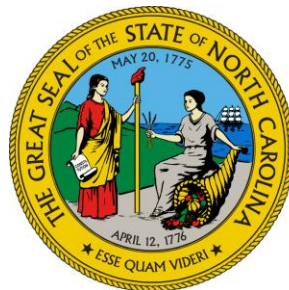


Hepatitis A and Other Disease Threats: Partnering with Public Health

Zack Moore, NC DPH

Christie Caputo, NC DPH

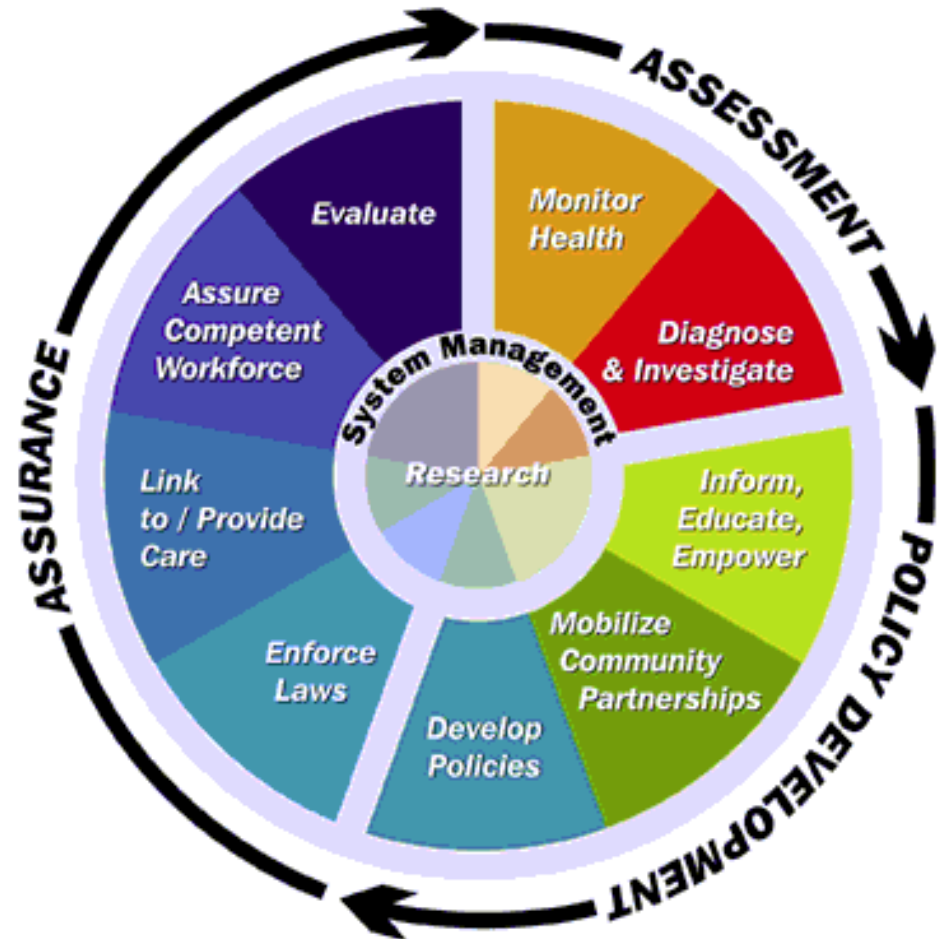
Candice Givens, Durham County DPH



NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**
Division of Public Health

North Carolina Public Health

- Works to promote and contribute to the highest possible level of health for the people of North Carolina
- 3 core functions
- 10 essential public health services

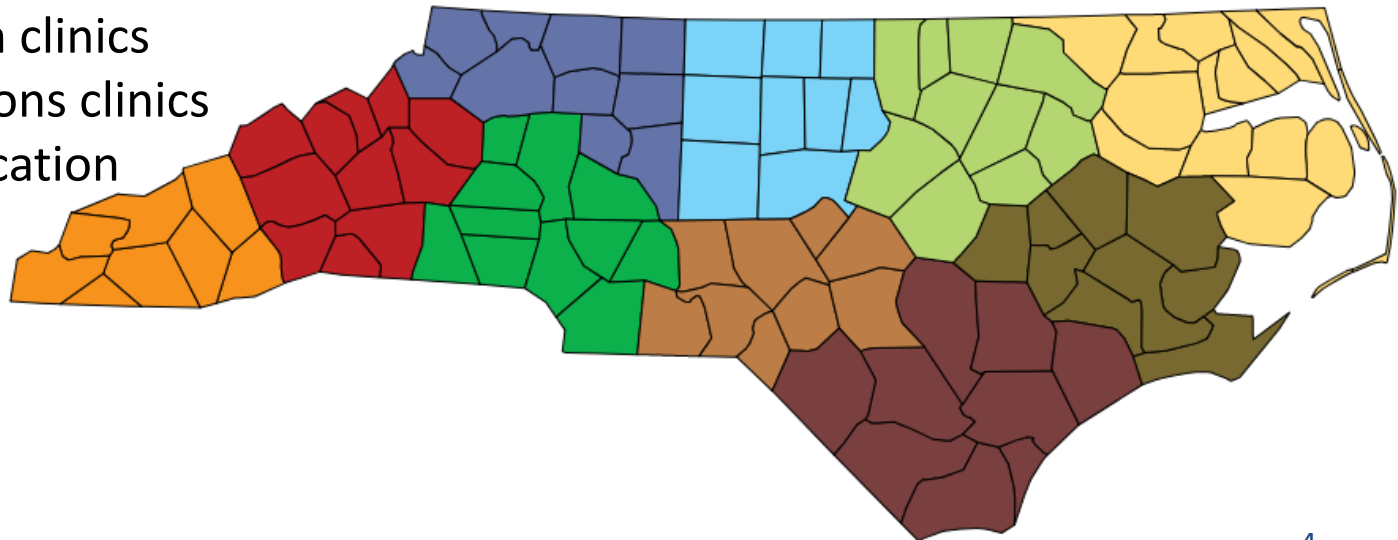


NC Division of Public Health

- Wide range of programs, including several relevant to today's discussion:
 - NC Communicable Disease Branch
 - NC Immunization Program
 - NC Injury and Violence Prevention
- Collaborates with local health departments, hospitals, community health centers, practitioners, community agencies and organizations throughout the state and nation

North Carolina Local Health Departments

- Services range at each HD but may include:
 - Primary care
 - Communicable disease
 - STD clinics
 - HIV clinics
 - Family planning/women's clinics
 - Social services/social work
 - Child health clinics
 - Immunizations clinics
 - Health education
 - Pharmacy
 - And more!



NC Communicable Disease Branch

Diseases and Conditions Reportable in North Carolina

Physicians must report these diseases and conditions to the county local health department, according to the **North Carolina Administrative Code: 10A NCAC 41A.0101 Reportable Diseases and Conditions** (see below). Contact information for local health departments can be accessed at www.ncalhd.org/directors. If you are unable to contact your local health department, call the 24/7 pager for N.C. Communicable Disease Branch **(919) 733-3419**.

For diseases and conditions required to be reported within 24 hours, the initial report shall be made by telephone to the local health department, and the written disease report be made within 7 days. The reporting rules and disease report forms can be accessed at: <http://epi.publichealth.nc.gov/cd/report.html>

Diseases in ***BOLD ITALICS*** should be reported immediately to local health department.

Reportable to Local Health Department Within

24 Hours

Reportable to Local Health Department Within

7 Days

DISEASE/CONDITION

DISEASE/CONDITION



HEPATITIS A

Hepatitis A

HOW IS HEPATITIS A SPREAD?



It can also be spread through close contact with someone infected with hepatitis A.

Image: Tennessee Department of Health

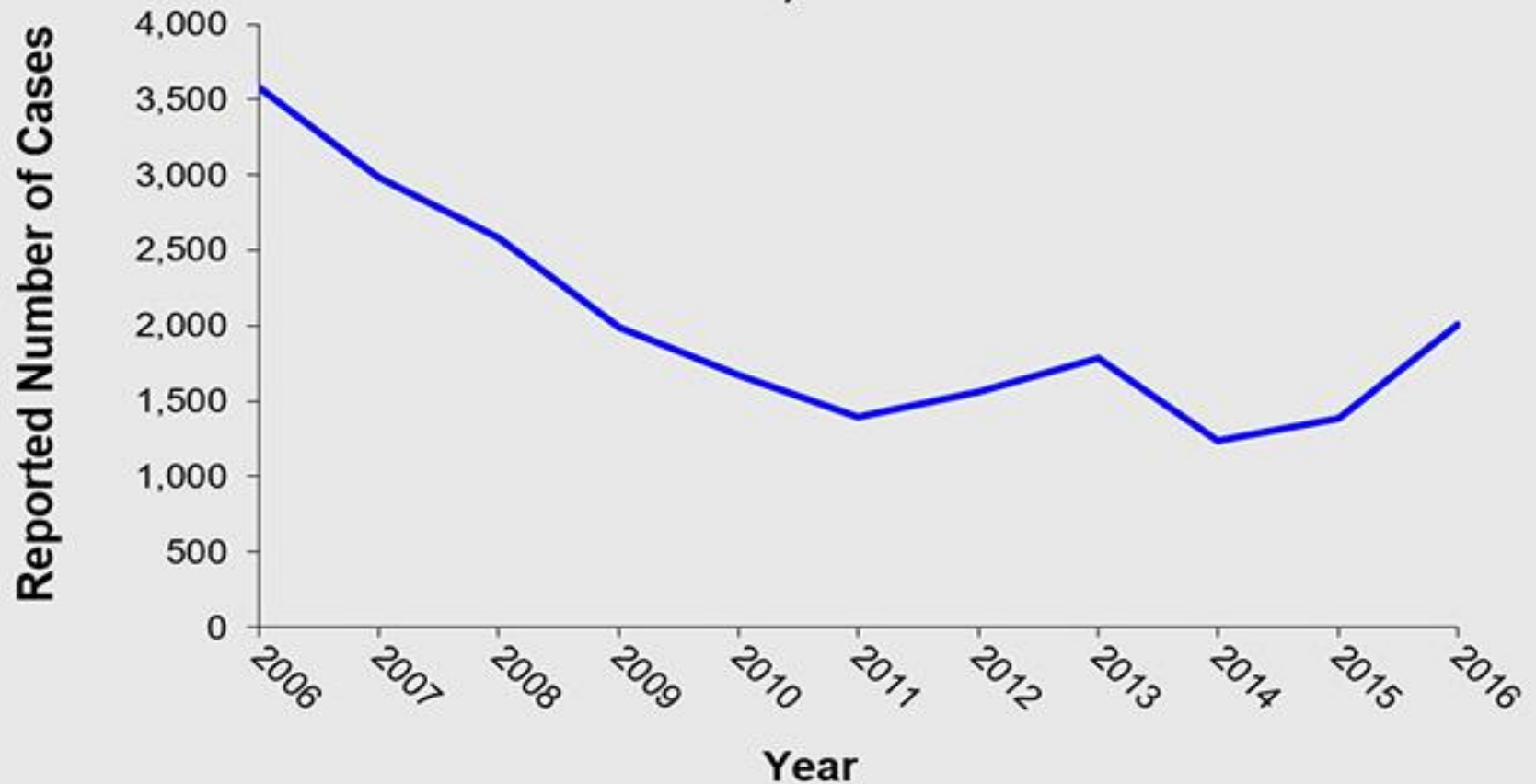
Hepatitis A: Symptoms

- Fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored stool, jaundice (yellow skin and/or eyes)
- Usually starts 28 days (range 15-50 days) after exposure



Image: CDC Public Health Image Library

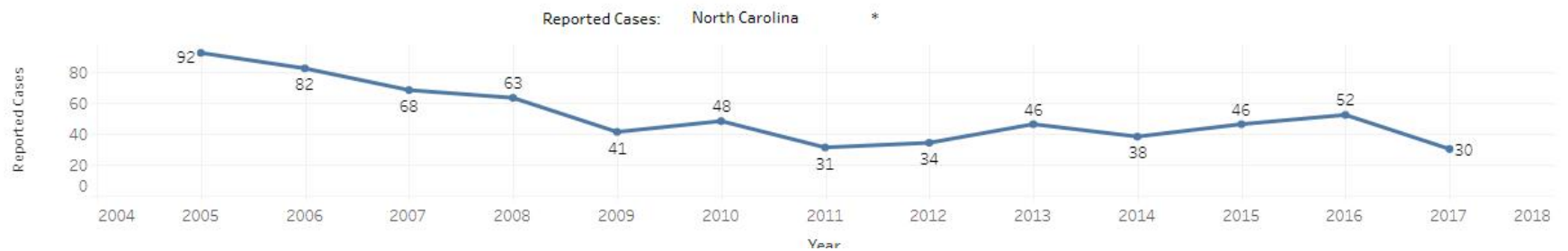
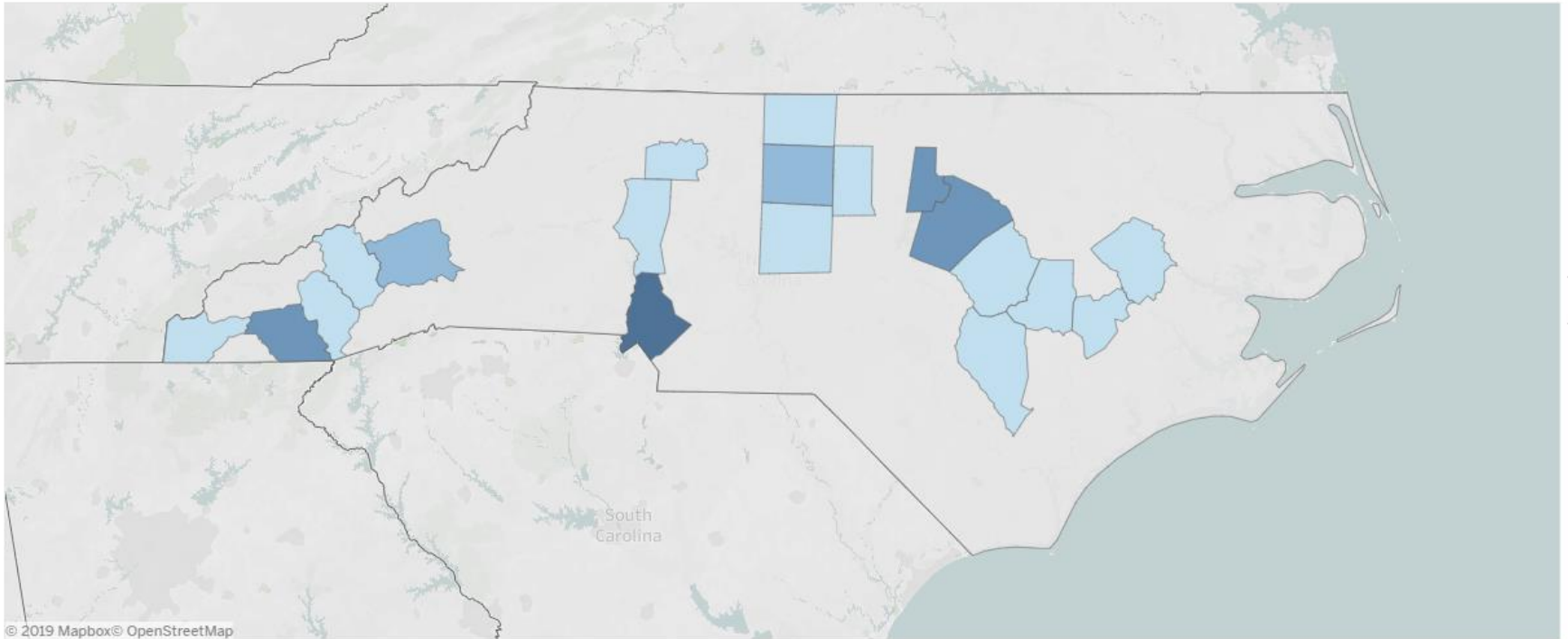
Incidence of hepatitis A, by year United States, 2006-2016



<https://www.cdc.gov/hepatitis/statistics/index.htm>

Hepatitis A in North Carolina

Reported Cases of Hepatitis A in 2017



Hepatitis A Outbreaks

- Began in Michigan and California in 2016
- Spread by person-to-person contact, drug use
- Many cases occurred in persons experiencing homelessness and in detention centers
- January 2017 to April 2018: Over 2,500 cases nationwide
- High hospitalization rate (>50%)





MUST READS

San Diego Washing Streets With Bleach To Combat Hepatitis A Outbreak

September 13, 2017 - 5:02 PM ET

San Diego has started washing its downtown streets with bleach in an effort to combat an outbreak of hepatitis A that has killed at least 15 people and infected nearly 400.

