



Alcohol and Drug Intoxication among Drivers Hospitalized for Motor Vehicle Crash Injuries, MA Crash-Related Injury Surveillance System (MA CRISS), FY2016 - FY2018

Executive Summary, October 2022

The Injury Surveillance Program at the Massachusetts Department of Public Health conducted an analysis of drivers who were hospitalized for crash-related injuries. This analysis explores the history of these hospitalized drivers in order to identify opportunities for preventing crashes that result in hospitalizations, especially crashes related to impaired driving.

The team analyzed data from the MA Crash-Related Injury Surveillance System (MA CRISS), a linked data set that includes hospital, driver, and crash data. Previously, the team determined that hospital discharge data identified approximately three times as many hospitalized drivers as intoxicated (24%) compared to crash (8%) and driver data (8%).

This new analysis found the following:

- Health care providers or law enforcement officials identified some hospitalized drivers as intoxicated. The analysis calls this group “drivers identified as intoxicated.” The analysis found that only a small proportion of this group admitted to or were convicted of Operating Under the Influence (OUI) in court.
 - According to the analysis, only 1 in 5 (21%) hospitalized drivers identified as intoxicated in crash data admitted to or were convicted of OUI.
 - Furthermore, only 1 in 10 hospitalized drivers identified as intoxicated in hospital data admitted to or were convicted of OUI.
- Of hospitalized drivers, 2% of drivers not identified as intoxicated were driving on a suspended license at the time of the crash, compared to 6% of drivers identified as intoxicated in hospital data only, and 9% of drivers identified as intoxicated in crash or driver data.
- Nearly 25% of hospitalized drivers had at least one at-fault crash in the previous 5 years and some had up to six prior at-fault crashes in their driver record. Hospitalized drivers who were identified as intoxicated in crash or driver data had more at-fault crashes in the previous 5 years than drivers not identified as intoxicated.
- Based on driver records, only a small percentage of hospitalized drivers had admitted to or were convicted of OUI in the previous 5 years. This finding may indicate that previous impaired driving crashes are not being captured in drivers’ records.

Opportunities for prevention or intervention include:

- Evaluation of the judicial process to better understand how OUI cases are adjudicated.
- [Bedside screening, brief intervention, and referral to treatment \(SBIRT\)](#) for substance use disorders and concerted follow-up efforts to connect those identified as intoxicated to services.
- Supporting equitable [Medical Fitness Reporting](#) that alerts the Registry of Motor Vehicles when a health care provider has determined that a driver is cognitively or physically impaired due to intoxication.
- Education and intervention post-crash, beyond insurance step increases.
- Development of alternative transportation options for people with suspended licenses.
- All-offender Ignition Interlock legislation proposed in the [2018 MA Strategic Highway Safety Plan](#).

Definitions:

- Hospitalized driver: A person operating a car, truck, or motorcycle who experienced a crash and was admitted to a hospital for treatment of injuries related to the crash.
- Identified as intoxicated: Hospital or crash data reflected evidence that a driver had been intoxicated while driving. For hospital data, a driver was identified as intoxicated when data included diagnostic codes for use of one or more substances, including alcohol, cannabis, and opioids. For crash data, a driver was identified as intoxicated when a crash report included an OUI-related violation code, a BAC level of .08 or higher, or other data indicating the police suspected alcohol or drug use. See appendices A-C for detailed descriptions of diagnosis codes, violation codes, and other intoxication identifiers.
- Admitted to or convicted of OUI: Driver data indicated a driver was found guilty of OUI or received an OUI violation that was continued without a finding. Cases continued without a finding are, legally, not convictions. In such cases, drivers acknowledge that they operated under the influence; the court then requires the driver to meet certain conditions, such as driver training and substance use education or treatment. If these conditions are met, the case is dismissed; if not, a driver may be found guilty of OUI.
- Hospital data: Inpatient hospital discharge data maintained by the Center for Health Information and Analysis.
- Crash Data: Data collected by law enforcement and maintained in the Crash Data System by the Registry of Motor Vehicles (RMV). See [Massachusetts Crash Report E-Manual](#) to learn more.
- Driver Data: Driver licensing and history data, including driving violation convictions and license suspensions, also maintained by the RMV.

**Alcohol and Drug Intoxication among Drivers Hospitalized for Motor Vehicle Crash Injuries,
MA Crash-Related Injury Surveillance System (MA CRISS), FY2016 - FY2018**

Summary of Findings

Background: [Analysis of 2012-2015 MA CRISS data](#) identified approximately one in five car/truck drivers (20.6%) as being under the influence of alcohol and/or drugs at the time of the crash. Crash data identified 70% fewer drivers as being under the influence of alcohol and/or drugs at the time of the crash (6.1% vs. 20.6%). A subsequent analysis by the MDPH Injury Surveillance Program comparing 2015 intoxication indicators in hospital discharge, crash, and driver data found that hospital discharge data identified approximately three times as many hospitalized drivers as intoxicated (24.1%) as crash (8.4%) or driver data (7.7%) (data not published).

Purpose of Current Analysis: 1) Assess history of risky driving in hospitalized drivers (includes motorcycle operators) identified as intoxicated at the time of the crash in hospital data but not crash or driver data to determine potential opportunities for intervention. 2) Demonstrate the utility of linked crash-driver-hospital discharge data to inform traffic safety measures.

Data Sources: FY2016 - FY2018 MA Crash-Related Injury Surveillance System data, including the following linked data sources:

- Crash Data System, MA Registry of Motor Vehicles
- Driver License/History Records, MA Registry of Motor Vehicles
- Inpatient Hospital Discharge data, Center for Health Information and Analysis

Findings on the following pages summarize answers the following questions:

- Q1. What percentage of hospitalized drivers were identified in each data source as intoxicated at the time of the index crash (crash in linked FY2016-FY2018 data)?
- Q2. What percentage of drivers identified as intoxicated in hospital discharge and/or crash data ultimately admitted to or were convicted of operating under the influence (OUI - based on driver data)?
- Q3. What were the three study groups and how many drivers were in each group?
- Q4. What percentage of hospitalized drivers in each study group were driving on a suspended license at the time of the index crash?
- Q5a. What percentage of drivers in each group had admitted to or were convicted of OUI in the 5 years prior to the index crash?
- Q5b. What was the average number of OUI convictions/admissions per driver and total number of OUI convictions/admissions per group in the 5 years prior to the index crash?
- Q6a. What percentage of drivers in each group had an at-fault crash in the 5 years prior to the index crash?
- Q6b. What was the average number of at-fault crashes per driver and the total number of at-fault crashes per group in the 5 years prior to the index crash?

See Appendices A - C for alcohol and drug use indicators used in hospital discharge, crash, and driver data, respectively.

Limitations: This analysis had several limitations. The analysis used linked FY2016-FY2018 MA driver-crash-hospital discharge data. These data do not represent all drivers who were hospitalized in MA for crash-related injuries for several reasons, including that the police were not involved in the crash, the driver was hospitalized more than one day following the crash, the driver was unlicensed, the crash report was not submitted to the state crash data system, or other missing or incorrect data prevented data linkage. A small number of hospital discharge records may be linked to the wrong crash and driver record. Alcohol and drug intoxication may be underestimated if police or healthcare providers did not test for alcohol or drugs, delayed testing, or positive results were not documented in the crash or medical record. Some OUI violations in crash data may have been missed, as violations were documented in non-standardized free text fields. There were also many incomplete Chap.90, Sec.23 and Sec. 24 violation codes in crash data. These laws cover OUI violations, but also include violations for speeding and reckless driving. Because they were incomplete, we were unable to determine whether they were OUI-related.

