The Joint Commission

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EC News

ENVIRONMENT OF CARE® | EMERGENCY MANAGEMENT | LIFE SAFETY

WHAT'S NEW IN 2020?

New Year's Resolutions (and Requirements)

AFFECTING VARIOUS PROGRAMS, FROM HOSPITALS TO NURSING CARE CENTERS, A NUMBER OF MODIFICATIONS TO EC, LS, AND EM STANDARDS AND EPS WILL TAKE EFFECT JANUARY 1

"Out with the old, in with the new" is the adage followed by many with the turn of the calendar year. And the same is true for Joint Commission standards and elements of performance (EPs), several of which get revised annually to conform with changing Centers for Medicare & Medicaid Services (CMS) requirements.

Although the updates for next year are relatively less extensive compared to past years—with language revised for certain existing standards and EPs as well as a few new EPs introduced—there are significant changes to be aware of that take effect on January 1, 2020, which this article addresses.

"It's important to give these revised requirements priority now, before the start of the New Year," says Herman A. McKenzie, MBA, CHSP, The Joint Commission's director of engineering. "Surveyors will begin scoring against these amended rules in January, so you want to be sure your facility is in proper compliance. It's easy for these matters to get overlooked or delayed during the holiday season, so keep them top-of-mind and make any necessary changes soon."

More important than satisfying surveyors is a health care organization's duty to protect patients, visitors, and personnel. "Our standards and elements of performance promote a safe, effective healing environment for patients and staff," McKenzie says. "Any modifications or additions we make to our requirements help us focus on what's most important in the physical environment."

In the updated Emergency Management (EM), Environment of Care (EC), and Life Safety (LS) standards and EPs that follow, new or revised language is underlined and in red, while deleted language is shown as strikethrough text. Note that this is not a complete list of new EC, LS, and EM requirements. Consult your applicable accreditation manual or its E-dition counterpart for a comprehensive list.

APPLICABLE PROGRAMS: HAP, CAH, AHC, NCC, LAB, OME

EM.01.01.01

The [organization] engages in planning activities prior to developing its written Emergency Operations Plan.*

Note: *An emergency is an unexpected or sudden event that significantly disrupts the organization's ability to provide care, or the environment of care itself, or that results in a sudden, significantly changed or increased demand for the organization's services. Emergencies can be either human-made (for example, an*

* *Emergency Management Plan* is the term used in EM.01.01.01 in the accreditation manual for ambulatory health care (AHC) programs.

electrical system failure or cyberattack) or natural (for example, a tornado or an infectious disease outbreak such as Ebola, Zika, influenza), or a combination of both, and they exist on a continuum of severity. A disaster is a type of emergency that, due to its complexity, scope, or duration, threatens the organization's capabilities and requires outside assistance to sustain patient care, safety, or security functions.

James Kendig, MS, CHSP, CHCM, CHEM, LHRM, field director–surveyor management and development for The Joint Commission, says that the added language in EM.01.01.01—while at first glance seems to provide only examples to the requirement—merits attention. Those examples emphasize the health care community's increased focus on preventing the spread of infectious diseases.

"CMS is now requiring accredited organizations to include emerging infectious diseases in their hazard vulnerability analysis (HVA),[1]" notes Kendig. "The good news is that many organizations have been proactive and already done so. They've addressed emerging infectious diseases in their Emergency Operations Plan (EOP) and HVA after the Ebola and Zika scares of the past several years. But those that haven't need to comply with this requirement by January 1, 2020."

In addition, Kendig recommends taking precautions a few steps further. "Reach out to other health care organizations that have actually treated Ebola and Zika patients and ask what lessons they learned and best practices they advise. Conduct related tabletop exercises and drills, too. And make sure you have a process in place to respond effectively and quickly to a patient with an emerging infectious disease."

Applicable Programs: HAP, CAH

EC.02.05.01

The hospital manages risks associated with its utility systems.

EP 15: In critical care areas (including areas designated for administration of general anesthesia, specifically, inhaled anesthetics) that are designed to control airborne contaminants (such as biological agents, gases, fumes, dust), the ventilation system provides appropriate pressure relationships, air-exchange rates, filtration efficiencies, temperature, and humidity. For new health care facilities or altered, renovated, or modernized portions of existing systems or individual components (constructed or plans approved on or after July 5, 2016), heating, cooling, and ventilation are in accordance with 2008 ASHRAE 170. Existing facilities may comply with 2008 ASHRAE 170 or earlier editions previously adopted by state authorities having jurisdiction at the time of design approval. In the absence of state design standards, The Joint Commission will use the edition of the Facility Guidelines Institute's *Guidelines for Design and Construction of Health Care Facilities* in use at the time of design approval.

Note 1: *Existing facilities may elect to implement a Centers for Medicare & Medicaid Services (CMS) categorical waiver to reduce their relative humidity to 20%. Should the facility elect the waiver, it must be included in its basic building*

information (BBI), and the facility's equipment and supplies must be compatible with the humidity reduction.

Note 2: *For more information about areas designed for control of airborne contaminants, the basis for design compliance is NFPA 99-2012, ASHRAE 170, and* Guidelines for Design and Construction of Health Care Facilities*, based on the edition used at the time of design approval (if available).*

"These changes to EP 15 are important, as the language is more aligned with what CMS wants and more prescriptive," says McKenzie. "In particular, you need to make sure your HVAC system conforms with 2008 ASHRAE 170. There's also new text about a categorical waiver for existing facilities that wasn't there before."

