

Pendulum NFPA 99 2012 Risk Assessment Tool

General Information

Date of Assessment:

Baseline Assessment:

Focused Assessment:

Facility Name:

Address:

Phone:

Administrator:

Maintenance Director:

Number of Beds:

Number of Stories:

Approximate Square Footage:

Risk Assessment Tool Instructions

PURPOSE OF THE RISK ASSESSMENT TOOL

The purpose of the Risk Assessment Tool is to determine which sections of the NFPA 99, Health Care Facilities Code, 2012 edition¹ (referred to as the “code” throughout these instructions) apply to installed systems and/or equipment in a skilled nursing facility (SNF). This tool shall be used when an area(s) is required to be assessed due to change-of-use, renovation, remodeling, or new construction. The facility should maintain the findings on-file in all cases for general compliance purposes.

WHEN TO CONDUCT THE RISK ASSESSMENT

It is recommended that a baseline risk assessment to evaluate the consequences of failure be conducted on all systems and equipment within the facility and subsequently reviewed on an annual basis.

There may be times when specific work occurs within the SNF when a focused risk assessment will need to be conducted in a specific area(s) of the facility when change-of-use, renovation, remodeling, and/or new construction occurs. In advance of this work, a risk assessment to evaluate the consequences of failure of specific systems and applicable equipment shall be conducted in this area(s) to determine which sections of the code shall apply and to categorize them appropriately.

RISK ASSESSMENT

According to explanatory information provided in section 4.2 of the code, the assessment should follow procedures as outlined below.

The results should be documented with this tool, and records should be retained to illustrate compliance.

INSTRUCTIONS FOR USING THE RISK ASSESSMENT TOOL

Prior to utilizing the Risk Assessment Tool, the following should be considered for implementation:

- Establish an assessment team within the facility that can review all aspects of facility operations in order to complete a comprehensive assessment process from multiple perspectives on physical plant infrastructure, patient care, and occupant safety.
- Familiarize all team members with NFPA 99, Health Care Facilities Code (2012 edition); specifically, section 4.1 on Building Systems Categories and 4.2 on Risk Assessment.
- Ensure team members understand the importance of system reliability and the consequences of failure.

The Risk Assessment Tool has been organized into the following two (2) sections for skilled nursing facilities (SNF):

- Systems
- Equipment

¹ The 2012 edition of the code has been reorganized and is now a risk-based code; whereas, previous editions were presented as occupancy-based standards.

SYSTEMS AND EQUIPMENT

The Risk Assessment Tool has been organized in a manner where the specific systems that are typical in a healthcare facility are itemized in an order that corresponds to specific chapters of the code on the **Systems** page. For example: oxygen, medical air, vacuum, and waste anesthetic gas disposal (WAGD) are grouped together on the tool to correspond to chapter 5 of the code. Electrical systems correspond to chapter 6 of the code and so on.

When change-of-use, renovation, remodeling, or new construction occurs within the SNF, specific patient care equipment, as identified in the following sections of the code, should be assessed, and the findings of the evaluation should be entered on the **Equipment** page of the Risk Assessment Tool:

- Chapter 10: Performance Criteria and Testing for Patient Care-related Electrical Appliances and Equipment
 - Permanently Connected–Fixed Equipment
 - Cord and Plug-Connected–Portable Equipment
- Chapter 11: Gas Equipment
 - Equipment required for the administration of non-flammable medical gases
 - Equipment required for the administration of vapors and aerosols

The level of care provided in the SNF will determine what equipment needs to be evaluated during the process.

BUILDING SYSTEM CATEGORIES

When conducting the assessment, the goal is to categorize the system being evaluated to one of the following:

Category 1: Facility systems in which failure of such systems is likely to cause major injury or death of patients or caregivers shall be designed to meet system Category 1 requirements of the code.

NOTE: Systems are expected to work or be available at all times to support patient needs. Failure of a Category 1 system has very serious consequences. Major injury or death can be caused by the failure of a life support system in a SNF.

Major injury can include any of the following:

1. Any amputation
2. Loss of sight in an eye (whether temporary or permanent)
3. Chemical or hot metal burns to the eye or any penetrating injury to the eye
4. Any injuries that result from electrical shock or electrical burns leading to unconsciousness and that require resuscitation or admittance to a hospital for 24 hours or more
5. Any other injury that leads to hypothermia, heat-induced illness, or unconsciousness and that requires resuscitation or admittance to a hospital for 24 hours or more
6. Loss of consciousness caused by asphyxia or lack of oxygen or exposure to biological agent or harmful substance
7. Absorption of any substance by inhalation, skin, or ingestion, causing loss of consciousness or acute illness requiring medical treatment

8. Acute illness requiring medical treatment where there is reason to believe the exposure was to biological agents, toxins, or infected material

Category 2: Facility systems in which failure of such equipment is likely to cause minor injury to patients or caregivers shall be designated to meet system Category 2 requirements defined in the code. The code defines a minor injury as, “*not serious or involving risk of life.*”

NOTE: Systems are expected to provide a high level of reliability; however, limited to short durations of system failure can be tolerated without significant impact on patient care. These systems support patient needs but are not critical for life support.

