

CSTE ICD-10-CM Drug Poisoning Indicators Workgroup Working Document

Background

Effective October 1, 2015 the US Department of Health and Human Services, Center for Medicare and Medicaid Services required a switch of morbidity coding in the United States from the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) to the International Classification of Diseases, Ten Revision, Clinical Modification (ICD-10-CM). This change was made for a number of reasons, including the updating of outdated medical terminology, increasing the specificity of disease and injury descriptions, and revising the structure to facilitate future expansion. These changes resulted in an increase in the number of chapters from 17 to 21, and in the number of current codes from about 14,000 to 68,000. Consequently, there is no simple crosswalk to translate codes used for surveillance from ICD-9-CM to ICD-10-CM.

This document is a comparison of the drug poisoning morbidity indicators recommended by the CDC in 2016, and the drug-related morbidity indicators recommended in a June 2016 CSTE white paper. It is the initial step in a project to examine the validity and functioning of the proposed indicators, and to provide recommendations for their use.

As a result, epidemiologists from organizations including CSTE, the Safe States Alliance and the National Center for Health Statistics in the Centers for Disease Control and Prevention (CDC) issued guidance documents to assist states and local jurisdictions with implementing the switch to ICD-10-CM. In the fall of 2016, CSTE created the CSTE Injury ICD-10-CM Transition Workgroup to use this guidance to explore state-level data. This new group met in Atlanta in November 2016 to develop a plan for coordinating a multi-jurisdictional exploration of the ICD-10-CM injury codes. Over 40 epidemiologists and other health professionals were in attendance, with other attendees joining virtually. This group has continued to meet by webinars twice monthly. One of the early outcomes of these meetings was a desire to work with two CSTE entities that have worked specifically on the development of drug indicators and are facing challenges due to the transition to ICD-10-CM coding: the CSTE Workgroup on Surveillance Indicators for Substance Abuse and Mental Health (SAMH), and the CSTE Alcohol and Other Drug Subcommittee (AOD).

The SAMH Workgroup was formed in June 2015 with the goal of developing a set of surveillance indicators that could be generated by most jurisdictions. The final product was a white paper that listed 18 indicators in three categories: alcohol, other drugs, and mental health. The other drugs category includes five indicators, including hospitalization rates associated with all drugs with potential for abuse and related sub-indicators associated with specific drugs. A CSTE Position Statement recommending the collection of these indicators was presented and approved at the 2016 CSTE Annual Conference in Anchorage, Alaska.

The AOD Subcommittee was formed in 2010 with the mission of developing indicators for hospitalizations due to alcohol and other drugs. After several years of work and discussion, they finalized a list of ICD-9-CM based indicators for hospitalizations associated with alcohol, and a list for

hospitalizations associated with other drugs with the potential for abuse or dependence. Much of the effort revolved around defining which codes were specific enough to conclude that they had the potential for abuse or dependence. The list of recommended ICD-9-CM indicators for other drugs was ultimately adopted by the SAMH Workgroup for their indicator. Most recently, the AOD Subcommittee has been working on translating the ICD-9-CM codes used in these indicators into ICD-10-CM codes, and conducting analyses of these codes as a validity check. The draft list of ICD-10-CM codes was completed in March 2017.

In addition to the drug-related hospitalization indicators discussed above, the CDC has developed six overdose morbidity indicators required to be reported by Prevention for States (PfS) and Data Driven Prevention Initiative (DDPI) awardees. The six indicators were originally released as part of the “Prevention for States Opioid Overdose Support Toolkit” in July of 2016. In March of 2017, the CDC released toolkit Version 2.0, “CDC’s Opioid Overdose Indicator Support Toolkit,” along with a provisional transition guidance document with proposed ICD-10-CM codes for each of the 6 indicators. At the present time, the guidance includes overall drug poisoning indicators and opioid overdose sub-indicators for both emergency department and hospital discharge data. The six indicators are “All drug overdose emergency department visits,” “Emergency department visits involving opioid overdose excluding heroin,” “Emergency department visits involving heroin overdose,” “All drug overdose hospitalizations” “Hospitalizations involving opioid overdose excluding heroin,” and “Hospitalizations involving heroin overdose.”

