

Infectious Diseases Morbidity Report

2016



ACKNOWLEDGEMENTS

This report was prepared by the Salt Lake County Health Department, Medical Division, Epidemiology and Infectious Disease Bureaus.

Ilene Risk, MPA Epidemiology Bureau Manager
Mary Hill, MPH Epidemiology Supervisor
Lynn Beltran, MPH Epidemiology Supervisor
Madison Clawson, RN Nursing Supervisor
Linda Bogdanow, BS, LEHS Epidemiology Supervisor
Melanie Spencer, MPH Epidemiologist
Andrea George, MPH Epidemiologist
Michelle Vowles, MPH Epidemiologist
Dede Vilven, MPH Epidemiologist

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Gary Edwards, MS Executive Director
Dagmar Vitek, MD, MPH Medical Director
Dorothy Adams, MPA, LEHS Deputy Director
Tair Kiphibane, RN, BSN Infectious Disease Bureau Manager
Nicholas Rupp, MCP Communications Coordinator

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For more information contact:

Mary Hill
Salt Lake County Health Department
Epidemiology Bureau
660 South 200 East, Suite 300
Salt Lake City, UT 84111
385-468-4207
mhill@slco.org

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EXECUTIVE SUMMARY

Utah law requires that over 80 infectious diseases be routinely reported to public health for ongoing surveillance and investigation. Reportable data are collected from laboratories, hospitals, medical providers and outpatient clinics. Salt Lake County Health Department Epidemiology and Infectious Disease Bureaus then investigate each report through patient interview and/or chart abstraction and analyze the data. The results of the data analysis are utilized to implement appropriate control and prevention measures. In 2016, over 14,000 disease reports were investigated to determine the source of infection and interrupt disease transmission.

The Salt Lake County Health Department 2016 Infectious Diseases Morbidity Report highlights diseases and events of interest and summarizes data for the most commonly reported infectious diseases affecting Salt Lake County residents. Highlights include Zika virus and vibriosis, as well as other diseases with high public interest, those with higher than expected case counts and those not previously seen in Salt Lake County. One-page disease profiles follow the highlights and present relevant demographic, clinical and epidemiologic data.

I hope this report can be a resource for healthcare providers, public health practitioners, community partners and the public, and that it can be used to help target intervention and prevention efforts.

Sincerely,

A handwritten signature in black ink that reads "Dagmar Vitek". The signature is written in a cursive, flowing style.

Dagmar Vitek, MD, MPH
Medical Director

HIGHLIGHTS

Zika virus

One confirmed case of Zika died at a Salt Lake County hospital. This was the first Zika death in the contiguous United States. Case acquired the disease outside of Utah in a country with known, local transmission.

Vibriosis

Four *Vibriosis parahaemolyticus* cases and one *Vibrio cholerae* non O1/nonO139 case were reported in 2016. No common exposures, however foreign travel and consumption of raw seafood were identified as possible risk factors.

Streptococcal disease, invasive, group A

An outbreak was identified among the homeless and intravenous drug using (IDU) populations. Elevated counts were noticed in 2015, with case counts remaining elevated for 2016. Salt Lake County Health Department is collaborating with CDC (Centers for Disease Control and Prevention) to see if any commonalities exist, particularly with the subtype of streptococcal group A that is circulating in these communities.

Botulism

One case of botulism type A, unknown subtype, was reported in 2016. There was no confirmation of wound or foodborne botulism. Most likely risk factor was IDU.

Acinetobacter

Eight pandrug-resistant *Acinetobacter baumannii* have been identified since June 2016. CDC is concerned about the situation since genuine pandrug-resistant cases are extremely rare in the United States. The majority of cases are associated with long term acute care (LTAC) centers. Investigation of these cases is ongoing.

Listeria

Two listeria cases were reported in 2016. They were not Pulsed-field gel electrophoresis (PFGE) matched, however one case matched a national outbreak and was investigated by the Centers for Disease Control and Prevention (CDC).

Gastrointestinal Outbreaks

Ten gastroenteritis outbreaks were investigated in 2016. Norovirus GII was identified in three facilities, one of which experienced a repeat outbreak several months later. Norovirus GII.4-untypable was identified.

TOP 20 REPORTABLE DISEASES

Disease	Rank	Number of cases
Chlamydia	1	5006
Gonorrhea	2	1367
Hepatitis C, acute & chronic	3	1332
Influenza, hospitalized	4	725
Tuberculosis, latent infection	5	675
Hepatitis B, acute & chronic	6	191
Campylobacteriosis	7	176
Pertussis	8	140
Streptococcal disease, invasive, group A	9	137
Salmonellosis	10	131
Streptococcal disease, invasive, other	11	128
<i>Streptococcus pneumoniae</i> , invasive disease	12	113
Syphilis (primary, secondary, early latent)	13	106
Chickenpox	14	88
HIV, new	15	87
Giardiasis	16	72
Streptococcal disease, invasive, group B	17	68
Cryptosporidiosis	18	50
Shigellosis	19	44
Shiga toxin-producing <i>E. coli</i>	20	29

CAMPYLOBACTERIOSIS

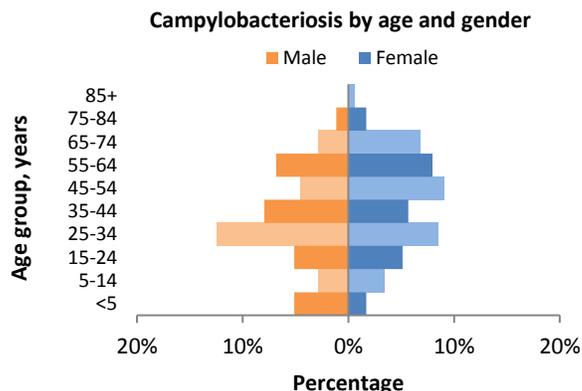
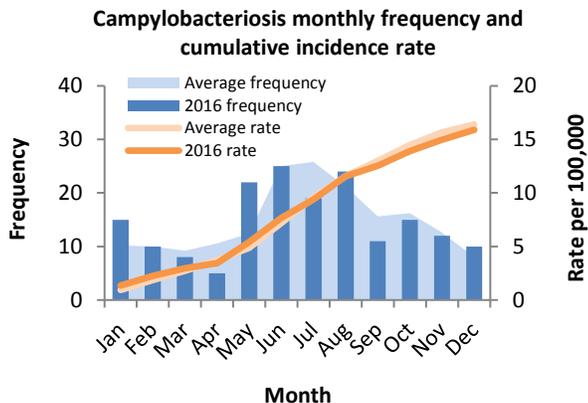
cdc.gov/foodsafety/diseases/campylobacter/index.html

176

Number of cases reported

15.9

Incidence rate per 100,000 population



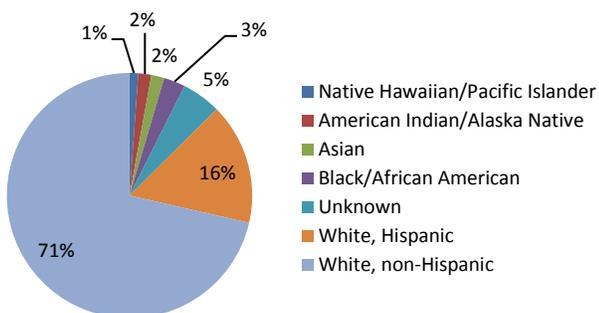
Clinical Review

- 16%** Hospitalized
- 1** Death
- 34%** Bloody diarrhea
- 9** Median duration of illness, days

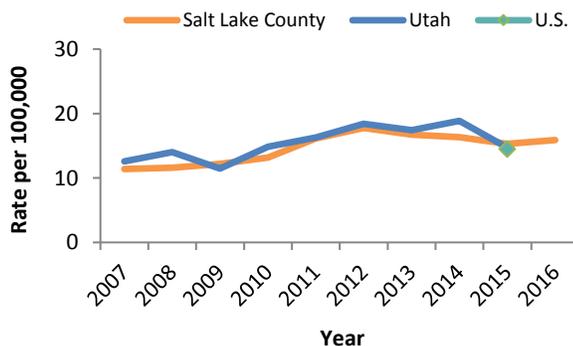
Epidemiologic Review

- Most common risk factors for infection:
 - Immunocompromised
 - Foreign travel – 48% of cases reported travel to South America
 - Animal exposure
 - Suspect meat exposure

Campylobacteriosis by race and ethnicity



Campylobacteriosis incidence rates, 2007-16



CRYPTOSPORIDIOSIS

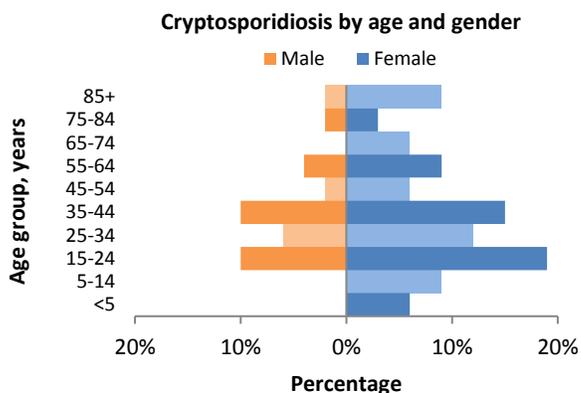
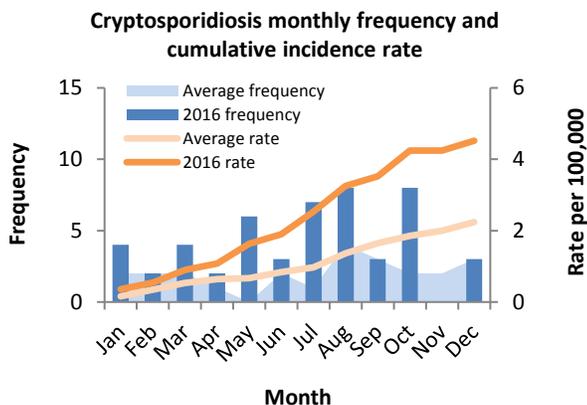
cdc.gov/parasites/crypto

50

Number of cases reported

4.5

Incidence rate per 100,000 population



Clinical Review

16% Hospitalized

0 Deaths

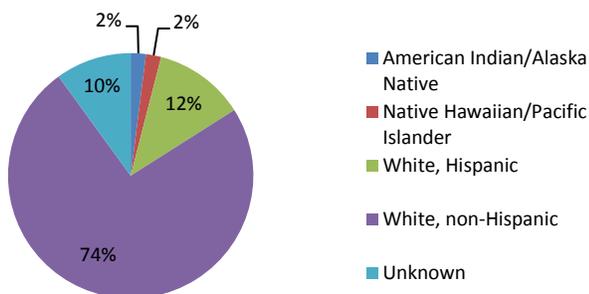
94% Diarrhea

7 Median duration of illness, days

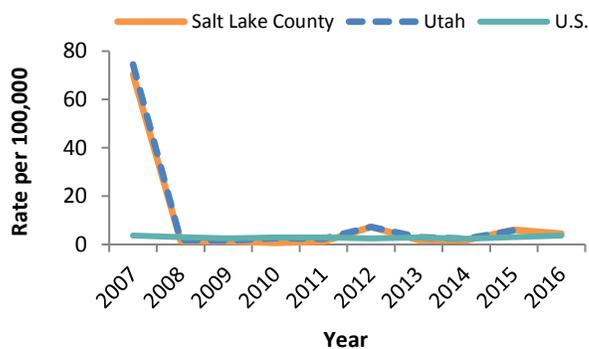
Epidemiologic Review

- Most common risk factors for infection:
 - Immunocompromised
 - Foreign travel
 - Suspect water exposure – most common water exposure reported was natural water, which includes hot springs, reservoirs, ocean and rivers
 - Animal exposure

Cryptosporidiosis by race and ethnicity



Cryptosporidiosis incidence rates, 2007-16



GIARDIASIS

cdc.gov/parasites/giardia

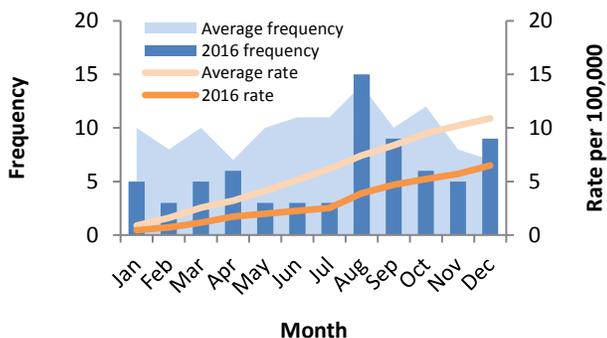
72

Number of cases reported

6.5

Incidence rate per 100,000 population

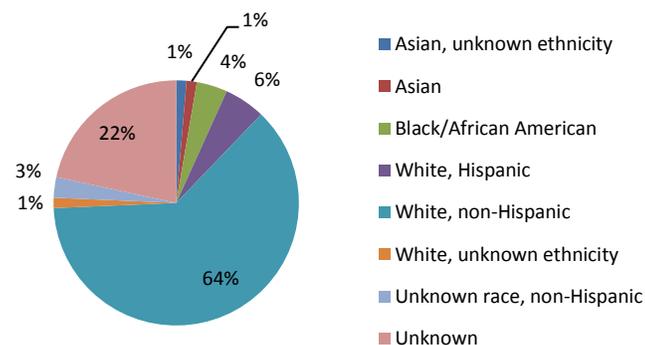
Giardiasis monthly frequency and cumulative incidence rate



