22 Total Distinct orgid/csumid	CY22 Distinct orgid/csumid without MEID	Percent
2020	7,158,163	42,975,820	10,422,696	24%	20,243,083	7,344,652	36%
2021	7,290,561	46,116,036	12,054,570	26%	20,403,079	7,376,861	36%
2022	7,420,784	47,109,872	15,902,803	34%	20,590,743	7,810,901	38%
2023	7,580,002	47,061,386	17,449,750	37%	23,205,086	9,153,821	39%

Year	CY21 Distinct MEIDs	CY21 Total ME Records	CY2021 Total ME Records without MEIDs	CY2021 Percent of Records without MEIDs	CY21 Total Distinct orgid/csumid	CY21 Distinct orgid/csumid without MEID	Percent
2019	7,283,744	48,296,785	12,285,513	25%	22,430,222	8,469,416	38%
2020	7,173,999	45,441,788	10,422,701	23%	20,263,251	7,344,657	36%
2021	7,255,078	42,693,785	12,054,620	28%	19,986,184	7,376,899	37%
2022	7,342,836	40,918,377	14,357,152	35%	20,368,575	7,672,202	38%

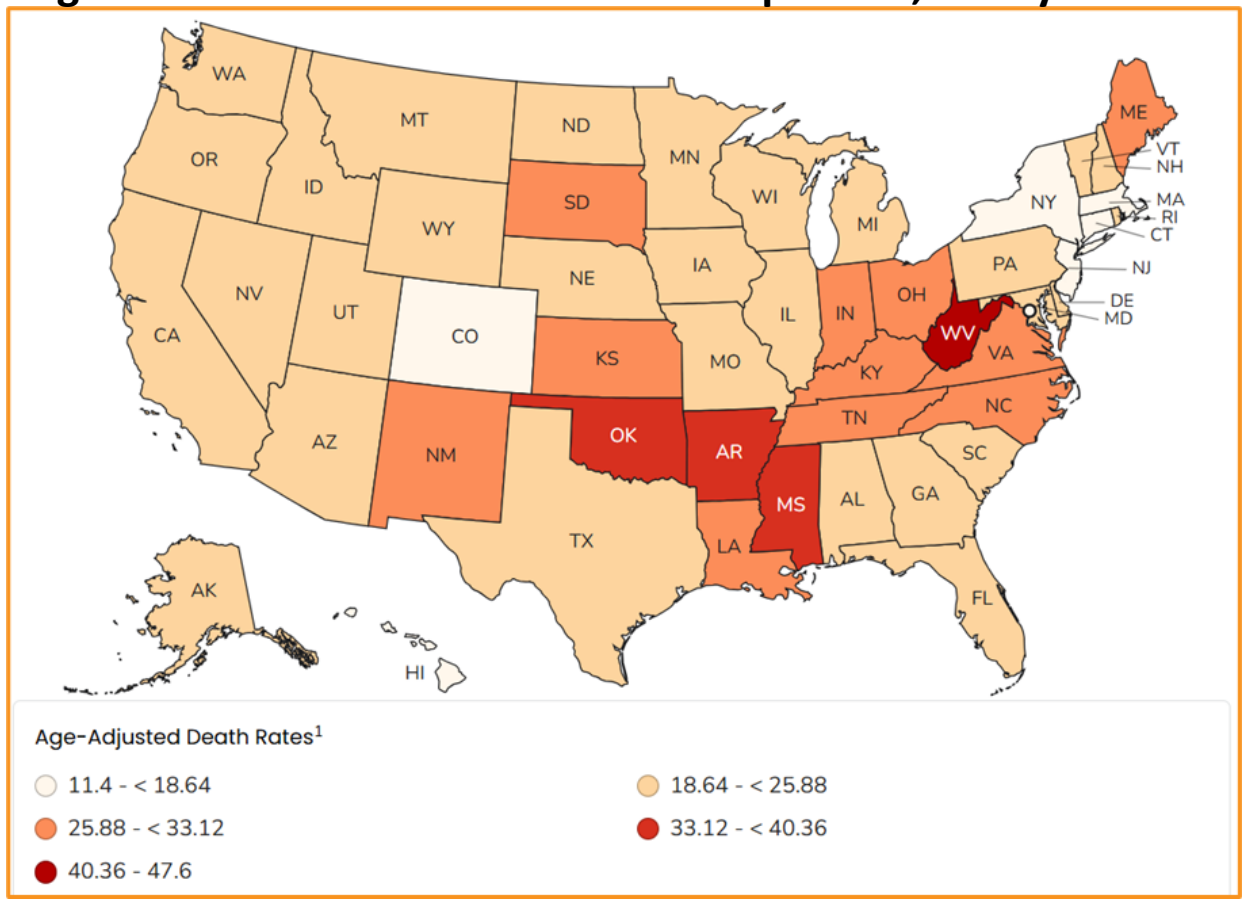
continued

Question:. I was seeking data on diabetes-related ED encounters within CHIA's publicly available ED visit dashboard at: https://www.chiamass.gov/emergency-department-database-edd-reporting/ but was unable to locate any relevant information. Before initiating a formal application for data, I would like to confirm the presence of diabetes data within the case mix datasets.

