

Strawberries Wreak HAVoc on Summer: A Multistate Outbreak of Hepatitis A Associated with Imported Frozen Strawberries

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Background: In July 2016, three hepatitis A virus (HAV) cases were reported to the Virginia Department of Health (VDH); all were residents of the central region of Virginia. One of the HAV case-patients voluntarily provided credit card statements to assist in gathering exposure history; upon review, a VDH epidemiologist identified multiple visits to a national restaurant chain (NRC) serving smoothies. The other two patients were re-interviewed, and one reported smoothie consumption at the same NRC. This information prompted further epidemiologic and environmental investigation.

Methods: HAV cases reported to VDH since May 1, 2016 that did not have a known source of infection were re-interviewed with a supplemental questionnaire assessing exposure to the NRC. New HAV cases that were reported to VDH were also specifically probed on exposure to the NRC. Environmental Health Specialists (EHS) visited selected locations of the NRC reported by HAV cases to conduct inspections and to collect available product for testing by the U.S. Food and Drug Administration (FDA). All available HAV positive patient specimens were forwarded from clinical laboratories to the Division of Consolidated Laboratory Services and then to CDC's Division of Viral Hepatitis laboratory for genotypic testing. The Virginia Rapid Response Team (RRT) was activated to provide for a coordinated response between multiple state and federal offices and agencies.

Results: A total of 110 Virginia residents were identified as part of the outbreak, including two cases resulting from secondary transmission. Seventy-seven of 87 clinical samples that were available were identified as HAV genotype 1B. Ninety-six patients recalled specific smoothies consumed, and 100% of these individuals reported consuming smoothies containing frozen strawberries. Product labeling of strawberries was inconsistent, and product distribution information reported by the manufacturer changed several times, slowing traceback efforts. VDH issued a press release warning of increased HAV risk on August 19, 2016 and recommended HAV post-exposure prophylaxis for those exposed. FDA traceback revealed frozen strawberries were imported by a single company. Product collected by FDA and VDH was tested at an FDA laboratory, and HAV was detected in six frozen strawberry samples. On October 25, 2016, the importer recalled all frozen strawberries imported from an Egyptian producer since January 1, 2016.

Conclusion: An outbreak of HAV related to imported, frozen strawberries was identified in Virginia. Rapid investigation of HAV cases by local health departments and identification of a strong hypothesis jump-started the investigation and likely prevented many additional HAV cases in Virginia. Virginia's RRT facilitated rapid communication among partner agencies.