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These results were compiled by the MA Department of Public Health Injury Surveillance Program.

Q1. What percentage of hospitalized drivers were identified in each linked data source as intoxicated at the time of the index crash (crash in linked FY2016-FY2018 data)?

| Table 1. Alcohol and Drug Intoxication among Drivers Hospitalized for Motor Vehicle Crash Injuries, MA Crash-Related Injury Surveillance System, FY2016 - FY2018 | | | |
|---|---------------------------|---|---|
| Data Source² | Total # of Drivers | Identified as Intoxicated in Data Source n | Identified as Intoxicated in Data Source % |
| Hospital discharge data | 3,615 | 764 | 21.1% |
| Crash data | 3,615 | 353 | 9.8% |
| Driver data | 3,615 | 110 | 3.0% |

Of the 3,615 hospitalized car/truck drivers and motorcycle operators,

* 21.1% were identified in hospital discharge data as intoxicated at the time of the crash.

* 9.8% were identified in crash data as intoxicated at the time of the crash.

* 3.0% were identified in driver data as intoxicated at the time of the crash, that is, admitted to or was convicted of OUI.

Q2. What percentage of drivers identified as intoxicated in hospital discharge and/or crash data admitted to³ or were convicted of operating under the influence (OUI) of alcohol or drugs in the index crash?

| Table 2. Drivers Identified as Intoxicated Who Admitted To or Were Convicted Of OUI, by Source Where Identified as Intoxicated, Drivers Hospitalized for Motor Vehicle Crash Injuries, MA Crash-Related Injury Surveillance System, FY2016-FY2018¹ (N = 3,615) | | | |
|--|---|---|---|
| Data Source² | # Drivers Identified in Data Source as Intoxicated | # Drivers Who Admitted to or were Convicted of OUI (Driver data) | % Drivers Who Admitted to or were Convicted of OUI (Driver data) |
| Hospital discharge data ⁴ | 764 | 74 | 9.7% |
| Crash data ⁵ | 353 | 73 | 20.7% |
| Both hospital discharge and crash data | 228 | 51 | 22.4% |

1. Linked data do not include all drivers hospitalized for MV crash injuries. See [Alcohol and Drug Involvement in MA Motor Vehicle Crashes, 2012-2015](#) for more information about MA CRIS linked data.

Fiscal years 2016-2018: Oct. 1, 2015 - Sep. 30, 2018. See appendices A-C for descriptions of intoxication indicators. Drivers with incomplete Ch90/Sec23 and Sec24 violation codes in crash data and no other intoxication indicators were excluded from this analysis.

2. Categories are not mutually exclusive.

3. These were OUI cases "continued without a finding", in which the driver admits they would likely be found guilty in a court case and agrees to complete requirements, such as driver training and substance addiction treatment.

4. May or may not be an intoxication indicator in crash data.

5. May or may not be intoxication indicator in hospital discharge data.

* Of the 764 hospitalized drivers identified in hospital discharge data as intoxicated at the time of the index crash, only one in ten (9.7%) admitted to or was convicted of OUI.

* Of the 353 hospitalized drivers identified in crash data as intoxicated at the time of the index crash, only one in five (20.7%) admitted to or was convicted of OUI.

* Of the 228 hospitalized drivers identified in both hospital discharge AND crash data as intoxicated at the time of the index crash, only slightly over one in five (22.4%) admitted to or was convicted of OUI.

Q3. What were the three study groups and how many drivers were in each group?

| Table 3. Study Groups Used in the Analysis of Intoxicated Drivers, Drivers Hospitalized for Motor Vehicle Crash Injuries, MA Crash-Related Injury Surveillance System, FY2016 - FY2018¹ | |
|---|---------------------------------|
| Study Group² | Total # Drivers in Group |
| Group 1: No Intoxication Indicators ³ | 2,712 |
| Group 2: Intox. Indicator in hospital data only ⁴ | 513 |
| Group 3: Intox. Indicator in crash and/or driver data ⁵ | 390 |
| Total | 3,615 |

* There were 513 drivers in the main study group (group 2). These drivers were identified as intoxicated in hospital discharge data, but not in crash or driver data.

* Drivers in group 2 were compared with two other groups: The 2,712 drivers in group 1 with no intoxication indicators and the 390 drivers in group 3 with intoxication indicators in crash and/or driver data.

Q4. What percentage of hospitalized drivers in each study group were driving on a suspended license at the time of the index crash?

| Table 4. Number and Percentage of Drivers who Crashed While Driving on a Suspended License, Drivers Hospitalized for Motor Vehicle Crash Injuries, MA Crash-Related Injury Surveillance System, FY2016 - FY2018¹ (N = 3,615) | | | |
|--|---------------------------------|---|---|
| Study Group² | Total # Drivers in Group | # Drivers Who Crashed on Susp. License | % Drivers Who Crashed on Susp. License |
| Group 1: No Intoxication Indicators ³ | 2,712 | 45 | 1.7% |
| Group 2: Intox. Indicator in hospital data only ⁴ | 513 | 28 | 5.5% |
| Group 3: Intox. Indicator in crash and/or driver data ⁵ | 390 | 35 | 9.0% |

1. Linked data do not include all drivers hospitalized for MV crash injuries. See [Alcohol and Drug Involvement in MA Motor Vehicle Crashes, 2012-2015](#) for more information about MA CRISS linked data.

Fiscal years 2016-2018: Oct. 1, 2015 - Sep. 30, 2018. See appendices A-C for descriptions of intoxication indicators. Drivers with incomplete Ch90/Sec23 and Sec24 violation codes in crash data and no other intoxication indicators were excluded from this analysis.

2. Categories are mutually exclusive.

3. No intoxication indicators in hospital discharge, crash, or driver data.

4. Intoxication indicator in hospital discharge data, but not in crash or driver data.

5. Intoxication indicator in crash and/or driver data. May or may not be an intoxication indicator in hospital discharge data.

* Of the 2,712 hospitalized drivers not identified as intoxicated in any of the data sources, 1.7% crashed while driving on a suspended license (n = 45 drivers).

* Of the 513 hospitalized drivers identified as intoxicated in hospital discharge data only, 5.5% crashed while driving on a suspended license (n = 28 drivers).

* Of the 390 hospitalized drivers identified as intoxicated in crash and/or driver data, 9.0% crashed while driving on a suspended license (n = 35 drivers).

Q5a. What percentage of drivers in each group had admitted to or were convicted of OUI in the 5 years prior to the index crash?

| Table 5a. OUI Convictions or Admissions in the 5 Years Prior to the Index Crash, by Study Group, Drivers Hospitalized for Motor Vehicle Crash Injuries, MA Crash-Related Injury Surveillance System, FY2016 - FY2018¹ (N = 3,615) | | | |
|---|--------------------------|---|---|
| Study Group | Total # Drivers in Group | # Drivers with OUI Convictions or Admissions, Prev. 5 yrs | % Drivers with OUI Convictions or Admissions, Prev. 5 yrs |
| Group 1: No Intoxication Indicators ² | 2,712 | 30 | 1.1% |
| Group 2: Intox. Indicator in hospital data only ³ | 513 | 16 | 3.1% |
| Group 3: Intox. Indicator in crash and/or driver data ⁵ | 390 | 17 | 4.4% |

* The percentage of drivers who had admitted to or were convicted of OUI in the 5 years prior to the index crash was low in all groups, but was slightly higher in drivers identified as intoxicated at the time of the index crash (groups 2 and 3) than drivers not identified as intoxicated at the time of the index crash (group 1).

