

Communicable Disease in King County – 2013

Introduction

This report summarizes communicable disease surveillance data from the Public Health – Seattle & King County Communicable Disease Epidemiology and Immunization Section. It includes information about our Section, a table with notifiable condition data from the past ten years, and notable communicable disease events from the past year. Additional information about the clinical features and epidemiology of each condition is available from our website at www.kingcounty.gov/health/cd (conditions are listed alphabetically). Information about the conditions below is available from their respective Public Health programs at the following websites:

- HIV/AIDS Program (www.kingcounty.gov/health/hiv)
- Tuberculosis Control Program (www.kingcounty.gov/health/tb)
- Sexually Transmitted Diseases Program (www.kingcounty.gov/health/std)

About the Communicable Disease Epidemiology and Immunization Section

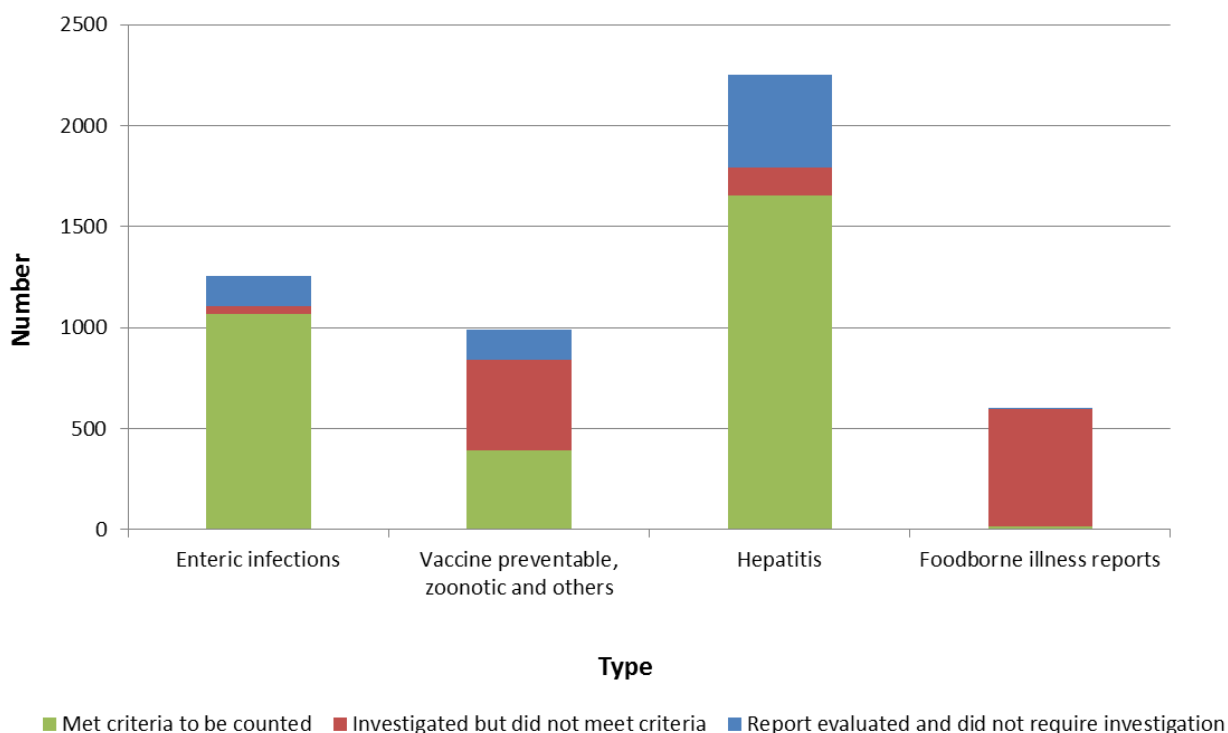
Our nurses, epidemiologists, physicians, veterinarians and administrative staff serve as “disease detectives” working to protect King County residents from infectious diseases of public health significance. We do this by:

- identifying and promoting the most effective prevention measures (such as vaccination and infection control measures)
- monitoring the occurrence of diseases in the community and describing the affected populations
- taking action to stop the spread of infections from contaminated food, beverages, environmental sources or contact with ill individuals
- helping people who have been exposed to infectious agents minimize their risk of getting sick and/or spreading infection to others
- providing information to the public, health care providers, hospitals and long term care facilities, schools, and businesses to help identify, manage and prevent infections

In addition to tracking, evaluating and responding to reports and outbreaks of notifiable conditions, we also investigate and respond to emerging infections such as novel influenza (including pandemic viruses and avian flu), severe acute respiratory syndrome (SARS) and other novel coronaviruses (including Middle Eastern Respiratory Syndrome), *Cryptococcus gattii* (a rare cause of serious and potentially fatal lung infections), and drug-resistant organisms including carbapenem-resistant *Enterobacteriaceae*.

