ACTIVATION OF SUSPECTED CASES

- Any healthcare worker who suspects the occurrence of an incident or exposure involving a bio-outbreak agent should immediately notify the Infection Control Practitioner on call (pager 188-7025).
- If a threat is deemed to be concerning by the Director of Infection Control, notification is made to other team members who discuss with the Senior Administrator On-Call (AOC) to determine whether to officially activate the Bio-Outbreak plan.

POTENTIAL CLINICAL SCENARIOS

**Anthrax (Inhalational)**
- Incubation period 1-7 days
- Nonspecific mild symptoms 1-3 days, followed by abrupt onset of high fever and severe respiratory distress (dyspnea, stridor, cyanosis)
- Rapid progression with shock and death within 24-36hrs
- Mediastinal widening, pleural effusions on CXR
- Gram positive bacilli on gram stain

**Botulism**
- Incubation period 12-72 hrs
- Acute symmetric descending flaccid paralysis
- Early or mild cases might present with prominent bulbar palsies including diplopia, dysarthria, dysphonia, and dysphagia
- Botulinum toxin can be aerosolized or foodborne

**Plague (Pneumonic)**
- Incubation period 1-6 days
- Fever, cough, chest pain and hemoptysis with signs consistent with pneumonia
- Rapid evolution of the disease occurs 2-4 days after symptom onset and leads to high morbidity and mortality without appropriate therapy.

**Smallpox**
- Incubation period 7-14 days
- Patients first develop high fevers (101-104°F) with malaise, myalgias, headache
- A rash emerges as small red spots on the tongue and in the mouth, these break down into sores and the patient at this time is most contagious
- Within approximately 1-2 days the fever will resolve and the rash will generalize to most of the body, by the third day they have become raised into bumps, and by the fourth day they are filled with an opaque fluid with a depression in the center.
- The key point is that the rash comes on all in one wave (not in crops of evolving vesicles like chicken pox)

**Tularemia**
Incubation period 3-5 days
Undifferentiated febrile illness followed by pneumonia, pleuritis, hilar lymphadenopathy
Untreated can progress to respiratory failure, shock and death
Chain-forming gram positive rod

**Viral Hemorrhagic Fevers**
- Incubation period 2-21 days
- Rash, hemorrhagic diathesis and shock
- Wide variation in clinical presentations
- No confirmatory/diagnostic tests widely available

### Clinical Care Plan & Management

**Isolation and Cohorting**
If known, the recommendations can be briefly summarized as follows:
- **Smallpox** – Respiratory and contact precautions.
- **Anthrax** – Standard precautions.
- **Plague** – Droplet precautions for pneumonic form.
- **Tularemia** – Standard precautions.
- **Botulinin toxin** exposure – Standard precautions.
- **Viral hemorrhagic fevers** (including Ebola, Marburg, and Lassa Virus) – Contact precautions, including consideration of surgical mask and shield when exposure to body fluids is likely.

**Patient Management**
- **Smallpox** – Supportive care, including critical care and ventilatory support when appropriate. Early triage for survivability. Directed therapy with antiviral agents as per most updated CDC recommendations.
- **Anthrax** – Early antibiotic therapy at the time of initial symptoms. Prompt diagnostic testing by culture and more rapid testing when available. Prolonged therapy likely necessary. Supportive care including ventilatory support for inhalational disease.
- **Plague** – Early antibiotic therapy. Prompt diagnostic testing. Supportive care +/- ventilatory support for pneumonic disease.
- **Tularemia** – Early antibiotic therapy.
- **Botulinin toxin** exposure – Early supportive therapy.
- **Viral hemorrhagic fevers** (including Ebola, Marburg, and Lassa Virus) - Supportive care, including ventilatory and blood product support when appropriate. Early triage for survivability. Directed therapy with antiviral agents as per most updated CDC recommendations.

