CASE MIX USER WORKGROUP

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October 22, 2019

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Agenda

➢ FY18 Case Mix Release Updates
➢ Website Updates
➢ October Data Audits
➢ Answered User Questions
➢ Q&A

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Case Mix FY18 Release

CURRENT RELEASE TIMEFRAMES FOR EACH FILE:

- Inpatient (HIDD)

  September [DONE]

- Emergency Department (ED)

  Early-Mid October [ALMOST DONE]

- Outpatient Observation (OOD)

  Late October

COMING SOON: Weekly Case Mix Release Updates

- Release updates on current FY Case Mix data release will soon be on the CHIA website.
- Aiming to provide updates weekly or bi-weekly ("off-season").
- New web page will likely show:
  - ✓ Release status of each Case Mix file
  - ✓ Status notes, including information on delays
  - ✓ Updated fulfillment queue, with unique IDs for each data request
- Very possible we will do this for upcoming APCD releases as well.

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Case Mix FY18 Release

REPEAT APPLICANTS:

- For those applicants with previously approved projects who indicated they would like to receive data annually, we are currently accepting Certificates of Continued Need and Compliance (Exhibit B of your DUA)
- After receiving this, we will send you an invoice for the FY18 data and release data to you once payment is received and the data is ready.
- If you are making any changes to your project, you must go through the amendment process first.

Case Mix FY18 Release

NEW APPLICANTS / NEW PROJECTS:

- We will continue to accept new applications on a rolling basis.
- If you are requesting FY18 data, just click the box for "Subscription" on p. 3 of the application form:

1. Please indicate below whether this is a one-time request, or if the described Project will require a subscription.

☐ One-Time Request   **OR**   ☐ Subscription

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
Describe how your research objectives require Inpatient Discharge data:

MA APCD Release 8.0

- Available Winter 2019/2020

Please hold off on submitting Release 8.0 requests for now

- Will encompasses data from January 2014 – December 2018 with six months of claim runout (includes paid claims through 6/30/19)
- Will be linkable to Release 7.0 via crosswalk
- Additional information on highlights and enhancements will be presented in future APCD User Workgroups.

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October Data Audits

- ALL academic institutions possessing CHIA data for an approved project should have received an email from CHIA last week with instructions for complying with our data audit.
  - ➢ This includes academic institutions that have been previously audited by CHIA.
  - ➢ Emails were sent to all projects' Primary Investigators.
- Please complete and return the Data Audit Response, with supporting documents, within ten (10) business days and make sure you give yourself plenty of time to get the required signatures.
- If we do not receive your response within 20 days, we will contact your institution's appropriate research office.
- If you are having any difficulty in completing this Data Audit Response or have any questions, we encourage you to contact CHIA and we will do our best to assist you.

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October Data Audits

- Failure to reply to the audit in a timely manner could have major impacts on your (and your institution's) continued use of the data, including but not limited to:
  - ✓ Being required to delete the data in your possession
  - ✓ Being barred from receiving CHIA data in the future

- All other organizations possessing CHIA data for approved projects will be audited next Spring.

