



Cross-cutting and multi-stakeholder response to the Hepatitis A Outbreak in Michigan

- TARGET POPULATION** People who use drugs, gay and bisexual men, people experiencing homelessness, people who are currently or were recently incarcerated, and those with chronic liver disease.
- LOCATION** Michigan
- PROGRAM DESIGN** Outbreak response
- ESTIMATED COST** \$14M
- FUNDING SOURCE** State Medicaid Funds Transfer (FY 18) and State General Fund (FY 19 Supplemental)

SUMMARY

Communicable Disease hepatitis A epidemiologists provided guidance to local health departments when the increase was first noticed in late summer of 2016. Monthly calls with high-incidence counties in Southeast Michigan began in March 2017, and supplemental vaccination efforts utilizing the Visiting Nurses Association began with Preventive Health and Health Services Block Grant funds in August 2017. In October 2017 the Community Health Emergency Coordination Center activated to coordinate the response to the outbreak. The Michigan Department of Health and Human Services (MDHHS) partnered with all 45 local health departments to conduct surveillance and public health follow up, and to increase vaccination and education in communities most impacted by the outbreak.

BACKGROUND

From 2016 through 2019, a large, multistate outbreak of hepatitis A swept the country. Hepatitis A is a vaccine-preventable, contagious liver disease that is usually contracted by consuming contaminated food or water. Symptoms include fatigue, stomach pain, and jaundice. In late August 2016, Michigan saw an increase in hepatitis A cases resulting in an outbreak that has continued through 2019. MDHHS

launched a multi-agency, cross-cutting approach to control the outbreak. Partners included the state's 45 local health departments, Michigan Department of Agriculture and Rural Development, Michigan Department of Corrections, behavioral health organizations, pharmacies, hospitals, eight regional healthcare coalitions, AIDS Service Organizations, LGBTQ organizations, homeless shelters, federally qualified health centers, and primary care practitioners. Internal partners at MDHHS included emergency preparedness, communicable disease, immunizations, behavioral health, Medicaid, and human services programs to reach the high-risk population.

This outbreak spread primarily via person-to-person contact, as a community-acquired infection. The populations at highest risk were persons who use drugs, who are experiencing homelessness or transient living conditions, were currently or recently incarcerated, and gay and bisexual men. To date, 912 hepatitis A cases have been identified since the outbreak began in August 2016, resulting in 732 hospitalization (80.3%) and 27 deaths (3.1%). Cases have ranged in age from less than 1 to 90 years (median 40 years), and 65% are male. Over 51% of cases disclosed a substance use disorder and 13.6% reported homelessness or transient living. Among cases with available laboratory results, 3.4% have a history of hepatitis B, while 26.5% have a history of hepatitis C. About 20% of cases have been lost to

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follow-up and approximately 10% of cases (n=89) are secondary. Secondary cases are those that were exposed to an infectious, laboratory-confirmed case 15-50 days prior to onset.

CORE ACTIVITIES

To combat this outbreak, MDHHS provided over \$5M to local health departments to increase local capacity to conduct surveillance, decrease time to report new cases, provide public health follow-up investigations, provide public information, and to conduct vaccination outreach in the community. Health department staff worked with state communicable disease and immunization programs to decrease the amount of time to report new cases, decrease loss to follow-up, and increase Hepatitis A awareness in the impacted jurisdictions. The MDHHS Population Health Administration worked with the Medicaid Administration to enable vaccination coverage eligibility at pharmacies. From 2017 to 2018, there was a 145% increase in hepatitis A doses reported to the state for adults 18 years and older by local health departments statewide.

Because of the vulnerable populations affected by the outbreak, specific expertise was needed to conduct outreach, provide vaccines, and provide post-exposure prophylaxis. To prepare for and support these response activities, Michigan used federal Public Health Emergency Preparedness funds to support the operation of a Community Health Emergency Coordination Center to coordinate multiple program areas across the department.

DATA

Funding for the hepatitis A outbreak dramatically increased local health department vaccination outreach and health education in Michigan communities, resulting in 84,653 doses of vaccine administered by local health departments in 2018. Overall, the immunization program and local health departments increased vaccination outreach, and as of March 23, 2019, more than 340,000 doses of hepatitis A vaccine have been given in areas affected by the outbreak.

FUNDING AND COST

The state provided \$14 million in State Medicaid Funds Transfer (FY 18) and State General Fund (FY 19 Supplemental) to the overall effort over two fiscal years, including expanded testing, vaccination, and outreach. Of that total:

- Over \$5 million supports local health departments for surveillance, vaccination and outreach;
- \$600,000 supports state staff coordinators;
- \$1 million supports statewide and targeted outreach to promote vaccination and hand hygiene;
- Over \$2 million purchased vaccine and immunoglobulin; and
- \$400,000 supports mobile vaccination outreach to men who have sex with men (MSM), visiting nurse vaccinator surge capacity, and mobile vaccination outreach to persons who use drugs through a team of peer support specialists and nurses.

STRENGTHS

- Guidance provided to local health departments by Communicable Disease and Immunizations subject matter experts;
- Utilization of established public health emergency preparedness and response structure to coordinate response activities across multiple program areas and state departments;
- During the hepatitis A outbreak, the experience and knowledge of HIV staff was used to develop novel strategies to reach the MSM community and healthcare providers. National HIV Behavioral Surveillance (NHBS) Program staff also shared NHBS activity space with local health department vaccinators to increase vaccine uptake. The response also used the experience, knowledge and community connections of behavioral health and human services staff to develop strategies to reach persons who use drugs and persons who are experiencing homelessness. Utilizing these types of partnerships, state and local health partners were able to reach people in bars, prisons, and shelters with vaccines or health communication materials about how to get vaccinated and prevent infections;
- Local health department engagement of fair and festival operators to promote hand hygiene and vaccination;

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- Statewide outreach to restaurants, grocery stores, septic haulers and portable toilet vendors;
- Statewide outreach to those communities most affected by the outbreak;
- State laboratory capacity to complete testing and sequencing dramatically accelerated outbreak characterization and local response;
- Exhaustion of federal resources (launch of a vaccination program by visiting nurses funded by the Preventive Health and Health Services Block Grant) prior to state funding request;
- Support from key decision-makers, including supplemental state funding to support local health departments in their response;
- Centers for Disease Control and Prevention support, including an on-site Infectious Disease doctor, and convening of partners; and
- Utilization of the Michigan Care Improvement Registry, Michigan's lifespan immunization registry, to check immunization statuses, enter reported doses and monitor outbreak response.

LIMITATIONS

- Changing HAV case demographics;
- Time-limited funding;
- Low adult vaccination rates;
- Vaccine supply constraint at the time of the greatest intensity in the outbreak;
- Time and labor intensity of the response;
- Maintaining level of effort over a prolonged response;
- Need to develop long-term funding and programmatic sustainability to prevent outbreak resurgence.

STAKEHOLDERS

Local Health Departments; Michigan Department of Health and Human Services; Michigan Department of Agriculture and Rural Development; Michigan Department of Corrections; behavioral health organizations; pharmacies; hospitals; healthcare coalitions; AIDS Service Organizations; LGBTQ organizations; homeless shelters; organizations serving persons who use drugs; federally qualified health centers; and primary care practitioners.

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