

Diagnosis and Management of Foodborne Illnesses

A Primer for Physicians and
Other Health Care Professionals

Clinical Vignettes

What's Your Call?

American Medical Association
American Nurses Association-American Nurses Foundation
Centers for Disease Control and Prevention
Center for Food Safety and Applied Nutrition
Food and Drug Administration
Food Safety and Inspection Service,
US Department of Agriculture

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Patient Vignettes – What’s Your Call?

The following clinical vignettes are provided for your self-evaluation. All are possible situations that may present at your practice. The **Introduction and Clinical Considerations** booklet and the **Foodborne Illnesses Tables** that are also part of this primer will provide the information necessary for you to adequately address these clinical situations. Note that these vignettes include both infectious and noninfectious forms of foodborne illness.

For the following clinical vignettes, choose the best answer(s) from the “Answer Choices” listed at the end of the vignettes:

A – likely diagnosis; choose the best possible etiology (there may be more than one possibility) listed under “Answer Choices”, Section **A**.

B – most appropriate test/follow up action to confirm the diagnosis (there may be more than one correct answer—list all of them). Choose from the possible tests/actions listed under “Answer Choices”, Section **B**.

Finally, decide whether the situation warrants reporting to the local or state health department.

Clinical Vignettes

- I.** You receive a long-distance call from a patient who is an outdoorsman. He is with a group that collected and ate some wild mushrooms less than 2 hours ago. Several members of the group have since developed vomiting, diarrhea, and some mental confusion.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

II. A newborn child has symptoms of sepsis. Cerebrospinal fluid studies are consistent with meningitis. The mother had a flu-like syndrome prior to delivery.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

III. This patient has just returned today from Latin America following a 2-day business trip. He reports having eaten several meals of fish that he bought from street vendors around his hotel. He feels very ill with profuse, watery diarrhea and vomiting.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

IV. An 18-month old child is brought to your office with fever, bloody diarrhea, and some vomiting. She has been drinking unpasteurized milk in the last 48 hours. No other family members are ill.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

V. A patient calls and states that he and several family members are ill with severe vomiting. They ate at a church picnic 4 hours earlier.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

VI. A patient calls and states that most family members have developed severe vomiting, about 1 hour after eating at a picnic. They ate barbecued beef, chips, potato salad, and homemade root beer. Some are complaining of a metallic taste.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

VII. A patient has had chronic intermittent diarrhea for about 3 weeks. There is no fever or vomiting and no blood in the stool. The patient travels to Latin America and Eastern Europe frequently, most recently 2 weeks ago.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

VIII. The parents of a 6-month old infant are concerned because she is listless and weak. The infant is feeding poorly, has poor head control, and is constipated. There is no fever or vomiting.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

IX. A businessman who travels frequently is ill with fatigue, jaundice, abdominal pain and diarrhea. About 1 month ago, he returned from an international trip during which he consumed raw oysters.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

X. Several members of a single family are ill with abdominal cramps and watery diarrhea. They just returned from visiting friends on the East Coast of the United States where they consumed raw oysters 48 hours ago.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

XI. A minister at a local church calls to report that many members began experiencing watery diarrhea on the morning after the annual turkey dinner fundraiser. Some people also reported nausea and abdominal cramps, but no one has fever or bloody stools.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

XII. You receive a long-distance call from a patient on a fishing vacation off the coast of Belize. Her family has been eating a variety of local fish and shellfish that they caught. She reports that several family members developed abdominal pain, severe diarrhea, and weakness the morning after they consumed the seafood for dinner. One family member began having difficulty speaking later on that same night.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

XIII. A family in a rural community is worried that their father may be having a stroke. He is complaining of double vision and is having trouble swallowing. They have a large garden and eat home-canned vegetables.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

XIV. A 2-year-old child who attends day care presents with abdominal cramps and severe bloody diarrhea, which has been present for 2 days. He has no fever.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

XV. Susan tells you that she has had diarrhea, nausea, and abdominal cramping for almost 12 hours now. She also presents with malaise and a low-grade fever and informs you that as far as she can tell, the symptoms developed very suddenly. Stool examination is negative for occult blood. Susan informs you that her good friend is also sick and they both attended a company picnic less than 2 days ago.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

XVI. Sally arrives at your office with acute gastrointestinal illness characterized by diarrhea, abdominal cramps, chills, fever, and body aches. She also informs you that about 3 days before she started getting sick, she had consumed raw ground beef that was seasoned with onions and an herb mix.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

