

Johns Hopkins Safety Manual	<i>Policy Number</i>	HSE 601
Subject:	<i>Last Review Date</i>	09/01/09
Airborne Pathogen Control Program	<i>Page</i>	1 of 10

POLICY

Johns Hopkins is committed to the delivery of quality health care to all patients including those with tuberculosis (TB). Furthermore, Johns Hopkins is committed to minimizing the risk of exposure or infection to all employees, faculty, students, contractors, and other healthcare workers. Johns Hopkins will provide education, training, resources and personal protective equipment to promote safe work practices and reduce hazards in the work place. All employees, students, contractors, and healthcare workers must adhere to the Johns Hopkins policies and procedures regarding precautionary measures to minimize the risk of transmission of tuberculosis. The Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control and Prevention (CDC) have established TB precautions. These precautions have been incorporated into the Airborne Pathogen Control Program approved by the Joint Committee for Health, Safety and Environment. The Airborne Pathogen Control Program applies to all workers that may be exposed to a known or suspected infectious TB patient.

Johns Hopkins maintains, reviews and updates the Airborne Pathogen Control Program as necessary to reflect new or modified tasks, procedures and engineering controls that affect occupational exposure. The Airborne Pathogen Control Program is also updated to reflect new or revised employee positions with occupational exposure.

JHH employees, students, contractors, and healthcare workers who fail to follow the Airborne Pathogen Control Program should be handled in accordance with Section 28, Discipline, of the JHH Personnel Policy Manual. Non-JHH employees, students, contractors, and healthcare workers are handled in accordance with appropriate Human Resources Policies.

In the event of exposure or potential exposure to tuberculosis, Johns Hopkins will respond to an individual's health needs and provide appropriate medical evaluation and follow-up. All medical records and documentation regarding employees, faculty and students will be treated in accordance with the provisions of federal and state laws and regulations regarding confidentiality of medical records.

Glossary

AFB	Acid Fast Bacillus	JHI	The Johns Hopkins Institutions
CXR	Chest X-ray, Radiograph	JHU	The Johns Hopkins University
HEIC	Hospital Epidemiology & Infection Control	MDR-TB	Multiple Drug Resistant TB
HEPA	High Efficiency Particulate Air Filter	MOTT	Mycobacterium Other Than TB
HSE	Health, Safety and Environment	OHS	Occupational Health Services
ID	Infectious Disease Department	PAPR	Positive Air Pressure Respirator
IBC	Institutional Biosafety Committee	PPD	TB Skin Test
JHH	The Johns Hopkins Hospital		

A. HAZARD COMMUNICATION

1. HSE provides training sessions to assure that all employees with job tasks that offer potential for occupational exposure to TB are informed of the hazard and take proper precautions to reduce the chance of exposure to TB.
2. Each department that maintains contact with outside contractors who provide temporary or contract employees who may incur occupational exposure must inform the contractor or contract employees of potential TB exposures. The contractor shall provide documentation that contract employees have received training about precautions to reduce the chance of exposure to TB.
3. Signs are posted at the entrance to.
 - a. Rooms or areas used to isolate an individual with suspected or confirmed infectious TB,
 - b. Areas where procedures or services are being performed on an individual with suspected/confirmed infectious TB, and
 - c. Clinical and research laboratories where M. tuberculosis is present.
4. Warning labels are placed on Airborne Isolation room exhaust ducts and areas where occupational exposure to TB is expected. All systems carrying air that may contain aerosolized M. tuberculosis are labeled at all points where ducts are accessed prior to HEPA filtration, at fans and at the discharge outlets

Johns Hopkins Safety Manual	<i>Policy Number</i>	HSE 601
Subject:	<i>Last Review Date</i>	09/01/09
Airborne Pathogen Control Program	<i>Page</i>	2 of 10

of non-HEPA filtered direct discharge Systems. The label says: A Contaminated Air - Respiratory Protection Required@.

5. Employees entering a laboratory or autopsy room are notified of occupational TB hazard by a sign at the entrance to these locations. These signs indicate the name and telephone number of the director of the laboratory, infectious agent (M. tuberculosis), and the special requirements for entering the laboratory or autopsy room. The sign shall display the Biohazard Symbol.