***Official recommendations for Isolation, cohorting and treatment will be made by Infection Control in consultation from Adult and Pediatric Infectious Disease in accordance with the recommendations from the CDC, and the Chicago and Illinois Departments of Public Health, given the available resources at the University of Chicago (most notably the available stock of pharmaceutical agents).***

### Updating of Information

Bio-OutbreakCodeBio.doc
Revised May 2003
In the event of a known or suspected agent, and as information becomes available, there will be a steady flow of information sheets distributed by the Chicago and Illinois Departments of Public of Health in conjunction with the Centers for Disease Control (CDC).

Information sheets will delineate symptoms, case definitions, contact precautions, treatment recommendations, and specific instructions regarding the obtaining of specimens and/or isolation.

BASIC ALERT LEVELS

Alert Levels 1 and 2
- Hospitals receive notice from a credible source (FBI, CDC, IDPH, CDPH, etc.) about a bio-outbreak threat. For example, case(s) of a bio-outbreak disease in locations other than the Chicago area.

Alert Level 3
- Cases of a bio-outbreak disease can be expected at the University of Chicago Hospitals (UCH). For example, case(s) of a bio-outbreak disease reported in the Chicago metropolitan area, but yet not at UCH.

Alert Level 4
- Case(s) or suspected cases of a bio-outbreak disease reported at UCH.

BIO-OUTBREAK TEAM GROUPINGS & RESPONSIBILITIES

PATIENT FLOW
- Patients presenting at any Hospital location (Clinics, Mitchell/Pediatric ED entrances, etc.) with actual or suspected exposure to bio-outbreak agents will be directed to the emergency department.
  - UCH personnel will contact their supervisor when a patient suspected of having the bio-outbreak disease present.
  - The UCH supervisor will contact Infection Control (pager 188-7025) to assess the situation.
  - At the discretion of Infection Control, the patient may be directed/transported to the Emergency Room.
  - Infection Control will specify the amount of protection the patient will wear when transported to the Emergency Room, which may include a surgical mask tightly over their mouth and nose, and a sheet covering the patient’s body. Patients may be transported in wheel chairs or gurneys.
  - Infection Control will ask the Safety office to record names, addresses, and phone numbers of patients, family, visitors, and staff who came in contact with the patient suspected of having the bio-outbreak disease. Safety will coordinate this task with the emergency room charge nurse.
- In situations where a terrorist act is announced and victims present immediately following exposure, decontamination may be necessary. Persons presenting to the ER may be directed to the decontamination chamber before entering the ER. Decontamination procedures are described in the Code Orange External Hazardous Materials Incident Plan (S05-10-02).
ADULT AND PEDIATRIC EMERGENCY DEPARTMENT FLOW

- The Director of Infection control will determine the level of protective equipment to be utilized by emergency department staff.
- The Director of Infection control, in consultation with the Director of Emergency Medicine and the Senior Administrator will determine whether security staff and clinicians need to be stationed at Hospital entrances to direct persons to the emergency room.
- At each level of the alert, the Senior Adult and Pediatric ED physicians will review plans with staff.
- Patients presenting to the adult and pediatric ED may be triaged by a security officer and/or a clinician outside of the building.
- Pediatric patients presenting to the ED may be directed to the decontamination chamber before entering the ED.
- If a large number of patients present to the emergency room, it may be necessary to evacuate the pediatric emergency room to accommodate bio-outbreak patients. Patients in the pediatric emergency room would either be admitted, directed to the DCAM or Friend Center, or sent home. This decision would be made by the Director of Infection Control, in consultation with the Section Chiefs, Adult and Pediatric of Emergency Medicine, and the Senior Administrator.
- Depending on the agent, ER personnel may be vaccinated or given prophylactic medication after being exposed. This decision is made by Infection Control in accordance with recommendations from the Department of Public Health and the CDC.
- The transfer of exposed or infected patients to non-traditional or unconventional settings will be determined by the Director of Infection Control, in consultation with the Director of Emergency Medicine, the Senior Administrator and public health authorities.
- Infected or exposed patients shall wear a face mask and have a sheet covering them while being transported from the emergency room to other areas of the hospital.
- Transporters will wear personal protective equipment.
- Quarantine – The Chicago Department of Public Health must make decisions regarding the quarantine of exposed persons.

