AGENDA

Healthcare Interpretations Task Force
June 7, 2022
1:00 p.m. to 5:00 p.m. (EDT)

Boston Convention and Exhibition Center
Room 203
Boston, Massachusetts

To join the meeting remotely, please contact lmackay@nfpa.org.

1. Call to order at 1:00 p.m. (EDT).

2. Introduction of members and guests. See page 03.

3. Review of questions.
i. Hazardous areas in business and ambulatory occupancies: 

4. Old business.

5. New business.
   a. Sedation levels/capability of self-preservation (J. Schwartz, B. 
      Prediger). See page 15.

6. Next meeting.

7. Adjournment by 5:00 p.m. (EDT).
<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Title</th>
<th>Organization</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chad E. Beebe</td>
<td>6/12/2012</td>
<td>Principal</td>
<td>HCI-TFC</td>
<td>ASHE - AHA&lt;br&gt;PO Box 5756&lt;br&gt;Lacey, WA 98509-5756&lt;br&gt;Alternate: David A. Dagenais</td>
</tr>
<tr>
<td>Clinton Butts</td>
<td>04/25/2022</td>
<td>Principal</td>
<td>HCI-TFC</td>
<td>DNV Healthcare USA Inc.&lt;br&gt;1400 Ravello Drive&lt;br&gt;Katy, TX 77449&lt;br&gt;Alternate: Brennan Scott</td>
</tr>
<tr>
<td>Gregory E. Harrington</td>
<td>10/4/2009</td>
<td>Principal</td>
<td>HCI-TFC</td>
<td>National Fire Protection Association&lt;br&gt;One Batterymarch Park&lt;br&gt;Quincy, MA 02169-7471</td>
</tr>
<tr>
<td>William E. Koffel</td>
<td>1/5/2018</td>
<td>Principal</td>
<td>HCF Health Care Occupancies</td>
<td>Koffel Associates, Inc.&lt;br&gt;8815 Centre Park Drive&lt;br&gt;Suite 200&lt;br&gt;Columbia, MD 21045-2107</td>
</tr>
<tr>
<td>James Merrill II</td>
<td>10/4/2009</td>
<td>Principal</td>
<td>HCI-TFC</td>
<td>US Department of Health &amp; Human Services&lt;br&gt;Centers for Medicare &amp; Medicaid Services (CMS)&lt;br&gt;7500 Security Boulevard&lt;br&gt;M/S S2-12-25&lt;br&gt;Baltimore, MD 21244-1849&lt;br&gt;Alternate: Martin Casey</td>
</tr>
<tr>
<td>Ajay V. Prasad</td>
<td>3/19/2019</td>
<td>Principal</td>
<td>HCI-TFC</td>
<td>JENSEN HUGHES&lt;br&gt;3610 Commerce Drive, Suite 817&lt;br&gt;Baltimore, MD 21227-1652&lt;br&gt;American Health Care Association&lt;br&gt;Alternate: David R. Hood</td>
</tr>
<tr>
<td>Kenneth E. Bush</td>
<td>10/4/2009</td>
<td>Principal</td>
<td>HCI-TFC</td>
<td>Maryland State Fire Marshals Office&lt;br&gt;301 Bay Street, Lower Level&lt;br&gt;Easton, MD 21601-2721&lt;br&gt;International Fire Marshals Association&lt;br&gt;Alternate: Kim L. Osborn</td>
</tr>
<tr>
<td>Sharon S. Gilyeat</td>
<td>04/14/2021</td>
<td>Principal</td>
<td>HCI-TFC</td>
<td>Koffel Associates, Inc.&lt;br&gt;8815 Centre Park Drive&lt;br&gt;Suite 200&lt;br&gt;Columbia, MD 21045&lt;br&gt;Health Care Facilities Correlating Committee</td>
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<tr>
<td>David P. Klein</td>
<td>10/4/2009</td>
<td>Principal</td>
<td>HCI-TFC</td>
<td>US Department of Veterans Affairs&lt;br&gt;810 Vermont Avenue, NW&lt;br&gt;Mail Code: (19HEF)&lt;br&gt;Washington, DC 20420&lt;br&gt;Alternate: Peter A. Larrimer</td>
</tr>
<tr>
<td>Herman McKenzie</td>
<td>5/24/2018</td>
<td>Principal</td>
<td>HCI-TFC</td>
<td>The Joint Commission - SIG&lt;br&gt;One Renaissance Boulevard&lt;br&gt;Oakbrook Terrace, IL 60181&lt;br&gt;Alternate: Tim Markijohn</td>
</tr>
<tr>
<td>James S. Peterkin</td>
<td>8/20/2019</td>
<td>Principal</td>
<td>HCI-TFC</td>
<td>TLC Engineering&lt;br&gt;Senior Fire Protection Engineer&lt;br&gt;1700 Market Street, Suite 1525&lt;br&gt;Philadelphia, PA 19103&lt;br&gt;NFPA Health Care Section</td>
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<tr>
<td>G. Brian Prediger</td>
<td>5/27/2010</td>
<td>Principal</td>
<td>HCI-TFC</td>
<td>US Army Corps of Engineers&lt;br&gt;Director, Project Management&lt;br&gt;7701 Telegraph Road&lt;br&gt;Alexandria, VA 22315&lt;br&gt;Alternate: Justin A. Schwartz</td>
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<tr>
<td>Name</td>
<td>Position</td>
<td>Date</td>
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<tr>
<td>Charlie Schlegel</td>
<td>Principal HCl-TFC</td>
<td>05/23/2022</td>
<td>Pennsylvania Department of Health Division of Safety Inspection 2150 Herr Street, 1st Floor, Suite A Harrisburg, PA 17103</td>
<td>State Health Care Agency (SHA) Alternate: John L. Williams</td>
</tr>
<tr>
<td>Martin Casey</td>
<td>Alternate HCl-TFC</td>
<td>06/11/2015</td>
<td>US Department of Health &amp; Human Services Centers for Medicare &amp; Medicaid Services (CMS) 7500 Security Boulevard, M/S S2-12-25 Baltimore, MD 21244-1849</td>
<td>Principal: James Merrill II</td>
</tr>
<tr>
<td>David A. Dagenais</td>
<td>Alternate HCl-TFC</td>
<td>10/4/2009</td>
<td>Partners/Wentworth-Douglass Hospital 789 Central Avenue Dover, NH 03820</td>
<td>American Society for Healthcare Engineering Principal: Chad E. Beebe</td>
</tr>
<tr>
<td>Tim Markjohn</td>
<td>Alternate HCl-TFC</td>
<td>04/20/2020</td>
<td>The Joint Commission Field Director, Surveyor Management and Support Division of Accreditation &amp; Certification Operations One Renaissance Boulevard Oakbrook Terrace, IL 60181</td>
<td>Principal: Herman McKenzie</td>
</tr>
<tr>
<td>Justin A. Schwartz</td>
<td>Alternate HCl-TFC</td>
<td>2/18/2020</td>
<td>U.S. Army Corps Of Engineers 7701 Telegraph Road (Floor 3) Cehnc-Edx-T Medical Facilities Alexandria, VA 22315-3813</td>
<td>Principal: G. Brian Prediger</td>
</tr>
<tr>
<td>Brennan Scott</td>
<td>Alternate HCl-TFC</td>
<td>4/11/2018</td>
<td>Det Norske Veritas Healthcare (DNV GL) 5049 West Bay Road Plainfield, IN 46168</td>
<td>Principal: Clinton Butts</td>
</tr>
<tr>
<td>John L. Williams</td>
<td>Alternate HCl-TFC</td>
<td>06/20/2016</td>
<td>Washington State Department of Health Construction Review Services 310 Israel Road, SE PO Box 47852 Olympia, WA 98504</td>
<td>State Health Care Agency (SHA) Principal: Charlie Schlegel</td>
</tr>
</tbody>
</table>
BACKGROUND INFORMATION (optional)
LSC 18.1.3.3 refers to "Sections of health care facilities..." with respect to classification as other occupancies where the sections meet both of the two criteria. Item 1 states that "They are not intended to provide services simultaneously, for four or more inpatients for purposes of housing treatment, or customary access by inpatients incapable of self-preservation." They refers back to "Sections."

