

CHIA USER WORKGROUP

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April 25, 2023

Agenda

- Announcements:
 - APCD Release CY 2021 Updates
 - FY21 Case Mix Release Projections
- Website Updates
- User Support Questions
 - Hospital Recorded Blood Alcohol Levels
 - ICD-10-Codes for Family and Social Disruption
 - Comparison of Case Mix to MA APCD Hospital Identifiers
- Q&A

MA APCD CY 2021

- Available for request
- Applicants with *approved projects* that require updated APCD data (CY 2021 Data) 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.
- **CY 2021 Data** includes data on services from January 2017 – December 2021 with six months of claim runout.

Case Mix FY21 Release

CURRENT RELEASE TIMEFRAMES FOR EACH FILE:

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

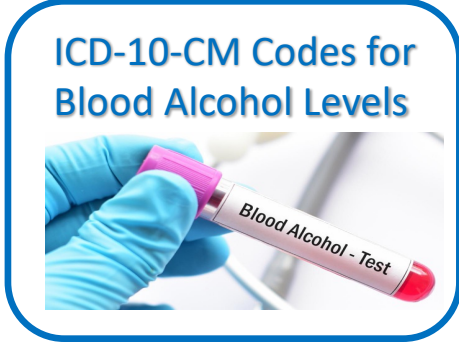


Website Release Updates

- 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.

USER QUESTIONS

Question: The latest Centers for Disease Control and Prevention underlying cause of death data for Massachusetts indicates a 38% increase in the age-adjusted death rate from “alcohol-induced causes” from calendar year 2019 to 2020. The FY2016 implementation of ICD-10-CM included an update to add specific nomenclature for gradients of blood alcohol levels. To what extent are the new blood alcohol gradient codes being used in the Case Mix data?

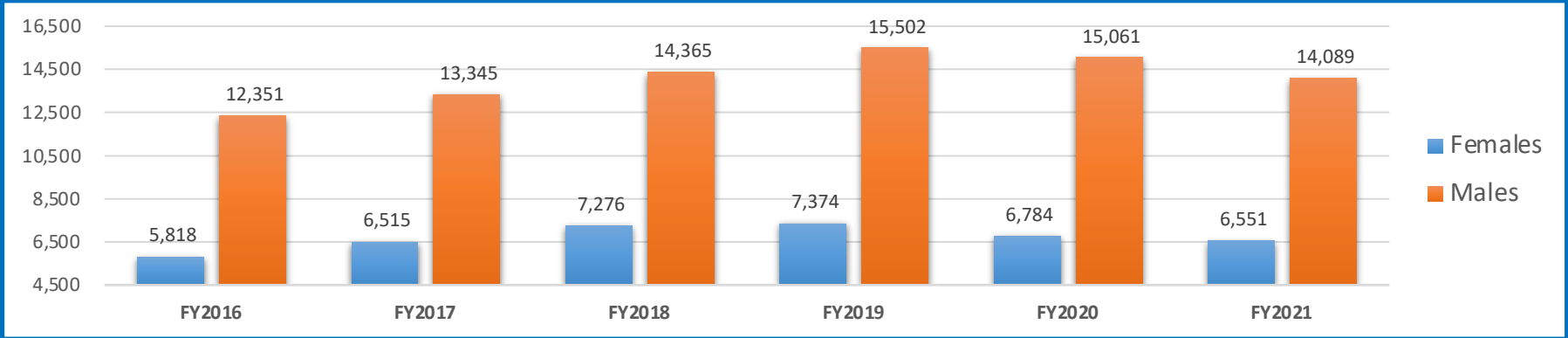


Answer: There are eleven new ICD-10-CM ‘Y90’ codes referencing blood alcohol levels. Nine of the codes include specific gradients for blood alcohol levels. **See Table 1 below.** The codes are being used in the outpatient emergency department (ED) visit data. The volume of patients with blood alcohol codes trended upward in FY2018, with more than twice the number of males than females having blood alcohol codes. **See Figure 1 below.**

