

Communicable Disease in King County – 2011

Introduction

This report summarizes communicable disease surveillance done by the Public Health – Seattle & King County Communicable Disease Epidemiology and Immunization Section. It includes information about our program, highlights from the past year in communicable diseases and a table with notifiable condition data from the past ten years. More details about the clinical features and epidemiology of each condition are available from our website: go to www.kingcounty.gov/health/cd and click on the first letter of the condition. Information about the conditions below is available from their respective program 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

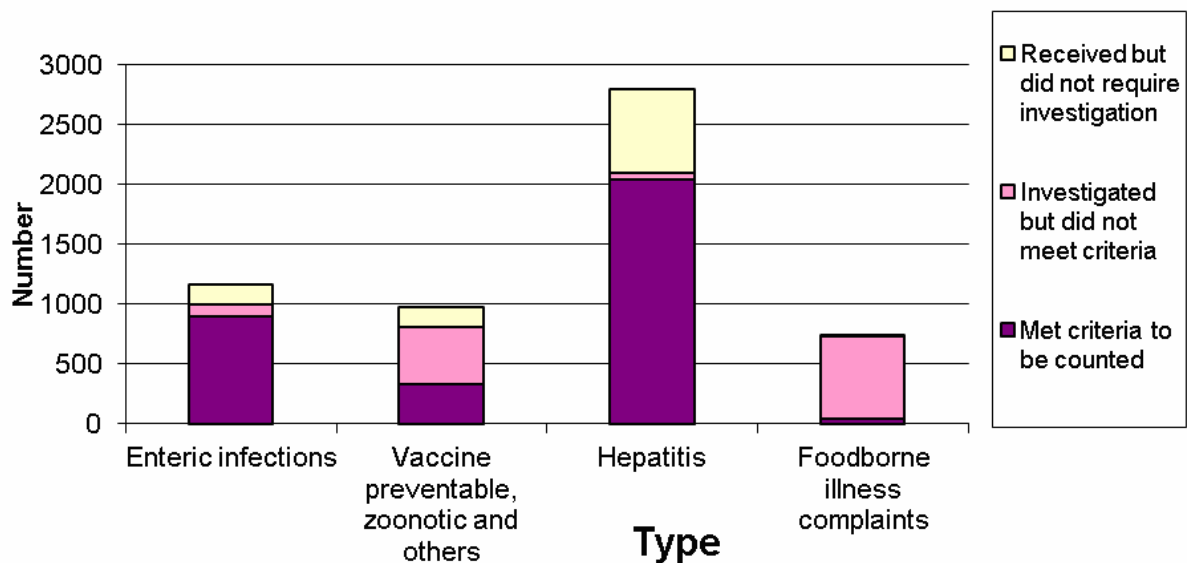
Our nurses, epidemiologists, physicians, veterinarians and administrative staff serve as “disease detectives” working to protect King County residents from infectious diseases of public health significance. We do this by:

- identifying and promoting the most effective prevention measures (such as vaccination and infection control measures)
- monitoring the occurrence of diseases in the community
- 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 surveillance for 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 *Cryptococcus gattii* (a rare cause of serious and potentially fatal lung infections).

The cases of notifiable conditions in King County residents summarized in this report represent only part of the work done by our program: approximately 1/3 of the reports we receive do not ultimately meet our criteria for reporting in the surveillance summary. 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, 2011



The year in brief

Washington State implemented revisions to its notifiable conditions rules in February 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 and are periodically revised to improve public health surveillance. The changes included:

- **New conditions added:** Several new conditions were added including illnesses due to specific arboviral infections, *Burkholderia*, domoic acid poisoning, novel influenza, SARS, smallpox, vaccinia transmission, vancomycin-resistant *S. aureus* (VRSA), varicella-associated death, and viral hemorrhagic fever.
- **Animal bites:** Instead of reporting all animal bites, health care providers and facilities now need only report those bites where there is a suspected human exposure to rabies.
- **Influenza-associated deaths:** Deaths associated with laboratory-confirmed influenza infections became notifiable. This change was made to help us better understand the risk factors for severe illness and death due to influenza.
- **Shiga toxin-producing *E. coli*:** The condition “Enterohemorrhagic *E. coli*” was renamed “Shiga toxin-producing *E. coli* (STEC).” In addition, hemolytic uremic syndrome (HUS) was eliminated as a separate condition; cases of HUS that occur after a diarrheal illness are now counted as STEC.
- **Viral hepatitis:** Along with chronic hepatitis B and chronic hepatitis C, acute and chronic hepatitis D and acute hepatitis E infections are now notifiable.

