

Outbreak Investigation Expectations for Oregon

General Considerations

This document outlines the minimum steps necessary to conduct an outbreak investigation in Oregon and is not intended to provide specific guidance for the investigation of GI illness. The Acute and Communicable Disease Prevention (ACDP) section of Oregon Health Services provides Investigative Guidelines specific for the investigation of food-borne disease outbreaks and gastrointestinal disease in congregate living facilities; see the ACDP website for the most current version.

When an outbreak is identified, an investigation should be initiated immediately. The county should notify ACDP as soon as possible within 24 hours. All investigations should be coordinated with ACDP epidemiologists. When needed, ACDP will provide technical assistance and coordination between counties, with other states and the Centers for Disease Control and Prevention. ACDP epidemiologists can assist the county in the design and implementation of the investigation. The amount of ACDP involvement will vary depending upon the situation but the county is ultimately responsible for the investigation and control of outbreaks within its jurisdiction. Each outbreak investigation shall address the following elements as applicable:

Basic Descriptive Epidemiology

- **Conduct case finding** by means appropriate to the outbreak (for example, by talking to cases, canvassing area healthcare providers, emergency departments, laboratories, establishing active surveillance channels).
- **Characterize the affected population** (for example, residents and staff at nursing home "X", students at school "Y", people who ate at restaurant "Z").
- **Characterize the cases and their illnesses through systematic data collection**, including demographics (for example, age, sex, classroom, room number), onset date and (often) time, symptom profile, duration of illness, measures of severity (MD or ER visits, hospitalizations, deaths). Standardized data collection tools (for example, forms or line lists) should be used to systematically collect this data.
- **When appropriate, collect an adequate number of specimens** for appropriate diagnostic testing. Ideally, these will be routed through the PHL; private labs are unable to test for Norwalk and several other common causes of outbreaks. Discuss specimen collection with the lab and the ACDP epidemiologist prior to submission. For submission to the PHL, an outbreak number must be obtained from the ACDP epidemiologist.
- **Assess the mode(s) of transmission.** Plotting the distribution of onset times (i.e., making an epi curve) is often a powerful tool for distinguishing point-source from, say, person-to-person transmission.
- **Evaluate the physical environment** as appropriate. Environmental health specialists often take the lead at this, but epidemiologists can greatly benefit by themselves visiting site(s) associated with the outbreak.
- **Look for other groups that may have been affected** (for example, other parties catered by the same group, other groups that came to the same restaurant or camp, etc.).

Basic Analytic Epidemiology

- **If a common source is suspected, try to identify it.** Identify potential exposures and develop tools (usually questionnaires) to assess their association(s) with risk of illness. Sampling strategies, questionnaire design, data entry and analytic methods, etc., must be well thought out and coordinated. Consultation with ACDP epidemiologists in this process is strongly recommended. **If you finalize a questionnaire without consulting with ACDP, assume that you will be responsible for all data entry and analysis.**

Control Measures and Follow-up

- **Correct deficiencies as they are identified.** Remove or control any identified sources of contagion. Review institutional and personal hygiene practices and work to improve them as indicated.
- **Monitor the situation until the incidence returns to baseline, especially in institutional outbreaks.** In some settings, line lists collected by ICPs or nursing staff may be adequate.
- **Review control measures as indicated.**

Outbreak Report and Other Documentation

ACDP will collaborate with the county on documentation of the investigation. The minimum information needed for an outbreak is the completed outbreak summary form. If control measures or recommendations were made, these should also be documented. This information is entered into the ACDP outbreak database. There are different forms for different kinds of outbreaks (e.g., foodborne, waterborne, non-foodborne GI, non-GI). The summary form should be completed as soon as possible, and no more than 30 days after completion of the investigation. ACDP epidemiologists have access to the appropriate outbreak summary forms. The summary includes space for a narrative description of the investigation, which may be just a few sentences if the investigation was minimal. More complex or higher profile investigations merit an additional, more substantial, report. There is no prescribed format for narratives, but we suggest the outline of outbreak papers published in medical journals:

Summary

Background

Methods

Results (including epi curves, signs/symptoms profile, risk factor analysis)

Conclusions

Intervention/recommendations

Performance Goals for ACDP

1. $\geq 90\%$ of calls to ACDP regarding outbreaks will be returned in a timely manner, as measured by the *ACDP Outbreak Investigation Evaluation Tool*.
2. In the case of outbreaks where ACDP enters and analyzes the data, the data will be made available to the county(ies) within 5 days of completion of data collection in $\geq 90\%$ of outbreaks. Analysis results will be made available to the county(ies) within 2 days of completion for $\geq 90\%$ of outbreaks, as measured by the *ACDP Outbreak Investigation Evaluation Tool*.
3. In the case of outbreaks that involve multiple counties, ACDP will keep all involved counties informed of pertinent information in a timely manner $\geq 90\%$ of the time, as measured by the *ACDP Outbreak Investigation Evaluation Tool*.
4. In the case of outbreaks that involve food product trace-back, counties will be informed of the progress of the trace-back, as the information becomes available, $\geq 90\%$ of the time, as measured by the *ACDP Outbreak Investigation Evaluation Tool*.

Performance Goals for Counties

1. $\geq 90\%$ of reported outbreaks will have investigation initiated within 24 hours of receipt of report.
2. $\geq 95\%$ of reported outbreaks will be reported to DHS-Health Services within 24 hours of receipt of report.
3. Reports on 100% of investigations will be forwarded to DHS-Health Services within 30 days after completion of the investigation.
4. 100% of investigations will address all applicable elements cited in this document.