Table 1. ICD-10-CM Codes for Blood Alcohol Levels

ICD-10-CM Code	Description
Y90	Evidence of alcohol involvement determined by blood alcohol level
Y90.0	Blood alcohol level of less than 20 mg/100 ml
Y90.1	Blood alcohol level of 20-39 mg/100 ml
Y90.2	Blood alcohol level of 40-59 mg/100 ml
Y90.3	Blood alcohol level of 60-79 mg/100 ml
Y90.4	Blood alcohol level of 80-99 mg/100 ml
Y90.5	Blood alcohol level of 100-119 mg/100 ml
Y90.6	Blood alcohol level of 120-199 mg/100 ml
Y90.7	Blood alcohol level of 200-239 mg/100 ml
Y90.8	Blood alcohol level of 240 mg/100 ml or more
Y90.9	Presence of alcohol in blood, level not specified

Figure 1. FY2016 to FY2021 Volume of Emergency Department Visits by Sex with Recorded Blood Alcohol Level



continued

Answer (continued): The higher rate of males with recorded blood alcohol levels in ED data aligns with the higher rate and upward trend in alcohol-induced deaths for males in Massachusetts. See **Figure 1 below**. While both the Massachusetts male and female alcohol-induced age-adjusted death rates per 100,000 trended upward, the death rate for males remains lower than the national rate for males. See **Figure 2 below**. However, at the height of the pandemic in calendar year 2020, the alcohol-induced death rate for Massachusetts females surpassed the national rate for females. See **Figure 3 below**.

ICD-10-CM Codes for Blood Alcohol Levels



Figure 1. Massachusetts Age-Adjusted Alcohol-Induced Death Rate by Sex per 100,000

