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KEY WORDS: outbreak, epidemiology, nosocomial, communicable disease

POLICY

The Department of Hospital Epidemiology and Infection Control (HEIC) should be notified about clusters of nosocomial infection, resistant and or epidemiologically important organisms or communicable diseases¹ in patients, staff, or visitors. In some instances, one case of an infection may require a response, for example agents of bioterrorism (see table 1).

RESPONSIBILITIES

JHH/JHU/JHMI Staff	Must follow this policy
Supervisor/Department Managers	Must assist in the control of any outbreak
HEIC Department	Will assist in the management of any outbreak


PROCEDURES

A. HEIC staff will:

1. Verify diagnosis of identified patients;
2. Confirm existence of an outbreak;
3. Institute initial control measures (proper isolation);
4. Develop a working case definition;
5. Direct nursing units to identify patients who have been exposed during an outbreak;
6. Find cases (by interview, chart review and microbiologic surveillance, as indicated);
7. Evaluate previous hospital experiences with the organism or disease (rates where possible); list cases (line list);
8. Create epidemic curve;
9. Develop a presumptive hypothesis on which to initiate additional reasonable control measures;
10. Recommend prevention and control measures;
11. Provide education about the causative organism or epidemiology; and
12. Determine if any changes are needed in policy/procedures. Evaluate the efficiency of the control measures.

B. The Hospital Epidemiologist or designee will be responsible for communicating this information to:

1. The Chair of the Hospital Epidemiology and Infection Control Committee;
2. The Director of the Microbiology Laboratory;
3. The Vice President for Medical Affairs;
4. The physician and/or nursing director and/or administrator responsible for the hospital area;
5. Occupational Health Services (OHS) or University Health, if employees are involved;
6. Risk Management, if indicated;
7. Appropriate division of the local or state health department or other public health agency (CDC, EPA, FDA), if indicated;
8. Public Affairs;
9. Pharmacy (if involves prophylaxis or drug utilization);
10. On call ICP at 410-283-3855, if applicable; and
11. Infectious Disease Consult Attending.

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- C. The Hospital Epidemiologist or designee, acting as the main coordinator, will perform the following functions:
1. Act as the focal point for flow of information;
 2. Coordinate the investigational activities;
 3. Keep log of events;
 4. Communicate decisions regarding investigational needs and required control measures;
 5. Consolidate and analyze all data; and
 6. Prepare the final report.
- D. The Hospital Epidemiologist (or designee) may convene a group, the Outbreak Investigation Management Team (OIMT); a list maintained by HEIC is available by calling 5-8384. Physicians with expertise in the suspected disease process or organism may be consulted when a disease with potential mass exposure is identified in a patient or staff member or when the potential exposure to other patients and staff members is beyond that which would normally be addressed by routine infection control practices.
- E. Managers/Supervisors of units where exposure of JHMI personnel has occurred will be responsible for providing information (e.g., work schedules, home addresses, telephone numbers) in a timely manner as requested by HEIC (see Appendix C).
- F. The Vice President of Medical Affairs will provide all necessary support to HEIC as appropriate.
- G. All decisions concerning the investigation will be made by the Hospital Epidemiologist, his/her designee, or the OIMT, if implemented. The Hospital Epidemiologist may also convene the HEIC Committee to review the investigation. In the event this group cannot be convened in a timely manner, then urgent decisions shall be made by the Hospital Epidemiologist and the Chairman of the HEIC Committee.
- H. The Director of Microbiology Laboratory will provide support for microbiologic and/or serologic studies.