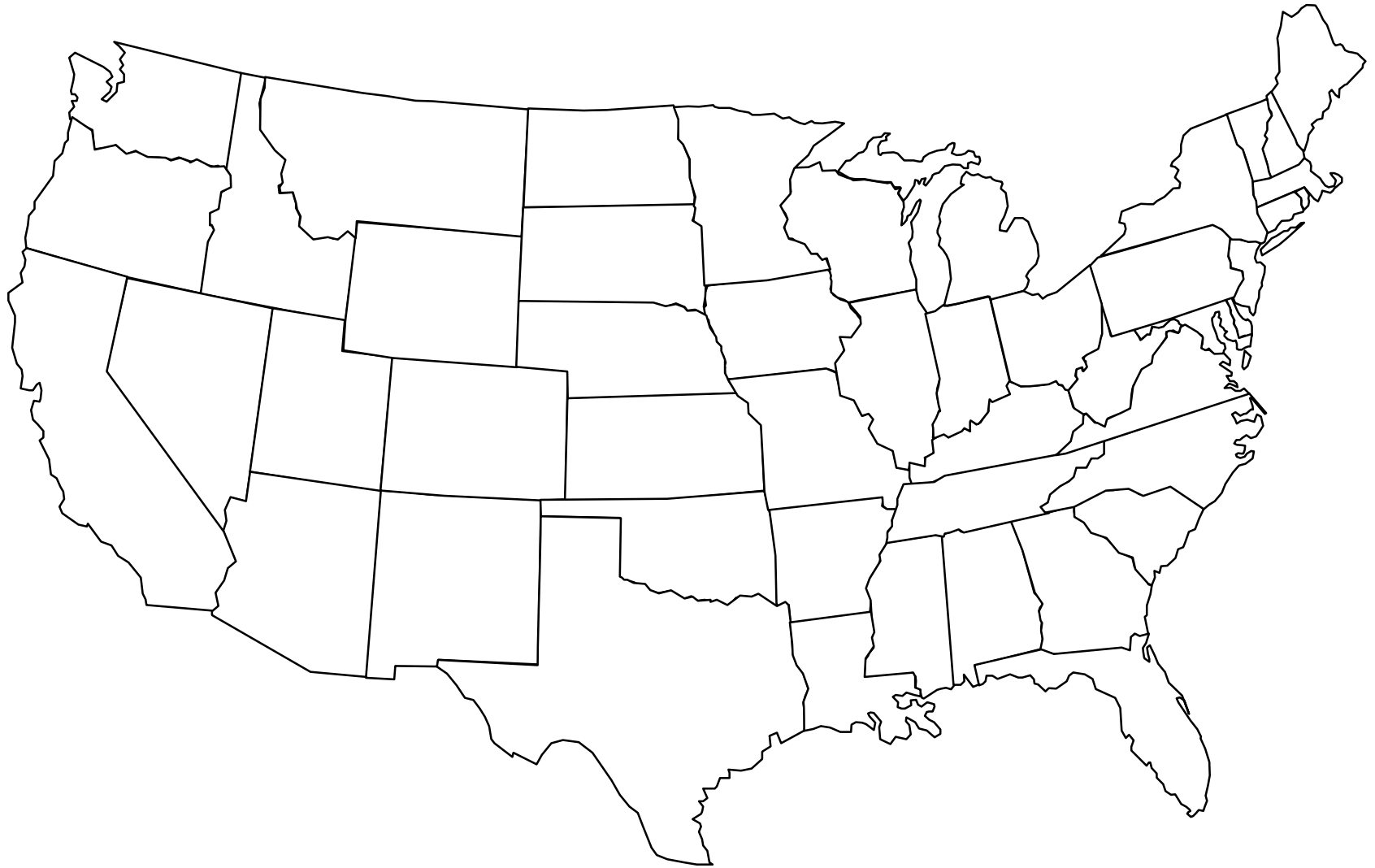
The infectious disease has largely infected homeless people in the coastal California city, and part of the issue is an apparent shortage of public restrooms in areas where the population congregates.

Hepatitis A was first identified in the area in early March, [according to the county](#), and declared a public health emergency earlier this month.

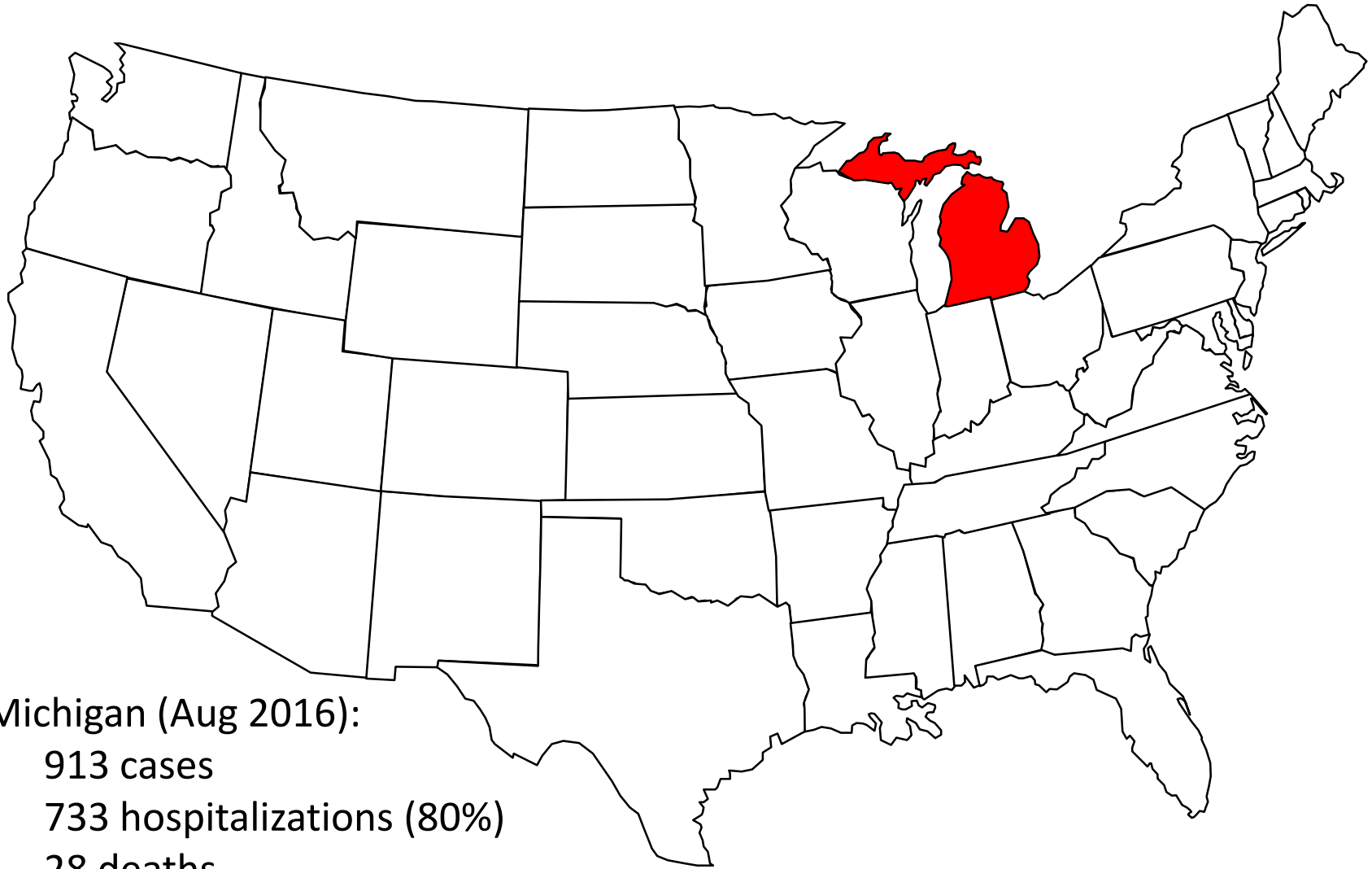
A letter from San Diego County health officials stated that hepatitis A is being spread though contact with a "fecally contaminated environment" as well as person-to-person transmission.



Hepatitis A Outbreaks, 2016–19



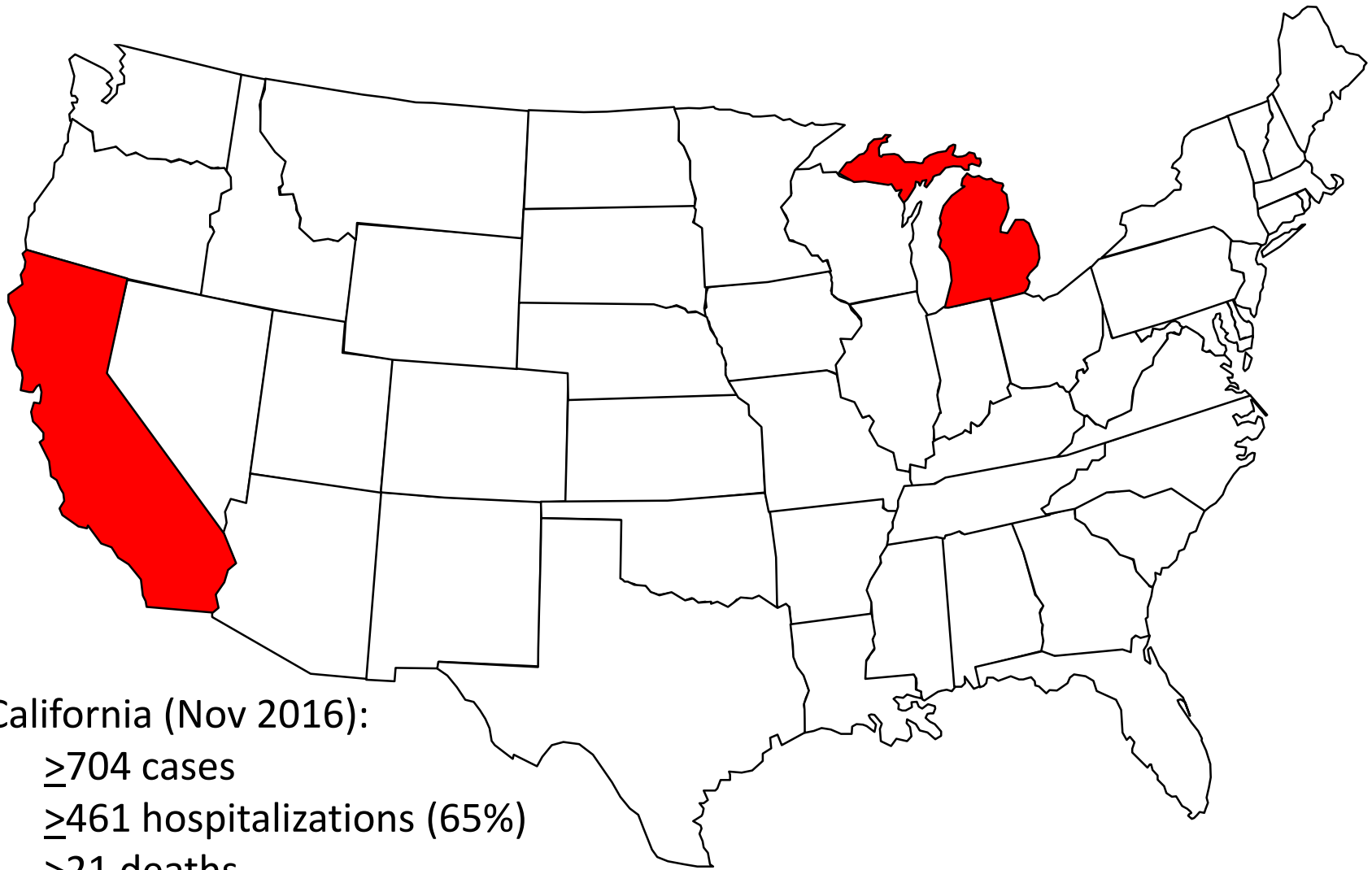
Hepatitis A Outbreaks, 2016–19



Michigan (Aug 2016):

- 913 cases
- 733 hospitalizations (80%)
- 28 deaths

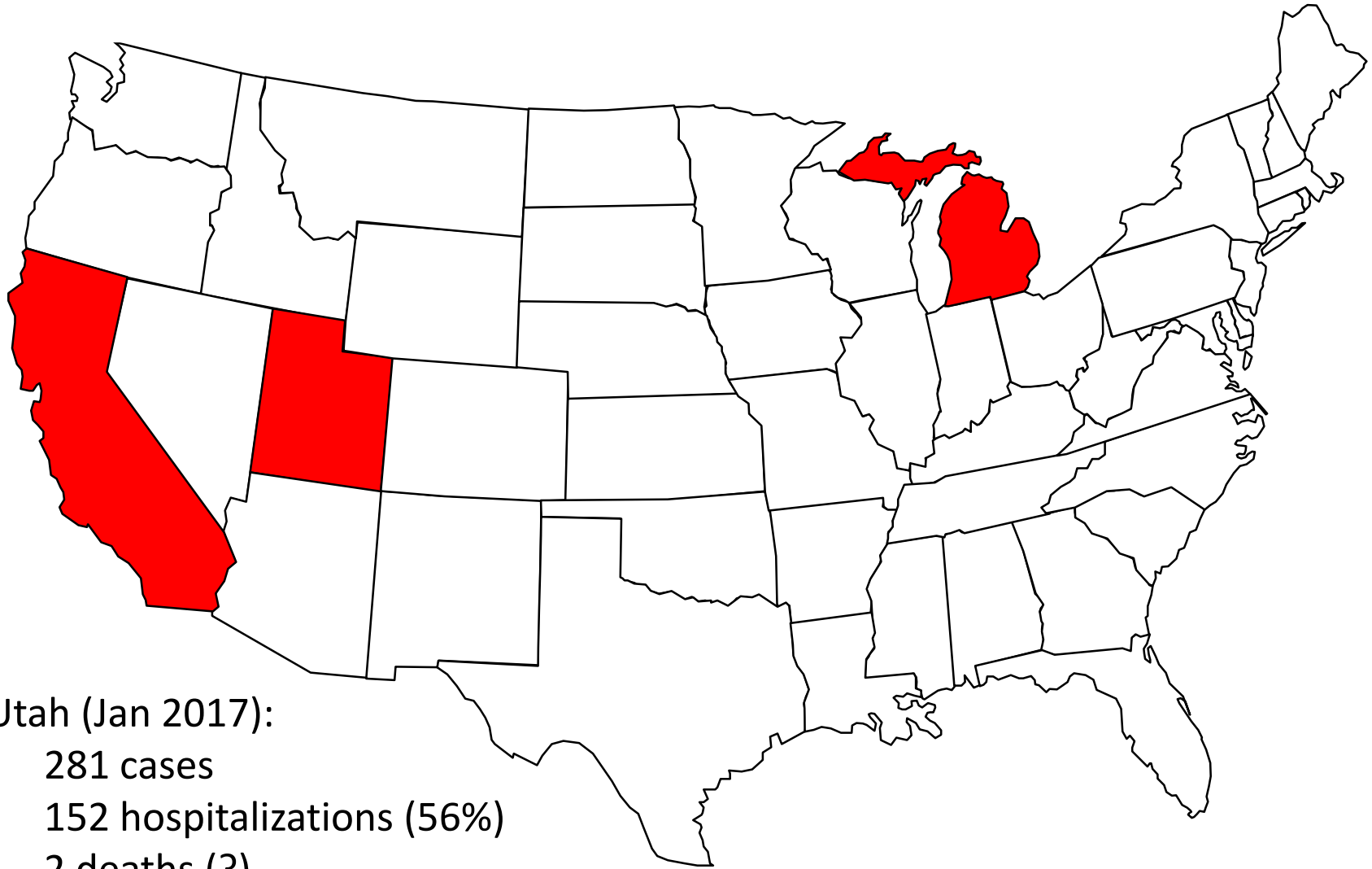
Hepatitis A Outbreaks, 2016–19



California (Nov 2016):

