

Communicable Disease in King County – 2014

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/STD Program (<http://www.kingcounty.gov/healthservices/health/communicable/hiv.aspx>)
- Tuberculosis Control Program (<http://www.kingcounty.gov/healthservices/health/communicable/TB.aspx>)

About the Communicable Disease Epidemiology and Immunization Section

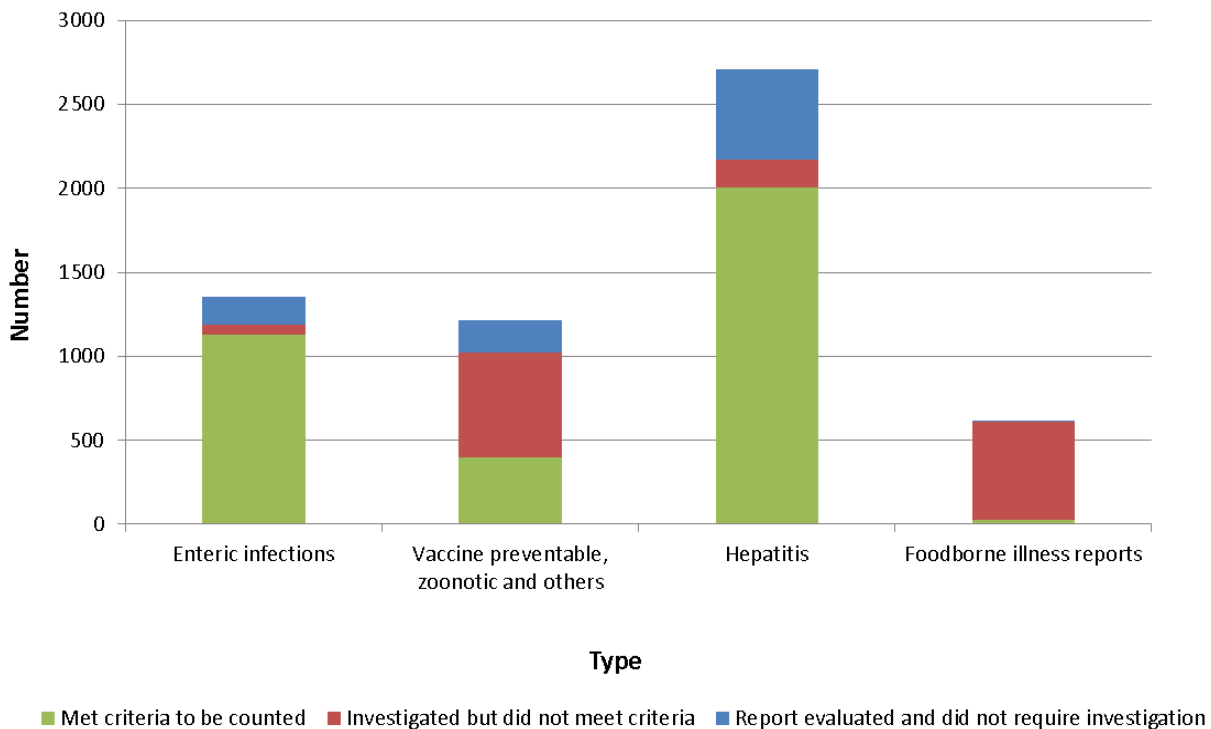
Our nurses, epidemiologists, physicians, veterinarians and administrative staff serve as “disease detectives” working to protect King County residents from infectious diseases of public health significance. We do this by:

- 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*. Following the outbreak of Ebola in West Africa in 2014, we have also begun performing mandatory 21-day symptom monitoring of travelers arriving from affected countries.

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 confirmed ultimately, typically because either lab testing 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 we can take rapid action to prevent additional cases in those situations where the disease is confirmed.

Number Reports Received, Investigated and Counted, 2014



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 2014, our Section received nearly 6,000 communicable disease reports. Below are a few 2014 highlights (for more details, please visit our website at www.kingcounty.gov/health/cd).

▪ Enteric diseases and foodborne illnesses:

- *Campylobacter*, *Giardia*, and *Salmonella* continue to comprise the majority of reportable enteric infections, accounting for roughly 75% of the 1,130 reportable enteric disease cases in King County residents.
- Twenty-two confirmed and four probable cases of salmonellosis were associated with an outbreak related to custom slaughter specialty meats. An additional fourteen cases were identified in five neighboring counties. An intensive investigation involving state and local health departments, environmental health teams, and state and federal regulators was conducted into the numerous processes involved in custom slaughter retail. Environmental samples collected from four locations in multiple counties matched two of three *Salmonella* strains isolated from the cases. Several cases in this outbreak reported consuming East African dishes which included raw or undercooked beef.
- Four cases of *E. coli* O121 were part of a multistate outbreak caused by consumption of raw clover sprouts. Nineteen cases in six states were identified during May 1 – May 20, seven (44%) of whom were hospitalized. Eighty-one percent of interviewed cases reported consuming clover sprouts from various locations, all of which were traced back to a common sprout farm in Idaho. An investigation by the U.S. Food and Drug Administration

(FDA) found [nine violations in Good Manufacturing Practice](#) (GMP), and all implicated products were removed from the market.

- Two cases of listeriosis occurred among highly immunocompromised persons who had both consumed milkshakes while inpatient at a King County healthcare facility; [this product was later confirmed to be contaminated with *L. monocytogenes* and was recalled](#).
- Nineteen foodborne outbreaks were reported in King County in 2014, attributed to norovirus (13), *Campylobacter* (1), *Salmonella* (1), bacterial toxin (1); 3 outbreaks had undetermined etiologies.

▪ **Chronic viral hepatitis infections:**

- Chronic hepatitis B and C infections continue to comprise the largest number of reports, with roughly 600 and 1,200 newly diagnosed cases reported in 2014, respectively. Thirty-one percent (77/250) of the newly reported female cases with hepatitis B 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 2014, 168 infants in King County were born to women with hepatitis B.

▪ **Imported measles:**

- In 2014, an outbreak of 16 measles cases, including 13 from King County, affected a local community of residents from the Federated States of Micronesia, to which the index case had recently traveled. Cases occurred from late May to early July. Four of the cases were exposed to the virus in healthcare settings. A majority of the outbreak-associated cases were either unvaccinated or too young to be vaccinated against measles. Community clinics were held by Public Health to provide MMR vaccine to members of the community with undocumented immunity to measles.

▪ **Laboratory exposures:**

- Twenty-four laboratory staff at a King County hospital were potentially exposed to a specimen that tested positive for *Brucella melitensis*, a potentially fatal illness which is also the most common laboratory-acquired bacterial infection. Public Health worked with the laboratory to identify persons potentially exposed, coordinate symptom monitoring of those identified, and set up routine serologic follow-up testing to detect early infection. No further cases resulted from this exposure.
- A further two laboratory workers were potentially exposed to *Francisella tularensis*, a rare infectious agent in the United States that is also a potential agent of bioterrorism. No illnesses resulted from this exposure.

▪ **Rabies:**

- Bats are the main reservoir of rabies in Washington State. Public Health routinely arranges for rabies testing of bats suspected to have exposed humans to rabies. In 2014, two bats submitted by members of the public after human exposure tested positive for rabies; both bats were found at private residences. Post-exposure prophylaxis was recommended for exposed persons. An additional 91 persons received rabies post-exposure prophylaxis because the animal was not available for rabies testing; 71 of these animal encounters occurred in King County.

▪ **Ebola symptom monitoring:**

- In 2014, Public Health assessed and monitored 62 travelers arriving from Ebola-affected West African countries (Guinea, Liberia, Mali, and Sierra Leone). Two of these travelers were considered “some risk” and required additional follow-up. None of the monitored travelers developed Ebola.

Notifiable Communicable Disease Reports – King County 2005-2014

Disease	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Arboviral disease	3	3	6	7	9	9	7	7	9	14
Botulism, Foodborne	0	0	0	0	0	0	0	1	0	0
Botulism, Infant	0	1	0	0	1	1	1	1	0	0
Botulism, Wound	0	0	1	0	1	0	2	0	0	0
Brucellosis	0	0	2	0	0	0	1	0	0	1
Campylobacteriosis	336	258	262	296	274	306	399	389	403	412
Cholera	0	0	0	0	0	0	0	0	0	0
Cryptosporidiosis	69	45	46	35	31	16	16	24	18	18
Cyclosporiasis	5	1	1	0	0	1	3	0	0	1
Diphtheria	0	0	0	0	0	0	0	0	0	0
Giardiasis	144	117	151	114	100	130	161	174	202	182
<i>Haemophilus influenzae</i> invasive disease (under age 5 years)	2	3	2	2	1	4	1	0	4	2
Hantavirus Pulmonary Syndrome	0	1	0	0	0	0	0	0	0	0
Hepatitis A	17	17	17	16	15	7	16	10	14	5
Hepatitis B, Acute	23	21	23	30	12	16	15	11	13	9
Hepatitis B, Chronic	707	838	836	881	658	663	570	676	501	624
Hepatitis C, Acute	10	6	7	11	6	7	8	4	17	20
Hepatitis C, Chronic	1712	1776	1745	1844	1558	1525	1433	1314	1003	1258
Hepatitis E	1	1	0	0	0	0	0	1	0	1
Legionellosis	8	5	7	7	9	8	10	7	18	13
Leptospirosis	1	1	0	0	0	0	0	1	0	0
Listeriosis	3	7	10	15	5	8	9	10	7	6

Disease	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Lyme disease	6	2	5	2	10	4	7	6	9	5
Malaria	12	25	15	14	17	21	11	13	19	18
Measles	1	0	1	0	1	1	0	0	4	13
Meningococcal disease	15	11	5	5	5	7	9	4	3	1
Mumps	1	33	27	7	2	1	1	1	0	4
Paralytic Shellfish Poisoning	0	0	0	0	0	0	0	7	0	0
Pertussis	316	105	119	92	39	69	112	792	126	136
Psittacosis	0	0	0	0	0	0	0	0	0	0
Q Fever	0	0	1	0	0	2	0	1	0	0
Relapsing Fever	0	0	2	1	2	3	2	1	0	1
Rubella	1	0	0	0	0	1	2	0	1	0
Salmonellosis	218	205	241	305	263	229	192	218	199	228
Shiga-toxin producing <i>E. coli</i> (including O157:H7)	45	42	44	49	68	44	53	72	71	88
Shigellosis	72	52	50	42	64	46	43	68	47	65
Suspected Rabies Exposures (animal bites)	73	102	127	142	124	91	68	68	115	93
Tetanus	1	0	0	0	0	0	0	0	0	2
Trichinosis	0	0	0	0	0	0	0	0	0	2
Tularemia	1	0	0	0	1	1	0	1	1	0
Typhoid Fever	8	3	4	8	4	15	10	6	8	10
Vibriosis	8	39	11	11	20	20	22	29	46	34
Yersiniosis	9	10	5	5	10	7	5	22	16	20