

IN THIS ISSUE: Overview of Reported Infectious Diseases in Washoe County, 2015

KNOWING YOUR COMMUNITY

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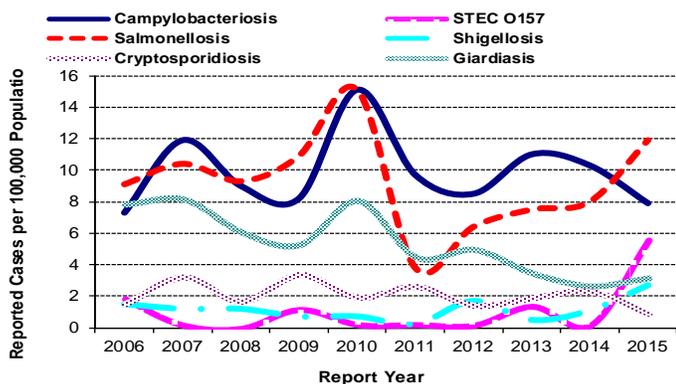
Introduction

The state of Nevada was ranked 38th in the nation for overall health in 2015 by the United Health Foundation¹. Infectious disease is one measure used to describe the community environment, which is one of the four groups of health determinants evaluated in the report. Infectious disease in 2015 was ranked No. 31 in the nation.

The Washoe County Health District (WCHD) has been compiling the Annual Communicable Diseases (CD) Summary since the 1980s. The purpose of this article is to describe infectious diseases reported in Washoe County in 2015. Please check the Health District's website at <http://tinyurl.com/WashoeCDAnnualSummary> for the latest report as well as historical reports.

Enteric Diseases

Figure 1. Incidence Rate of Reported Enteric Diseases, Washoe County, 2006-2015



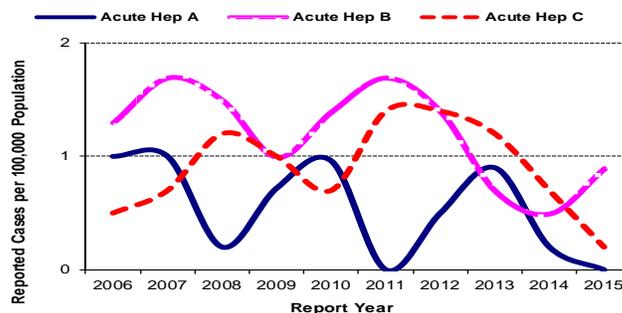
Of 138 cases with gastroenteritis reported in 2015, 132 cases (98%) were caused by *Campylobacter* spp., *Salmonella*, *Shigella*, Shiga toxin producing *E. coli* (STEC) including *E. coli* O157:H7, and *Giardia*. The remaining cases were caused by *Cryptosporidium*, *Vibrio* spp., and other organisms. There were a few outbreaks caused by STEC O157, *Salmonella*, and *Shigella* in 2015. The trend of incidence for commonly reported enteric diseases is

shown above in Figure 1. Washoe County met the Healthy People (HP) 2020 objective for Campylobacteriosis and Listeriosis, which is 8.5 cases per 100,000 population and 0.2 cases per 100,000 population, respectively. However, enteric diseases are most likely under-detected and under-reported. For example, only 5% of the estimated level of Salmonellosis gets reported each year.² Therefore the reported rates may underestimate the actual incidence in Washoe County. Healthcare providers are encouraged to collect stool specimens for a routine stool culture or rapid antigen test to identify pathogens for patients with a diarrheal illness. Doing so will improve case identification and potential outbreak detection, assist in disease control and prevent further transmission, especially if the case-patient works in a sensitive occupation such as food handling, child care, or healthcare.

Hepatitis

Reported cases of acute hepatitis A, B and C have been relatively stable in recent years (See Figure 2) in Washoe County. In 2015, Washoe County did meet the HP 2020 objectives for acute hepatitis A (0.3 cases per 100,000), acute hepatitis B (1.5 cases per 100,000 adults aged 19 and older), and for acute hepatitis C (0.2 cases per 100,000). The significant reduction of acute hepatitis A since 2004 is most likely attributable to mandatory immunization against hepatitis A virus for children entering a Nevada school for the first time beginning in July 1, 2002.