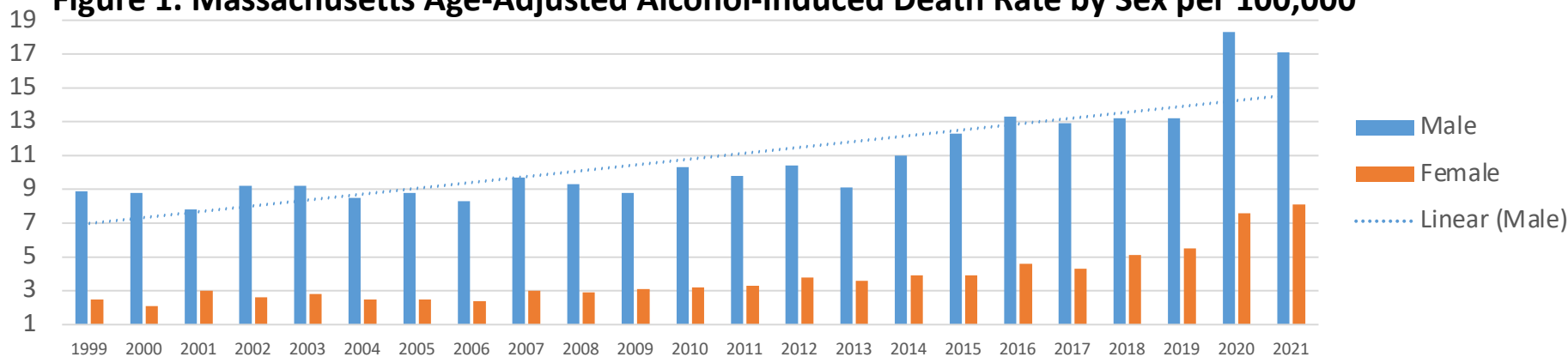


Fig. 2. Comparison of Massachusetts to National Death Rate for Males*

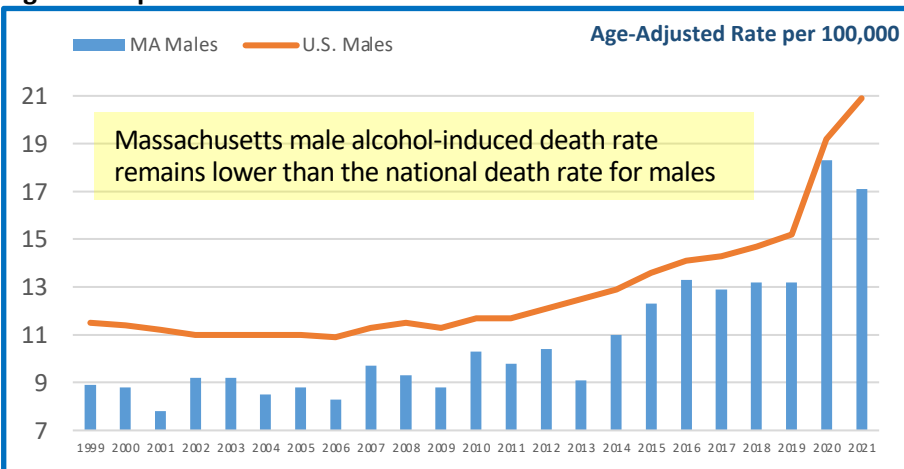
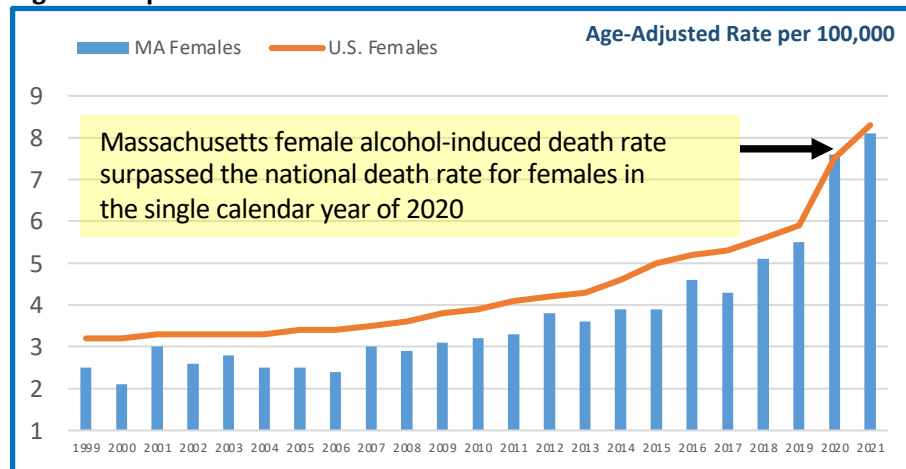


Fig. 3. Comparison of Massachusetts to National Death Rate for Females*



*Source: Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Mortality Data on CDC Wonder

continued



Answer (continued): When analyzing ICD-10-CM blood alcohol levels, keep in mind that the ICD-10-CM 'Y90' codes for blood alcohol levels are reported in either the associated diagnosis field or the external cause field, not in the principal diagnosis field. Over the past six years (FY2016-FY2021), the top emergency department principal diagnoses for those tested for alcohol levels were **alcohol abuse with intoxication and alcohol dependence with Intoxication**. For those who did not have a principal diagnosis of alcohol abuse or dependence, **head injuries** were the leading anatomic trauma associated with high blood alcohol levels, **chest pains** were the leading physiologic disorder, and **major depression** the leading psychiatric disorder. **See Table 1 below.** Each year since ICD-10-CM implementation, on average 20,839 patients have ED recorded blood alcohol level and consistently, each year, the most frequent recorded level on over 40% of patients tested was the highest blood alcohol level of 240 mg/100 or more. **See Figure 1 below.**