In 2011 more than 5,600 communicable disease reports were received by Public Health – Seattle & King County. Below are some of the highlights of the year (for more details, please visit our website at www.kingcounty.gov/health/cd).

- **Enteric diseases and foodborne illnesses:**
 - Reportable enteric diseases: *Campylobacter*, *Giardia*, and *Salmonella* continue to be responsible for the highest numbers of reportable enteric infections, accounting for 86% of the 851 reportable enteric disease cases received in 2011. The numbers of *Campylobacter* reports (385) and *Giardia* reports (161) were higher than in recent years, due in part to

revisions in the notifiable conditions rules that now require clinical laboratories to report these organisms; previously they were notifiable only by health care providers. The number of *Salmonella* reports declined for a third year in a row, but the organism remains an important cause of illness with 190 cases reported in 2011. Two national *Salmonella* outbreaks affected King County residents: a *Salmonella* Panama outbreak linked to consumption of cantaloupe harvested from a single farm in Guatemala that sickened at least 12 people including three King County residents, and an ongoing outbreak of *S. Typhimurium* linked to contact with African dwarf frogs with two King County cases and at least 239 others nationally in 2011.

- Shellfish associated illnesses: Non-cholera *Vibrio* infections continue to be a health risk for people consuming seafood – 19 of the 21 cases reported were infected after eating shellfish or other seafood, 14 after eating raw oysters. An investigation of diarrhetic shellfish poisoning (DSP) in a King County family stimulated a significant expansion in the number of shellfish harvesting areas that are monitored for the presence of DSP toxin. The family had consumed recreationally-harvested mussels and experienced symptoms consistent with DSP. High DSP toxin levels were found in mussels sampled from the harvest site. The toxin had previously been detected in Washington, but this was the first time that it was documented at harmful levels.
- Norovirus infections associated with frozen raw oysters: An investigation of norovirus infections among people consuming imported raw oysters from Korea led to the product being recalled. A subsequent FDA evaluation of the Korean shellfish sanitation program resulted in an import ban of all Korean shellfish. The initial investigation focused on three King County residents who experienced acute gastroenteritis after consuming a raw oyster dish containing frozen oysters imported from South Korea. Norovirus was detected in a stool sample from one of the ill diners, as well as from a sample of the frozen oysters.
- **Chronic hepatitis infections:** Chronic hepatitis B and C continue to be the notifiable conditions responsible for the largest number of reports, with just over 2,000 reports of newly diagnosed chronic hepatitis B and C cases (570 hepatitis B and 1,434 hepatitis C) in 2011. Persons with chronic hepatitis B or chronic hepatitis C are at increased risk for serious liver disease including cirrhosis and liver cancer. More than a third of the females reported with chronic hepatitis B were pregnant (110 out of 284), and were subsequently enrolled in Public Health's Perinatal Hepatitis B Prevention Program to protect their infants from hepatitis B infection.
- **Vaccine-preventable diseases:**
 - Pertussis: An increase in reported pertussis cases in December 2011 marked the beginning of a sustained pertussis outbreak in King County that continued into 2012. The outbreak occurred in the context of rising vaccination exemption rates in Washington state. In May 2011, a bill closing a loophole in state vaccine exemption policy was signed into law.
 - Hepatitis A: An outbreak of hepatitis A occurred among injection drug users and their close contacts. Ten cases (nine King County residents, and one resident of another Washington State county) occurred over a period of five months, likely transmitted through close contact. The index case was probably infected while traveling in Mexico.
 - Rubella: Two cases of rubella were identified in 2011. The index case was an adult who had recently traveled to India, and exposed the second case through household contact. The investigation included follow-up of potentially exposed persons at their homes, workplaces and health care clinics. No other individuals with symptoms of rubella were found.