* Of the 2,712 hospitalized drivers not identified as intoxicated in any of the data sources, 1.1% had admitted to or were convicted of OUI in the 5 years prior to the index crash (n = 30 drivers).

* Of the 513 hospitalized drivers identified as intoxicated in hospital discharge data only, 3.1% had admitted to or were convicted of OUI in the 5 years prior to the index crash (n = 16 drivers).

* Of the 390 hospitalized drivers identified as intoxicated in crash and/or driver data, 4.4% had admitted to or were convicted of OUI in the 5 years prior to the index crash (n = 17 drivers).

Q5b. What was the average number of OUI convictions/admissions per driver and the total number of OUI convictions/admissions per group in the 5 years prior to the index crash?

| Table 5b. Average Number of OUI Convictions/Admissions per Driver and Total Number of OUI Convictions/Admissions per Group in the 5 Years Prior to the Index Crash, Drivers Hospitalized for Motor Vehicle Crash Injuries, MA Crash-Related Injury Surveillance System, FY2016 - FY2018¹ (N = 3,615) | | | |
|--|---|--|--|
| Study Group | # Drivers with OUI Conviction or Admission, Prev. 5 yrs | Average # of OUI Convic./Admiss. per Driver ⁵ , Prev. 5 yrs | Total # of OUI Convic./Admiss. in Group, Prev. 5 yrs |
| Group 1: No Intoxication Indicators ² | 30 | 1 | 32 |
| Group 2: Intox. Indicator in hospital data only ³ | 16 | 1 | 20 |
| Group 3: Intox. Indicator in crash and/or driver data ⁴ | 17 | 1 | 23 |

1. Linked data do not include all drivers hospitalized for MV crash injuries. See [Alcohol and Drug Involvement in MA Motor Vehicle Crashes, 2012-2015](#) for more information about MA CRISS linked data.

Fiscal years 2016-2018: Oct. 1, 2015 - Sep. 30, 2018. See appendices A-C for description of intoxication indicators. Drivers with incomplete Ch90/Sec23 and Sec24 violation codes in crash data and no other intoxication indicators were excluded from this analysis.

2. No intoxication indicators in hospital discharge, crash, or driver data.

3. Intoxication indicator in hospital discharge data, but not in crash or driver data.

4. Intoxication indicators in crash and/or driver data. May or may not be an intoxication indicator in hospital discharge data.

5. Of drivers in that group who had any OUI convictions/admissions in the 5 years prior to the index crash.

* In each group of drivers, the average number of OUI convictions/admissions per driver was 1, although a few drivers had been convicted of or admitted to OUI 2-3 times in the 5 years prior to the index crash (data not shown).

* Of the 2,712 hospitalized drivers not identified as intoxicated in any of the data sources, 30 drivers had a total of 32 OUI convictions/admissions in the 5 years prior to their index crash.

* Of the 513 hospitalized drivers identified as intoxicated in hospital discharge data only, 16 drivers had a total of 20 OUI convictions/admissions in the 5 years prior to their index crash.

* Of the 390 hospitalized drivers identified as intoxicated in crash and/or driver data, 17 drivers had a total of 23 OUI convictions/admissions in the 5 years prior to their index crash.

Q6a. What percentage of drivers in each group had an at-fault crash in the 5 years prior to the index crash?

| Table 6a. At-fault Crashes in the 5 Years Prior to the Index Crash, by Study Group, Drivers Hospitalized for Motor Vehicle Crash Injuries, MA Crash-Related Injury Surveillance System, FY2016 - FY2018¹ (N = 3,615) | | | |
|--|--------------------------|--|--|
| Group | Total # Drivers in Group | # Drivers with Any At-fault Crash, Prev. 5 yrs | % Drivers with Any At-fault Crash, Prev. 5 yrs |
| Group 1: No Intoxication Indicators ² | 2,712 | 611 | 22.5% |
| Group 2: Intox. Indicator in hospital data only ³ | 513 | 116 | 22.6% |
| Group 3: Intox. Indicator in crash and/or driver data ⁵ | 390 | 101 | 25.9% |

* The percentage of drivers with any at-fault crash in their driving record in the 5 years prior to the index crash was high in all groups, although it was highest in drivers identified as intoxicated in crash and/or driver data (group 3).

* Of the 2,712 hospitalized drivers not identified as intoxicated in any of the data sources, 22.5% had any at-fault crashes in the 5 years prior to the index crash (n = 611 drivers).

* Of the 513 hospitalized drivers identified as intoxicated in hospital discharge data only, 22.6% had any at-fault crashes in the 5 years prior to the index crash (n = 116 drivers).

* Of the 390 hospitalized drivers identified as intoxicated in crash and/or driver data, 25.9% had any at-fault crashes in the 5 years prior to the index crash (n = 101 drivers).

Q6b. What was the average number of at-fault crashes per driver and the total number of at-fault crashes per group in the 5 years prior to the index crash?

| Table 6b. Average Number of At-fault Crashes per Driver and Total Number of At-fault Crashes per Group in the 5 Years Prior to the Index Crash, Drivers Hospitalized for Motor Vehicle Crash Injuries, MA Crash-Related Injury Surveillance System, FY2016 - FY2018¹ (N = 3,615) | | | |
|--|--|---|---|
| Study Group | # Drivers with Any At-fault Crash, Prev. 5 yrs | Average # of At-fault Crashes per Driver ⁵ , Prev. 5 yrs | Total # of At-fault Crashes in Group, Prev. 5 yrs |
| Group 1: No Intoxication Indicators ² | 611 | 1 | 824 |
| Group 2: Intox. Indicator in hospital data only ³ | 116 | 2 | 186 |
| Group 3: Intox. Indicator in crash and/or driver data ⁴ | 101 | 2 | 160 |

1. Linked data do not include all drivers hospitalized for MV crash injuries. See [Alcohol and Drug Involvement in MA Motor Vehicle Crashes, 2012-2015](#) for more information about MA CRIS linked data.

Fiscal years 2016-2018: Oct. 1, 2015 - Sep. 30, 2018. See appendices A-C for description of intoxication indicators. Drivers with incomplete Ch90/Sec23 and Sec24 violation codes in crash data and no other intoxication indicators were excluded from this analysis.

2. No intoxication indicators in hospital discharge, crash, or driver data.

3. Intoxication indicator in hospital discharge data, but not in crash or driver data.

4. Intoxication indicators in crash and/or driver data. May or may not be an intoxication indicator in hospital discharge data.

5. Of drivers in that group who had any at-fault crashes in the 5 years prior to the index crash.

* Drivers identified as intoxicated at the time of the index crash (groups 2 and 3) had an average of 2 at-fault crashes in the previous 5 years compared to an average of 1 at-fault crash in the previous 5 years among drivers not identified as intoxicated (group 1). Many drivers in all three groups had multiple at-fault crashes in the 5 years prior to the index crash, with a maximum of 6 crashes (data not shown).