B. VISITORS FOR AIRBORNE ISOLATION PATIENTS

1. Visitors must report to the nurses' station to obtain instructions before entering an Airborne Isolation room.
2. Visitation should be limited to immediate family members.
3. The visitor must wear a surgical mask to enter the room and the patient must wear a surgical mask to receive visitors.
4. If either patient or visitor cannot wear a mask, the patient is not to have visitors.
5. Children are not encouraged to visit patients in Airborne Isolation.

C. EXPOSURE INCIDENT REPORTING

1. All employees must report exposure incidents immediately to their supervisor, OHS/OIC and HEIC. Complete Employee Incident Report.
2. The following procedures are used to investigate/evaluate potential TB exposure incidents at Johns Hopkins:
 - a. HEIC will generate and maintain a database of TB patients and records of the AFB smear culture results.
 - b. Occupational Health Services, in collaboration with HEIC, will investigate all active pulmonary TB patient cases and determine the need for employee evaluation and follow up, i.e. PPD or CXR.
 - c. In the event of a TB exposure, a list of exposed healthcare workers will be compiled by HEIC and the supervisors in the involved departments/areas and forwarded to OHS.
 - d. All JHI employee/student medical follow-up will be coordinated by OHS. OHS will provide a report to HEIC with completed PPD skin test and radiographic results.
3. A Report of Incident Form must be completed by the person's supervisor at the time the employee reports the incident and delivered to OHS.

D. OPERATING ROOM/PROCEDURE AREA

1. Staff attending patients in Airborne Isolation will wear a powered air-purifying respirator (PAPR) until the patient is intubated. While the patient is intubated, the PAPR is no longer needed, but staff within the OR room will need to wear a standard surgical facemask.
2. A HEPA filter unit will be placed in the Operating Room. Airborne Isolation patients who undergo operative procedures in the General Operating Room (GOR) shall recover in the GOR or Medical Intensive Care Unit (MICU). If the patient's medical needs cannot be met in the GOR or MICU, the patient may be recovered in a nursing unit in Airborne Isolation. These patients may not be recovered in a Post Anesthesia Recovery Room (PACU).
3. Inpatients in Airborne Isolation who undergo bronchoscopy will recover in the procedure room following sedation.

E. TB PATIENT TRANSPORT AND RELOCATION WITHIN JHI

1. A patient on Airborne Isolation may leave their room only when transport within the Institution is absolutely essential. If the patient must be transported, the following guidelines apply:
 - a. The receiving department must be notified by nursing so that the patient will be immediately placed into a private room or private waiting area with the door closed.
 - b. If the patient's medical status permits, the patient should wear a standard surgical mask when leaving his/her room. The escort need not wear a mask during transport. If the patient cannot wear a mask,

Johns Hopkins Safety Manual	<i>Policy Number</i>	HSE 601
Subject:	<i>Last Review Date</i>	09/01/09
Airborne Pathogen Control Program	<i>Page</i>	3 of 10

contact Hospital Epidemiology and Infection Control (ext. 5-8384) for consultation regarding transportation procedures.

- c. Services that cannot be rendered in the patient's room are provided in an area that meets the requirements for an Airborne Isolation room.
 - d. Patients must be returned to an Airborne Isolation room as soon as practical after completion of the procedure.
 - e. Patients in Airborne Isolation may not receive nebulized treatments on a general patient care floor for the purpose of obtaining a sputum sample.
2. All induced sputum procedures must be done in a certified, reverse flow, HEPA filter exhaust, clean air bench or in a negative pressure Airborne Isolation room.
 3. Elective high-hazard procedures and surgery are delayed until a patient is non-infectious for TB.
 4. Outpatients that are suspected or known TB patients who undergo an outpatient bronchoscopy must be scheduled as the last case of the day and recovered in the procedure room, while adhering to the conscious sedation protocol.
 5. Suspected or known TB patients that undergo autopsy must be maintained in Airborne Isolation.

F. HIGH-HAZARD PROCEDURES

1. High hazard procedures where TB may be aerosolized, require special precautions to prevent/minimize occupational exposure to infectious TB. The following are high-hazard procedures:
 - a. Cough-inducing procedures.
 - b. Surgical procedures.
 - c. Nebulized treatments.
 - d. Bronchoscopy, intubation, suctioning.
 - e. Autopsy.
 - f. Specimen and culture manipulation.

