

Scenario 1: Plague Event Recognition

Topic: Detection of a Possible Bioterrorist Event

Date: Wednesday morning, October 27, 2004

Events:

- Early in the morning on Wednesday, October 28, 2004, epidemiologists at the state health departments in Minnesota, Iowa, and Wisconsin are contacted by Infection Control Professionals (ICPs) at several hospitals in their states regarding multiple cases of severe pneumonia admitted through the Emergency Departments during the previous 4 hours; several of the patients report bloody sputum.
 - In Minnesota, initial reports were received from: Hennepin County Medical Center (12 cases), Abbott Northwestern Hospital (9 cases), Fairview Southdale Hospital (7 cases), United Hospital (6 cases), North Memorial Hospital (6 cases), and St. Cloud Hospital (5 cases).
 - In Wisconsin, initial reports were received from: the University of Wisconsin Hospitals and Clinics in Madison (7 cases), St. Joseph's Hospital in Marshfield (4 cases), St. Luke's Medical Center in Milwaukee (10 cases), Luther Hospital in Eau Claire (6 cases), and Froedtert Memorial Lutheran Hospital in Milwaukee (13 cases).
 - In Iowa, initial reports were received from: Mercy Medical Center in Des Moines (9 cases) and University of Iowa Hospitals and Clinics in Iowa City (12 cases).
- By early afternoon, DFA staining of clinical specimens from several patients is positive for *Yersinia pestis*, the causative agent of plague.
- Later in the day, cases also are recognized in South Dakota, North Dakota, Nebraska, and throughout Illinois. Several cases also have been identified in Winnipeg, Canada
- Each state health department sends out an alert via the Health Alert Network and by late afternoon, the following numbers of suspect inhalational plague cases have been identified from hospital-based surveillance:
 - Minnesota: over 400 cases
 - Wisconsin: 168 cases
 - Iowa: 120 cases
 - South Dakota: 67 cases
 - North Dakota: 46 cases
 - Nebraska: 25 cases

Issues for Consideration:

- In this type of situation, at what point would epidemiologists within each state contact other states in their region? How quickly would state health officials recognize that cases are occurring across the region?
- Are there protocols in place for notifications of key contacts within the region and in Canada?

- Are there mechanisms in place for sharing information across state borders and the Canadian border?
- How would the initial investigation be coordinated between different health departments in the region?
- What is the role of CDC and other federal agencies early in the investigation?

Scenario 1: Plague Risk Communication

Topic: Identification of the source of the outbreak and initial risk communication messages

Date: Wednesday evening, October 27, 2004

Events:

- By Wednesday evening, epidemiologic data indicate that all of the initial patients interviewed (approximately 45) had attended the third game of the World Series between the Minnesota Twins and the Chicago Cubs on Monday evening, October 24, 2004, at the Hubert H. Humphrey Metrodome in downtown Minneapolis.
- The Metrodome is closed off as a crime scene and the rest of the games for the World Series are being postponed indefinitely. Spokespersons for the teams have reported that several baseball players have symptoms compatible with plague pneumonia.
- The governors of Minnesota, Wisconsin, and Iowa all declare a state of emergency in their respective states and activate their Emergency Operations Centers (EOCs). As case numbers continue to grow, several other states also activate their EOCs.
- Public health officials in the involved states have called for the Strategic National Stockpile (SNS) and push packs will be delivered over the next 12 hours. Each state is scrambling to have POD clinics operational across their jurisdictions by Thursday morning.
- Each state also has developed risk communication messages about the outbreak and by late afternoon, the public has been notified. Messages between states have been somewhat inconsistent and the national media are trying to sort out the various comments and recommendations.
- Public health officials have called in all of their trained personnel and are working as quickly as possible to: 1) identify and interview cases and 2) conduct contact tracing to locate persons who may have been exposed to cases of plague pneumonia. Hundreds of calls have flooded into the state health departments, emergency hotlines have been established, and available resources are being pulled in numerous directions at once.

Issues for Consideration:

- How will the state Emergency Operations Centers (EOCs) be coordinated across the region?
- How will ongoing communications between states and Canadian provinces be maintained?
- How will the ongoing criminal investigations be coordinated across the states?
- How will local agencies work with the FBI and who will be in charge of the criminal investigation?

- How will risk communication messages be coordinated between the different states?
- What will be the role of elected officials and how will they communicate with each other?