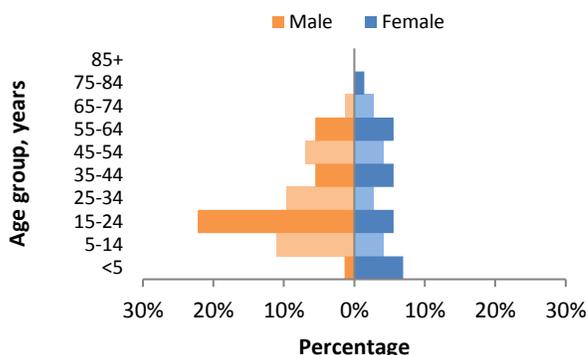
Clinical Review

- 10%** Hospitalized
- 0** Deaths
- 8%** Co-infected
- 21%** Weight loss
- 25** Median duration of illness, days

Giardiasis by race and ethnicity



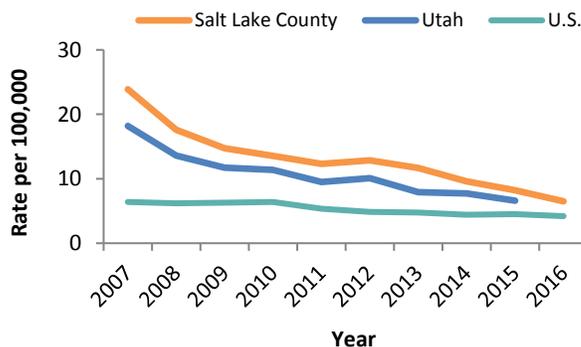
Giardiasis by age and gender



Epidemiologic Review

- 8% of cases were refugees or recent immigrants.
- Most common risk factors for infection:
 - Water exposure
 - Foreign travel
 - Outdoor exposure – 75% of cases who reported outdoor exposure identified either hiking and/or camping. 54% of people who reported hiking, hiked in Utah (Moab, Bryce and Millcreek Canyon).

Giardiasis incidence rates, 2007-16



SALMONELLOSIS

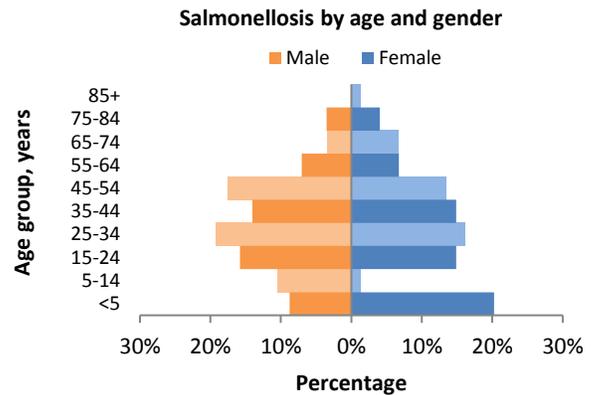
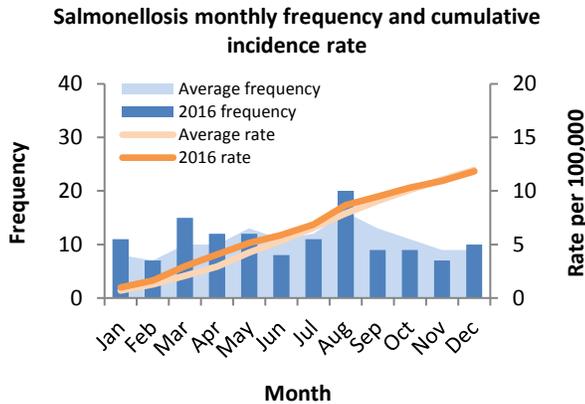
cdc.gov/salmonella

131

Number of cases reported

11.8

Incidence rate per 100,000 population

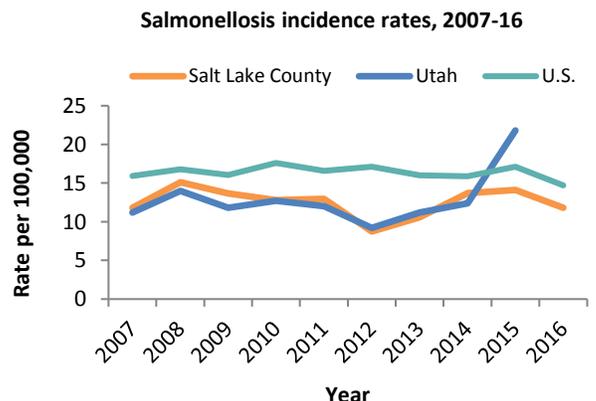
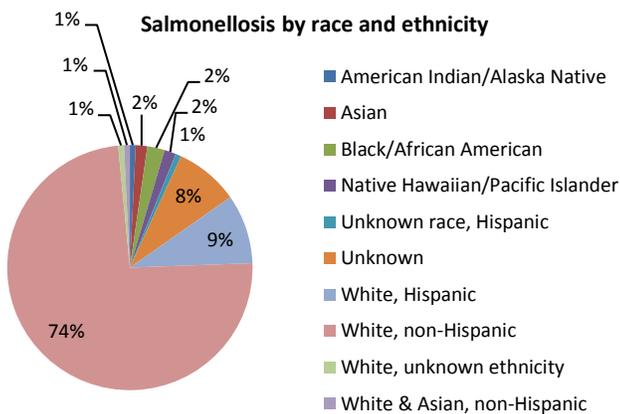


Clinical Review

- 21%** Hospitalized
- 1** Death
- 10** Median duration of illness, days
- 38%** Bloody diarrhea
- 6%** Asymptomatic

Epidemiologic Review

- Six outbreaks were identified and investigated.
- A statewide outbreak of *Salmonella* Saintpaul was associated with raw milk.
- A nationwide outbreak of *Salmonella* Virchow (which included Salt Lake County) was associated with a meal replacement powder.
- Top 4 serotypes: Enteritidis (31%), Typhimurium (8%), I 4,[5],12:i (4%), Newport (3%).
- Common risk factors for infection include animal exposure, immunocompromised status, foreign travel.



SHIGA TOXIN-PRODUCING E. COLI

cdc.gov/ecoli

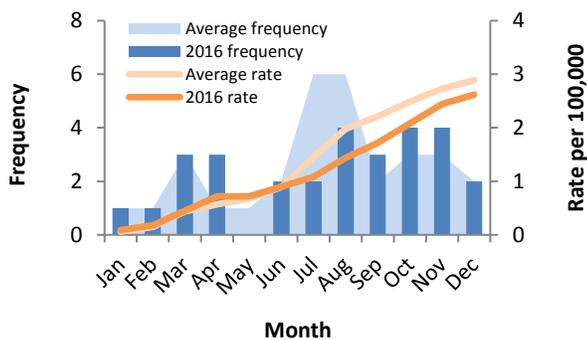
29

Number of cases reported

2.6

Incidence rate per 100,000 population

Shiga toxin-producing *E. coli* monthly frequency and cumulative incidence rate



Clinical Review

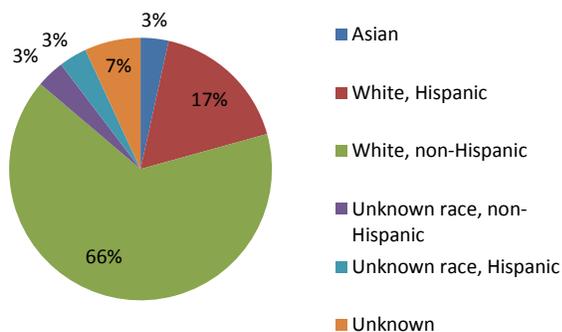
2% Hospitalized

0 Deaths

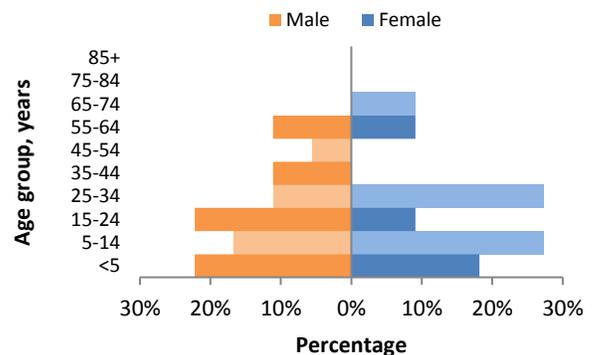
72% Bloody diarrhea

8 Median duration of illness, days

Shiga toxin-producing *E. coli* by race and ethnicity



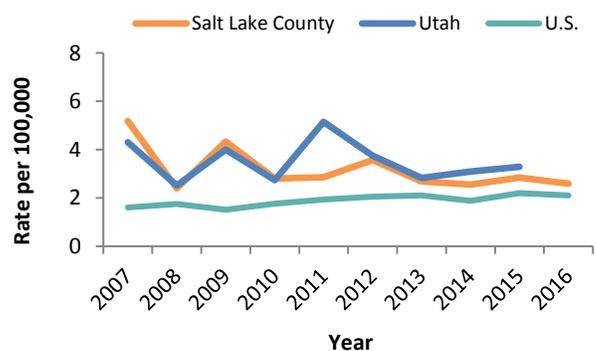
Shiga toxin-producing *E. coli* by age and gender



Epidemiologic Review

- Top 3 serotypes: O1257:H7 (24%), O126 (10%) and O111 (7%).
- Most common risk factors for infection:
 - Water exposure
 - Foreign travel
 - Out of state travel
 - Immunocompromised

Shiga toxin-producing *E. coli* incidence rates, 2007-16



SHIGELLOSIS

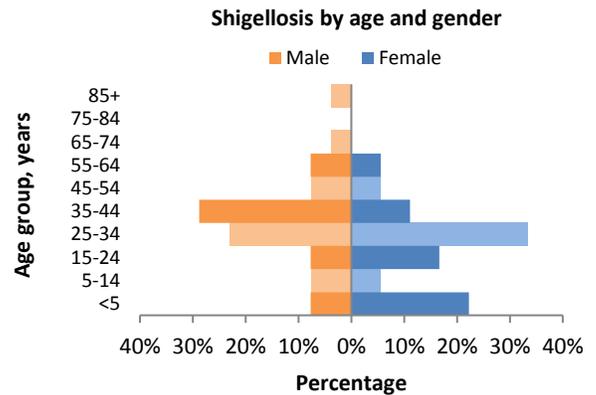
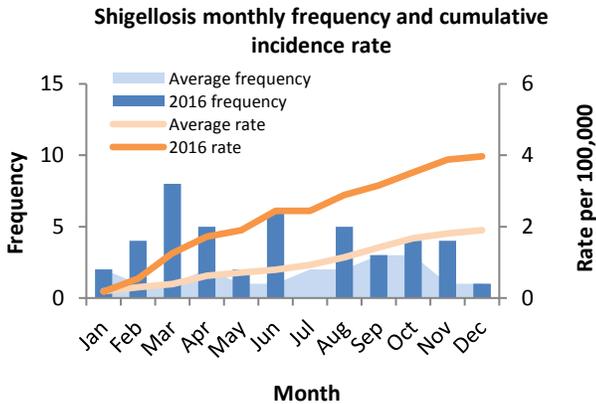
cdc.gov/shigella

44

Number of cases reported

4.0

Incidence rate per 100,000 population



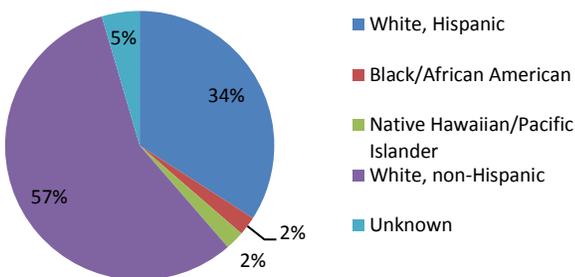
Clinical Review

- 30%** Hospitalized
- 0** Deaths
- 41%** Bloody diarrhea
- 7** Median duration of illness, days

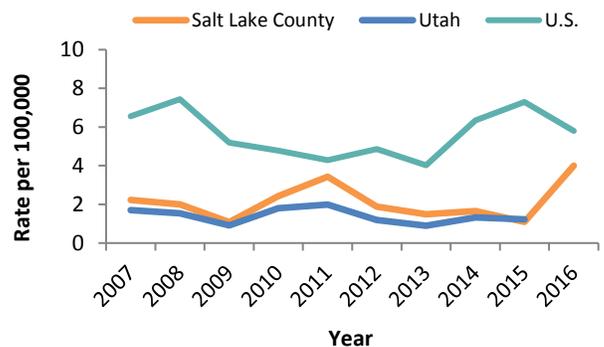
Epidemiologic Review

- Three outbreaks were identified and investigated.
- One outbreak was associated with a large family party.
- Two national outbreaks were associated with men who have sex with men.
- Common risk factors for infection include foreign travel, men who have sex with men and immunocompromised status.