G. ENGINEERING CONTROLS, MAINTENANCE SCHEDULES AND RECORDS

1. Negative pressure areas occupied by a patient on Airborne Isolation are qualitatively demonstrated daily by using smoke trails or by computerized room pressure monitoring procedures.
2. Facilities monitors negative pressure rooms and reports are sent to HEIC and HSE quarterly.
3. Whenever HEPA filters are changed, the system is inspected and its performance monitored in accordance with current United States Public Health Service or National Sanitation Foundation Standard 49 guidelines, as applicable.
4. HSE changes and certifies portable HEPA Unit HEPA filters whenever the airflow measurements indicate the filters need changing, or whenever filters lose integrity.
5. HEPA filters in contained air exhaust systems are inspected, maintained and performance monitored every six months, in accordance with current USPHS guidelines, by Facilities Management Departments.
6. Facilities Management performs all routine and special monitoring and maintenance of the ventilation system of Airborne Isolation rooms.
7. HSE monitors magnehelic gauge air pressure drop readings on HEPA filtered bag in bag out exhaust systems every three months.

H. PERSONAL PROTECTIVE EQUIPMENT

1. Prior to wearing a respirator, all employees must be properly screened by OHS.
2. HSE will fit employees who are unable to wear a PAPR with an alternative respirator.
3. HSE monitors PAPR airflow monthly. HEPA filters are changed whenever the airflow measurements indicate the filters need changing, or whenever filters lose integrity.
4. Care and use of Powered Air-Purifying Respirators (PAPR's)

Johns Hopkins Safety Manual	<i>Policy Number</i>	HSE 601
Subject:	<i>Last Review Date</i>	09/01/09
Airborne Pathogen Control Program	<i>Page</i>	4 of 10

- a. The PAPR Head Cover may be used repeatedly, until it is torn, the elastic is no longer taut, or it is grossly soiled.
 - b. Each person should keep their Head Cover in a bag near the PAPR Filter Unit. If soiled, the PAPR Filter Unit and Breathing Tube must be wiped off with an approved germicide between uses.
 - c. When not in use, PAPR Filter Units shall be plugged into battery chargers and kept in a specific area designated by each nursing unit.
 - d. PAPR Head Covers are available from Central Supply (ESI # 5948). PAPR Filter Units are shared by healthcare workers, but each person should have their own PAPR Head Cover.
5. The following PAPR procedures shall not be conducted inside an Airborne Isolation room;
- a. Donning PAPR
 1. Visually inspect the PAPR Filter Unit and Breathing Tube for visible damage. If any damage is noted, use a different unit and contact HSE (5-5918) to report the damage.
 2. Turn on the PAPR Filter Unit to assure that an adequate airflow is generated at the end of the Breathing Tube.
NOTE: The protection afforded by the system may be negated if there is visible damage.
 3. Connect the Breathing Tube to a PAPR Head Cover. Check the connection to be sure that the Breathing Tube is seated properly.
 4. Turn on the PAPR Filter Unit blower, place the Unit around the waist, and fasten the waist belt for a comfortable fit.
 5. Place the PAPR Head Cover over the head and check the fit by ensuring that the elastic band encircles the head. The PAPR Head Cover should be pulled down under the chin and should hug the face. The PAPR Head Cover sits just above the ears. Air flows to the front of the PAPR Head Cover. The protection afforded by the system may be negated if the PAPR Head Cover is not worn properly.
 - b. The PAPR system should be removed in the following manner:
 1. Remove the PAPR Head Cover,
 2. Disconnect the Breathing Tube from the PAPR Head Cover,
 3. Remove the PAPR Filter Unit with Breathing Tube attached from the waist,
 4. Turn off the PAPR Filter Unit.
 - c. Visually inspect the PAPR Filter Unit, Breathing Tube, and PAPR Head Cover for any visible contamination or damage.
 1. Light contamination can be removed by wiping the area with a disinfectant.
 2. Grossly contaminated PAPR Filter Units and Breathing Tubes should be set aside and HSE should be called at (410)955-5918.
 3. Grossly contaminated PAPR Head Covers should be discarded as biohazard waste
 - d. Return PAPR Filter Units and Breathing Tubes to the charging location and plug the Unit into the battery-charger.
 - e. Each employee shall put their personal PAPR Head Cover into a plastic bag labeled with their name.