PEDIATRIC MEDICINE

- At all levels of the Alert, the senior Pediatric physician on call and the Director, Pediatric Infectious Disease, will review plans with pediatric physicians.
- If the NDH and DCC are established, pediatric charge nurses from all inpatient units will immediately prepare patient rosters, decide which patients can be discharged to clear hospital beds, and provide this information to the Operations Nurse in NDH and DCC.
- Pediatric isolation rooms exist, but are scattered in various locations. A list of isolation rooms with negative pressure is included as Infection Control Policy IC02-11-Ap.C 2003, “List of Special Ventilation Rooms”. This can be reached by navigating from the UCH Intranet Home Page: http://home.uchospitals.edu/->Policies and Procedures->Infection Control
- A possible location for pediatric patient cohorting is the pediatrics ICU step-down area. The PICU has a separate HVAC system.
- In the event of a bio-outbreak, especially a bioterrorist event, the Director, Pediatric Infectious Diseases must contact the pharmacy to provide advice regarding pediatric formulations of antibiotics not usually used in pediatric patients (i.e. Fluoroquinolones, doxycycline). This may require crushing pills or acquiring powdered compounds, and
may require urgent acquisition of pharmaceuticals from outside sources if these are not readily at hand.

**INPATIENT AREAS**

- The Director of Infection Control will decide upon appropriate receiving areas for exposed or infected patients. Initially, the first few patients may be directed to any of the negative pressure rooms throughout the Hospital. Bed assignments will be made in consultation with Infection Control regarding the need for negative pressure isolation.

- Cohorting of patients will depend on the number of patients and whether the suspected agent is highly contagious, moderately contagious or not very contagious. The Director of Infection Control, in consultation with the Director of Emergency Medicine and the Senior Administrator would determine whether cohorting is necessary and the locations to be used. A list of isolation rooms with negative pressure is included as Infection Control Policy IC02-11-Ap.C 2003, “List of Special Ventilation Rooms”. This can be reached by navigating from the UCH Intranet Home Page: http://home.uchospitals.edu/->Policies and Procedures->Infection Control. Possible locations include:
  - T6 ICU
  - Other adult units
  - Children's Hospital

- Access to cohorted areas may be limited to approved healthcare workers using appropriate infection control precautions.

- In the event of infected children or families, it may be decided to keep families together, rather than separating children from parents.

- If it is necessary to obtain additional beds, the Discharge Coordination Center (DCC) will open in TN202 to facilitate the transfer of existing patients to other facilities or their discharge home.

- Elective admissions and surgeries may be curtailed as determined by Director of Infection Control, in consultation with the Director of Emergency Medicine and the Senior Administrator.

**NURSING**

- An overhead page of “Code Bio” will activate the Nursing Plan.

- The Hospital Operations Administrator (HOA) (pager 188-7500) will report to the Bio-outbreak Command Center until relieved by the VP of Nursing (pager 188-1312).

- Nursing Disaster Headquarters (NDH) – will be located in TN202, and staffed by the Operations Nurse, Care Center leaders, a bed desk representative, and an Environmental Service supervisor. The NDH receives census reports, staff rosters, and equipment rosters from all inpatient units, and ensures adequate nurse staffing, supplies and equipment. The NDH evaluates appropriate room placement for admitted patients, taking into consideration isolation requirements.

- Inpatient Discharge Coordination Center – is established in TN-208 when there is a need to coordinate the transfer of patients from inpatient units. This center will be staffed by nurses, one of whom will be designated as Leader by the NDH, continuity of care coordinators, a representative from Patient Special Services, and a representative from Social Work.