Shigellosis by race and ethnicity



Shigellosis incidence rates, 2007-16



HAEMOPHILUS INFLUENZAE

cdc.gov/hi-disease

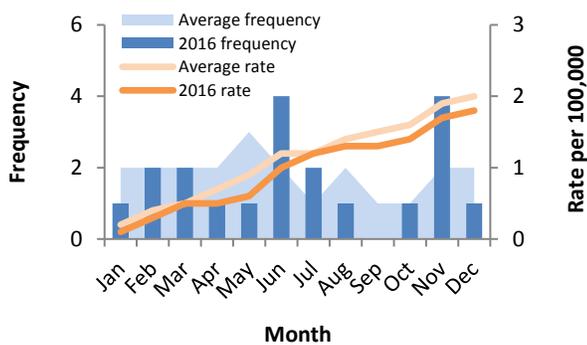
20

Number of cases reported

1.8

Incidence rate per 100,000 population

H. influenzae monthly frequency and cumulative incidence rate



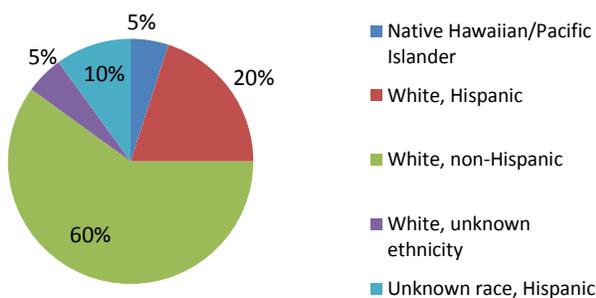
Clinical Review

100% Hospitalized

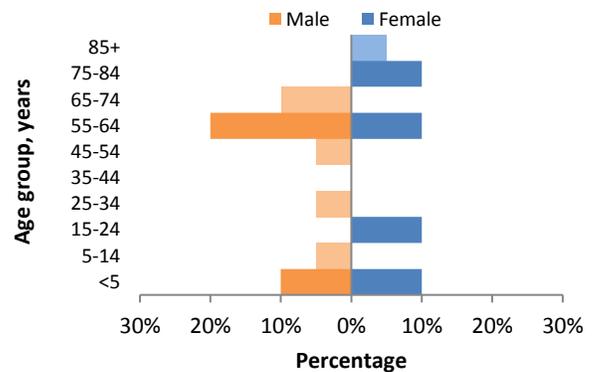
2 Deaths

70% Bacteremia

H. influenzae by race and ethnicity



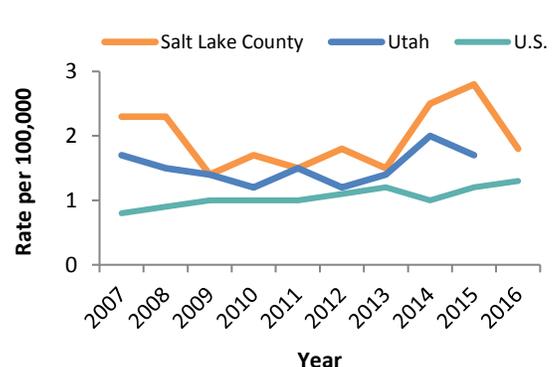
H. influenzae by age and gender



Epidemiologic Review

- There were two cases of *H. influenzae* type b (Hib). One case was under 5 years of age and did receive a Hib vaccine. Second case was 85+ with unknown vaccine status.
- Types include nontypeable (65%), type F (10%), type B (10%), type E (5%), type A (5%) and unknown type (5%).
- 25% of cases report receiving a Hib vaccine.
- Two cases experienced fetal loss due to infection.

H. influenzae incidence rates, 2007-16



PERTUSSIS

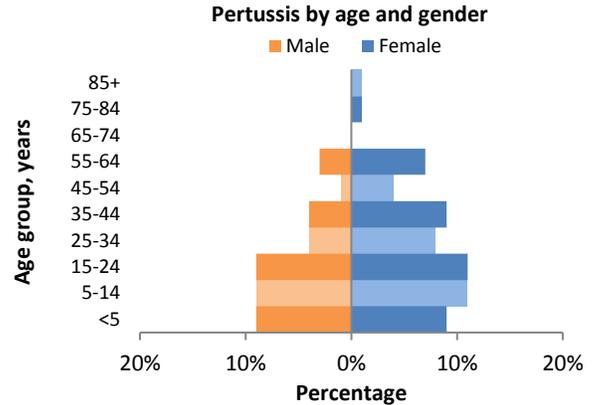
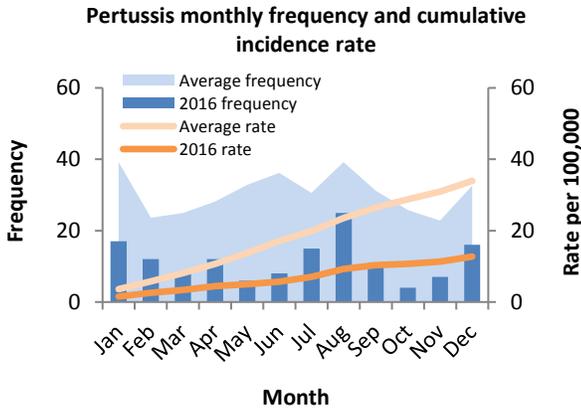
cdc.gov/pertussis

141

Number of cases reported

12.7

Incidence rate per 100,000 population

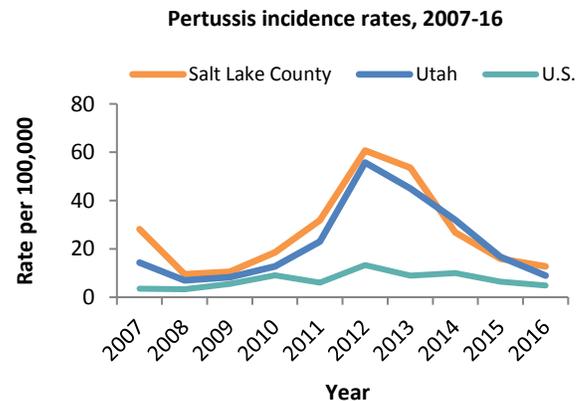
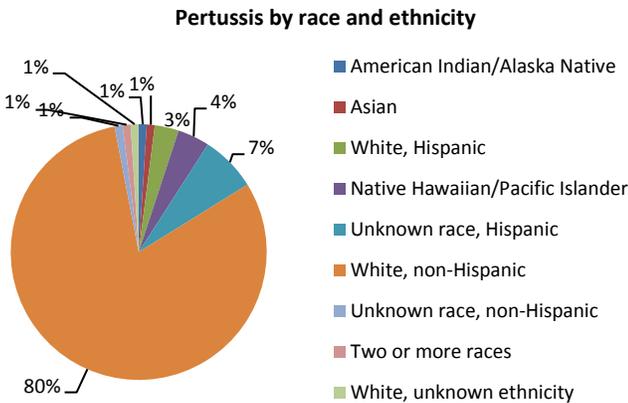


Clinical Review

- 1%** Hospitalized
- 0** Deaths
- 96%** Paroxysmal cough
- 53%** Inspiratory whoop
- 47%** Post-tussive vomiting

Epidemiologic Review

- Four outbreaks were identified and investigated. Outbreaks occurred at a charter school, preschool, church and credit union.
- 12% of cases were not vaccinated. Of those cases, 76% sited philosophical beliefs as the reason for not vaccinating.
- 85% of cases reported receiving at least one vaccine. 45% of those cases were up to date.



VARICELLA (CHICKENPOX)

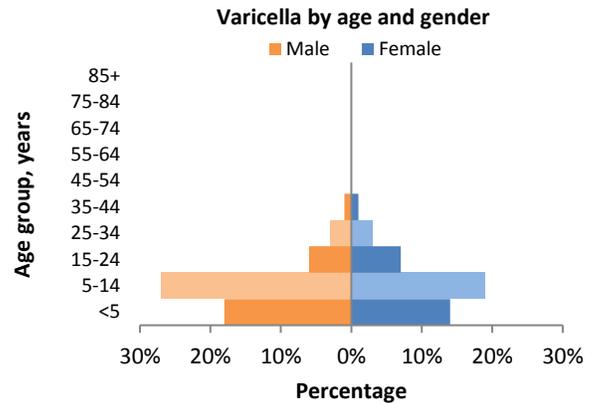
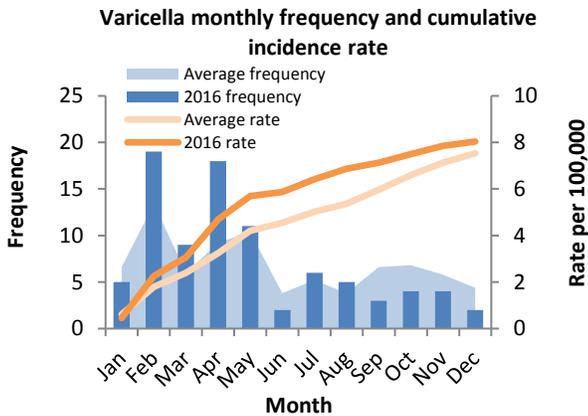
cdc.gov/varicella

88

Number of cases reported

7.9

Incidence rate per 100,000 population

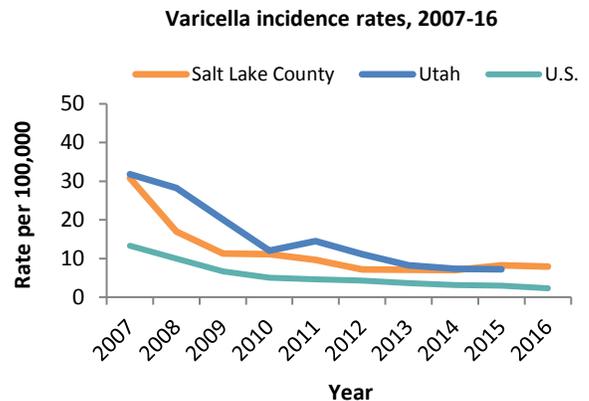
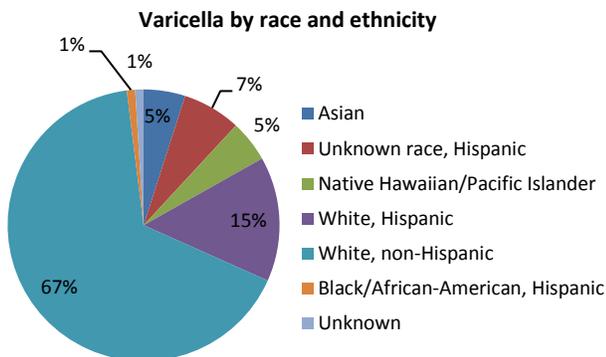


Clinical Review

- 3%** Hospitalized
- 0** Deaths
- 48%** Cases with 50 lesions or less

Epidemiologic Review

- One outbreak was identified and investigated. Outbreak occurred at an elementary school which involved seven students.
- 55% of cases were not vaccinated. Of these cases, 23% were philosophically opposed to vaccine, 14% had family members with adverse reactions to vaccine, 9% were outside the recommended age range to receive vaccine.
- Seven cases had prior history of disease. Only one of seven had been vaccinated.