Applicable Programs: HAP, CAH

EC.02.05.01

The hospital manages risks associated with its utility systems.

EP 27: Areas designated for administration of general anesthesia (specifically, inhaled anesthetics) using medical gases or vacuum have the following characteristics:

~~- Heating, cooling, and ventilation are in accordance with ASHRAE 170. Medical supply and equipment manufacturers' instructions are considered before reducing humidity levels to those allowed by ASHRAE.~~

McKenzie notes that the language stricken from EP 27 has been moved to EP 15 of this standard (as shown above).

"This was edited because there was some content that was redundant to EP 15. We wanted all the information about ventilation tables and critical pressure captured within EP 15, so we removed it here," he explains.

Applicable Programs: HAP, CAH, AHC, OBS

EC.02.05.09

The [organization] inspects, tests, and maintains medical gas and vacuum systems.

EP 4: Locations containing positive pressure gases, other than oxygen or medical air, have doors labeled "Positive Pressure Gases: NO Smoking or Open Flame. Room May Have Insufficient Oxygen. Open Door and Allow Room to Ventilate Before Entering." Locations containing central supply systems or cylinders only containing oxygen or medical air have doors labeled "Medical Gases: NO Smoking or Open Flame." (For full text, refer to NFPA 99-2012: 5.1.3.1.8 and 5.1.3.1.9.)

"This was a case where the EP didn't match the current code—*Health Care Facilities Code* (NFPA 99-2012)—so we clarified the language accordingly," McKenzie says.

Applicable Programs: HAP, CAH, AHC

LS.01.01.01

The [organization] designs and manages the physical environment to comply with the *Life Safety Code*.

EP 7: The [organization] maintains current basic building information (BBI) within the statement of conditions (SOC).

EP 7 is being reintroduced in 2020 for crucial reasons. "Some staff who complete Joint Commission survey paperwork actually aren't aware of the accurate size of buildings on their campus. They might guess that a certain facility is, say, 15,000 square feet when it's really 5,000 square feet, and document it as such on a form," says McKenzie.

Surveyors need to trust that this documentation is accurate so that they don't overestimate or underestimate the time it will take to complete the survey.

Note that while the BBI needs to be included in the SOC by January 1, 2020, the specific square footage (rather than a range or approximation) will not need to be documented in the SOC until a future (to-be-determined) date.

Other updates

What's more, a number of revisions have been made to EC standards and EPs in the OBS accreditation manual to better align the requirements with NFPA 101-2012, other NFPA standards, and The Joint Commission's survey process.

Significant new and revised standards and EPs are also slated to take effect July 1, 2020. One of the most crucial relates to EC.02.05.01, EP 14, which currently requires hospitals to minimize pathogenic biological agents in cooling towers, domestic hot- and cold-water systems, and other aerosolizing water systems to prevent *Legionella*. "The changes will make our requirement for a water management plan more stringent while also incorporating additional CMS elements into the EP," Kendig says.

In addition, Kendig points out that CMS recently issued its Omnibus Burden Reduction (Conditions of Participation) Final Rule,[2] designed to eliminate obsolete, unnecessary, or excessively burdensome regulations on hospitals and other health care providers. These regulations took effect on November 29, 2019.

"It's too soon to say which Joint Commission Standards or EPs will be affected by these requirements and revised," notes Kendig. "But be aware that changes related to this new Final Rule are forthcoming," with some likely taking effect July 1.

References

1. Centers for Medicare & Medicaid Services. Ref: QSO19-06-ALL: Emergency Preparedness- Updates to Appendix Z of the State Operations Manual (SOM). Accessed Oct 3, 2019. https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/QSO19-06-ALL.pdf.
2. Federal Register. Medicare and Medicaid Programs; Regulatory Provisions To Promote Program Efficiency, Transparency, and Burden Reduction; Fire Safety Requirements for Certain Dialysis Facilities; Hospital and Critical Access Hospital (CAH) Changes To Promote Innovation, Flexibility, and Improvement in Patient Care. Accessed Oct 3, 2019. https://www.federalregister.gov/documents/2019/09/30/2019-20736/medicare-and-medicaid-programs-regulatory-provisions-to-promote-program-efficiency-transparency-and.

Applicable Programs: HAP, CAH, AHC, and LAB*

The Joint Commission References the 2018 FGI *Guidelines* for Construction or Renovation

Effective January 1, 2020, The Joint Commission will no longer reference the 2014 edition of the Facility Guidelines Institute (FGI) *Guidelines for Design and Construction of Health Care Facilities* in accreditation manuals for the hospital (HAP), critical access hospital (CAH), ambulatory health care (AHC), and laboratory and point-of-care testing (LAB) programs. Instead, these manuals will reference the 2018 edition of the FGI *Guidelines*.

This change, indicated below in red, affects Environment of Care Standard EC.02.06.05, Element of Performance (EP) 1.

EC.02.06.05

The [organization] manages its environment during demolition, renovation, or new construction to reduce risk to those in the organization.

EP 1: When planning for new, altered, or renovated space, the [organization] uses one of the following design criteria:

- State rules and regulations
- *Guidelines for Design and Construction of Health Care Facilities*, ~~2014~~ 2018 edition, administered by the Facility Guidelines Institute and published by the American Society for Healthcare Engineering (ASHE). When the above rules, regulations, and guidelines do not meet specific design needs, use other reputable standards and guidelines that provide equivalent design criteria.

What's new?

The 2018 edition of the FGI *Guidelines* includes some significant changes from the 2014 edition, including the following:

- Instead of being one compendium for all health care facilities, the 2018 edition of the FGI *Guidelines* is divided into three manuals: *Guidelines for Design and Construction of Hospitals*, *Guidelines for Design and Construction of Outpatient Facilities*, and *Guidelines for Design and Construction of Residential Health, Care, and Support Facilities*.
- Because many procedures have shifted from hospitals to outpatient facilities, the outpatient portion of the *Guidelines* has been substantially expanded and includes more detailed discussion of heating, ventilation, and air conditioning (HVAC) systems, depending on the type of space or facility.
- There is greater emphasis on accommodating *patients of size*, a term that replaces *bariatric patients*, in recognition that many patients are not clinically obese but are large enough to need additional clearances and expanded-capacity lifts.
- Design requirements have been added for spaces in which telemedicine services are provided.

More information on the 2018 FGI *Guidelines* can be on the FGI's website, at https://www.fgiguidelines.org/.

*Although referencing the 2018 FGI *Guidelines* effective January 1, 2020, the manual for accredited laboratories has slightly different wording for EC.02.06.05, EP 1, from that shown above.

NEXT ↓

APPLICABLE PROGRAMS: HAP AND CAH

Reducing Fire Risks in Hospital Kitchens

MORE THAN HALF OF HEALTH CARE FACILITY FIRES START IN THE KITCHEN; A JOINT COMMISSION *LIFE SAFETY CODE*®* SURVEYOR SHARES COMMONLY SCORED VIOLATIONS AS WELL AS COMPLIANCE TIPS

According to the National Fire Protection Association (NFPA), cooking equipment was the leading cause of fire in health care facilities from 2011 to 2015.[1] Health care facility commercial kitchens contain gas and/or electric cooking appliances—and grease—providing both fuel and a potential source of ignition for fires. In addition, many hospital kitchens operate up to 24 hours a day, which means that the opportunity for fire is ever-present.

Joint Commission surveyors are giving hospital kitchen fire risks more attention because this has been a disparity issue between The Joint Commission and the Centers for Medicare & Medicaid Services (CMS).

Ted West, MS, CFPS, CFI, a *Life Safety Code* (LSC) surveyor for The Joint Commission, says that excessive grease buildup is one of the safety concerns he observes and ultimately scores when surveying health care facility commercial kitchens. This is why one of the first stops he makes during a kitchen tour is the vent hood.

"When you're cooking items that result in grease-laden vapors [such as fried foods and grilled meats], these vapors get pulled into the vent hood, through grease filters, by the hood exhaust fan," West explains. Over time, grease builds up on these filters, creating a fire risk.

"When you look under the hood and observe excessive grease buildup, that's going to be an issue," West says. "If you do have a fire under the hood, it could travel to the hood plenum and potentially all the way to the exhaust fan. The volume of cooking the kitchen does will determine how frequently both the hood and its grease filters should be cleaned." This is regulated by NFPA 96-2011: *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations* (in Table 11.4).

In addition to assessing the overall cleanliness of the vent hood and filters, surveyors check to see if the filters are in the proper position. "Sometimes when kitchen staff remove the filters to clean them, they put them back incorrectly, resulting in large gaps—something that surveyors score if observed," West says. "There shouldn't be any way for grease-laden vapors to bypass the filters."

LSC surveyors will also look at whether all the cooking appliances are properly covered by the fire-suppression system, West notes. Sometimes the nozzle piping gets moved for hood or filter maintenance by kitchen or facilities staff, or sometimes cooking appliances get moved.

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Photo courtesy of Ted West. Used with permission.

A chock system such as the one shown here can help kitchen staff ensure that cooking appliances moved for cleaning are put back in the right spot.

"Kitchen staff may want to rearrange their cooking appliances, but they should not do that," he emphasizes. "Once those nozzles are set in place to cover a cooking appliance, staff are not supposed to move the cooking equipment." Unfortunately, West often must score this violation under LS.02.01.35, EP 14, which is a "catch-all" for automatic fire-suppression deficiencies. (See "Related Joint Commission Requirements" on page 11.) The NFPA's NFPA 101-2012 (*Life Safety Code*): 9.2.3 references NFPA 96-2011.

"What happens is that kitchen staff pull out the cooking appliances to clean behind them; however, they often do not return an appliance to the 'approved design location' [with respect to nozzle coverage]," West says. "They place the appliance either too far back or too far to the left or right, not realizing that the appliance should be aligned with the nozzle(s)."

West notes that NFPA 96-2011: 12.1.2.3 and 12.1.2.3.1 allow for the movement of cooking appliances for cleaning purposes as long as there is a method provided to ensure that an appliance is returned to the approved design location.

West shares this good practice: "Some facilities use markings on the floor, rails, or fixed wheel (caster) chocks (*see* photo above) to provide a guide, so they know to put the equipment back in the exact place where it was before."

Understanding fire-suppression requirements

Another focus of surveyors' hospital kitchen assessments is the fixed fire-suppression system. "A kitchen's fixed fire-suppression system discharges automatically when there is a fire under the hood large enough to reach the fusible links," West notes. Fusible links are fixed-temperature heat-detecting devices that release the extinguishing agent when activated.

"There must also be a way to activate the system manually via a manual activation device, typically a cable-operated pull station," West says. This pull station, in turn, has to meet certain criteria." NFPA 96-2011: 10.5 states that the pull station must be

Photo courtesy of Ted West. Used with permission.

In health care facility kitchens where deep-fat frying takes place, a steel or tempered glass baffle plate at least 8 inches in height (as shown here) should be installed between the fryer and surface flames of adjacent appliances. If such a baffle plate is not installed, there must be at least 16 inches of space between the fryer and the surface flames of adjacent cooking equipment.

readily accessible at all times and located in the path of egress between 10 and 20 feet from the hood, and it must clearly identify the hazard (hood) protected.

Occasionally, West observes a wall-mounted pull station obstructed by a dish-washing cart, a bread warmer, or other kitchen equipment, which is a violation he scores.

Photo courtesy of Ted West. Used with permission.

This is how a clean vent over a cooking appliances hood should look.

Surveyors are also looking at the accessibility of a Class K fire extinguisher, which per NFPA 10-1998: *Standard for Portable Fire Extinguishers* must be located within 30 feet of any grease-producing cooking appliance and not obstructed. The fire extinguisher must have a placard placed conspicuously nearby. According to NFPA 96-2011: 10.2.2, the placard should indicate that the extinguisher is to be used only *after* the fixed fire-suppression system has been activated (see the image on page 10).

"The fire-suppression system should activate automatically, but sometimes the fusible links don't

Photo courtesy of Ted West. Used with permission.

A placard identifying the use of a fire extinguisher as a secondary backup means to the automatic fire-suppression system must be conspicuously placed near each portable fire extinguisher in the cooking area.

get changed out as often as required," West explains. "If they don't get changed out, they become excessively loaded with grease and may possibly fail to activate. That's why a means for manual activation is required."

If the fire is not completely out following activation of the fire-suppression system, the Class K fire extinguishers then should be used. "Probably 70% to 80% of the time, when you ask kitchen staff what they should do first in the event of a grease fire, they almost always say to use the extinguisher," West says. "That's not correct. You're supposed to activate the fire-suppression system first and then use the Class K fire extinguisher if the fire re-ignites." It is the responsibility of the facilities manager or life safety compliance professional to train the kitchen director and staff about proper fire suppression.

West notes that a health care facility should have a service contractor who specializes in fixed fire-suppression systems test the kitchen's system every six months. Per NFPA 96-2011, such individual(s) must be "properly trained, qualified, and certified person(s) acceptable to the authority having jurisdiction."

The service contractor checks the links and nozzles and actually "dry" trips the system to make sure it's tied to the building fire alarm, West says. "Once the system activates, it's supposed to shut off all sources of ignition, both gas and electric," he notes. "Joint Commission surveyors look at a facility's documentation to make sure that testing has taken place."

West points out that some health care facilities that operate their kitchens 24 hours a day will push back on shutting off the fuel for this test. "It may be a temporary interruption to cooking operations, but it must be done twice a year," he insists. "Some hospitals will do it at 2 a.m. or 3 a.m., when cooking is the lightest. If that's what it takes, so be it." West says that if a facility did not do this test semi-annually and have documentation indicating so, he would score this as a violation.

Joint Commission surveyors also look at deep-fat fryer placement with respect to other cooking appliances. NFPA 96-2011: 12.1.2.4 requires a 16-inch horizontal separation between the fryer and any open flames from adjacent cooking equipment (including a gas range or gas char-grill). In lieu of the 16-inch horizontal separation, NFPA 96-2011: 12.1.2.5 allows an 8-inch vertical baffle, typically of heavy-gauge stainless steel, between the fryer and any open flames from adjacent cooking equipment.

Related Joint Commission Requirements

The following Life Safety standard and elements of performance (EPs) pertain to commercial kitchen operations in health care facilities.

LS.02.01.35

The hospital provides and maintains systems for extinguishing fires.

EP 11: Class K–type portable fire extinguishers are located within 30 feet of grease-producing ranges, griddles, broilers, or cooking appliances that use vegetable or animal oils or fats, such as deep fat fryers. A placard is conspicuously placed near the extinguisher stating that the fire protection system should be activated prior to using the fire extinguisher. (For full text, refer to NFPA 101-2012: 18/19.3.2.5.1; NFPA 96-2011: 10.10.2; NFPA 10-2010: 5.5.5; 6.6.2)

EP 12: Grease-producing cooking devices such as deep fat fryers, ranges, griddles, or broilers have an exhaust hood, an exhaust duct system, and grease removal devices without mesh filters. (For full text, refer to NFPA 101-2012: 18/19.3.2.5.1; NFPA 96-2011: 6.1)

EP 13: The automatic fire extinguishing system for grease-producing cooking devices does the following: deactivates the fuel source, activates the building fire alarm system, and controls the exhaust fans as designed. (For full text, refer to NFPA 101-2012: 18/19.3.2.5.1; NFPA 96-2011: 10.4; 10.6.1; 10.6.2; 8.2.3)

EP 14: The hospital meets all other *Life Safety Code* automatic extinguishing requirements related to NFPA 101-2012: 18/19.3.5.

Kitchen FAQ

The Joint Commission also clarifies its commercial kitchen–related requirements in the following response to a frequently asked question posted on The Joint Commission's website:

What is the requirement for testing kitchen automatic fire extinguishing systems and cleaning requirements?

The Joint Commission has no specific checklist for semi-annual inspection tasks for these systems. Criteria are found in NFPA 96-2011, where all actuation components, including remote manual pull stations, mechanical or electrical devices, detectors, actuators, and fire-actuated dampers, shall be checked for proper operation during the inspection in accordance with the manufacturer's listed procedures. This includes annual fusible link replacement.

The organization must also be able to demonstrate ongoing compliance with required system design components described in LS.02.01.35, including proper portable fire extinguishers in the vicinity, proper grease removal devices, fire alarm system activation, deactivation of the cooking fuel source, and proper operation of the exhaust system. Guidance for cleaning can be found in NFPA 96-2011, but The Joint Commission has no prescriptive procedures for maintaining kitchen extinguishing systems. The organization is required to have a strategy in place for cleaning based upon an assessment of manufacturers' requirements, risk levels, and hospital experience, as described in EC.02.05.01.

"If you think about it, this makes sense," West says. "When you're frying and grease is splattering, you don't want it to splatter into an open flame, where it could flare up. This is a violation I see at least once a month when I survey."

The high fire risk of cooking operations in a hospital can be significantly reduced by following the requirements (and good practices) described above, especially proper equipment cleaning, maintenance, and system testing and regular training of kitchen staff.

Reference

1. National Fire Protection Association (NFPA). *Structure Fires in Health Care Facilities*. Oct 2017. Accessed Oct 25, 2019. https://www.nfpa.org//-/media/Files/News-and-Research/Fire-statistics-and-reports/Building-and-life-safety/oshealthcarefacilities.pdf

NEXT

This is the second article in a two-part series.

APPLICABLE PROGRAMS: HAP, CAH, AHC, NCC, AND BHC

Part 2: PCRA and ICRA—Procedures and Best Practices

A DETAILED LOOK AT PRE-CONSTRUCTION RISK ASSESSMENT AND INFECTION CONTROL RISK ASSESSMENT FOR HEALTH CARE ORGANIZATIONS

by Cathryn Balestrieri, MA, CHSP; Kenneth R. Haber, MPA, FACHE, CHSP, CHFSP; Mary Ann Haran RN, BSN, CIC; Steve Marzo, CHSP; and John Sohl

As mentioned in last month's article "Mitigating Construction and Maintenance Risks," a pre-construction risk assessment (PCRA) identifies the potential environment of care, life safety, and infection prevention and control risks associated with planned or unplanned construction, renovation, demolition, or maintenance/repairs in or contiguous to a health care environment. These risks include—but are not limited to—the spread of infection, noise, odors, vibration, security, maintenance, and the integrity and function of fire equipment and systems, ventilation, utility systems, and medical equipment. An infection control risk assessment (ICRA), which is part of the PCRA process, addresses work practices, patient populations, and infectious agents associated with a proposed project and/or physical environment activity, as well as the action that needs to be taken prior to the work to mitigate risk.

The PCRA and ICRA processes—both of which The Joint Commission requires for hospitals, ambulatory health care centers, behavioral health care centers, and nursing care centers (*see* "Related Joint Commission Requirements" on page 17)—include several general components:

- Identify the problem(s).
- Develop and review possible mitigation measures based on the assessment.
- Implement the mitigation measures.
- Monitor the measures at regular intervals.
- Follow up on any concerns identified during the monitoring process.
- Report trends and concerns to the health care organization's Environment of Care Committee.

The following steps, which include examples, describe the PCRA process in more detail.

Step 1: Describe the project work in detail

Create a detailed description of the project work. Let's say that the project is the renovation of a cardiac catheterization lab (cath lab). In this case, the PCRA might list the following activities:

- Demolish all millwork and acoustical ceiling components and restore with new components of like kind.
- Remove and install new light-emitting diode (LED) lighting fixtures.
- With all mechanical equipment staying as is, install and maintain equipment protection throughout the project.
- Repair walls, creating minimal dust; install millwork; and paint.

Step 2: Identify areas surrounding the project area

Based on the use of the workspace during normal conditions and the nature of the adjacent areas, select and identify the occupant risk group from your organization's PCRA/ICRA form. For a cath lab, the adjacent areas might include the operating room, the recovery room, the magnetic resonance imaging (MRI) room, and so forth. Describe and assess the potential impact on each surrounding area.

Group 1 Lowest	Group 2 Medium	Group 3 High	Group 4 Highest
Office areas	All medical/surgical units	Emergency room	Operating rooms
Lobby and public hallways	Physical therapy	Radiology/MRI	Sterile processing
	Admission/discharge area	Postanesthesia care unit	Cardiac catheterization
	Outpatient areas	Labor and delivery	Oncology
		Newborn nurseries	Renal transplant
		Pediatrics	Anesthesia and pump areas
		All intensive care units	Endoscopy/minor surgery
		Nuclear medicine	Pharmacy admixture
		Dietary kitchen	Outpatient surgery
		Echocardiography	Central services
		Laboratories	

Source: Kenneth R. Haber

Step 3: Select the construction activity type

Using the PCRA form, select the construction type from the chart of options (as shown below). For the cardiac cath lab renovation, the selected construction activity would be medium scale, Type C category. The construction type relates to how invasive the work will be in the designated area. This selection is part of an impact assessment.

Construction Activity *(check type of activity)*
TYPE A—Inspection, non-invasive activity
TYPE B—Small-scale, short-duration projects
TYPE C—Medium: Activity generates moderate to high levels of dust and requires more than one work shift for completion
TYPE D—Major duration and construction activities requiring consecutive work shifts

Source: Kenneth R. Haber

Step 4: Identify infection prevention and control precautions

Identify mitigation strategies from the preset list on the PCRA/ICRA form that constitute what is best for the specific occupancy and construction activity type. Examples of PCRA or ICRA mitigation measures include the following:

- Construct an anteroom.
- Remove or isolate the heating, ventilation, and air conditioning (HVAC) system in the area.
- Maintain negative air pressure within the worksite.
- Maintain an anteroom in a negative pressure state in relation to patient areas.

Step 5: Identify other issues and/or impact on the worksite and adjacent areas

Environmental conditions to assess include the following:

- Air quality
- Dust
- Emergency procedures
- Noise
- Security measures for the worksite and areas adjacent
- Odor
- Storage of construction equipment
- Utilities (electrical, plumbing, and so forth)
- Removal of construction waste
- As applicable, management of unit/department supplies and equipment during construction/alteration/maintenance

Step 6: Identify means and methods

Define the mitigation methods for all items identified in step 5. After completing the assessment portions of this process, consider and select mitigation measures based on history, regulatory requirements, advice from project content experts, and analysis of what will best protect all occupants.

Step 7: Complete the interim life safety measure (ILSM) assessment and select measures[1]

The PCRA needs to include an ILSM assessment per LS.01.02.01, EP 1 (*see* "Related Joint Commission Requirements" on page 17).

In the event that the life safety assessment indicates the need for ILSMs due to a *Life Safety Code*®* deficiency, the appropriate measures and contingency plans must be implemented, communicated to the involved areas/departments, and documented. Examples of conditions that warrant ILSMs include the following:

- Diminished egress-corridor width due to a construction site barrier
- A compromised smoke/fire barrier
- Electrical impairment that might affect fire systems
- Fire protection system taken offline
- Rerouting of egress

Step 8: Monitor the project/worksite on an ongoing basis

Daily surveillance and continuous monitoring of the project/worksite(s) are critical to ensuring that appropriate measures are maintained and assessing the need for modified measures or additional measures due to unplanned issues. Measures can be terminated when the identified risk or deficiency is corrected or eliminated.

PCRA/ICRA implementation challenges

Measures associated with PCRA/ICRA can be challenging. Some of the common obstacles include the following:

- Lack of training and competency in PCRA/ICRA processes
- Difficulties in creating negative air pressure around a worksite due to location, costs, and lack of access to exhaust points
  - Defining an alternative when negative pressure cannot be created
- Complying with requirements for workers to use personal protective equipment (PPE) in and out of worksites
- Short duration of work compared to the potential high costs of implementing mitigation measures
- Failure to implement measures before a project starts, which can add to delays and costs

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- The need to seal the work area from occupied patient spaces
- The need for new workflows that maintain a clean-to-soiled process flow
- The need to maintain sufficient alternate egress paths
- Difficulty obtaining support from senior management

Related Joint Commission Requirements

Standard EC.02.05.05

The organization inspects, tests, and maintains utility systems.

Note: *At times, maintenance is performed by an external service. In these cases, organizations are not required to possess maintenance documentation but must have access to such documentation during survey and as needed.*

EP 1: When performing repairs or maintenance activities, the organization has a process to manage risks associated with air-quality requirements; infection control; utility requirements; noise, odor, dust, vibration; and other hazards that affect care, treatment, or services for patients, staff, and visitors.

Standard EC.02.06.05

The organization manages its environment during demolition, renovation, or new construction to reduce risk to those in the organization.

EP 2: When planning for demolition, construction, renovation, or general maintenance, the organization conducts a preconstruction risk assessment for air quality requirements, infection control, utility requirements, noise, vibration, and other hazards that affect care, treatment, and services.

Note: *See LS.01.02.01 for information on fire safety procedures to implement during construction or renovation.*

EP 3: The organization takes action based on its assessment to minimize risks during demolition, construction, renovation, or general maintenance.

Standard LS.01.02.01

The organization protects occupants during periods when the *Life Safety Code* is not met or during periods of construction.

EP 1: The organization has a written interim life safety measure (ILSM) policy that covers situations when *Life Safety Code* deficiencies cannot be immediately corrected or during periods of construction. The policy includes criteria for evaluating when and to what extent the organization implements LS.01.02.01, EPs 2–15 to compensate for increased life safety risk. The criteria include the assessment process to determine when interim life safety measures are implemented.

Best practices

Consider the following best practices related to the PCRA/ICRA process:

- **Adopt a comprehensive construction safety program.** Health care organizations should consider adopting a comprehensive construction safety program (CSP). A CSP is a well-established program of which the PCRA/ICRA is the foundation. The CSP includes safety protocols not only for patients, but also for construction crew members, physicians and other health care staff, and visitors. A well-developed CSP includes written safety protocols that become part of the contractor's construction contract, plus an education program to teach PCRA/ICRA protocols to the contractor, construction crew, and health care organization staff tasked with managing the construction project.

  The CSP ideally includes monitoring of applicable safety protocols, periodic audits and surveys of the construction projects, and reassessments of the CSP itself. To be truly effective, the program needs to be a "living program"—one that evolves as the team learns and matures. The CSP should be developed in such a way as to promote teamwork among all involved in the project: the general contractor and construction manager and their crew, the health care organization's safety personnel, infection prevention staff, nursing staff, engineering staff, and construction project managers. The CSP must place the safety of the patients first, promote quality work, and pursue excellence in maintaining an appropriate environment for the care of patients. It is within this type of safety culture that a PCRA/ICRA program will flourish.

- **Promote education and certification.** A PCRA/ICRA certification program provides a means of educating personnel to help ensure their competence. Optimally, as a prequalification for participation in pre-construction, maintenance, and construction activities, worker competence can be demonstrated through the award of a PCRA/ICRA credential accredited under the American National Standards Institute (ANSI)[†] and ASTM International joint standard ANSI/ASTM E2659.[2]

  Personnel who pursue a PCRA/ICRA credential gain knowledge of health care facility environments and the risks, precautions and mitigation measures needed to reduce or eliminate hazards—to help ensure the safety of the building occupants (patients, staff, and visitors) as well as the physical plant.

- **Facilitate teamwork.** The safety officer, the infection preventionist, and the balance of the PCRA/ICRA team members must regularly communicate with one another and work harmoniously to uphold the PCRA/ICRA requirements.

- **Ensure ongoing surveillance.** Reinforcement of PCRA/ICRA requirements, through ongoing inspection and onsite education, is the key to PCRA/ICRA

[†] ANSI the official US representative to the International Organization for Standardization (ISO) (https://www.iso.org/home.html) and is a US representative to the International Accreditation Forum (IAF) (https://www.iaf.nu). ANSI accreditation is nationally and internationally recognized as a mark of quality and ensures that employers can have confidence that the certificate holder has completed the prescribed course of study (https://www.ansi.org/accreditation/credentialing).

compliance. The project/work may need to stop if unsafe conditions are not corrected by responsible parties. Without sufficient oversight, consistent and safe outcomes may not always be achieved.

- **Conduct after-action reviews.** When project or maintenance activities are completed, the entire PCRA/ICRA process should be assessed for process improvement in future applications. Ideally this work should be conducted under the auspices of the Environment of Care Committee.

The PCRA and ICRA were developed to protect patients from emerging risks due to maintenance and construction activities. Significant emerging global risks such as natural disasters have made these processes increasingly critical—to the point that they should be considered part of emergency preparedness. Proper execution of the PCRA process proactively protects health care occupants and infrastructure from potential serious safety risks. EC

References

1. Joint Commission Resources. Interim strategies: What to know when it's time to turn to interim life safety measures. *Environment of Care News*. 2019 Jul; 22(7): 2–9.
2. American National Standards Institute/ASTM International. ANSI/ASTM E2659. Accessed Oct 24, 2019. https://www.ansi.org/accreditation/credentialing/certificate-issuers/howtoapply.

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NEXT ↓

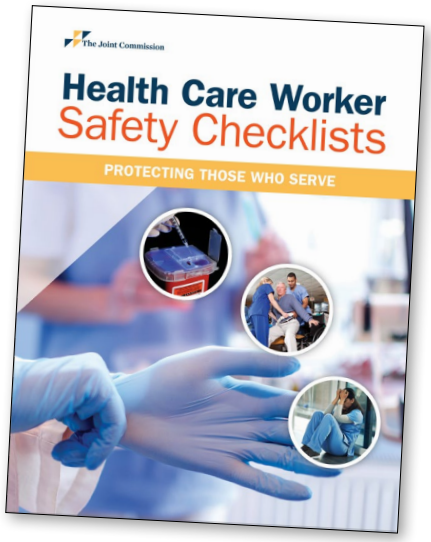
TOOLBOX

Preparing for High-Consequence Infectious Diseases

HOW A HEALTH CARE FACILITY RESPONDS TO HCID OUTBREAKS, INCLUDING EMERGING INFECTIOUS DISEASES, MUST BE ADDRESSED IN ITS EMERGENCY OPERATIONS PLAN

From measles to Middle East respiratory syndrome (MERS), high-consequence infectious diseases (HCIDs) can wreak profound havoc on health care facilities. HCIDs threaten the health and even the lives of staff as well as patients.

How a health care facility responds to potential HCIDs must be addressed in the organization's Emergency Operations Plan, as required by The Joint Commission. It is also recommended that organizations conduct biothreats readiness exercises, which count toward The Joint Commission's Emergency Management requirement (spelled out in EM.03.01.03) that organizations conduct emergency response exercises at least twice a year.



To learn whether your organization is well prepared for an HCID outbreak, use the following "High-Consequence Infectious Disease Preparedness Checklist," a customizable version of which is available here.

This checklist is one of more than 60 checklists in the new Joint Commission Resources book *Health Care Worker Safety Checklists: Protecting Those Who Serve*, which can be ordered from the JCR webstore.

Some of the checklists in this book, including the "High-Consequence Infectious Disease Preparedness Checklist," are aimed at management, while others are for health care workers to use themselves as training tools or for ongoing guidance. In addition to "Infectious Agents," the book includes chapters titled "Chemical Hazards," "Physical Hazards" (including a set of checklists aimed at environment of care workers), "Workplace Violence Hazards," and "Stress and Workplace-Related Behavioral Health Issues." EC

DOWNLOAD

Previously published in *Health Care Worker Safety Checklists: Protecting Those Who Serve* Joint Commission Resources, 2019.

APPLICABLE PROGRAM(S)			
☒ AHC	☒ BHC	☒ CAH	☒ HAP
☐ LAB	☒ NCC	☐ OBS	☐ OME

For Managers: High-Consequence Infectious Disease Preparedness Checklist

From measles to Middle East respiratory syndrome (MERS) to Ebola virus disease (EVD), high-consequence infectious diseases (HCIDs) can wreak sudden and deadly havoc on health care facilities. Every health care facility should regularly consult the Centers for Disease Control and Prevention (CDC) website's "Division of High-Consequence Pathogens and Pathology" section (https://www.cdc.gov/ncezid/dhcpp/index.html) for the latest evidence-based guidelines and protocols on what to do in cases of suspected or confirmed HCIDs of various types. Keep in mind that the precautions and procedures that need to be followed are often specific to the size, type, and configuration of a health care facility. How a health care facility responds to HCID outbreaks must be covered in the organization's Emergency Operations Plan (as required by The Joint Commission's Emergency Management standard and element of performance EM.02.01.01, EP 5), as well as in the organization's Infection Prevention and Control Plan (required by The Joint Commission's Infection Control standard IC.01.05.01).[1]

Answers to all questions should ideally be **Y** for **Yes** (unless marked **NA** for **Not Applicable**). Use the **Comments** section to indicate any required follow-up action(s) identified by an **N** for **No** response.

This checklist is based partly on Massachusetts General Hospital's innovative and comprehensive biothreats readiness program.

Organization: _____ Department/Unit: _____

Date of Review: _____ Reviewer(s): _____

QUESTIONS	Y	N	NA	COMMENTS
Does the health care facility address high-consequence infectious diseases (HCIDs) of various types in its Infection Prevention and Control Plan?				
Does the health care organization address HCID outbreaks in its written Emergency Operations Plan?				
Does the organization regularly consult the CDC's website (https://www.cdc.gov/ncezid/dhcpp/index.html) for the latest recommendations on how to best respond to various HCIDs and update the Infection Prevention and Control Plan and Emergency Operations Plan accordingly?				
Does the organization follow the CDC's "identify, isolate, and inform" methodology when someone is suspected of having a particularly lethal HCID, such as Ebola virus disease (EVD)?				
Does the health care facility conduct training exercises for HCIDs across all departments? In hospitals, the emergency department (ED) and other critical access points should be the focus of attention. Joint Commission standard EM.03.01.03 requires that organizations conduct emergency response exercises at least twice a year; these can include biothreats readiness exercises.				
To assist with the identification of patients with HCIDs, does the organization's electronic health record (EHR) system require that all patients be asked for their recent travel history?				

For Managers: High-Consequence Infectious Disease Preparedness Checklist *continued*

Questions	Y	N	NA	Comments
Does the EHR system have mechanisms in place for alerting staff when a patient's travel history and presenting symptoms indicate the possibility of an HCID?				
Does the organization have protocols in place for alerting staff during patient handoffs that a patient's travel history and presenting systems indicate the possibility of an HCID?				
For hospitals, is there always an infectious disease specialist, intensivist, or emergency physician onsite or on call who has expertise in HCIDs, infection control, and current outbreaks of concern? One good practice is to have that expert carry a dedicated pager.				
Does the organization have a highly trained multidisciplinary biothreats readiness team in place to assume a leadership role during an HCID outbreak? This volunteer team should include clinicians from intensive care (adult and pediatric), infectious diseases, respiratory therapy, and other areas.				
Does the health facility follow the good practice of having ongoing "no notice" 15-minute training exercises in clinical settings that focus on priority responsibilities in the initial moments of an HCID event?*				
Does the organization conduct full-scale exercises that evaluate interdepartmental coordination, including the movement of patients and resources throughout the building?†				
Does the organization conduct "tabletop exercises" that walk through appropriate responses to an HCID event?‡				

* Such exercises help critical stakeholders develop reflexive actions to facilitate interdepartmental response to an HCID outbreak.

† The benefits of full-scale exercises include the ability to test protocols in a real-world environment and help staff develop muscle memory by testing the plan in a familiar setting.

‡ The benefits of such exercises include more detailed discussions that provide context such as theory and history, as well as the ability to involve more staff members in the training. Note that tabletop exercises cannot be used to meet the Joint Commission requirement of conducting two emergency response exercises a year.

Reference

1. Joint Commission Resources. Combating HCIDs. *Environment of Care® News*. 2019 Jun;22(6):8–14.

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