

Objectives

- Describe the steps in case investigation
- Become familiar with the structure of the Investigative Guidelines
- Practice using the Investigative Guidelines to determine case status



Why do we Investigate?

- Protect contacts
- Identify risk factors
- Detect outbreaks
- Monitor epidemiologic trends
- Guide public health programs
- Facilitate public health research





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Case Investigation Components

Who is affected?

What is the agent?

When did the disease occur?

Where did the cases occur?

How did they get infected?



Water under microscope illustration, 1846

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Case Investigation: Who

Demographics

- Name, address, sex, age
- · Occupation/worksite
 - Daycare
 - School
 - Food handler
 - Healthcare worker



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Case Investigation: Who

REALD Questions

Race, Ethnicity, Language, and Disability

SOGI Questions

Sexual Orientation, Gender Identity

<u>Oregon statute</u> requires REALD & SOGI be collected annually. It helps us understand health inequities in our communities

Training resources are available.

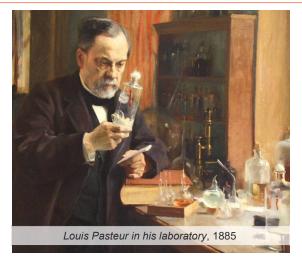


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Case investigation: What

What is the disease or diagnosis?

- Verify the diagnosis
- Lab tests
- · Clinical data
- Epi linkages



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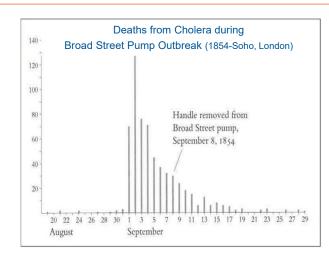
Case Investigation: When

Infectious Timeline

- Exposure period: when was our case exposed?
- · Incubation period
- Communicable period: when was the case able to transmit disease to others?

Epidemic curve:

 Plotting number of cases by illness onset



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Case investigation: Where and How

Where

- · Place of residence
- · Place of occupation
- Activity sites

How (possible exposures)

- Travel history
- · Environmental exposures
- · Contaminated food
- · Other, based on agent



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Case Investigation: Contact Management

- · Communicable period
 - Household roster
 - · Other close contacts
- · Screening for disease
- Prophylaxis if necessary
 - Antibiotics, vaccines, immunoglobulin
- Education



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Have these Investigative Guidelines handy

- •Shigellosis
- Meningococcal Disease
- Rabies and Animal Bites

Because each disease is unique, ACDP has developed **Investigative Guidelines** for most of the reportable diseases

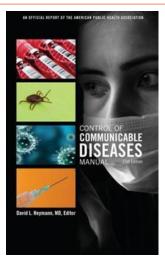
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Investigative Guidelines: Overview

A labor of love; they combine:

- Basics of disease (like in a textbook)
- Public health elements
 (cf., Control of Communicable
 Diseases Manual)
- Pertinent Oregon law (e.g., exclusion and testing requirements)



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Part 1: Disease Reporting

- Purpose of Reporting and Surveillance
- Lab and Physician Reporting Requirements
- Local Health Department Reporting and Follow-up Responsibilities



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Part 2: The Disease and Its Epidemiology

- Etiologic Agent
- Description of Illness
- Reservoirs
- Modes of Transmission
- Incubation Period
- Period of Communicability
- Treatment



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Part 3: Case Definition, Diagnosis, Laboratory

- Confirmed Case Definition
- Presumptive Case Definition
- Suspect Case Definition
- Services Available at OSPHL



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Part 4: Routine Case Investigation

- Determine Source of Infection
- Identify Potentially Exposed Persons
- Environmental Evaluation



~1940

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Part 5: Controlling Further Spread

- Education
- Isolation and Work or Day-care Restrictions
- Follow-Up of Cases
- · Protection of Contacts
- · Environmental Measures