GROUP A STREPTOCOCCUS (GAS)

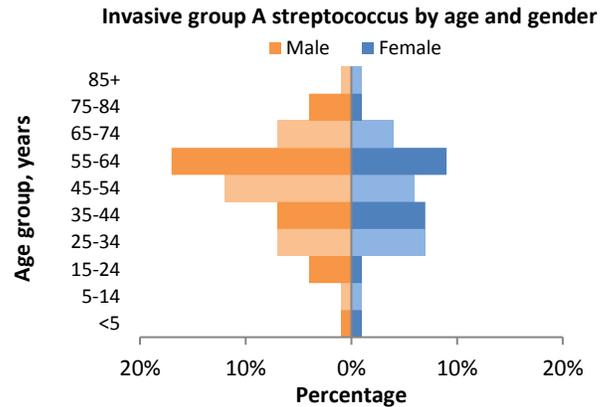
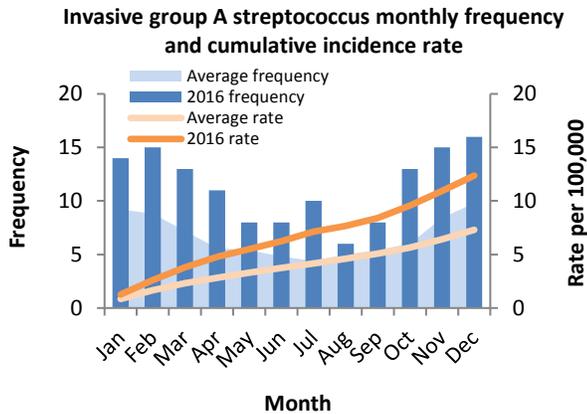
cdc.gov/groupastrep

137

Number of cases reported

12.4

Incidence rate per 100,000 population

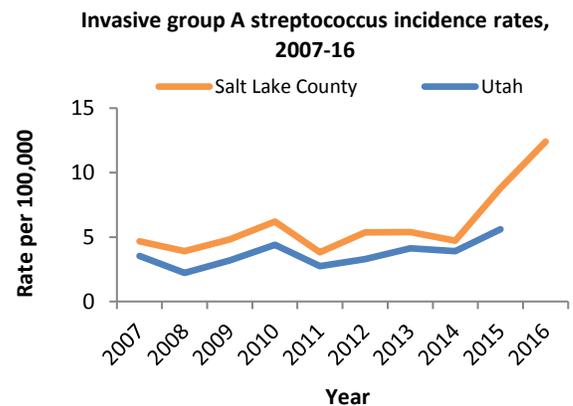
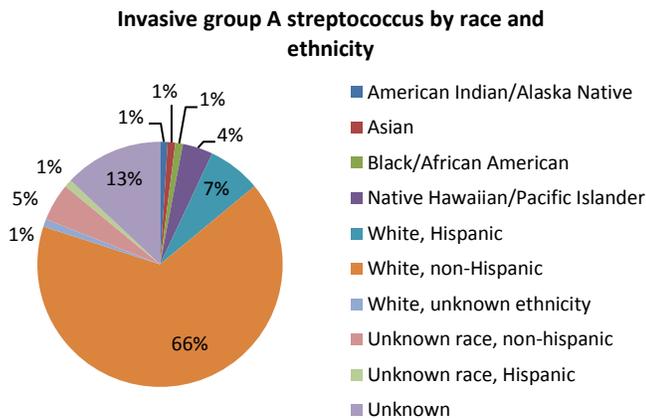


Epidemiologic Review

- One outbreak was identified. Outbreak identified among the homeless and/or IDU populations. A current study is ongoing with CDC to identify how closely cases are related.
- Common comorbidities include chronic pulmonary disease and diabetes.
- 23% of cases were homeless.
- 24% of cases report intravenous drug use (IDU).

Clinical Review

- 96%** Hospitalized
- 9** Deaths
- 64%** Cases with two or more syndromes



GROUP B STREPTOCOCCUS (GBS)

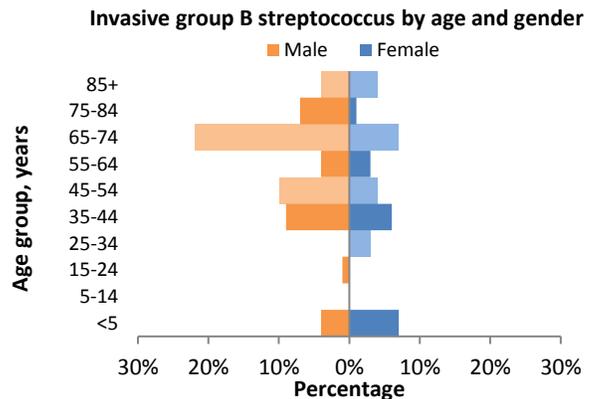
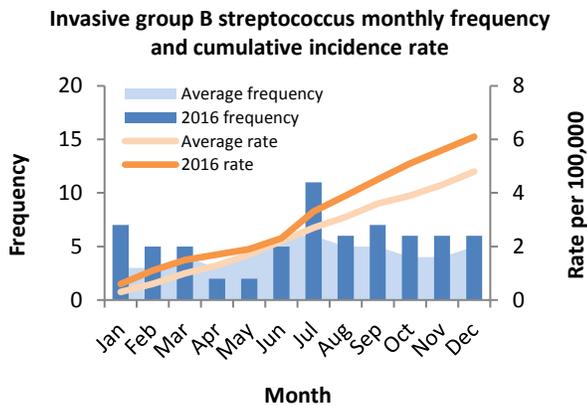
<http://www.cdc.gov/groupbstrep/>

68

Number of cases reported

6.1

Incidence rate per 100,000 population



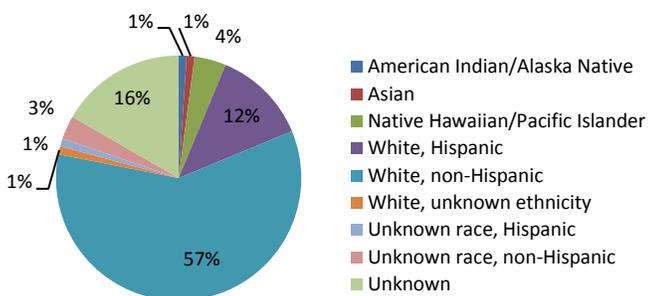
Epidemiologic Review

- 90% of cases report a preexisting condition. 46% of cases had diabetes, 41% with chronic heart disease, 22% obese, 21% smokers.
- 38% of infected newborns were born via vaginal delivery.
- 63% of infected newborns were in the NICU.
- 75% of delivering mothers received prenatal care. 67% of these women were screened for GBS prior to delivery.

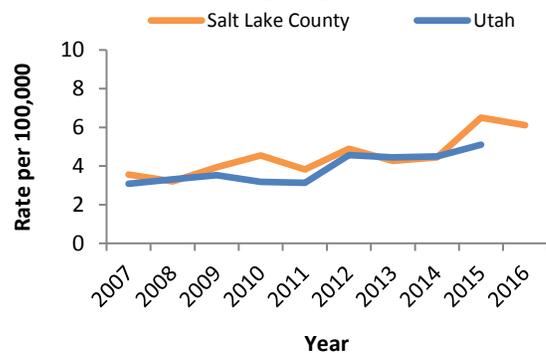
Clinical Review

- 90%** Hospitalized
- 4** Deaths
- 32%** Bacteremia and cellulitis

Invasive group B streptococcus by race and ethnicity



Invasive group B streptococcus incidence rates, 2007-16



STREPTOCOCCUS PNEUMONIAE

cdc.gov/pneumococcal

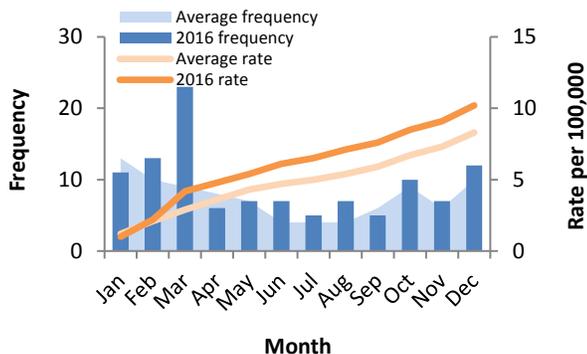
113

Number of cases reported

10.2

Incidence rate per 100,000 population

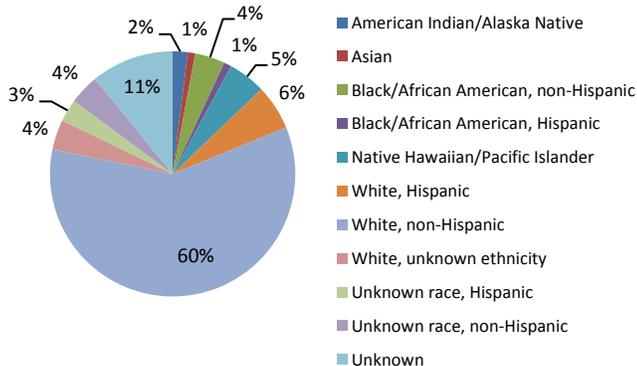
Streptococcus pneumoniae monthly frequency and cumulative incidence rate



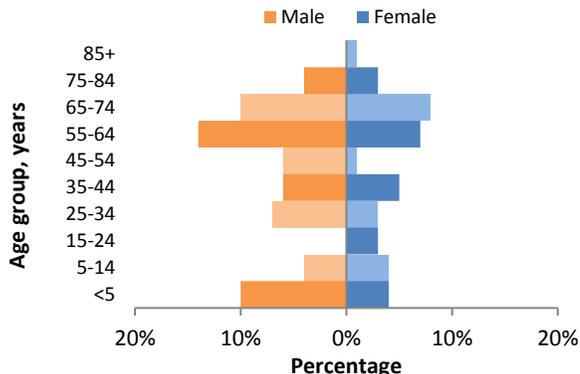
Clinical Review

- 95%** Hospitalized
- 12** Deaths
- 45%** Bacteremia and pneumonia
- 12%** Erythromycin resistance

Streptococcus pneumoniae by race and ethnicity



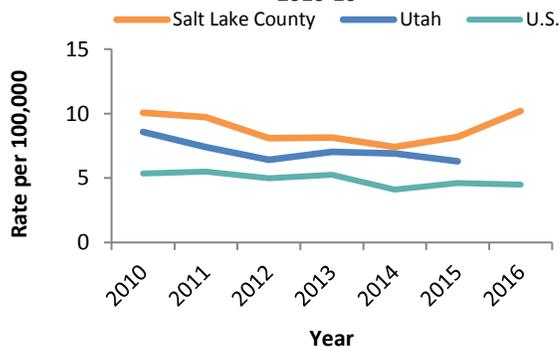
Streptococcus pneumoniae by age and gender



Epidemiologic Review

- 39% of cases received pneumovax prior to admit. Of those cases, 48% were under 18 years of age.
- Common risk factors for infection include smoking, alcohol abuse and homelessness.
- 18% of cases report illicit drug abuse. Of those cases, 45% report intravenous drug use (IDU).
- Common comorbidities include asthma and hepatitis C.

Streptococcus pneumoniae incidence rates, 2010-16



STREPTOCOCCAL TOXIC SHOCK

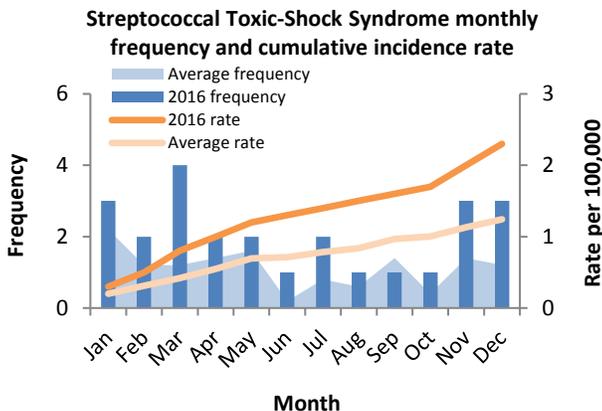
cdc.gov/groupastrep

25

Number of cases reported

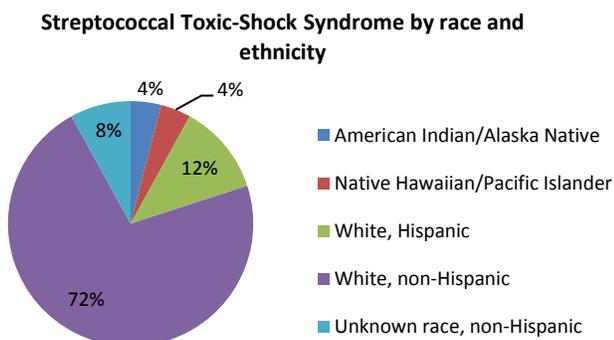
2.3

Incidence rate per 100,000 population

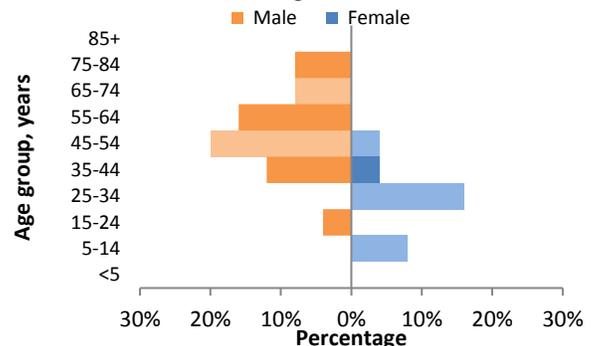


Clinical Review

- 96%** Hospitalized
- 5** Deaths
- 24%** Acute Respiratory Distress Syndrome (ARDS)
- 8%** Soft tissue necrosis
- 16%** Wound associated



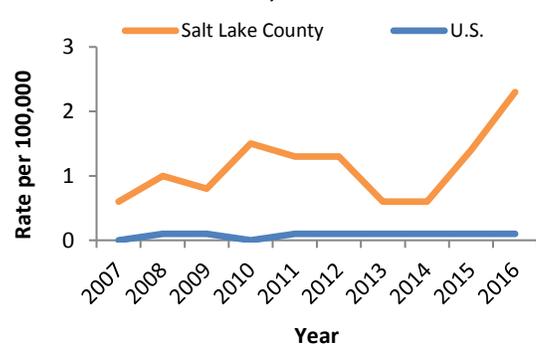
Streptococcal Toxic-Shock Syndrome by age and gender



Epidemiologic Review

- 16% of cases reported intravenous drug use (IDU).
- 32% of cases reported either current or former smoking status.

