

06-EH-01

Committee: Environmental Health

Title: Proposal to Adopt Amended Surveillance Definition for Hazardous Substances Emergency Events Surveillance

Statement of the Problem:

Use of surveillance definitions is critical to the analysis of surveillance data for comparison among reporting jurisdictions and over time. Surveillance definitions are intended to provide guidance to states interested in conducting surveillance for these conditions, and to promote uniform reporting of cases and events at the local, state, and national level.

The surveillance definition for Hazardous Substances Emergency Events Surveillance (HSEES) was previously approved by the CSTE at the 1998 annual meeting. Some limitations with the case definition were identified by an Agency for Toxic Substances and Disease Registry (ATSDR) Peer Review of the HSEES program in January 2005. The major limitations identified were that eligibility was based on “federal, state and local laws”, which varied among the states and that events resulting in injury and evacuation occur below these regulatory thresholds quite often.

HSEES staff and state program partners formed a workgroup to develop a more sensitive, simplified, and consistent case definition in the summer/fall of 2005. For the purposes of capturing events resulting in injury or public health impact at low levels, the HSEES mandatory reporting list was developed. The new definition was shared with stakeholders for input and then ratified by all HSEES states. The new definition went into effect January 1, 2006.

Statement of the desired action(s) to be taken:

CSTE approval of the revised HSEES case definition.

Old HSEES case definition:

Hazardous substances emergency events are defined as sudden uncontrolled or illegal releases or threatened releases of at least one hazardous substance or the hazardous by-product of a substance. A substance is considered hazardous if it might reasonably be expected to cause adverse human health outcomes.

Definite:

- There was a release of at least one hazardous substance and the amount released had to be removed, cleaned up, or neutralized according to federal, state, or local law, or
- There was a threatened release of at least one hazardous substance in an amount that would have had to be removed, cleaned up, or neutralized according to federal, state or local law and the threat led to an action (for example, an evacuation) that could have affected the health of employees, responders, or the general public.

Suspected:

- There was a release of at least one hazardous substance, but there was insufficient information to judge whether the amount released had to be removed, cleaned up, or neutralized according to federal, state, or local law, or
- There was a threatened releases of at least one hazardous substance that led to an action (for example, and evacuation) that could have affected the health of employees, responders, or the general public, but there was insufficient information to judge whether the amount of hazardous substance that might have been released had to be removed, cleaned up, or neutralized according to federal, state, or local law.

Revised HSEES case definition:

Hazardous substances emergency events are defined as sudden uncontrolled or illegal releases or threatened releases of at least one hazardous substance or the hazardous by-product of a substance. A substance is considered hazardous if it might reasonably be expected to cause adverse human health outcomes (except petroleum, when petroleum is the only substance released).

Case Classification

Confirmed:

- There was a release of at least one hazardous substance, in any amount for substances listed on the HSEES Mandatory Chemical Reporting List, or if not on the list, in an amount greater than or equal to 10 pounds or 1 gallon, or
- There was a threatened release of at least one hazardous substance, in any amount for substances listed on the HSEES Mandatory Chemical Reporting List, or if not on the list, in an amount greater than or equal to 10 pounds or 1 gallon AND the threat led to a public health action (for example, an evacuation).

Suspected:

- There was a release of at least one hazardous substance not on the mandatory

reporting list, but there was insufficient information to judge whether the amount was greater than or equal to 10 pounds or 1 gallon, or

- There was a threatened release of at least one hazardous substance, and that threat led to a public health action (for example, an evacuation), but there was insufficient information to judge whether the amount threatened was greater than or equal to 10 pounds or 1 gallon.

Comment

Currently HSEES is funded in 15 states by competitive awards with the Agency for Toxic Substance and Disease Registry (ATSDR) and Coordinating Office of Terrorism Preparedness and Emergency Response (COTPER) of the Centers for Disease Control and Prevention (CDC). Since petroleum products are excluded from the legislative mandate of ATSDR, events involving petroleum products exclusively are historically not reported to HSEES.

Several data sources are used to obtain the maximum amount of information about these events. These sources include, but are not limited to, records or oral reports of state environmental protection agencies, police and fire departments, state and county emergency management agencies, industries involved, witnesses, victims, media, the National Response Center, U.S. Department of Transportation, and hospitals. This variety of reporting sources across the states may still result in a disparity between states in their ability to collect data below regulatory thresholds. Currently, there is limited ability to change regulatory reporting requirements and they are generally too high for the purposes of HSEES. Exclusions to the case definition are few and they are enacted to reduce the burden of collecting data on events with little public health impact or events that are too difficult to consistently capture.

HSEES Mandatory Reporting List

The HSEES Mandatory Reporting List was formed by reviewing existing federal agencies lists of most dangerous chemicals to identify substances that, in small quantities, could potentially cause injuries. Actual data on injuries from HSEES was also used in this process. A consensus was reached to add all substances on the US Environmental Protection Agency (US EPA) Emergency Planning and Community Right-To-Know (EPCRA) Extremely Hazardous Substances List. All substances (not already on the HSEES Mandatory Reporting List) with an US EPA Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or Superfund Reportable Quantity (RQ) of 1 pound are reported at an amount of 1 pound or greater. The HSEES Mandatory Reporting List workgroup will meet annually to review and update the list. The list is maintained on the HSEES website.

Exclusions

Smoke stack emissions of sulfur oxides (SOX), nitrous oxides (NOX), or carbon monoxide (CO) are not reportable at any quantity, unless there is another hazardous substance present, or there is a fire or explosion involved. This was enacted to reduce the amount of time spent following up on a large number of events where there was very little morbidity and mortality occurring.

Events occurring in private residences with no outside response or public health action (e.g. evacuation) are not included. Outside response can include environmental agencies, but not calls to the Poison control center. These events seldom get reported to authorities and are very inconsistent in reporting among states.

Unknown quantities of CO are included because it is on HSEES Mandatory Reporting List. However, if it can be determined that the CO level was less than 50 ppm, it is excluded.

Public Health Impact:

HSEES is a critical element in the prevention of hazardous substances emergencies. Therefore it is necessary to have consistency and sensitivity. The new case definition is simpler to apply and will be more consistent among states. Additionally, the new definition will capture more events of public health significance (those below regulatory threshold amount for extremely hazardous substances) while eliminating follow-up on events with little public health significance.

Coordination:**Agencies for Response:**

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