

BIOLOGICAL DISEASE OUTBREAK – NOROVIRUS

SCENARIO

An unusually high number of college students are coming to the Emergency Department with gastroenteritis. The hospital staff begins to care for these students and clean up after any incidence of diarrhea and vomiting. These students continue to present for approximately 24 hours. At approximately 36 hours after the first presentation, there are multiple Emergency Department employee calls into the staffing center of not being able to work due to gastroenteritis symptoms. There are also multiple sick calls from the environmental services staff with similar symptoms.

The health department began looking into the initial student symptoms as soon as they were notified of the increase. Upon looking further, it was found that all of these students lived in the same dormitory. It was also found that 50% of the students presenting with the gastrointestinal illness had eaten at the favorite local buffet. Of these individuals, all of them ate food from the salad bar.

After the laboratory results on the students come back, it is realized that the disease that is being dealt with is Norovirus. The only treatment available for the illness is supportive therapy without specific viral treatment, but it is extremely contagious. There is now an imminent need to contain the virus from spreading more within the hospital and to work with the community health department to ensure that the initial source is no longer spreading this illness.

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INCIDENT PLANNING GUIDE

Does your Emergency Management Plan address the following issues?

Mitigation & Preparedness

1. Does your hospital provide information and education to staff on infection control precautions, personal protective equipment, exposure prophylaxis and family/dependent care options?
2. Does your hospital have a procedure to provide personal protective equipment (PPE), including surgical masks, N-95 respirators, Airmates/PAPRS, gowns, and gloves to designated work locations?
3. Does your hospital have a plan to expand patient care capabilities in the face of a rapid surge of Norovirus patients and staff? Does the plan include:
 - Testing of patient’s stool specimens within 48-72 hours of the onset of symptoms?>
 - Rapid identification, triage and isolation practices in ED and clinics
 - Rapid decision to admit ill patients to dedicated unit and staff (containment)?
 - Expanding isolation capability (cohorting, portable HEPA filtration, etc.)?
 - Canceling elective surgeries and outpatient clinics/testing?
 - When surge capacity issues for outpatient services are a concern, plan to open up an off-site clinic to transfer stable, non-urgent patients for assessment and/or treatment?
 - Integration with other local hospitals, clinics, public health and emergency management?
4. Does your hospital have a plan to monitor the spread of disease (1) among admitted patients and (2) among multi-department staff call-ins both to a central location for control management from unit to unit throughout the facility to ensure prevention education is disseminated appropriately?
5. Does your hospital have a plan to notify and maintain communications and exchange appropriate information with
 - Internal experts, including infection control, hospital epidemiology, environmental services and engineering/facilities?
 - External experts, including local, regional and state public health, EOC/emergency management?
 - Other local hospitals?
6. Does your hospital have a plan to provide situation and risk communication briefings to staff, patients and community in conjunction with local public health and emergency management?

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7. Does your hospital have policies and procedures to track ED and clinic activity and inpatient census data for trends and report information to the appropriate partners?
8. Does your hospital have policies and procedures to limit hospital access to a small number of monitored entrances so that patients and visitors entering the facility and be screened for illness (e.g., screening for gastroenteritis)
9. Does your hospital have a plan for restricting visitors during an outbreak?
10. Does your hospital have a procedure to monitor staff and volunteers for symptoms and a policy for “fitness for duty” procedures?
11. Does your hospital plan for ensuring safe transportation routes and infection control procedures (e.g. patients wearing masks, gowns, and gloves) when transferring patients through the hospital (i.e., from ED to inpatient units)?
12. Does your hospital have a policy to determine appropriate amounts of PPE and hand hygiene/washing supplies available and to supplement those supplies as required?
13. Does your hospital have quickly available enough effective disinfectant to kill norovirus?
14. Does your hospital have a policy to disinfect the environment appropriately (e.g. cleaning of contaminated body fluid) without contaminating themselves and other patients?
15. Does your hospital maintain an adequate amount of IV fluid to allow for supportive therapy?
16. Does your hospital plan for adequate numbers of security personnel to maintain hospital security and limit visitors to prevent spread of illness to the community?
17. Does your hospital have a plan for evacuating a unit if necessary to limit the spread of norovirus?
18. Does your hospital have a plan for providing appropriate personal protective equipment to laboratory personnel when required?
19. Does your hospital have a plan for safely packaging, identifying, and transferring lab specimens to external sites, including local, state, and federal labs?
20. Does your hospital have a plan for increasing capability to perform specific screening tests for designated pathogens?
21. Does your hospital have the capability of handling the documentation associated with a surge in designated testing?
22. Does your hospital have a plan for relaying laboratory results to:
 - Internal clinical sites?
 - External partners (public health, schools, other)?