- Measles: No cases of measles were reported in King County residents. However, over the course of the year Public Health staff followed up with four persons exposed to measles during air travel to make sure they were immune to measles and not ill.
- **Travel-associated diseases:** 202 King County residents reported with notifiable conditions were determined to have been infected during international travel. A variety of infections were acquired, including campylobacteriosis, cryptosporidiosis, dengue fever, giardiasis, hepatitis A, malaria, rubella, salmonellosis, Shiga toxin-producing *E. coli* (STEC), shigellosis, typhoid fever, and animal bites or scratches that needed rabies post-exposure prophylaxis (preventive treatment).

Notifiable Communicable Disease Reports – King County 2002-2011

Disease	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Arboviral disease	0	0	2	0	2	1	3	3	3	2
Botulism, Foodborne	0	0	0	0	0	0	0	0	0	0
Botulism, Infant	0	1	0	0	0	0	0	0	0	1
Botulism, Wound	0	0	1	0	0	1	0	1	0	1
Brucellosis	0	1	0	0	0	2	0	0	0	1
Campylobacteriosis	299	262	264	336	258	262	296	274	302	385
Cholera	1	1	0	0	0	0	0	0	0	0
Cryptosporidiosis	34	38	35	69	45	46	35	31	16	6
Cyclosporiasis	5	1	9	5	1	1	0	0	1	2
Diphtheria	0	0	0	0	0	0	0	0	0	0
Giardiasis	171	124	125	144	117	151	114	100	130	161
<i>Haemophilus influenzae</i> invasive disease (under age 5 years)	1	2	2	2	3	2	2	1	4	1
Hantavirus Pulmonary Syndrome	0	1	0	0	0	1	0	0	0	0
Hepatitis A	32	30	14	17	17	17	16	15	7	16
Hepatitis B, Acute	31	34	23	23	21	23	30	12	16	15
Hepatitis B, Chronic	581	522	629	708	838	836	880	661	664	570
Hepatitis C, Acute	12	8	10	10	6	7	11	6	7	9
Hepatitis C, Chronic	1925	1099	1636	1726	1783	1757	1857	1583	1539	1434
Hepatitis E	0	0	0	0	1	0	0	0	0	0
Legionellosis	3	2	7	8	5	7	7	9	8	10
Leptospirosis	0	1	0	1	1	0	0	0	0	0
Listeriosis	4	6	5	3	7	10	15	5	8	9

Disease	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Lyme disease	6	2	10	6	2	5	2	8	4	7
Malaria	15	16	12	12	25	15	14	17	21	11
Measles	0	0	6	1	0	1	0	1	1	0
Meningococcal disease	21	6	18	15	10	4	5	5	7	8
Mumps	0	0	1	1	2	8	1	1	1	1
Paralytic Shellfish Poisoning	0	0	0	0	0	0	0	0	0	0
Pertussis	155	281	201	316	105	119	78	37	59	98
Psittacosis	0	0	0	0	0	0	0	0	0	0
Q Fever	0	0	0	0	0	1	0	0	1	0
Relapsing Fever	5	2	1	0	0	2	1	2	3	2
Rubella	2	0	0	1	0	0	0	0	1	2
Salmonellosis	212	243	234	218	203	235	255	245	229	190
Shiga-toxin producing <i>E. coli</i> (including O157:H7)	32	43	42	45	42	43	49	66	41	51
Shigellosis	86	88	63	72	52	50	41	61	44	43
Suspected Rabies Exposures (animal bites)	34	30	87	73	102	126	142	123	91	68
Tetanus	0	0	0	1	0	0	0	0	0	0
Trichinosis	0	0	0	0	0	0	0	0	0	0
Tularemia	0	1	0	1	0	0	0	1	1	0
Typhoid Fever	4	2	4	8	3	4	8	4	15	10
Vibriosis	13	7	8	8	39	11	11	20	20	21
Yersiniosis	13	11	15	9	10	5	5	10	7	5