I. CLINICAL LABORATORIES AND RESEARCH LABORATORIES

1. The JHH Clinical TB Laboratory and the JHU research facilities which utilize M. tuberculosis organisms or specimens which potentially contain M. Tuberculosis operate at Biosafety Level 3 (BSL-3) as recommended by the Biosafety Officer and approved by the Johns Hopkins Institutional Biosafety Committee (IBC). This shall be in accordance with current CDC/NIH guidelines published in the latest edition of Biosafety in Microbiological and Biomedical Laboratories and Recombinant DNA Guidelines. The following controls are in operation in the laboratories at these facilities;
2. Work Practices;
 - a. Work surfaces are decontaminated at least once a day and after any spill of viable material.
 - b. All contaminated liquid or solid wastes are decontaminated before disposal.
 - c. Mechanical pipetting devices are used; mouth pipetting is prohibited.
 - d. Eating, drinking, smoking, storing food, and applying cosmetics are not permitted in the work area.

Johns Hopkins Safety Manual	<i>Policy Number</i>	HSE 601
Subject:	<i>Last Review Date</i>	09/01/09
Airborne Pathogen Control Program	<i>Page</i>	5 of 10

- e. Persons must wash their hands:
 1. After handling materials involving organisms containing recombinant DNA molecules, and handling animals, and
 2. When exiting the laboratory.
 - f. All procedures are performed carefully to minimize the creation of aerosols.
 - g. Persons under 18 years of age shall not enter the laboratory.
 - h. If experiments involving other organisms which require lower levels of containment are to be conducted in the same laboratory concurrently with experiments requiring BSL-3 level physical containment, they shall be conducted in accordance with all BSL-3 level laboratory practices.
3. Special Practices (BSL-3);
- a. Laboratory doors are kept closed when experiments are in progress.
 - b. Contaminated materials that are to be decontaminated at a site away from the laboratory are placed in a durable leak-proof container, which is closed before being removed from the laboratory.
 - c. The Principal Investigator or Laboratory Director controls access to the laboratory and restricts access to persons whose presence is required for program or support purposes. The Principal Investigator has the final responsibility for assessing each circumstance and determining who may enter or work in the laboratory.
 - d. The Principal Investigator or Laboratory Director establishes policies and procedures whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements (e.g., skin test), and who comply with all entry and exit procedures entering the laboratory or animal rooms.
 - e. A HSE approved hazard warning sign incorporating the universal biosafety symbol is posted on all laboratory and animal room access doors. The hazard warning sign identifies the agent, lists the name and telephone number of the Principal Investigator or other responsible person(s), and indicates any special requirements for entering the laboratory such as the need for skin tests, respirators, or other personal protective measures.
 - f. All activities involving TB organisms are conducted in certified biological safety cabinets or other physical containment devices within the containment module. No work in open vessels is conducted on the open bench.
 - g. The work surfaces of biological safety cabinets and other containment equipment are decontaminated when work with TB organisms is finished. Plastic backed paper toweling used on non-perforated work surfaces within biological safety cabinets facilitates clean up.
 - h. An insect and rodent program is in effect.
 - i. Laboratory clothing that protects street clothing (e.g., solid front or wrap-around gowns, scrub suits, coveralls) is worn in the laboratory. Laboratory clothing is not worn outside the laboratory, and it is decontaminated prior to laundering or disposal.
 - j. Special care is taken to avoid skin contamination with contaminated materials. Gloves should be worn when handling infected animals and when skin contact with infectious materials is unavoidable.
 - k. HEPA or N95 respirators are worn in rooms containing experimental animals.
 - l. Animals and plants not related to the work being conducted are not permitted in the laboratory.
 - m. Laboratory animals held in a BL3 area shall be housed in partial containment caging systems, open cages placed in ventilated enclosures, solid wall and bottom cages covered by filter bonnets.
 - n. Conventional caging systems may be used provided that all personnel wear appropriate personal protective devices. These protective devices shall include at a minimum, wrap around gowns, head

Johns Hopkins Safety Manual	<i>Policy Number</i>	HSE 601
Subject:	<i>Last Review Date</i>	09/01/09
Airborne Pathogen Control Program	<i>Page</i>	6 of 10

covers, gloves, shoe covers, and respirators. All personnel shall shower on exit from areas where these devices are required.

