

Exposure Event



2014 Annual Communicable Disease Conference

Learning Objectives

- ∞ Describe specific disease
- ∞ Describe & apply steps of outbreak investigation / response
- ∞ Identify how your HD organizes itself around a response

10 Steps of an Outbreak Investigation

1. Identify investigation team and resources
2. Establish existence of an outbreak
3. Verify the diagnosis
4. Construct case definition
5. Case finding: Find cases systematically / develop line list
6. Perform descriptive epidemiology / develop hypotheses
7. Evaluate hypotheses / perform additional studies (as necessary)
8. Implement control measures
9. Communicate findings
10. Maintain surveillance

In Any Response...

- ∞ Be systematic
 - Follow the same steps every time
 - Write down case definitions
 - Ask the same questions of everybody
- ∞ Stop often to re-assess what you know
 - Line list and epidemic curve provide valuable information
 - Consider control measures to be applied
- ∞ Coordinate with partners (e.g., environmental)

Steps of an Outbreak Investigation

- ∞ These steps may occur simultaneously or be repeated as new information is received

A few things to think about...

- ∞ Who is on your team?
- ∞ How are you organized (i.e., designated 'lead', etc)
- ∞ Other resources?

THE CALL



Summary

☞ 36 yo female

- Newlywed
- Symptoms: fever 102F, nausea, vomiting, achy
- Sunday, May 11
- Hospitalized in ICU on ventilator
- Diagnosis of 'sepsis'

Pause

- ∞ What information do you need at this point?
- ∞ What questions would you ask?

Bachelor/ette Parties!



Saturday, May 3

Makeup Session



Wednesday, May 7

Rehearsal Dinner



Friday, May 9

Wedding Day!



Saturday, May 10

Your Turn!



Investigation

☞ In your groups / Epi Teams

- Think about the illness and scenarios you just witnessed

☞ Outputs:

- Diagnosis
- Line list
- Control measures
- Communication
- Surveillance

Relevant Dates

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	29	30	1	2	3 BACHELOR/ ETTE PARTIES
4	5	6	7 MAKE-UP SESSION	8	9 REHEARSAL / DINNER	10 WEDDING
11 BRIDE BECOMES ILL	12	13 	14	15	16	17
18	19	20	21	22	23	24



Epidemiology

∞ Incubation Period:

- 2-10 days
- Commonly 3-4 days

∞ Communicable period:

- Until live meningococci are no longer present in discharges from mouth and nose
- Usually within 24 hours of appropriate antibiotic treatment

Case Definition

☞ Suspect

- Clinical purpura fulminans in the absence of a positive blood culture; OR
- Gram-negative diplococci, not yet identified, isolated from a normally sterile body site

☞ Probable

- Detection of *N. meningitidis*-specific nucleic acid in a specimen obtained from a normally sterile body site, using a validated PCR assay; OR
- Detection of *N. meningitidis* antigen:
 - in formalin-fixed tissue by immunohistochemistry (IHC); OR
 - in CSF by latex agglutination

☞ Confirmed

- Isolation of *N. meningitidis*:
 - From a normally sterile body site; OR
 - From purpuric lesions

Contacts & Chemoprophylaxis

☞ Close contacts include:

1. Household contacts
2. Contacts at daycare centers
3. Persons directly exposed to oral secretions

☞ Chemoprophylaxis is:

- Recommended for persons identified as a close contact in the 7 days before onset
- Not recommended if >14 days after last exposure

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PEP Recommended for Contacts