

Indoor Air Quality Concerns in Healthcare

by

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www.hciconsultinggroup.com

Resources

- American National Standards Institute
(www.ansi.org)
- American Society of Heating, Refrigeration and Air Conditioning Engineers, Inc.
(www.ashrae.org)
- Environmental Protection Agency (www.epa.gov)
- Occupational Safety and Health Administration
(www.osha.gov)

I-Beam Recommendations

- Conducting an indoor air quality (IAQ) building audit;
- Diagnosing and resolving IAQ related health problems;
- Establishing and IAQ management and maintenance program to reduce IAQ risks;

I-Beam Recommendations

- Planning IAQ compatible energy projects;
- Protecting occupants from exposures to construction/renovation contaminants; and,
- Calculating the cost, revenue, and productivity impacts of planned IAQ activities.

IAQ Health Issues

- Sick Building Syndrome (SBS)
- Building Related Illness (BRI)
- Indoor Air Pollution (IAP)

Sick Building Syndrome (SBS)

Symptoms

- Often vague nonspecific upper respiratory discomfort
- Usually will persist for an extended period of time
- Will usually disappear when the individual leaves the building

Sick Building Syndrome (SBS)

Causes

- Airborne dust and inorganic particulate matter
- Airborne volatile organic chemicals and vapors
- Allergens, pollens, environmental mold and bacteria

Sick Building Syndrome (SBS) Control

- Source control
- Filtration and air cleaning
- Dilution

Building Related Illnesses (BRI)

Symptoms

- Clinically diagnosed health problems caused by exposure to contaminants in the building (Legionnaires' Disease and airborne latex are good examples)
- Can result in severe morbidity and mortality
- Often associated with poor maintenance and housekeeping practices

Building Related Illnesses (BRI) Causes

- Fungi
- Other microorganisms

Building Related Illnesses (BRI) Control

- Adequate maintenance
- Renovation dust containment - rigid and impervious barriers, areas under constant negative pressurization, and ensure that dust does not go into patient areas

Indoor Air Pollution (IAP)

- “The subject of indoor air pollution is not without some controversy”.... and “Indoor Air Quality is an evolving issue” and “it is important to keep informed about continuing developments in this area”
- Toxic Materials and Hazardous Wastes

IAQ Operation and Maintenance Forms

- General Information and Schedule (1 page)
- Periodic IAQ Maintenance (13 pages)

(forms found on the EPA I-Beam website)

Baseline IAQ Audit Forms

- HVAC Systems (24 pages)
- Indoor Spaces (3 pages)
- Building Exterior (1 page)

(forms found on the EPA I-Beam website)

Occupant Complaint Forms

- IAQ Complaint Log (1 page)
- IAQ Complaint Form (1 page)
- IAQ Interview Form (2 pages)
- IAQ Occupant Diary (2 pages)
- IAQ Complaint-Response Summary (1 page)

(forms found on the EPA I-Beam website)

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