Streptococcal Toxic-Shock Syndrome incidence rates, 2007-16



CHLAMYDIA

cdc.gov/std/chlamydia

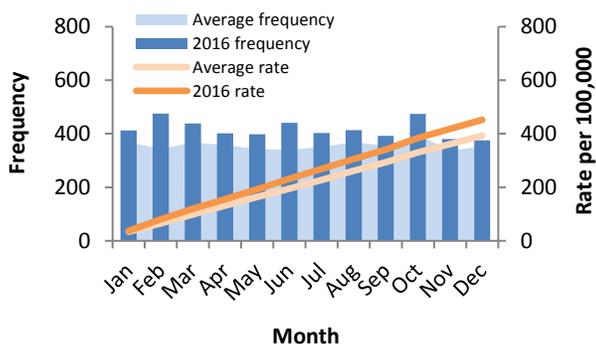
5006

Number of cases reported

452.1

Incidence rate per 100,000 population

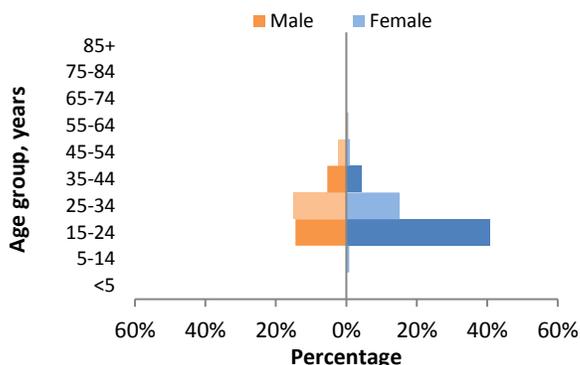
Chlamydia monthly frequency and cumulative incidence rate



Clinical Review

75% Asymptomatic infections

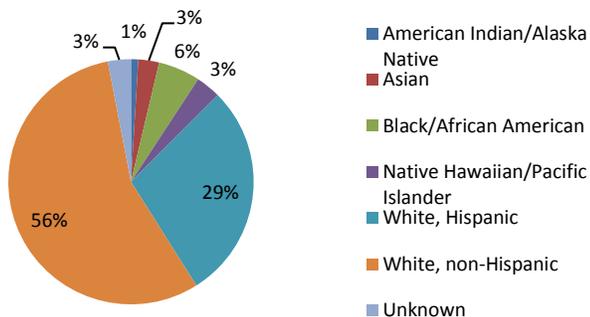
Chlamydia by age and gender



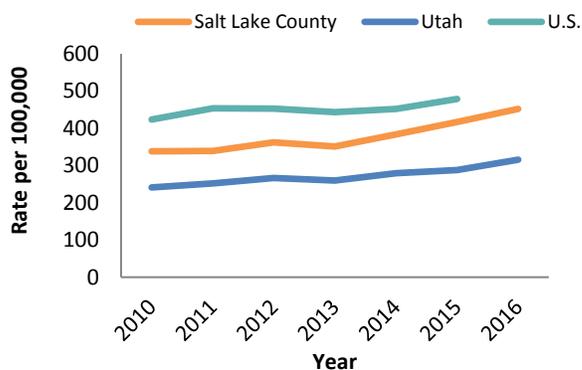
Epidemiologic Review

- Chief complaint for females is low abdominal pain.
- Female and males aged 15-34 years comprise 75% of all cases.
- Females aged 15-24 years comprised 41% of all infection.
- African American males were disproportionately infected.

Chlamydia by race and ethnicity



Chlamydia incidence rates, 2010-2016



GONORRHEA

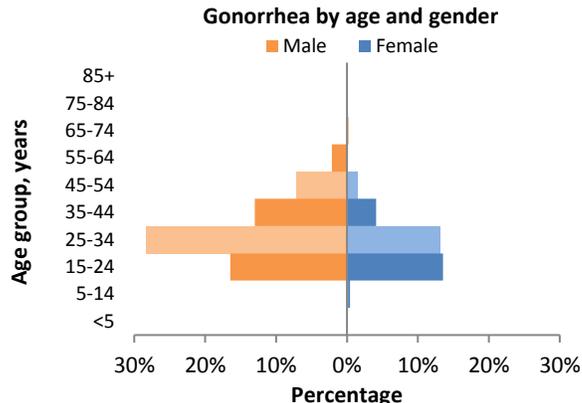
cdc.gov/std/Gonorrhea

1367

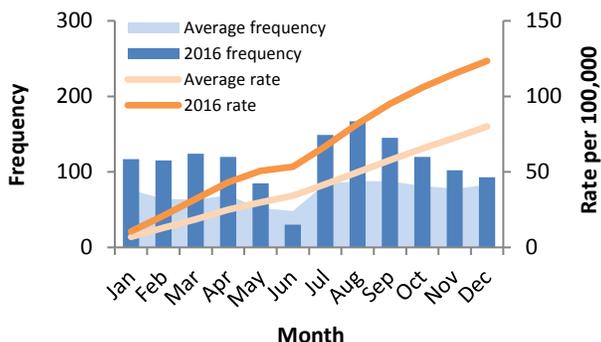
Number of cases reported

123.5

Incidence rate per 100,000 population



Gonorrhea monthly frequency and cumulative incidence rate



Epidemiologic Review

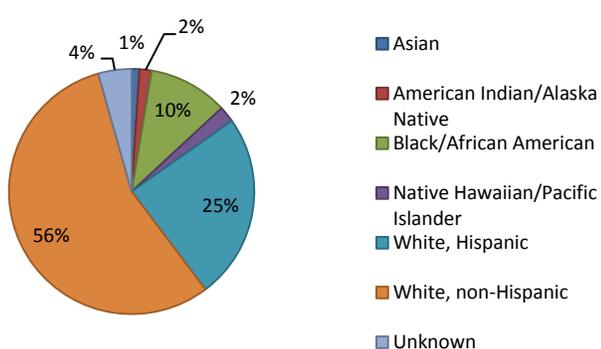
- Males and females aged 15-34 years comprise over 70% of all cases.
- Males comprise 67% of all infection.
- African American males were disproportionately infected.

Clinical Review

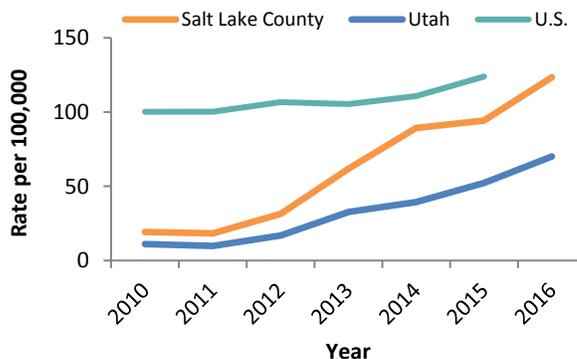
0% Hospitalized

0 Deaths

Gonorrhea by race and ethnicity



Gonorrhea incidence rates, 2010-2016



HIV, NEW

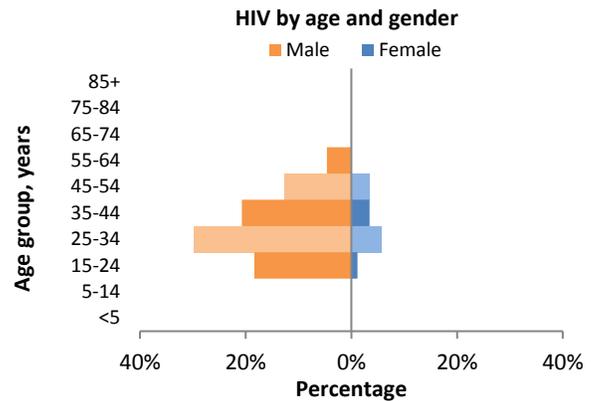
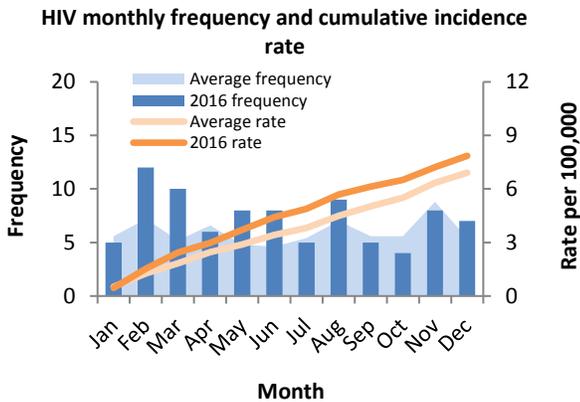
cdc.gov/hiv

87

Number of cases reported

7.9

Incidence rate per 100,000 population

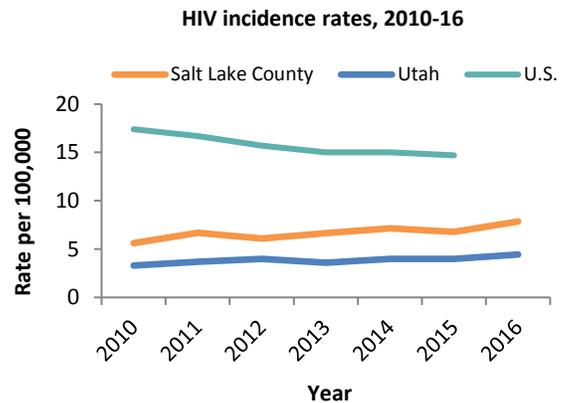
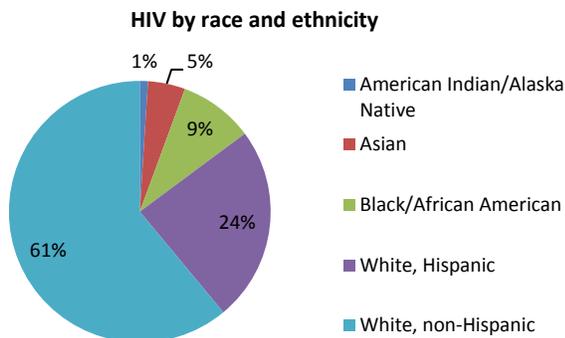


Epidemiologic Review

- Males aged 25-44 years comprise the largest group infected.
- 86% of new infections were in males.
- African American males and females were disproportionately infected.

Clinical Review

- 16%** Hospitalized
- 4** Deaths
- 16%** Diagnosed at late stage of infection
- 1** Case diagnosed while adherent to PrEP



SYPHILIS

(PRIMARY, SECONDARY, EARLY LATENT)

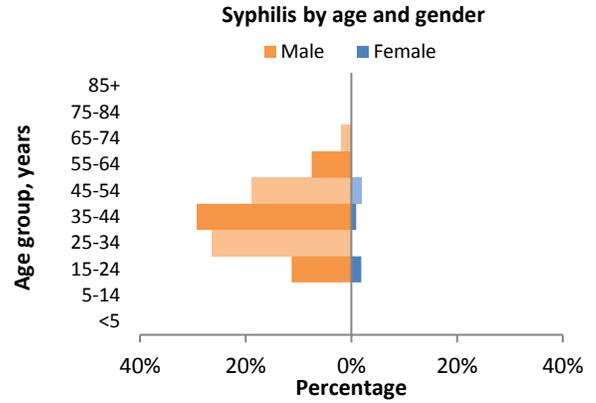
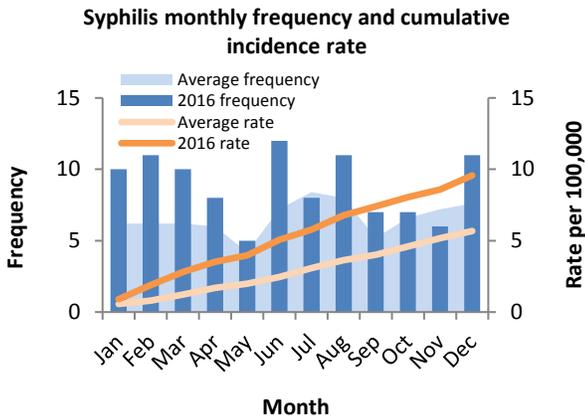
cdc.gov/std/syphilis

106

Number of cases reported

9.6

Incidence rate per 100,000 population

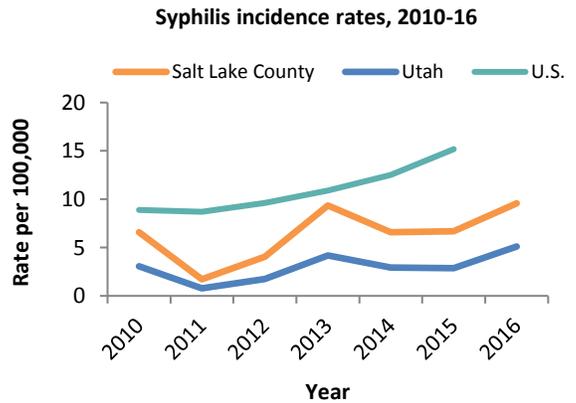
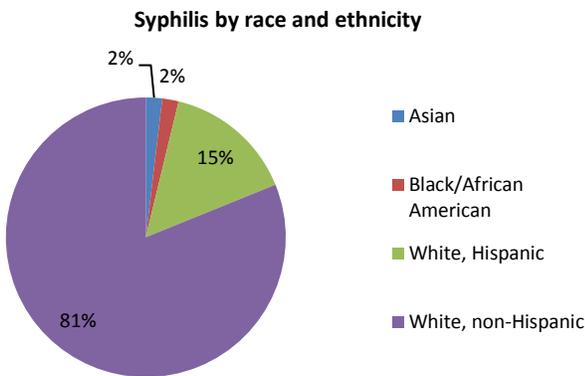


Epidemiologic Review

- 30% of cases had been previously diagnosed and treated.
- 95% of cases were male.
- 44% of cases were co-infected with HIV.

