Chapter 13- Outbreaks of shellfish-related illness

13.1 Response to outbreaks

Public health authorities are responsible for the investigation and response to illness outbreaks. Provincial and local public health authorities lead the response to enteric illness outbreaks within their respective jurisdictions. The Public Health Agency of Canada leads the response to enteric illness outbreaks that span more than one Canadian province or territory or involve Canada as well as another country, pursuant to the Canada’s Food-borne Illness Outbreak Response Protocol. When shellfish are implicated in an illness outbreak, the Canadian Shellfish Sanitation Program authorities participate in the investigation response.

13.2 Epidemiological information and food safety investigations

Provincial public health authorities and the Public Health Agency of Canada provide the Canadian Food Inspection Agency (CFIA) with information respecting potential epidemiological associations between reported illnesses and shellfish consumption. The CFIA will use the epidemiological illness data in conjunction with evidence gathered as part of a CFIA led food safety investigation to assess the link between molluscan shellfish from a specific shellfish harvest area, landfile or lease and reported illnesses. The CFIA’s food safety investigation will assess whether the illness is related to a shellfish harvest area (whole or part of), landfile or lease or is the result of processor post-harvest contamination.

13.3 Shellfish harvest area, landfile or lease closures – norovirus contamination

The CFIA will recommend to Fisheries and Oceans Canada (DFO) to place an implicated shellfish harvest area (whole or part of), landfile or lease in closed status if:

- shellfish from a specific area (whole or part of), landfile or lease are the suspected vector of infection and there are/is:
  - two single source illness clusters in a 21 day harvest period or,
  - one single source illness cluster and 2 multi-source illness clusters in a 21 day harvest period or,
  - a single source illness cluster comprised of a large number of illnesses resulting from a specific harvest for a public or private event.

or,

Environment and Climate Change Canada (ECCC) will recommend to DFO to place an implicated shellfish harvest area (whole or part of), landfile or lease in closed status if there has been a confirmed contamination event as per appendix VIII (Protocol for Emergency Closure of any Shellfish Growing Area).
Follow-up representative shellfish sampling at the harvest area, landfile or lease will be conducted to determine the level and extent of contamination. The shellfish area (whole or part of), landfile or lease remains in closed status when investigative samples from approved areas exceed any of the following criteria:

- E. coli (n=5, c=1, m=230 MPN/100g, M= 330 MPN/ 100g)
- Norovirus (n=5 detected in any sample)

If samples are unacceptable for norovirus, the closure will be in effect for a minimum of 30 days. If sample results are unacceptable for E.coli only, the closure will remain in place for a minimum of 7 days.

A shellfish area (whole or part of), landfile or lease may return to open status if investigative sample results are acceptable.

13.4 Shellfish harvest area re-opening – norovirus contamination

a) For closures due to Norovirus

CFIA and ECCC will recommend to DFO that a shellfish harvest area, landfile or lease be returned to open status when:

- ECCC has confirmed that there is no evidence of new or ongoing sanitary concerns and,
- After 30 days, CFIA shellfish testing results meet the following criteria:
  - E. coli (n=5, c=1, m=230 MPN/100g, M= 330 MPN/ 100g)
  - Norovirus (n=5 not detected)
  or,
- After 60 days, without testing, when the harvest area water temperature has remained at 10 degrees Celsius or higher.

b) For closures due to E.coli only

CFIA and ECCC will recommend to DFO that a shellfish harvest area, landfile or lease be returned to open status when:

- ECCC has confirmed that there is no evidence of new or ongoing sanitary concerns and
- After 7 days, CFIA shellfish testing results meet the following criterion:
  - E. coli (n=5, c=1, m=230 MPN/100g, M= 330 MPN/ 100g)

13.5 Risk assessment
The CFIA will consult with Health Canada to determine the level of risk that any shellfish in distribution might pose and take follow-up action as required as per CFIA’s Food Investigation and Response Manual.