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USER QUESTIONS
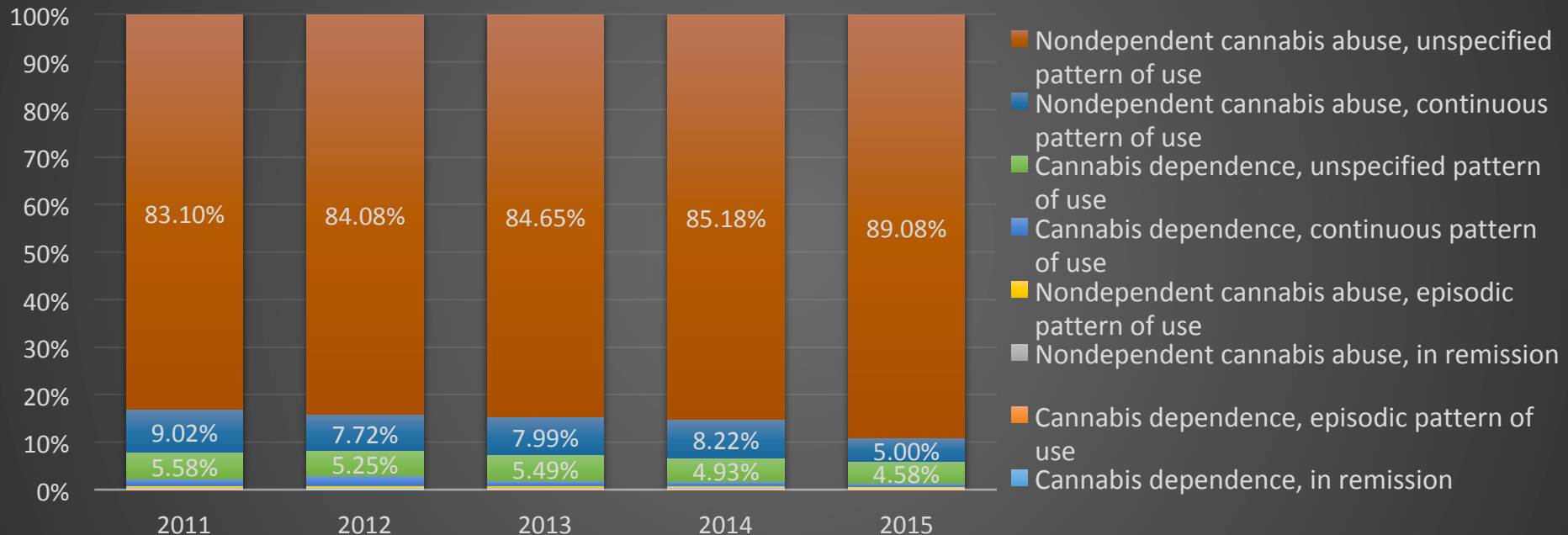
ICD-10-CM vs ICD-9-CM

Question: What is the magnitude of increase from ICD-9-CM to ICD-10-CM in diagnosis coding of outpatient ED visits for patterns of cannabis dependence, nondependent use and exposure? Are all of the new ICD-10-CM cannabis codes being used? Has there been an increase in ED visits associated with cannabis use or exposure?

*Answer: ICD-9-CM cannabis diagnosis codes used prior to October 2015 are comprised of 8 diagnosis codes to distinguish dependent patterns of cannabis use from nondependent patterns of abuse (**see Table 1**). While all 8 cannabis diagnosis codes have been in the case mix ED data, over 80% of pre-October 2015 cannabis-related ED visits were coded as **ICD-9-CM 30520 for nondependent cannabis abuse with an unspecified pattern of use** (**see Figure 1 below**) and therefore lacked specificity on the pattern of use.*

Table 1. ICD-9-CM Cannabis Diagnosis Codes

ICD-9-CM	Description
30430	Cannabis dependence, unspecified pattern of use
30431	Cannabis dependence, continuous pattern of use
30432	Cannabis dependence, episodic pattern of use
30433	Cannabis dependence, in remission
30520	Nondependent cannabis abuse, unspecified pattern of use
30521	Nondependent cannabis abuse, continuous pattern of use
30522	Nondependent cannabis abuse, episodic pattern of use
30523	Nondependent cannabis abuse, in remission

Figure 1. Emergency Department Oct 2011 to Sept 2015 Top ICD-9-CM Cannabis Diagnoses

ICD-10-CM vs ICD-9-CM

Answer (continued): *ICD-10-CM cannabis diagnosis codes used after September 2015 contain 78 codes to describe patterns of cannabis use, cannabis abuse, cannabis dependence, occupational exposure to hemp, newborn affected by maternal use of cannabis, poisoning by cannabis derivatives, adverse effects of cannabis derivatives, and underdosing of cannabis derivatives (**see Table 2 below**). The concept of underdosing in ICD-10-CM is intended to describe the effects of unintentional underdosing of a medication regimen.*