* Of the 2,712 hospitalized drivers not identified as intoxicated in any of the data sources, 611 drivers had a total of 824 at-fault crashes in the 5 years prior to their index crash.

* Of the 513 hospitalized drivers identified as intoxicated in hospital discharge data only, 116 drivers had a total of 186 at-fault crashes in the 5 years prior to their index crash.

* Of the 390 hospitalized drivers identified as intoxicated in crash and/or driver data, 101 drivers had a total of 160 at-fault crashes in the 5 years prior to their index crash.

Please contact Jeanne.Hathaway@mass.gov if interested in using these indicators as codes may be updated periodically.

Appendix A
Alcohol and Drug Intoxication among Drivers Hospitalized for Motor Vehicle Crash Injuries,
MA Crash-Related Injury Surveillance System, FY2016 - FY2018

Search for specified ICD-10-CM codes in all diagnosis and external cause code fields in hospital discharge data.

| Alcohol | |
|---|--|
| ICD-10-CM Code | Description |
| Purpose of Current Analysis: 1) Assess history of risky driving in hospitalized drivers (includes motorcycle operators) identified as operating under the influence of alcohol and/or drugs (OUI) at the time of the crash in hospital data but not crash or | Alcohol codes (conservative definition) Does not include abuse or dependence in remission; uncomplicated dependence without intoxication; alcohol use complicating pregnancy, childbirth, and the puerperium (O99.31); or blood alcohol levels below 80 mg/100 ml (Y90.0-Y90.3); |
| F10.10 | alcohol abuse, uncomplicated |
| F10.12 | alcohol abuse, with intoxication |
| F10.13 | alcohol abuse, with withdrawal |
| F10.14 | alcohol abuse, with alcohol-induced mood disorder |
| F10.15 | alcohol abuse, with alcohol-induced psychotic disorder |
| F10.180 | alcohol abuse, with alcohol-induced anxiety disorder |
| F10.22 | alcohol dependence, with intoxication |
| F10.23 | alcohol dependence, with withdrawal |
| F10.24 | alcohol dependence, with alcohol-induced mood disorder |
| F10.25 | alcohol dependence, with alcohol-induced psychotic disorder |
| F10.280 | alcohol dependence, with alcohol-induced anxiety disorder |
| T51 | Toxic effect of alcohol (all types of alcohol; there are no adverse effects or underdosing codes) |
| Y90 (.4-.8) | Blood alcohol level of 80 mg/ml or higher |
| F10.9, R78.0, Y90 (with 4th char 0-3, 9) | Additional alcohol codes for any alcohol use (NOT used in OUI analysis of FY2016-FY2018 linked driver-crash-hospital discharge data) |
| F10.92 | alcohol use, unspecified, with intoxication |
| F10.93 | alcohol use, unspecified, with withdrawal |
| F10.94 | alcohol use, unspecified, with alcohol-induced mood disorder |
| F10.95 | alcohol use, unspecified, with alcohol-induced psychotic disorder |
| F10.980 | alcohol use, unspecified, with alcohol-induced anxiety disorder |
| R78.0 | Finding of alcohol in blood |
| Y90(.0-.3) | Blood alcohol levels <80 mg/100 ml |
| Y90.9 | Presence of alcohol in blood, level not specified |

| Psychoactive Drugs (other than alcohol) | |
|---|---|
| (F11,F13-F15,F19)[.10,.12-.15]; F12[.10,.12,.13,.15]; (F16,F18)[.10,.12,.14,.15]; (F12 F16 and F18, F19)[.180]; (F11,F13-F15,F19)[.22-.25]; F12[.22,.23,.25]; (F16,F18)[.22,.24,.25]; (F12-F16 and F18, F19)[.280]; (F11,F13-F15,F19)[.90,.92-.95]; F12[.90,.92,.93,.95]; (F16,F18)[.90,.92,.94,.95]; (F12-F16 and F18, F19)[.980]; (T40.0-T40.4 & T40.6)[w/6th char 1-5]; (T40.5 & T40.7-T40.9)[w/6th char 1-4]; (T41.0-T41.2 & T41.5)[w/6th char 1-4]; (T42.0-T42.6 & T42.8)[w/6th char 1-4]; (T43.0-T43.6 & T43.8)[w/6th char 1-4]; (T41.4, T42.7, T43.9)[w/5th char 1-4]; (T50[.90,.91,.99])[w/6th char 1-4]; R78.1- R78.4; and a 7th char of A or missing for all codes | All psychoactive drugs |
| | Drug categories included: opioids and other narcotics (F11, T40); cannabis (F12, T40.7); sedatives, hypnotics, and antiepileptics (F13, T42); cocaine (F14, T40.5, R78.2); other stimulants (F15, T43.6); hallucinogens (F16, T40.8, T40.9); inhalants and inhaled or IV anesthetics (F18, T41); other psychoactive substances (F19, T43); unspecified and multiple drugs (certain T50.9 codes) |
| | Drug categories excluded: nicotine (F17), antibiotics (T36), anti-infectives and anti-parasitics (T37), hormones (T38), nonopioid analgesics, antipyretics, and antirheumatics (T39), local anesthetics (T41.3), unspecified psychotropic drugs (may be Lithium or Valproic Acid) (T43.9); autonomic nervous system drugs (T44), hematologic system drugs (T45), cardiovascular system drugs (T46), gastrointestinal system drugs (T47), muscular and respiratory system drugs (T48), topical drugs and ophthalmological, otorhinolaryngological and dental drugs (T49), diuretics and other specified drugs (T50, except T50.9 codes for unspecified or multiple drugs) |
| | Code categories included: drug abuse, uncomplicated (FXX.10); drug abuse, dependence, or use with intoxication or withdrawal (FXX [.12.13,.22,.23,.92,.93]); drug abuse, dependence or use with drug-induced mood, psychotic, or anxiety disorder (FXX [.14,.15,.180,.24,.25,.280,.94,.95,.980]); drug poisoning (specified T40-T43, T50, with 6th character 1-4); adverse effects of opioids (T40.XX5); specified drugs found in blood (R78.0-R78.4) |
| | Code categories excluded: drug dependence without intoxication (FXX.20); drug abuse or dependence in remission (FXX [.11,.21]); drug abuse, dependence or use with other or unspecified drug-induced disorders (specified FXX [.18,.19,.28,.29,.98,.99]); adverse effects of drugs, except opioids (TXX.XX5); underdosing of drugs (TXX.XX6); other psychotropic drugs found in blood (since may be Lithium or Valproic Acid)(R78.5-R78.9); injury, poisoning or other external causes complicating childbirth (O9A.2); drug use complicating pregnancy, childbirth, and the puerperium (O99.32); or long-term/current use of opiate analgesic (Z79.891) |