- o. All wastes from laboratories and animal rooms are appropriately decontaminated before disposal.
 - p. Vacuum lines are protected with HEPA filters and liquid disinfectant traps.
 - q. Hypodermic needles and syringes are used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle locking syringes or disposable syringe needle units (i.e., needle is integral to the syringe) are used for the injection or aspiration of fluids containing TB organisms. Extreme caution should be used when handling needles and syringes to avoid auto-inoculation and the generation of aerosols during use and disposal. Needles should not be bent, sheared, replaced in the needle sheath or guard, or removed from the syringe following use. The needle and syringe should be promptly placed in a HSE approved container and decontaminated, preferably by autoclaving, before discard or reuse.
 - r. Spills and accidents which result in overt or potential exposures to TB organisms are immediately reported to HSE at (410) 955-5918. Appropriate medical evaluation, surveillance, and treatment are provided and written records are maintained by OHS.
 - s. A set of Standard Operating Procedures or lab-specific Biosafety Manual is prepared and approved by the Johns Hopkins Institutional Biological Safety Committee (IBC). Personnel are advised of special hazards and are required to read and follow the instructions on practices and procedures.
4. Containment Equipment (BSL-3);
- a. Biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protective or physical containment devices (e.g., special protective clothing, masks, gloves, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals) are used for all activities with TB organisms which pose a threat of aerosol exposure. These include:
 1. Manipulation of cultures and of those clinical or environmental materials which may be a source of aerosols,
 2. Aerosol challenge of experimental animals,
 3. Harvesting of infected tissues or fluids from experimental animals and embryonated eggs, and
 4. Necropsy of experimental animals
5. Laboratory Facilities (BSL-3)
- a. The laboratory is separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors is the basic requirement for entry into the laboratory from access corridors or other contiguous areas. Physical separation of the high containment laboratory from access corridors or other laboratories or activities may be provided by a double-door clothes change room, airlock, or other access facility which requires passage through two sets of doors before entering the laboratory.
 - b. The interior surfaces of walls, floors, and ceilings are water-resistant so that they can be easily cleaned. Penetrations in these surfaces are sealed or capable of being sealed to facilitate decontaminating the area.
 - c. Bench tops are impervious to water and resistant to acids, alkalis, organic solvents, and moderate heat.
 - d. Laboratory furniture is sturdy and spaces between benches, cabinets, and equipment are accessible for cleaning.
 - e. Each laboratory contains a sink for hand washing. The sink is foot, elbow, or automatically operated and is located near the laboratory exit door.
 - f. Windows in the laboratory are closed and sealed.
 - g. Access doors to the laboratory or containment module are self-closing.
 - h. An autoclave for decontaminating laboratory wastes is available, preferably within the laboratory.

Johns Hopkins Safety Manual	<i>Policy Number</i>	HSE 601
Subject:	<i>Last Review Date</i>	09/01/09
Airborne Pathogen Control Program	<i>Page</i>	7 of 10

- i. The exhaust air from Class I or Class II biological safety cabinets is discharged through the building exhaust system with a thimble unit connection that avoids any interference with the air balance of the cabinets or building exhaust system.
- j. A ducted exhaust air ventilation system is provided. This system creates directional airflow that draws air into the laboratory through the entry area. The exhaust air is not recirculated to any other area of the building, is discharged to the outside, and is dispersed away from the occupied areas and air intakes. Personnel shall verify that the direction of the airflow (into the laboratory) is proper. The exhaust air from a laboratory that is discharged near public areas or building air intakes must be HEPA filtered.