Failure of a Category 2 system will cause minor injury. Examples of Category 2 systems include the following in a SNF:

- Task or procedure lighting in patient rooms
- Potable water in patient care areas

Category 3: Facility systems in which failure of such equipment is not likely to cause injury to patients or caregivers, but can cause discomfort, shall be designed to meet system Category 3 requirements as defined in the code.

NOTE: The level of reliability of a normal building system is expected. Such systems support patient needs, but failure of such equipment would not immediately affect patient care. Such equipment is not critical for life support. Examples of Category 3 systems include the following in a SNF:

- Heating systems in the southern United States
- Humidity control in non-operating areas
- Motorized bed adjustments
- Cooling tower makeup water in the northwest United States

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

NOTE: Such systems have no impact on patient care and would not be noticeable to patients in the event of failure. Examples of Category 4 systems include the following in a SNF:

- Gray water lawn systems
- Seasonal lighting systems
- Public address systems
- Pneumatic tube systems

The category definitions apply to equipment operations and are not intended to consider the intervention of caregivers or others.

COMPLETING THE RISK ASSESSMENT FORM

Once the assessment of the consequences of failure of systems and applicable equipment has been completed in accordance with the methodology recommended in the “Risk Assessment” section of these instructions, the Risk Assessment Tool shall be completed with the findings of the assessment. The form has been designed with the following sections:

- General Information
- Instructions
- Systems Risk Assessment
- Equipment Risk Assessment
- Additional Information/Comments

The user shall complete all required sections of the document.

The **General Information** section will identify if the documents pertain to a baseline assessment or a focused assessment. The appropriate box needs to be checked to illustrate the type of assessment that the tool is being used for.

The **Instructions** section provides the guidance and references needed to use the Risk Assessment Tool.

The **Systems** and **Equipment** sections of the tool provide the space needed to illustrate the findings of the risk assessment in accordance with Categories 1 through 4 as identified in the code.

If a system identified in the **Systems** section of the tool is not installed within the facility, the Not Applicable (NA) box should be checked.

Itemization of applicable patient care equipment identified in Chapters 10 and 11 of the code shall be manually inserted in this section of the tool, and the findings of the risk assessment in accordance with Categories 1 through 4 identified in the code should be inserted in the space provided.

The **Additional Information/Comments** page provides space for any explanatory information that needs to be added to the tool.

Systems Risk Assessment

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.
2	Facility systems in which failure of such equipment or systems is likely to cause minor injury to patients or caregivers shall be designed to meet system Category 2 requirements as defined in this code.
3	Facility systems in which failure of such equipment or systems is not likely to cause injury to patients or caregivers but can cause discomfort to patients shall be designed to meet system Category 3 requirements as defined in this code.
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.

	Systems	Category					Notes
		1	2	3	4	NA	
Chapter 5	Oxygen						
	Medical Air						
	Vacuum						
	WAGD (Waste Anesthetic Gas Disposal)						
Chapter 6	Electrical Systems						
Chapter 7	Data						
	Phone						

	Systems	Category					Notes
		1	2	3	4	NA	
	Nurse Call						
	Cable TV						
Chapter 8	Potable Water						
	Non-Potable Water						
	Water Heating						
	Water Conditioning						
	Non-Medical Compressed Air						
	Black Water Waste						
	Gray Water Waste						
	Clear Water Waste						
Chapter 9	Heating						
	Ventilation						
	Air Conditioning						

Equipment Risk Assessment

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.
2	Facility systems in which failure of such equipment or systems is likely to cause minor injury to patients or caregivers shall be designed to meet system Category 2 requirements as defined in this code.
3	Facility systems in which failure of such equipment or systems is not likely to cause injury to patients or caregivers but can cause discomfort to patients shall be designed to meet system Category 3 requirements as defined in this code.
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.

<u>Equipment:</u>	Electrical Equipment: Chapter 10 Requirements Gas Equipment: Chapter 11 Requirements
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Room or Area Evaluated	Item	Equipment ID#	Category				Notes
			1	2	3	4	

Room or Area	Item	Equipment ID#	Category				Notes

Additional Information/Comments

Additional Information/Comments: