

# Update on the *Shigella* Outbreak Investigation in Saginaw & Genesee Counties

## December 15, 2016

Dear Community Members,

The Centers for Disease Control and Prevention (CDC), state, and local officials are continuing to investigate the *Shigella* outbreak that occurred in Saginaw and Genesee counties. The number of new cases of *Shigella* infection occurring in these counties has declined.

New data from the investigation continue to show that:

- ***Shigella* bacteria did NOT appear to spread through drinking water.**
- ***Shigella* bacteria appear to have spread in the community from person to person.**

New data also indicates that **the use of hand sanitizer and cleaning wipes for cleaning hands or bathing did NOT contribute to the outbreak differently in one location versus another.**

These new findings are based on additional interviews and analyses of interviews with people who got sick (83 interviews total), laboratory testing of samples of *Shigella* bacteria from the outbreak, and a review of data on the location of cases.

We would like to share more information about the findings in the four main points outlined below.

### 1. Information from interviews with the people who got sick continues to indicate that *Shigella* spread from person to person in the community.

- Information gathered from interviews shows that **the majority (68%) of the people who got sick either wore diapers, changed diapers, came in contact with a person wearing diapers, or had direct contact with a person with diarrhea who did not live with them in the week before they became ill.**
  - This information suggests the *Shigella* bacteria spread through the feces (poop) of infected people.
- None of the new interviews suggested that people got sick from a single source, like a restaurant, community event, drinking water system, or swimming pool.
- People who lived together got sick at about the same rate, whether they lived in Saginaw County (55.1%), greater Genesee County (41.7%), or Flint (50.3%). **This result suggests that there was nothing unique or different about the way *Shigella* was transmitted in these three communities.**

### 2. Laboratory testing of bacteria samples collected from people who got sick from *Shigella* in Saginaw and Genesee counties also indicates that *Shigella* spread from person to person and not through drinking water.

- When *Shigella* bacteria spread from person to person, the DNA fingerprint of the bacteria changes in small ways over time. However, when the bacteria spread from a single point of contamination or source, like drinking water, the DNA fingerprint usually does not change at all.

- Although the DNA fingerprints of the bacteria samples tested from Saginaw and Genesee counties are similar enough to suggest they are all part of the same outbreak, **there is enough variation between them to suggest there was no single source causing the outbreak, like drinking water or food.**
- We are still analyzing bacteria samples from other parts of Michigan and will compare them to samples collected from Saginaw and Genesee counties.

**3. The location of households where people got sick are NOT clustered around a single drinking water source.**

- If *Shigella* bacteria had spread through the City of Flint municipal water system, we would expect to see far more sick people in Flint compared to other geographic regions, like Saginaw. **The pattern seen on the map is consistent with other *Shigella* outbreaks where the bacteria was spread from person to person.**
- Although all the information we have collected so far indicates that the drinking water supply did not cause this outbreak, we still plan to compare locations where sick people lived and locations there were known water quality issues, like water main breaks and low chlorine levels. If the analysis shows any concerning results, they will be shared without delay.

**4. The use of hand sanitizer or cleaning wipes for cleaning hands did not differ in Flint, greater Genesee County, and Saginaw County, which suggests use of these products did not contribute to the outbreak differently in one location versus another.**

- The number of sick people who reported using hand sanitizer and cleaning wipes for handwashing, bathing/showering, cleaning a diaper changing station, dishwashing, cleaning countertops, and rinsing food was not significantly different based on their location.

Health officials are continuing to analyze information from the investigation. Final results will be shared as soon as they are available. If you have any questions about the outbreak or the investigation, please contact your local health department. For more information on how to prevent the spread of *Shigella* bacteria, visit [www.cdc.gov/shigella/prevention-control.html](http://www.cdc.gov/shigella/prevention-control.html). Thank you for your ongoing support.

Sincerely,



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and Prevention



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