INFECTION CONTROL:

Presentation by
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THE **WHO** OF **INFECTION CONTROL**

CDC, Center for Disease Control and Prevention

CDC's Guideline for Handwashing and Hospital Environmental Control

Guidelines for Environmental Infection Control in Health-Care Facilities

The CDC does recognize the FGI Healthcare Guidelines as a resource and guideline

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CURRENT HEALTH FACILITIES GUIDELINES

Joint Commission: Third party certification, FGI 2010 and CDC

CMS: NFPA 101, Infection Control Worksheet

Kentucky – Kentucky Cabinet for Health and Family Services, Health Care Facilities Regulations/Statutes Title 902

Illinois – Illinois Department of Public Health, Hospital Licensing Act (210 ILCS 80)

Indiana – Indiana State Department of Health, Acute Care Division, Rules: 410 IAC 6-15-1.3, 410 IAC 6-15-2.3, and 410 IAC 6-15-2

Michigan – Michigan Department of Health and Human Services acute care hospital license, R 325.1001 – 325.1100

Ohio – Ohio currently does not license hospitals, but ODH does register hospitals

THE **WHERE** OF INFECTION CONTROL

Acute Care Hospital

Outpatient Surgical Centers

Surgery Care Centers

Clinics, Outpatient Dialysis Centers

Physicians' Offices

Skilled Nursing Facilities

Per HICPAC's, CDC

WHY INFECTION CONTROL MEASURES

Healthcare primary mission:

"First, Do No Harm"

A little story why ...

WHY INFECTION CONTROL MEASURES

- Health Care Facility Design
  - The built environment has a profound effect on health, productivity, and the natural environment

- Construction/Renovation
  - Creates conditions harmful to patients and staff
  - Affects ongoing cleanliness
  - Must mitigate infection control issues
  - Safety risk assessment

GET THE TEAM TOGETHER

- Infection-Control /Epidemiologists
- Clinical Staff and Physicians
- Facility Administrators / Facility Managers
- Engineering
- Risk-Management
- Directors of Specialized Programs
- Patient / Employee Safety
- Industrial Hygienists, and Regulatory Affairs
- Environmental Services
- Construction Administrators
- Architects, Engineers, and Contractors

http://www.cdc.gov/hicpac/pdf/guidelines/eic_in_HCF_03.pdf *PG. 24*

GATHER THE TOOLS
INFECTION CONTROL RISK ASSESSMENT (ICRA)

"A multidisciplinary organizational process that focuses on reducing risk from infection throughout facility planning, design, and construction (including renovation) activities. The environment, infectious agents, and human factors and the impact of the proposed project are considered by a multidisciplinary team that includes, at minimum, members with expertise in infectious disease, infection prevention, patient care, epidemiology, facility design, engineering, construction, and safety, as circumstances dictate." [1]

[1] The Facility Guidelines Institute, Guidelines for Design and Construction of Hospitals and Outpatient Facilities, 2014 Edition

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INFECTION CONTROL RISK ASSESSMENT (ICRA)

ICRA minimum recommendations
- Design Considerations
  - Spatial Relationships
  - Patient / Staff and Material Flow
  - Hand Washing / Hand Sanitation
  - Material Selection
- Construction Considerations
  - Airborne Pathogens
  - Waterborne Pathogens

ICRA CONSTRUCTION RISK MITIGATION

- Essential service disruptions
- Specific hazards and protection levels
- Susceptible Patient Types
- Adjacencies – Above, Below, Surrounding
- Movement of debris, traffic flow, spill clean up, testing and certification

INFECTION CONTROL RISK MITIGATION RECOMMENDATIONS (ICRMRS)

Develop Written Policy
- Identify Specific Methods
- Standardize Minimum Requirements
- Maintain Monitoring Procedures

INFECTION CONTROL RISK MITIGATION RECOMMENDATIONS (ICRMRS)

Identify Specific Methods to Control:
- Airborne Contaminant Transmission
- Waterborne Contaminant Transmission

INFECTION CONTROL RISK MITIGATION RECOMMENDATIONS (ICRMRS)

Minimum Requirements
- Patient placement and relocation
- Barriers and Protective Measures
- Temporary provisions for phasing
- Protection from Demolition
- Training – staff, visitors, construction personnel

THE TOOL:
SPECIFICATION 13 53 33

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Resources:

CDC:
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5210a1.htm

CSM: Checklists : https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/Survey-and-Cert-Letter-15-12-Attachment-1.pdf

https://www.cms.gov/medicare/provider-enrollment-and-certification/surveycertificationgeninfo/downloads/survey-and-cert-letter-14-36.pdf