| Opioids | |
|---|--|
| ICD-10-CM Code | Description |
| F11[.10,.12-.15]; F11[.22-25]; F11[.90,.92-.95]; (T40.0-T40.4, and T40.6)[with 6th char 1-5]; R78.1; and a 7th char of A or missing for all codes | All opioid codes (There are no codes for opioid-induced anxiety disorders) |
| F11.10 | opioid abuse, uncomplicated |
| F11.12 | opioid abuse, with intoxication |
| F11.13 | opioid abuse, with withdrawal |
| F11.14 | opioid abuse, with opioid-induced mood disorder |
| F11.15 | opioid abuse, with opioid-induced psychotic disorder |
| F11.22 | opioid dependence, with intoxication |
| F11.23 | opioid dependence, with withdrawal |
| F11.24 | opioid dependence, with opioid-induced mood disorder |
| F11.25 | opioid dependence, with opioid-induced psychotic disorder |
| F11.90 | opioid use, unspecified |
| F11.92 | opioid use, unspecified, with intoxication |
| F11.93 | opioid use, unspecified, with withdrawal |
| F11.94 | opioid use, unspecified, with opioid-induced mood disorder |
| F11.95 | opioid use, unspecified, with opioid-induced psychotic disorder |
| T40.0 (with 6th char 1-5) | poisoning by or adverse effect of opium |
| T40.1 (with 6th char 1-5) | poisoning by or adverse effect of heroin |
| T40.2 (with 6th char 1-5) | poisoning by or adverse effect of other opioids |
| T40.3 (with 6th char 1-5) | poisoning by or adverse effect of methadone |
| T40.4 (with 6th char 1-5) | poisoning by or adverse effect of synthetic narcotics (e.g. fentanyl) |
| T40.6 (with 6th char 1-5) | poisoning by or adverse effect of other or unspecified narcotics |
| R78.1 | opiate drug in blood |
| Cannabis | |
| ICD-10-CM Code | Description |
| F12[.10,.12,.13,.15,.180]; F12[.22,.23,.25,.280]; F12[.90,.92,.93,.95,.980]; T40.7 (with 6th char 1-4); and a 7th char of A or missing for all codes | All cannabis codes (There are no codes for cannabis-induced mood disorder.) |
| F12.10 | Cannabis abuse, uncomplicated |
| F12.12 | Cannabis abuse, with intoxication |
| F12.13 | Cannabis abuse, with withdrawal |
| F12.15 | Cannabis abuse, with cannabis-induced psychotic disorder |
| F12.180 | Cannabis abuse, with cannabis-induced anxiety disorder |
| F12.22 | Cannabis dependence, with intoxication |
| F12.23 | Cannabis dependence, with withdrawal |
| F12.25 | Cannabis dependence, with cannabis-induced psychotic disorder |
| F12.280 | Cannabis dependence, with cannabis-induced anxiety disorder |
| F12.90 | Cannabis use, unspecified |
| F12.92 | Cannabis use, unspecified, with intoxication |
| F12.93 | Cannabis use, unspecified, with withdrawal |
| F12.95 | Cannabis use, unspecified, with cannabis-induced psychotic disorder |
| F12.980 | Cannabis use, unspecified, with cannabis-induced anxiety disorder |
| T40.7 (with 6th char 1-4) | Poisoning by cannabis |

| Stimulants | |
|---|---|
| ICD-10-CM Code | Description |
| (F14, F15) [.10,.12-.15,.180]; (F14, F15)[.22-.25,.280]; (F14, F15)[.90,.92-.95,.980]; (T40.5 and T43.6)[with 6th char 1-4]; R78.2; and a 7th char of A or missing for all codes | All stimulant codes |
| F14.10 | cocaine abuse, uncomplicated |
| F14.12 | cocaine abuse, with intoxication |
| F14.13 | cocaine abuse, with withdrawal |
| F14.14 | cocaine abuse, with cocaine-induced mood disorder |
| F14.15 | cocaine abuse, with cocaine-induced psychotic disorder |
| F14.180 | cocaine abuse, with cocaine-induced anxiety disorder |
| F14.22 | cocaine dependence, with intoxication |
| F14.23 | cocaine dependence, with withdrawal |
| F14.24 | cocaine dependence, with cocaine-induced mood disorder |
| F14.25 | cocaine dependence, with cocaine-induced psychotic disorder |
| F14.280 | cocaine dependence, with cocaine-induced anxiety disorder |
| F14.90 | cocaine use, unspecified |
| F14.92 | cocaine use, unspecified, with intoxication |
| F14.93 | cocaine use, unspecified, with withdrawal |
| F14.94 | cocaine use, unspecified, with cocaine-induced mood disorder |
| F14.95 | cocaine use, unspecified, with cocaine-induced psychotic disorder |
| F14.980 | cocaine use, unspecified, with cocaine-induced anxiety disorder |
| F15.10 | other stimulant abuse, uncomplicated |
| F15.12 | other stimulant abuse, with intoxication |
| F15.13 | other stimulant abuse, with withdrawal |
| F15.14 | other stimulant abuse, with other stimulant-induced mood disorder |
| F15.15 | other stimulant abuse, with other stimulant-induced psychotic disorder |
| F15.180 | other stimulant abuse, with other/unspecified stimulant-induced disorder |
| F15.22 | other stimulant dependence, with intoxication |
| F15.23 | other stimulant dependence, with withdrawal |
| F15.24 | other stimulant dependence, with other stimulant-induced mood disorder |
| F15.25 | other stimulant dependence, with other stimulant-induced psychotic disorder |
| F15.280 | other stimulant dependence, with other stimulant-induced anxiety disorder |
| F15.90 | other stimulant use, unspecified |
| F15.92 | other stimulant use, unspecified, with intoxication |
| F15.93 | other stimulant use, unspecified, with withdrawal |
| F15.94 | other stimulant use, unspecified, with other stimulant-induced mood disorder |
| F15.95 | other stimulant use, unspecified, with other stimulant-induced psychotic disorder |
| F15.980 | other stimulant use, unspecified, with other stimulant-induced anxiety disorder |
| T40.5 (with 6th char 1-4) | poisoning by cocaine |
| T43.6 (with 6th char 1-4) | poisoning by psychostimulants |
| R78.2 | cocaine in blood |