DIABETES DISEASE RATE

Answer: CHIA ED Dashboards prioritize and highlight the top diagnoses relevant to resource demand monitoring, for public health surveillance, and that facilitate longitudinal benchmarking. Due to the high volume and extensive variety of distinct diagnoses within the ED data, diagnosis codes with infrequent visit rates or statistically unstable data points can render dashboards less actionable. Massachusetts has one of the lowest diabetes rates in the nation. Figure 1, from the CDC's year 2022 nationwide death data, shows that Massachusetts has second lowest age-adjusted death rate from diabetes in the nation with a rate of 16.1 per 100,000 population, second to Connecticut which has a rate of 15.2 per 100,000.

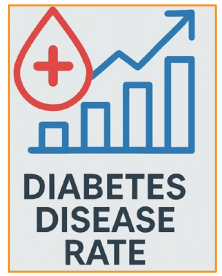
Fig 1. Year 2022 Diabetes Death Rate per 100,000 by State

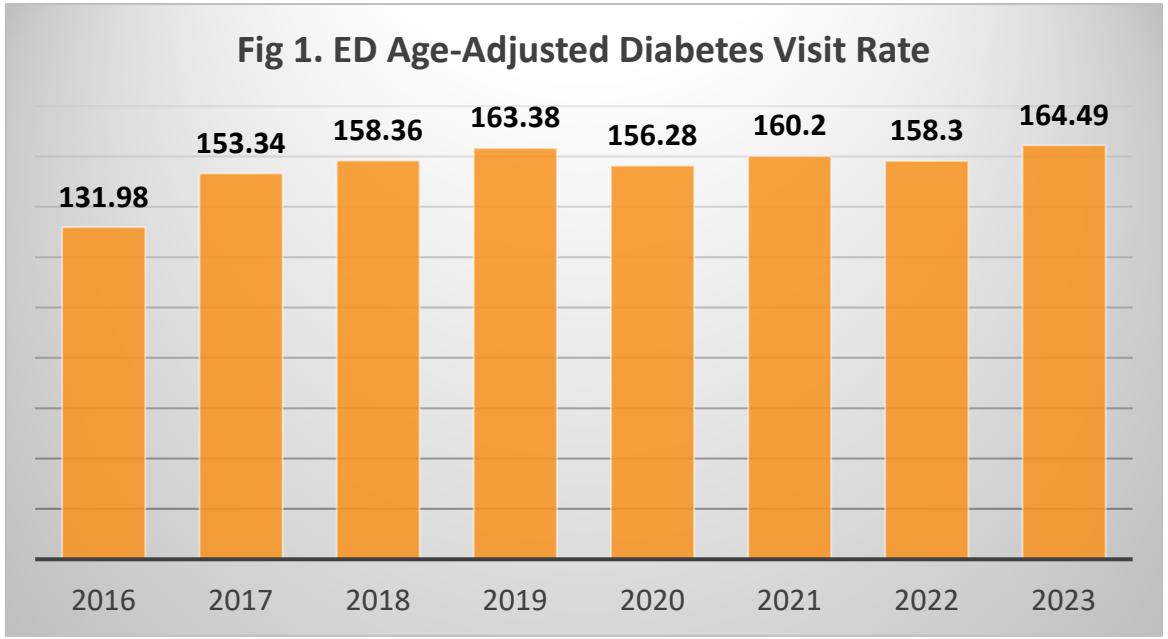


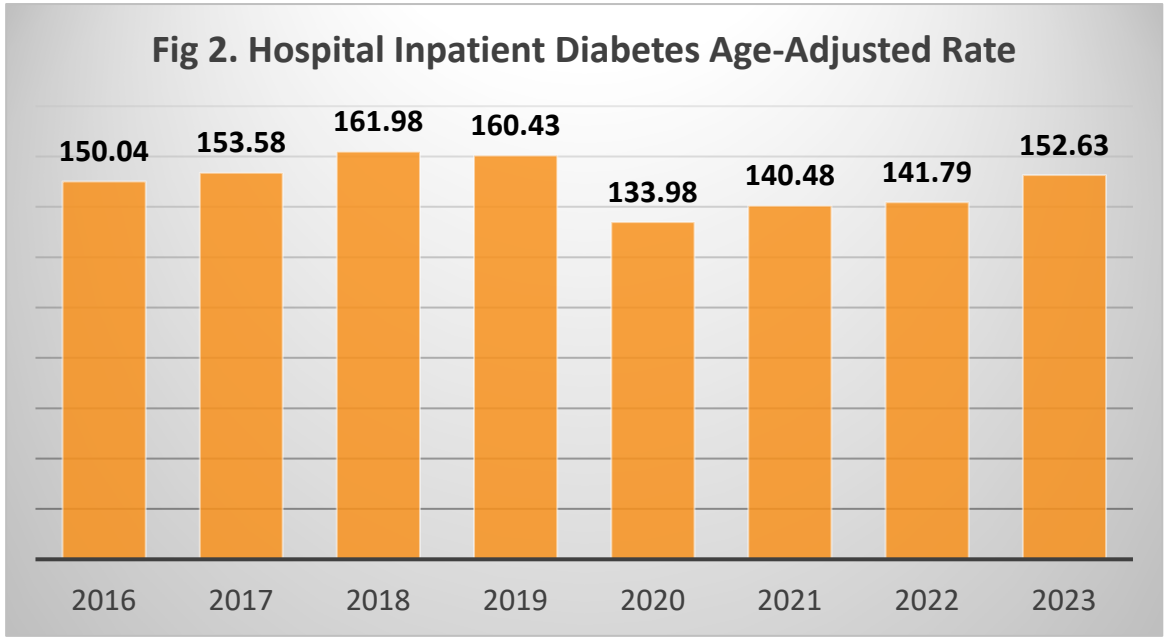
Note: *Map Source: https://wonder.cdc.gov States are categorized from highest rate to lowest rate. Although adjusted for differences in age-distribution and population size, rankings by state do not take into account other state specific population characteristics that may affect the level of mortality. When the number of deaths is small, rankings by state may be unreliable due to instability in death rates.*

continued

Answer *(continued)*: The age-adjusted diabetes rate per 100,000 hospitals encounters was calculated from ED Visit Data from FY2016 through FY2023 (*see Fig 1 below*) and Hospital Inpatient Data (*see Fig 2 below*) for patient with a principal diagnosis of ICD-10-CM E08-E13 which covers various types of diabetes, including Type 1, Type 2, and other specific types like drug-induced or secondary diabetes. From 2016 to 2020, age-adjusted ED visit rates for diabetes increased from 131.98 to a peak of 163.38 in 2019 before declining slightly to 156.28 in 2020. In contrast, HIDD age-adjusted rates began at 150.04 in 2016, rose to a high of 161.98 in 2018, and then declined more sharply to 