QUESTION:
1. Is it the intent of the code to allow multiple sections of a health care facility to be classified as other occupancies provided that each section conforms to Items 1 and 2 of 18.1.3.3?
   For example, the first floor of a hospital would be permitted to have two separate sections each providing services simultaneously to three or fewer inpatients who are incapable of self-preservation.

2. Is it the intent of the code for Item 2 of 18.1.3.3 to be met by floor assemblies having a 2-hour fire-resistance rating?
   For example, would 18.1.3.3 permit adjoining stories to each provide services simultaneously to not more than three inpatients who are incapable of self-preservation.
BACKGROUND INFORMATION (optional)

Hospitals have areas that are called by various names including central sterile processing, sterile supply, or sterile processing department in which supplies are cleaned and stored. The areas are staff only with low occupant densities and significant portion of the floor area used for equipment and shelving.

The areas are "back-of-house" and often located away from patient and public areas.

Although these areas resemble industrial occupancies, the washers, carts, sterilizers and items being sterilized could be considered as low to moderate hazard depending on the use of chemicals, etc. Low hazard laboratories (NFPA 45 Class D) are classified as business occupancies.

The LSC does not provide guidance for assigning an occupancy classification for the portions of these areas that are not used for storage.

QUESTION:

Is it the intent of the code for central sterile processing, sterile stores, sterile processing departments and similar departments?

excluding storage spaces within the departments, to be classified as industrial occupancies?
Name: Lennon Peake

Document to be Interpreted: NFPA 101 2012 Edition

Subject: Non-Required Fire Door Inspection and Testing

Background Information:

LSC 2012 Section 4.5.8 requires any devices, equipment, system, condition, arrangement, level of protection or other feature required by the Code to be maintained unless the Code exempts such maintenance.

LSC 2012 Section 4.6.12.3 requires existing life safety features obvious to the public, if not required by the Code, to be maintained or removed.

The LSC 2021 Section 4.6.12.4 has clarified the intent of the language “obvious to the public” and now states that where a door or door frame is not required to be fire protection rated and is equipped with a fire protection listing label, the door and door frame are not required to comply with NFPA 80.

Question:

Are doors provided with a fire protection listing label located in non-rated barriers required to have an annual inspection and test as required by NFPA 80?
Name: Lennon Peake

Document to be Interpreted: NFPA 101 2012 Edition

Subject: Transmission of Fire Alarm Signal During Fire Drills

Background Information:

LSC 2012 Section 18/19.7.1.4 requires the transmission of a fire alarm signal and simulation of emergency fire conditions during a fire drill.

NFPA 101 2021 Edition modified the sections as indicated below:

LSC 2021 Section 18/19.7.1.4 Fire drills in health care occupancies shall include the simulation of emergency fire conditions and, except as indicated in 18/19.7.1.7, include activation of the fire alarm system notification appliances. The committee statement associated with First Revision 6845 states “This clarifies the intent of transmission of a fire alarm signal and shows that it is not intended to send a signal to emergency forces”.

LSC 2012 18/19.7.1.7 allows for a coded announcement to be used instead of activating fire alarm system notification appliances.

It should be noted that NFPA 72 2010 Table 14.4.5 requires an annual test to verify transmission of the fire alarm signal to a supervising station.

Question:

As part of a quarterly fire drill, is verification that a fire alarm signal was transmitted to a supervision station required?
Clarification is requested regarding how to calculate the area of health care suites limited by LSC 2012 18/19.2.5.7.2.3, 18/19.2.5.7.3.3 and smoke compartments limited by 18.3.7.1(3) and 19.3.7(1).

The LSC contains maximum allowable areas for suites and smoke compartments depending on the life safety features provided and/or the configurations of the suites / smoke compartments.

The LSC 2021 Section 3.3.22.2.3 defines a new term:

**Gross Floor Area (Health Care and Ambulatory Health Care Occupancies)** – For determining the areas of smoke compartments in health care and ambulatory health care occupancies and determining the areas of health care suites, the floor area within the inside perimeter of the outside walls, or the outside walls and fire walls of a building, or outside and/or inside walls that bound an occupancy or incidental use area with no deductions for hallways, closets, thickness of interior walls, columns, or other features, but excluding floor openings associated with atriums and communicating spaces.

The annex note for Section A.3.3.22.2.3 further explains

**Gross Floor Area (Health Care and Ambulatory Health Care Occupancies)** – Stairs and elevator and building services shafts are not included in determining gross floor areas of health care and ambulatory health care smoke compartments and health care suites.