Cases of notifiable conditions in King County residents summarized in this report represent only a fraction of the reports we received and evaluated. Approximately 1/3 of the reports we investigate are not ultimately confirmed, typically because lab testing either did not support the diagnosis, established another diagnosis, or was not available; or the clinical illness did not meet the surveillance case definition. We promptly investigate *suspected* cases of many conditions (e.g. measles, hepatitis A, meningococcal meningitis, and others) and establish the cause of illness so that rapid action can be taken to prevent additional cases in those situations where the disease is confirmed.

Number Reports Received, Investigated and Counted, 2013



The year in brief

Washington State requires reporting of selected notifiable conditions, and the last major updates to these rules were in 2011. These rules define the conditions that are reportable to public health by health care providers, health care facilities and clinical laboratories in our state. More information on notifiable conditions and how to report cases is available online at: www.kingcounty.gov/health/cd (see resources for health care providers).

In 2013, our Section received more than 5,000 communicable disease reports. Below are a few 2013 highlights (for more details, please visit our website at www.kingcounty.gov/health/cd).

▪ Enteric diseases and foodborne illnesses:

- *Campylobacter* (404 cases), *Giardia* (202 cases), and *Salmonella* (199 cases) continue to comprise the majority of reportable enteric infections, accounting for roughly 75% of the 1,065 reportable enteric disease cases in King County residents. A record number of *Vibrio* cases (46 cases) were reported in 2013, compared to an average of 20 cases per year (over the past five years).
- More than 10 people from four different counties became ill – at least four with laboratory-confirmed salmonellosis – after attending a summer scout camp in Washington. Findings from the investigation suggested that cross-contamination or undercooking of a frozen chicken entrée was the most likely cause of illness.
- In February, three cases of *E. coli* O157:H7 infection were traced to a common King County restaurant, which was closed by Public Health's Environmental Health Division until they corrected food handling errors that were identified.
- Five King County cases were linked to an ongoing multi-state outbreak of *Salmonella* Heidelberg from Foster Farms chicken that sickened nearly 500 persons.

- Fifteen foodborne outbreaks were reported in King County in 2013, attributed to norovirus (10), *Campylobacter* (2), *Salmonella* (1), Shiga toxin-producing *E. coli* (1), and *Vibrio* (1).
- **Chronic viral hepatitis infections:**
 - Chronic hepatitis B and C infections continue to comprise the largest number of reports, with roughly 1,500 newly diagnosed cases reported in 2013. Thirty-one percent (77/250) of the female cases newly reported were identified through recommended screening of pregnant women. Our Perinatal Hepatitis B Prevention Program tracks hepatitis cases in pregnant women to prevent hepatitis B in their infants by ensuring the infants receive appropriate preventive treatment. In 2013, 186 infants in King County were born to women with hepatitis B.
- **Imported measles cases:**
 - International travelers can be exposed to measles in many parts of the world. When travelers are not up to date on measles vaccine, they can develop measles during travel or upon return home. Because measles is a potentially serious disease, we investigate all cases to inform others who may have been exposed to the cases and to take steps to prevent spread of the infection. A few examples follow.
 - A case of measles occurred in a King County teenager who had traveled to Europe and attended a multi-state tennis tournament while infectious shortly after returning. The teen's sibling also subsequently developed measles.
 - A child adopted from China developed measles upon arrival to Washington. This measles case was one of several among adoptees from the same orphanage (the other adoptees resided in other areas of the U.S.) CDC worked with health officials in China to evaluate all children from the originating orphanage for measles and to recommend all adoptees be screened for fever and rash illness, and measles immunity be verified for those with imminent departure.
 - An infant too young to be vaccinated contracted measles following travel to the Philippines and upon returning spent time in many public settings in King County while contagious.
 - Two siblings from California were diagnosed with measles during travel to King County. They visited several locations in King County while contagious.
 - In two other instances, non-King County residents infectious with measles arrived on flights to Seatac airport exposing others to the disease.
- **Laboratory exposures:**
 - Over fifty hospital laboratory staff and healthcare staff from a King County hospital were potentially exposed to a specimen that tested positive for *Burkholderia pseudomallei*, a rare infectious agent in the US that is also a potential agent of bioterrorism. Investigation did not identify high-risk exposures, and no exposed persons were found to be ill after follow-up testing and health monitoring.
- **Rabies:**
 - Bats are the main reservoir of rabies in Washington State. Public Health routinely arranges for rabies testing of bats that are suspected to have exposed humans to rabies. In 2013, two bats tested positive for rabies after being found in public locations, one at the Madison Park beach, and one at the Madison Park playground. Information was distributed through media to alert the public about the potential rabies exposures, and two people initiated rabies post-exposure treatment as a result.

