ACIPC
Australasian College
for Infection Prevention and Control

Infection Prevention and Control Risk Assessment Matrix

Pre-construction and renovation assessment

Step 1: Construction activity type

Defined by: Expected amount of dust generated, and duration of involvement of HVAC systems

Type A	**Inspection and non-invasive activities which do not generate dust** Includes but not limited to: ▪ Activities which do not generate dust or require cutting of walls, or access to ceilings other than for visual inspection ▪ Removal of ceiling tiles for visual inspection only ▪ Painting (but not sanding) e.g., painting, minor plumbing or electrical trim work
Type B	**Small scale, short duration activities that create minimal dust** Includes but is not limited to: ▪ Installation of telephone and computer cabling ▪ Access to chase spaces ▪ Cutting of walls or ceilings where dust migration can be controlled
Type C	**Work that generates a moderate to high level of dust or requires demolition of fixed building components.** Includes but is not limited to: ▪ Demolition or removal of built-in building components or assemblies ▪ 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 that cannot be completed within a single work shift
Type D	**Major demolition and construction projects** Includes but is not limited to: ▪ Activities that require consecutive work shifts ▪ Heavy demolition ▪ Removal of a complete ceiling system ▪ New construction

Source: Adapted from: Infection prevention manual for construction and renovation, APIC (2019). And Infection prevention and control during construction and renovation toolkit, SA Health (2018).

Step 2: Identification of patient risk groups

Defined by: The project location. If more than one area will be affected select the higher risk group.

Low risk	▪ Office areas ▪ Public areas ▪ Workshops and plantrooms
Medium risk	▪ Unoccupied wards ▪ Outpatients' clinics (excluding oncology/haematology) ▪ Admission/discharge units ▪ Allied health areas ▪ Kitchens and catering services ▪ Laundry services ▪ Mental health areas ▪ All other patient/resident areas (unless stated in high and highest risk groups)
High risk	▪ Dental clinics ▪ Echocardiography ▪ Emergency department ▪ Patient care laboratories (respiratory function, sleep clinics) ▪ Maternity, labour and delivery units, Paediatrics ▪ Medical/Surgical wards ▪ Nuclear medicine ▪ Radiology/Magnetic resonance imaging (MRI)
Highest risk	▪ Anaesthesia areas ▪ Cardiac catheterization and angiography areas ▪ Cardiovascular/cardiology wards ▪ Day surgery units ▪ Dialysis units ▪ Endoscopy and bronchoscopy units ▪ Haematology/Oncology wards and outpatient's clinics (including radiotherapy) ▪ Intensive care (adult, neonatal, paediatric) and High dependency units ▪ Operating theatres (including recovery, sterilizing departments and sterile stores) ▪ Pharmacy clean rooms ▪ Transplant units

Step 3: Determine the class of precautions

Match the **construction activity type (A, B, C, D)** determined in step 1 with the **patient risk group** determined in step 2 (low, medium, high, highest) to determine the **class of precautions** required (I, II, III, IV).

Patient risk group	Construction activity type			
	Type A	Type B	Type C	Type D
Low	I	II	II	III / IV
Medium	I	II	III	IV
High	I	III	III / IV	IV
Highest	I - III	III / IV	III / IV	IV

Step 4: Type of precautions required during construction or renovation

IPC in liaison with the appropriate clinical manager will determine whether construction or renovation activity poses an increased risk to require patients be moved from the area during construction/renovation activity, to an area where such activities are not occurring.

	Tasks	Check
Class I	1. Works in a manner to minimise generating dust	
	2. Immediately after visual inspection completed, replace displaced ceiling tiles	
	3. Clean work area upon completion of task	
Class II	**The following to be considered in addition to Class I**	
	1. Provide active means to prevent dust from dispersing into atmosphere – extractor fans	
	2. Seal unused doors with duct tape	
	3. Water mist work surfaces to control dust while cutting	
	4. Isolate HVAC system in areas where work is being performed	
	5. Place dust mats at entrance to work area Replace or clean when no longer effective	
	6. Contain construction waste before transport in tightly covered containers	
	7. Clean work area upon completion of tasks Wet mop and/or vacuum with HEPA filtered vacuum	
Class III	**The following to be considered in addition to Class I and II**	
	1. Remove or isolate the air handling system in the construction area to prevent contamination of the entire duct system. Supply ducts and return air ducts should be covered to prevent dust contamination.	
	2. Where containment is possible, utilize building walls and close all doors (excluding construction access doors) and seal with duct tape to prevent escape of dust and debris.	
	3. In construction, demolition or reconstruction projects where existing building walls and doors is not possible, use one of the following ▪ Airtight plastic barriers (e.g., zip wall) extending from floor to ceiling decking or ceiling tiles. ▪ Plastic barriers with seams sealed and duct tape to prevent dust and debris escape. ▪ Drywall barriers with seams or joints covered or sealed to prevent escape of dust and debris.	

	4. Maintain negative pressure within work site, using HEPA filter units	
	5. Contain construction waste before transport in covered containers	
	6. Direct pedestrian activity from construction areas away from patient/resident care areas and limit opening and closing of doors (or other barriers) that may cause dust dispersion, entry of contaminated air, or tracking of dust outside the worksite.	
	7. Clean work area upon completion of tasks, prior to barrier/hoarding removal Vacuum with HEPA filtered vacuum, and wet mop with detergent and disinfectant	
Class IV	**The following to be considered in addition to Class I, II and III**	
	1. Isolate HVAC system in area where work is being undertaken	
	2. Place isolation barriers at penetration of ceiling envelopes, chases and ceiling spaces to stop movement of air and debris.	
	3. When openings are made into existing ceilings in clinical areas, a decontamination unit which will seal off openings and fit tightly from ceiling to floor should be used	
	4. Construct an anteroom to ensure airflow from the clean area, through the anteroom and into the work area. All personnel passing through anteroom into work area to put on or remove disposable coveralls or shoe covers.	
	5. Upon completion of work, restore HVAC system.	
	Other risk reduction strategies	
	1. Post non-authorised entry signage into construction area	
	2. Completed IPC construction permit is available	
	3. The construction area is kept secure at all times	
	4. Patient/clinical area doors adjacent to the construction area are kept closed	
	5. Re-locate high-risk patients/residents to an area removed from the construction site	
	6. Other:	