¹Diseases with Mass Exposure Potential ²Starred Diseases require only one case

*Anthrax	Resistant Organisms (MRSA, VRE, VISA, VRSA)
Botulism	Respiratory Syncytial Virus
Chickenpox	Rubella
Hepatitis A,	Scabies
Influenza A or B	*Small Pox
*Legionnaires Disease	Tuberculosis
*Measles	Tularemia
Meningococcal Meningitis	Viral Conjunctivitis
Pertussis	Viral Gastroenteritis (Rotavirus, Norwalk or related viruses)
*Plague	Viral Hemorrhagic Fevers
*Polio	SARS

REFERENCES

- Wendt, C. & Herwaldt, L. (1997). *Prevention and Control of Nosocomial Infections* (3rd Ed.). 175-213.
- Jarvis, W. & Zaza, S. (1999). *Hospital Epidemiology and Infection Control* (2nd Ed) C. Glen Mahall *Investigation of Outbreaks*, Chap. 7, 111-128.
- Ares, K.M. (2000). *Outbreak Investigation and Infection Control in Healthcare Facilities*, 164-180.

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Checko, P.J. (2002). Outbreak investigation. *APIC Text of Infection Control and Epidemiology*; 15:1-9.

DEVELOPER

- Hospital Epidemiology and Infection Control Committee

SPONSOR


- Medical Care Evaluation Committee

COMMUNICATION & EDUCATION

This policy will be communicated to the appropriate JHHS personnel via the following channels:

1. Updates and revisions will be communicated via Medical Staff and Nursing publications.
2. Nurse Managers, Physician Advisors, Residency Coordinators, Department Chiefs and Department Management will be responsible to train new employees regarding the policy as appropriate, and to communicate updates to the protocol.
3. This policy will be placed in the Interdisciplinary Clinical Practice Manual on the JHH Intranet site <http://www.insidehopkinsmedicine.org/icpm>. Paper distributions will be made to the Functional Unit Nursing offices in the event of web access difficulty.
4. Placement of policy online at www.hopkins-HEIC.org.

REVIEW CYCLE	• Three (3) years	MEDICAL BOARD	Approval Date: 8/26/03 Effective Date: 11/30/03
VICE PRESIDENT FOR MEDICAL AFFAIRS _____ Date:			

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APPENDIX A - Outbreak Investigation Management Team (OIMT) Membership

The Outbreak Investigation Management Team (OIMT) includes a standing membership of key hospital personnel who would be expected to participate, regardless of the nature or specific geography of the exposure. In addition, liaison members* will be included depending on the scope and nature of the individual outbreak. This would include a representative from involved departments or units, a specialist in the specific outbreak disease, and other appropriate individuals as determined by the Hospital Epidemiologist. In some cases City or State Health Departments may be involved. Standing OIMT members:


Department or Position

1. Hospital Epidemiologist or designee
2. Associate Hospital Epidemiologists
3. Infection Control Manager
4. Infection Control Epidemiologists
5. Chairperson, HEIC Committee
6. Vice President, Medical Affairs
7. Risk Management
8. Public Affairs
9. OHS Manager**
10. Pharmacy***
11. Nursing Management
12. Disease specialist
13. Microbiologist or designee

* Pertinent members from implicated unit or service


** If employees involved

*** If involves prophylaxis or drug utilization

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APPENDIX B - General Operating Rules for OIMT

1. The OIMT will meet as quickly as possible on the day that the Hospital Epidemiologist or designee convenes the team and will meet daily until or unless the OIMT agrees upon an alternative schedule.
2. The OIMT will make all decisions regarding the need for laboratory testing or prophylaxis of large numbers of exposed staff members or patients, unless the OIMT is unable to convene in a timely fashion and the delay will seriously increase the scope of the outbreak, in which case the Hospital Epidemiologist will make such decisions
3. The Hospital Epidemiologist and the HEIC staff will be responsible for:
 - a. describing the scope and nature of the outbreak
 - b. presenting interventional strategy options and their relative costs,
 - c. making a recommendation to the OIMT of the most appropriate strategy
4. The Hospital Epidemiologist will be responsible for implementing the strategy for acute management of the outbreak.
5. The OIMT will designate the location where all testing or prophylaxis will be administered for staff. In general, this will be OHS (Church Home).
6. The Hospital Epidemiologist will be responsible for assuring that all appropriate diagnostic and therapeutic orders are appropriately signed.
7. The OIMT will designate individuals responsible for communication between the OIMT and the affected areas.
8. Communications between the OIMT and the affected areas will be carried out through the designated individuals, and will be documented in writing by the responsible OIMT member. A single individual, designated by the Hospital Epidemiologist, will be responsible for maintaining documentation of all communications, issues, and responses made under the aegis of the OIMT for the duration of the outbreak.
9. The Department of Hospital Epidemiology and Infection Control will maintain a current computer database with the demographic, exposure, treatment, and clinical status of involved staff members and patients. The exact data to be included in the database will be determined by the OIMT specifically for the disease in question. All data related to employees must be transferred to OHS in a timely fashion.