XVII. James presents to the emergency room with a low-grade fever and complaining of fatigue and nausea for the past 24 hours. He also describes his urine as being dark and states that he has had 4 bowel movements in the past 24 hours, all of which were light colored. Upon further questioning, James says that he has no history of jaundice and that he returned from a business trip to the Philippines a month ago.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

XVIII. You are halfway through your shift in the ER. There are four patients, two adults and two children, with a history of nausea, vomiting, abdominal pain, and profuse (especially in the children) watery diarrhea in the absence of fever. They each report that these symptoms began 5 days ago and resolved after 1 day. They had all been symptom free for 3 days, but now the symptoms have returned. There is also a new onset of jaundice and bloody diarrhea. Lab results indicate elevated LFTs. The patients do not know each other, but all report eating hamburgers several hours before the initial onset of symptoms.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

XIX. A mother has brought in a 5-month-old child with apparent blindness. She reports that the child had been healthy until the past month when the vision problems appeared. The mother states that she had been well during the pregnancy, but further questioning reveals that the mother had two young cats at home for which she was the sole care provider. The cats were given away just before the birth of the child because of concerns about the child being smothered by the cats.

A – likely diagnosis: _____

B – most appropriate test to confirm etiology/follow-up action: _____

Report to the health department? Yes No

Answers

Question number	Choice for A	Choice(s) for B	Report to health department?
I	12	11	Yes
II	8	12	Yes
III	6	5, 6	Yes
IV	3, 4	2	Yes
V	1	1, 3	Yes
VI	11	9	Yes
VII	14	8	Yes
VIII	7	5	Yes
IX	16	7, 13, 14	Yes
X	5	5, 6, 7	Yes
XI	2	1, 5	Yes
XII	13	10	Yes
XIII	7	3, 5	Yes
XIV	4	5, 6	Yes
XV	3, 5	5,6,7	Yes
XVI	3, 4	2	Yes
XVII	16	4,7,13	Yes
XVIII	18	16	Yes – intentional contamination?
XIX	17	13,15	Yes

Answer Choices

A: Choose from any of these possible etiologies:

1. Intoxication from preformed toxins of *Staphylococcus aureus* or *Bacillus cereus*
2. Intoxication from toxins produced in vivo by *Clostridium perfringens*
3. *Salmonella* or *Campylobacter* are possible.
4. *E. coli* O157:H7
5. Noroviruses, *Vibrio parahaemolyticus*, and other *Vibrio* infections
6. *Vibrio cholerae* infection
7. Botulism must be ruled out
8. *Listeria monocytogenes* sepsis
9. *Cryptosporidium parvum*
10. *Cyclospora cayentanensis*
11. A form of metal poisoning
12. A form of mushroom poisoning
13. Likely fish/shellfish toxin
14. *Giardia lamblia*
15. *Trichinella spiralis*
16. Hepatitis A virus
17. Congenital toxoplasmosis
18. Intentional amantin poisoning

B: Choose from any of these following tests/actions

1. Clinical diagnosis; laboratory tests may not always be indicated.
2. Generally detected on routine stool cultures.
3. Generally, a reference laboratory is needed to identify the toxin from food, stool, or vomitus.
4. Important to identify causative organism for public health reasons.
5. Send stool samples to health department (*Vibrio cholerae*, other vibrios, *E. coli* O157:H7, special toxin tests, *Clostridium perfringens*, *Clostridium botulinum*).
6. Not detected by routine stool cultures (*E. coli* O157:H7, *Vibrio cholerae*, other vibrios).
7. Should test for viral agents.
8. For cysts, ova, and parasite detection, at least 3 stool samples must be collected. Sometimes the organism may still be missed.
9. Test for appropriate metal.
10. Special test needed to identify a fish toxin.
11. Consult a mycologist to identify the mushroom.
12. Blood culture is the best source for diagnosis.
13. Blood test helpful to identify the agent.
14. May need acute and convalescent serum or viral cultures.
15. Isolation of *T. gondii* from infant blood. PCR of white blood cells or CSE, or IgM and IgA serology, performed by a reference laboratory.
16. Rapid and aggressive antitoxin therapy. There is no single effective antidote at this time, but silibinin (with penicillin G) and N-acetyl cysteine are showing promise. Plan for hepatic and renal failure.