Scenario 1: Plague Resource Management

Topic: Resources management/allocation issues

Date: Thursday morning, October 28, 2004

Events:

- By Thursday morning, public health and medical resources in the Twin Cities area are completely overwhelmed with plague cases; over 2,500 plague cases have been identified in the state; many of the cases are critical ill and over 200 deaths have occurred. Plague case numbers for other states in the region include the following:
 - Wisconsin: over 900 cases
 - Iowa: approximately 600 cases
 - South Dakota: 150 cases
 - North Dakota: 90 cases
 - Nebraska: 55 cases
- Despite the best efforts of hospital administrators and public health officials, many hospital workers are refusing to come to work (particularly ancillary staff) and a number of hospitals in Minnesota, Iowa, and Wisconsin are experiencing critical staffing shortages. Many hospitals have closed their doors and have asked the National Guard to monitor entrances and exits.
- All critical care beds in the state of Minnesota are full; additional ventilators have been sent through the SNS; however, the existing critical care capacity is inadequate to deal with the crisis and hospitals remain severely understaffed. The governor of Minnesota has made a plea to surrounding states to send volunteers to staff hospitals and to allow for transfers of ill patients outside of Minnesota to other hospitals in the region.
- Public health personnel in Minnesota are working to prevent secondary cases through aggressive media messages and contact tracing. In addition, numerous POD clinics have been set up and additional personnel to run the clinics are needed. The public health infrastructure in the state is becoming rapidly overwhelmed. The Minnesota Department of Health has asked the surrounding states to send trained public health volunteers to help manage the Minnesota case load, to communicate with healthcare providers, to staff the PODs, and to staff the public information hotline.

Issues for Consideration:

- How will the need for surge capacity of trained public health staff be met in areas hardest hit by the epidemic?
- How will the needs for medical surge capacity be met?

- What are the mechanisms to assess medical care needs on an ongoing basis throughout the region during a rapidly unfolding crisis?
- What steps are needed to allow for out-of-state volunteer credentialing and tracking of volunteers that are sent to other states?
- What are the issues related to sharing medical supplies and equipment across state borders and possibly between the United States and Canada?
- What are the issues related to transferring patients across state borders?
- Can residents from one state receive antibiotic prophylaxis in another state?

Scenario 1: Plague Quarantine Issues

Topic: Issues of quarantine and border closings

Date: Friday morning, October 29, 2004

Events:

- By Friday morning, the plague outbreak is out of control in the Twin Cities and surrounding areas of Minnesota. Because of concerns about secondary transmission, panic has spread through the region. People in Iowa, Wisconsin, and South Dakota are urging their political leaders to take more drastic actions to halt the spread of plague. There is a growing public sentiment to close the border with Minnesota.
- Airports across the region are not accepting flights from the Twin Cities and numerous flights have been cancelled, leading to large numbers of travelers stranded at the Twin Cities airport.
- Truckers are refusing to enter Minnesota, leading to concerns about shortages of food and supplies.

Issues for Consideration:

- How would public health (and other government) officials deal with public demand to close a state border?
- Would border closings ever be considered in this type of scenario?
- Who makes the decisions around border closings and how would those decisions be enforced?
- What are the legal issues around border closings?
- What are the issues around limiting or canceling other forms of transportation (airlines, trains, buses) into and out of the areas most heavily affected by an epidemic?
- How would adequate supplies of food and other essential items be maintained in the face of public panic?

What are the mechanisms to assure consistent risk communication messages around issues of quarantine and border closings?

Scenario 2: Botulism Event Recognition

Topic: Suspected botulism cases identified

Date: Monday, June 7, 2004

Events:

- During the morning, state health department officials across the region become aware of cases of suspected botulism admitted to hospitals scattered through out each state. By mid-day, it is clear that cases are occurring in multiple communities and no obvious common exposures are readily apparent.
- CDC is contacted and botulism antitoxin is requested through the Strategic National Stockpile (SNS). Supplies of antitoxin will be available for distribution by early evening. Public health officials spend most of the day making arrangements to distribute antitoxin to hospitals where cases have been identified and alerting area physicians about the signs and symptoms of botulism.
- Each state prepares and issues a press release by mid-afternoon; at this point, public health officials do not know the source of the toxin. The public is informed of the early symptoms of botulism and people are instructed to seek medical care if they have compatible symptoms. Hotlines for the public are established and rapidly become overwhelmed with calls from concerned citizens.
- By evening, the “worried well” are flooding area emergency rooms and urgent care clinics. Crowd control has been an issue at some sites.
- By late in the evening, the following cases numbers have been identified:
 - Iowa: 55 cases reported from Des Moines, Davenport, Dubuque, Cedar Rapids, Mason City, Sioux City, and Burlington
 - Minnesota: 70 cases reported from Minneapolis, St. Paul, Duluth, Rochester, St. Cloud, Mankato, Albert Lea, Worthington, Willmar, Little Falls, Bemidji, and Brainerd.
 - North Dakota: 25 cases reported from Fargo, Grand Forks, Wahpeton, Valley City, and Bismarck
 - Nebraska: 35 cases reported from Omaha, Lincoln, Beatrice, Grand Island, Hastings, and Columbus.
 - South Dakota: 31 cases reported from Sioux Falls, Vermillion, Yankton, Brookings, Mitchell, and Watertown.
 - Wisconsin: 96 cases reported from Madison, Milwaukee, Janesville, Fond du Lac, Stevens Point, Marshfield, Wausau, Eau Claire, and Green Bay.
- Several cases also are reported in Canada and other states (including Illinois, Michigan, Missouri, Kansas, California, Florida, and Pennsylvania).

Issues for Consideration:

- Are there mechanisms in place for sharing information across state borders and the Canadian border?
- How would the initial investigation be coordinated between different health departments in the region?
- What is the role of CDC and other federal agencies early in the investigation?
- Would risk communication messages be coordinated and if so, how?

Scenario 2: Botulism Coordination of Investigation

Topic: Ongoing coordination of the investigation and risk communication messages to the public

Date: Tuesday morning, June 8, 2004

Events:

- Interviews of cases (or their family members) living in states outside the region (i.e., from Illinois, Michigan, Missouri, Kansas, California, Florida, and Pennsylvania) indicate that those persons had visited one of the states in the region during the 5 days before illness onset, suggesting that the source is a regionally distributed product.
- Rumors about contamination of water supplies are widespread and public health officials are having a difficult time calming the public; public panic is reaching crisis levels and people are beginning to evacuate the region because they don't know if their food and water are safe.
- Public health officials across the different states are still in the process of conducting an epidemiologic investigation, so the source is still not yet known.
- Because of the magnitude of the outbreak, FBI officials are concerned that the situation represents a deliberate terrorist attack.

Issues for Consideration:

- Ongoing mechanisms of communication between states to determine the source of the outbreak.
- Coordination of risk communication messages between affected states; mechanisms to deal with public panic.
- How would issues around travel and mass evacuation of the affected states be dealt with regionally?

Scenario 2: Botulism Resource Management

Topic: Resources management/allocation issues

Date: Tuesday evening, June 8, 2004 and Wednesday morning, June 10, 2004

Events:

- By Tuesday evening, public health officials have determined that the source of the outbreak is potato salad produced by a large commercial kitchen in Minneapolis. After being made, the potato salad was shipped to several distributors across the region and sold under several different brand names. Because the product was sold as different brands, investigators had some difficulty in rapidly identifying the contaminated product.
- The large number of cases supports heavy contamination of the product with botulinum toxin, which suggests deliberate contamination. Preliminary information obtained from the kitchen reveals that the potato salad is made daily in large vats. Botulinum toxin could have been introduced into the product while it was held in the vats before being placed into individual serving containers.
- The potato salad was distributed throughout Wisconsin, Iowa, and Minnesota and to the Eastern regions of North and South Dakota and Nebraska.
- Cases of botulism continue to mount across the region; in several cities there is an extreme shortage of critical care beds and ventilators, particularly for pediatric cases. Local resources continue to be overwhelmed by the “worried well.”
- Case numbers by Wednesday morning are as follows:
 - Iowa: 675 cases
 - Minnesota: 839 cases
 - North Dakota: 106 cases
 - Nebraska: 205 cases
 - South Dakota: 168
 - Wisconsin: 932 cases
- The existing critical care capacity is inadequate to deal with the crisis and hospitals remain severely understaffed, particularly in Wisconsin, Minnesota, and Iowa. The governors of these states have made a plea to surrounding areas to send volunteers to staff hospitals and to care for critically ill patients.

Issues for Consideration:

- What are the mechanisms to assess medical care needs on an ongoing basis throughout the region during a rapidly unfolding crisis?
- What steps are needed to allow for out-of-state volunteer credentialing and tracking of volunteers that are sent to other states?
- What are the issues related to sharing medical supplies and equipment across state borders and possibly between the United States and Canada?