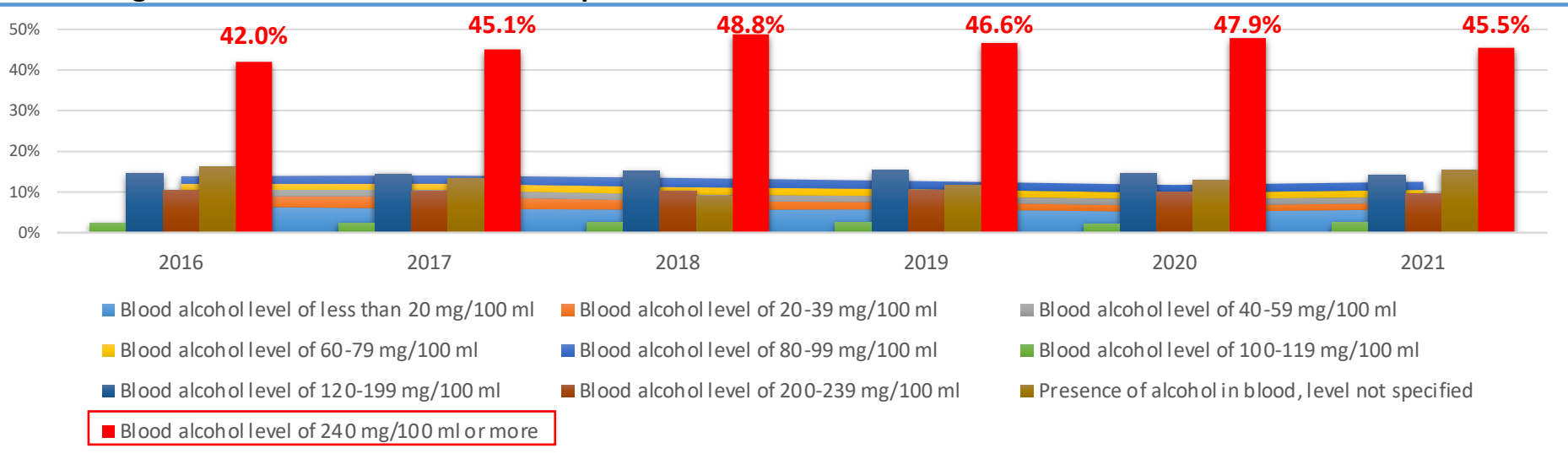


ICD-10-CM Codes for Blood Alcohol Levels

Table 1. FY2016 – FY2021 Top ED Non-Alcohol Principal Diagnoses with Recorded Blood Alcohol Levels

Rank	Anatomic Injuries	Physiologic disorders	Psychiatric/Behavioral Disorders
1	Unspecified injury of head	Chest pain	Major depressive disorder
2	Laceration without foreign body of scalp	Other chest pain	Suicidal ideations
3	Laceration without foreign body of other part of the head	Syncope and collapse	Anxiety disorder
4	Contusion of other part of head	Nausea with vomiting	Altered mental status
5	Abrasion of other part of head	Epigastric pain	Other psychoactive substance abuse

Figure 1. FY2016 – FY2021 Most Frequent Alcohol Level of Patients with ED Recorded Blood Alcohol Level



Answer (continued): As with the outpatient ED visit data, a higher volume of males in the inpatient hospital care setting have recorded blood alcohol levels, paralleled by the same pronounced FY2019 increase in overall testing volume. **See Figure 1 below.** However, when comparing the age distribution of patients with recorded blood alcohol levels by care setting (ED vs Inpatient) for the six-year period of FY2016 through FY2019, the age distribution for females has a higher proportion of younger patients than does the male age distribution. **See Figure 2 below.** The inpatient hospital care setting has a higher proportion of older patients for both males and females compared to the ED visit care setting. **See Figure 3 below.**

ICD-10-CM Codes for Blood Alcohol Levels



Figure 1. FY2016 to FY2021 Volume of Inpatient Hospitalizations by Sex with Recorded Blood Alcohol Level

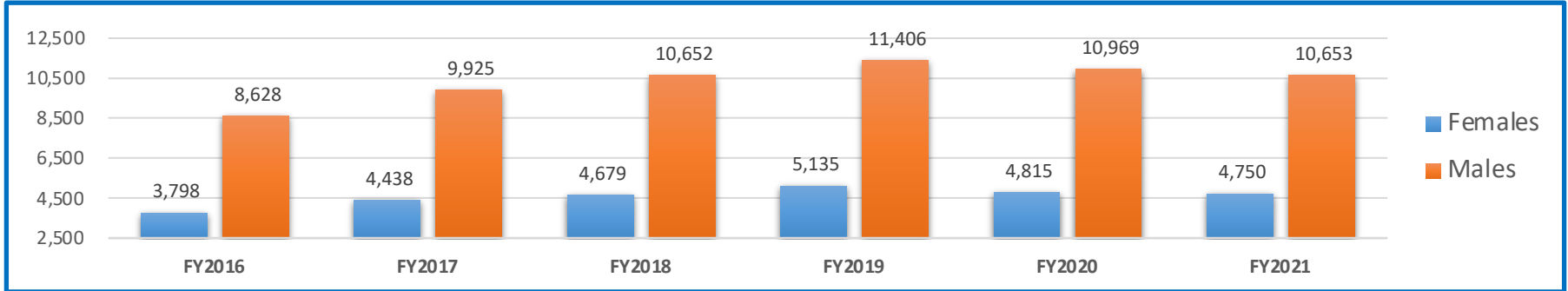


Figure 2.

Age Distribution of ED Visit Patients with Recorded Blood Alcohol Level

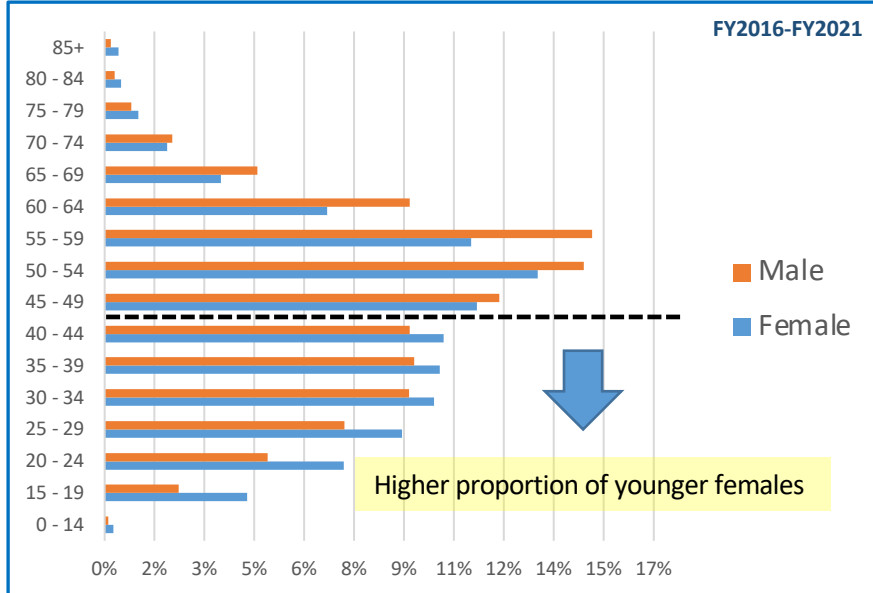
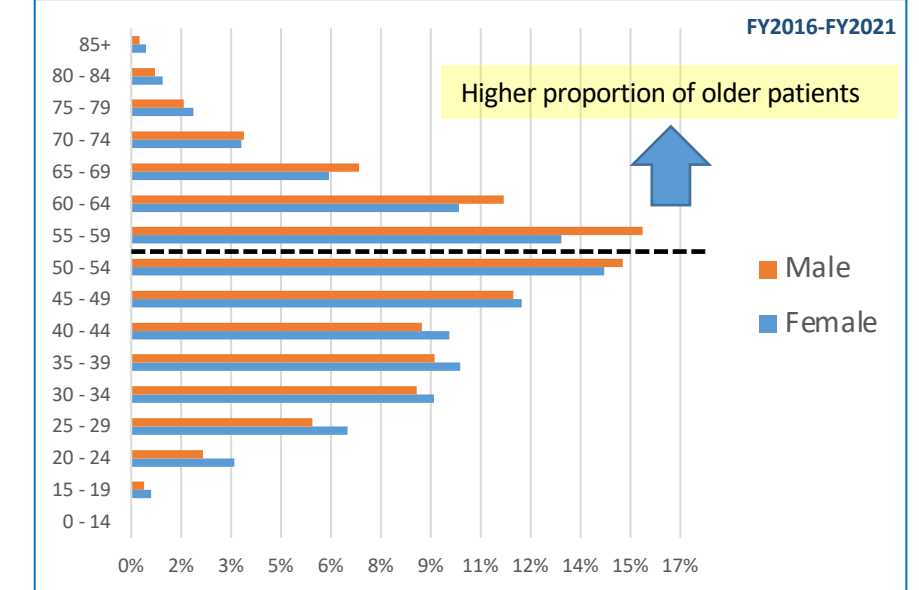


Figure 3.