- ≥ 704 cases
- ≥ 461 hospitalizations (65%)
- ≥ 21 deaths

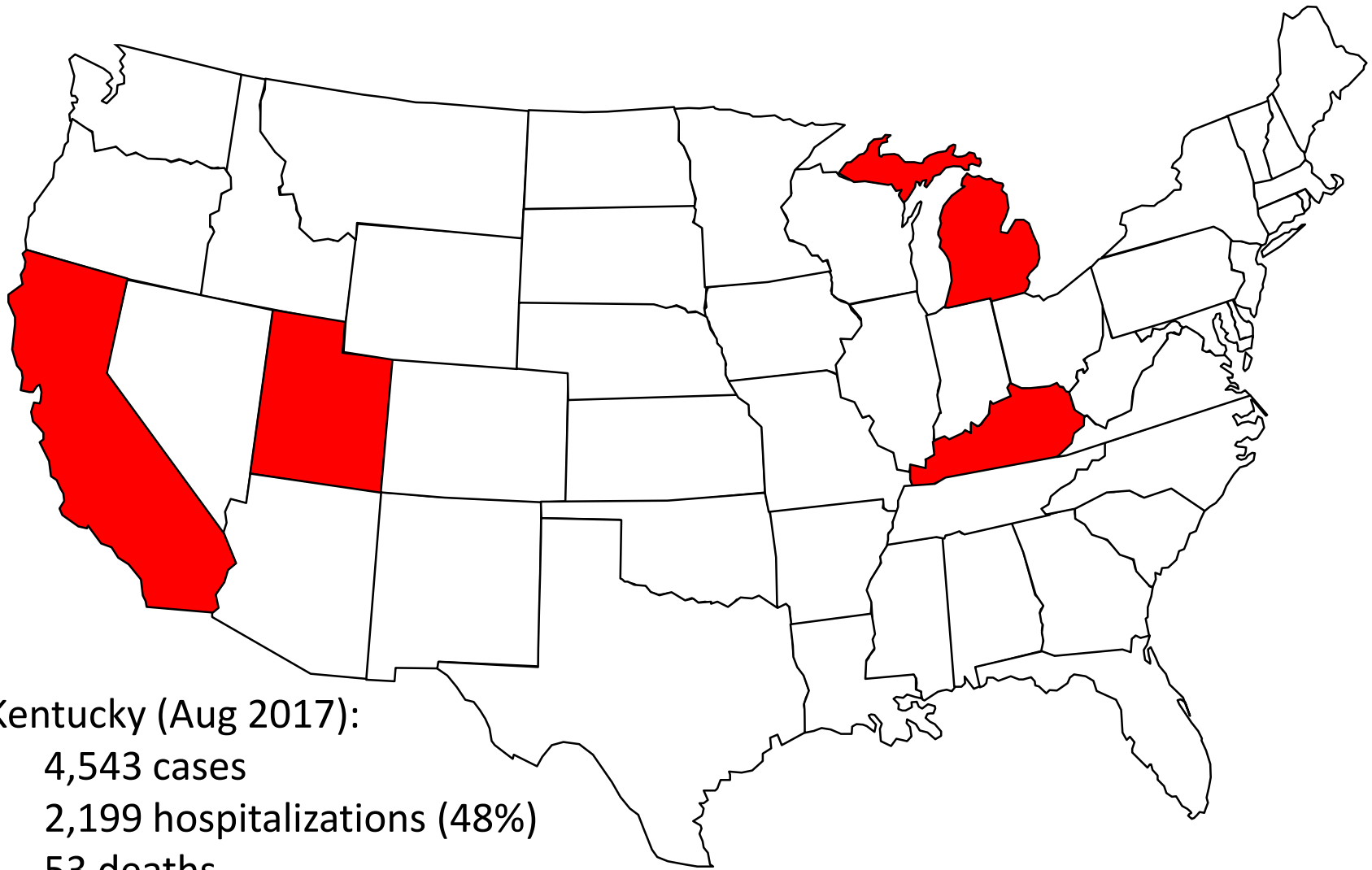
Hepatitis A Outbreaks, 2016–19



Utah (Jan 2017):

- 281 cases
- 152 hospitalizations (56%)
- 2 deaths (?)

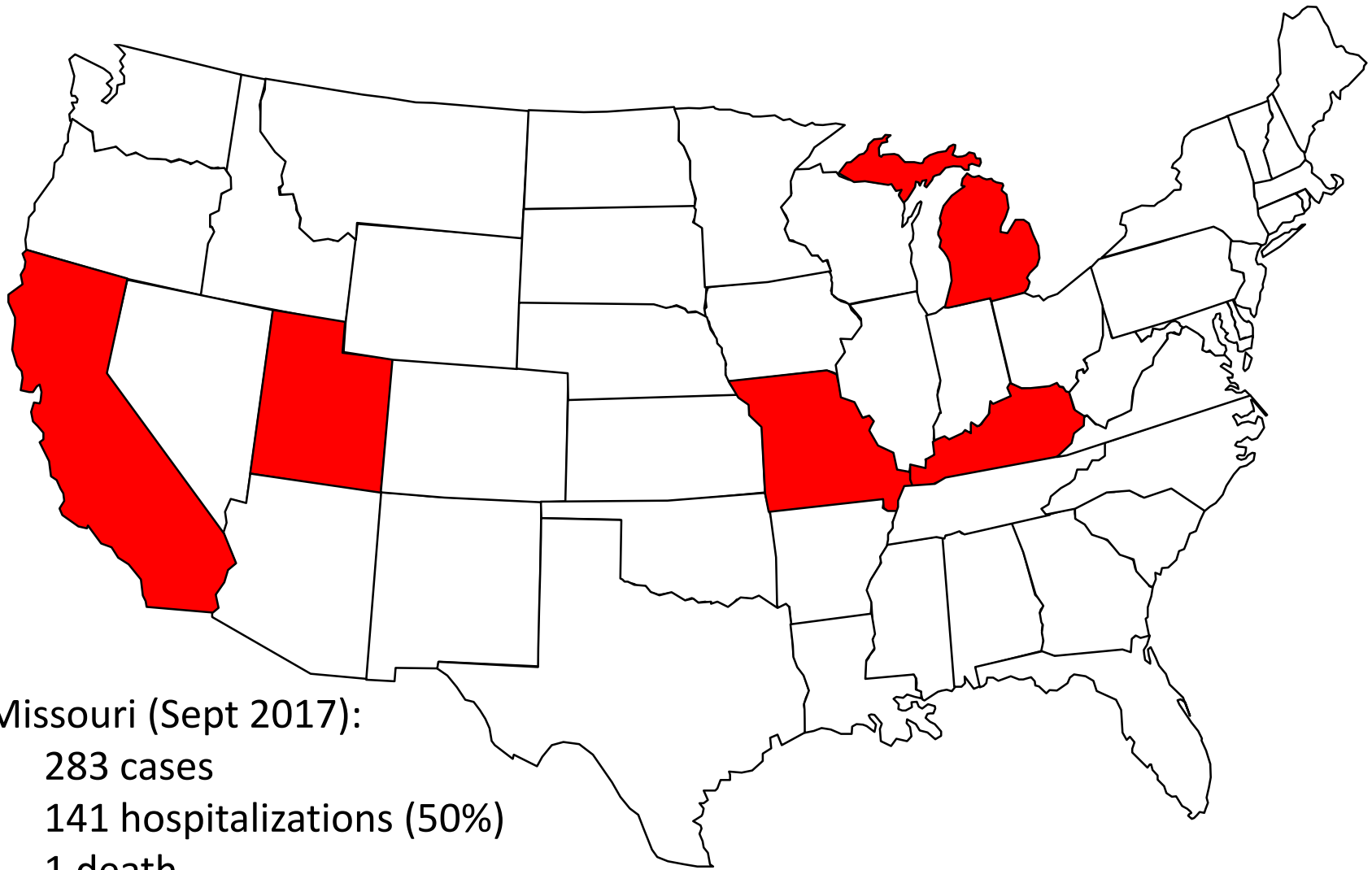
Hepatitis A Outbreaks, 2016–19



Kentucky (Aug 2017):

- 4,543 cases
- 2,199 hospitalizations (48%)
- 53 deaths

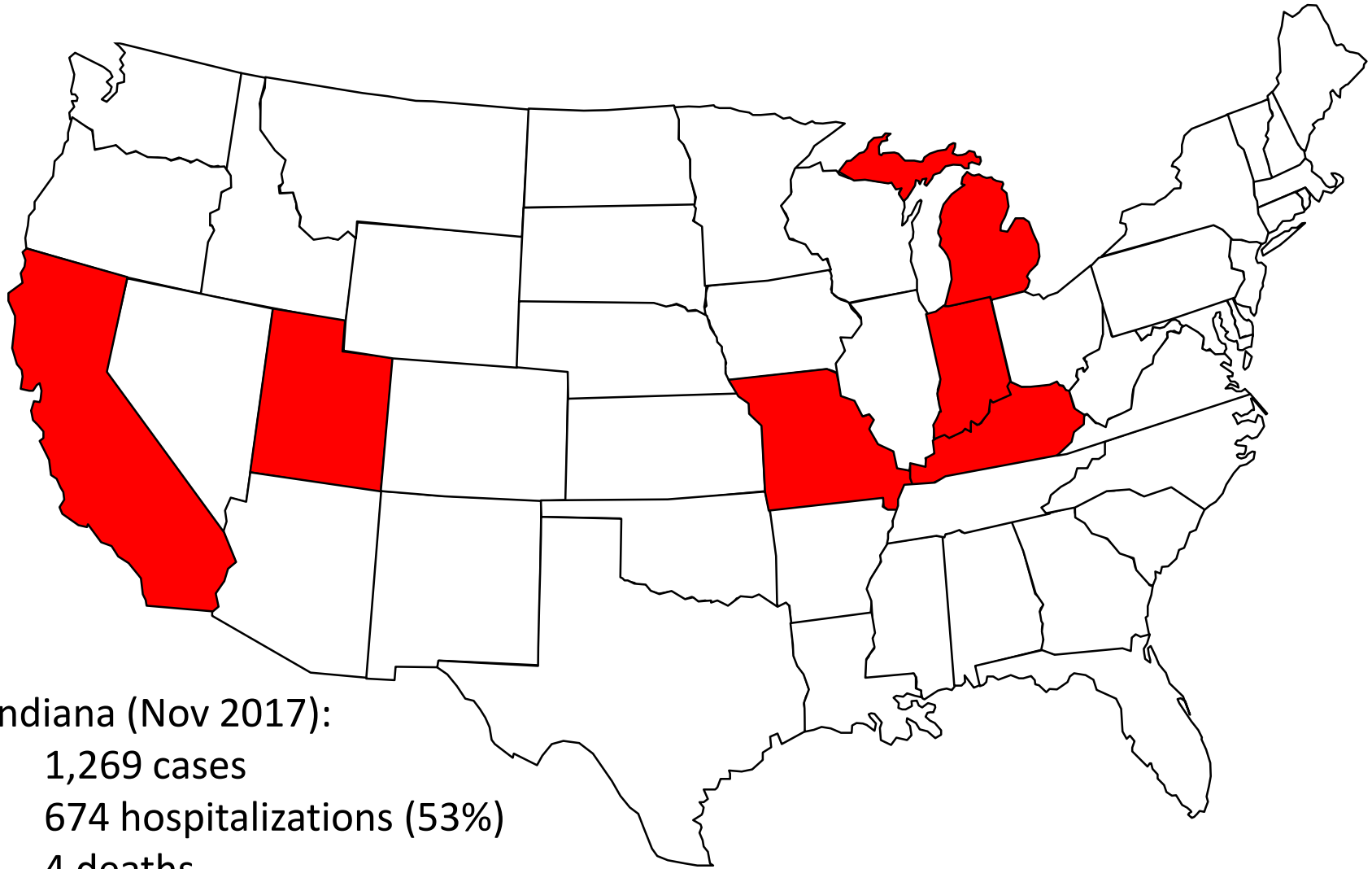
Hepatitis A Outbreaks, 2016–19



Missouri (Sept 2017):

- 283 cases
- 141 hospitalizations (50%)
- 1 death

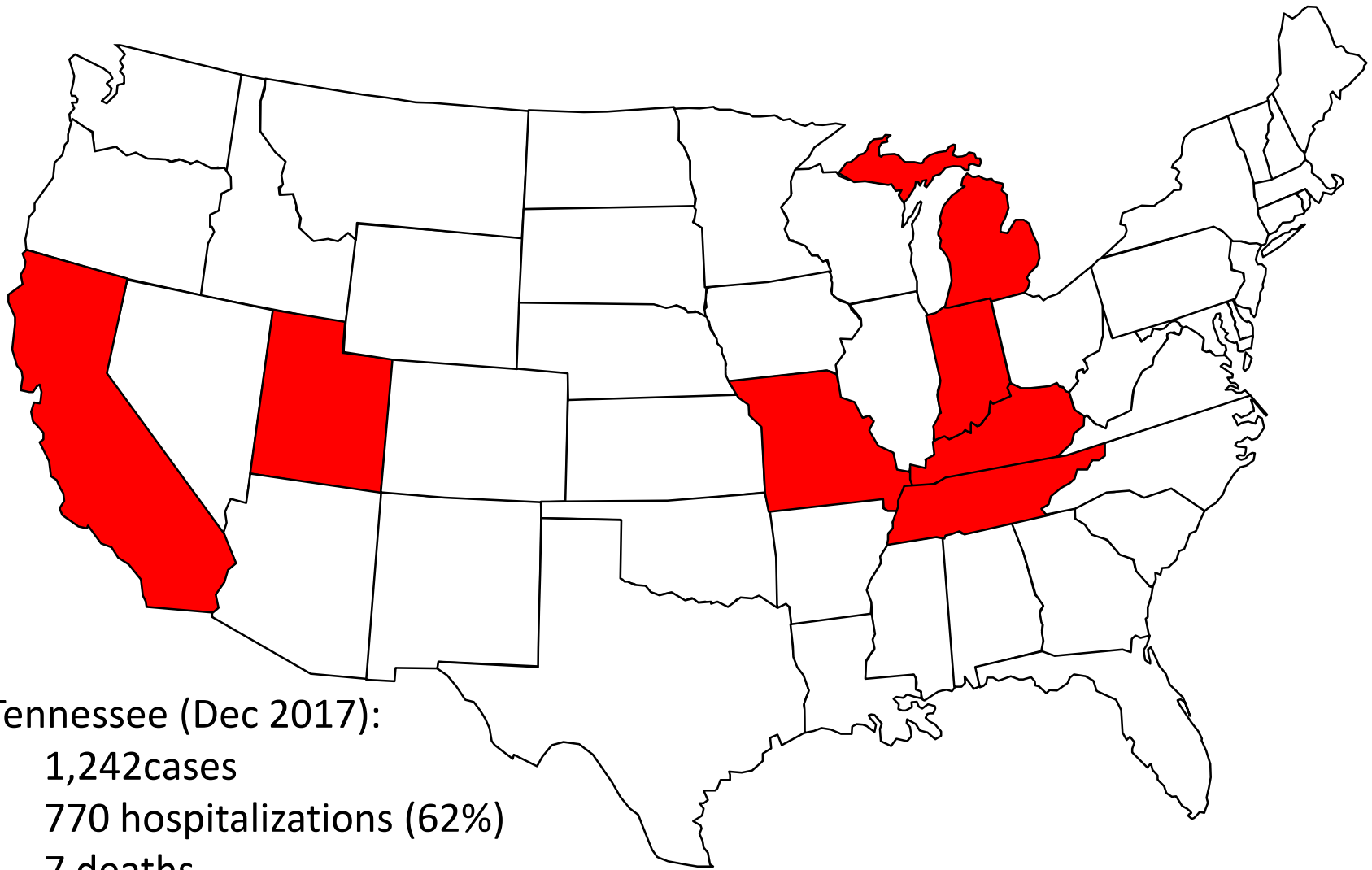
Hepatitis A Outbreaks, 2016–19



Indiana (Nov 2017):

