

Enteric Disease Outbreaks in BC

In 2018, 29 enteric disease outbreaks were investigated in BC ([Table 5.1](#)). The number of outbreaks was lower than 2017, but was slightly higher than previous years ([Figure 5.2](#)). This decrease is likely due to gaining familiarity with whole genome sequencing and fewer outbreaks initiated nationally. All five health authorities reported outbreaks in 2018. NHA reported the largest number of outbreaks for a regional HA and this was due to a large number of viral outbreaks reported in various work camps.

A variety of etiologies were reported in outbreak investigation in 2018 including viruses, bacteria, parasites and chemical/toxins ([Table 5.3](#)). The pathogen was laboratory-confirmed in 19 (62.1%) outbreaks; this is lower than previous years and is primarily due to 10 viral outbreaks that were not lab-confirmed in 2018. Norovirus and *Salmonella* remained the two most frequently identified pathogens as in previous years.

Outbreaks occurred in a variety of settings, most commonly the community and mining camps

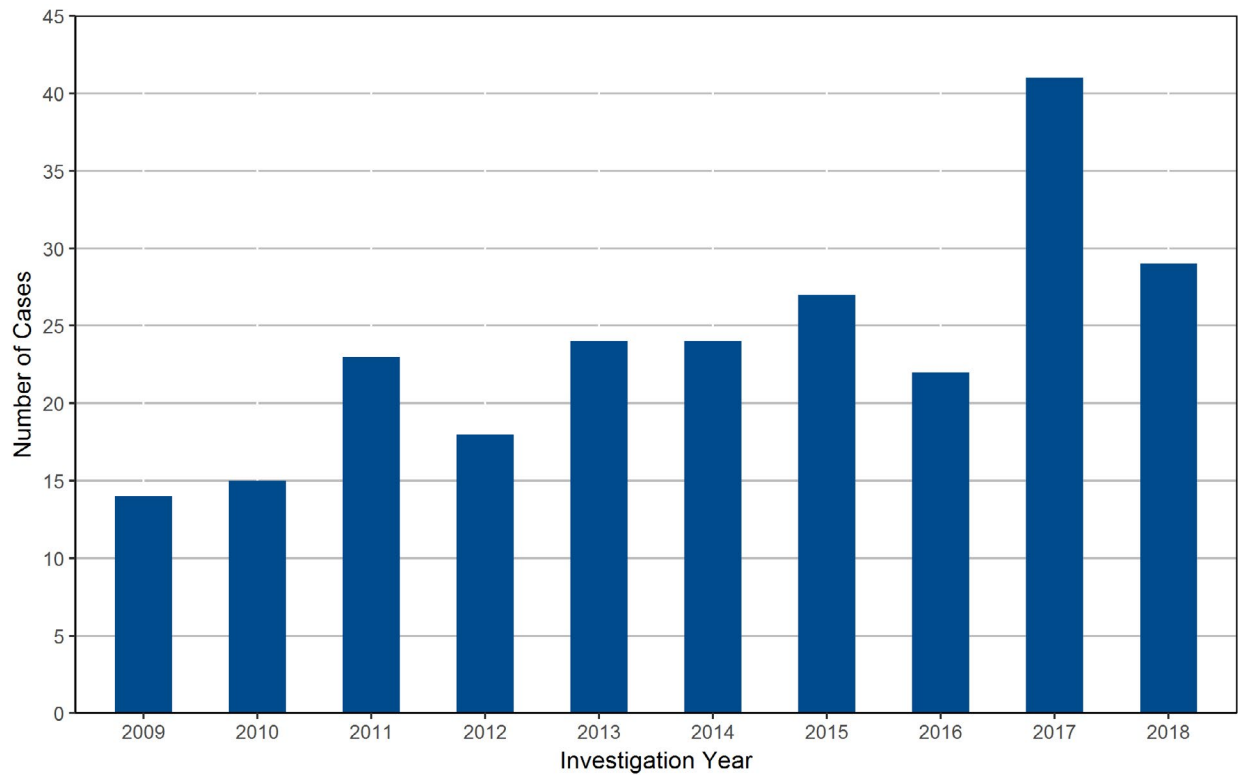
([Table 5.4](#)). This is a slight change from previous years where food service establishments were the second most common setting. The same number of outbreaks as in similar years are reported from food service establishments.