Clinical Review

- 4** Neurological involvement
- 3** Ocular syphilis
- 58%** Rash and/or chancre



ACINETOBACTER (CARBAPENEM NON-SUSCEPTIBLE)

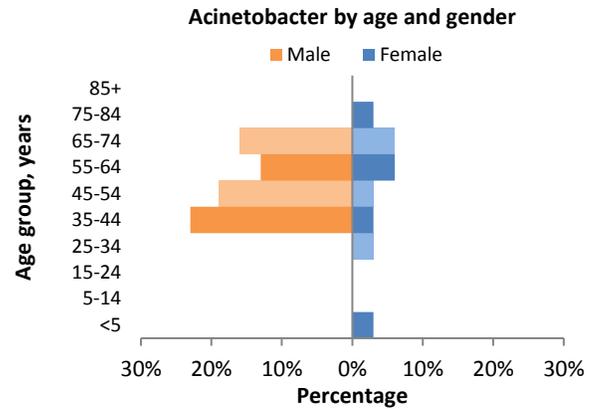
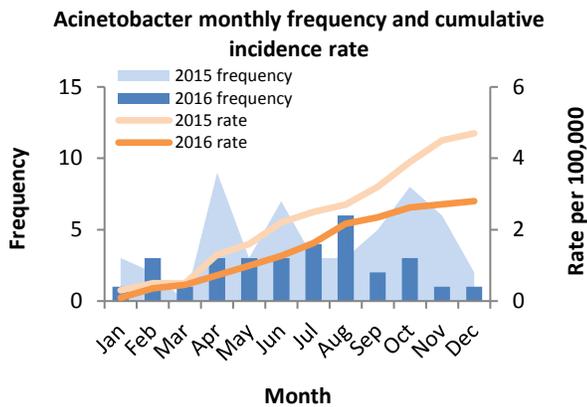
cdc.gov/HAI/organisms/acinetobacter.html

31

Number of cases reported

2.8

Incidence rate per 100,000 population



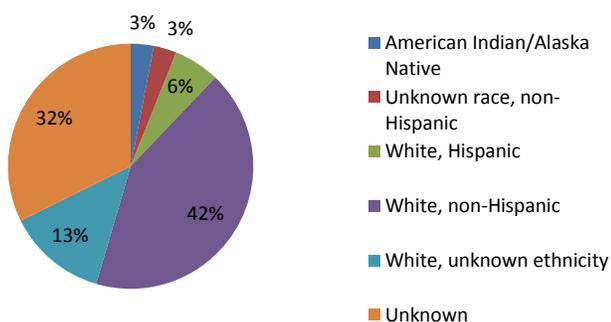
Clinical Review

- 61%** Hospitalized
- 7** Deaths
- 16%** Recurrent urinary tract infections
- 2** Outbreaks

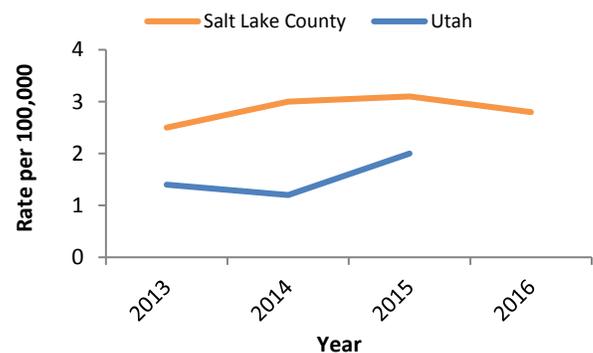
Epidemiologic Review

- One outbreak includes a pandrug-resistant *Acinetobacter baumannii*, which is resistant to all first line antibiotics. The other outbreak started in 2015 at a long term acute care hospital and continued into 2016.
- 29% of cases had non-healing wounds or chronic pressure ulcers.
- 13% of cases were trach dependent.
- 10% of cases had indwelling catheters.

Acinetobacter by race and ethnicity



Acinetobacter incidence rates, 2013-16



COCCIDIOIDOMYCOSIS

cdc.gov/fungal/diseases/coccidioidomycosis

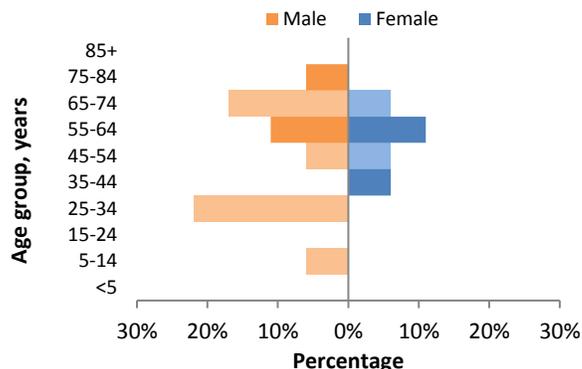
18

Number of cases reported

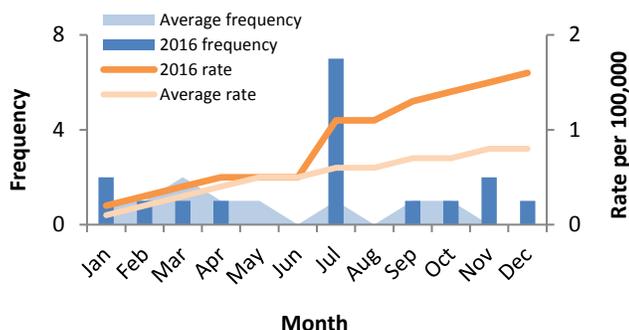
1.6

Incidence rate per 100,000 population

Coccidioidomycosis by age and gender



Coccidioidomycosis monthly frequency and cumulative incidence rate



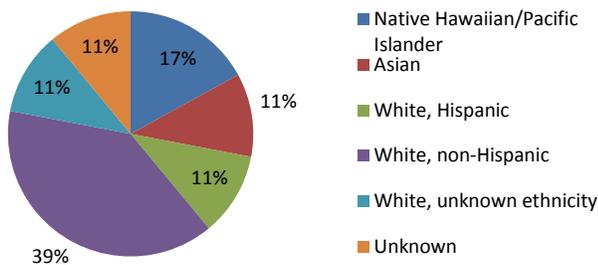
Epidemiologic Review

- 89% of cases had recent travel to California, Nevada or Arizona prior to illness.
- Common exposures include hiking and ATV riding.
- Frequently reported symptoms include fatigue, cough, chest pain, weight loss, joint pain and headache.
- Most common test used for diagnoses was the IgG antibody test (72% of cases).

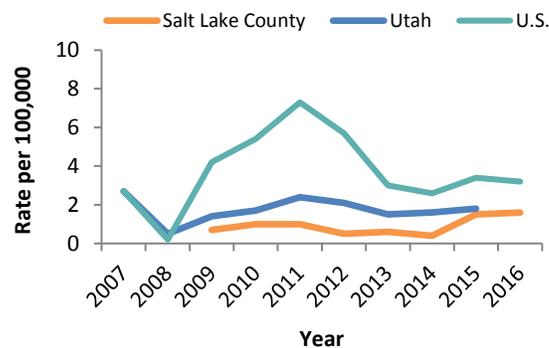
Clinical Review

- 44%** Hospitalized
- 0** Deaths
- 28%** Recent organ transplant recipients
- 7** Tested for TB with negative results

Coccidioidomycosis by race and ethnicity



Coccidioidomycosis incidence rates, 2007-16



HEPATITIS C, ACUTE

cdc.gov/hepatitis/hcv

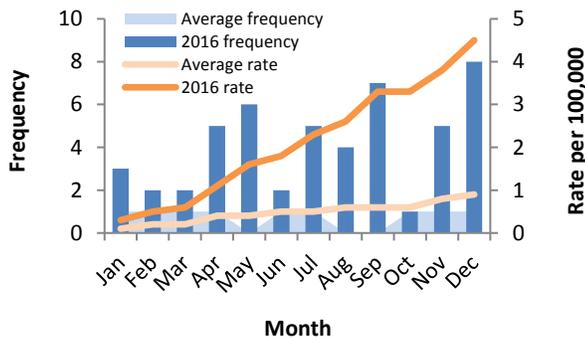
51

Number of cases reported

4.6

Incidence rate per 100,000 population

Acute hepatitis C monthly frequency and cumulative incidence rate



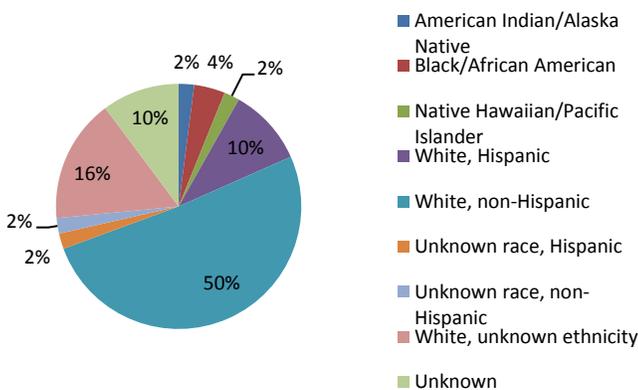
Clinical Review

32% Hospitalized

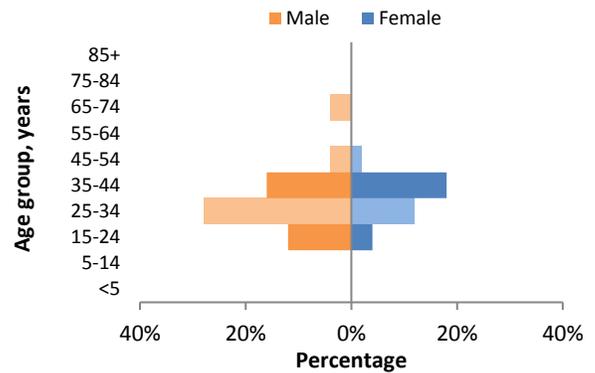
0 Deaths

71% Jaundice

Acute hepatitis C by race and ethnicity



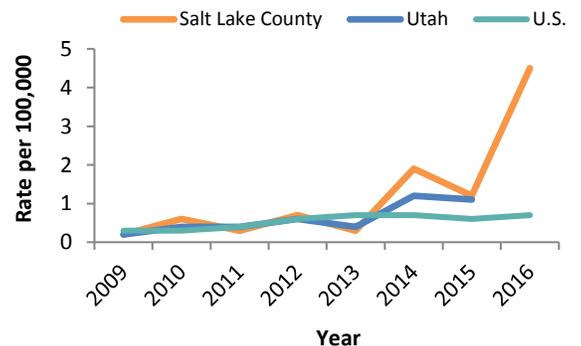
Acute hepatitis C by age and gender



Epidemiologic Review

- Risk factors for infection include intravenous drug use (IDU) (31%), incarceration (64%), homelessness (36%) and home done tattoos (6%).
- Genotypes identified include 1a or 1b (16%) and 3a (2%).
- Higher case count may be due to revised case classification initiated in 2016.

