Beth Israel Deaconess Medical Center ***Infection Control Manual***
Title: **Guidelines for Construction, Renovation, Maintenance Risk Assessment** ***Guideline #:*** **IC-CRM5** ***Purpose*:** To reduce the risk of colonization or infection with aspergillus and other infectious agents during periods of construction, renovation or maintenance.
Guideline Statement: Construction, renovation or maintenance activities are those that disturb the environment where settled dust or dirt is found and which may cause spores to become airborne. ***Guideline(s) for Implementation:*** **Infection Control Risk Assessment** **A. Identify Construction, Renovation, Maintenance Activity** • Construction activity types are defined by the amount of dust, which is generated, the duration, and the amount of shared HVAC systems. • Identify the type of construction project activity by using the following table.

Type A Maintenance Activities	**Inspection and Non-Invasive Activities** Includes, but not limited to: • removal of ceiling tiles for visual inspection limited to 1 tile per 50 square feet • painting with minimal sanding • wall covering, electrical trim work, minor plumbing, and activities which do not generate dust or require cutting of walls or access to ceiling other than for visual inspection
Type B Construction/ Renovation Activities	**Small scale, short duration activities which create minimal dust** Includes, but is not limited to: • installation of telephone and computer cabling • access to chase spaces • cutting of walls or ceiling where dust migration can be controlled
Type C Construction/ Renovation Activities	**Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies** Includes, but is not limited to : • major sanding of walls for painting or wall covering • removal of floor coverings, ceiling tiles and casework • new wall construction • minor duct work or electrical work above ceilings • major cabling activities • any activity which cannot be completed within a single work shift
Type D Construction/ Renovation Activities	**Major demolition and construction projects** Includes, but is not limited to: • activities which require consecutive work shifts • requires heavy demolition or removal of a complete cabling system • new construction

B. Identify the Patient Risk groups that will be affected

- If more that one risk group will be affected, select the higher risk group

Low Risk	Medium Risk	High Risk
• Office areas	• Cardiology • Echocardiography • Emergency Dept. • Endoscopy • In-patient Units • Nuclear Medicine • Ambulatory Areas • PACU • Rehab Services • Radiology/MRI • Respiratory Therapy	• Cardiac Cath Lab • CPD • Dialysis • Distribution Storage • ICUs including NICU * • Labor & Delivery (including C-section rooms) * • Laboratories (Specimen) • Newborn Nursery * • Oncology * • Operating rooms • Pharmacy • Transplant units *

C. Match the *Patient Risk Group* with the Planned *Project Type* to find the *Class of Precautions* (level of infection control activities required—next page).

Infection Control Matrix: Class of Precautions for Construction Projects by Patient Risk

Patient risk Group **Construction Renovation, Maintenance Project Type**

	Type A	Type B	Type C	Type D
Low Risk	**I**	**II**	**II**	**III / IV**
Medium Risk	**I**	**II**	**III**	**IV**
High Risk	**I**	**III / IV**	**III / IV**	**IV**

* Infection Control consultation required prior to work for all Type A projects in these units.

D. Description of Required Infection Control Precautions by Class		
	During Project	**Upon Completion of Project**
Class I	1. Coordinate activity with unit manager. 2. Execute work by methods to minimize raising dust from construction operations. 3. Immediately replace any ceiling tile displaced for visual inspection.	1. Cleanup and disposal in accordance with defined Procedures on Cleanup and Disposal.
Class II	1. Infection Control Permit required. 2. Provide active means to prevent air-borne dust from dispersing into atmosphere. 3. Water mist work surfaces to control dust while cutting. 4. Seal unused doors with duct tape. 5. Place dust mat at entrance and exit of work area. 6. Install a Merv-8 Filter Media over all exhaust/return registers in the construction area to assure that our duct system remains clean. 7. Contain construction waste before transport in tightly covered containers.	1. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area. (daily if occupied area) 2. Wipe work surfaces with disinfectant. (daily if occupied area) 3. Remove filter and blocking material from HVAC system in areas where work is performed.
Class III	1. Infection Control Permit required. 2. Install a Merv-8 Filter Media over all exhaust/return registers in the construction area to assure that our duct system remains clean. 3. Create and assure negative pressure by completely blocking off and sealing all supply air registers. 4. Complete all critical barriers i.e. sheet rock, plywood, plastic, to seal area from non work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction. 5. Utilize HEPA equipped air filtration unit to assure air quality at all times. 6. Place dust mat at entrance and exit of work area. 7. Contain construction waste before transport in tightly covered containers. 8. Cover transport receptacles or carts. Tape covering unless solid lid.	1. Do not remove barriers from work area until completed project is thoroughly cleaned by environmental services. 2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 3. Vacuum work area with HEPA filtered vacuum. (daily if occupied area) 4. Wet mop area with disinfectant. 5. Remove filter and blocking material from HVAC system in areas where work is being performed.
Class IV	1. Infection Control Permit required 2. Install a Merv-8 Filter Media over all exhaust/return registers in the construction area to assure that our duct system remains clean. 3. Create and assure negative pressure by completely blocking off and sealing all supply air registers only. 4. Complete all critical barriers i.e. sheet rock, plywood, plastic, to seal area from non work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction. 5. Utilize HEPA equipped air filtration unit to assure air quality at all times. 6. Place dust mat at entrance and exit of work area. 7. Contain construction waste before transport in tightly covered containers 8. Cover transport receptacles or carts. Tape covering unless solid lid. 9. Seal holes, pipes, conduits, and punctures appropriately. 10. Provide adhesive walk-off mats at entrance to work area within the anteroom. Replace used mats with new mats in accordance with manufacturer's recommendations. 11. Construct anteroom and require all personnel to pass through this room so they can be vacuumed using an HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave the work site. 12. All personnel entering work site are required to wear shoe covers. Shoe covers must be changed each time the worker exits the work area.	1. Do not remove barriers from work area until completed project is thoroughly cleaned by environmental services. 2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. 3. Vacuum work area with HEPA filtered vacuums. (daily) 4. Wet mop area with disinfectant. 5. Remove filter and blocking material from HVAC system in areas where work is being performed.

Reviewed Infection Control: 2001, 2003, 2004, 2005, 2006, 2008, 2011 March