- Upon direction from Director of Infection Control (and depending on the bio-outbreak agent), the Operations Nurse in the Nursing Disaster Headquarters will work to obtain negative pressure rooms for the first bio-outbreak patients. Bed assignments will be made in consultation with Infection Control regarding the need for negative pressure isolation.
• If the Director of Infection Control determines that cohorting is necessary, the Operations Nurse will determine which units are most appropriate and will work to free up entire inpatient units.
• If the Director of Infection Control determines that parent and children victims will remain together as inpatients, the Operations Nurse will insure that pediatric and adult nurses are properly deployed. Many of the Burn Unit and PICU nurses are peds/adult cross trained.
• The Command Nurse will consult with the Director, Infection Control and contact Respiratory Therapy to initiate rental of ventilators, depending on anticipated demand.
• The Command Nurse will instruct the unit nursing staff that specimens from exposed patients will be transported to the laboratories via a designated runner or patient transportation personnel wearing appropriate PPE, NOT through the pneumatic tube system.

**PHARMACY**

• The hospital will establish and maintain a stockpile of antibiotics to support the needs of patients and designated healthcare workers from the time this plan is activated until supplies are received from the National Pharmaceutical Stockpile (which may be as long as 72 hours).
• Distribution of antibiotics and/or vaccine to healthcare workers will proceed as defined in the guidelines appended to this plan or based upon directives from IDPH.
• The decision to begin prophylaxis or vaccination will be made by the Director, Infection Control.
• Antibiotic usage will be monitored and restricted when necessary by the Director, Infection Control with the assistance of the Pharmacy.
• Decisions to limit the use of antibiotics will be made by the Director, Infection Control.

The Pharmacy will maintain the following inventory on hand at all times, irrespective of an Alert situation:

• **Cyanide antidote** – 100 kits
• **Pralidoxime for nerve gas** – 100 doses
• **Ciprofloxacin or gatifloxacin for anthrax** – 100 doses

**LABORATORY**

• The Laboratory specifies requirements for the handling of clinical specimens from patients with known or suspected disease caused by bio-outbreak agents.
• **DO NOT** use the tube system for specimens – they must be hand delivered, and persons carrying the samples must be wearing the appropriate personal protective equipment.
• The Laboratory is also responsible for the Morgue. Morgue space at the University of Chicago is very limited. Refrigerated trucks will be needed in the event of mass casualties.

**SECURITY**

**Security Alert Level 1**

• At Level 1, Security will review bio-outbreak response plan with Public Affairs staff.
• Review pre-written information sheets and update as needed.

**Security Alert Levels 2 and 3**

• All activities in Level 1.
In addition, will conduct periodic meetings with staff to ensure readiness, as needed. If necessary, Infection Control representative will attend at least one of the meetings to provide expertise and other meetings, as the situation changes.

Security Alert Level 4

- All activities listed in Level 2. Will also update information as needed, including a reminder that all media inquiries and responses need to be channeled through the Department of Public Affairs.
- Public Affairs director assigns one professional staff to each of three areas:
  - 6th floor Public Affairs office to coordinate activities
  - DCAM 1010, media center. This person may act as a ‘roamer’ when not specifically needed in the media center.
  - ER or other patient area to gather information for dissemination. Staff is not trained in the use of personal protective equipment and must follow instructions of Director of Infection Control concerning proximity to patients or potentially contaminated areas. Communications with responding physicians may be via telephone, depending on circumstances.
- Direct media away from ER or other areas to the media center.

**SAFETY**

- The Safety office will record names, addresses, and phone numbers of patients, family, visitors, and staff who came in contact with the patients suspected of having the bio-outbreak disease. Safety will coordinate this task with the Emergency Department Charge Nurse and Infection Control.

**PUBLIC AFFAIRS -EXTERNAL COMMUNICATIONS**

- Public Affairs specifies the content and logistics of external communications.
- Medical Center Public Affairs may establish a News Media Center (DCAM 1010 or other location) to facilitate communications with external media organizations.

**HUMAN RESOURCES-INTERNAL COMMUNICATIONS**

- Consists of leadership from the Director of Human Resources (BSD), the Vice-President of Human Resources (UCH) and the Vice-President of Legal Affairs.
- The Special Assistant to the President of the University of Chicago Hospitals will serve as a resource for drafting internal messages.
- Personnel Pool – The Human Resources Department may establish a personnel pool in the DCAM food court for non-nursing employees. Nurses will report to the Nursing Disaster Headquarters, TN202, for assignment, per Code Triage Phase 2 Nursing External Disaster Plan.