Table 2. ICD-10-CM Cannabis Diagnosis Codes

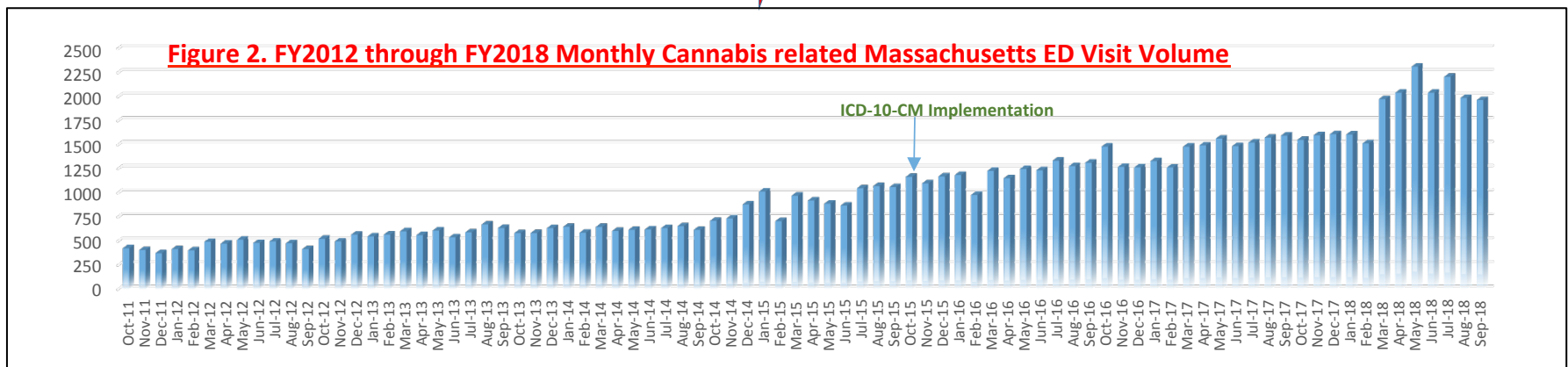| ICD-10-CM	Description	ICD-10-CM	Description
F12	Cannabis related disorders	F12922	Cannabis use, unspecified with intoxication with perceptual disturbance
F121	Cannabis abuse	F12929	Cannabis use, unspecified with intoxication, unspecified
F1210	Cannabis abuse, uncomplicated	F1293	Cannabis use, unspecified with withdrawal
F1211	Cannabis abuse, in remission	F1295	Cannabis use, unspecified with psychotic disorder
F1212	Cannabis abuse with intoxication	F12950	Cannabis use, unspecified with psychotic disorder with delusions
F12120	Cannabis abuse with intoxication, uncomplicated	F12951	Cannabis use, unspecified with psychotic disorder with hallucinations
F12121	Cannabis abuse with intoxication delirium	F12959	Cannabis use, unspecified with psychotic disorder, unspecified
F12122	Cannabis abuse with intoxication with perceptual disturbance	F1298	Cannabis use, unspecified with other cannabis-induced disorder
F12129	Cannabis abuse with intoxication, unspecified	F12980	Cannabis use, unspecified with anxiety disorder
F1215	Cannabis abuse with psychotic disorder	F12988	Cannabis use, unspecified with other cannabis-induced disorder
F12150	Cannabis abuse with psychotic disorder with delusions	F1299	Cannabis use, unspecified with unspecified cannabis-induced disorder
F12151	Cannabis abuse with psychotic disorder with hallucinations	J662	Cannabinosis (Hemp worker's disease)
F12159	Cannabis abuse with psychotic disorder, unspecified	P0481	Newborn affected by maternal use of cannabis
F1218	Cannabis abuse with other cannabis-induced disorder	T407	Poisoning by, adverse effect of and underdosing of cannabis (derivatives)
F12180	Cannabis abuse with cannabis-induced anxiety disorder	T407X	Poisoning by, adverse effect of and underdosing of cannabis (derivatives)
F12188	Cannabis abuse with other cannabis-induced disorder	T407X1	Poisoning by cannabis (derivatives), accidental (unintentional)
F1219	Cannabis abuse with unspecified cannabis-induced disorder	T407X1A	Poisoning by cannabis (derivatives), accidental (unintentional), initial encounter
F122	Cannabis dependence	T407X1D	Poisoning by cannabis (derivatives), accidental (unintentional), subsequent encounter
F1220	Cannabis dependence, uncomplicated	T407X1S	Poisoning by cannabis (derivatives), accidental (unintentional), sequela