| Sedatives, Hypnotics, Anxiolytics & Antiepileptics | |
|--|--|
| F13[.10,.12-.15,.180]; F13[.22-.25,.280]; F13[.90,.92-.95,.980]; (T42.0-T42.6 & T42.8)[w/6th char 1-4]; T42.7[w/5th char 1-4]; and a 7th char of A or missing for all codes | All sedative, hypnotic, anxiolytic & antiepileptic codes |
| F13.10 | Sedative, hypnotic or anxiolytic (sed/hyp/anx) abuse, uncomplicated |
| F13.12 | sed/hyp/anx abuse, with intoxication |
| F13.13 | sed/hyp/anx abuse, with withdrawal |
| F13.14 | sed/hyp/anx abuse, with sed/hyp/anx-induced mood disorder |
| F13.15 | sed/hyp/anx abuse, with sed/hyp/anx-induced psychotic disorder |
| F13.180 | sed/hyp/anx abuse, with sed/hyp/anx-induced anxiety disorder |
| F13.22 | sed/hyp/anx dependence, with intoxication |
| F13.23 | sed/hyp/anx dependence, with withdrawal |
| F13.24 | sed/hyp/anx dependence, with sed/hyp/anx-induced mood disorder |
| F13.25 | sed/hyp/anx dependence, with sed/hyp/anx-induced psychotic disorder |
| F13.280 | sed/hyp/anx dependence, with sed/hyp/anx-induced anxiety disorder |
| F13.90 | sed/hyp/anx use, unspecified |
| F13.92 | sed/hyp/anx use, unspecified, with intoxication |
| F13.93 | sed/hyp/anx use, unspecified, with withdrawal |
| F13.94 | sed/hyp/anx use, unspecified, with sed/hyp/anx-induced mood disorder |
| F13.95 | sed/hyp/anx use, unspecified, with sed/hyp/anx-induced psychotic disorder |
| F13.980 | sed/hyp/anx use, unspecified, with sed/hyp/anx-induced anxiety disorder |
| T42.0 (with 6th char 1-4) | poisoning by hydantoin derivatives |
| T42.1 (with 6th char 1-4) | poisoning by iminostibenes |
| T42.2 (with 6th char 1-4) | poisoning by succinimides and oxazolidinediones |
| T42.3 (with 6th char 1-4) | poisoning by barbiturates |
| T42.4 (with 6th char 1-4) | poisoning by benzodiazepines |
| T42.5 (with 6th char 1-4) | poisoning by mixed antiepileptics |
| T42.6 (with 6th char 1-4) | poisoning by other antiepileptic and sedative-hypnotic drugs |
| T42.7 (with 5th char 1-4) | Poisoning by unspecified antiepileptic and sedative-hypnotic drugs |
| T42.8 (with 6th char 1-4) | Poisoning by antiparkinsonism drugs and other central muscle-tone depressants |
| Hallucinogens | |
| ICD-10-CM Code | Description |
| F16[.10,.12,.14,.15,.180]; F16[.22,.24,.25,.280]; F16[.90,.92,.94,.95,.980]; T40.8; T40.9(w/6th char 1-4); R78.3; and a 7th char of A or missing for all codes | All hallucinogen/psychodysleptics codes. (There are no withdrawal codes.) |
| F16.10 | hallucinogen abuse, uncomplicated |
| F16.12 | hallucinogen abuse, with intoxication |
| F16.14 | hallucinogen abuse, with hallucinogen-induced mood disorder |
| F16.15 | hallucinogen abuse, with hallucinogen-induced psychotic disorder |
| F16.180 | hallucinogen abuse, with other/unspecified hallucinogen-induced disorder |
| F16.22 | hallucinogen dependence, with intoxication |
| F16.24 | hallucinogen dependence, with hallucinogen-induced mood disorder |
| F16.25 | hallucinogen dependence, with hallucinogen-induced psychotic disorder |
| F16.280 | hallucinogen dependence, with other/unspecified hallucinogen-induced disorder |
| F16.90 | hallucinogen use, unspecified |
| F16.92 | hallucinogen use, unspecified, with intoxication |
| F16.94 | hallucinogen use, unspecified, with hallucinogen-induced mood disorder |
| F16.95 | hallucinogen use, unspecified, with hallucinogen-induced psychotic disorder |
| F16.980 | hallucinogen use, unspecified, with hallucinogen-induced anxiety disorder |
| T40.8 (with 6th char 1-4) | poisoning by lysergide (LSD) |
| T40.90 (with 6th char 1-4) | poisoning by unspecified psychodysleptics (hallucinogens) |
| T40.99 (with 6th char 1-4) | poisoning by other psychodysleptics |
| R78.3 | finding of hallucinogen in blood |

NOTES: These indicators were first drafted by Jeanne Hathaway in Nov. 2021 and updated in Feb. 2022. Materials reviewed in the process of creating these indicators were:

[The International Classification of Diseases, 10th Revision, Clinical Modification \(ICD-10-CM\) External Cause-of-Injury Framework for Categorizing Mechanism and Intent of Injury](#)

1) National Health Statistics Reports Number 136, Dec. 2019: The International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) External Cause-of-Injury Framework for Categorizing Mechanism and Intent of Injury. This was used to obtain codes for drug poisoning.

2) Draft SAS code for alcohol and drug indicators based on ICD-10-CM codes from the Colorado Department of Public Health and Environment, received on 3/25/21. Used to get initial categories and assign ICD-10-CM codes.

[CSTE Drug Overdose Indicator](#)

3) CSTE Drug Overdose Indicator. Used to see what ICD-10-CM codes were included in this overdose definition. Except for opioid and stimulant poisoning codes, we did not use this definition because it included many medications which are not generally considered psychoactive and it excluded key concepts, including intoxication, abuse, dependence, and drugs found in blood.

4) The website ICD10data.com (accessed in November 2021). This website was used to review and identify relevant codes and code ranges. Code descriptions were also obtained from information on this site. We used this website to search for the following terms in ICD-10-CM codes and reviewed all search findings for additional potential codes: "alcohol", "opioid", "cocaine", "stimulant", "sedative", and "hallucinogen".

[Modification to the 2014 Proposed ICD-10-CM external cause-of-injury matrix, as of October 1, 2021](#)

5) The National Center for Health Statistics table of Modifications made to the 2014 Proposed ICD-10-CM external cause-of-injury matrix, as of October 1, 2021. This table was reviewed to check for new drug poisoning codes or reassigned categories.

6) Alcohol/Drug Use Indicators based on ICD-9-CM codes developed by the Massachusetts (MA) Department of Public Health Injury Surveillance Program in 2018. See page 3 of Alcohol and Drug Involvement in MA Motor Vehicle Crashes, 2012-2015. These indicators were used to make sure the ICD-10-CM indicators included similar types of codes as the ICD-9-CM alcohol and drug indicators.

7) Drug and Alcohol Prevalence in Seriously and Fatally Injured Road Users Before and During the COVID-19 Public Health Emergency, 2020, link: <https://rosap.ntl.bts.gov/view/dot/50941>. This report was used to inform appropriate drug categories.

[Recommended CSTE Surveillance Indicators for Substance Abuse & Mental Health, 2019](#)

8) We used the 2019 report "Recommended CSTE Surveillance Indicators for Substance Abuse & Mental Health", recommended by Tom Largo, to help decide which types of drug categories and code types to include or exclude.

Additional input was sought from:

1) MA Department of Public Health MA Violent Death Reporting System (MAVDRS) and the State Unintentional Drug Overdose Reporting System (SUDORS) staff regarding the drug indicator definition and drug categories. Lauren suggested leaving out "withdrawal", but Katy (as a practicing MD) thought this should be in the ICD-9-CM alcohol/drug indicators, as patients in withdrawal likely used the substance recently before their admission. Providers are also more likely to document alcohol or drug withdrawal as a diagnosis, as that is what they would need to treat once the patient was hospitalized.

2) In Dec. 2021, Jonathan Bressler reviewed definition, compared it with literature, and reviewed accuracy of codes in definition and SAS code.

3) 1/18/22 - Consulted Hannah Yang in the Montana state health dept. about the rationale for not including F-codes in the CSTE ICD-10 CM poisoning definition. She thought the F-codes were excluded because injuries/poisonings were acute events, whereas F-codes "focused on the presence of an underlying substance use disorder, rather than an acute poisoning event". She thought it would be appropriate to include the F-codes in our alcohol and drug indicators, however.

4) 2/27/22 - Received feedback from Dan Leonard (Uillinois), Anna Waller (UNC), and Katie Harmon (UNC). Dan suggested having one broad indicator that included Y90 codes for BAC level below .08 and another more conservative indicator for BAC levels of .08+. Anna and Katie supported this suggestion. Jeanne suggested including generic "alcohol use" codes in the broad indicator. We agreed that it would be helpful to assess the frequency of the various codes.