Response & Recovery

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1. Does your hospital have a policy to monitor the health status and absenteeism of staff during the outbreak?
2. Does your hospital have a plan to track ED, inpatient and clinic census and symptoms?
3. Does your hospital have triggers to implement the infectious patient surge capacity plan?
4. Does your hospital monitor medical care issues for patients and exposed or ill staff?
5. Does your hospital monitor safe and consistent use of PPE?
6. Does your hospital have a plan to maintain facility security?

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INCIDENT RESPONSE GUIDE

Mission: To effectively and efficiently identify, triage, isolate, treat and track a surge of potentially infectious patients and staff; to assist public health in identifying the source and scope of the illness; and manage the uninjured/asymptomatic persons, family members, and the media.

Directions

- Read this entire incident response guide and incident management team chart.
- Use this Incident Response Guide as a checklist to ensure all tasks are addressed and completed.

Objectives

- Identify, triage, isolate and treat infectious patients.
- Disinfect affected area appropriately to reduce or eliminate further spread of the illness to patients, staff, visitors and faculty.
- Accurately track patients throughout the healthcare system.
- Assure safety and security of the staff, patients, visitors, and faculty.
- Address issues related to infectious patient surge capacity.

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INCIDENT RESPONSE GUIDE

Immediate (Operational Period 0-2 Hours)

COMMAND

(Incident Commander):

- Activate the appropriate Medical/Technical Specialists to assess the Incident
- Activate the Command staff and Section Chiefs
- Determine which positions are necessary according to the magnitude of the situation.
- Implement regular briefing schedule for Command staff and Section Chiefs
- Implement the infectious patients surge plan and (norovirus decontamination plan) other emergency management plans, as indicated
- Cancel elective surgeries and outpatient clinics/testing, if required

(Medical Technical Specialist – Biological/Infectious disease):

- Infection Control Practitioner
- Verify from the ED attending physician and other affected clinics (i.e., employee health), in collaboration with Public Health officials, and report the following information to the Incident Commander
 - Number and condition of patients affected, including asymptomatic
 - Type of biological/infectious disease involved (case definition)
 - Medical problems present besides biological/infectious disease involved
 - Measures taken (e.g., cultures, supportive treatment, environmental cleaning)
 - Potential for and scope of communicability
 - Implement appropriate PPE and isolation precautions

(Liaison Officer):

- Communicate with local and state health department to identify infectious agent
- Communicate with EMS/Public Health to determine the possible number of possible infectious patients
- Communicate regularly with Incident Commander and Section Chiefs regarding operational needs and integration of hospital function with local EOC

(Public Information Officer):

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- Is responsible for both internal and external communication (may need to be approved by Incident Commander)
- Monitor media outlets for updates on the outbreak and possible impacts on the hospital
- Determine who will develop and disseminate education for the patients, visitors, staff, doctors, and general public

(Safety Officer):

- Conduct ongoing analysis of existing response practices for health and safety issues related to staff, patients, and facility, and implement corrective actions to address.

(Medical/Technical Specialist – Biological/Infectious Disease):

- Coordinate with the Operations Section Chief to verify from the ED attending physician and other affected physicians' offices, in collaboration with regional officials, and report the following information to the Incident Commander and Section Chiefs:
 - Number and condition of patients affected, including asymptomatic
 - Medical problems present besides infectious disease involved
 - Measures taken (e.g., cultures/PCR, supportive treatment, environmental cleaning)
 - Potential for scope of communicability
 - Appropriate isolation precautions and recommended PPE

OPERATIONS:

- Provide just-in-time training for both clinical and non-clinical staff regarding the status of the event, precautions they should take, and rumor control
- Provide environmental services staff just-in-time training on appropriate cleaning of body fluid
- Notify the ED of possible numbers of incoming infectious patients that are experiencing gastroenteritis symptoms
- Ensure staff are informed to stay home in the event of gastroenteritis symptoms for themselves
- Establish criteria (or follow pre-established criteria) of when a Norovirus-ill employee is fit for duty and no longer contagious
- Conduct hospital census and determine if discharges and appointment cancellations are required

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- Determine if a dedicated unit or staff for ill patients should be established
- Ensure safe collection, transport, and processing of laboratory specimens

PLANNING:

- Implement patient, materiel, personnel, and bed tracking protocols
- Establish operational periods in collaboration with the Incident Commander
- Develop and distribute the Incident Action Plan

LOGISTICS:

- Coordinate activation of environmental disinfection plan with Operations
- Develop or utilize existing plan to obtain external housekeeping supplies, esp. steam shampooing equipment and calcivirus-killing agents in a matter of hours
- Monitor the health status of staff who are exposed to infectious individuals
- Establish Family Care Unit under Support Branch Director to address family/dependent care issues to maximize employee numbers at work.