- 1,269 cases
- 674 hospitalizations (53%)
- 4 deaths

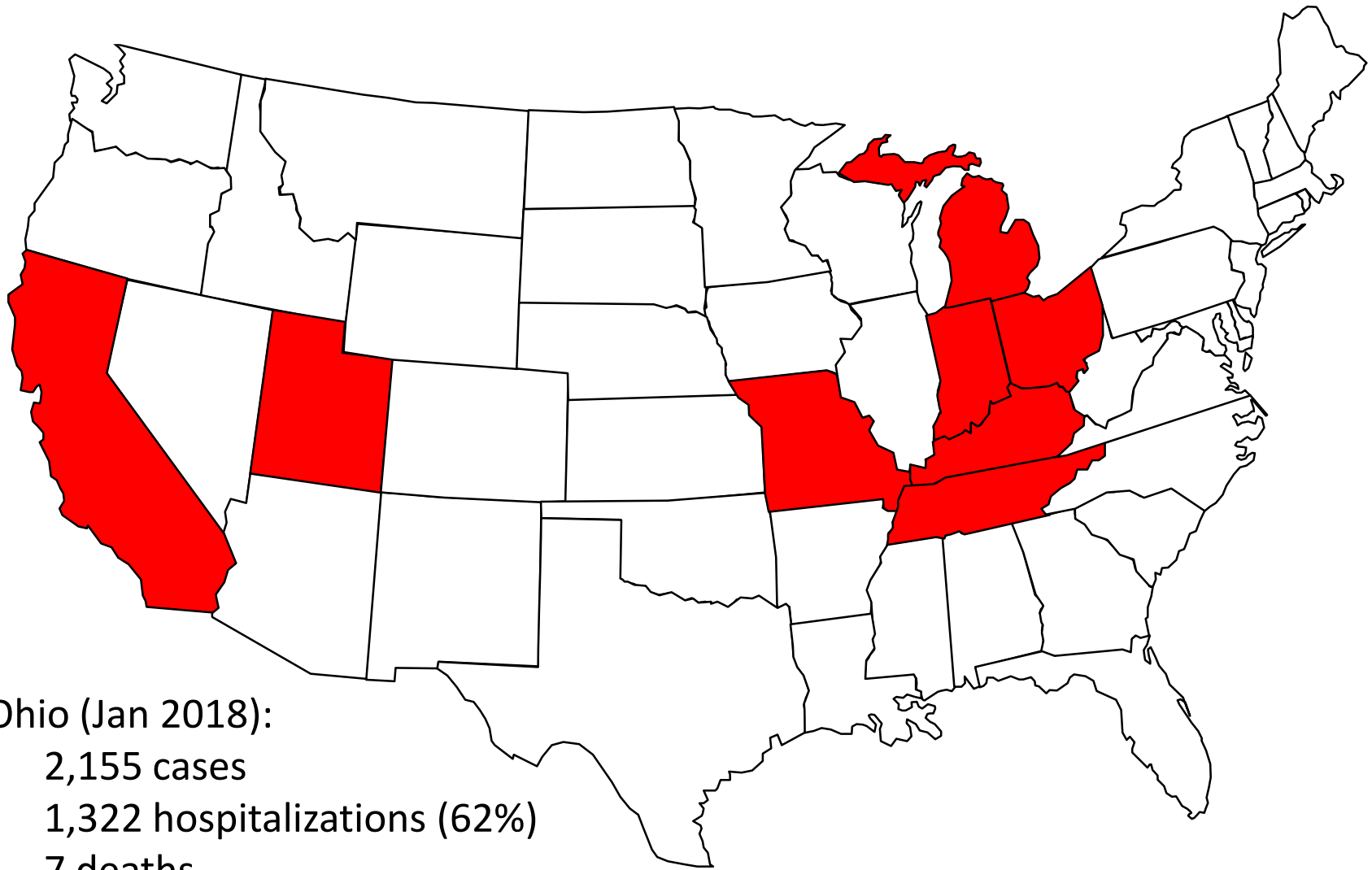
Hepatitis A Outbreaks, 2016–19



Tennessee (Dec 2017):

- 1,242 cases
- 770 hospitalizations (62%)
- 7 deaths

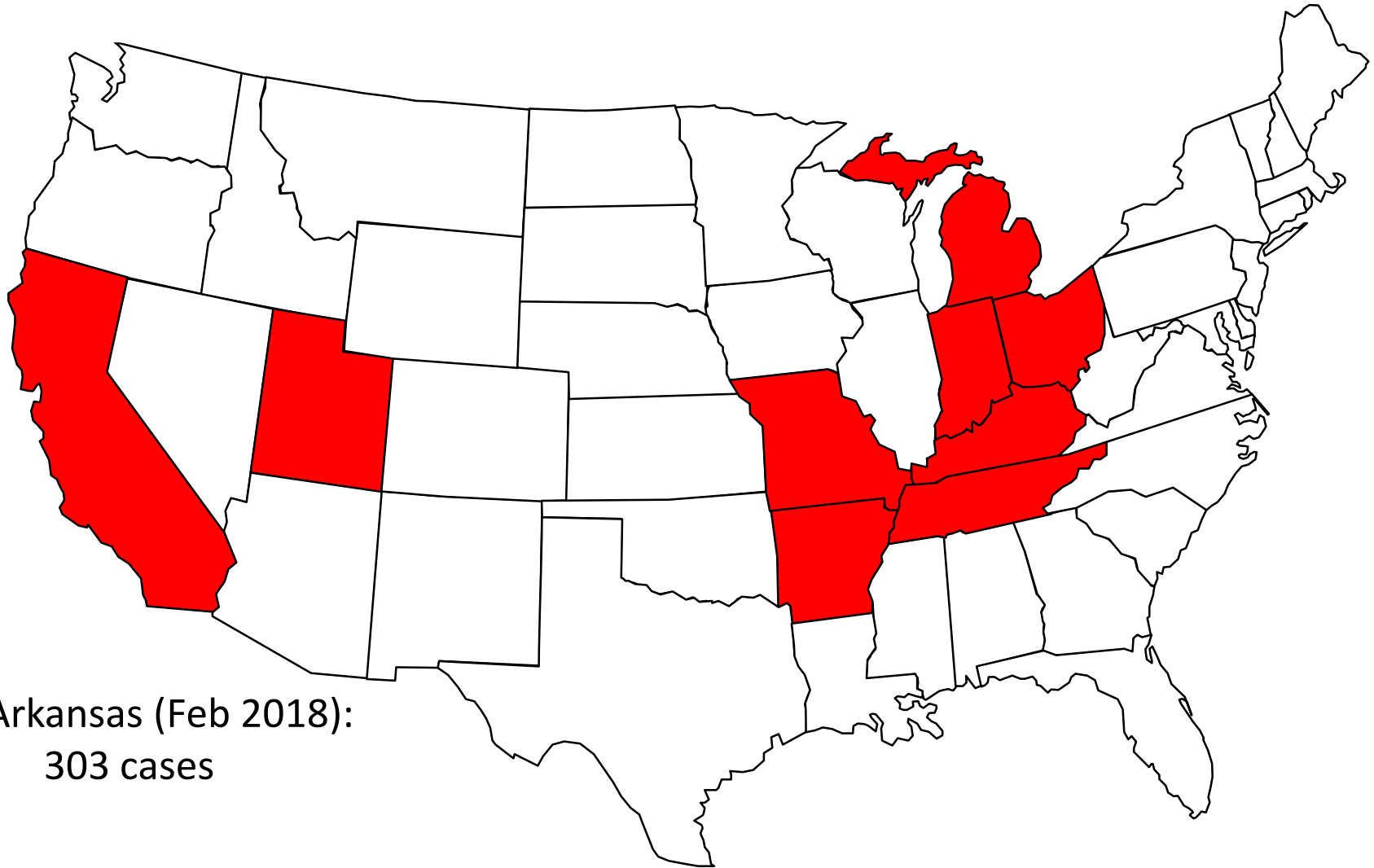
Hepatitis A Outbreaks, 2016–19



Ohio (Jan 2018):

- 2,155 cases
- 1,322 hospitalizations (62%)
- 7 deaths

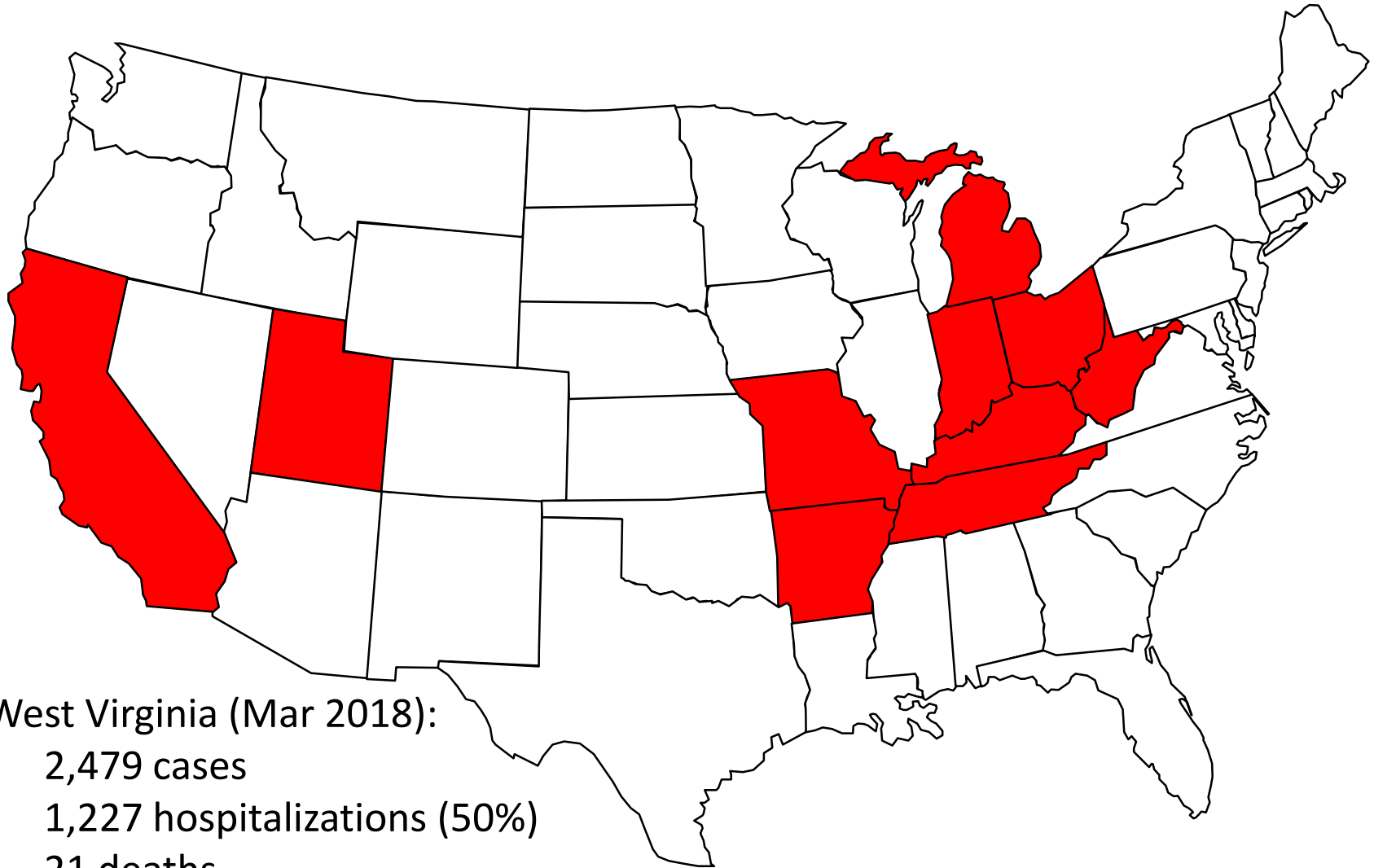
Hepatitis A Outbreaks, 2016–19



Arkansas (Feb 2018):

- 303 cases

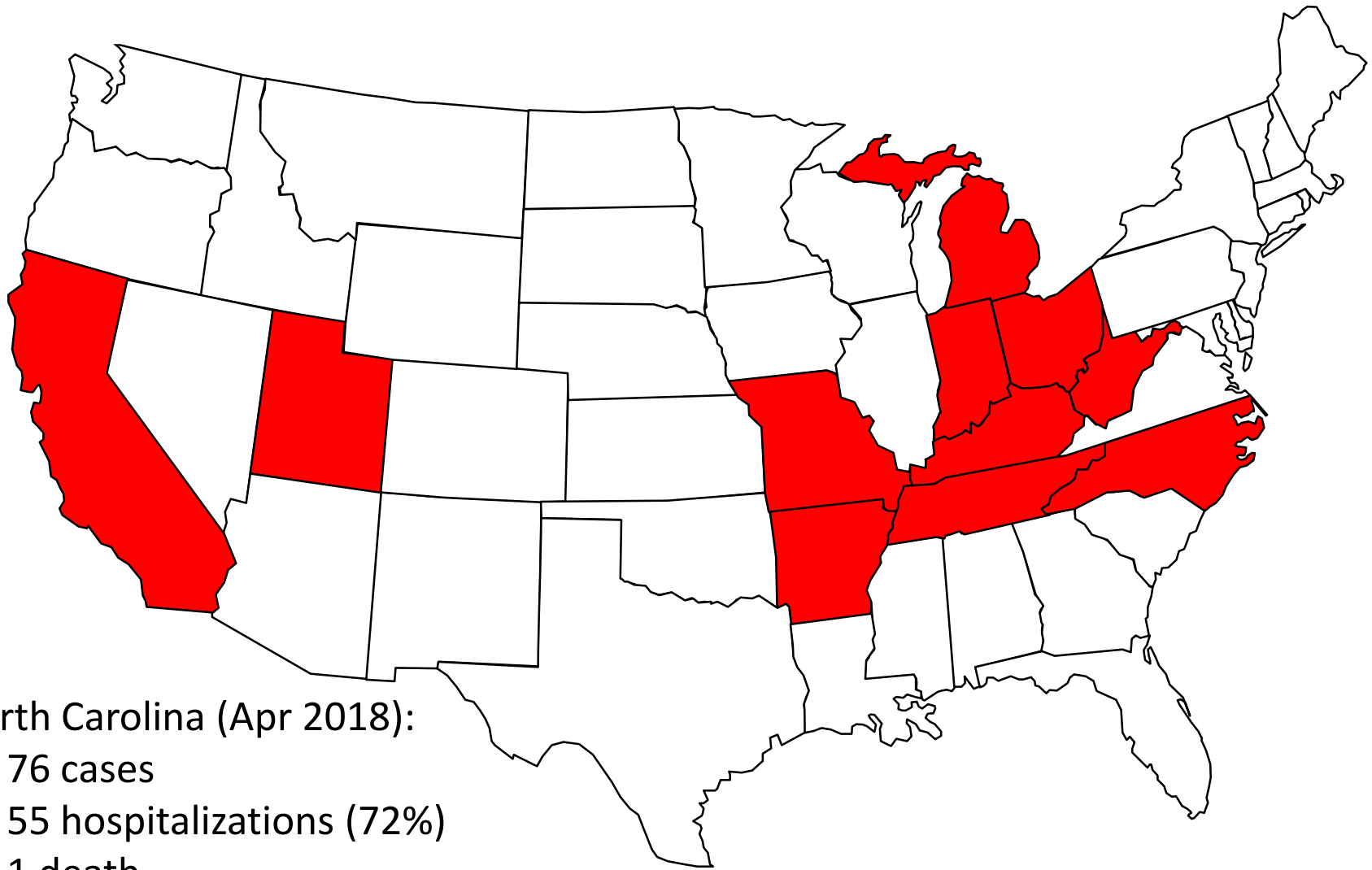
Hepatitis A Outbreaks, 2016–19



West Virginia (Mar 2018):

- 2,479 cases
- 1,227 hospitalizations (50%)
- 21 deaths

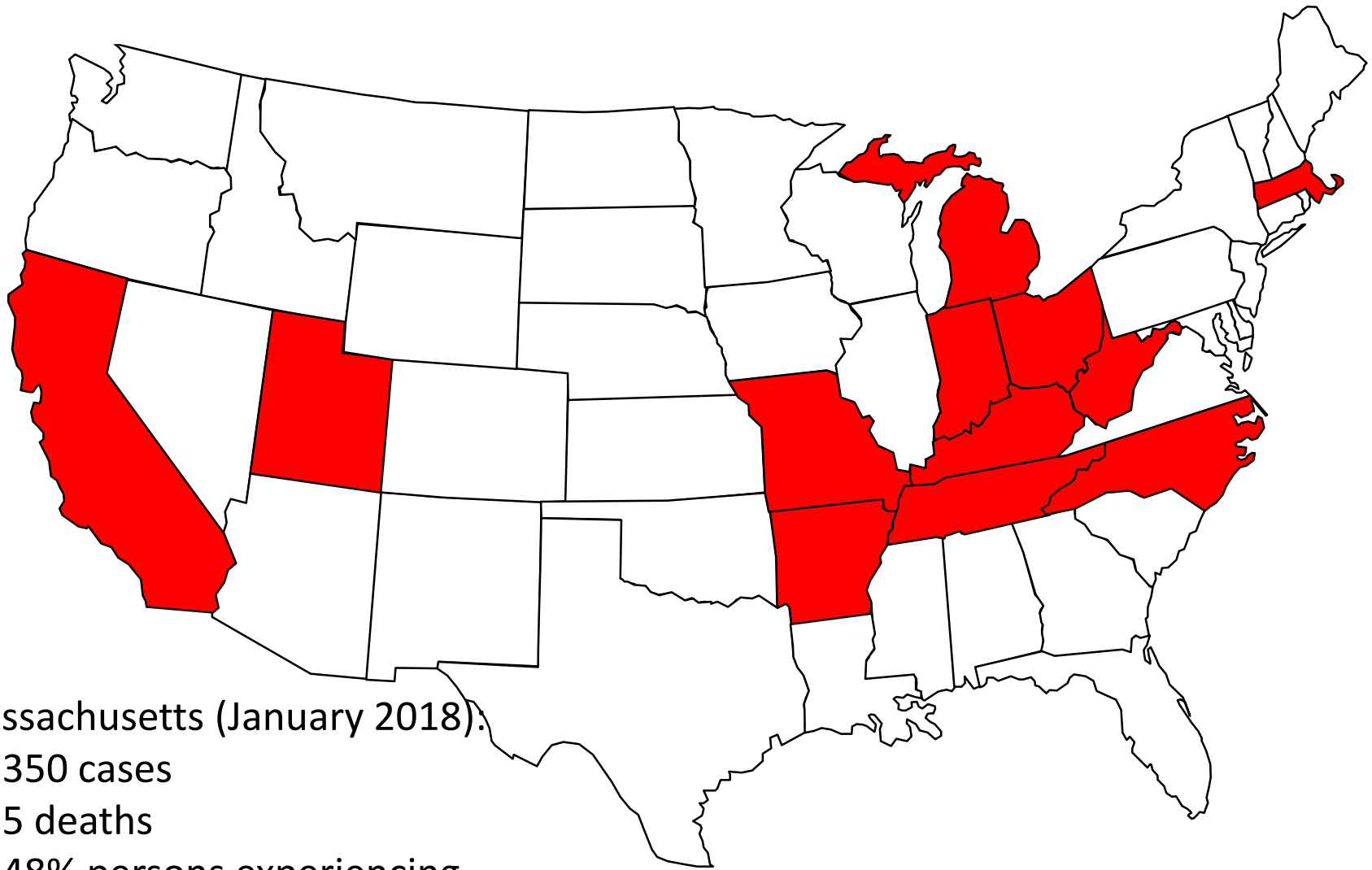
Hepatitis A Outbreaks, 2016–19



North Carolina (Apr 2018):

- 76 cases
- 55 hospitalizations (72%)
- 1 death

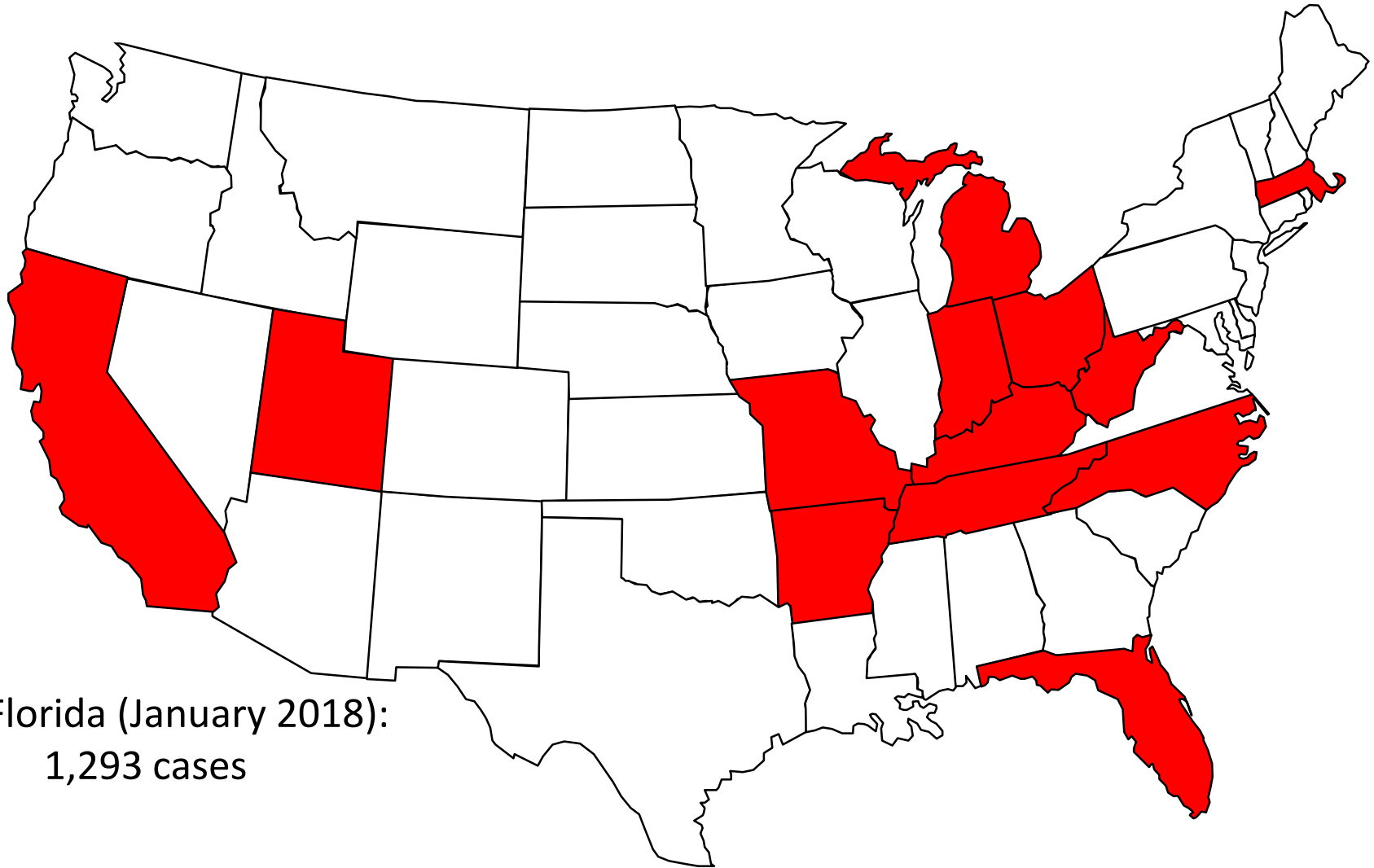
Hepatitis A Outbreaks, 2016–19



Massachusetts (January 2018):

- 350 cases
- 5 deaths
- 48% persons experiencing homelessness/unstable housing

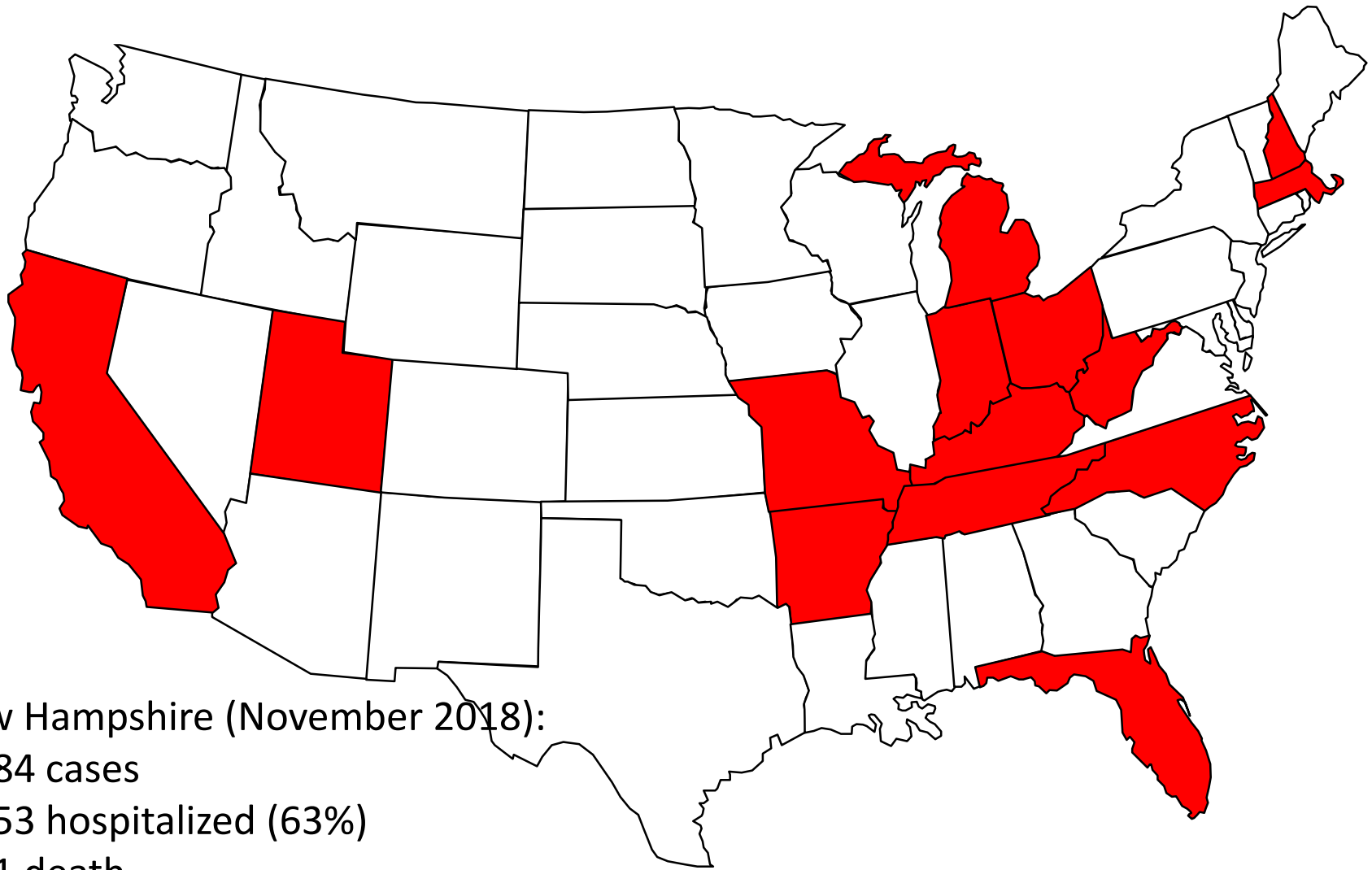
Hepatitis A Outbreaks, 2016–19



Florida (January 2018):

- 1,293 cases

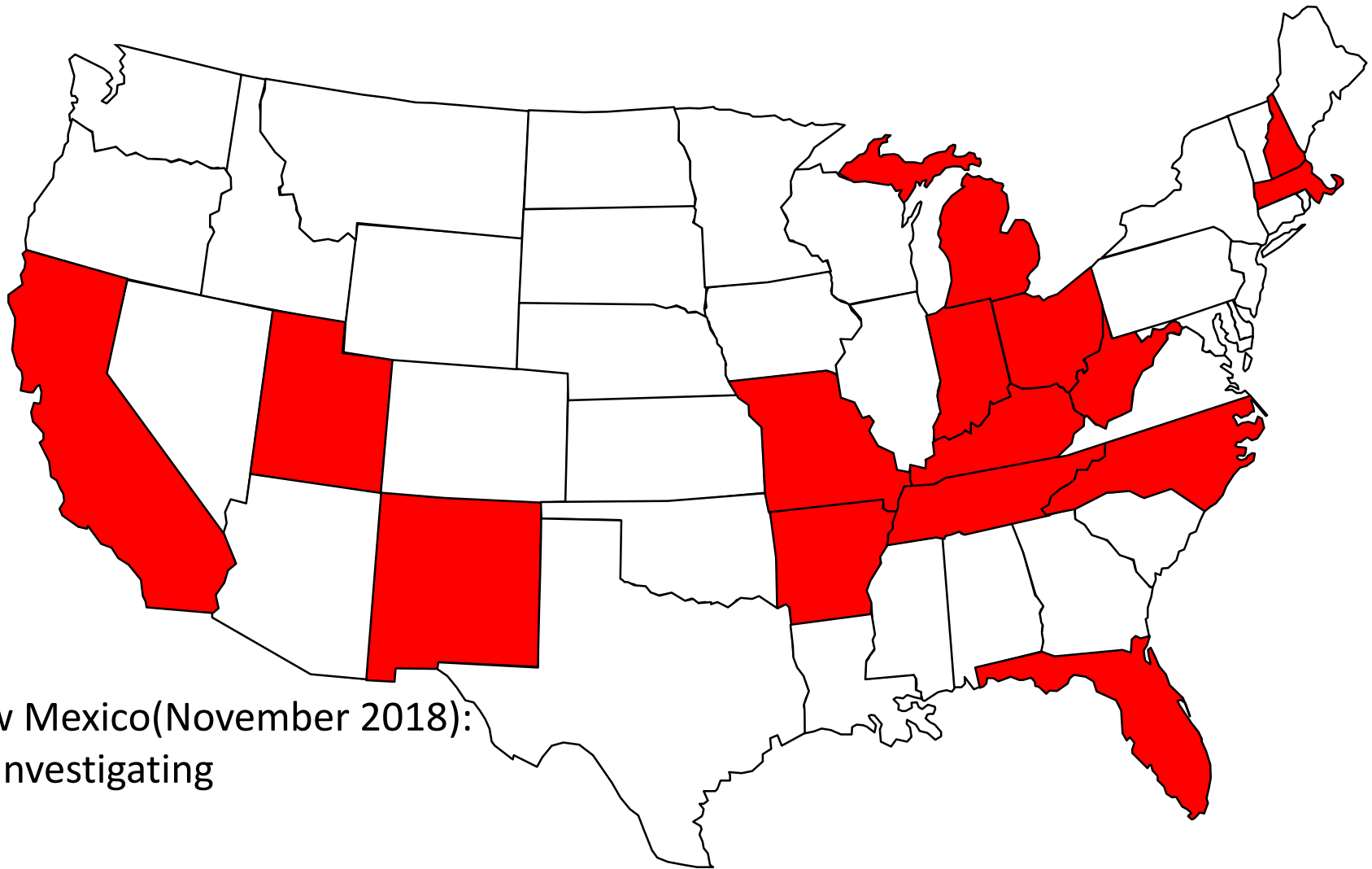
Hepatitis A Outbreaks, 2016–19



New Hampshire (November 2018):

- 84 cases
- 53 hospitalized (63%)
- 1 death

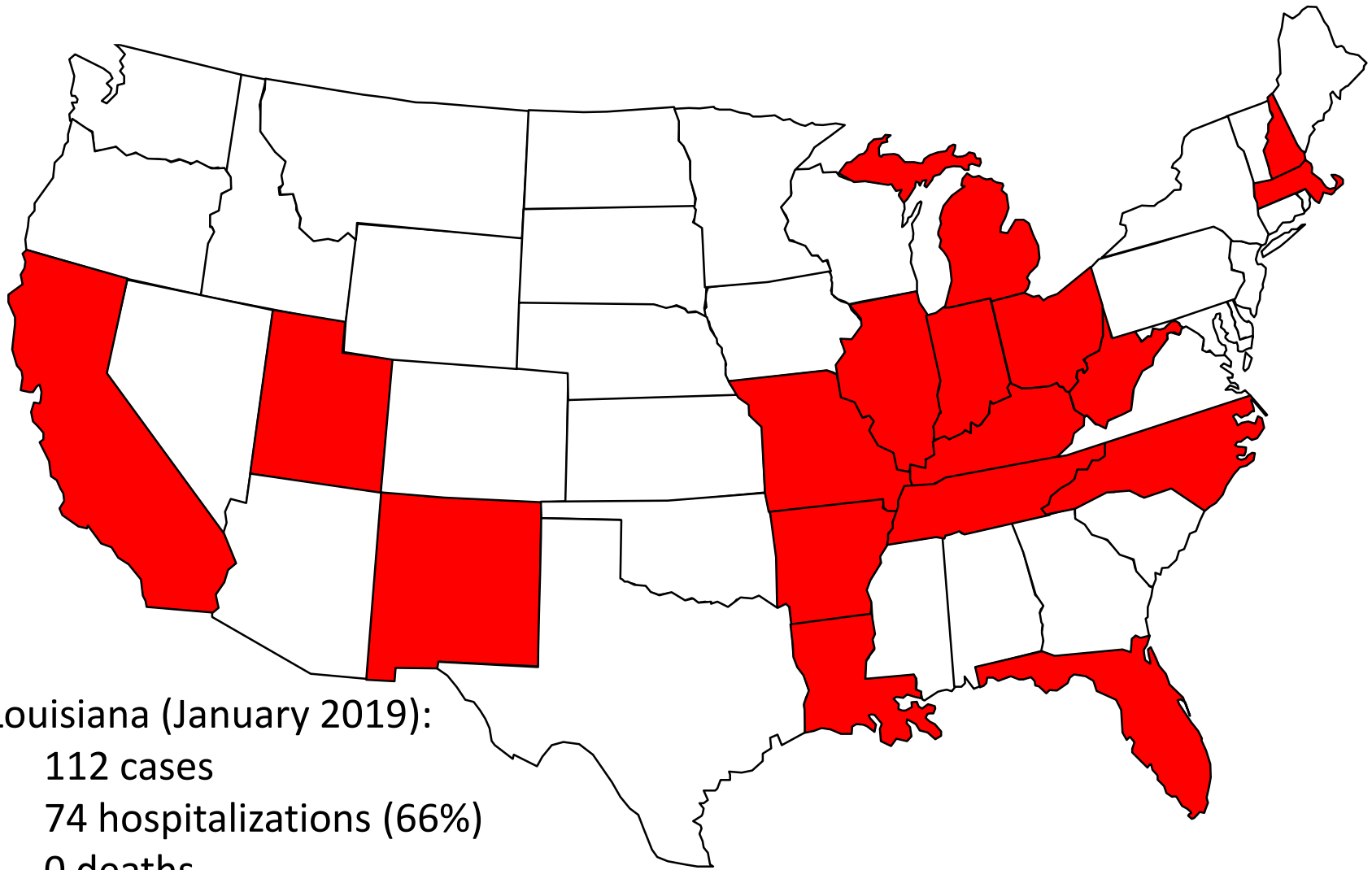
Hepatitis A Outbreaks, 2016–19



New Mexico(November 2018):

- Investigating

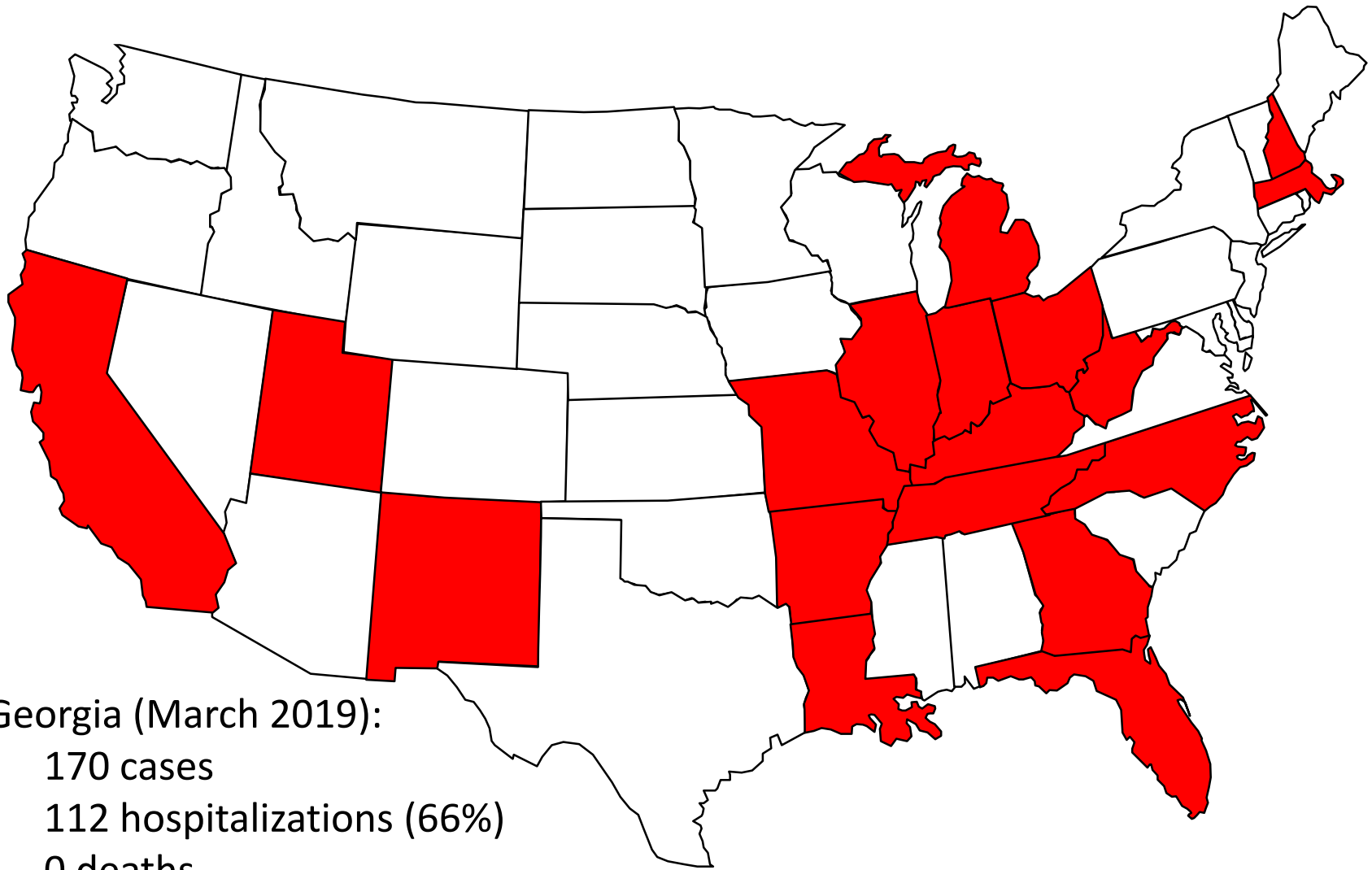
Hepatitis A Outbreaks, 2016–19



Louisiana (January 2019):

- 112 cases
- 74 hospitalizations (66%)
- 0 deaths

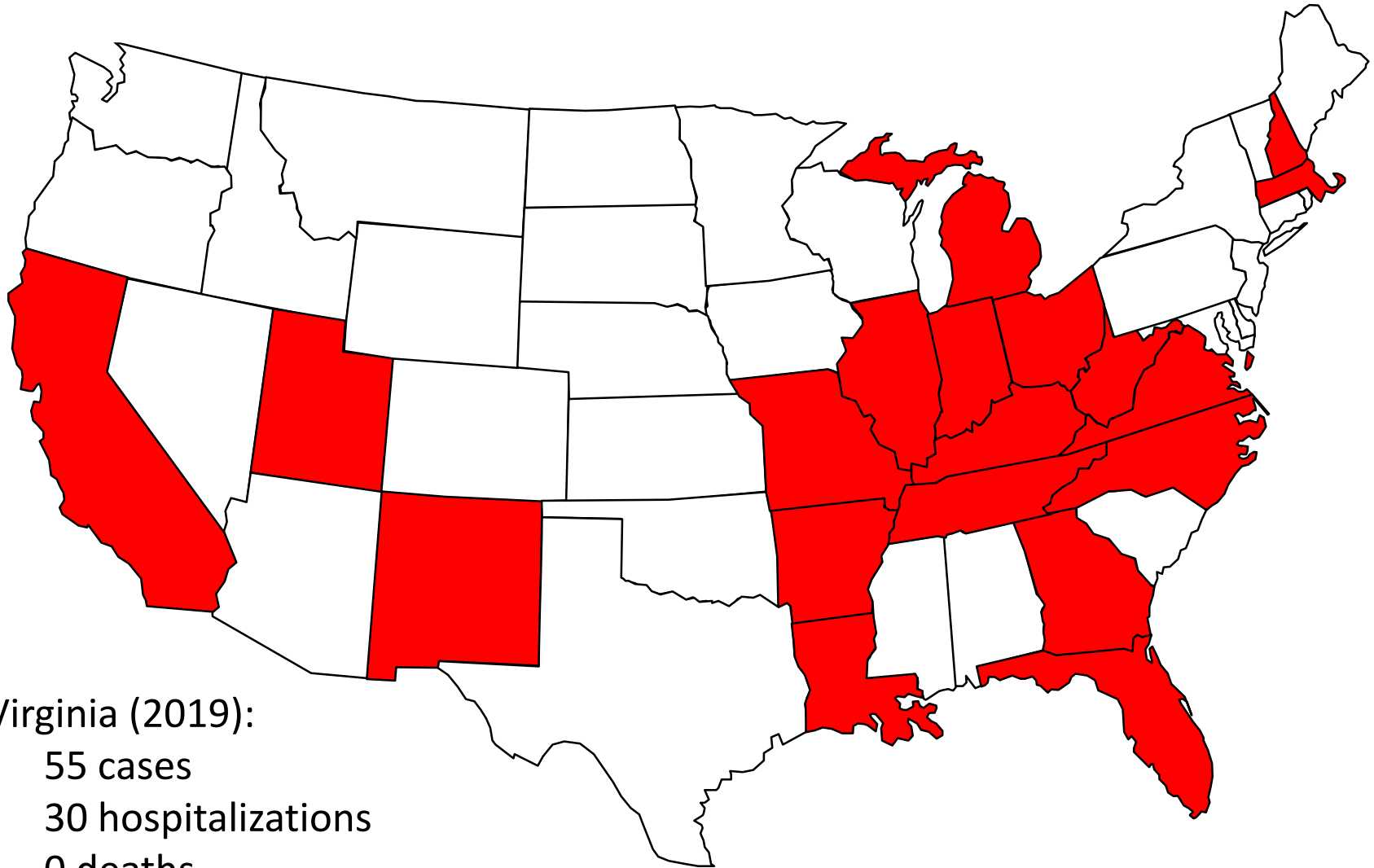
Hepatitis A Outbreaks, 2016–19



Georgia (March 2019):

- 170 cases
- 112 hospitalizations (66%)
- 0 deaths

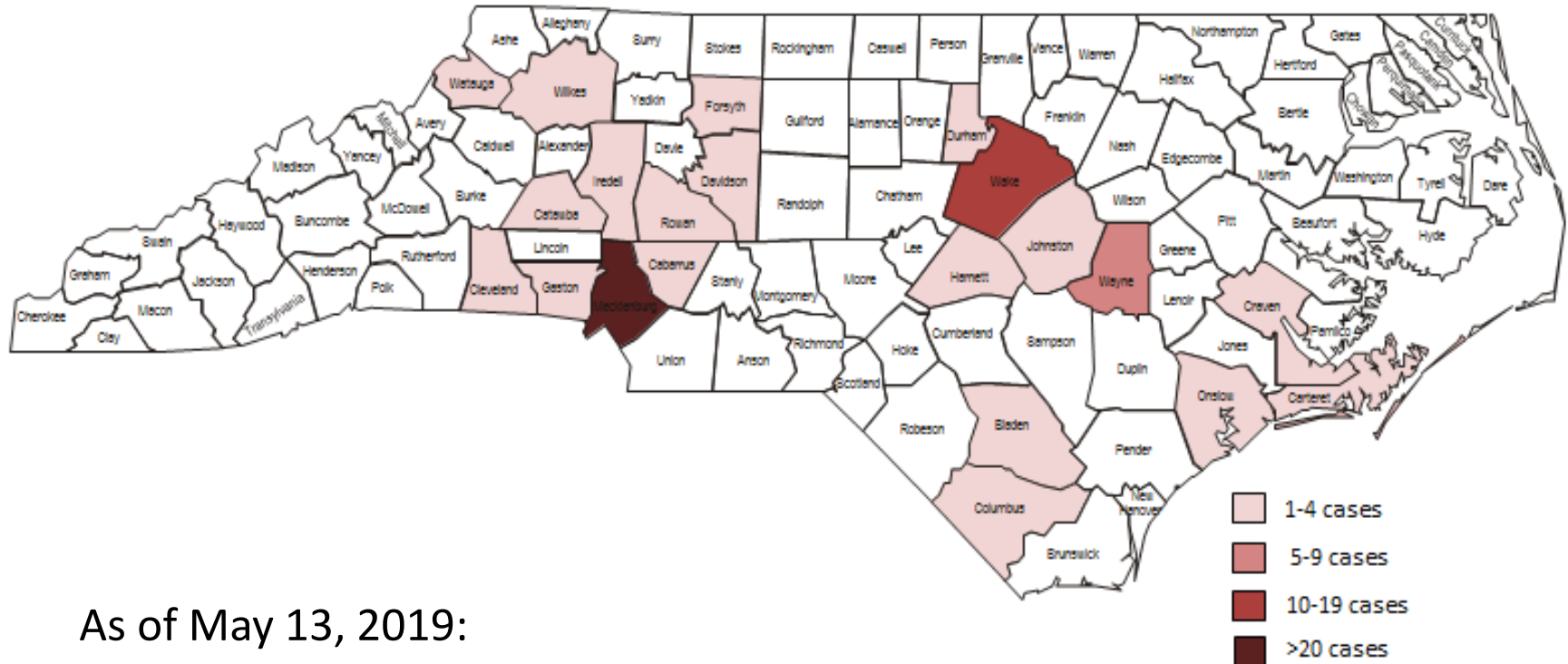
Hepatitis A Outbreaks, 2016–19



Virginia (2019):

- 55 cases
- 30 hospitalizations
- 0 deaths

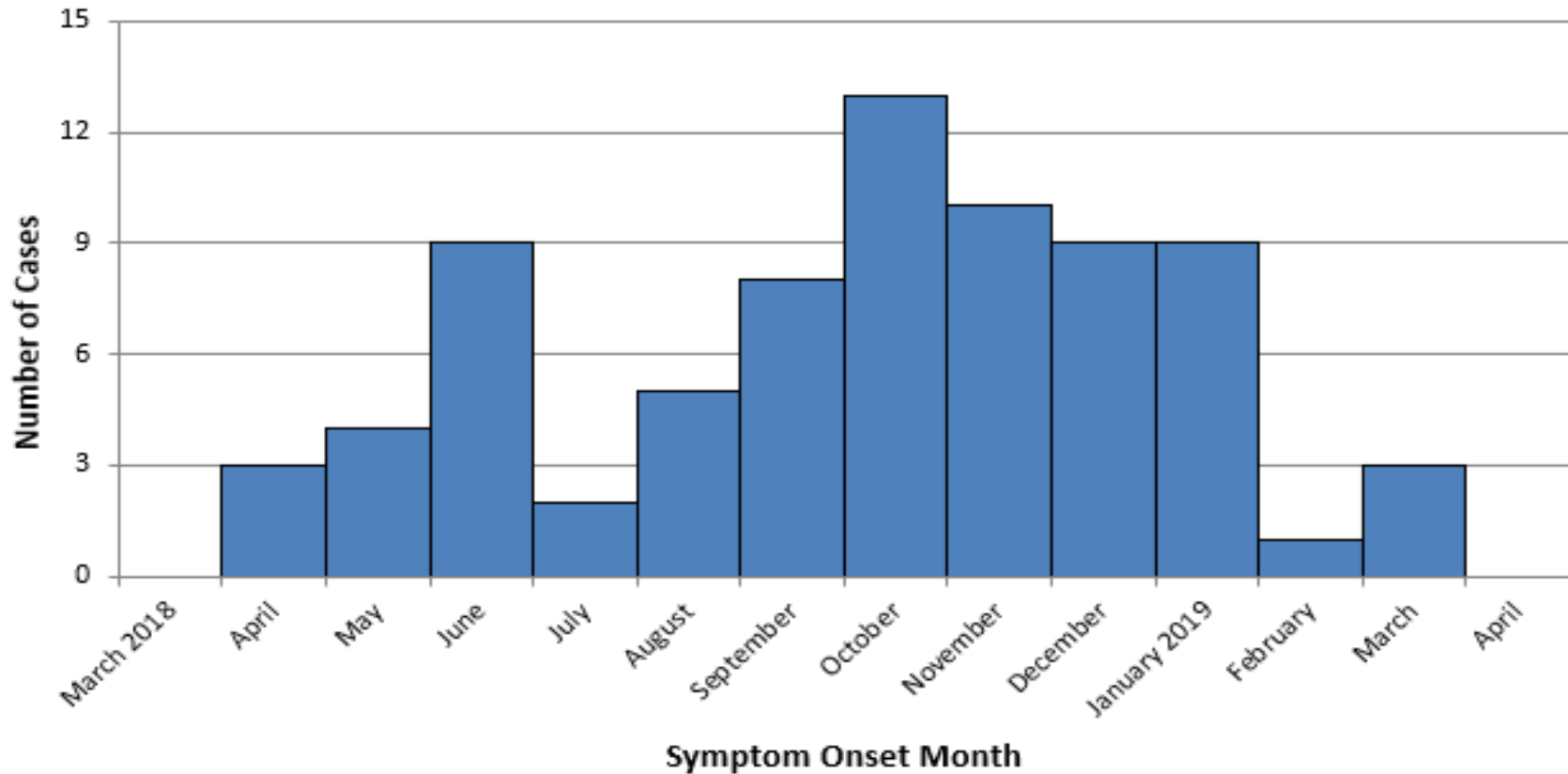
Hepatitis A Outbreak in NC, January 1, 2018 – May 13, 2019