F1221	Cannabis dependence, in remission	T407X2	Poisoning by cannabis (derivatives), intentional self-harm
F1222	Cannabis dependence with intoxication	T407X2A	Poisoning by cannabis (derivatives), intentional self-harm, initial encounter
F12220	Cannabis dependence with intoxication, uncomplicated	T407X2D	Poisoning by cannabis (derivatives), intentional self-harm, subsequent encounter
F12221	Cannabis dependence with intoxication delirium	T407X2S	Poisoning by cannabis (derivatives), intentional self-harm, sequela
F12222	Cannabis dependence with intoxication with perceptual disturbance	T407X3	Poisoning by cannabis (derivatives), assault
F12229	Cannabis dependence with intoxication, unspecified	T407X3A	Poisoning by cannabis (derivatives), assault, initial encounter
F1223	Cannabis dependence with withdrawal	T407X3D	Poisoning by cannabis (derivatives), assault, subsequent encounter
F1225	Cannabis dependence with psychotic disorder	T407X3S	Poisoning by cannabis (derivatives), assault, sequela
F12250	Cannabis dependence with psychotic disorder with delusions	T407X4	Poisoning by cannabis (derivatives), undetermined
F12251	Cannabis dependence with psychotic disorder with hallucinations	T407X4A	Poisoning by cannabis (derivatives), undetermined, initial encounter
F12259	Cannabis dependence with psychotic disorder, unspecified	T407X4D	Poisoning by cannabis (derivatives), undetermined, subsequent encounter
F1228	Cannabis dependence with other cannabis-induced disorder	T407X4S	Poisoning by cannabis (derivatives), undetermined, sequela
F12280	Cannabis dependence with cannabis-induced anxiety disorder	T407X5	Adverse effect of cannabis (derivatives)
F12288	Cannabis dependence with other cannabis-induced disorder	T407X5A	Adverse effect of cannabis (derivatives), initial encounter
F1229	Cannabis dependence with unspecified cannabis-induced disorder	T407X5D	Adverse effect of cannabis (derivatives), subsequent encounter
F129	Cannabis use, unspecified	T407X5S	Adverse effect of cannabis (derivatives), sequela
F1290	Cannabis use, unspecified, uncomplicated	T407X6	Underdosing of cannabis (derivatives)
F1292	Cannabis use, unspecified with intoxication	T407X6A	Underdosing of cannabis (derivatives), initial encounter
F12920	Cannabis use, unspecified with intoxication, uncomplicated	T407X6D	Underdosing of cannabis (derivatives), subsequent encounter
F12921	Cannabis use, unspecified with intoxication delirium	T407X6S	Underdosing of cannabis (derivatives), sequela