Initial Findings

This first phase of the CSTE ICD-10-CM Drug Poisoning Indicators Workgroup project is an examination of the differences between the current CSTE and PfS/DDPI indicators. Among the major differences are: the PfS/DDPI indicators include both hospitalizations and emergency department visits, whereas the CSTE indicators include only hospitalizations; the PfS/DDPI indicators include only overdose/poisonings, compared to the CSTE indicators which also include hospitalizations for drug abuse and dependence, mental and behavioral disorders due to psychoactive drug use, and drug-related problems related to pregnancy or childbirth; the PfS/DDPI overall indicator includes all poisonings related to drugs, medicinals and biologics, whereas the poisoning codes in the CSTE overall indicator are limited to substances with the potential for abuse or dependency; the PfS/DDPI sub-indicators are limited to opioid poisonings, compared to the CSTE indicators which also include cocaine, benzodiazepines and amphetamines.

These differences are displayed in the summary comparison below, with details in the following numbered tables.

Summary comparison of the PFS/DDPI and CSTE SAMH Workgroup/AOD Subcommittee recommended indicators

	PFS/DDPI recommendations	CSTE recommendations
Purpose of recommendations	Surveillance of all poisonings by drugs, medicinals and biological substances within the injury hospitalization category	Surveillance of hospitalizations attributed to or associated with drugs with potential for abuse or dependence
Breadth of the relevant codes for the overall indicator	Very broad within the poisoning categories (ICD-9-CM 960-979 and E850-858; ICD-10-CM T36-T50)	More focused on drugs of abuse within the poisoning category. Also includes codes in mental health disorder, drug-dependency, and pregnancy/newborn categories.
Includes: ICD-9-CM hospital codes ICD-10-CM hospital codes ICD-9-CM ED codes ICD-10-CM ED codes	YES YES YES (same as hospital codes) YES (same as hospital codes)	YES (SAMH & AOD) YES (AOD) NO NO
Sub-indicators (poisoning): Heroin poisoning Other opioid poisoning Cocaine poisoning Benzodiazepine poisoning Amphetamine poisoning	YES (same as CSTE) YES (same as CSTE) NO NO NO	YES (same as PFS/DDPI) YES (same as PFS/DDPI) YES YES YES
Sub-indicators (dependency and abuse): Cocaine depend/abuse Opioid dependence/abuse	NO NO	Both included in ICD-9-CM for overall and sub-indicators. Currently included in ICD-10-CM for overall, but not recommended for sub-indicators
ICD-9-CM Diagnostic codes	Principal diagnostic code OR first listed E-code	AOD same as PFS/DDPI SAMH lists include two options: (A) Principal code OR first listed E-code (B) Any diagnoses codes OR E-code listed
ICD-10-CM Diagnostic codes	Principal diagnostic code	AOD: Principal diagnostic code SAMH: NA

List of Numbered Tables

Table 1a. Overall Drug-Related Hospitalization Indicators: ICD-9-CM Diagnostic Codes

Table 1b. Overall Drug-Related Hospitalization Indicators: ICD-9-CM External Cause of Injury Codes

NOTE: For both sets of recommendations, a case is defined as having a principal diagnosis of one of the IDC-9-CM codes in table 1a OR a first-listed E-code in table 1b.