**Question:**

Are stairs, elevators and building services shafts required to be included in the gross floor area calculation of suites and smoke compartments in health care and ambulatory health care occupancies?
NAME: Chad Beebe

DOCUMENT TO BE INTERPRETED: 70

EDITION: 2011

BACKGROUND INFORMATION (optional)

**Spare Breakers**

The code is currently silent on spare breaker on/off positions. NFPA 70 (2010) states in 408.4 (A), Circuit Directory or Circuit Identification, states, “Spare positions that contain unused overcurrent devices or switches shall be described accordingly. The identification shall be included in a circuit directory that is located on the face or inside of the panel door in the case of a panelboard and at each switch or circuit breaker in a switchboard or switchgear. No circuit shall be described in a manner that depends on transient conditions of occupancy.”

Surveyors have inconsistently cited position of spare breakers. While some say that they are required to be in the “on” position, others say they have to be in the “off” position.

**QUESTION:**

Do spare breakers have to be in the “on” or "off" position?
There are several sections in Code that require emergency illumination, (typically served by a generator for health care), battery-powered lighting units, or battery-powered emergency lighting.

**Fly Wheels**

There are several sections in Code that require emergency illumination, (typically served by a generator for health care), battery-powered lighting units, or battery-powered emergency lighting.

1. NFPA 101 (2012) 7.9.2 requires that Emergency Illumination provide for a minimum of 1 1/2 hours in the event of failure of normal lighting.
2. NFPA 99 (2012) 3.3.17 requires defines Battery-Powered Lighting Units according the to the NFPA 70 (2011) edition which states:
   1. Individual unit equipment for backup illumination consisting of a rechargeable battery, battery-charging means, provisions for one or more lamps mounted on the equipment, or with terminals for remote lamps, or both, and relaying device arranged to energize the lamps automatically upon failure of the supply to the unit equipment. [70, 2011] (ELS)
3. NFPA 70 (2011) 517.2 states that Battery-Powered Lighting Unit are Individual unit equipment for backup illumination consisting of the following:
   (1) Rechargeable battery
   (2) Battery-charging means
   (3) Provisions for one or more lamps mounted on the equipment, or with terminals for remote lamps, or both
   (4) Relaying device arranged to energize the lamps automatically upon failure of the supply to the unit equipment
4. Further NFPA 99 (2012) requires in 6.3.2.2.11 that Battery-Powered Lighting Units shall be provided within locations where deep sedation and general anesthesia is administered.
5. NFPA 110 (2010) requires in 7.3.1 The Level 1 or Level 2 EPS equipment location(s) shall be provided with battery-powered emergency lighting. This requirement shall not apply to units located outdoors in enclosures that do not include walk-in access.
Does a battery-powered unit have to be locally installed per individual light/exit sign?

Is a centralized battery system serving a set or group of lights acceptable?

Since a flywheel is considered a form of energy storage systems according to the below article by NFPA tied directly to the new NFPA 855 standard, does a flywheel or other energy storage system defined by code meet the INTENT of the "battery-powered" units?

GFCI on Ice Machines

NFPA 70, 210.8(B) lists a number of spaces where GFCI are required, but none specifically state that GFCI must be provided for an ice machine. It could be determined that an ice machine in a kitchen would require GFCI protection, but ice machines located in nursing units and surgery departments do not meet the definition of a kitchen in article 100. A GFCI that is installed needs to be tested per the manufacture’s instructions. Testing of GFCI’s that are supplying power to ice machines is problematic. In order to do the test, you often have to move the equipment.

QUESTIONS:

- Are ice machines not located in kitchens required to be provided with ground fault protection?
- Does ground fault protection need to be provided even if not recommended by the manufacturer?

https://safemgt.com/2021/03/02/gfis-for-ice-machines/

Hazardous areas in business and ambulatory occupancies

38.3.2.1* General.

Hazardous areas including, but not limited to, areas used for general storage, boiler or furnace rooms, and maintenance shops that include woodworking and painting areas shall be protected in accordance with Section 8.7.

We have been told by organizations and surveyors that when it comes to “areas used for general storage” that we should apply the same requirements as Chapter 18 & 19 and only require protection if they are rooms or spaces more than 50 sf. A lot of organizations are concerned about their smaller storage closets in their business occupancies.

QUESTION:

Are general storage rooms in business occupancies required to meet the requirements of Chapter 18 & 19 for hazardous areas?
Continuum of Depth of Sedation:
Definition of General Anesthesia and Levels of Sedation/Analgesia*

Committee of Origin: Quality Management and Departmental Administration

(Approved by the ASA House of Delegates on October 13, 1999, and last amended on October 23, 2019)

<table>
<thead>
<tr>
<th>Responsiveness</th>
<th>Minimal Sedation Anxiolysis</th>
<th>Moderate Sedation/Analgesia (&quot;Conscious Sedation&quot;)</th>
<th>Deep Sedation/Analgesia</th>
<th>General Anesthesia</th>
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</thead>
<tbody>
<tr>
<td><strong>Airway</strong></td>
<td>Unaffected</td>
<td>No intervention required</td>
<td>Intervention may be required</td>
<td>Intervention often required</td>
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<tr>
<td>Spontaneous Ventilation</td>
<td>Unaffected</td>
<td>Adequate</td>
<td>May be inadequate</td>
<td>Frequently inadequate</td>
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<tr>
<td><strong>Cardiovascular Function</strong></td>
<td>Unaffected</td>
<td>Usually maintained</td>
<td>Usually maintained</td>
<td>May be impaired</td>
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</table>

**Minimal Sedation (Anxiolysis)** is a drug-induced state during which patients respond normally to verbal commands. Although cognitive function and physical coordination may be impaired, airway reflexes, and ventilatory and cardiovascular functions are unaffected.

**Moderate Sedation/Analgesia ("Conscious Sedation")** is a drug-induced depression of consciousness during which patients respond purposefully** to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained.

* Monitored Anesthesia Care ("MAC") does not describe the continuum of depth of sedation, rather it describes “a specific anesthesia service performed by a qualified anesthesia provider, for a diagnostic or therapeutic procedure.” Indications for monitored anesthesia care include
“the need for deeper levels of analgesia and sedation than can be provided by moderate sedation (including potential conversion to a general or regional anesthetic.”

** Reflex withdrawal from a painful stimulus is NOT considered a purposeful response.

** Deep Sedation/Analgesia is a drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully** following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Patients may require assistance in maintaining a patent airway, and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.

** General Anesthesia is a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilatory function is often impaired. Patients often require assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function. Cardiovascular function may be impaired.