Notifiable Communicable Disease Reports – King County 2004-2013

| Disease | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--|------|------|------|------|------|------|------|------|------|------|
| Arboviral disease | 2 | 3 | 3 | 6 | 7 | 9 | 9 | 7 | 7 | 9 |
| Botulism, Foodborne | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Botulism, Infant | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| Botulism, Wound | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 |
| Brucellosis | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 |
| Campylobacteriosis | 264 | 336 | 258 | 262 | 296 | 274 | 306 | 399 | 389 | 404 |
| Cholera | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cryptosporidiosis | 35 | 69 | 45 | 46 | 35 | 31 | 16 | 16 | 24 | 18 |
| Cyclosporiasis | 9 | 5 | 1 | 1 | 0 | 0 | 1 | 3 | 0 | 0 |
| Diphtheria | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Giardiasis | 125 | 144 | 117 | 151 | 114 | 100 | 130 | 161 | 174 | 202 |
| <i>Haemophilus influenzae</i> invasive disease (under age 5 years) | 2 | 2 | 3 | 2 | 2 | 1 | 4 | 1 | 0 | 4 |
| Hantavirus Pulmonary Syndrome | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hepatitis A | 14 | 17 | 17 | 17 | 16 | 15 | 7 | 16 | 10 | 14 |
| Hepatitis B, Acute | 23 | 23 | 21 | 23 | 30 | 12 | 16 | 15 | 11 | 13 |
| Hepatitis B, Chronic | 629 | 708 | 838 | 836 | 880 | 660 | 663 | 570 | 676 | 507 |
| Hepatitis C, Acute | 10 | 10 | 6 | 7 | 11 | 6 | 7 | 8 | 4 | 17 |
| Hepatitis C, Chronic | 1633 | 1713 | 1774 | 1745 | 1844 | 1560 | 1523 | 1434 | 1316 | 1004 |
| Hepatitis E | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Legionellosis | 7 | 8 | 5 | 7 | 7 | 9 | 8 | 10 | 7 | 18 |
| Leptospirosis | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Listeriosis | 5 | 3 | 7 | 10 | 15 | 5 | 8 | 9 | 10 | 7 |

| Disease | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Lyme disease | 10 | 6 | 2 | 5 | 2 | 10 | 4 | 7 | 6 | 9 |
| Malaria | 12 | 12 | 25 | 15 | 14 | 17 | 21 | 11 | 13 | 19 |
| Measles | 6 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 4 |
| Meningococcal disease | 18 | 15 | 11 | 5 | 5 | 5 | 7 | 9 | 4 | 3 |
| Mumps | 1 | 1 | 33 | 27 | 7 | 2 | 1 | 1 | 1 | 0 |
| Paralytic Shellfish Poisoning | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 |
| Pertussis | 201 | 316 | 105 | 119 | 92 | 39 | 69 | 112 | 792 | 126 |
| Psittacosis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Q Fever | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 0 |
| Relapsing Fever | 1 | 0 | 0 | 2 | 1 | 2 | 3 | 2 | 1 | 0 |
| Rubella | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 |
| Salmonellosis | 234 | 218 | 205 | 241 | 305 | 263 | 229 | 192 | 218 | 199 |
| Shiga-toxin producing <i>E. coli</i> (including O157:H7) | 42 | 45 | 42 | 44 | 49 | 68 | 44 | 53 | 72 | 71 |
| Shigellosis | 63 | 72 | 52 | 50 | 42 | 64 | 46 | 43 | 68 | 47 |
| Suspected Rabies Exposures (animal bites) | 88 | 73 | 102 | 127 | 142 | 124 | 91 | 68 | 68 | 115 |
| Tetanus | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Trichinosis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tularemia | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Typhoid Fever | 4 | 8 | 3 | 4 | 8 | 4 | 15 | 10 | 6 | 8 |
| Vibriosis | 8 | 8 | 39 | 11 | 11 | 20 | 20 | 22 | 29 | 46 |
| Yersiniosis | 15 | 9 | 10 | 5 | 5 | 10 | 7 | 5 | 22 | 16 |