Acute hepatitis C incidence rates, 2009-16



LEGIONELLOSIS

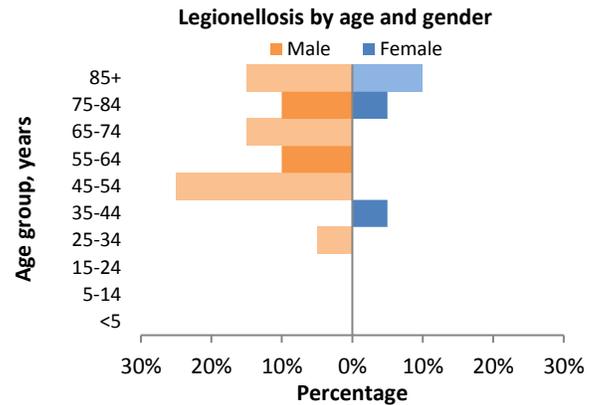
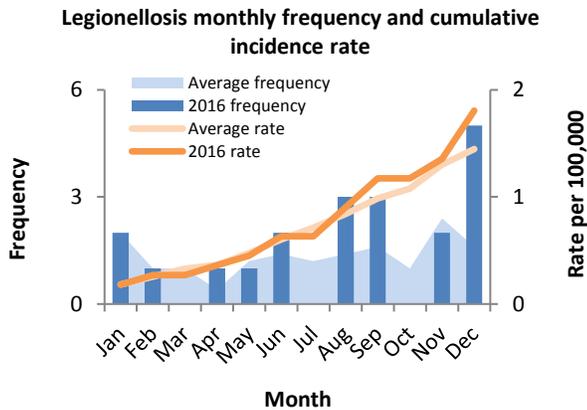
cdc.gov/legionella

20

Number of cases reported

1.8

Incidence rate per 100,000 population



Clinical Review

100% Hospitalized

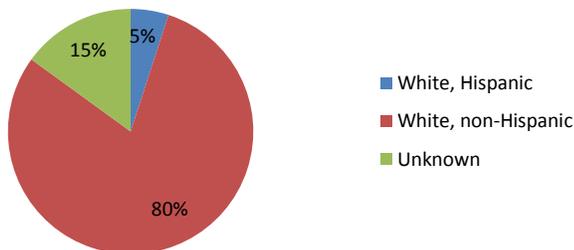
2 Deaths

40% Immunocompromised

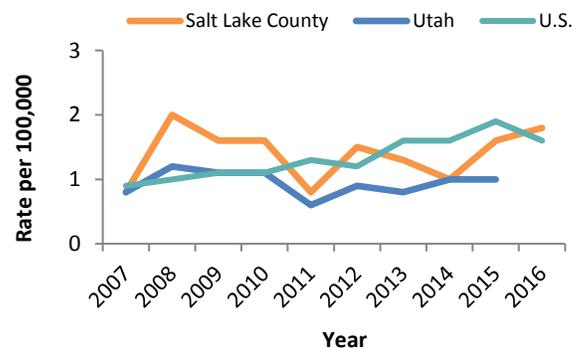
Epidemiologic Review

- Common risk factors include smoking, heart disease and diabetes.
- 80% of cases were infected with the *L. pneumophila* strain. 25% were classified as *L. pneumophila* serogroup 1.
- Two cases were nosocomial, five were possibly nosocomial and thirteen were community acquired.

Legionellosis by race and ethnicity



Legionellosis incidence rates, 2007-16



LYME DISEASE

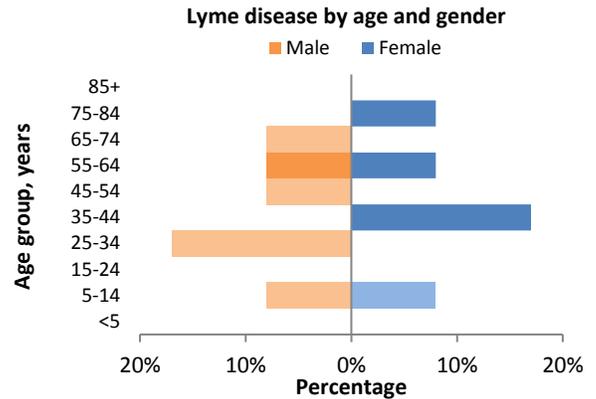
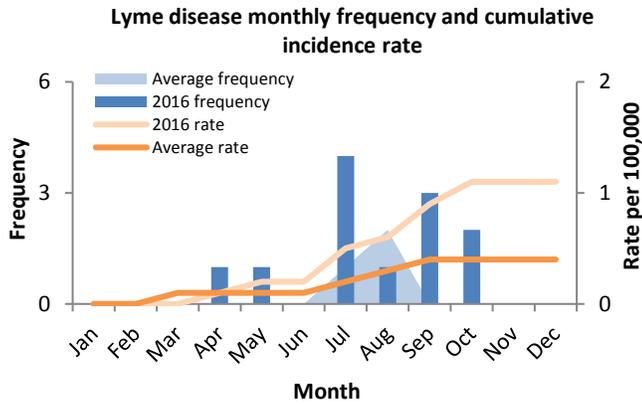
cdc.gov/lyme

12

Number of cases reported

1.1

Incidence rate per 100,000 population



Clinical Review

17% Hospitalized

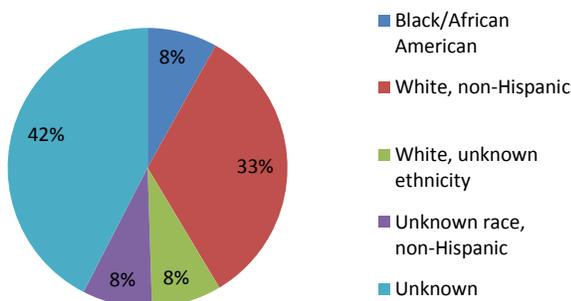
0 Deaths

33% Erythema migrans

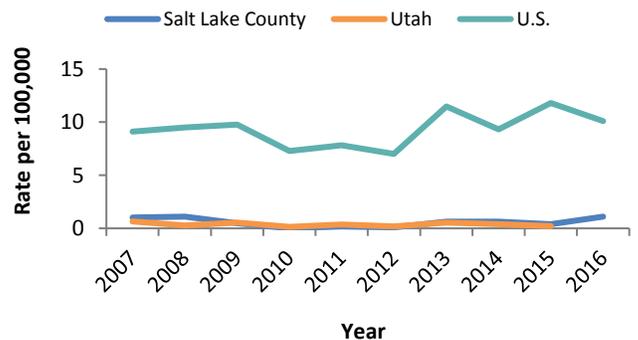
Epidemiologic Review

- 92% of cases acquired the disease outside Utah, the remaining 8% are unknown. All states identified have known, local transmission.
- States where cases were exposed include Massachusetts, Maine, Michigan, New Jersey, North Carolina, South Carolina, Pennsylvania, Ohio, Wisconsin, New Hampshire and Connecticut.
- 33% of cases report a tick bite.
- 67% of cases had disease onsets between June and September.

Lyme disease by race and ethnicity



Lyme disease incidence rates, 2007-16

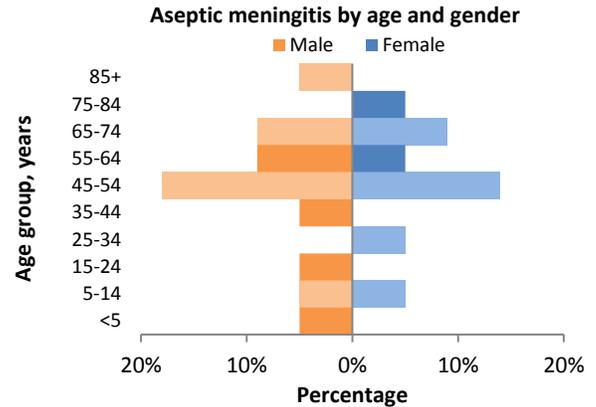
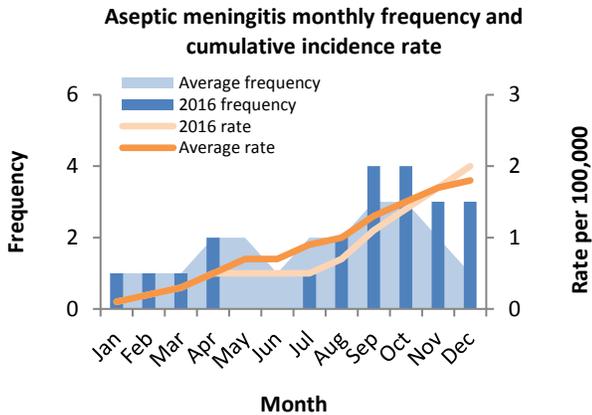


MENINGITIS, ASEPTIC

cdc.gov/meningitis/viral.html

22
Number of cases reported

2.0
Incidence rate per 100,000 population

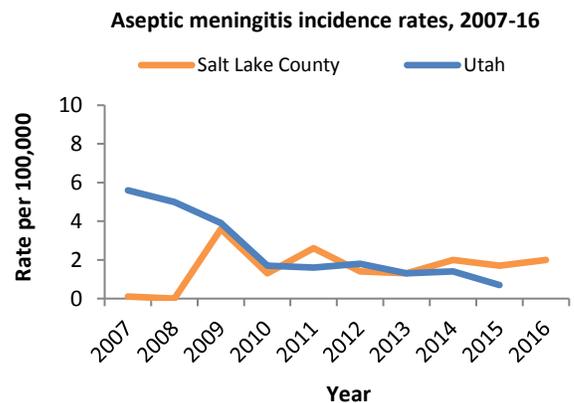
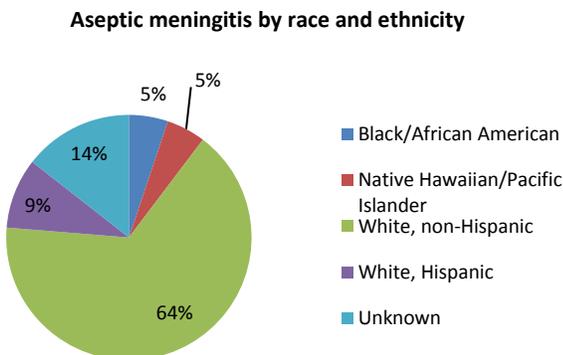


Epidemiologic Review

- Common symptoms include headache (64%), fever (50%), altered mental status (41%), stiff neck (36%) and nausea/vomiting (32%).
- Of the 21 cases who had a gram stain done, all showed no organisms. One culture grew *Cryptococcus*.

Clinical Review

91% Hospitalized
1 Death
91% Meningitis



MENINGITIS, VIRAL

cdc.gov/meningitis/viral.html

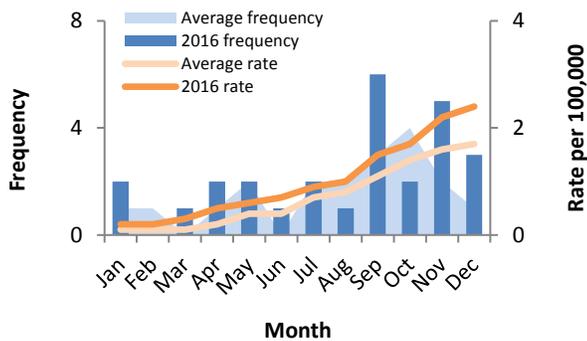
27

Number of cases reported

2.4

Incidence rate per 100,000 population

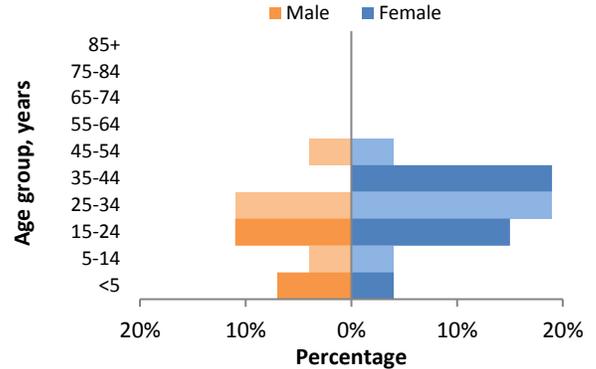
Viral meningitis monthly frequency and cumulative incidence rate



Clinical Review

- 89%** Hospitalized
- 0** Deaths
- 96%** Meningitis
- 4%** Meningoencephalitis

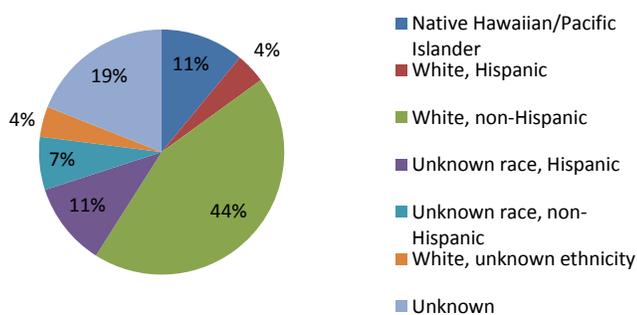
Viral meningitis by age and gender



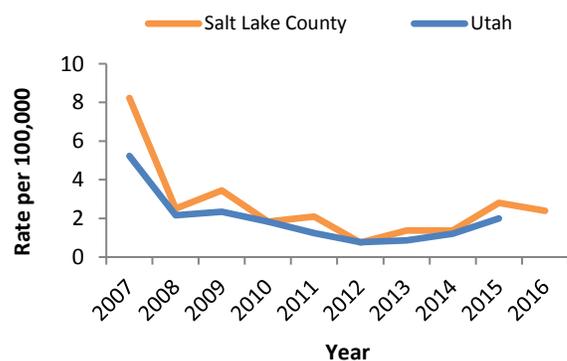
Epidemiologic Review

- Viruses identified include enterovirus (56%), herpes simplex viruses (26%), varicella-zoster virus (15%) and herpes and varicella-zoster viruses (4%).
- 11% of cases had out of state travel prior to disease onset.
- Common symptoms include headache (81%), fever (70%), stiff neck (56%), nausea and/or vomiting (52%), photophobia (41%) and muscle pain (41%).

