


Life Safety Risk Assessment: What is it and what is Required?

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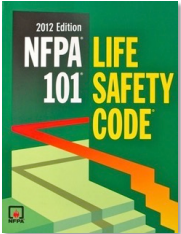
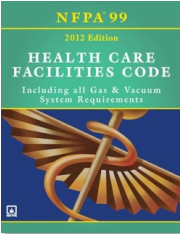
1

OVERVIEW

July 5, 2016

CMS adopted 2012 editions:

- Health Care Facilities Code (NFPA 99)
- Life Safety Code (NFPA 101)©



November 1, 2016

CMS began surveying for compliance with the **2012 LSC and HCFC**

NOW


Life Safety Surveyors are included on more accrediting surveys than before, resulting in more citations for items located in your Physical Environment of Care.

2


WHAT IS A RISK ASSESSMENT?

DEFINITION

A Risk Assessment is a systematic process of evaluating the potential risk that may be involved in a projected activity or undertaking in order to identify health and safety hazards within the workplace or **YOUR** Surgery Center.



The image shows a hand holding a white ruler vertically. To the left of the ruler, four wooden blocks are stacked vertically, each with a letter: 'R' on top, 'I' below it, 'S' below that, and 'K' at the bottom. The background is a light blue gradient.



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3

TYPES of Risk Assessments

The following Risk Assessments are **required** for all Surgery Centers:

Building Category Risk Assessments

Wet Room Risk Assessments

Infection Control Risk Assessments (ICRA)

When performing construction or renovation efforts in an active environment



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BUILDING CATEGORY POLICY

- CMS requires that all healthcare facilities develop and implement a policy that addresses how to determine the risk categories of your physical environment.
- The categories of risk shall be determined in accordance with Chapter 4 of the Health Care Facilities Code (NFPA 99 – 2012).
- The policy must be approved by the Governing Body and updated on an annual basis, as needed.



5

Building Category RA | Categories

Pursuant to NFPA 99: 4.1 - Fundamentals for the items and/or systems noted below shall be presented to the governing body for approval on an annual basis:

CATEGORY 1

Facility systems in which failure of such equipment or systems **is likely to cause major injury or death of patients or caregivers** shall be designed to meet system Category 1 requirements as defined in this code.

CATEGORY 2

Facility systems in which failure of such equipment or systems **is likely to cause minor injury or death of patients or caregivers** shall be designed to meet system Category 2 requirements as defined in this code.

CATEGORY 3

Facility systems in which failure of such equipment or systems **is not likely to cause injury to patients or caregivers** shall be designed to meet system Category 3 requirements as defined in this code.

CATEGORY 4

Facility systems in which failure of such equipment **would have no impact on patient care** shall be designed to meet system Category 4 requirements as defined in this code.



The Category definitions in this Chapter shall apply to Chapters 5 through 11.

6

Building Category RA

NOTE

All Surgery Centers using general anesthesia and/or life support equipment and that contain critical care areas **are automatically** **Category 1**



7

BUILDING CATEGORY ITEMS FOR EVALUATION

Health Care Facilities Code
(NFPA 99 - 2012)

Chapters 5 - 11

These items are **evaluated objectively and scored** based on the Category definitions provided earlier.




8



Building Category RA

ITEMS FOR EVALUATION

Health Care Facilities Code (NFPA 99 - 2012)




Chapter 5 Medical Gas Systems	
Evaluate all gases installed and their location for the impact on patient safety should they fail	Rating of 1 – 3
Chapter 6 Electrical Systems	
Evaluate normal power, emergency power and battery systems for the impact on patient safety in all locations (non-critical, critical and non-patient areas)	Rating of 1 – 3
Chapter 7 Information and Communication Systems	
Evaluate items such as data (internet), Telephone, Nurse Call and Cable TV and their importance on patient safety in the event of disruption	Rating of 1 – 3
Chapter 8 Plumbing Systems	
Evaluate potable water, wastewater and water conditioning for the impact on patient safety in all locations	Rating of 1 – 3

9


Building Category RA

ITEMS FOR EVALUATION

Health Care Facilities Code (NFPA 99 - 2012)



Chapter 9 Heating, Ventilation and Air-Conditioning (HVAC) Systems	
Evaluate the HVAC System and their importance on providing proper temperature, pressure and humidity levels in the event of any disruption	Rating of 1 – 3
Chapter 10 Electrical Equipment	
Evaluate all receptacles, power strips, line isolation monitors and portable equipment and their impact on patient safety	Rating of 1 – 3
Chapter 10 Medical Gas Equipment	
Evaluate the integrity of medical gas cylinders, their storage, transfilling and condition of manifolds	Rating of 1 – 3



REMEMBER... upon completion, submit the findings to the Governing Body for Approval.

