



## **Rhode Island Enhanced State Opioid Overdose Surveillance (ESOOS) Case Definition for Emergency Medical Services (EMS)**

### **Background**

Since January 1, 2014, Rhode Island Emergency Medical Services (EMS) has required its 88 licensed services to enter data electronically into National EMS Information System (NEMSIS), a project of National Highway and Traffic in Utah. In October 2016, Rhode Island EMS throughout the state began the upgrade from NEMSIS version 2.2.1 to version 3.4. A majority of services completed the transition by January 1, 2017. Some services are still using the older version and others are unable to submit data due to third party coding updates. Rhode Island vendor ImageTrend manages approximately 75% of services, while seven or eight services use a third-party vendor.

### **Case Definition**

The Rhode Island ESOOS program defines an overdose-related EMS run according to criteria demonstrated in Tables 1 and 2. Criteria are separate for NEMSIS version 2.2.1 and version 3.4 based on three main categories: (1) primary/secondary impression; (2) overdose term in narrative or chief complaint; and (3) and Narcan<sup>®</sup> given (administration of naloxone as indicated by “Medication Administered” field, mention in narrative, or chief complaint).

It should be noted that per this definition, administration of naloxone alone - without primary/secondary impression of drug overdose and without overdose term in narrative or chief complaint- does not indicate overdose unless it is indicated that the patient improved or medication response is not indicated and a specific search term is found in the narrative or chief complaint. Administration of naloxone is allowed as per Rhode Island EMS protocol and standard orders for altered mental status and if drug ingestion is suspected or unknown.

### **Interpretation of Case Definition Tables**

An EMS run is considered an overdose according to the three main criteria as indicated by checkboxes across each row. For example, in NEMSIS version 2.2.1, if an EMS run has a checkmark under the primary/secondary impression category, a checkmark under the overdose term in narrative or chief complaint category, and a checkmark under the Narcan<sup>®</sup> given category is considered a drug overdose-related EMS run.

**Table 1: NEMESIS Version 2.2.1**

Excludes patient disposition of "Dead at Scene" and "No Treatment Required" and the following patient dispositions if naloxone was not administered (per medication given or mention in chief complaint or narrative): "Patient Refused Care and/or Transport," "Treated and Refused Transport," "Transported, Treatment by Other Agency," "Treated, Transferred Care," and "Standby Only – No Patient Contacts."

Primary/Secondary Impression	Overdose Term in Narrative or Chief Complaint	Narcan® Given
<b>DRUG OVERDOSE</b>		
EMS run is considered a drug overdose if the following criteria are met:		
Primary OR Secondary Impression (dropdown) is: <ul style="list-style-type: none"> <li>Overdose – Drug/Medication</li> <li>Overdose – Inhalant</li> <li>Poisoning/Drug Ingestion</li> </ul>	Narrative OR Chief Complaint contains one of the following strings: <ul style="list-style-type: none"> <li>Overdose, opioid, opiate, opium, fentanyl, heroin, heroin, speedball, speed ball, spheroin, hod</li> </ul> Or, one of the following words: <ul style="list-style-type: none"> <li>OD, O.D., O/D, OD/, ODED, HOD</li> </ul>	Narcan® listed as Medication Administered OR narrative or chief complaint contains one of the following strings: <ul style="list-style-type: none"> <li>Narcan®</li> <li>Naloxone</li> </ul>
✓	✓	✓
✓	✓	✓
✓	✓	✓
	✓	✓
		✓ <i>(ONLY if Medication Response indicates that patient "Improved" OR Medication Response does not indicate "Unchanged" or "Worse" and one of the following terms is found in the narrative or chief complaint: white powder; syringes; drug paraphernalia; drug paraphernalia; more responsive; began breathing; more alert; loc improved; improved loc; improvement in loc; positive response to Narcan®)</i>
<b>OPIOID OVERDOSE</b>		
EMS run is considered an opioid overdose if the following criteria are met:		
Primary OR Secondary Impression (dropdown) is: <ul style="list-style-type: none"> <li>Overdose – Drug/Medication</li> <li>Overdose – Inhalant</li> <li>Poisoning/Drug Ingestion</li> </ul>	Narrative OR Chief Complaint contains one of the following strings: <ul style="list-style-type: none"> <li>Opioid, opiate, opium, fentanyl, heroin, heroin, speedball, speed ball, spheroin</li> </ul> Or, one of the following words: <ul style="list-style-type: none"> <li>hod</li> </ul>	Narcan® listed as Medication Administered OR narrative or chief complaint contains one of the following strings: <ul style="list-style-type: none"> <li>Narcan®</li> <li>Naloxone</li> </ul>
✓	✓	✓
✓	✓	✓
✓	✓	✓
	✓	✓
		✓ <i>(ONLY if Medication Response indicates patient improved OR patient meets criteria for DRUG OVERDOSE)</i>
<b>HEROIN OVERDOSE</b>		
EMS run is considered a heroin overdose if the following criteria are met:		
Primary OR Secondary Impression (dropdown) is: <ul style="list-style-type: none"> <li>Overdose – Drug/Medication</li> <li>Overdose – Inhalant</li> <li>Poisoning/Drug Ingestion</li> </ul>	Narrative OR Chief Complaint contains one of the following strings: <ul style="list-style-type: none"> <li>Heroin, heroin, speedball, speed ball, spheroin,</li> </ul> Or, one of the following words: <ul style="list-style-type: none"> <li>hod</li> </ul>	Narcan® listed as Medication Administered OR narrative or chief complaint contains one of the following strings: <ul style="list-style-type: none"> <li>Narcan®</li> <li>Naloxone</li> </ul>
✓	✓	✓
✓	✓	✓
	✓	✓

