



## Working in ceilings - when is containment needed?

This is a very good question and one that cannot be answered with a simple yes or no. The Centers for Disease Control Guidelines for Environmental Infection Control in Health-Care Facilities (EIC) has recommended that any disruption of the environment in a patient occupied area be evaluated for its potential impact on the patient, staff, or visitor. When accessing ceilings by removing lay in tiles or opening up access panels, there is a good possibility a layer of dust or other fine particulate has settled on the tile and this contaminate needs to be addressed in the risk assessment. When tiles are pushed aside or tilted to be removed a plume of dust may permeate the occupied space below thereby presenting a risk. So what is the solution? CDC recommends that anytime you have a major project in a ceiling the following precautions be implemental:

*Paragraph II E.5.i. In patient-care areas, for major repairs that include removal of ceiling tiles and disruption of the space above the false ceiling, use plastic sheets or prefabricated plastic units to contain dust; use a negative pressure system within this enclosure to remove dust; and either pass air through an industrial grade, portable HEPA filter capable of filtration rates of 300–800 ft<sup>3</sup>/min., or exhaust air directly to the outside.*

Even the simple removal of a single tile in areas where the Infection Control Risk Assessment has indicated a Class 3 or 4 project may need to have special containment. Health care organizations are taking very different approaches to ceiling access. To illustrate the broad spectrum of compliance - one major teaching hospital has decided that due to the high-risk patient population within their buildings any access above a ceiling requires a containment system and in many cases the associated HEPA filtered negative air machine. Other health care systems have implemented a different approach and through the use of color coded documents (floor plans) showing high risk patient populations have limited those areas of the building where special containment is necessary. In order to monitor and document compliance when ceilings are accessed many organizations are using an above-the-ceiling work permitting program. For example, any person, accessing space in a designated area such as critical care units (ICU, CCU, MICU, etc.), nurseries, operating rooms, bone marrow transplant units, oncology, etc when performing maintenance, repair and minor construction projects must meet the CDC recommendations. Some activities that would qualify as disruptive are:

1. When cleaning lighting fixtures in sensitive areas.
2. When repairing piping in the ceiling cavities.
3. Repair of information system cabling.
4. Repair and installation of telemetry devices.
5. Installation of additional cabling and fiber optics.
6. Reviewing the space for renovation and system upgrades, etc.



So, when working in a health care facility, it is always prudent to communicate with the facility management team to determine the level of compliance necessary when working above ceilings. Don't assume that the other guy is doing it right just because he/she does not have containment set up, caution on the side of knowing the requirements – don't guess.

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