Because sedation is a continuum, it is not always possible to predict how an individual patient will respond. Hence, practitioners intending to produce a given level of sedation should be able to rescue*** patients whose level of sedation becomes deeper than initially intended. Individuals administering Moderate Sedation/Analgesia (“Conscious Sedation”) should be able to rescue*** patients who enter a state of Deep Sedation/Analgesia, while those administering Deep Sedation/Analgesia should be able to rescue*** patients who enter a state of General Anesthesia.

** Reflex withdrawal from a painful stimulus is NOT considered a purposeful response.

*** Rescue of a patient from a deeper level of sedation than intended is an intervention by a practitioner proficient in airway management and advanced life support. The qualified practitioner corrects adverse physiologic consequences of the deeper-than-intended level of sedation (such as hypoventilation, hypoxia and hypotension) and returns the patient to the originally intended level of sedation. It is not appropriate to continue the procedure at an unintended level of sedation.

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1 American Society of Anesthesiologists, *Position on Monitored Anesthesia Care*, Last Amended on October 17, 2018.
I. Introduction

The administration of local anesthesia, sedation and general anesthesia is an integral part of dental practice. The American Dental Association is committed to the safe and effective use of these modalities by appropriately educated and trained dentists. The purpose of these guidelines is to assist dentists in the delivery of safe and effective sedation and anesthesia.

Dentists must comply with their state laws, rules and/or regulations when providing sedation and anesthesia and will only be subject to Section III. Educational Requirements as required by those state laws, rules and/or regulations.

Level of sedation is entirely independent of the route of administration. Moderate and deep sedation or general anesthesia may be achieved via any route of administration and thus an appropriately consistent level of training must be established.

For children, the American Dental Association supports the use of the American Academy of Pediatrics/American Academy of Pediatric Dentistry Guidelines for Monitoring and Management of Pediatric Patients During and After Sedation for Diagnostic and Therapeutic Procedures.

II. Definitions

Methods of Anxiety and Pain Control

**minimal sedation (previously known as anxiolysis)** - a minimally depressed level of consciousness, produced by a pharmacological method, that retains the patient’s ability to independently and continuously maintain an airway and respond *normally* to tactile stimulation and verbal command. Although cognitive function and coordination may be modestly impaired, ventilatory and cardiovascular functions are unaffected.¹

Patients whose only response is reflex withdrawal from repeated painful stimuli would not be considered to be in a state of minimal sedation.

The following definitions apply to administration of minimal sedation:

*maximum recommended dose (MRD)* - maximum FDA-recommended dose of a drug, as printed in FDA-approved labeling for unmonitored home use.

*dosing for minimal sedation via the enteral route* – minimal sedation may be achieved by the administration of a drug, either singly or in divided doses, by the enteral route to achieve the desired clinical effect, not to exceed the maximum recommended dose (MRD).

The administration of enteral drugs exceeding the maximum recommended dose during a single appointment is considered to be moderate sedation and the moderate sedation guidelines apply.

Nitrous oxide/oxygen when used in combination with sedative agent(s) may produce minimal, moderate, deep sedation or general anesthesia.
If more than one enteral drug is administered to achieve the desired sedation effect, with or without the concomitant use of nitrous oxide, the guidelines for moderate sedation must apply.

\textit{Note:} In accord with this particular definition, the drug(s) and/or techniques used should carry a margin of safety wide enough never to render unintended loss of consciousness. The use of the MRD to guide dosing for minimal sedation is intended to create this margin of safety.

**moderate sedation** - a drug-induced depression of consciousness during which patients respond \textit{purposefully} to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained.\textsuperscript{1}

\begin{itemize}
  \item If more than one enteral drug is administered to achieve the desired sedation effect, with or without the concomitant use of nitrous oxide, the guidelines for moderate sedation must apply.
  \item \textit{Note:} In accord with this particular definition, the drug(s) and/or techniques used should carry a margin of safety wide enough never to render unintended loss of consciousness. The use of the MRD to guide dosing for minimal sedation is intended to create this margin of safety.
  \item **moderate sedation** - a drug-induced depression of consciousness during which patients respond \textit{purposefully} to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is usually maintained.\textsuperscript{1}
  \item The following definition applies to the administration of moderate or greater sedation:
    \begin{itemize}
      \item **titration** - administration of incremental doses of an intravenous or inhalation drug until a desired effect is reached. Knowledge of each drug’s time of onset, peak response and duration of action is essential to avoid over sedation. Although the concept of titration of a drug to effect is critical for patient safety, when the intent is moderate sedation one must know whether the previous dose has taken full effect before administering an additional drug increment.
      \item **deep sedation** - a drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully following repeated or painful stimulation. The ability to independently maintain ventilatory function may be impaired. Patients may require assistance in maintaining a patent airway, and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained.\textsuperscript{1}
      \item **general anesthesia** - a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilatory function is often impaired. Patients often require assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function. Cardiovascular function may be impaired.
    \end{itemize}
\end{itemize}

Because sedation and general anesthesia are a continuum, it is not always possible to predict how an individual patient will respond. Hence, practitioners intending to produce a given level of sedation should be able to diagnose and manage the physiologic consequences (rescue) for patients whose level of sedation becomes deeper than initially intended.\textsuperscript{1}

For all levels of sedation, the qualified dentist must have the training, skills, drugs and equipment to identify and manage such an occurrence until either assistance arrives (emergency medical service) or the patient returns to the intended level of sedation without airway or cardiovascular complications.

**Routes of Administration**

- \textit{enteral} - any technique of administration in which the agent is absorbed through the gastrointestinal (GI) tract or oral mucosa [i.e., oral, rectal, sublingual].
- \textit{parenteral} - a technique of administration in which the drug bypasses the gastrointestinal (GI) tract [i.e., intramuscular (IM), intravenous (IV), intranasal (IN), submucosal (SM), subcutaneous (SC), intraosseous (IO)].
transdermal - a technique of administration in which the drug is administered by patch or iontophoresis through skin.

transmucosal - a technique of administration in which the drug is administered across mucosa such as intranasal, sublingual, or rectal.

inhalation - a technique of administration in which a gaseous or volatile agent is introduced into the lungs and whose primary effect is due to absorption through the gas/blood interface.

Terms

analgesia – the diminution or elimination of pain.

local anesthesia - the elimination of sensation, especially pain, in one part of the body by the topical application or regional injection of a drug.