10

WET ROOM RISK ASSESSMENT WHAT CHANGED?

Several new items were implemented when CMS adopted the NFPA 99 2012 edition.

- **Section 6.3.2.2.8** of this code now requires that all Wet Procedure locations shall be provided with special protection against electrical shock.
- **Section 6.3.2.2.8.4** states that all Operating Rooms SHALL be considered a wet procedure location, UNLESS a risk assessment conducted by the health care governing body determines otherwise.



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11

Wet Room RA

ITEMS TO CONSIDER

Health Care Facilities Code
(NFPA 99 - 2012)



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Is the OR a wet location or not?

Consider these questions to determine...


- ✓ Are waste extracting systems utilized to reduce liquids from collecting on the floor?
- ✓ Is there evidence or history of shock to staff or patients in the last 5 years?
- ✓ Are procedures performed that generate standing fluid on the floor on a weekly basis?
- ✓ How often are staff members required to clean up liquids on the floor on a weekly basis?
- ✓ Are procedures performed that generate drenching of the work area on a weekly basis?

12

Wet Room RA

ITEMS TO CONSIDER

Health Care Facilities Code
(NFPA 99 - 2012)



Is the OR a wet location or not?

Consider these questions to determine...


- ✓ Are there containers with conductive liquid within 6 feet of the procedure area?
- ✓ Are line powered cords on the floor?
- ✓ Are electrical cords suspended from the ceiling to prevent contact with the floor?
- ✓ Are staff exposed to electrical hazards?
- ✓ Is a visual inspection of all equipment completed before starting any procedure?
- ✓ Are line cords, attachment plugs, or exposed metal routinely inspected and repaired or taken out of service until repaired?

13

Wet Room RA | Scoring

- Many RA templates contain formulas that allows the governing body to objectively score each question.
- Most recommend the following determination, including the template developed by American Society of Health Care Engineers (ASHE):

SCALE OF 1 - 4	
Score of 2 or less	Does not require mitigation and is deemed to not be a wet location.
Score of 3 or more	requires mitigation and is deemed to be a wet location.



14

Wet Room RA | Mitigation

If the operating room is deemed a wet location...

Section 6.3.2.2.8.2 of NFPA 99 – 2012: Special protection against electrical shock shall be provided by one of the following:

- 1 A power distribution system that inherently limits the possible ground-fault current due to a first fault to a low value, without interrupting the power supply (Line Isolation Monitors)
- 2 A power distribution system in which the power supply is interrupted if the ground-fault current does, in fact, exceed the trip value of a Class A GFCI (more than 5 mA)



15

INFECTION CONTROL RISK ASSESSMENT

The use of infection control risk assessments (ICRAs) during hospital design and construction projects has been evolving for the past several decades...

“Infection Control Risk Assessment”


The formal version was introduced in the 1996-1997 edition of the *Guidelines for Design and Construction of Hospital and Health Care Facilities*, then published by the American Institute of Architects (AIA), although earlier editions required construction and renovation assessments related to specific risks.



16

Infection Control RA

RENOVATIONS/ CONSTRUCTION



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Risks associated with construction include:

- ✓ dust and debris compromising the environment
- ✓ airborne microbes journeying via air currents to infect other susceptible hosts
- ✓ an unbalanced ventilation system affecting air quality
- ✓ water stagnation and contamination, accumulated and multiple waste reservoirs and ineffective dustproof barriers
- ✓ managing the transportation of waste and contaminated workers, among others.


Given the extent of known conditions, construction-related requirements of the ICRA must be included into the contract documents and implemented during construction.

17

Infection Control RA

RENOVATIONS/ CONSTRUCTION

FGI Guidelines



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As part of the IC risk mitigation recommendations, specific methods to reduce the potential for the transmission of airborne and waterborne biological contaminants are documented in writing.

The FGI *Guidelines* include the following considerations as a minimum standard:

- ✓ Patient placement and relocation plans.
- ✓ Protection from airborne contaminants (i.e., barriers and other protective measures to protect adjacent areas and patients), demolition and emergencies (e.g., planned and unplanned utility outages and evacuation).
- ✓ Phasing or temporary provisions for construction or modification of HVAC and water supply systems.
- ✓ Training for staff, visitors and construction personnel.
- ✓ Construction worker flows, including construction worker routes (e.g., elevator use for personnel and materials); movement of debris, traffic flow and cleanup; and provisions for bathroom and food facility use.
- ✓ Installation of clean materials that have not been damaged by water.