Figure 2. Incidence Rate of Reported Acute Hepatitis, Washoe County, 2006-2015



¹ <http://www.americashealthrankings.org/learn/reports/2015-annual-report>

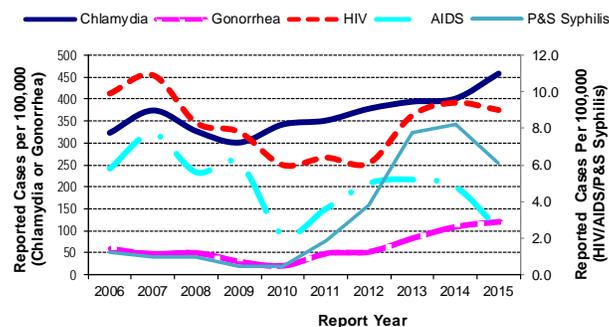
² <http://www.cdc.gov/foodborneburden/2011-foodborne-estimates.html>

From 1990-2015, 1,475 unique cases (0.33% of the county's population) of chronic hepatitis B were reported. From May 2002-December 2015, 8,288 unique cases (1.87% of the county's population) of hepatitis C were reported. The chronic hepatitis B and hepatitis C surveillance systems enable WCHD to monitor the disease burden and to increase detection of acute hepatitis cases not reported by healthcare providers. The WCHD's Perinatal Hepatitis B Prevention Program also works closely with obstetrics, hospital and pediatric providers in Washoe County to prevent the transmission of HBV to newborns and to household and sexual contacts of HBsAg-positive pregnant women.

Sexually Transmitted Diseases (STD)

Chlamydia infection is the most commonly reported STD in Washoe County. Expansion of *Chlamydia* screening and the increased use of more sensitive diagnostic tests are likely to have contributed to the increased incidence rate. Because the majority of *Chlamydia* infections are asymptomatic, morbidity reporting may not reflect actual disease burden. The WCHD has collaborated with LabCorp during 2005--2009 to monitor *Chlamydia* test positivity data. From 2005-2009, the test positivity rate among all age groups was 3% (1,653/54,683) and the rate among the 15-25 year-old age group was 4.5% (1126/24,812). The U.S. Preventive Services Task Force (USPSTF) recommends that **clinicians routinely screen all sexually active women aged 25 and younger** and all women who may otherwise be at risk—whether or not they are pregnant—for *Chlamydia* infection. Early detection is the most effective way to prevent the serious health problems in women and newborn babies that this often "silent disease" can cause.

Figure 3. Incidence Rate of Reported Sexually Transmitted Diseases, Washoe County, 2006-2015.



The HP 2020 objectives for HIV and deaths due to HIV have been met in 2015 in Washoe County. The HP 2020 objectives for the incidence of chlamydia, gonorrhea, and primary and secondary syphilis have not been met in 2015. The incidence of

syphilis has increased significantly during the past five years. This might be associated with increased transiency, anonymous partners, multiple partners and lack of cooperation of index cases. Advances in social media and networking have impacted traditional disease investigation methods as anonymity of the partner is easier to maintain, leaving little or no method to contact a partner. The trend of frequently reported sexually transmitted diseases is seen in Figure 3.

Tuberculosis

The incidence of active TB in 2015 was 2.5 cases per 100,000 population, which did not meet the HP 2020 objective of 1.0 case per 100,000. Seven of eleven reported cases were foreign born. Treating Latent TB Infection (LTBI) can effectively reduce a person's risk of ever developing TB disease. The overall completion rate for treatment of LTBI among all persons who started treatment in 2014 was 90% (47/52), which met the HP 2020 objective of 79%.

Vaccine Preventable Diseases

In 2015, an assessment of vaccine coverage showed that 79.2% of children aged 19-35 months had received age-appropriate vaccinations at the time of their visit to the WCHD Immunization Clinic or a healthcare provider located in Washoe County. The HP 2020 objective for vaccine coverage among this age group is 80%. The vaccines include DTaP (4 doses), polio (3 doses), MMR (1 dose), Hib (3 doses), hepatitis B (3 doses), varicella (1 dose), and PCV (4 doses). These are highly effective vaccines against diphtheria, tetanus, pertussis, polio, measles, mumps, rubella, *Haemophilus influenzae* type b (Hib) disease, hepatitis B, chickenpox, and invasive pneumococcal disease. Due to the mandatory implementation of a statewide immunization registration system in 2010, a systematic assessment of vaccine coverage among children aged 19-35 months in Washoe County has been performed by the Nevada Division of Public and Behavioral Health.

