



# Michigan's Hepatitis A Outbreak Detroit Health Department: Strategies & Lessons Learned

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## Background

An unparalleled Hepatitis A (Hep A) outbreak within the State of Michigan (MI) has been occurring since August 2016. As of October 17, 2018; there are 899 cases, 28 deaths with an 80% hospitalization rate. The City of Detroit has the 2nd highest amount of Hep A cases (n=172) behind Macomb county (n=222). The Detroit Health Department (DHD) has been conducting preventive Hep A outreach vaccination events since the Spring of 2017 with various organizations throughout the city to help curb the outbreak.

## Aim

The overall goal is to stop the Hep A outbreak in MI by targeting vaccinations to the high-risk populations who have been identified of transmitting Hep A virus the most during the outbreak:

- Persons who use injection and/or non-injection illegal drugs
  - Persons who are homeless/transient living
  - Persons who are incarcerated
  - Men who have sex with men (MSM)

## Strategies

Hep A vaccination events have been targeting the organizations that work with the high-risk populations such as homeless shelters, soup kitchens and substance abuse rehabilitation centers. Many Hep A educational presentations throughout the city have been given by DHD for healthcare professionals, physicians at hospitals, clinic staff members at various Federally Qualified Health Centers (FQHCs) and community members within Detroit.

- ❖ DHD vaccinated all Medical First Responders, Detroit Water Sewage Department employees, and police officers within the city of Detroit.
- ❖ DHD held over 100 vaccination clinics to reach high risk individuals in shelters, soup kitchens, substance abuse treatment centers, and as needed for post-exposure vaccination.
- ❖ DHD is working with Detroit's 4 Major ED Trauma Centers to assure ongoing ED vaccination targeting at-risk patients. DHD communicates regularly with the Detroit medical community through presentations, letters, weekly update calls and in-person visits.
- ❖ DHD's Food Safety program has been targeting all food establishments and shelters/soup kitchens with vaccination information, recommendations regarding bathroom cleaning and disinfection.

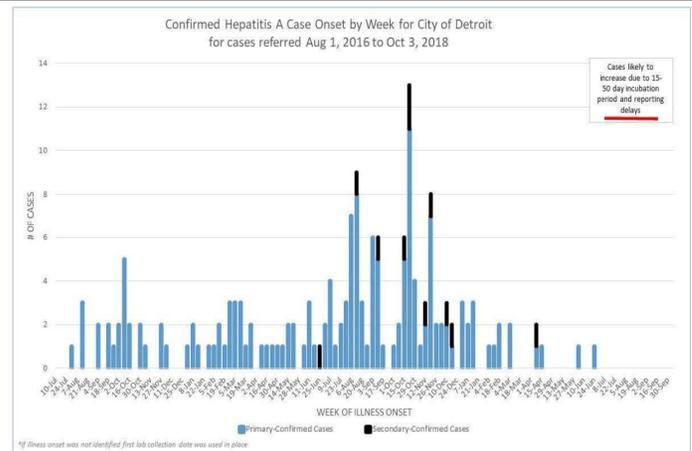
## Public Health Response Overview

Michigan Department of Health Human Services activated the Community Health Emergency Coordination Center on October 31, 2017 to coordinate the response of the jurisdictions involved in the outbreak. The State Emergency Operations Center was active from November 2017 through January 2018 to help coordinate the multiple state agency responses to the hepatitis A outbreak.