FINANCE:

- Track response expenses and report regularly to Command staff and Section chiefs.
- Track and follow up with employee illnesses and absenteeism issues.

Intermediate (Operational Period 2-12 Hours)

COMMAND

(Incident Commander):

- Activate and implement emergency operations plans, including Just-in-time training and patient surge plan, as needed

(Public Information Officer):

- Establish a patient information center in coordination with the Liaison Officer and the local Public Health Department

(Liaison Officer):

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- Establish the patient information center in coordination with the PIO and the local Public Health Department
- Continue to work with Public Health to identify food contaminant and scope of illness
- Notify the local public health department of medical issues and trends identified in collaboration with the Medical Care Branch Director and the Medical/Technical Specialist – Biological/Infectious Disease
- Communicate the hospital's operational status with area hospitals and officials

(Medical/Technical Specialist – Biological/Infectious Disease):

- Continue to support Emergency Department and Operations Section Chief, as needed

OPERATIONS

- Continue patient management activities, including management of asymptomatic patients
- Continue disease surveillance, monitoring and reporting
- Determine need for supplies, equipment and personnel and report to the Logistics Section
- Review and modify as needed, the security plan and family visitation policy

PLANNING

- Continue patient, material, personnel and bed tracking
- Update and distribute the Incident Action Plan
- Plan for demobilization of incident and system recovery

LOGISTICS

- Provide mental health support services to staff, as needed
- Provide supplemental staffing to impacted areas
- Ensure the procurement of medications, supplies and equipment

FINANCE

- Track response expenses

Extended (Operational Period beyond 12 Hours)

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COMMAND

(Incident Commander):

- Continue regular briefing of Command staff/Section Chiefs. Address issues identified.

(Public Information Officer)

- Continue to monitor patient information center, as necessary. Coordinate efforts with local/state public health resources/JIC

(Liaison Officer): Continue to

- Ensure integrated response with local EOC/JIC (if appropriate)
- Communicate personnel/equipment/supply needs to local EOC (if appropriate)
- Keep public health advised of any health problems/trends identified

OPERATIONS

- Continue patient management and facility monitoring activities. Communicate personnel/equipment/supply needs to local EOC.
- Ensure proper disposal of infectious waste, including disposable supplies/equipment

PLANNING

- Revise and update the IAP and distribute to IC, Command Staff and Section Chiefs.

LOGISTICS

- Continue monitoring the health status of staff exposed to infectious individuals.
- Continue addressing behavioral health support needs for patients/visitors/staff.
- Continue providing equipment/supply/personnel needs.

FINANCE

- Continue to track response expenses and employee injury/illness and absenteeism.

Demobilization/System Recovery

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COMMAND

(Incident Commander):

- Provide appreciation and recognition to solicited and non-solicited volunteers, staff, state and federal personnel that helped during the incident.

(Public Information Officer):

- Provide briefings as needed to patients/visitors/staff/media, in cooperation with JIC

(Liaison Officer)

- Prepare a summary of the status and location of infectious patients. Disseminate to Command staff/Section Chiefs and to public health/EMS as appropriate

OPERATIONS

- Restore normal facility operations and visitation

LOGISTICS

- Conduct stress management and after-action debriefings and meetings as necessary.
- Monitor health status of staff.
- Inventory all EOC and hospital supplies and replenish as necessary.
- Restore/repair replace broken equipment after proper cleaning/disinfection.
- Restore normal non-essential services (i.e. gift shop, etc.)

PLANNING

- Conduct after action review with HCC Command staff and Section Chiefs and general staff immediately upon demobilization or deactivation of positions.
- Conduct after action debriefing with all staff, physicians and volunteers.
- Prepare the after action report and corrective action plan to include the following:
 - Summary of actions taken
 - Summary of the incident
 - Actions that went well
 - Area for improvement

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- Recommendations for corrective actions and future response actions

FINANCE

- Compile time, expense and claims reports and submit to IC for approval
- Distribute approved reports to appropriate authorities for reimbursement

Documents and Tools

Emergency Operations Plan, including:

- Infectious patient surge plan
 - Risk communication plan
 - Hospital security plan
 - Patient/staff/equipment tracking procedure
 - Behavioral health support for staff/patients plan
- Infection control plan
 - Employee health monitoring/treatment plan
 - All other relevant protocols/guidelines relating to biological/infectious disease incidents
 - HICS forms
 - Job Action Sheets
 - Hospital organization chart
 - Television/radio/internet to monitor news
 - Telephone/cell phone/radio/satellite phone/internet for communication