

Enteric disease outbreaks in BC

In 2016, 24 enteric disease outbreaks were investigated in BC (Table 6.1). The number of outbreaks was comparable with the previous 4 years, when 24 to 26 outbreaks were investigated each year (Figure 1). All health authorities reported outbreaks in 2016; Vancouver Coastal reported the most (45.8%).

Bacteria and viruses caused a similar proportion of outbreaks (Table 6.2). The pathogen was laboratory-confirmed in 19 (79.1%) outbreaks; this proportion is similar to previous years. Norovirus and *Salmonella* remained the two most frequently identified pathogens as in previous years. No *E. coli* or *Shigella* outbreaks were reported in 2016.

Outbreaks occurred in a variety of settings, most commonly food service establishments and private functions (Table 6.3). These settings were also the most common in 2015.

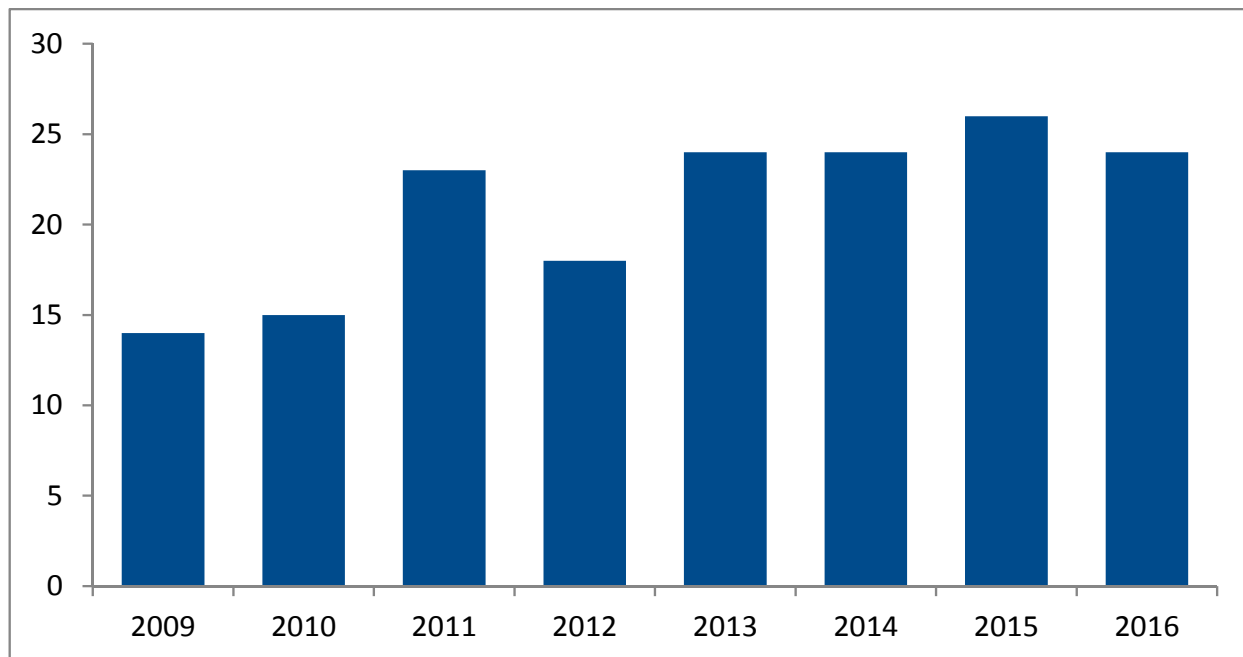
Similar to previous years, the most common mode of transmission was foodborne (Table 6.4). Among

the 12 foodborne outbreak investigations, 9 (75.0%) identified a food source. Mixed foods and meat were the most commonly reported sources of infection in 2016 (Table 6.5); however, the meat-related outbreaks implicated different sources (chicken and other poultry, pork and multiple types). A food handler was identified as contributing to the contamination of a food source in three foodborne outbreaks, 2 caused by norovirus and 1 caused by *Salmonella*.

6.1 Enteric disease outbreaks by reporting organization, BC, 2016

Reporting Organization	Number of outbreaks
Fraser Health Authority	1
Interior Health Authority	7
Northern Health Authority	1
Vancouver Coastal Health	11
Vancouver Island Health Authority	2
BCCDC	2
Total	24

6.2 Number of Outbreaks By Year Investigation Started, BC, 2009-2016 (N=144)



6.3 Characteristics of Enteric Outbreaks by Pathogen Type, BC, 2016

	Bacterial (N=12)	Viral (N=10)	Toxin/ Chemical Poison (N=1)	Unknown (N=2)	Total (N=24)
Number of lab confirmed outbreaks	11	8	0	0	19
Total number of lab confirmed cases	67	23	0	0	90
Total number of clinical cases	49	340	4	12	405
Total number of hospitalizations	12	7	0	0	19
Total number of deaths	1	0	0	0	1
Median duration of outbreak (days)	11	7	NA	NA	7
Causative agent	<i>Salmonella</i> (9) <i>Clostridium</i> (1) Unknown (1)	Norovirus (10) Unknown (1)	Paralytic shellfish poisoning (1)		

6.4 Outbreak by Setting Type, BC, 2016

Outbreak setting	Number of outbreaks
Food service establishment	11 (45.8%)
Private Function	4 (16.7%)
Institutional - Residential	3 (12.5%)
Community	2 (8.3%)
Non-institutional Facility	2 (8.3%)
Other	2 (8.3%)
Total	26 (100%)

6.5 Outbreaks by Mode of Transmission, BC, 2016

Outbreak mode of transmission	Number of outbreaks
Foodborne	12 (50.0%)
Person-to-person	8 (33.3%)
Animal-to-person	2 (8.3%)
Waterborne	0 (0.0%)
Unknown	2 (8.3%)
Total	24 (100%)

6.6 Source of Foodborne Outbreaks by Pathogen, BC, 2016

	<i>Clostridium</i>	<i>Listeria</i>	<i>Norovirus</i>	<i>Salmonella</i>	Unknown	Total
Eggs	0	0	0	1	0	1
Meat	0	1	0	3	0	4
Mixed Foods	1	0	1	0	0	2
Seafood	0	0	1	0	1	2
Unknown	0	1	1	2	0	3
Total	1	1	3	6	1	12