J. TRAINING

1. Vice presidents, Chairpersons and department management will work in conjunction with HSE and HEIC to develop and make available TB education programs and related resource materials.
2. HSE will train employees how to use respiratory protective devices.
3. HSE will schedule and present training programs regarding TB.
4. HSE will maintain documentation on those trained (identified by Social Security Number), the date of training, the instructor, and the content of the training programs.
5. Healthcare workers employed by other agencies who are contracted to work on-site at JHI, will be provided with orientation material that includes a review of this policy. Contracts for temporary employment services of healthcare workers shall require prior training in the hazards associated with and prevention of occupational exposure to TB. The contracted agency is responsible for educating contractual employees on the current CDC Guidelines regarding the transmission of TB before beginning work at Johns Hopkins.
6. A failure on the part of a contractual employee to demonstrate adequate knowledge of safe work practices will result in temporary or permanent removal of the contractual employee.
7. Trainees (including graduate, medical, and nursing students, interns and residents) or any other individual pursuing a medically-related or other research training program will receive orientation and training to insure familiarity with the Airborne Pathogen Control Program. Trainees must comply with all Johns Hopkins policies regarding the Airborne Pathogen Control Program, and demonstrate, through work practices, a familiarity with those policies and guidelines. Failure to comply with the policies may result in a temporary or permanent removal of the student/trainee.

K. MEDICAL SURVEILLANCE/TUBERCULIN SKIN TESTING

1. Any employee providing patient care or having occupational exposure to TB shall be evaluated annually and after a potential exposure, at no cost to them, through OHS.
2. Any employee working in a Johns Hopkins area which has been determined by HEIC to be a high risk unit for transmission of TB shall be evaluated every six months.
3. Employees and students included in the Airborne Pathogen Control Program will be provided information regarding the PPD skin test.
4. Any employee who wishes to receive a PPD test may arrange to do so, at no cost, by contacting OHS at (5-6211). The individual will be informed confidentially of the test results and evaluation/guidance will be provided as required.
5. It is recommended that all non-JHI students and/or contract employees who may reasonably anticipate exposure to TB while performing duties at JHI shall be skin tested prior to their working at Johns Hopkins.

L. MANAGEMENT OF HEALTHCARE WORKERS EXPOSED TO TB

1. OHS will provide counseling to the exposed healthcare worker regarding the use of antimicrobial prophylaxis following an exposure.
2. Each situation will be evaluated on a case-by-case basis, and will include the following considerations:

Johns Hopkins Safety Manual	<i>Policy Number</i>	HSE 601
Subject:	<i>Last Review Date</i>	09/01/09
Airborne Pathogen Control Program	<i>Page</i>	8 of 10

REFERENCE

CDC/NIH *Biosafety in Microbiological and Biomedical Laboratories*, 4th Edition, Washington, DC, May, 1999.

Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health-Care Facilities, 1994, U.S. Department of Health and Human Services, Federal Register 59:54241, October 28, 1994.

OSHA Personal Protective Equipment (29 CFR 1910.139)

Guidelines for Research Involving Recombinant DNA Molecules, Federal Register 66:1146, Jan. 5, 2001.

The Johns Hopkins Hospital Interdisciplinary Clinical Practice Manual, Policy No. IFC-021, Airborne Isolation.

The Johns Hopkins Hospital *Personnel Policy Manual*: Discipline, Section 28.

Johns Hopkins *Safety Manual: Protective Devices for Health Care Workers, HSE 006, and Occupational Injury Management*, HSE 005.

RESPONSIBILITIES

Employee, Student, Healthcare Worker

Report all TB-related incidents, exposures and potential exposures to OHS and HEIC. Report all conditions that may endanger the health of staff, students and patients to HEIC.

When entering an Airborne Isolation room, wear a HSE approved respirator. A HEPA filtered powered air-purifying respirator (PAPR) is the respirator of choice at Johns Hopkins. Only respirator-trained essential healthcare personnel shall enter the room.

Keep the PAPR Head Cover in a bag near the PAPR Filter Unit and Breathing Tube. PAPR equipment must be disinfected with an approved germicide between uses, if soiled. When not in use, PAPR Filter Units shall be plugged into battery chargers and kept in a specific area designated by each nursing unit.

Department Management, Shift Supervisor, Charge Nurse

Each department that maintains contact with outside contractors who provide temporary or contract employees who may incur occupational exposure must notify the contractor or contract employees of any TB hazard and of the proper precautions against exposure to TB. This allows the contractor to institute precautions to protect his or her employees.