18

Infection Control RA | Matrix Precautions

All construction projects in an active environment shall identify the **TYPE** of construction project activity...

TYPE A | Inspection and Non-Invasive Activities

Includes, but is not limited to:

- removal of ceiling tiles for visual inspection only e.g., limited to 1 tile per 50 square feet
- painting (but not sanding)
- wallcovering, electrical trim work, minor plumbing, and activities which do not generate dust or require cutting of walls or access to ceilings other than for visual inspection.



19

Infection Control RA | Matrix Precautions

All construction projects in an active environment shall identify the **TYPE** of construction project activity...

TYPE B | Small scale, short duration activities (minimal dust)

Includes, but is not limited to:

- installation of telephone and computer cabling
- access to chase spaces
- cutting of walls or ceiling where dust migration can be controlled.



20

Infection Control RA | Matrix Precautions

All construction projects in an active environment shall identify the **TYPE** of construction project activity...

TYPE C | Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies

Includes, but is not limited to:

- sanding of walls for painting or wall covering
- removal of floorcoverings, ceiling tiles and casework
- new wall construction
- minor duct work or electrical work above ceilings
- major cabling activities
- any activity which cannot be completed within a single work shift.

21

Infection Control RA | Matrix Precautions

All construction projects in an active environment shall identify the **TYPE** of construction project activity...

TYPE D | Major Demolition and Construction Projects

Includes, but is not limited to:

- activities which require consecutive work shifts
- requires heavy demolition or removal of a complete cabling system
- new construction.

22

Infection Control RA | Patient Risk Groups

Upon determination of the **Type** of Construction Activity, the **RISK** assigned to an active surgical environment will be determined as follows:

LOW RISK

Office Areas

MEDIUM RISK

Special Units,
Imaging,
Rehabilitation
therapy, etc.

HIGH RISK

Outpatient
Surgery
Centers

HIGHEST RISK

Operating and
Procedure
Rooms



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Infection Control RA | Class of Precautions

CLASS I

- Execute work by methods to minimize raising dust from construction operations
- Immediately replace a ceiling tile displaced for visual inspection
- Clean work area upon completion of task



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Infection Control RA | Class of Precautions

CLASS II

- Provide active means to prevent airborne dust from dispersing into atmosphere.
- Water mist work surfaces to control dust while cutting.
- Seal unused doors with duct tape.
- Block off and seal air vents.
- Place dust mat at entrance and exit of work area
- Remove or isolate HVAC system in areas where work is being performed.



25

Infection Control RA | Class of Precautions

CLASS III

- Remove or Isolate HVAC system in area where work is being done to prevent contamination of duct system.
- Complete all critical barriers i.e., sheetrock, plywood, plastic, to seal area from non work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins.
- Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.
- Contain construction waste before transport in tightly covered containers.
- Cover transport receptacles or carts. Tape covering unless solid lid.



26

Infection Control RA | Class of Precautions

CLASS IV

- Isolate HVAC system in area where work is being done to prevent contamination of duct system.
- Complete all critical barriers i.e., sheetrock, plywood, plastic, to seal area from non work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins.
- Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.
- Seal holes, pipes, conduits, and punctures.
- Construct anteroom and require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave work site.
- All personnel entering work site are required to wear shoe covers. Shoe covers must be changed each time the worker exits the work area.



27

IC RA | Final Determination Chart

PATIENT RISK GROUP	TYPE A	TYPE B	TYPE C	TYPE D
LOW	I	II	II	III/IV
MEDIUM	I	II	III	IV
HIGH	I	II	III/IV	IV
HIGHEST	II	III/IV	III/IV	IV

NOTE: Infection Control approval will be required when the Construction Activity and Risk Level indicate that Class III or Class IV control procedures are necessary.



28

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 - ✓ Action Plan
- Operating Room Wet Area Risk Assessment
 - ✓ RA Template
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29

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30

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Questions?
Contact John L. Crowder, Jr.
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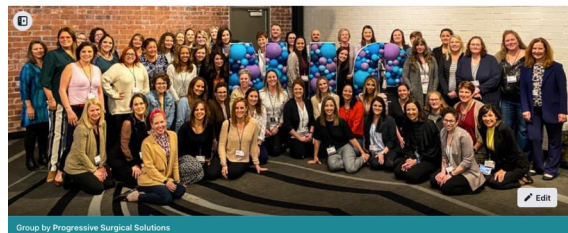
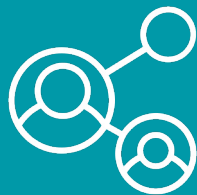


Any questions regarding CE Credit, contact Jenna@pss4asc.com



33

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34

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35

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36