133.98 by 2020. Notably, 2019 marked the first year in which the ED rate (163.38) surpassed the corresponding HIDD rate (160.43), indicating a potential shift in the locus of diabetes-related acute care from inpatient to emergency settings. The divergence in 2020, with ED rates remaining comparatively high while HIDD rates dropped, may reflect changing patterns of healthcare utilization during the COVID-19 pandemic.







Note: *The hospitalization rates were standardized using the 2010 US standard population weights to account for age distribution differences.*

Question: I plan to apply for the case mix data to study the prevalence of gambling addiction and need to determine the feasibility of using hospital data for epidemiological analysis? Specifically, do the hospital discharge records and ED Visit records contain the relevant ICD-10-CM codes with enough of longitudinal trend to enable delineating the incidence, prevalence, and risk factors associated with gambling addiction?

Answer: No**,** in all case mix datasets (ED, OOD, HIDD, and new behavioral health inpatient data), the diagnosis codes F63.0 (pathological gambling) and Z72.6 (gambling and betting) are rarely reported, with some years under 10 cases, and others none. This addiction is more frequently treated in the outpatient setting. **In fact, four papers have been published using the MA APCD to study gambling addiction.**

Available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/ajad.12826


research snapshot
summarize | mobilize

Gender differences in healthcare use for mental health and substance use disorders

What this research is about

Problem gambling is defined as repetitive gambling behaviour that leads to negative consequences. Pathological gambling is a clinical diagnosis of severe problem gambling. It is more common among men than women. Pathological gambling often co-occurs with a range of other mental disorders. These include alcohol and substance use disorders, mood and anxiety disorders, and impulse control disorders.