A Report of Incident Form must be completed by the person's supervisor at the time the employee reports a TB-related incident. This must be kept confidential and must be delivered to OHS.

Monitor work practices to determine the need for training/retraining and to ensure compliance with the Airborne Pathogen Control Program.

Discipline employees, according to Section 28 in the JHH Personnel Policy & Procedure Manual, or other applicable policy, for failure to use safe work practices.

When an Airborne Isolation patient occupies an isolation room, daily documentation that the isolation remains at negative pressure is required.

Johns Hopkins Safety Manual	<i>Policy Number</i>	HSE 601
Subject:	<i>Last Review Date</i>	09/01/09
Airborne Pathogen Control Program	<i>Page</i>	9 of 10

Health, Safety and Environment (HSE)

Oversee the coordination of medical, legal and management resources to address both individual and institutional concerns in regard to health and safety issues pertaining to the Airborne Pathogen Control Program.

Develop, coordinate and disseminate educational programs for staff, students, and contractors.

Schedule and document training process. Include in documentation; program content, individuals trained (identified by Social Security Number), date of training, name of trainer, and information presented.

Fit employees with alternative respirators if they are unable to wear a PAPR.

Review, evaluate and inspect laboratories working with mycobacteria spp.

Register clinical and research laboratories working with TB with the Institutional Biosafety Committee.

Deliver, track location, maintain, certify and repair portable HEPA Units and PAPR equipment.

Certify and repair biological safety cabinets, clean air benches and other HEPA filter-containing equipment.

Track pre-filter and HEPA filter pressure readings quarterly on bag in bag out exhaust systems connected to potentially hazardous areas.

Monitor PAPR airflow and performance every month.

Provide inservice training on the use of PAPR equipment.

Monitor portable HEPA Unit performance and replace pre-filters every three months.

Advise Facilities about the placement and type of warning signage for Airborne Isolation room exhaust ducting.

Occupational Health Services (OHS)

Screen employees for TB per established guidelines.

Collaborate with HEIC to investigate all active pulmonary TB patient cases and determine the need for employee evaluation and follow up, i.e. PPD, or CXR.

Coordinate all medical follow-up. OHS will provide a report to HEIC with completed PPD skin test and radiographic results.

Manage TB prevention medical surveillance programs. Offer TB skin testing to all employees and students included in the Airborne Pathogen Control Program.

Evaluate all incidents involving potential exposure to TB by staff and students in collaboration with HEIC.

Johns Hopkins Safety Manual	<i>Policy Number</i>	HSE 601
Subject:	<i>Last Review Date</i>	09/01/09
Airborne Pathogen Control Program	<i>Page</i>	10 of 10

Hospital Epidemiology and Infection Control (HEIC)	<p>Coordinate efforts with nursing to provide appropriate signage, training and personal protective equipment to health care workers who enter Airborne Isolation rooms.</p> <p>Send reports of occupational TB exposure to OHS.</p> <p>Provide information about the TB infectivity of the source patient when sought by OHS or the Emergency Room.</p>
Infectious Disease Department (ID)	<p>Approve Airborne Isolation for all inpatients at JHH.</p> <p>Serve as a resource for issues related to infection control.</p> <p>Serve as a resource for issues related to infectious diseases.</p>
Facilities Management	<p>Monitor negative pressure of isolation rooms daily when occupied by a suspected or known infectious TB patient.</p> <p>Place and maintain warning labels on exhaust Systems connected to Airborne Isolation areas.</p> <p>Maintain fixed filters, fans, monitors and other isolation equipment utilized in the Airborne Pathogen Control Program.</p>

COMMUNICATION/EDUCATION

The Airborne Pathogen Control Program will be disseminated throughout the organization via the following channels:

- A. Health, Safety and Environment (HSE) will;
1. Provide copies of this policy and other material to JHI instructors for student training on the subject,
 2. Distribute this policy to all holders of the Johns Hopkins Safety Manual.
 3. Provide training and proper notification of any significant changes in this policy.
- B. Department management will be responsible for maintaining staff competency in TB information and procedures and will be responsible for determining staff requiring annual PPD testing.

REVIEW CYCLE

Annually