Note: Although the use of local anesthetics is the foundation of pain control in dentistry and has a long record of safety, dentists must be aware of the maximum, safe dosage limits for each patient. Large doses of local anesthetics in themselves may result in central nervous system depression, especially in combination with sedative agents.

qualified dentist - a dentist providing sedation and anesthesia in compliance with their state rules and/or regulations.

operating dentist – dentist with primary responsibility for providing operative dental care while a qualified dentist or independently practicing qualified anesthesia healthcare provider administers minimal, moderate or deep sedation or general anesthesia.

competency – displaying special skill or knowledge derived from training and experience.

must/shall - indicates an imperative need and/or duty; an essential or indispensable item; mandatory.

should - indicates the recommended manner to obtain the standard; highly desirable.

may - indicates freedom or liberty to follow a reasonable alternative.

continual - repeated regularly and frequently in a steady succession.

continuous - prolonged without any interruption at any time.

time-oriented anesthesia record - documentation at appropriate time intervals of drugs, doses and physiologic data obtained during patient monitoring.

immediately available – on site in the facility and available for immediate use.
### American Society of Anesthesiologists (ASA) Patient Physical Status Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Definition</th>
<th>Examples, including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASA I</td>
<td>A normal healthy patient</td>
<td>Healthy, non-smoking, no or minimal alcohol use</td>
</tr>
<tr>
<td>ASA II</td>
<td>A patient with mild systemic disease</td>
<td>Mild diseases only without substantive functional limitations. Examples include (but not limited to): current smoker, social alcohol drinker, pregnancy, obesity (30 &lt; BMI &lt; 40), well-controlled DM/HTN, mild lung disease</td>
</tr>
<tr>
<td>ASA III</td>
<td>A patient with severe systemic disease</td>
<td>Substantive functional limitations; One or more moderate to severe diseases. Examples include (but not limited to): poorly controlled DM or HTN, COPD, morbid obesity (BMI ≥40), active hepatitis, alcohol dependence or abuse, implanted pacemaker, moderate reduction of ejection fraction, *ESRD undergoing regularly scheduled dialysis, premature infant PCA &lt; 60 weeks, history (&gt;3 months) of MI, CVA, TIA, or CAD/stents.</td>
</tr>
<tr>
<td>ASA IV</td>
<td>A patient with severe systemic disease that is a constant threat to life</td>
<td>Examples include (but not limited to): recent (&lt; 3 months) MI, CVA, TIA, or CAD/stents, ongoing cardiac ischemia or severe valve dysfunction, severe reduction of ejection fraction, sepsis, DIC, ARD or *ESRD not undergoing regularly scheduled dialysis</td>
</tr>
<tr>
<td>ASA V</td>
<td>A moribund patient who is not expected to survive without the operation</td>
<td>Examples include (but not limited to): ruptured abdominal/thoracic aneurysm, massive trauma, intracranial bleed with mass effect, ischemic bowel in the face of significant cardiac pathology or multiple organ/system dysfunction</td>
</tr>
<tr>
<td>ASA VI</td>
<td>A declared brain-dead patient whose organs are being removed for donor purposes</td>
<td></td>
</tr>
</tbody>
</table>

*The addition of “E” denotes Emergency surgery: (An emergency is defined as existing when delay in treatment of the patient would lead to a significant increase in the threat to life or body part)*

### American Society of Anesthesiologists Fasting Guidelines

<table>
<thead>
<tr>
<th>Ingested Material</th>
<th>Minimum Fasting Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear liquids</td>
<td>2 hours</td>
</tr>
<tr>
<td>Breast milk</td>
<td>4 hours</td>
</tr>
<tr>
<td>Infant formula</td>
<td>6 hours</td>
</tr>
<tr>
<td>Nonhuman milk</td>
<td>6 hours</td>
</tr>
<tr>
<td>Light meal</td>
<td>6 hours</td>
</tr>
<tr>
<td>Fatty meal</td>
<td>8 hours</td>
</tr>
</tbody>
</table>

### III. Educational Requirements

A. Minimal Sedation

1. To administer minimal sedation the dentist must demonstrate competency by having successfully completed:

   a. training in minimal sedation consistent with that prescribed in the ADA Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students,
b. comprehensive training in moderate sedation that satisfies the requirements described in the Moderate Sedation section of the ADA Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students at the time training was commenced,

or

c. an advanced education program accredited by the Commission on Dental Accreditation that affords comprehensive and appropriate training necessary to administer and manage minimal sedation commensurate with these guidelines;

and

d. a current certification in Basic Life Support for Healthcare Providers.

2. Administration of minimal sedation by another qualified dentist or independently practicing qualified anesthesia healthcare provider requires the operating dentist and his/her clinical staff to maintain current certification in Basic Life Support for Healthcare Providers.

B. Moderate Sedation

1. To administer moderate sedation, the dentist must demonstrate competency by having successfully completed:

a. a comprehensive training program in moderate sedation that satisfies the requirements described in the Moderate Sedation section of the ADA Guidelines for Teaching Pain Control and Sedation to Dentists and Dental Students at the time training was commenced,

or

b. an advanced education program accredited by the Commission on Dental Accreditation that affords comprehensive and appropriate training necessary to administer and manage moderate sedation commensurate with these guidelines;

and

c. 1) A current certification in Basic Life Support for Healthcare Providers and

2) Either current certification in Advanced Cardiac Life Support (ACLS or equivalent) or completion of an appropriate dental sedation/anesthesia emergency management course on the same recertification cycle that is required for ACLS.

2. Administration of moderate sedation by another qualified dentist or independently practicing qualified anesthesia healthcare provider requires the operating dentist and his/her clinical staff to maintain current certification in Basic Life Support for Healthcare Providers.

C. Deep Sedation or General Anesthesia

1. To administer deep sedation or general anesthesia, the dentist must demonstrate competency by having completed:

a. An advanced education program accredited by the Commission on Dental Accreditation that affords comprehensive and appropriate training necessary to administer and manage deep sedation or general anesthesia, commensurate with Part IV.C of these guidelines;

and
b. 1) A current certification in Basic Life Support for Healthcare Providers and
2) either current certification in Advanced Cardiac Life Support (ACLS or equivalent) or completion of an appropriate dental sedation/anesthesia emergency management course on the same re-certification cycle that is required for ACLS.

2. Administration of deep sedation or general anesthesia by another qualified dentist or independently practicing qualified anesthesia healthcare provider requires the operating dentist and his/her clinical staff to maintain current certification in Basic Life Support (BLS) Course for the Healthcare Provider.