**PSYCHOSOCIAL SUPPORT**

- Participants include the Department of Social Work and Pastoral Care and the Department of Psychiatry.
- Family and Visitor Center – The family and visitor center will be established in J-103 and staffed by Social Work and Chaplaincy. When open, Security will direct family and visitors to J-103. Information to this center will be communicated by Medical Center Public Affairs to Social Work and Chaplaincy personnel, who in turn will share appropriate information with family and friends.
## BIO-OUTBREAK COMMAND TEAM

<table>
<thead>
<tr>
<th>TEAM TITLE</th>
<th>MEMBER</th>
<th>PAGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Initiate Bio-OutBreak Response/Suspicion</td>
<td>Infx Control</td>
<td>188-7025</td>
</tr>
<tr>
<td>Senior AOC (Rotating)</td>
<td></td>
<td>188-7502</td>
</tr>
<tr>
<td>Infection Control (Medical Director)</td>
<td>Stephen Weber, MD</td>
<td>188-1580</td>
</tr>
<tr>
<td>VP for Emergency Services</td>
<td>Jeffrey Finesilver</td>
<td>188-1254</td>
</tr>
<tr>
<td>VP, Nursing</td>
<td>Jamie O’Malley</td>
<td>188-1312</td>
</tr>
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<td></td>
<td></td>
<td>188-7500</td>
</tr>
<tr>
<td>Adult Infx Disease</td>
<td>David Pitrak, MD</td>
<td>188-5220</td>
</tr>
<tr>
<td>Peds Infx Disease</td>
<td>Robert Daum, MD</td>
<td>188-7858</td>
</tr>
<tr>
<td>Adult EM</td>
<td>Jim Walter, MD</td>
<td>188-9705</td>
</tr>
<tr>
<td>Peds EM</td>
<td>Mark Hostetler, MD</td>
<td>188-3875</td>
</tr>
<tr>
<td>Manager of Safety</td>
<td>Markus Schaufele</td>
<td>188-6874</td>
</tr>
<tr>
<td>Security</td>
<td>Daryl Wilkerson</td>
<td>188-6131</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Jeannell Mansur</td>
<td>188-8115</td>
</tr>
<tr>
<td>Facilities Management</td>
<td>Ray Cullen</td>
<td>188-2217</td>
</tr>
<tr>
<td>Materials Management</td>
<td>Vickie Humphry</td>
<td>188-2683</td>
</tr>
<tr>
<td>Public Affairs</td>
<td>John Easton</td>
<td>188-7914</td>
</tr>
<tr>
<td>Special Assistant to the President</td>
<td>Linda Diamond Shapiro</td>
<td>188-6070</td>
</tr>
<tr>
<td>Special Assistant to the VP</td>
<td>Joel Roth</td>
<td>2-1490</td>
</tr>
<tr>
<td></td>
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<td>(no pager)</td>
</tr>
</tbody>
</table>

Upon notification from Senior AOC, page operator will text page or phone Bio-Outbreak Command Team with following message:

“Bio-outbreak Command Team report to Admitting Conference Room L-106 Board Room”
## Pediatrics

### Bio-Outbreak Check List

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsible person</th>
<th>Completed Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Peds Emergency Room</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review plans with staff at each alert level</td>
<td></td>
<td></td>
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<tr>
<td>ER staff to wear PPE at direction of Infection Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If necessary, evacuate Peds ER to allow for cohorting of bio-outbreak victims</td>
<td></td>
<td></td>
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<tr>
<td><strong>Pediatric Medicine</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peds Infectious Disease to review plans with senior Pediatric physician on call at each alert level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pediatric inpatient charges nurses to follow Code Triage Phase 2 plan, at direction of Nursing Disaster Headquarters</td>
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</tr>
<tr>
<td>Director, Peds Infection Disease to contact pharmacy to provide advice on dosage of medications that are not usually used for children.</td>
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<td></td>
</tr>
</tbody>
</table>
REFERENCES & RESOURCES