Note: Primary and secondary impression in version 2.2.1 are not specific to opioid/heroin. Data are unduplicated by incident number, vehicle unit number, and agency name. Data for CDC submission include runs among individuals ages 11 years or older, and excludes the following type of service requests: (v2.2.1) Interfacility Transfer (Scheduled), Interfacility Transfer (Unscheduled), Medical Transport, Standby, Transport to Dialysis Facility, and (v3.4) Bariatric Transport or Special Equip, Interfacility Transport (Emergent), Interfacility Transport (Routine), Medical Transport (other), Public Assistance/Other Not Listed, Service Call Lift Move, and Standby.

**Table 2: NEMSIS Version 3.4**

Excludes patient disposition of "Patient Dead at Scene-No Resuscitation Attempted (DOA)," "Canceled on Scene (No Patient Contact)," "Patient Evaluated, No Treatment/Transport Required," and the following patient dispositions if Narcan® was not administered (per medication given or mention in chief complaint or narrative): "Patient Refused Care/Transport," "Standby-Public Safety, Fire, or EMS Operational Support Provided," and "Treated, Transferred Care to Another EMS Unit."

Primary/Secondary Impression	Overdose Term in Narrative or Chief Complaint	Narcan® Given
<p><b>DRUG OVERDOSE</b> EMS run is considered a drug overdose if the following criteria are met:</p>		
<p>Primary Impression (drop-down) is:</p> <ul style="list-style-type: none"> <li>• Stimulant related disorders (non-cocaine) (F15);</li> <li>• Opioid-related disorders (F11);</li> <li>• Opioid abuse with intoxication, uncomplicated (F11.120);</li> <li>• Hallucinogen related disorders (F16);</li> <li>• Cocaine related disorders (F14);</li> <li>• Sedative, hypnotic or anxiolytic related disorders (F13);</li> <li>• Inhalant related disorders (F18)</li> <li>• Other psychoactive substance related disorders (F19);</li> <li>• Other psychoactive substance abuse, uncomplicated (F19.10)</li> <li>• Poisoning by other opioids, accidental (unintentional) (T40.2X1);</li> <li>• Poisoning by amphetamines, accidental (unintentional) (T43.291);</li> <li>• Poisoning by heroin, undetermined (T40.1X4);</li> <li>• Poisoning by other antidepressants, accidental (unintentional) (T43.291);</li> <li>• Poisoning by other drugs, medicaments and biological substances, accidental (unintentional) (T50.991);</li> <li>• Poisoning by other narcotics, accidental (unintentional) (T40.691);</li> <li>• Poisoning by unspecified drugs, medicaments and biological substances, undetermined (T50.904)</li> </ul> <p>OR Secondary Impression (multi-select) contains one of the following:</p> <ul style="list-style-type: none"> <li style="width: 50%;">• Opioid</li> <li style="width: 50%;">• Inhalant</li> <li style="width: 50%;">• Stimulant</li> <li style="width: 50%;">• Psychoactive</li> <li style="width: 50%;">• Hallucinogen</li> <li style="width: 50%;">• Heroin</li> <li style="width: 50%;">• Cocaine</li> <li style="width: 50%;">• Other drugs</li> <li style="width: 50%;">• Sedative</li> <li style="width: 50%;">• Unspecified drugs</li> </ul>	<p>Narrative OR Chief Complaint contains one of the following strings:</p> <ul style="list-style-type: none"> <li>• Overdose, opioid, opiate, opium, fentanyl, heroin, speedball, speed ball, spheroin</li> </ul> <p>Or, one of the following words:</p> <ul style="list-style-type: none"> <li>• OD, O.D., O/D, OD/, ODED, hod</li> </ul>	<p>Narcan® listed as Medication Administered OR narrative/chief complaint contains one of the following strings:</p> <ul style="list-style-type: none"> <li>• Narcan®</li> <li>• Naloxone</li> </ul>
✓	✓	✓
✓	✓	
✓		✓
	✓	✓
		<p style="text-align: center;">✓</p> <p><i>(ONLY if Medication Response indicates that patient "Improved" OR Medication Response does not indicate "Unchanged" or "Worse" and one of the following terms is found in the narrative or chief complaint: white powder; syringes; drug paraphernalia; drug paraphernalia; more responsive; began breathing; more alert; loc improved; improved loc; improvement in loc; positive response to Narcan®)</i></p>