Michigan Hepatitis A 2016-2018 Outbreak Summary: Detroit City

Epi Summary for Hepatitis A Cases in Detroit City for Confirmed Cases Referred August 1, 2016 – October 3, 2018*									
	2 <sup>nd</sup> Half CY2016	1 <sup>st</sup> Half CY2017	2 <sup>nd</sup> Half CY2017	Q1 CY2018	Q2 CY2018	Jul-18	Aug-18	Sept-18	Total
Total # of Cases (by Onset)	25	36	92	14	5	0	0	0	172
# Primary Confirmed Cases w/ Outbreak Strains	11	19	47	6	2	0	0	0	85
# Primary Confirmed Cases w/out sequencing	14	16	36	8	2	0	0	0	76
# Secondary Confirmed Cases	0	1	9	0	1	0	0	0	11
Female, n (%)	7 (28.0)	15 (41.7)	33 (35.9)	1 (7.1)	1 (20.0)				57 (33.1)
Hospitalized, n (%)	22 (88.0)	32 (88.9)	75 (81.5)	13 (92.9)	4 (80.0)				146 (84.9)
Min Age (years)	29	22	21	28	20				20
Max Age (years)	83	74	87	57	47				87
Median Age (years)	47	50	43	45	36				45.5
Deaths, n (%)	1 (4.0)	3 (8.3)	4 (4.3)	0 (0.0)	0 (0.0)				8 (4.7)
Data below excludes secondary cases									
No Substance Abuse + No Homeless/Transient Living, n (%)	13 (52.0)	8 (22.9)	36 (43.4)	4 (28.6)	2 (50.0)				63 (39.1)
Documented Substance Abuse, n (%)	10 (40.0)	26 (74.3)	37 (44.6)	6 (42.9)	2 (50.0)				81 (50.3)
Homeless/Transient Living, n (%)	5 (20.0)	9 (25.7)	10 (12.1)	2 (14.3)	1 (25.0)				27 (16.8)
History of Hepatitis B, n (%)	1 (4.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (25.0)				2 (1.2)
History of Hepatitis C, n (%)	6 (24.0)	8 (22.9)	15 (18.1)	1 (7.1)	0 (0.0)				30 (18.6)
MSM, n (%) - Data includes only male cases	0 (0.0)	1 (4.8)	8 (14.6)	2 (15.4)	1 (25.0)				12 (10.8)
Correctional Facility Inmates, n (%)	0 (0.0)	1 (2.9)	7 (8.4)	1 (7.1)	1 (25.0)				10 (6.2)
Healthcare Worker, n (%)	1 (4.0)	0 (0.0)	1 (1.2)	0 (0.0)	0 (0.0)				2 (1.2)
Food Worker, n (%)	0 (0.0)	0 (0.0)	5 (6.0)	1 (7.1)	0 (0.0)				6 (3.7)
Cases LTF	9 (36.0)	13 (37.1)	14 (16.9)	2 (14.3)	0 (0.0)				38 (23.6)



Report is a preliminary ad hoc analysis. Information to be considered DRAFT.

## Lessons Learned

- Staffing these activities and gaining access to high risk individuals is critical
  - Staff and clinic resources need to be maximized
- The reasons for low number of attendees or low uptake at certain facilities should be analyzed
- Establishing relationships with FQHCs and the community partners who service and work with the high risk populations is instrumental
- Mitigation of disease impact through effective primary and secondary prevention strategies based on epidemiologic support and effective partnerships is valuable
  - Given Detroit's immense geographic size and extreme weather, partnerships to implement sustained vaccination at critical access points that reach high-risk individuals are paramount

## Reasons for vaccine declination

- Some people believed they had already received the hepatitis A vaccine
  - Inmates could not be verified in Michigan Care and Improvement Registry (MCIR) that tracks patient's vaccination records
    - Dislike of the government
      - Fear of needles
    - Fear of experimentation (i.e. Tuskegee Project)
      - Fear that vaccines were expired or unsafe
  - Fear that the vaccine might worsen Hepatitis C or cause recurrence if they were cured

## Evidence of Impact

A decline in new cases was observed as the number of monthly adult hepatitis A outbreak vaccinations administered increased to ten times the baseline rate.

## Conclusions/Recommendations

Robust epidemiologic support drove innovative partnerships and strategic responses needed to address a challenging Hepatitis A outbreak.

Resource: Hepatitis A outbreak website  
[www.michigan.gov/hepatitisaoutbreak.com](http://www.michigan.gov/hepatitisaoutbreak.com)