5) 2/8/22 - Received input from Tom Largo, who was involved in the CSTE workgroups that created substance use indicators using ICD-9-CM and ICD-10-CM codes. (See 2019 report "Recommended CSTE Surveillance Indicators for Substance Abuse & Mental Health"). They focused on drugs viewed to have the potential for abuse and dependence. He noted that adverse effects were not included as its definition is adverse effects "when the drug is taken as prescribed". We therefore decided to exclude these codes. They did not consider inhalants to be drugs. They excluded some anti-epileptics, as the drugs were not included in the ICD-9-CM drug indicators. They did not look at R78.

6) 2/24/22 - Dr. Katy Rahilly-Tierney reviewed the ICD-10-CM indicators, ICD-9-CM indicators, CMS definitions, and 2019 report noted above. She supported inclusion of the following codes that were not included in the 2019 Substance Use Indicator report: F18 inhalants, as these include volatile gases that can be psychoactive; T42.1-2 anti-epileptics, as these drugs are psychoactive and have a depressant effect on the brain; and T50 unspecified drugs and multiple drugs, as these are unlikely to refer to prescribed medications. She recommended including adverse effects for opioids only, as common side effects for opioids affect cognition (delirium and drowsiness). She suggested excluding R78.5 - finding of other psychoactive drug in blood, as this could be Lithium or Valproic Acid, which do not have acute psychoactive effects. She also supported having conservative and broad definitions for the alcohol use indicator, with the broad definition to include F10.9 (alcohol use, unspecified), R78.0 (finding of alcohol in blood), Y90(.0-.3) (blood alcohol levels below 80 mg/100 mg), and Y90.9 (presence of alcohol in blood, level not specified).

7) 4/13/22 - Consulted Dr. Katy Rahilly-Tierney on inclusion of T42.0 (hydantoin derivatives), T42.5 (mixed antiepileptics), and T42.8 (antiparkinsonism drugs). Using CDC WONDER, she found that these 3 codes were associated with 456 deaths in the U.S. in 2018. We also identified that common side effects of hydantoin derivatives were drowsiness, fatigue, and loss of motor control, and side effects of antiparkinsonism drugs included hallucinations and confusion. T42.5 includes other antiepileptics that are included in the definition because they are psychoactive and have a depressant effect on the brain. We therefore decided to include these T42 categories, which results in the inclusion of all T42 poisoning codes.

8) 5/13/22 - Consulted Dr. Katy Rahilly-Tierney on inclusion of codes for drug-induced disorders. We decided to include drug-induced mood, psychotic, and anxiety disorders, as these are more likely to be acute conditions. We will exclude drug-induced sexual dysfunction and dementia, as these are more likely to be chronic conditions. We will also exclude other and unspecified drug-induced disorders, as these could be chronic psychiatric conditions exacerbated by drug use. There is some concern that coders could interpret "sleepiness" as a drug-induced sleep disorder, but we will exclude this code as well, since sleep disorders are usually chronic conditions.

9) 6/15/22 - Dr. Katy Rahilly-Tierney checked SAS code against ICD-10-CM alcohol and drug use definitions and found some ranges that included non-existent codes. SAS code and definitions were updated to remove non-existent codes.

Appendix B
MA Crash Data Indicators for Operating Under the Influence of Alcohol or Drugs,
Based on Specified Crash Data Fields and Violation Codes
Last updated 4/18/22

Law enforcement suspects alcohol or drug use (ALC_SUSPD_TYPE_CODE, DRUG_SUSPD_TYPE_CODE)

| Value | Description |
|-------|--------------------------------------|
| 1 | Law enforcement suspects alcohol use |
| | Law enforcement suspects drug use |

BAC test result (ALC_TEST_RESULT_CODE)

| | |
|---|------------------------|
| 5 | BAC of 0.08 or greater |
|---|------------------------|

Violation codes 1 - 8 (viol1 - viol8)

| Chapter and Section | Description | Text Found in VIOLX Fields (spaces removed) |
|--|---|--|
| MA Alcohol-related violation codes | | |
| 90/24A/A (added in 2018) | OUI Liquor, 9th offense | 9024AA |
| 90/24G/F | MV Homicide OUI-Liquor or .08 | 9024GF |
| 90/24G/G | MV Homicide OUI-Liquor or .08 & Neglig | 9024GG |
| 90/24G/H | MV Homicide OUI- Liquor or .08 & Reckless | 9024GH |
| 90/24I (no slash before "I") | Alcohol in MV, open container of | 9024I, 9024(I), 90/24I, 90S24I, C90S24I |
| 90/24/J | OUI Liquor OR .08 | 9024J, 90/24/J, 9024(J), 9024/J, 90/24J, 90249024J, C9024J |
| 90/24/K | OUI Liquor OR .08, 2 nd offense | 9024K, 9024/K, 9024(K), 90/24/K, C9024K, |
| 90/24/L | OUI Liquor OR .08, 3 rd offense | 9024L, 90/24L, 9024(L), 9024/L, 90/24/L, 90/24L, C9024L, C90S24L |
| 90/24L/D | OUI-Liquor or .08 & Serious Injury | 9024LD, 9024/LD, 90/24L/D |
| 90/24L/E | OUI-Liquor or .08 & Serious Injury & Neglig | 9024LE, 9024L/E, 90/24L/E |
| 90/24L/F | OUI-Liquor or .08 & Serious Injury & Reckless | 9024LF, 90/24L/F |
| 90/24/M | OUI Liquor OR .08, 4 th offense | 9024M, 9024/M, 90/24/M |
| 90/24/V | OUI Liquor OR .08, 5 th offense | 90/24V, 9024V, 9024/V, 90/24/V, CH90/S24/V |
| 90/24/X (added in 2018) | OUI Liquor, 6th offense | 9024X |
| 90/24/Y (added in 2018) | OUI Liquor, 7th offense | 9024Y |
| 90/24/Z (added in 2018) | OUI Liquor, 8th offense | |
| MA Drug-related violation codes | | |
| 90/24B/B V2(added in 2018) | OUI Drugs, 6th offense | |
| 90/24C/C (added in 2018) | OUI Drugs, 7th offense | |
| 90/24D/D (added in 2018) | OUI Drugs, 8th offense | 9024DD |
| 90/24E/E (added in 2018) | OUI Drugs, 9th offense | 9024EE |
| 90/24/F | OUI Drugs | 924F, 9024F, 90/24/F, 9024/F, 90/24F, C9024F, 9024(DRUGS |
| 90/24/G | OUI Drugs, 2 nd offense | 9024G, 9024/G, 90/24G, 90/24/G |
| 90/24G/C | MV Homicide OUI Drugs | 90/24G/C (not seen yet) |
| 90/24G/D | MV Homicide OUI-Drugs & Neglig | 90/24G/D (not seen yet) |
| 90/24G/E | MV Homicide OUI-Drugs & Reckless | 90/24G/E (not seen yet) |
| 90/24/H | OUI Drugs, 3 rd offense | 9024H, 90/24/H |
| 90/24/I (slash before "I") | OUI Drugs, 4 th offense | 9024/I, 90/24/I |
| 90/24L/A | OUI-Drugs & Serious Injury | 9024LA, 90/24L/A |
| 90/24L/B | OUI-Drugs & Serious Injury & Neglig | 9024LB, 90/24L/B |
| 90/24L/C | OUI-Drugs & Serious Injury & Reckless | 9024LC, 90/24L/C |
| 90/24/U | OUI Drugs, 5 th offense | 90/24/U |
| MA OUI violations, not specified whether alcohol or drugs (or code not clear) | | |
| 90/23/J | License Suspended for OUI, OUI while | 9023J, 9023/J, 90/23/J, 90/23J |
| 90/24V/A | Child Endangerment while OUI | 9024VA, 9024V/A, 90/24V/A, 9024V(A)(1, |
| 90/24V/B | Child Endangerment while OUI, subseq. offense | 90/24V/B (not seen yet) |
| 90/24/(1)(A)(1) | OUI of intoxicating substances | 9024(1), 90241, 90241A, 90241A1, 9024(1)(A), 90/24(1A), 90/241A, 90/24(1), 90/24/(1), 90/24/1A, 90/24(1)(A), 90/24(1)A, CH90/S241A1, 9024OUI, 90/24OUI, 9024OUICHI, 9024OUISE, 9024SERIOU, OUI9024, 9024L1, 9024L(1), 9024L(2), 9024VE, 9024VV |