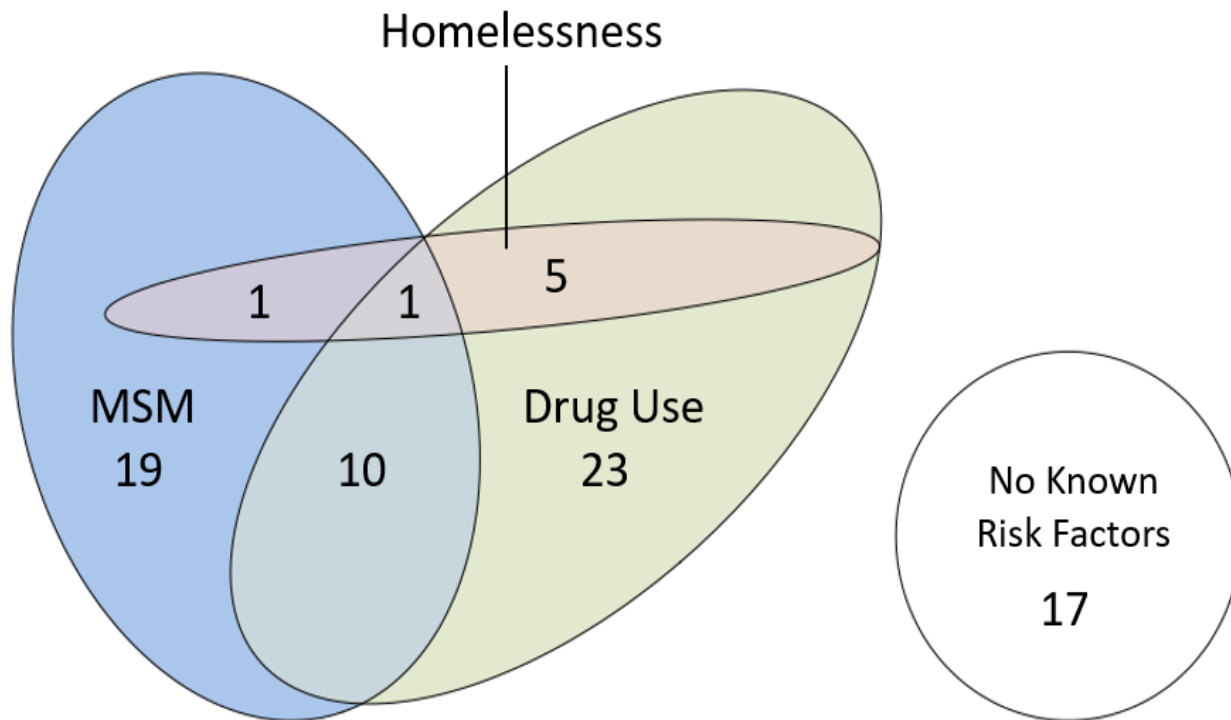
As of May 13, 2019:

- 76 cases
- 55 hospitalized (72%)
- 1 death

Outbreak-associated Cases: January 1, 2018 – May 13, 2019



Risk Factors among Outbreak-Associated Cases



Hepatitis A: Prevention

- **Vaccine preventable!** One dose is 95% effective
- Handwashing is important!
 - Wash for at least 20 seconds, frequently
 - Hand sanitizer is better than nothing, but not efficient
- Safer sex practices: Especially anal play, anal-oral
- Safer injection and drug use practices:
 - Never share works
 - Never share pipes
 - Clean surfaces

Hepatitis A Vaccination in Adults

- Most adults unaware they need shots
- Many physicians forget to offer vaccines to adults (even the recommended ones)
- Percentages of adults who are up-to-date (nationally):
 - 9% for adults ≥ 19 years,
 - 13% for adults 19-49 years, and
 - 5% for adults ≥ 50 years
- Among adults 19-49 years with chronic liver conditions, coverage was only 23%

CDC Guidance for Response

- Provide hepatitis A vaccine to those at high risk
 - People experiencing homelessness
 - People who use injection and non-injection drugs
 - Men who have sex with men (MSM)
 - Others with established risk factors who are not yet immunized
- Consider hepatitis A vaccination for anyone with ongoing, close contact with people who are homeless or people who use injection and non-injection drugs

Vaccine Availability Guidance in NC

- Published September 2018
- NC Immunization Program initiated a “liberal use” policy for state supplied hepatitis A vaccine among high risk individuals
- People experiencing homelessness are eligible for free state supplied vaccine regardless of insurance status or vaccination status

NC Public Health Response: Goals

- Identify and implement strategies to increase hepatitis A vaccinations among
 - Persons who use injection and non-injection drugs
 - Persons who are experiencing homelessness
 - Men who have sex with men
 - Persons with chronic liver disease, including chronic hepatitis B and C
- Provide education and increase awareness of hepatitis A among high-risk populations
- Form sustainable partnerships for future public health collaborations

Seriously?

Did you know **HEPATITIS A** liver infections are on the rise in North Carolina? If you are experiencing homelessness, use drugs or are a man who has sex with men, you are most at risk.



Protect yourself.
Protect others.
Get vaccinated.

Seriously.

Hepatitis A is spread when small, undetectable amounts of feces (poop) get into your mouth. You can get hepatitis A:

- By swallowing food or drink contaminated with the virus.
- Through oral or anal sex.
- By touching surfaces or objects contaminated with the virus, then putting your hands in your mouth.

Hepatitis A can also be spread by sharing drug injection equipment.

Ask your doctor or local health department about the hepatitis A vaccine.



Hepatitis A Response: Partnership

- Local health departments
- Community-based organizations
- Clinicians
- Other state agencies
 - Public Safety
 - Mental health/substance abuse
 - State-operated facilities
- Others



What Can We Do?

- Establish communication with your local health department; identify who already works with your clients
- Consider partnering on
 - Vaccine clinics
 - Testing events
 - Homeless health clinics
- Provide education
- Refer your clients to the local health department for vaccine, testing, and other services
- Other?

OTHER COMMUNICABLE DISEASE CONCERNS

Other Infectious Complications of Drug Use

- HCV, HBV and HIV
- Bacterial infections
 - Endocarditis
 - Sepsis
 - Bone/joint infections
 - Invasive group A strep
 - Wound infections
- etc.

HEPATITIS C

A SILENT EPIDEMIC



The hepatitis C virus is a leading cause of **liver disease, liver cancer, and liver transplants**, placing a huge burden on patients, their families, caregivers, and the healthcare system.

The Growing Problem of Hepatitis C in the U.S.



> 150% increase
in new cases in recent years



3.5 MILLION
people are living with hepatitis C



59 years
is the average age people are dying

More persons die from hepatitis C than all of the 60 other reported infectious disease combined. According to available data, at least 20,000 deaths occur each year - which is believed to be an underestimate of the actual number.

Hepatitis C Virus is Very Infectious



Hepatitis C virus spreads when blood from an infected person enters the body of someone who is not infected.



Hepatitis C is **10 times more infectious** than HIV.



At least 50% of persons living with hepatitis C do not know they are infected.

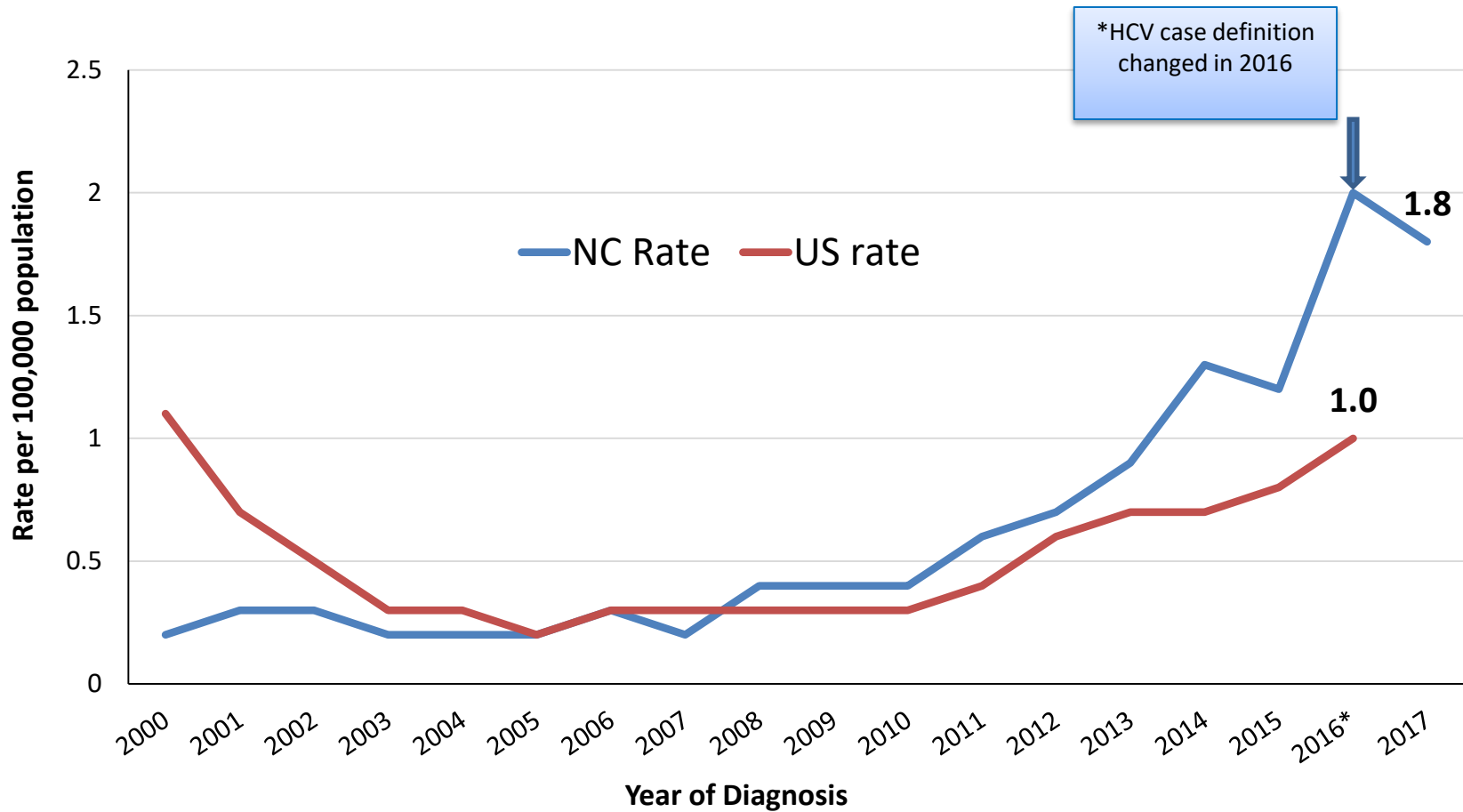


A **blood test** is the only way to know if a person has been infected.

Testing for the hepatitis C virus is recommended for certain individuals, including those who:

Source: www.cdc.gov

Acute HCV Rates in North Carolina and United States, 2000–2017



*Case definition for HCV changed in 2016.

Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 3, 2018) and Surveillance for Viral Hepatitis, United States, 2009-2015 CDC reports (<https://www.cdc.gov/hepatitis/statistics/index.htm>).

HEPATITIS B: ARE YOU AT RISK?

HEPATITIS B IS A SERIOUS & DEADLY DISEASE



Hepatitis B virus infects people of all ages & as many as **2.2M people** in the US are chronically infected



Up to 40% of chronic infections lead to cirrhosis, liver failure, and liver cancer, which may lead to death

HEPATITIS B IS EASILY SPREAD

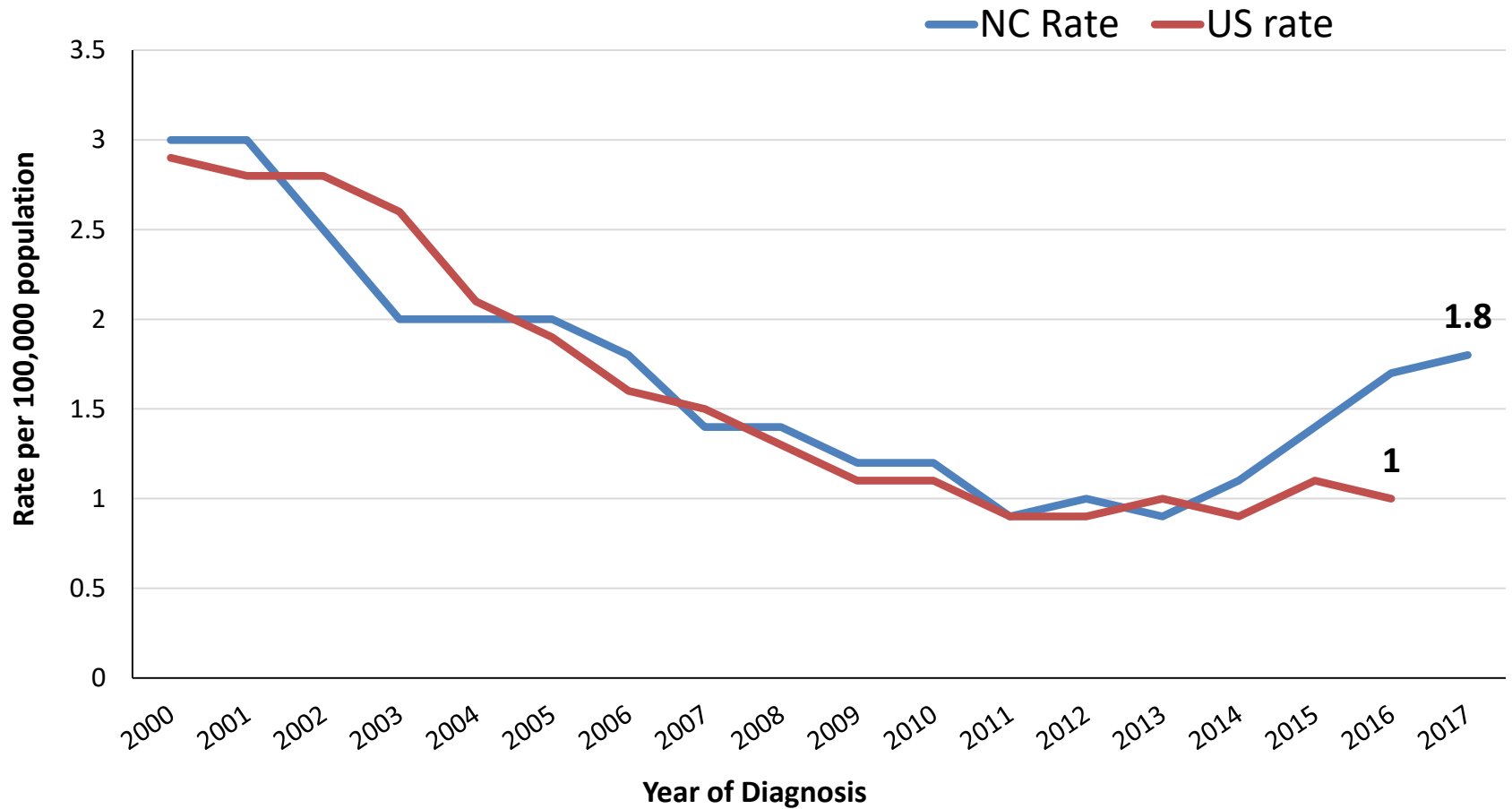


Hepatitis B is **50 to 100X more** infectious than HIV and can live outside the body for **7+ days** and still cause infection



2/3 of those living with chronic hepatitis B do not know they are infected but can still spread the virus to others

Acute HBV Rates in North Carolina and United States, 2000–2017

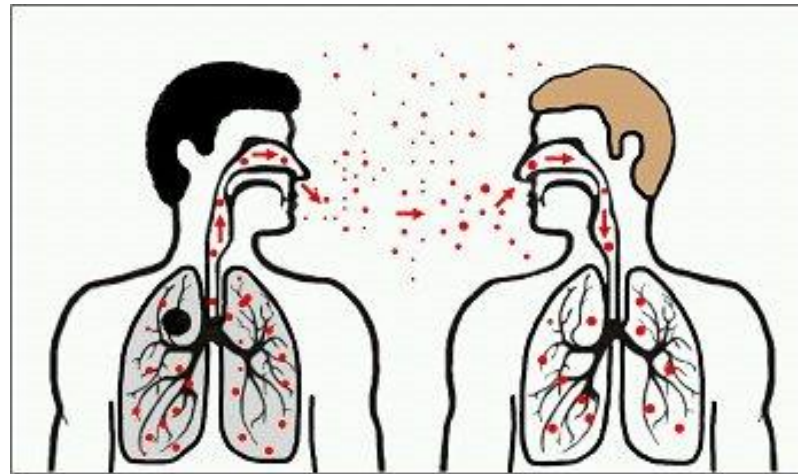


Data Source: North Carolina Electronic Disease Surveillance System (NC EDSS) (data as of June 3, 2018) and Surveillance for Viral Hepatitis, United States, 2000-2016 CDC reports (<https://www.cdc.gov/hepatitis/statistics/index.htm>).