*__Answer (continued)__: Of the 78 ICD-10-CM cannabis diagnosis codes, to date 41 of the codes have been used in Massachusetts ED visit data. While the top ranking diagnosis are related to uncomplicated cannabis use (**see Table 3 below**), ICD-10-CM coding has provided additional information on cannabis induced mental disorders. In the past 8 years the number of cannabis related ED visits has increased from a low of 376 per in December 2011, to a high of 2,624 per month in May 2018 (**see Figure 2 below**).*

Table 3. Ranking of ICD-10-CM Cannabis Diagnosis Codes used in Massachusetts ED Visit Data from FY2016 through FY2018

Rank	ICD-10-CM	Description	Rank	ICD-10-CM	Description
1	F1290	Cannabis use, unspecified, uncomplicated	21	F12921	Cannabis use, unspecified with intoxication delirium
2	F1210	Cannabis abuse, uncomplicated	22	F12121	Cannabis abuse with intoxication delirium
3	F1220	Cannabis dependence, uncomplicated	23	T407X5A	Adverse effect of cannabis (derivatives), initial encounter
4	F12929	Cannabis use, unspecified with intoxication, unspecified	24	F12159	Cannabis abuse with psychotic disorder, unspecified
5	F12129	Cannabis abuse with intoxication, unspecified	25	F12122	Cannabis abuse with intoxication with perceptual disturbance
6	F12188	Cannabis abuse with other cannabis-induced disorder	26	F12151	Cannabis abuse with psychotic disorder with hallucinations
7	F12988	Cannabis use, unspecified with other cannabis-induced disorder	27	F12959	Cannabis use, unspecified with psychotic disorder, unspecified
8	F12920	Cannabis use, unspecified with intoxication, uncomplicated	28	F12150	Cannabis abuse with psychotic disorder with delusions
9	F1299	Cannabis use, unspecified with unspecified cannabis-induced disorder	29	F12259	Cannabis dependence with psychotic disorder, unspecified
10	F12180	Cannabis abuse with cannabis-induced anxiety disorder	30	F12280	Cannabis dependence with cannabis-induced anxiety disorder
11	F12120	Cannabis abuse with intoxication, uncomplicated	31	F12951	Cannabis use, unspecified with psychotic disorder with hallucinations
12	T407X1A	Poisoning by cannabis (derivatives), accidental (unintentional), initial encounter	32	F12220	Cannabis dependence with intoxication, uncomplicated
13	F12229	Cannabis dependence with intoxication, unspecified	33	F12950	Cannabis use, unspecified with psychotic disorder with delusions
14	F12980	Cannabis use, unspecified with anxiety disorder	34	F12221	Cannabis dependence with intoxication delirium
15	F1221	Cannabis dependence, in remission	35	F12222	Cannabis dependence with intoxication with perceptual disturbance
16	F1211	Cannabis abuse, in remission	36	T407X4A	Poisoning by cannabis (derivatives), undetermined, initial encounter
17	F12288	Cannabis dependence with other cannabis-induced disorder	37	T407X2A	Poisoning by cannabis (derivatives), intentional self-harm, initial encounter
18	F12922	Cannabis use, unspecified with intoxication with perceptual disturbance	38	F12250	Cannabis dependence with psychotic disorder with delusions
19	F1219	Cannabis abuse with unspecified cannabis-induced disorder	38	F12251	Cannabis dependence with psychotic disorder with hallucinations
20	F1229	Cannabis dependence with unspecified cannabis-induced disorder	38	J662	Cannabinosis (Hemp worker exposure)
		Bottom four ranking tie ➜	38	T407X1D	Poisoning by cannabis (derivatives), accidental (unintentional), subsequent encounter

Figure 2. FY2012 through FY2018 Monthly Cannabis related Massachusetts ED Visit Volume

Question: I am interested in using the Case Mix data to analyze ED visits that result from tobacco related vaping? What codes should I use?

Answer: *New information is now available from the Centers for Disease Control and Prevention (CDC) on coding and analysis of vaping related injuries and disorders. Last week (October 17, 2019), the CDC issued official "**ICD-10-CM Coding Guidance Vaping related disorders**" available online at*:

https://www.cdc.gov/nchs/data/icd/Vapingcodingguidance2019_10_17_2019.pdf

The guidance outlines and describes all of the specific ICD-10-CM codes to use for assigning codes covering diagnoses in the categories of:

- Lung-related complications
- Poisoning and toxicity
- Substance use, abuse, and dependence
- Signs and symptoms

The guidance advices to assign as many codes, as appropriate. Examples:
      Cannabis related disorders: F12.---
      Nicotine related disorders: F17.----

Specifically, for vaping of nicotine, assign code:
      F17.29-, Nicotine dependence, other tobacco products. Electronic nicotine delivery systems (ENDS) are non-combustible tobacco products.

Where can I find old User Workgroup Presentations?

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

MA APCD and Case Mix User Workgroup Information

These webinar workgroups bring together users of CHIA's APCD and Case Mix data with CHIA's in-house data experts to discuss analytical techniques, data issues, and data quality. These webinars are also used for making announcements regarding data releases, enhancements, and features. Each meeting features a segment where CHIA staff answer common questions from data users and field live questions from webinar participants.

Please register for one or both of these separate registration links. All meetings take place on Tuesday afternoons at 3:00 p.m.

Case Mix Workgroup Registration	MA APCD Workgroup Registration
NEXT MEETING	**NEXT MEETING**
Tuesday, February 26, 2019	**Tuesday, March 26, 2019**
Case Mix Workgroup Registration	MA APCD Workgroup Registration

Previous MA APCD / Case Mix Meeting Materials

Case Mix Tuesday, February 26, 2019

- Presentation (available shortly after the meeting)

MA APCD Tuesday, January 22, 2019

- Presentation (PDF) | PPT

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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.

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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 2019, contact Adam Tapply [adam.tapply@state.ma.us]

- If you are interested in **PRESENTING** at an MA APCD or Case Mix workgroup in 2019, contact Adam Tapply [adam.tapply@state.ma.us]

  You can present remotely, or in-person at CHIA.

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