

Construction Monitoring for Hospitals

Hospitals are unlike any other construction site. Some very sick people may be lying just a few yards away, highly vulnerable to infection or other illness if the air quality isn't carefully controlled during renovations. This creates special professional challenges for construction teams - indoor air quality (IAQ) management is mandatory during construction if hospitals are to control liability and maintain their Joint Commission accreditation.

Good IAQ in patient areas during a hospital construction project is a result of a combination of proper planning, regulatory enforcement, monitoring and thorough documentation.

Healthcare Construction Trends

A 2010 report on America's hospitals and health systems indicated that there has been a tremendous focus on renovation or expansion rather than new construction in healthcare facilities, according to a survey from Health Facilities Management magazine and the American Society for Healthcare Engineering (ASHE). In fact, renovation or expansion accounted for 73 percent of construction projects at hospitals responding to the survey. Nonetheless, new construction is also on the rise - in California new medical facilities comprise nearly 8 percent of all new construction in the state. In addition, hospitals are focusing on being environmental stewards through greater use of sustainable construction programs.



Palomar Medical Center West (PMCW) – DPR Construction
Healthy Buildings is conducting mold and moisture monitoring during the construction phase of this major construction project

Infection Control Compliance

Across the United States, medical facilities currently follow a mix of self-regulation and industry and Governmental guidelines during new construction and/or renovation and expansion activities. Depending on the jurisdiction, compliance regulations and guidelines include infection control protocols and third party oversight during the construction process.

The introduction of The Infection Control Risk Assessment (ICRA) was promulgated in the 2001 edition of the AIA Guidelines for the Design and Construction of Health Care Facilities. The guideline specified the requirements for patient areas affected by construction projects and the protocols for infection control within these areas. The Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) made the guideline mandatory in the Environment of Care Standard EC 1.7. The ICRA defines the plan to identify and mitigate potential risks for the transmission of environmental and construction related agents that pose risk to the patient population.



Examples of agents that can create illnesses during construction-related activity include infection as a result of exposure to mold, especially *Aspergillus*, or *Legionella*. Long term hazards include asbestos and other dusts, chemicals and fumes. In new construction, materials susceptible to moisture, especially drywall, are often installed before the building's weather-tight envelope is complete. If not monitored, wet materials can harbor mold which can be left to contaminate the indoor spaces after the building is occupied.

The use of real-time diagnostic equipment to monitor patient areas during construction is imperative in identifying potential sources of pollutants that could compromise the health and well being of patients, staff and occupants of the facility. Furthermore, samples collected within these areas provide evidence of the efficiency of the preventive measures taken to limit potential exposures to the population.

LEED for Healthcare

LEED for Healthcare is a U.S. Green Building Council (USGBC) program currently launching in part to address these special infection control considerations in the context of sustainable construction. In developing this program, USGBC addresses the traditional elements of sustainable construction, while acknowledging that health care environments are different from conventional buildings.

Conclusions

Overall, a well planned and effective infection control plan during construction is paramount in the safeguarding and prevention of illness and disease transmission during construction whether it is new construction, renovation or expansion in medical facilities. Please contact Simon Turner at 949.450.1111 for more information on healthcare facility construction monitoring.