Age Distribution of Inpatient Discharges with Recorded Blood Alcohol Level



Disappearance and Death of a Family Member

Question: I am applying for ED visit data to study the emotional/social sequelae of the pandemic on families, such as the impact of loss of a loved one. I previously used ICD-9-CM 'V-codes' on factors influencing health status to study forms of family disruption and wanted to determine whether the newer ICD-10-CM health status codes are consistently being used in the outpatient emergency department visit data.

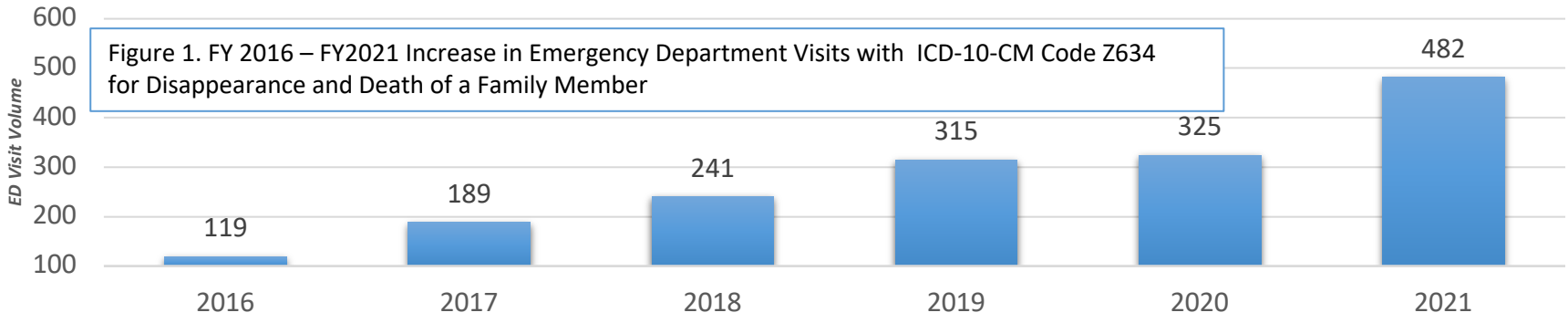
Answer: Yes, there are granular ICD-10-CM 'Z-codes' for family life disruption (See Table 1 below) and social life disruption (See Table 2). Hospitals are using these codes to report on factors influencing the health status of patients visiting the outpatient emergency. For example, even though there has been a 21% decrease in overall ED Visit volume from 2016 to 2021, the volume of patients whose health status was impacted by "the disappearance and loss of a family member" (ICD-10-CM Z634) has more than tripled. See Figure 1 below.

Table 1. ICD-10-CM Codes for Family Life Disruption

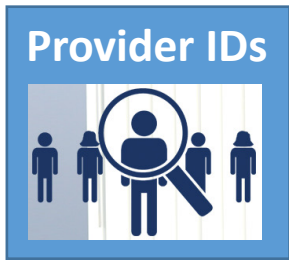
ICD-10-CM	Description
Z633	Absence of family member
Z6331	Absence of family member due to military deployment
Z6332	Other absence of family member
Z634	Disappearance and death of family member
Z635	Disruption of family by separation and divorce
Z637	Other stressful life events affecting family and household
Z6371	Stress on family due to return of family member from military deployment
Z6372	Alcoholism and drug addiction in family
Z6379	Other stressful life events affecting family and household
Z63	Other problems related to primary support group, including family circumstances
Z630	Problems in relationship with spouse or partner

Table 2. ICD-10-CM Codes for Social Life Disruption

ICD-10-CM	Description
Z600	Problems of adjustment to life-cycle transitions
Z608	Other problems related to social environment
Z602	Problems related to living alone
Z605	Target of (perceived) adverse discrimination and persecution
Z603	Acculturation difficulty
Z60	Problems related to social environment
Z604	Social exclusion and rejection
Z609	Problem related to social environment, unspecified