IV. Clinical Guidelines
A. Minimal sedation

1. Patient History and Evaluation

Patients considered for minimal sedation must be suitably evaluated prior to the start of any sedative procedure. In healthy or medically stable individuals (ASA I, II) this should consist of a review of their current medical history and medication use. In addition, patients with significant medical considerations (ASA III, IV) may require consultation with their primary care physician or consulting medical specialist.

2. Pre-Operative Evaluation and Preparation

- The patient, parent, legal guardian or care giver must be advised regarding the procedure associated with the delivery of any sedative agents and informed consent for the proposed sedation must be obtained.
- Determination of adequate oxygen supply and equipment necessary to deliver oxygen under positive pressure must be completed.
- An appropriate focused physical evaluation should be performed.
- Baseline vital signs including body weight, height, blood pressure, pulse rate, and respiration rate must be obtained unless invalidated by the nature of the patient, procedure or equipment. Body temperature should be measured when clinically indicated.
- Preoperative dietary restrictions must be considered based on the sedative technique prescribed.
- Pre-operative verbal and written instructions must be given to the patient, parent, escort, legal guardian or care giver.

3. Personnel and Equipment Requirements

Personnel:
- At least one additional person trained in Basic Life Support for Healthcare Providers must be present in addition to the dentist.

Equipment:
- A positive-pressure oxygen delivery system suitable for the patient being treated must be immediately available.
- Documentation of compliance with manufacturers’ recommended maintenance of monitors, anesthesia delivery systems, and other anesthesia-related equipment should be maintained. A pre-procedural check of equipment for each administration of sedation must be performed.
- When inhalation equipment is used, it must have a fail-safe system that is appropriately checked and calibrated. The equipment must also have either (1) a functioning device that prohibits the delivery of less than 30% oxygen or (2) an appropriately calibrated and functioning in-line oxygen analyzer with audible alarm.
- An appropriate scavenging system must be available if gases other than oxygen or air are used.
4. Monitoring and Documentation

Monitoring: A dentist, or at the dentist’s direction, an appropriately trained individual, must remain in the operatory during active dental treatment to monitor the patient continuously until the patient meets the criteria for discharge to the recovery area. The appropriately trained individual must be familiar with monitoring techniques and equipment. Monitoring must include:

Consciousness:
- Level of sedation (e.g., responsiveness to verbal commands) must be continually assessed.

Oxygenation:
- Oxygen saturation by pulse oximetry may be clinically useful and should be considered.

Ventilation:
- The dentist and/or appropriately trained individual must observe chest excursions.
- The dentist and/or appropriately trained individual must verify respirations.

Circulation:
- Blood pressure and heart rate should be evaluated pre-operatively, post-operatively and intraoperatively as necessary (unless the patient is unable to tolerate such monitoring).

Documentation: An appropriate sedative record must be maintained, including the names of all drugs administered, time administered and route of administration, including local anesthetics, dosages, and monitored physiological parameters.

5. Recovery and Discharge

- Oxygen and suction equipment must be immediately available if a separate recovery area is utilized.
- The qualified dentist or appropriately trained clinical staff must monitor the patient during recovery until the patient is ready for discharge by the dentist.
- The qualified dentist must determine and document that level of consciousness, oxygenation, ventilation and circulation are satisfactory prior to discharge.
- Post-operative verbal and written instructions must be given to the patient, parent, escort, legal guardian or care giver.

6. Emergency Management

- If a patient enters a deeper level of sedation than the dentist is qualified to provide, the dentist must stop the dental procedure until the patient returns is returned to the intended level of sedation.
- The qualified dentist is responsible for the sedative management, adequacy of the facility and staff, diagnosis and treatment of emergencies related to the administration of minimal sedation and providing the equipment and protocols for patient rescue.

B. Moderate Sedation

1. Patient History and Evaluation

Patients considered for moderate sedation must undergo an evaluation prior to the administration of any sedative. This should consist of at least a review at an appropriate time of their medical history and
medication use and NPO (nothing by mouth) status. In addition, patients with significant medical considerations (e.g., ASA III, IV) should also require consultation with their primary care physician or consulting medical specialist. Assessment of Body Mass Index (BMI) should be considered part of a pre-procedural workup. Patients with elevated BMI may be at increased risk for airway associated morbidity, particularly if in association with other factors such as obstructive sleep apnea.

2. Pre-operative Evaluation and Preparation

- The patient, parent, legal guardian or care giver must be advised regarding the procedure associated with the delivery of any sedative agents and informed consent for the proposed sedation must be obtained.
- Determination of adequate oxygen supply and equipment necessary to deliver oxygen under positive pressure must be completed.
- An appropriate focused physical evaluation must be performed.
- Baseline vital signs including body weight, height, blood pressure, pulse rate, respiration rate, and blood oxygen saturation by pulse oximetry must be obtained unless precluded by the nature of the patient, procedure or equipment. Body temperature should be measured when clinically indicated.
- Pre-operative verbal or written instructions must be given to the patient, parent, escort, legal guardian or care giver, including pre-operative fasting instructions based on the ASA Summary of Fasting and Pharmacologic Recommendations.

3. Personnel and Equipment Requirements

**Personnel:**

- At least one additional person trained in Basic Life Support for Healthcare Providers must be present in addition to the dentist.

**Equipment:**

- A positive-pressure oxygen delivery system suitable for the patient being treated must be immediately available.
- Documentation of compliance with manufacturers’ recommended maintenance of monitors, anesthesia delivery systems, and other anesthesia-related equipment should be maintained. A pre-procedural check of equipment for each administration of sedation must be performed.
- When inhalation equipment is used, it must have a fail-safe system that is appropriately checked and calibrated. The equipment must also have either (1) a functioning device that prohibits the delivery of less than 30% oxygen or (2) an appropriately calibrated and functioning in-line oxygen analyzer with audible alarm.
- The equipment necessary for monitoring end-tidal CO₂ and auscultation of breath sounds must be immediately available.
- An appropriate scavenging system must be available if gases other than oxygen or air are used.
- The equipment necessary to establish intravascular or intraosseous access should be available until the patient meets discharge criteria.

4. Monitoring and Documentation

**Monitoring:** A qualified dentist administering moderate sedation must remain in the operatory room to monitor the patient continuously until the patient meets the criteria for recovery. When active treatment concludes and the patient recovers to a minimally sedated level a qualified auxiliary may be directed by the dentist to remain with the patient and continue to monitor them as explained in the guidelines until they are discharged from the facility. The dentist must not leave the facility until the patient meets the criteria for discharge and is discharged from the facility. Monitoring must include:
Consciousness:
- Level of sedation (e.g., responsiveness to verbal command) must be continually assessed.