Table 2. Drug Hospitalization Sub-indicators: ICD-9-CM Diagnostic and E-codes

Table 3. Overall Drug-Related Hospitalization Indicators: ICD-10-CM Codes

Table 4. Drug Hospitalization Sub-indicators: ICD-10-CM Codes

Table 1a. Overall Drug-Related Hospitalization Indicators: ICD-9-CM Codes

Disease category	PfS/DDPI	CSTE Workgroup
Drug-induced mental disorders		292.0 Drug Withdrawal
Drug dependence .x0 unspecified .x1 continuous .x2 episodic .x3 in remission	NA	304(.00-.03) Opioid 304(.10-.13) Sedative, hypnotic, anxiolytic 304(.20-.23) Cocaine 304(.30-.33) Cannabis 304(.40-.43) Amphetamine 304(.50-.53) Hallucinogen 304(.60-.63) Other specified 304(.70-.73) Combo opioid and other 304(.80-.83) Combo except opioid 304(.90-.93) Unspecified
Non-dependent use of drugs .x0 unspecified .x1 continuous .x2 episodic .x3 in remission	NA	305(.20-.23) Cannabis 305(.30-.33) Hallucinogen 305(.40-.43) Sedative, hypnotic, anxiolytic 305(.50-.53) Opioid 305(.60-.63) Cocaine 305(.70-.73) Amphetamine 305(.80-.83) Antidepressant 305(.90-.93) Other, mixed, unspecified
Conditions in mothers complicating pregnancy	NA	648(.30-.34) Drug dependence of mother .30 unspecified .31 delivered .32 delivered w p/p complication .33 antepartum condition .34 postpartum condition

Fetus or newborn affected by maternal condition	NA	760.72 Narcotics 760.73 Hallucinogens 760.75 Cocaine 779.5 Drug withdrawal in newborn

Table 1a. Overall Drug-Related Hospitalization Indicators: ICD-9-CM Codes (continued)

Disease category	PfS/DDPI	CSTE Workgroup
Poisoning by drugs, medicinal and biological substances	960 - 979 (all 184 codes)	965.00 Opium, unspecified 965.01 Heroin 965.02 Methadone 965.09 Other opiates 967.0 Barbiturates 967.1 Chloral hydrate 967.2 Paraldehyde 967.3 Bromine compound 967.4 Methaqualone 967.5 Glutethimide 967.6 Mixed sedative 967.8 Other sedative/hypnotic NEC 967.9 Unspecified sedative/hypnotic 969.4 Benzodiazepine-based tranquilizers 969.6 Psychodysleptics (hallucinogens) 969.70 Unspecified psychostimulants 969.71 Caffeine 969.72 Amphetamines 969.73 Methylphenidate 969.9 Other psychostimulant 970.81 Cocaine

Table 1b. Overall Drug-Related Hospitalization Indicators: ICD-9-CM External Cause of Injury Codes

External Cause Category	PfS/DDPI	CSTE Workgroup
<u>Accidental</u> Poisoning by drugs, medical substances and biologicals	E850 - E858 (all 50 codes)	E850.0 Heroin E850.1 Methadone E850.2 Other opiates and related narcotics E851 Barbiturates E852.0 Chloral hydrate E852.1 Paraldehyde E852.2 Bromine compound E852.3 Methaqualone E852.4 Glutethimide E852.5 Mixed sedative NEC E852.8 Other sedative NEC E852.9 Unspecified sedative E853.2 Benzodiazepine-based tranquilizers E854.1 Psychodysleptics E854.2 Psychostimulants
<u>Suicide</u> and self-inflicted poisoning by solid or liquid substance	E950.0 Analgesics E950.1 Barbiturates E950.2 Sedatives/hypnotics E950.3 Psychotropic agents E950.4 Other specified drug E950.5 Unspecified drug	E950.1 Barbiturates E950.2 Sedatives/hypnotics
<u>Assault</u> by drugs and medicinal substances	E962.0 Drugs and med agents	NA

Poisoning by solid or liquid substances <u>undetermined</u> whether accidentally or purposely inflicted	E980.0 Analgesics E980.1 Barbiturates E980.2 Sedative/hypnotic NEC E980.3 Psychotropics E980.4 Medical agent NEC E980.5 Unspecified med agent	E980.1 Barbiturates E980.2 Other sedative/hypnotic
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Table 2. Drug Hospitalization Sub-indicators: ICD-9-CM and ICD-9-CM E-codes