Similar to previous years, the most common mode of transmission was foodborne ([Table 5.5](#)). Among the 16 foodborne outbreak investigations, 14 (87.5%) identified a food source, which is similar to 2017 and higher than in years prior. Meat was the most commonly reported food source ([Table 5.6](#)) and all meat outbreaks were caused by chicken. Four of these were caused by frozen breaded chicken products and led to recalls of products. Produce and seafood outbreaks were caused by a variety of different etiologies, including toxins, viruses and bacterial pathogens.

5.1 Enteric disease outbreaks by reporting organization, BC, 2018

Reporting Organization	Number of Outbreaks Investigated
Fraser Health	1
Interior Health	4
Northern Health	8
Vancouver Coastal Health	2
Island Health	3
British Columbia Centre for Disease Control	11
Total	29

5.2. Number of outbreaks by year investigation started, BC, 2009-2018 (N=237)



5.3 Characteristics of enteric outbreaks by pathogen type, BC, 2018

	Bacterial (N=11)	Viral (N=15)	Parasite (N=1)	Toxin/ Chemical (N=2)	Total (N=29)
Number of lab confirmed outbreaks	11	5	1	1	18
number of lab confirmed cases	91	17	16	3	127
number of clinical cases	11	371	0	14	396
number of hospitalizations	13	15	0	4	32
number of deaths	0	0	0	0	0
Median and range in duration of outbreak* (days)	31 Range 2-114 days	5 Range 1-32 days	32**	1.5 Range 1-2 days	6 Range 1-114 days
Causative agent	<i>Salmonella</i> (7) <i>E. coli</i> (2) <i>Vibrio</i> (2)	Norovirus (6) Astrovirus (1) Hepatitis A (1) Unknown (7)	<i>Cyclospora</i>	Paralytic shellfish poisoning (1) Carbonate (1)	

*Duration of outbreak is calculated as the time period between the earliest and last reported onset date of cases. This is calculated for outbreaks with more than one case and for columns with more than one outbreak

** Duration only

5.4 Outbreaks by setting, BC, 2018

Outbreak Setting	Outbreaks Investigated	
	#	%
Community	11	33.9
Mining camps	7	24.1
Food service establishments	4	13.8
Daycares	2	6.9
Other	5	17.2
Total	29	100.0

5.5 Outbreaks by mode of transmission, BC, 2018

Outbreak Mode of Transmission	Outbreaks Investigated	
	#	%
Foodborne	16	55.2
Person-to-person	11	37.9
Multiple	1	3.4
Unknown	1	3.4
Total	29	100.0

5.6 Source of foodborne outbreaks by pathogen, 2018, BC

	Carbonate	<i>Cyclospora</i>	<i>E. coli</i>	Hepatitis A	Norovirus	<i>Salmonella</i>	<i>Vibrio</i>	Paralytic Shellfish Poisoning	Total
Dairy	0	0	1	0	0	0	0	0	1
Meat	0	0	0	0	0	5	0	0	5
Produce	1	0	1	0	0	1	0	0	3
Seafood	0	0	0	0	1	0	2	1	4
Unknown	0	1	0	1	0	1	0	0	3
Total	1	1	2	1	1	7	2	1	16

1. Enteric disease outbreak data are reported through a national, secure web-enabled outbreak reporting tool using the Canadian Network for Public Health Intelligence (CNPHI). Data were extracted from CNPHI on May 13, 2019. Viral outbreaks in hospitals and long-term care facilities are excluded.