

## Triathlon Scenario

A GP contacts their local Public Health Department at 10.15am on Wednesday morning following a bank holiday weekend to report that they have just seen a young woman with ongoing symptoms of vomiting and diarrhoea for the last 24 hours who took part in a triathlon on the Saturday morning of the bank holiday weekend. She described that some other members of the local triathlon club who partook were also unwell with the same symptoms. The swim part of the triathlon took place in a local river. The weather leading up to the bank holiday weekend had been wet with some significant amounts of rainfall. The river is not an identified bathing water under the Bathing Water Quality Regulations but is used regularly for both training and events for example river swimming, triathlon, kayaking, canoeing, and rowing.

*Nominate a scribe to represent the group and complete this sheet. Nominate someone who will provide feedback if requested during the feedback session*

Using the national guidance (in particular the appendices), outline in bullet points the initial environmental and public health approach that should be taken to managing this scenario

### Public Health

Concerned? – YES

Ask GP can you contact the woman. (Assume GP says yes to contact.)

Interview woman asking usual questions re other potential sources of infection. Identify possible IP. Ask about hygiene measures eg hand washing / showering after swim. Ask if any information provided by organisers of event re infection risks/ measures to reduce. Ask how many participants she thinks there might have been. Get contact details for organisers of event. Arrange for stool sample to be taken. Ask if she would ask the other people who have become unwell to either contact PH or give permission for PH to contact them.

Interview any other individuals possible at this stage and arrange stool sampling if agreeable

Remember may not be microbiological – could be chemical

Contact local EHS to advise them of your concerns and to ascertain what knowledge they may / may not have of this water area. [**Not** identified area] Ask if they could arrange water sampling (Appendix 12) and an EH risk assessment as per Appendix 3

Passive surveillance - but what are limitations. Review recent CIDR GI notifications BUT not sufficiently timely source and considerable under ascertainment as significant number won't attend health services and if they do the proportion that will be asked to submit a stool sample will be minimal. Check if anyone else in department has received calls

Active surveillance - Contact organisers of event. Qs to ask - Number of participants, where the participants are from, in particular are there large numbers from other international jurisdictions including NI? Any complaints? Any risk assessment or water sampling prior to event? What information on risk of infectious diseases is provided to participants prior to event? Is any additional info provided on the day? What hygiene facilities are provided – hand washing, toilets, showers? Are participants provided with food +/- drink immediately after exiting water?

Social media – eg event might have facebook page

### *New information for participants*

The PHD contacts the organisers of the triathlon event who report that there were approximately 400 participants in the event and that they had received a number of phone calls (approximately 30) to date from participants reporting GI symptoms after the event.

The EHS carry out urgent water sampling on Wednesday morning and preliminary *E coli* results of 3,231 are phoned through that evening. The EHS also contact the local County Council who advise that the degree of rainfall before the event would have been sufficient to overwhelm the foul water drainage system leading to overflow and who state that, although the water is not subject to regular quality monitoring, water quality has been unsatisfactory when sampled in the past.

Using the national guidance list what further steps need to be taken:

#### **Public Health:**

Consult with EHS re EH risk assessment carried out to inform extent of population exposure. Consider likely source (CSO, sewage discharges, surface water run-off, run-off from agricultural lands etc), likely duration of contamination, current weather conditions and forecasted conditions, in particular rainfall. ? possibility of mapping race and eg points of sewage discharge and locations of CSOs)

Convene and Chair an OCT(Appendix 4) – membership to include PH, EHS, LA, Lab / micro

Develop communications strategy

Additional active surveillance – who and how (GPs, EDs, other PHDs, other jurisdictions eg NI)

If possible identify any other users of the water area that weekend and currently eg clubs, training events, other events.

Follow-up stool sample results to identify organism if possible which may indicate further control measures that need to be taken

Carry out an epidemiological investigation – most likely method would be a retrospective cohort study. Study population = all triathlon participants. Case definition. May need to consider exclusion criteria eg had travelled abroad in the week preceding onset of illness. Develop a survey for participants and ask organisers to distribute. What kind of questions would you include? Demographics, symptoms, symptom onset, symptom duration, others in household unwell, questions on behaviours that may have affected ingestion of water during or after the race and participants previous experience of open water swimming, whether or not a wet-suit was worn, post-race hygiene behaviours (showering, hand-washing / hand sanitiser, consumption of food / drink after exiting water before hand washing)

Ask all completing the survey if they had submitted a sample for testing and what the test results were

Consider a method, mindful of GDPR, of how you might link CIDR notifications to event participants for GI notifications that do not undergo enhanced surveillance

Future control measures to consider:

Work proactively with identified stakeholders, including the organiser of this event, re risk of ID exposure during recreational water events and measures that should be taken to provide water users with advice on how to reduce the risk of infection, including awareness of impact of heavy rainfall around the time of the event on water quality  
Work with event organisers re need to monitor weather situation prior to events which may indicate need to carry out water sampling in advance of event to assess the risk to PH and whether event needs to be cancelled or participants advised of increased level of risk.

Work with event organisers to encourage instigation of appropriate measures that would facilitate post-race hygiene

? use of precautionary notices (eg STP type notices) or permanent advisory notices that highlight risk

LA should keep the number and location of identified bathing waters under the Bathing Water Regulations under Review with the possibility of identifying further water areas for identification under the legislation

??? is it advisable for mass-participation open water events to be organized in locations that are not designated as safe for bathing.

**ENVIRONMENTAL HEALTH:**

As per section 4.2 (page 8) PEHOs on receiving preliminary E Coli results and taken into consideration the conversation with the Local Council will immediately notify the Medical officer of Health ( Specialist in Public Health Medicine on duty) of any proposed bathing water advisory or prohibition warnings. In this case the recommended Notice would be as per Table 1

'Any gross malfunction or leakage of the sewerage system.....Issue of a **Bathing Prohibition Notice** (until the status of the Bathing water quality can be verified)'

Also as per 4.2: Following a bathing prohibition if required, the HSE will advise the Local Authority to do additional sampling and/or the HSE may carry out additional discretionary sampling...

Taken in the unsatisfactory water quality history for this body of water and the case study above, consideration should be giving (similar to Stream inlets in Guide 2.3) to recommending to the Council that temporary or permanent Bathing Warning signage should be put in place.