Sub-indicator	PfS/DDPI	CSTE Workgroup
Poisoning by heroin	965.01 Heroin OR	965.01 Heroin OR
	E850.0 Accidental poisoning: heroin	E850.0 Accidental poisoning: heroin
Poisoning by opioids other than heroin	965.00 Opium 965.02 Methadone 965.09 Other opiates/narcotics OR	965.00 Opium 965.02 Methadone 965.09 Other opiates/narcotics OR
	E850.1 Accidental: methadone E850.2 Accidental: other opiates	E850.1 Accidental: methadone E850.2 Accidental: other opiates
Poisoning by Cocaine	NA	970.81 Cocaine
Poisoning by Benzodiazepine-based tranquilizers	NA	969.4 Benzodiazepine-based tranquilizers OR
		E853.2 Benzodiazepine-based tranquilizers
Poisoning by Amphetamines	NA	969.72 Amphetamine
Cocaine abuse or dependence	NA	304.2 Cocaine dependence 305.6 Cocaine abuse
Opioid abuse or dependence	NA	304.0 Opioid dependence 304.7 Opioid & other drug depend 305.5 Opioid abuse

Table 3. Overall Drug-Related Hospitalization Indicators: ICD-10-CM Codes

Category	PfS/DDPI	CSTE AOD Subcommittee
Mental and behavioral disorders due to psychoactive substance use	NA	F11 Opioid-related disorders F12 Cannabis-related disorders F13 Sedative, hypnotic, anxiolytic disorders F14 Cocaine-related disorders F15 Other stimulant-related disorders F16 Hallucinogen-related disorders F19 Other psychoactive substance disorders
Drug use complicating pregnancy, childbirth, and the puerperium	NA	O99.32 Drug use complicating pregnancy, childbirth, and the puerperium
Newborn affected by maternal factors	NA	P04.4 Newborn affected by maternal use of drugs of addiction
Other conditions originating in the perinatal period	NA	P96.1 Neonatal withdrawal symptoms from maternal use of drugs of addiction
Poisoning by drugs, medicaments and biological substances*	T36-T50 All drugs, medicaments and biological substances	T40.0-T40.9 Opioids, other narcotics, cocaine, cannabis and hallucinogens T42.3 Barbiturates T42.4 Benzodiazepines T42.6 Antiepileptics & sedatives/hypnotics T42.7 Unspecified antiepileptics & sedatives/hypnotics T43.6 Psychostimulants
* For both recommended lists, T codes (the 5 th or 6 th character) are restricted to intention (external cause of injury) codes of 1 (accidental/unintentional), 2 (intentional self-harm), 3 (assault), and 4 (undetermined). 5 th or 6 th character of 5 (adverse effect) and 6 (underdosing) are excluded.		

Additionally the 7th character, representing the encounter, is limited to A (initial encounter) and D (subsequent encounter). 7th character of S (sequela) is excluded.

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Table 4. Drug Hospitalization Sub-indicators: ICD-10-CM Codes

Sub-indicator	PfS/DDPI	CSTE Workgroup*
Poisoning by heroin	T40.1X1 Accidental (unintentional) T40.1X2 Intentional self-harm T40.1X3 Assault T40.1X4 Undetermined intent	T40.1X1 Accidental (unintentional) T40.1X2 Intentional self-harm T40.1X3 Assault T40.1X4 Undetermined intent
Poisoning by opioids other than heroin	T40.0X Opium T40.2X Other opioids T40.3X Methadone T40.4X Synthetic narcotics T40.60 Unspecified narcotics T40.69 Other narcotics	T40.0X Opium T40.2X Other opioids T40.3X Methadone T40.4X Synthetic narcotics T40.60 Unspecified narcotics T40.69 Other narcotics
	AND a 6th character of 1, 2, 3, or 4.	AND a 6th character of 1, 2, 3, or 4.
Poisoning by Cocaine	NA	T40.5X1 Accidental (unintentional) T40.5X2 Intentional self-harm T40.5X3 Assault T40.5X4 Undetermined intent
Poisoning by Benzodiazepine	NA	T42.4X1 Accidental (unintentional) T42.4X2 Intentional self-harm T42.4X3 Assault T42.4X4 Undetermined intent
Poisoning by Amphetamines	NA	T43.621 Accidental (unintentional) T43.622 Intentional self-harm T43.623 Assault T43.624 Undetermined intent
	NA	NA

Cocaine abuse or dependence		
Opioid abuse or dependence	NA	NA
* For both lists, the 7 th character, representing the encounter, is limited to A (initial encounter) and D (subsequent encounter). 7 th character of S (sequela) is excluded.		