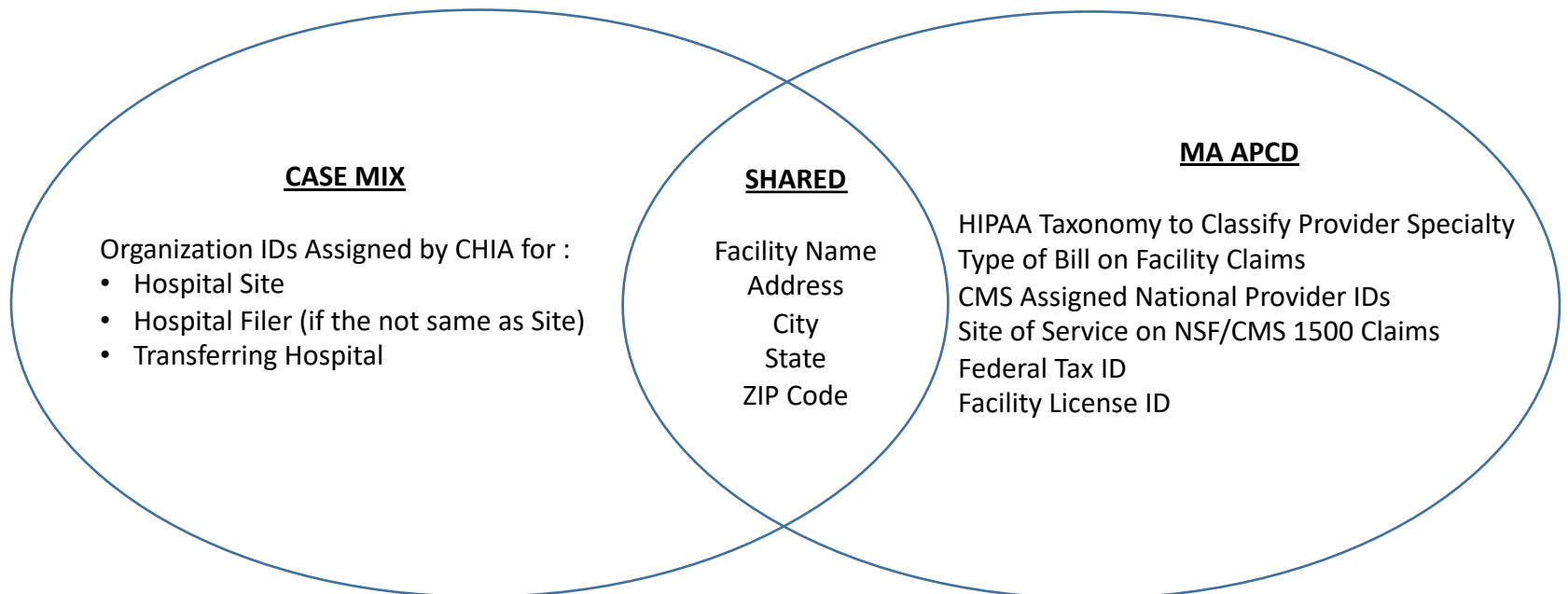


Question: The Case Mix data has organization identifiers for facilities. Can those same identifiers be used in the MA APCD to identify the parallel claims data associated with the hospital submitters in the case mix data?



Answer: No, the case mix hospital organization identifiers are facility IDs assigned by CHIA and are not used in the MA APCD. However, the case mix data does include the physician license number assigned by the Massachusetts Board of Registration of Medicine. The MA APCD Provider filing specifications does contain a field for License ID (PV06) which insurance carriers are ask to report the state license number for the provider identified in the Plan Provider ID field (PV002). For a physician, this is the medical license for a non-doctor this is the practice license. It is important to keep in mind that the Plan Provider ID is not always for a person but can be persons, facilities or other entities involved in claims transactions. **The license ID reported in the Case Mix data is only for persons, not facilities.** While both hospitals in the MA APCD and in Case Mix data contain the same facility names, the facility names are standardized in the Case Mix data. In the MA APCD, one carrier's data might include the full name of a facility while another carrier might abbreviate that name. Therefore, the MA APCD facility names are not reported in a standardized fashion across all carriers.

FACILITY SITE COMPARISON DATA



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

When is the next User Group meeting?

- The next User Group will meet Tuesday May, 23.
- <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>



[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@chiamass.gov
- Questions related to Case Mix:
casemix.data@chiamass.gov

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