**Example: Case finding following a wedding banquet**

**Scenario:**

Three days following a wedding banquet, several guests developed gastrointestinal illness. Times of symptom onset of the ill attendees were within 12 hours of each other. Laboratory testing confirmed the presence of *E. coli* O157 genetically related by WGS. Although the initial cases were all from health unit A, wedding guests included residents of neighbouring health units as well as out-of-country residents. An investigation was initiated and lead by the local public health unit, with support from provincial and federal public health partners.

**Assessment:**

The initial cases identified were linked to the wedding party and the close proximity of symptom onset between cases suggested that there may have been a common exposure at the event. While the potential "case" population appeared to be well defined (i.e. wedding guests) - assuming that the exposure was indeed related to the event - it was possible that alternative exposures were relevant (e.g. initial cases were all residents of health unit, therefore, other exposures in the geographic area may have been important). As such, the case finding strategy considered what was known about the outbreak (e.g. common event) as well as other potential hypotheses.

**Methods:**

* During routine follow-up, cases were asked whether they were aware of other ill individuals or contacts. A phone number for the health unit was provided for the case to give to ill contacts for follow-up.
* Public health initiated contact with the hosts of the wedding to obtain the guest list. As all wedding communications occurred through email, an electronic questionnaire was sent to all guests by email.
* Public health obtained a list of employees to explore possible illness among staff, particularly among food handlers, and to gather information for the environmental investigation.
* Surveillance data were reviewed to determine if other cases:
  + Within the jurisdiction have matching WGS, pending WGS patterns, and/or common exposures
  + In other jurisdictions have matching WGS and/or common exposures
  + Public health authorities were notified of the investigation through routine communication channels (e.g. laboratory network, public health alerts)
* Case finding activities identified several cases among high-risk occupations (e.g. ill food handlers, day care staff) which re-defined the scope of those potentially exposed. Additional case finding strategies were implemented including public communications and further targeted follow-up.