Oxygenation:
- Oxygen saturation must be evaluated by pulse oximetry continuously.

Ventilation:
- The dentist must observe chest excursions continually.
- The dentist must monitor ventilation and/or breathing by monitoring end-tidal CO₂ unless precluded or invalidated by the nature of the patient, procedure or equipment. In addition, ventilation should be monitored by continual observation of qualitative signs, including auscultation of breath sounds with a precordial or pretracheal stethoscope.

Circulation:
- The dentist must continually evaluate blood pressure and heart rate unless invalidated by the nature of the patient, procedure or equipment and this is noted in the time-oriented anesthesia record.
- Continuous ECG monitoring of patients with significant cardiovascular disease should be considered.

Documentation:
- Appropriate time-oriented anesthetic record must be maintained, including the names of all drugs, dosages and their administration times, including local anesthetics, dosages and monitored physiological parameters.
- Pulse oximetry, heart rate, respiratory rate, blood pressure and level of consciousness must be recorded continually.

5. Recovery and Discharge
- Oxygen and suction equipment must be immediately available if a separate recovery area is utilized.
- The qualified dentist or appropriately trained clinical staff must continually monitor the patient’s blood pressure, heart rate, oxygenation and level of consciousness.
- The qualified dentist must determine and document that level of consciousness; oxygenation, ventilation and circulation are satisfactory for discharge.
- Post-operative verbal and written instructions must be given to the patient, parent, escort, legal guardian or care giver.
- If a pharmacological reversal agent is administered before discharge criteria have been met, the patient must be monitored for a longer period than usual before discharge, since re-sedation may occur once the effects of the reversal agent have waned.

6. Emergency Management
- If a patient enters a deeper level of sedation than the dentist is qualified to provide, the dentist must stop the dental procedure until the patient is returned to the intended level of sedation.
- The qualified dentist is responsible for the sedative management, adequacy of the facility and staff, diagnosis and treatment of emergencies related to the administration of moderate sedation and providing the equipment, drugs and protocol for patient rescue.
C. Deep Sedation or General Anesthesia

1. Patient History and Evaluation

Patients considered for deep sedation or general anesthesia must undergo an evaluation prior to the administration of any sedative. This must consist of at least a review of their medical history and medication use and NPO (nothing by mouth) status. In addition, patients with significant medical considerations (e.g., ASA III, IV) should also require consultation with their primary care physician or consulting medical specialist. Assessment of Body Mass Index (BMI) should be considered part of a pre-procedural workup. Patients with elevated BMI may be at increased risk for airway associated morbidity, particularly if in association with other factors such as obstructive sleep apnea.

2. Pre-operative Evaluation and Preparation

- The patient, parent, legal guardian or care giver must be advised regarding the procedure associated with the delivery of any sedative or anesthetic agents and informed consent for the proposed sedation/anesthesia must be obtained.
- Determination of adequate oxygen supply and equipment necessary to deliver oxygen under positive pressure must be completed.
- A focused physical evaluation must be performed as deemed appropriate.
- Baseline vital signs including body weight, height, blood pressure, pulse rate, respiration rate, and blood oxygen saturation by pulse oximetry must be obtained unless invalidated by the patient, procedure or equipment. In addition, body temperature should be measured when clinically appropriate.
- Pre-operative verbal and written instructions must be given to the patient, parent, escort, legal guardian or care giver, including pre-operative fasting instructions based on the ASA Summary of Fasting and Pharmacologic Recommendations.
- An intravenous line, which is secured throughout the procedure, must be established except as provided in part IV. C.6. Special Needs Patients.

3. Personnel and Equipment Requirements

**Personnel:** A minimum of three (3) individuals must be present.

- A dentist qualified in accordance with part III. C. of these Guidelines to administer the deep sedation or general anesthesia.
- Two additional individuals who have current certification of successfully completing a Basic Life Support (BLS) Course for the Healthcare Provider.
- When the same individual administering the deep sedation or general anesthesia is performing the dental procedure, one of the additional appropriately trained team members must be designated for patient monitoring.

**Equipment:**

- A positive-pressure oxygen delivery system suitable for the patient being treated must be immediately available.
- Documentation of compliance with manufacturers’ recommended maintenance of monitors, anesthesia delivery systems, and other anesthesia-related equipment should be maintained. A pre-procedural check of equipment for each administration must be performed.
- When inhalation equipment is used, it must have a fail-safe system that is appropriately checked and calibrated. The equipment must also have either (1) a functioning device that prohibits the delivery of less than 30% oxygen or (2) an appropriately calibrated and functioning in-line oxygen analyzer with audible alarm.
• An appropriate scavenging system must be available if gases other than oxygen or air are used.
• The equipment necessary to establish intravenous access must be available.
• Equipment and drugs necessary to provide advanced airway management, and advanced cardiac life
  support must be immediately available.
• The equipment necessary for monitoring end-tidal CO₂ and auscultation of breath sounds must be
  immediately available.
• Resuscitation medications and an appropriate defibrillator must be immediately available.

4. Monitoring and Documentation

Monitoring: A qualified dentist administering deep sedation or general anesthesia must remain in the
operatory room to monitor the patient continuously until the patient meets the criteria for recovery. The
dentist must not leave the facility until the patient meets the criteria for discharge and is discharged from the
facility. Monitoring must include:

Oxygenation:
• Oxygenation saturation must be evaluated continuously by pulse oximetry.

Ventilation:
• Intubated patient: End-tidal CO₂ must be continuously monitored and evaluated.
• Non-intubated patient: End-tidal CO₂ must be continually monitored and evaluated unless precluded or
  invalidated by the nature of the patient, procedure, or equipment. In addition, ventilation should be
  monitored and evaluated by continual observation of qualitative signs, including auscultation of breath
  sounds with a precordial or pretracheal stethoscope.
• Respiration rate must be continually monitored and evaluated.

Circulation:
• The dentist must continuously evaluate heart rate and rhythm via ECG throughout the procedure, as well
  as pulse rate via pulse oximetry.
• The dentist must continually evaluate blood pressure.

Temperature:
• A device capable of measuring body temperature must be readily available during the administration of
  deep sedation or general anesthesia.
• The equipment to continuously monitor body temperature should be available and must be performed
  whenever triggering agents associated with malignant hyperthermia are administered.