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APPENDIX C - Working Documents

A) Instructions for Primary Contact Persons: Staff Identification

Each departmental primary contact person will receive copies of an Exposure Form from their Infection Control Epidemiologist and will be responsible for screening his/her staff to determine the actual exposure status of each staff member. This process should be carried out in two distinct phases.

The first phase is to determine (using work assignment logs, etc.) which staff members might have been exposed as a result of a duty assignment in the general geographical area of the index case during the exposure period.

The second phase is for the Department Manager to review each staff member identified in Phase 1 as potentially exposed using an Exposure Form. The worksheet will help categorize staff members as either “Not Exposed” or “Exposed or Possibly Exposed”. The staff member identified as “Exposed/Possibly Exposed” should be sent, with a completed individual exposure form, to OHS, Church Home, for further management. The patient should also be recorded on the exposure form. The exposure form is then sent directly to Hospital Epidemiology and Infection Control, Osler 425, when completed.


B) Instructions for Primary Contact Persons: Patient Identification

Each department’s primary contact person will work with Hospital Epidemiology and Infection Control staff and patient physicians to determine the actual exposure status of each patient (in-house and discharged). This process should be carried out in three distinct phases.

1. The first phase is to determine which patients might have been exposed as a result of direct or indirect contact/exposure to the index case(s) during the exposure period.
2. The second phase is for the Department Manager to fill out Exposure Forms including each patient potentially exposed. OIMT will recommend patient treatment or testing which impact on follow-up and care to the patient’s physician (see Communicable Disease policy link to policy). Hospital Epidemiology and Infection Control will consult with medical teams which will jointly determine and assign staff to call discharged patients and their referring physicians.
3. Hospital Epidemiology and Infection Control will monitor patient contact activity and will see that Exposure Forms have been completed and all patients and physicians have been contacted by phone and follow-up letter. They will be asked in the letter to report back to the hospital if they have disease exposed patients and visitors healthcare workers.
4. Prophylaxis and/or testing costs will be determined at time of the exposure. Charges for patient:
 - a. Exposure to another patient or to a staff member will be directed to Hospital Epidemiology and Infection Control (reached by pager if needed).
 - b. Exposure to patients’ own family members or their own visitors will be directed to their insurance for payment to OHS.
 - c. Exposure to the employees’ own family members or their visitors will be directed to their insurance for payment.

C) Instructions for Documentation

1. Exposure Timeline - used by Hospital Epidemiology and Infection Control to identify time period where patients and staff could have been exposed.

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2. Post Exposure Management Worksheet and Questions - used by OHS or other designated personnel to determine if the exposed person needs to have further action taken.
3. Treatment/Testing Management Options (please see OHS guidelines). General statements about:
 - a. Pre-treatment testing
 - b. Post-exposure treatment
 - c. Management of exposed staff who decline treatment
 - d. Criteria for return to duty

These options will be used by the OIMT as the basis for testing or treating patients and staff members in a major outbreak of the specific disease. The options should be based on the most current epidemiological information available. In general, no pre-treatment testing of exposed individuals should be done unless the testing results will yield a cost effective/low risk change in patient management, confirm a clinical diagnosis, or prevent adverse outcomes associated with a therapy.

4. Disease Specific Fact Sheet - Provides information about the current state of understanding of the disease.