Viral meningitis by race and ethnicity



Viral meningitis incidence rates, 2007-16



TUBERCULOSIS, ACTIVE

cdc.gov/tb

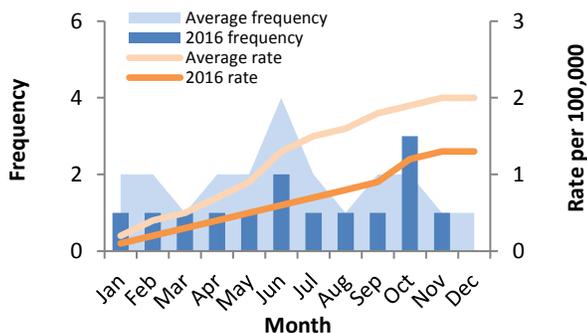
14

Number of cases reported

1.3

Incidence rate per 100,000 population

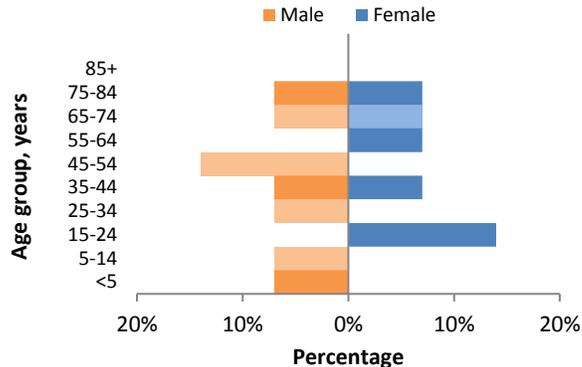
Active tuberculosis monthly frequency and cumulative incidence rate



Clinical Review

- 64%** Hospitalized
- 0** Deaths
- 7** Smear positive cases

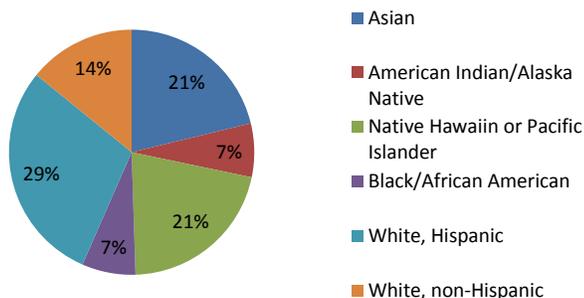
Active tuberculosis by age and gender



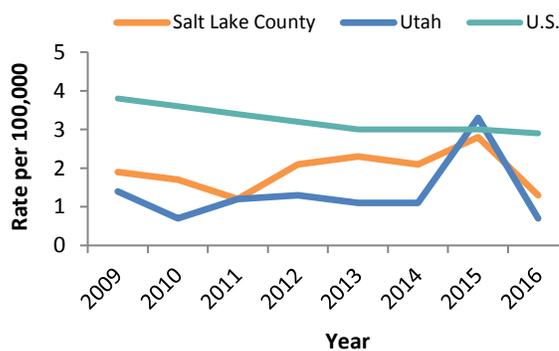
Epidemiologic Review

- Less than half the number of active TB cases when compared to 2015.
- One case was associated with an outbreak that started in 2015.
- Eleven cases were foreign born, with Mexico as the most common country of origin.
- Salt Lake County had 70% of the active TB cases in Utah.
- One case completed LTBI treatment in 2012 and developed active TB in 2016.

Active tuberculosis by race and ethnicity



Active tuberculosis incidence rates, 2009-16



WEST NILE VIRUS

cdc.gov/westnile

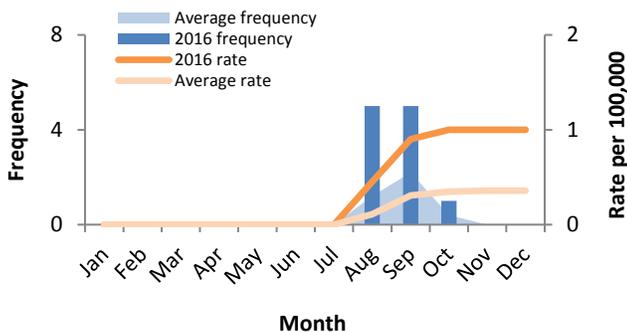
11

Number of cases reported

1.0

Incidence rate per 100,000 population

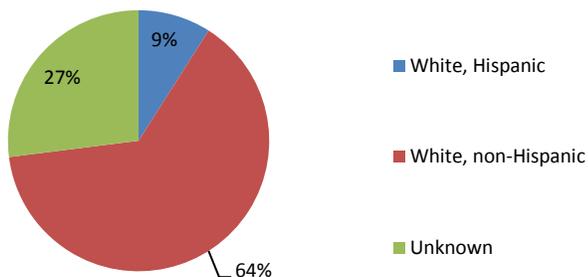
West Nile Virus monthly frequency and cumulative incidence rate



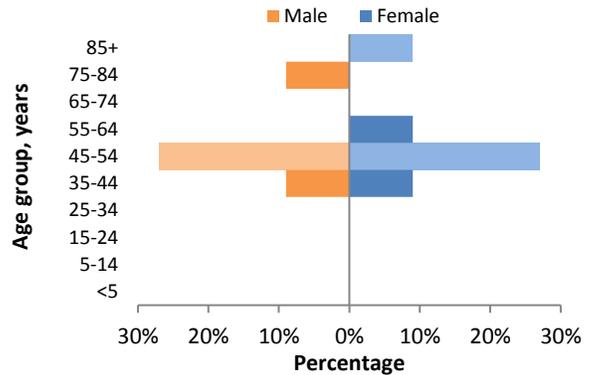
Clinical Review

- 73%** Hospitalized
- 1** Death
- 7** Neuroinvasive
- 4** West Nile fever
- 36%** Meningitis

West Nile Virus by race and ethnicity



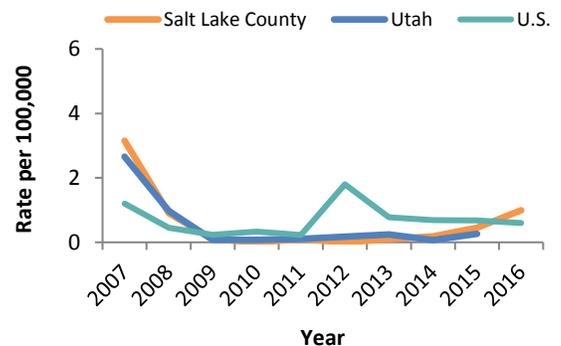
West Nile Virus by age and gender



Epidemiologic Review

- 90% of cases reported having seen mosquitos near their home.
- 64% of cases reported participating in outdoor activities during exposure period.
- 36% of cases reported travel during exposure period.

West Nile Virus incidence rates, 2007-16



ZIKA VIRUS

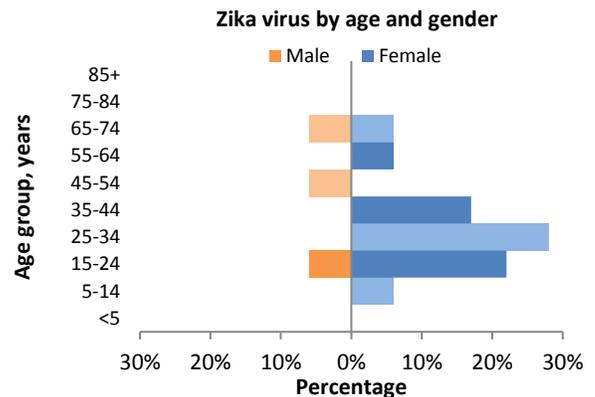
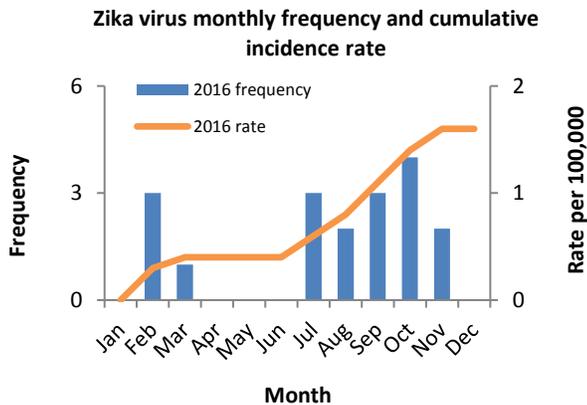
cdc.gov/zika

18

Number of cases reported

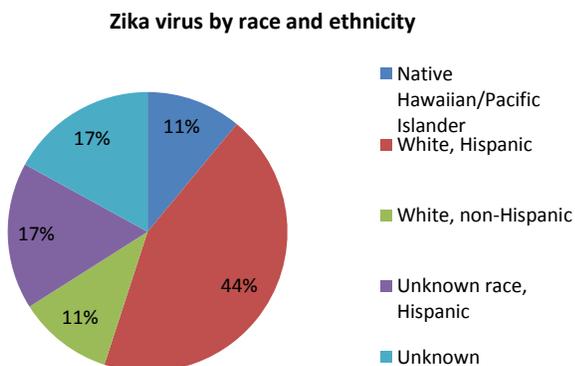
1.6

Incidence rate per 100,000 population



Clinical Review

- 6%** Hospitalized
- 1** Death
- 50%** Pregnant
- 22%** Tested for coinfections



Epidemiologic Review

- The first Zika death in the continental United States occurred in Salt Lake County. The case had underlying conditions and recent travel to a country with known, local Zika transmission.
- 94% of cases traveled to or immigrated from a country with known, local Zika transmission. The largest portion of cases were exposed in Mexico. Other countries include the Marshall Islands, Tonga, Grenada, Venezuela, El Salvador and Guatemala.
- The Birth Defects Network is tracking 8 surviving infants at 2, 6 and 12 months. There are no reported Zika affiliated abnormalities in these infants.
- Of the nine pregnant cases, 1 resulted in fetal loss thought to be Zika related, one infant with abnormalities not thought to be associated with Zika and all remaining were healthy, uncomplicated births.

DATA NOTES

Summarized diseases include reportable conditions with a 2016 count ≥ 10 . Diseases with a 2016 count < 10 are not included and influenza data are summarized in a separate report. Analysis included data based on date reported to public health (1/1/16-12/31/16) and case status (Table 1). Outbreak data are only provided for diseases where outbreaks were identified (Table 1). Rates were calculated per 100,000 population. Population denominators were obtained from the Utah Indicator-Based Information System (IBIS). U.S. incidence rates are not available for diseases that are not nationally notifiable or whose data are otherwise unavailable. Historical incidence rates for carbapenem non-susceptible *Acinetobacter* are only available for 2013 when it became a notifiable disease. Race and ethnicity data may not sum exactly to 100% due to rounding error. Age and gender data may not sum exactly to 100% due to the exclusion of unknown data.

Table 1. Reportable disease case statuses and outbreak definitions used in data analysis.

Reportable Disease	Case status			Outbreak definition*
	confirmed	probable	suspect	
Enteric Diseases				
Campylobacteriosis	x	x		
Cryptosporidiosis	x	x		
Giardiasis	x	x		
Salmonellosis	x	x	x	†
Shiga toxin-producing <i>E. coli</i>	x	x	x	
Shigellosis	x	x	x	†
Vaccine-Preventable Diseases				
<i>Haemophilus influenzae</i>	x	x		
Pertussis	x	x		§
Varicella (chickenpox)	x	x		†
Invasive Diseases				
Group A streptococcus	x	x		†
Group B streptococcus	x	x		
<i>Streptococcus pneumoniae</i>	x	x		
Streptococcal Toxic Shock	x			
Sexually Transmitted Diseases				
Chlamydia	x	x		
Gonorrhea	x	x		
HIV	x	x		
Syphilis (primary, secondary, early latent)	x	x		
Other Reportable Diseases				
<i>Acinetobacter</i> , carbapenem non-susceptible	x			†
Coccidioidomycosis	x	x		
Hepatitis C, acute	x	x		
Legionellosis	x	x		
Lyme disease	x	x		
Meningitis, aseptic		x		
Meningitis, viral	x	x		
Tuberculosis, active	x	x		
West Nile virus	x	x		
Zika virus	x	x		‡

* Outbreak definition is only provided for diseases where outbreaks were identified.

† ≥ 2 related cases

§ ≥ 2 related cases in 21 days

‡ 1 case