Kentucky: http://chfs.ky.gov/os/oig/hlthcarefacregs.htm

Indiana: http://www.in.gov/isdh/20123.htm

Illinois:
http://www.idph.state.il.us/rulesregs/lawsrules.htm#Health Care Facilities

Michigan:
http://w3.lara.state.mi.us/orr/Files/AdminCode/334_10312_AdminCode.pdf

THE FINE REGULATORY PRINT

E. Implement infection–control measures relevant to construction, renovation, maintenance, demolition, and repair (1,16,49,50,60). Category III, IC (AIA: 5.1, 5.2)
  1. Before the project gets under way, perform an ICRA to define the scope of the activity and the need for barrier measures (1,11,13—16,48—51,60). Category III, IC (AIA: 5.1)
     a. Determine if immunocompromised patients may be at risk for exposure to fungal spores from dust generated during the project (13—16,48,51).
     b. Develop a contingency plan to prevent such exposures (13—16,48,51).
  2. Implement infection–control measures for external demolition and construction activities (11,13—16,50,61,62). Category III
     a. Determine if the facility can operate temporarily on recirculated air; if feasible, seal off adjacent air intakes.
     b. If this is not possible or practical, check the low–efficiency (roughing) filter banks frequently and replace as needed to avoid buildup of particulates.
     c. Seal windows and reduce wherever possible other sources of outside air intrusion (e.g., open doors in stairwells and corridors), especially in PE areas.
  3. Avoid damaging the underground water system (i.e., buried pipes) to prevent soil and dust contamination of the water (1,63). Category III, IC (AIA: 5.1)
  4. Implement infection–control measures for internal construction activities (1,11,13—16,48—50,64). Category III, IC (AIA: 5.1, 5.2)
     a. Construct barriers to prevent dust from construction areas from entering patient–care areas; ensure that barriers are impermeable to fungal spores and in compliance with local fire codes (1,45,48,49,55,64—66).
     b. Seal off and block return air vents if rigid barriers are used for containment (1,16,50).
     c. Implement dust–control measures on surfaces and divert pedestrian traffic away from work zones (1,48,49,64).
     d. Relocate patients whose rooms are adjacent to work zones, depending on their immune status, the scope of the project, the potential for generation of dust or water aerosols, and the methods used to control these aerosols (1,64,65).
  5. Perform those engineering and work–site related infection–control measures as needed for internal construction, repairs, and renovations (1,48,49,51,64,66). Category III, IC (AIA: 5.1, 5.2)
     a. Ensure proper operation of the air–handling system in the affected area after erection of barriers and before the room or area is set to negative pressure (39,47,50,64). Category III
     b. Create and maintain negative air pressure in work zones adjacent to patient–care areas and ensure that required engineering controls are maintained (1,48,49,51,64,66).
     c. Monitor negative airflow inside the construction barriers (1,67).
     d. Monitor barriers and ensure integrity of the construction barriers; repair gaps or breaks in barrier joints (1,65,66,68).
     e. Seal windows in work zones if practical; use window chutes for disposal of large pieces of debris as needed, but ensure that the negative pressure differential for the area is maintained (1,13,48).
     f. Direct pedestrian traffic from construction zones away from patient–care areas to minimize dispersion of dust (1,13—16,44,48—51,64).
     g. Provide construction crews with 1) designated entrances, corridors, and elevators wherever practical; 2) essential services (e.g., toilet facilities) and convenience services (e.g., vending machines); 3) protective clothing (e.g., coveralls, footgear, and headgear) for travel to patient–care areas; and 4) a space or anteroom for changing clothing and storing equipment (1,11,13—16,50).
     h. Clean work zones and their entrances daily by 1) wet–wiping tools and tool carts before their removal from the work zone; 2) placing mats with tacky surfaces inside the entrance; and 3) covering debris and securing this covering before removing debris from the work zone (1,11,13—16,50).
     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 ft3/ min., or exhaust air directly to the outside (16,50,64,67,69).
     j. Upon completion of the project, clean the work zone according to facility procedures, and install barrier curtains to contain dust and debris before removing rigid barriers (1,11,13—16,48—50).
     k. Flush the water system to clear sediment from pipes to minimize waterborne microorganism proliferation (1,63).
     l. Restore appropriate ACH, humidity, and pressure differential; clean or replace air filters; dispose of spent filters (1,4,28,47).

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