

A coordinated interagency public health outbreak response to a multistate outbreak of supplement-associated hepatitis

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BACKGROUND

In Sept. 2013, clinicians at a tertiary care hospital notified the Hawaii Department of Health (HDOH) of 7 previously healthy patients with acute hepatitis and liver failure. The only common exposure identified was OxyELITE Pro, a dietary supplement marketed for weight loss and muscle building. The CDC, FDA, and DoD initiated a national investigation to identify additional cases and potential exposures. These agencies have complementary and sometimes overlapping roles in an outbreak investigation (Figure 1).

METHODS

Each agency has a distinct reporting chain and unique structure for detecting and managing outbreaks. Figure 2 depicts the sources of case reporting in this outbreak, most of which relied on passive surveillance. Additionally, the DoD performed active case-finding within the Defense Medical Surveillance System.

CDC

- Health Studies Branch: provides technical assistance for noninfectious outbreaks
- Following notification by HDOH, sent field team to assist in investigation
- Coordinated line list of cases and data analysis

FDA

- FDA CORE: centralized system to coordinate outbreak response to foodborne (incl. supplement), feed, or cosmetic outbreaks
- Conducted product trace back and manufacturer investigation

DoD

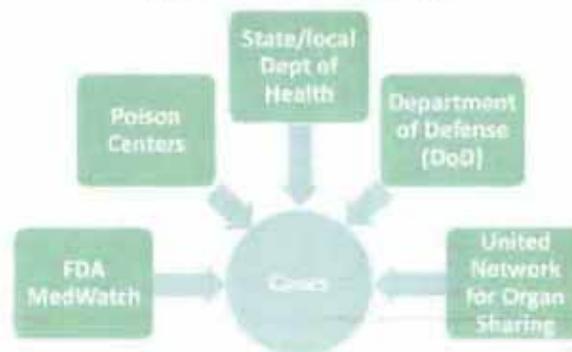
- Armed Forces Health Surveillance Center and Service Public Health Centers: coordinates outbreaks affecting more than one Service (Army, Navy, Marine Corps, Air Force, Coast Guard)
- Performed active case-finding using administrative data

- DCoE for Health and Military Performance (CHAMP) – Human Performance Resource Center and Operation Supplement Safety
- Online clearinghouse for evidenced-based information for military personnel for health and performance
- Information for making informed decisions about supplement use

Figure 1: Agency Roles during Outbreak Investigations



Figure 2: Sources of Case reports



RESULTS

- Cases were identified in a total of 16 states and among deployed active duty service members
- Nationwide, 92 unique cases were captured. OxyELITE Pro was the only common exposure identified among cases
- Investigation contributed to the nationwide recall of OxyELITE Pro
- Interagency coordination prevented duplicate counting of 10 cases found by multiple sources

OUTCOMES

- Quarantine of the product with an estimated value of more than \$22 million
- Recall of U.S. product
- Removal of products from commissaries and bases worldwide
- Removal of product in foreign countries

CONCLUSIONS

Although the multi-agency public health response likely prevented additional cases of dietary supplement-associated acute hepatitis, some cases were taking other supplements that were not recalled.

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