|  |  |  |  |
| --- | --- | --- | --- |
| **Pathogen** | **Case Definition(s)** | **Context** | **Reference** |
| *Salmonella* | **Confirmed case**: a laboratory-confirmed infection with the outbreak strains of *S.* Enteritidis based on whole-genome sequencing (WGS), occurring between May 1, 2015, and Oct 31, 2018  **Probable case**: laboratory-confirmed infection with *S.* Enteritidis with the multiple-locus variable-number tandem repeat analysis outbreak profile | Outbreak associated with a specific product; definition using WGS | Pijnacker, R., et al. 2019. An international outbreak of *Salmonella enterica* serotype enteritidis linked to eggs from Poland: a microbiological and epidemiological study. *Lancet Infect Dis*. 19(7):778-786. Available at: https://www.sciencedirect.com/science/article/pii/S1473309919300477?via%3Dihub |
| *Salmonella* | **Confirmed case:** a person with a laboratory-confirmed *S*. Newport ST118 isolate belonging to the outbreak cluster on phylogenetic analysis (i.e. core genome MLST (cgMLST) hierarchical clustering of five or less alleles or <5 single nucleotide polymorphisms (SNPs) to another isolate) in a sample taken after 1 July 2018.  **Probable case**: a person with an epidemiological link to a confirmed case and either a non-serotyped *Salmonella* spp. isolate in a sample taken after 1 July or the onset of gastrointestinal illness after 1 July.  **Possible case**: as a person with a laboratory-confirmed *S*. Newport isolate in a sample taken after 1 July for whom cluster analysis was not possible and epidemiological links were not known. | Outbreak associated with a specific product; definition using WGS | Robinson, E., et al. 2020. Outbreak of *Salmonella* Newport associated with internationally distributed raw goat’s milk cheese, France, 2018. *Epidemiol Infect*. 148: e180. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7482037/ |
| *Salmonella* | A case was defined as a domestically acquired, laboratory confirmed case of monophasic *S*. Typhimurium belonging to the specific genetic cluster ST5296 cluster 1 with a symptom onset from October 2018–January 2019 in Denmark. | Outbreak associated with a specific product | Helmuth, I.G., et al. 2019. An outbreak of monophasic *Salmonella* Typhimurium associated with raw pork sausage and other pork products, Denmark 2018-2019. *Epidemiol Infect*. 147: e315. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7003620/ |
| Norovirus | Cases were defined as any person who attended the wedding and experienced vomiting and/or diarrhoea with an onset date in the 72 h following the wedding. | Event-based outbreak | Smith, K.C. et al. 2017. An outbreak of norovirus GI-6 infection following a wedding in North West England. *Epidemiol Infect.* 145:6. Available at: https://www.cambridge.org/core/journals/epidemiology-and-infection/article/an-outbreak-of-norovirus-gi6-infection-following-a-wedding-in-north-west-england/D6900D7408DDFC61C61664876FCD3772 |
| *Listeria* | **Outbreak-associated case**: a laboratory-confirmed *L. monocytogenes* infection in a US resident with an isolate cultured from a normally sterile site (e.g. blood or CSF) or from products of conception (e.g. placenta) that was highly related to other outbreak isolates by PFGE and wgMLST and collected during 1 October 2014 to 1 February 2015.  **Pregnancy-associated cases**: as infection in a pregnant woman or infant (aged ≤28 days). | Case definition using WGS and PFGE | Angelo, K.M., et al., 2017. Multistate outbreak of *Listeria monocytogenes* infections linked to whole apples used in commercially produced, prepackaged caramel apples: United States: 2014-2015. *Epidemiol Infect*. 145(5): 848-856. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6542465/ |
| *E coli* | **Confirmed case**: a person infected with *E. coli* O121 between August 1, 2018, and November 30, 2018, visiting or residing in BC, with an isolate matching within 10 alleles by whole genome multi-locus sequence typing (wgMLST). | Case definition using WGS | Boyd, E. et al. 2021. *Escherichia coli* O121 outbreak associated with raw milk Gouda-like cheese in British Columbia, Canada, 2018. *CCDR*. 47-01. Available at: https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2021-47/issue-1-january-2021/foodborne-outbreak-british-columbia-related-raw-milk-gouda-like-products-2018.html |
| *E coli* | **Confirmed case**: a resident or visitor to Canada with *E. coli* non-O157 that had one of the outbreak PFGE pattern combinations or was closely related by whole-genome sequencing (WGS) with symptom onset on or after 1 November 2016. Closely related was defined as within 0–10 whole genome multi-locus sequencing typing (wgMLST) allele differences. | Case definition using WGS and PFGE | Morton, V. et al., 2020. The use of multiple hypothesis-generating methods in an outbreak investigation of *Escherichia coli* O121 infections associated with wheat flour, Canada 2016-2017. *Epidemiol Infect*. 148:e265. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7689785/ |
| *Clostridium perfingens* | **Case definition:** Members taking part in Exercise MR18 that ate from hay boxes on the evening of 21 April 2018 […].  **Confirmed case:** […] with symptoms of non-bloody diarrhea with a stool sample confirmed positive for the presence of *C. perfringens*.  **Probable case:** […] who displayed the following symptoms: diarrhea with or without cramping.  **Possible case:** […] who displayed gastro-intestinal symptoms without diarrhea. | Event-based outbreak | Public Health Agency of Canada. 2020. Foodborne illness outbreak investigation of April 21st 2018 (Exercise Maple Resolve 2018). *CCDR*. Available at: https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2020-46/issue-9-september-3-2020/infographic-outbreak-investigation-foodborne-illness-2018.html |
| Hepatitis A | **Confirmed case:** a resident of or visitor to Canada with laboratory-confirmed HAV infection with genotype 1A and one of two genetically related outbreak RNA fingerprints; an onset date on or after 1 October 2017; and no close contact with a confirmed case 15 to 50 days prior to illness onset.  **Secondary case**: a resident of or visitor to Canada with laboratory-confirmed HAV infection, close contact with a confirmed case 15 to 50 days prior to illness onset and symptom onset at least 15 days after the laboratory confirmed case. | Case definition using genotyping and RNA fingerprinting | Smith, C.R. et al., 2019. An outbreak of hepatitis A in Canada: the use of a control bank to conduct a case-control study. *Epidemiol Infect*; 147: e300. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6873153/ |
| Botulism | A case was defined as an illness in a person clinically compatible with botulism that began between March 1, 2017 and June 1, 2017 and linked to a common ingested product before illness onset, with botulism toxin A detected by mouse bioassay in clinical specimens. | Outbreak associated with a specific product | Kim, M. et al. 2019. Outbreak of foodborne botulism associated with prepackaged pouches of liquid herbal tea. *Open Forum Infect Dis*. 6(2). Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6368845/ |
| Botulism | **Outbreak-associated**: a person with laboratory-confirmed botulism and clinically compatible neurological symptoms who resided in or visited Sacramento County during April 2017 or May 2017 with illness onset after 15 April 2017 and who had no evidence of recent wounds, fractures, or recent injection drug use. **Suspected:** identified by clinicians who contacted their local health department or the CDPH for botulism consultation and requested BAT release. | Outbreak associated with a specific product | Rosen, H.E. et al. 2020. Foodborne botulism outbreak associated with commercial nacho cheese sauce from a gas station market. *Clin Infect Dis* 70(8): 1695-1700. Available at: https://academic.oup.com/cid/article/70/8/1695/5524350 |