No cases of Diphtheria, Measles, Polio, or Rubella were reported during 2006-2015. One case of Tetanus was reported in 2009 in an adult. In 2015, 4 confirmed cases and 9 probable cases of pertussis were reported in Washoe County for an incidence of 2.9 cases per 100,000 population. The 2015 provisional national incidence was 5.7 cases per 100,000 population. During 1995-2015, Meningococcal serogroups among 59 reported cases were group B (27%), C (27%), Y (20%), and unknown group (20%). In 2015, the incidence of

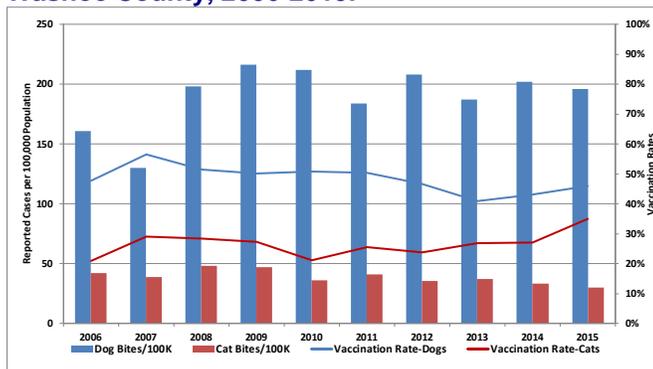
invasive pneumococcal diseases among children under 5 years and persons aged 65 years or older met the HP 2020 objectives. WCHD also received occasional reports of mumps during 2006-2015. No outbreaks of these diseases occurred in 2015. There was, however, one pertussis cluster that occurred in household settings during 2015. The incidence of rotavirus among children under 2 years of age decreased significantly during 2009-2015. This likely is attributable to increased vaccination against rotavirus among children.

The WCHD's Influenza Sentinel Surveillance Program has been in place since 1984. This program works closely with hospital emergency departments, private providers, and the University of Nevada-Reno Student Health Services. The surveillance program monitors the proportion of patients seen with influenza-like-illness on a weekly basis.

Vector-borne Diseases

One case of Malaria and three cases of West Nile virus (WNV) infection were reported in 2015. All three WNV cases acquired the infection locally while the Malaria case acquired the infection when traveling. Two cases of Lyme disease were reported and one of them denied having a travel history. No cases of plague or Hantavirus infection were reported in 2015.

Figure 4. Animal Bite Incidence & Vaccination Status, Washoe County, 2006-2015.



In 2015, two of 46 bats tested (4.35%) were positive for rabies in Washoe County. Statewide, 11% (8/73) of bats tested were positive for rabies. No cases of rabies in domestic animals were reported. In 2015, about 46% (403/873) of reported biting dogs and 35% (47/134) of reported biting cats were vaccinated against rabies (Figure 4).

Outbreaks

The WCDHD received 34 outbreak reports with 2512 ill persons. Of 34 outbreaks, 32 (94%) were gastroenteritis caused by norovirus or sapovirus, salmonella, shigella, or STEC O157. Two (6%) were

Hand, Foot, and Mouth Disease (HFMD) likely caused by *coxsackie* virus type A6. Six of 32 (19%) gastroenteritis outbreaks were foodborne. One of these foodborne outbreaks caused by Salmonella was part of a multi-state outbreak due to contaminated food products. A big local foodborne outbreak of STEC O157 with 25 ill persons was associated with a local food establishment. Of 2512 illness, 2451 (97%) were likely caused by norovirus. Of 34 outbreaks, 27 (79%) occurred in schools or child cares; two were associated with events; one was associated with a local restaurant. The other settings include household and apartment. The transmission mode for the majority of norovirus outbreaks in schools or child cares was primarily person-to-person.

Extraordinary Occurrence of Illness

Nevada law (NAC 441A.525) requires healthcare providers to report any extraordinary occurrence of illness to the local health authority even if such disease may not be specifically listed in the law. Under this provision, WCHD investigated a case of Chikungunya. The case acquired the infection while traveling to an endemic country.

CD Reporting

The list of reportable communicable diseases and reporting forms can be found at <http://tinyurl.com/WashoeDiseaseReporting> or call 775-328-2447. To report a communicable disease, please fax your report to the WCHD at 775-328-3764.

Frequently Used WCHD Web Resources:

1. WCHD CD Reporting: <http://tinyurl.com/WashoeDiseaseReporting>
2. WCHD 2015 Antibigram <http://tinyurl.com/WashoeAntibiogram>
3. WCHD 2015 CD Annual Summary <http://tinyurl.com/WashoeCDAnnualSummary>
4. WCHD Sentinel Flu Surveillance <http://tinyurl.com/WashoeFlu>

Acknowledgement

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