

Outbreak Recognition and Response for Emergency Managers

You get a call from the Tribal casino manager. They have received several calls over the past week from customers about recent nausea, vomiting, and diarrhea about a day after visiting the casino. You contact the tribal clinic, and they report similar illness among three casino employees.

1. Is this an outbreak?

2. What might be causing these illnesses? Do we have enough here to warrant investigating? Who would make the decision?

3. If an investigation is needed, who would do it? If you feel an investigation is needed, who would you call to get started?

4. What needs to be done to inform tribal leadership? Do you share information with the community at this time? If so, what would be the message?

5. What might be some key goals of the investigation? Would it be useful to know how many people are sick? Should we try to find out what pathogen caused the illness? Can we find clues to why some people got sick, but others didn't?

6. Are there any steps that could be taken to help prevent further disease at this point? What would your role be?

Tribal health recommends use of a disinfectant active against norovirus to clean all frequently touched surfaces at the casino, encourage handwashing, and arrange for environmental health evaluation of the casino kitchen and food serving areas.

7. Is there any way to find out what kind of infection, if any, is causing people to get sick? How?

Is the strategy you came up with something that your tribe can do? Does it fit within services the tribe offers and authorities the tribe has? If the tribe couldn't do this, but it seems like a good idea, who could you work with to get it done?

8. How might the people doing the investigation figure out if other people who went to the casino got sick? What support can your office provide?

Would this kind of “case finding” be OK for your office to do? Are there obstacles to getting this done? Cultural barriers? Legal barriers? If your office couldn’t do this, but it seems like a good idea, who could?

Case finding through credit card receipts from the casino hotel and restaurant reveals many more ill with similar symptoms. Stool specimens have been collected and sent for testing.

Based on interviews, all ill people report diarrhea and most report vomiting. Two were hospitalized. Stool samples from 4 of six people tested showed norovirus infection.

Most recent illness onset was yesterday, and people interviewed fell ill in the last week and a half. Most of those who got sick in the first two days ate at the casino buffet the evening of Jan. 10. Many of those who got sick later didn’t eat at the buffet.

9. Does this information give us any clues about what the pathogen might be? Or where the outbreak might have started? Could it help guide the investigation and control measures?

Interview of food workers reveals that one, while ill with gastroenteritis symptoms, was preparing food for the buffet on Jan. 10. She was responsible for cutting up and preparing the fruit salad.

Based on the available information, people who became ill during Jan. 11th and 12th are re-interviewed, along with a group of people who dined at the buffet on Jan. 10th, but didn't get sick. Almost all of those who got sick reported eating the fruit salad, while very few people who remained well ate it. No other foods were associated with becoming ill. It also came to light that the food worker who cut up the fruit salad got sick in the foyer on the way to the bathroom. The outbreak was controlled after starting regular cleaning with bleach.

10. At this point, what should be communicated about the outbreak to tribal leadership, casino employees, and the community at large? What is your role in this communication?

Conclusion

In all, at least 60 people became ill with gastroenteritis, presumably all caused by norovirus infection. Preparation of fruit salad by an ill food worker, and contamination of a public area with norovirus started the outbreak, which then persisted through person-to-person transmission.

Control efforts aimed at preventing further spread included having ill staff (especially food handlers) stay home when ill, encouraging regular hand washing by all staff and visitors, and cleaning frequently touched surfaces with bleach to kill norovirus. This stopped the outbreak.