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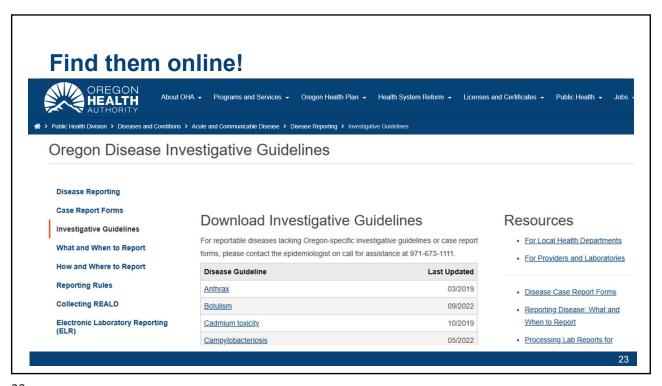
Part 6: Managing Special Situations

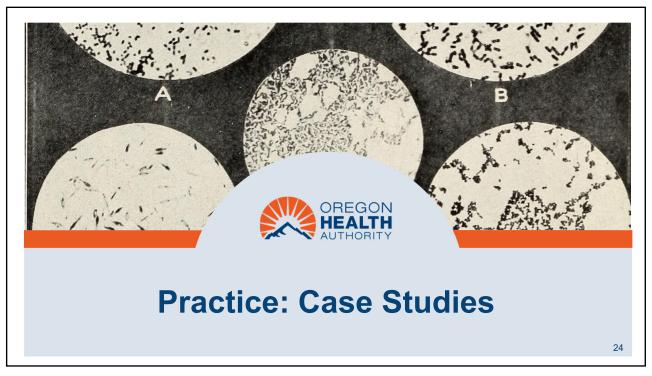
- Each Investigative Guideline has recommendations specific for that disease
- FOR EXAMPLE: Meningococcal Disease
 - · Daycare Association
 - · Determining outbreak
 - · Troubleshooting prophylaxis availability



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Incubation Period

List the incubation periods for the following diseases:

- Shigellosis
- Rabies
- Meningococcal disease
- In which section of the Guideline is this information found?

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Case Definitions: Shigellosis

A nurse calls to report that a 4-year-old girl is admitted with severe abdominal cramps, nausea and bloody diarrhea, and moderate fever.

A culture independent diagnostic test (CIDT) at the hospital detects Shigella in her stool, but no culture was performed. The stool sample is sent to OSPHL for further testing.

Does this meet the confirmed case definition for shigellosis?

Case Definitions: Shigellosis

OSPHL reports that testing done on the girl's stool specimen was unable to identify any Shigella spp.

Since this test is negative, should she be considered "no case"?

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Case Definitions: Meningococcal Disease

An infection control practitioner calls to report a 14-year-old male, admitted via the emergency room to the intensive care unit with fever, hypotension, maculopapular rash, diminished level of consciousness. Blood and cerebrospinal fluid (CSF) cultures are negative, but Gram stain of CSF showed Gram-negative diplococci.

Does this meet the case definition as a confirmed case of Meningococcal disease?

Case Study: Meningococcal Disease

In the week before this case's onset he attended a 4 hour study group, went to church for 1 hour, went hiking with his family, kissed his girlfriend.

Which of his contacts should get postexposure prophylaxis?

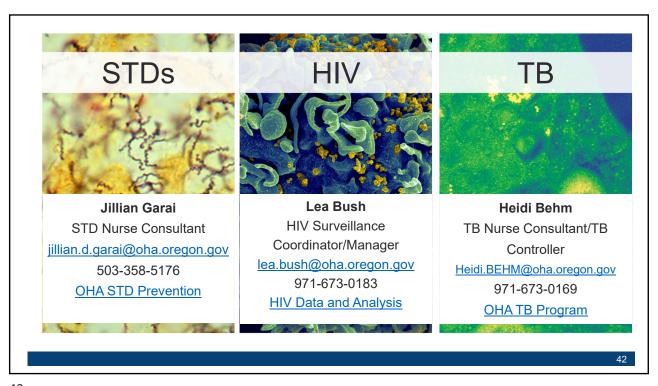
What are appropriate antibiotic prophylaxis options?

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Diagnostic Testing: Rabies

What confirmatory lab tests are available for rabies?





Confused, questioning, lost?

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