Appendix C
Driver Record Indicators for Operating Under the Influence of Alcohol or Drugs
Based on Violation Codes in Section 2 MA and Out-of State Driver Records

Note: Driver records only include violations for which the driver was adjudicated as "guilty" or "responsible".

For surchargeable accident definition, see <https://www.mass.gov/info-details/surchargeable-incidents>. For NDR definition, see <https://www.mass.gov/service-details/out-of-state-suspensions-and-revocations>

| Violation Code and Description | Search terms in SAS code |
|---|---|
| 90/23/J - LICENSE SUSPENDED FOR OUI, OUI WHILE c90 §23 | "265/1312", "90/23/J", "90/24/F", "90/24/G", " |
| 90/24/F - OUI--DRUGS c90 §24(1)(a)(1) | 90/24/H", "90/24/I", "90/24/J", "90/24/K", "90/ |
| 90/24/F - OUI-DRUGS c90 §24(1)(a)(1) | 24/L", "90/24/M", "90/24G/D", "90/24G/F", "90 |
| 90/24/G - OUI-DRUGS, 2ND OFFENSE c90 §24(1)(a)(1) | /24G/G", "90/24G/H", "90/24I", "90/24L/A", "9 |
| 90/24/H - OUI-DRUGS, 3RD OFFENSE c90 §24(1)(a)(1) | 0/24L/B", "90/24L/C", "90/24L/D", "90/24L/E", |
| 90/24/I - OUI-DRUGS, 4TH OFFENSE c90 §24(1)(a)(1) | "90/24L/F", "90/24/V", "90/24V/A", "94G/13/E |
| 90/24/J - OUI--LIQUOR c90 §24(1)(a)(1) | ", "A08", "A10", "A11", "A12", "A20", "A21", "A22 |
| 90/24/J - OUI-LIQUOR OR .08% c90 §24(1)(a)(1) | ", "A23", "A24", "A25", "A26", "A35", "A60", "A61 |
| 90/24/K - OUI--LIQUOR, 2ND OFFENSE c90 §24(1)(a)(1) | ", "A90", "A91", "A98", "ADMIN PER SE", "CTR", |
| 90/24/K - OUI-LIQUOR OR .08%, 2ND OFFENSE c90 §24(1)(a)(1) | "YAP" |
| 90/24/L - OUI-LIQUOR OR .08%, 3RD OFFENSE c90 §24(1)(a)(1) | |
| 90/24/M - OUI LIQUOR, 4TH OFFENSE c90 §24 | |
| 90/24/M - OUI-LIQUOR OR .08%, 4th OR GREATER OFFENSE c90 §24(1)(a)(1) | |
| 90/24/V - OUI LIQUOR, 5TH OFFENSE c90 §24 | |
| 90/24/V - OUI-LIQUOR OR .08%, 5TH OFFENSE c90 §24(1)(a)(1) | |
| 90/24G/D - MOTOR VEH HOMICIDE OUI-DRUGS & NEGLIG c90 §24G(a) | |
| 90/24G/F - MOTOR VEH HOMICIDE OUI-LIQUOR OR .08% c90 §24G(b) | |
| 90/24G/G - MOTOR VEH HOMICIDE OUI--LIQUOR OR .08% & NEGLIGENT c90 §24G(a) | |
| 90/24G/G - MOTOR VEH HOMICIDE OUI-LIQUOR OR .08% & NEGLIGENT c90 §24G(a) | |
| 90/24G/H - MOTOR VEH HOMICIDE OUI--LIQUOR & RECKL c90 §24G(a) | |
| 90/24G/H - MOTOR VEH HOMICIDE OUI-LIQUOR OR .08% & RECKLESS c90 §24G(a) | |
| 90/24I - ALCOHOL FROM OPEN CONTAINER IN MV, DRINK | |
| 90/24I - ALCOHOL FROM OPEN CONTAINER IN MV, DRINK c90 §24I | |
| 90/24I - ALCOHOL IN MV, POSSESS OPEN CONTAINER OF * c90 §24I | |
| 90/24L/A - OUI-DRUGS & SERIOUS INJURY c90 §24L(2) | |
| 90/24L/B - OUI-DRUGS & SERIOUS INJURY & NEGLIGENT c90 §24L(1) | |
| 90/24L/C - OUI-DRUGS & SERIOUS INJURY & RECKLESS c90 §24L(1) | |
| 90/24L/D - OUI--LIQUOR & SERIOUS INJURY c90 §24L(2) | |
| 90/24L/D - OUI--LIQUOR OR .08% & SERIOUS INJURY c90 §24L(2) | |
| 90/24L/D - OUI-LIQUOR OR .08% & SERIOUS INJURY c90 §24L(2) | |
| 90/24L/E - OUI-LIQUOR OR .08% & SERIOUS INJURY & NEGLIGENT c90 §24L(1) | |
| 90/24L/F - OUI-LIQUOR OR .08% & SERIOUS INJURY & RECKLESS c90 §24L(1) | |
| 90/24V/A - CHILD ENDANGERMENT WHILE OUI c90 §24V | |
| 94G/13/E - OPEN CONTAINER MARIJUANA IN VEHICLE c94G §13(d) | |
| A08 - DUI WITH BAC >=.08 | |
| A10 - DUI WITH BAC >=.10 | |
| A11 - DUI W/BAC >=._ (DTL REQ) | |
| A12 - REFUSED TO TEST (ALCOHOL) | |
| A20 - DUI OF ALCOHOL OR DRUGS | |
| A21 - DUI OF ALCOHOL | |
| A22 - DUI OF DRUGS | |
| A23 - DUI OF ALCOHOL AND DRUGS | |
| A24 - DUI OF MEDICATION | |
| A25 - DRIVING WHILE IMPAIRED | |
| A26 - DRINKING WHILE DRIVING | |
| A35 - POSSESS OF OPN CONTAINER | |
| A60 - UNDERAGE DUI BAC >=.02 | |
| A61 - UNGE ADMIN DUI BAC >=.02 | |
| A90 - ADMIN PER SE BAC >=.10 | |
| A91 - ADMIN PER SE | |
| A98 - ADMIN PER SE | |
| ADMIN - ADMIN PER SE | |
| CTR - CHEMICAL TEST REFUSAL | |
| YAP - YOUTH ALCOHOL (suspension for underage OUI) | |