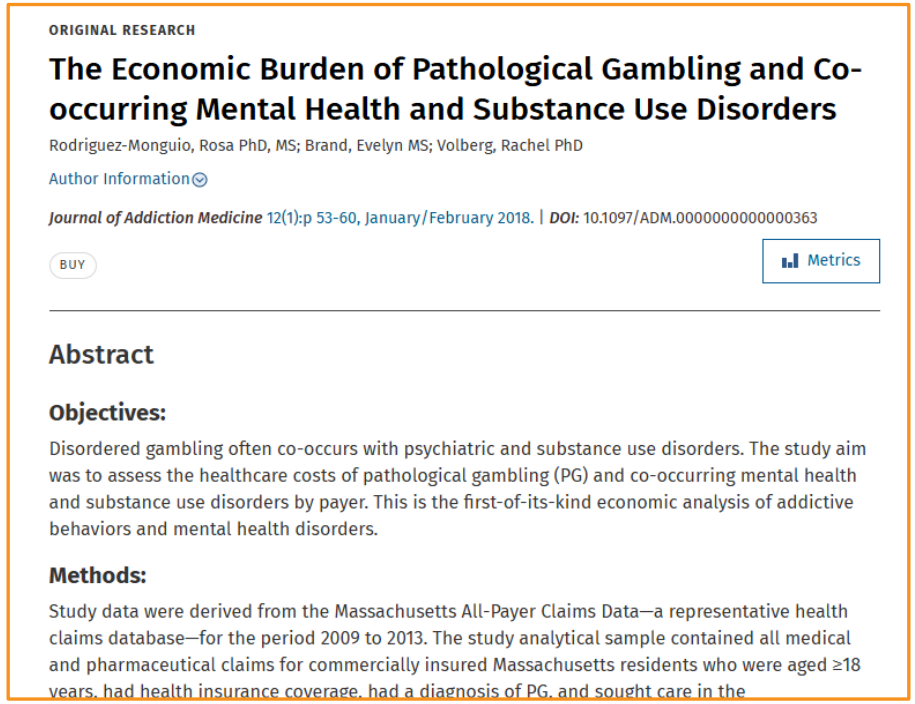
Co-occurring mental disorders are more common among women with pathological gambling than men with pathological gambling. Women are also more likely than men to seek treatment and use healthcare services for mental disorders. However, women seek

What you need to know

The researchers examined healthcare claims data from 591 adult patients with pathological gambling. Over two-thirds of patients were male. Most patients had pathological gambling as their principal diagnosis. Slightly more women than men had a principal diagnosis of pathological gambling. More women than men had co-occurring mental health disorders, except for alcohol use disorders. Men were more likely than women to have an alcohol use disorder. Also, more women than men seeking treatment for pathological gambling had three or more co-occurring conditions. Women also

Both studies reveal how gambling co-occurs with other psychiatric and substance use disorders.

https://journals.lww.com/journaladdictionmedicine/fulltext/2018/02000/The_Economic_Burden_of_Pathological_Gambling_and.9.aspx


ORIGINAL RESEARCH

The Economic Burden of Pathological Gambling and Co-occurring Mental Health and Substance Use Disorders

Rodriguez-Monguio, Rosa PhD, MS; Brand, Evelyn MS; Volberg, Rachel PhD

Author Information

Journal of Addiction Medicine 12(1):p 53-60, January/February 2018. | **DOI:** 10.1097/ADM.0000000000000363

BUY

Metrics

Abstract

Objectives:

Disordered gambling often co-occurs with psychiatric and substance use disorders. The study aim was to assess the healthcare costs of pathological gambling (PG) and co-occurring mental health and substance use disorders by payer. This is the first-of-its-kind economic analysis of addictive behaviors and mental health disorders.

Methods:

Study data were derived from the Massachusetts All-Payer Claims Data—a representative health claims database—for the period 2009 to 2013. The study analytical sample contained all medical and pharmaceutical claims for commercially insured Massachusetts residents who were aged ≥18 years, had health insurance coverage, had a diagnosis of PG, and sought care in the

When is the next Data User Group meeting?

- The next User Group will meet Tuesday, May 27, 2025.
- https://www.chiamass.gov/chia-data-user-workgroup-information

Questions?

- Questions related to MA APCD email:

  apcd.data@chiamass.gov
- Questions related to Case Mix email:

  casemix.data@chiamass.gov

REMINDER

CHIA still receives a high volume of email from data users who do not include their IRBNet ID. If you are in the process of or have already submitted a data application to CHIA through IRBNet https://www.irbnet.org/release/home.html, due to the volume of email CHIA receives, please remember to always include your IRBNET ID# in the subject line of your email. Doing so facilitates tracking your application and expediting responses to any questions.