Tuberculosis in North Carolina

TB: Transmission

- Caused by bacteria called *Mycobacterium tuberculosis*



- Spreads through droplets in the air when a person with active disease sings, coughs, sneezes or speaks
- Transmitted when a person is in **VERY CLOSE CONTACT** with someone who is sick with TB disease over a prolonged period of time

Tuberculosis (TB) Disease: Only the Tip of the Iceberg

There are **two** types of TB conditions:
TB disease and **latent TB infection**.

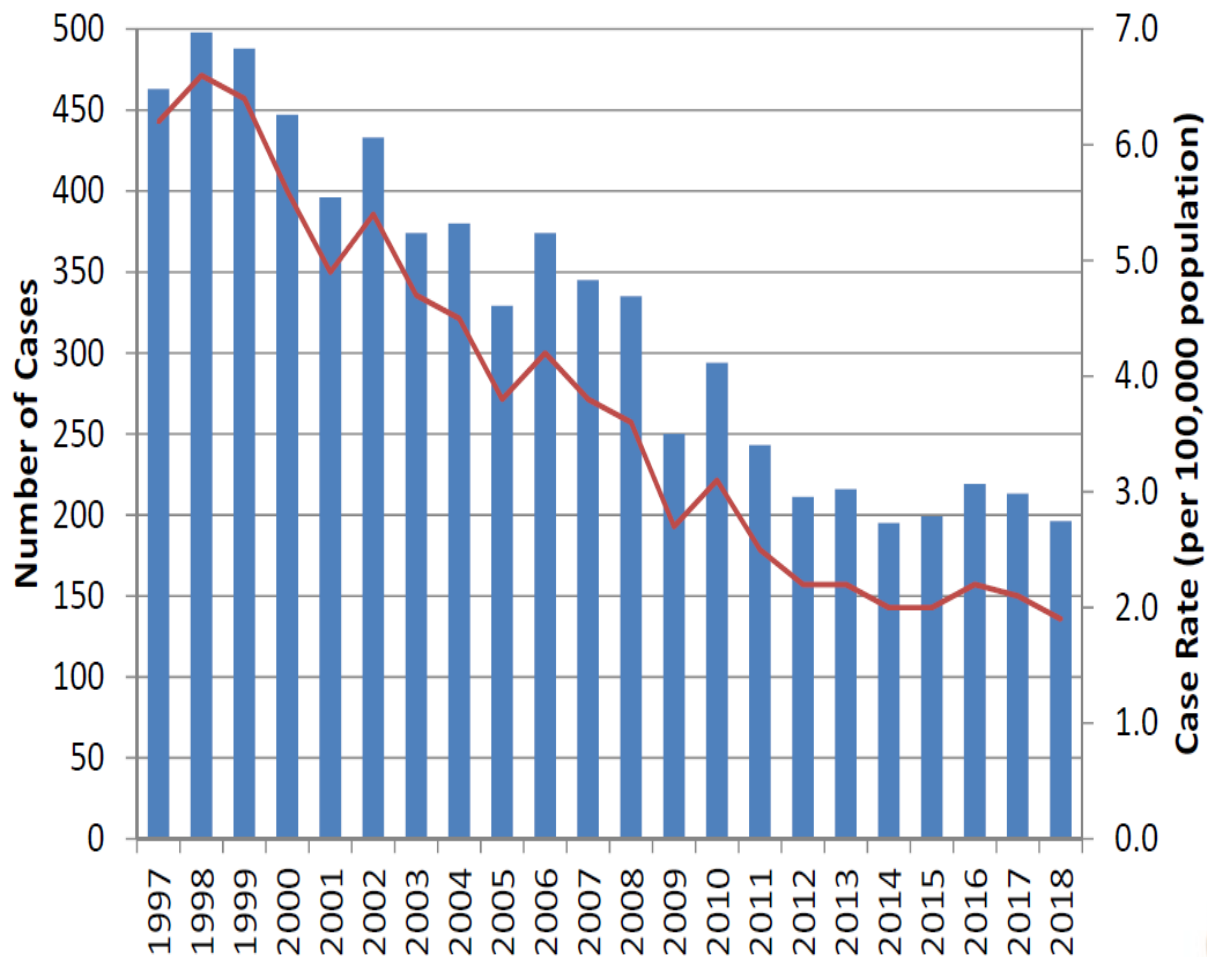
People with **TB disease** are sick from active TB germs. They usually have symptoms and may spread TB germs to others.

People with **latent TB infection** do not feel sick, do not have symptoms, and cannot spread TB germs to others.

But, if their TB germs become active, they can develop **TB disease**.

Millions of people in the U.S. have **latent TB infection**. Without treatment, they are at risk for developing **TB disease**.

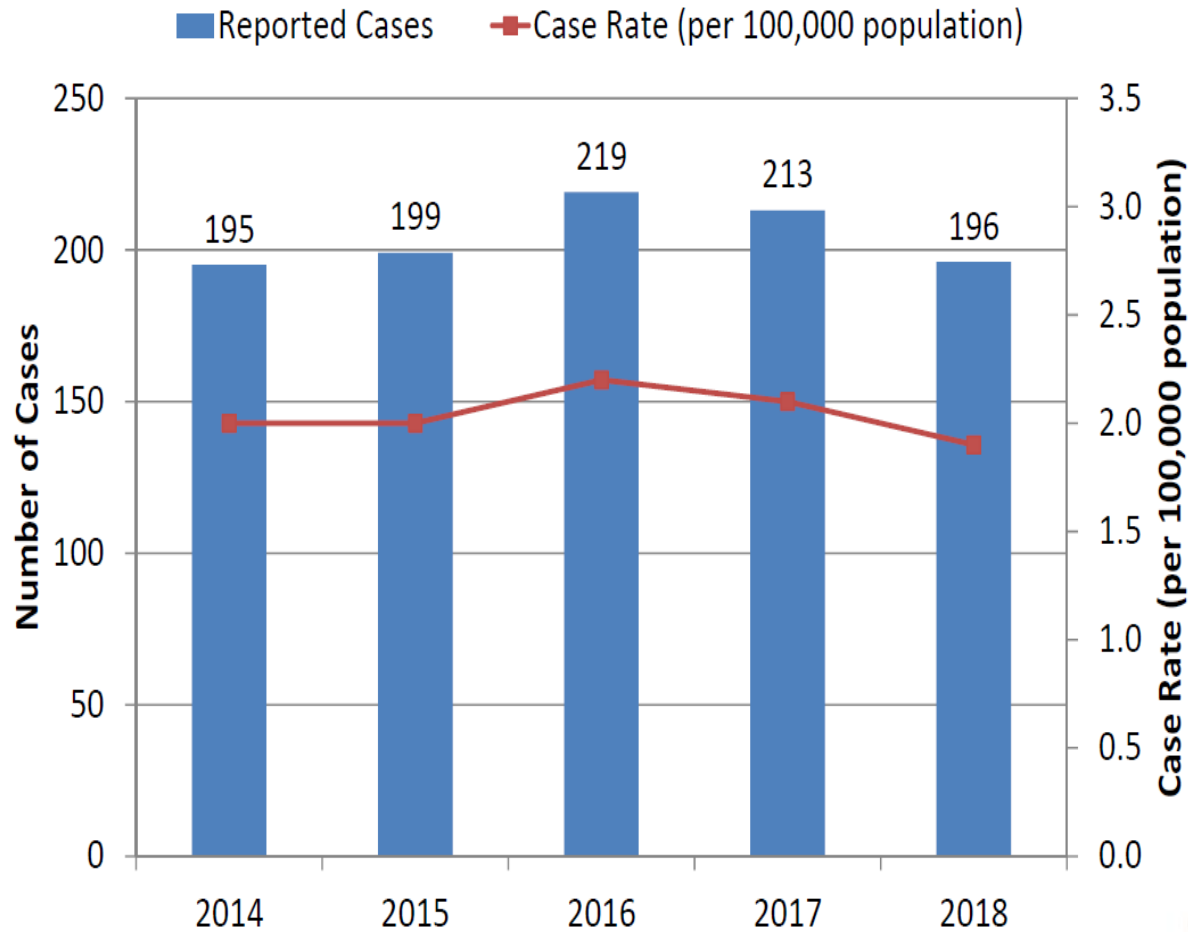
North Carolina TB Cases, 1997-2018



Data Source: NC EDSS; data run 3/15/2019



North Carolina TB Cases, 2014-2018



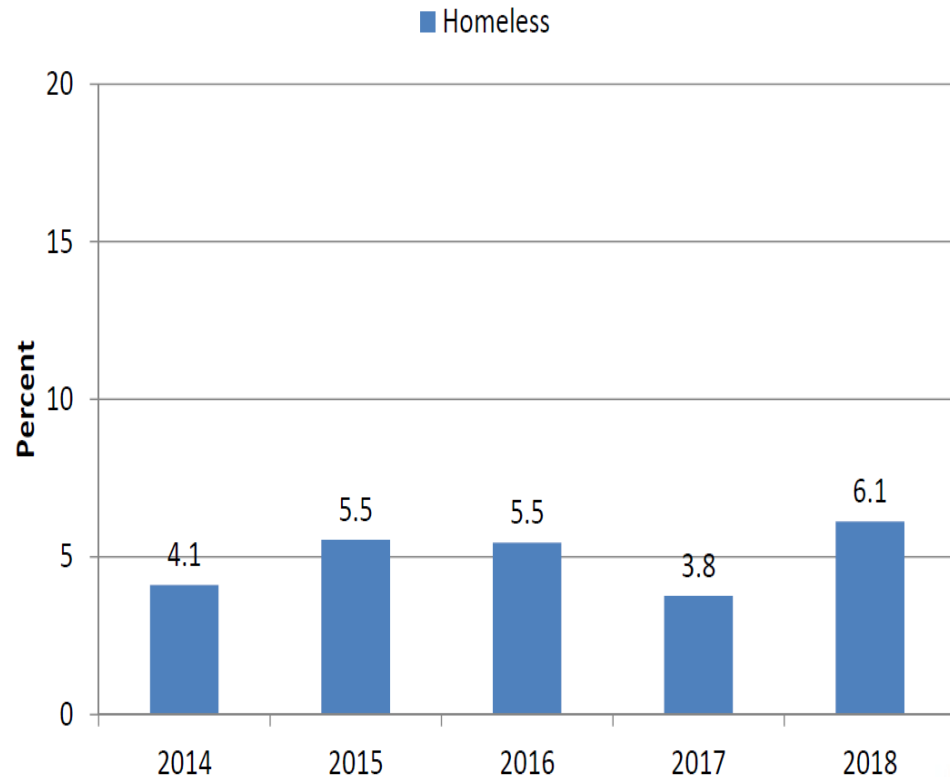
Data Source: NC EDSS; data run 3/15/2019



Tuberculosis and Homelessness

- Homelessness is referred to as an unstable housing situation
- TB Program is concerned with any homeless episodes in a lifetime
- Cases have remained relatively stable over the years

Homelessness Among NC TB Cases, 2014-2018



Data Source: NC EDSS; data run 3/15/2019

Resources and Contacts

- American Lung Association (ALA)
 - Provides incentives and enablers to local health departments
 - Covers housing cost, utilities and other items for select patients
- Centers of Excellence (COE)
 - 4 across the nation
 - Southeastern National Tuberculosis Center (SNTC) – services NC
 - Educational material and trainings
 - Medical consultations
 - Provide support for specialty medications during treatment
- Local Health Departments
 - Provide screening services
 - Provide treatment and follow up for TB infection and disease
- NC TB Program Staff
919-755-3184
 - TB Medical Director and Controller
 - Dr. Jason Stout
 - Medical Consultation Unit Manager
 - Dr. Jean-Marie Maillard
 - TB Nurse Consultants
 - Myra Allen
 - Daniela Ingram
 - Lynn Kearney
 - Julie Luffman
 - TB Registrar
 - India Solomon
 - Epidemiologist
 - Jenni Wheeler

What Now?

PARTNERSHIPS

Durham Health Department



Candice Givens, MSW, LCSWA, LCASA
Hepatitis C Bridge Counselor
Durham County Department of Public Health

Durham Health Department

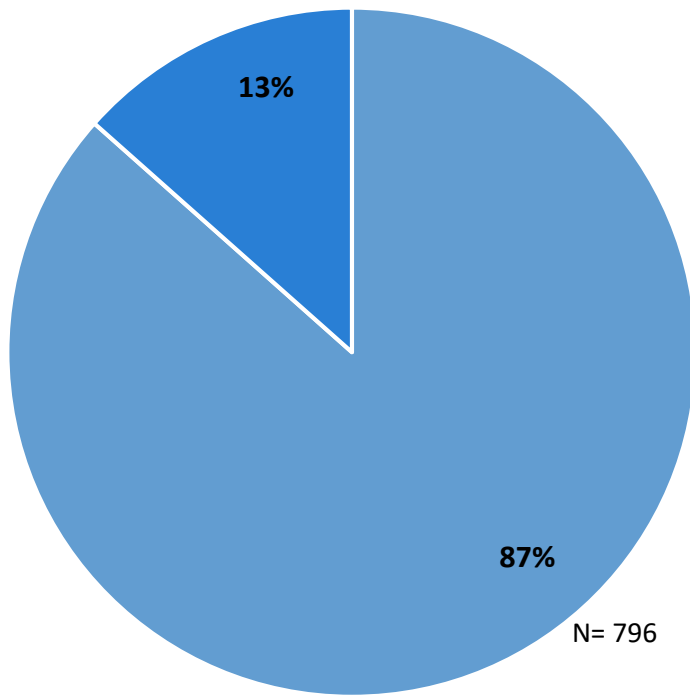


Routine Opt-out HIV and HCV testing (with reflex RNA) and linkage to care:

- DCoDPH Clinics
- Durham County Detention Center and Community Outreach
- Durham County Department of Social Services
- **Lincoln Community Health Center**
- Durham County Safe Syringe Program

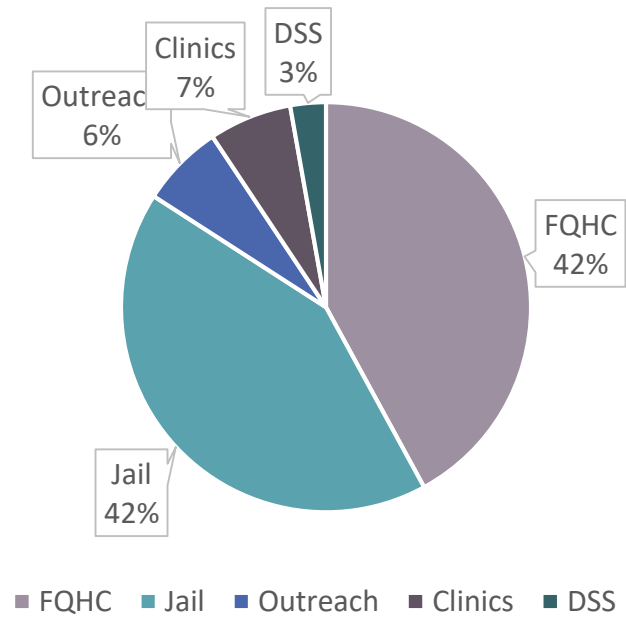
Homeless with Chronic HCV

Chronic HCV



■ Housed ■ Homeless

Site of Test for Homeless w/
Chronic HCV





Lincoln Community Health Center

Lincoln Community Health Center- Healthcare for the Homeless Clinic

- On the campus of Urban Ministries-Durham homeless shelter
- Serves those who are living on the streets, in emergency shelters, or in unstable or transitional housing*
- Services
 - Chronic health conditions
 - Mental health & substance abuse screenings/ services
 - GYN care
 - Medication assistance
 - Urgent care
 - Other services*
- Walk-in or by appointment
- \$1 copay*



Contact Us

Candice Givens, MSW, LCSWA, LCASA

Durham County Bridge Counselor

cgivens@dconc.gov

**Lincoln Community Health Center-
Healthcare for the Homeless**

412 Liberty St., Durham, NC

919-808-5640