Documentation:
• Appropriate time-oriented anesthetic record must be maintained, including the names of all drugs,
  dosages and their administration times, including local anesthetics and monitored physiological
  parameters.
• Pulse oximetry and end-tidal CO₂ measurements (if taken), heart rate, respiratory rate and blood pressure
  must be recorded continually.

5. Recovery and Discharge

• Oxygen and suction equipment must be immediately available if a separate recovery area is utilized.
• The dentist or clinical staff must continually monitor the patient’s blood pressure, heart rate, oxygenation
  and level of consciousness.
• The dentist must determine and document that level of consciousness; oxygenation, ventilation and
  circulation are satisfactory for discharge.
• Post-operative verbal and written instructions must be given to the patient, and parent, escort, guardian or care giver.

6. Special Needs Patients

Because many dental patients undergoing deep sedation or general anesthesia are mentally and/or physically challenged, it is not always possible to have a comprehensive physical examination or appropriate laboratory tests prior to administering care. When these situations occur, the dentist responsible for administering the deep sedation or general anesthesia should document the reasons preventing the recommended preoperative management.

In selected circumstances, deep sedation or general anesthesia may be utilized without establishing an indwelling intravenous line. These selected circumstances may include very brief procedures or periods of time, which, for example, may occur in some patients; or the establishment of intravenous access after deep sedation or general anesthesia has been induced because of poor patient cooperation.

7. Emergency Management

The qualified dentist is responsible for sedative/anesthetic management, adequacy of the facility and staff, diagnosis and treatment of emergencies related to the administration of deep sedation or general anesthesia and providing the equipment, drugs and protocols for patient rescue.

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1 Excerpted from Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia, 2014, of the American Society of Anesthesiologists (ASA)
2 ASA Physical Status Classification System is reprinted with permission of the American Society of Anesthesiologists, Updated by ASA House of Delegates, October 15, 2014.
4 Standardized BMI category definitions can be obtained from the Centers for Disease Control and Prevention or the American Society of Anesthesiologists.
Situation (Nurse Call Systems)

The nurse call industry is facing an acute shortage of electronic components included in hardware used in conjunction with their UL 1069 listed nurse call systems. Nurse call system manufacturers are able to substitute certain hardware components with available components without impacting the safety and reliability of their systems. However, substitution of components often requires “recertification” of the system hardware with the nationally recognized testing laboratory (NRTL) that previously provided UL 1069 certification.

All of the NRTLs are significantly delayed in certifications due to the volume of submissions and staffing challenges. As a result, nurse call manufacturers are becoming unable to provide hospitals and other healthcare facilities with required system hardware. Without the hardware, a healthcare facility cannot operate its NFPA 99 compliant nurse call system. As a practical matter, this reduces facility capacity and reduces the ability of healthcare facilities to admit patients and to provide healthcare services.

Background

Healthcare facilities in the United States are required to comply with the NFPA 99 building code in addition to other building codes. NFPA 99 requires a facility to install a nurse call system for patient and staff communication. Nurse call systems consist of sophisticated software and hardware and are often integrated with other systems in a healthcare facility.

The 2018 and 2021 edition of NFPA 99 provide that the recognized standard for a listed nurse call system is the ANSI/UL 1069 standard. The ANSI/UL 1069 standard is a system standard that specifies the construction and performance requirements for a nurse call system to assure safety and reliability. This standard has stood the test of time and boasts of a stellar safety and performance record.

Action

In order to assure availability of hardware for existing UL 1069 listed nurse call systems, the regulatory community needs to recognize the situation described above and provide temporary relief. Nurse call manufacturers need to be temporarily permitted to ship hardware associated with their UL listed systems pending recertification of the hardware with the associated NRTL. Hardware shipped would not include a UL listed label and would include product literature with appropriate disclosures and rationale. Manufacturers would notify end users upon the recertification of any hardware shipped pending UL 1069 certification.

Recommendation

The recommendation is that NFPA and related organizations work with authorities have jurisdiction (AHJs) to recognize the situation described above and provide the temporary relief described above. As a result, AHJ's should allow the installation of hardware associated with listed UL systems pending recertification until the supply chain issues are mitigated.
Situation (PoE Switches/Nurse Call Systems)

The nurse call industry is facing an acute shortage of electronic components included in hardware used in conjunction with their UL 1069 listed nurse call systems. This shortage is forcing nurse call system manufacturers to redesign several hardware components and recertify the designs changes with nationally recognized test labs (NRTLS).

All the NRTLs are significantly delayed in certifications due to the volume of submissions and staffing challenges. As a result, nurse call manufacturers are becoming unable to provide hospitals and other healthcare facilities with required system hardware. Without the hardware, a healthcare facility cannot operate its NFPA 99 compliant nurse call system. As a practical matter, this reduces facility capacity and reduces the ability of healthcare facilities to admit patients and to provide healthcare services.

Nurse call systems can interoperate with 3rd party hardware components like PoE switches that are listed to an alternate safety standard like IEC 62368-1 and do not pose a safety risk when used outside the patient care area.

Background

Healthcare facilities in the United States are required to comply with the NFPA 99 building code in addition to other building codes. NFPA 99 requires a facility to install a nurse call system for patient and staff communication. Nurse call systems consist of sophisticated software and hardware and are often integrated with other systems in a healthcare facility.

The 2018 and 2021 edition of NFPA 99 provide that the recognized standard for a listed nurse call system is the ANSI/UL 1069 standard. The ANSI/UL 1069 standard is a system standard that specifies the construction and performance requirements for a nurse call system to assure safety and reliability. This standard has stood the test of time and boasts of a stellar safety and performance record.

Action

In order to assure availability of hardware for existing UL 1069 listed nurse call systems, the regulatory community needs to recognize the situation described above and provide temporary relief. Healthcare facilities should be allowed to purchase PoE switches that are listed to IEC 62368-1 and power nurse call devices that are outside the patient care area. Doing so, so will not compromise patient or operator safety and fill a gap when the nurse call manufacturer is unable to supply PoE switches listed to ANSI/UL 1069.

Recommendation

The recommendation is that NFPA and related organizations work with authorities have jurisdiction (AHJs) to recognize the situation described above and provide the temporary relief described above. As a result, AHJ’s should allow the installation PoE switches listed to the IEC 62368-1 safety standard until the supply chain issues are mitigated.