

Guidelines for Environmental Health Practices at Village Health Clinics

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This document was developed as a tool for staff conducting environmental health surveys of village health clinics (VHCs) in rural Alaska. Environmental health staff, health aides and other health practitioners may also use these guidelines for appropriate environmental health operations within the facilities.



Preface

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History and supersession:

- “Environmental Health Standards for Village Health Clinics,” Alaska Area Native Health Service (AANHS) Circular No. 93-74: This is the last circular published by the AANHS for village health clinic standards.
- “Guidelines for Environmental Health Practices at Village Health Clinics,” April 2002, Alaska Native Tribal Health Consortium (ANTHC): ANTHC could not issue a document superseding an AANHS Circular. The guidelines were developed to update information provided in the AANHS circular for use by tribal health organization, environmental health programs.
- “Guidelines for Environmental Health Practices at Village Health Clinics,” 2011, ANTHC: This document is an update of the 2002 guidelines.

Intended purpose:

Reports resulting from the surveys of Village Health Clinics (VHCs) may be used by both local and/or regional native health boards. The guidelines may be adopted and/or modified as appropriate by tribal health organizations wishing to use them as an environmental health standard for VHCs. The guidelines are intended as a tool to assist in VHC surveys and are not a substitute for any of the references cited.

Tribal health organization, environmental health programs are encouraged to send their village health clinic surveys to the Alaska Area Native Health Service, Real Property Officer. The Real Property Officer can assist with following up on conditions found at clinics participating in the Village Built Clinic Leasing Program. More importantly, the Real Property Officer may use information gleaned from the surveys to help substantiate the need to increase the leasing program funds.

Major Additions and Revisions from the 2001 Guidelines

- Topics are now alphabetized by subject and are hyperlinked.
- The appendices are hyperlinked to return to the referring section after viewing.
- New sections have been added to include:
 - Dental
 - Combined Laboratory and Pharmacy.
- Fire Safety is now one section, combining *General* and *Lodging* in Clinics.
- Titles have been updated. This includes:
 - Environmental Services (housekeeping),
 - Hand hygiene (hand washing), and
 - Airborne Infection Isolation (negative pressure rooms)

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References Cited

The following references and codes were used to support these guidelines. In the event of a conflict or overlap between codes or references, the more stringent shall apply (see VBC Leasing Program, Alaska Area Native Health Service Circular No. 91-75). The user should have access to the cited references and codes. This access may be at the office for more commonly used references and codes or through the Alaska Native Tribal Health Consortium, Division of Environmental Health and Engineering for other standards.

An explanation of relevance for specific codes can be found in [Appendix 1](#).

ALASKA (AK) ADMINISTRATIVE CODES (AAC) AND STATUTES (AS):

AK Additional Hazard Communication Standards, 8 AAC 61.1110, September 2011. Available at:

<http://www.legis.state.ak.us/basis/folio.asp>

AK Boiler & Unfired Pressure Vessels, AS 18.60.320, September 2011. Available at:

<http://labor.state.ak.us/lss/forms/boiler-stats-regs.pdf>

ADEC Drinking Water, 18 AAC 80, November 11, 2010. Available at:

<http://www.dec.state.ak.us/regulations/pdfs/18%20AAC%2080.pdf>

ADEC Hazardous Waste, 18 AAC 62, August 8, 2003. Available at:

<http://www.dec.state.ak.us/regulations/pdfs/18%20AAC%2062.pdf>

ADEC Pesticide Control, 18 AAC 90, April 10, 2010. Available at:

<http://www.dec.state.ak.us/regulations/pdfs/18%20AAC%2090.pdf>

ADEC Radiation Protection, 18 AAC 85, April 9, 2009. Available at:

<http://www.dec.state.ak.us/regulations/pdfs/18%20AAC%2085.pdf>

ADEC Solid Waste Management, 18 AAC 60, September 5, 2010. Available at:

<http://www.dec.state.ak.us/regulations/pdfs/18%20AAC%2060.pdf>

ADEC Wastewater Disposal, 18 AAC 72, December 23, 2009. Available at:

<http://www.dec.state.ak.us/regulations/pdfs/18%20AAC%2072%20As%20amended%20through%20December%2023,%202009.pdf>

BEST MANAGEMENT PRACTICES (BMP)

This citation may be used when a specific standard or recommendation could not be found, but in the opinion of the authors it should be mentioned. Experience has shown these are often items the Joint Commission (TJC) may cite.

INTERNATIONAL CODES:

International Building Code (IBC), 2006, 13 AAC 50.020

International Fire Code (IFC), 2006, 13 AAC 50.025

International Fuel Gas Code (IFGC), 2006

International Mechanical Code (IMC), 2006, 13 AAC 50.023

International Private Sewage Code (IPSC), 2000

International Property Maintenance Code (IPMC) 2006

Uniform Plumbing Code (UPC), 2006, 8 AAC 63.010

Available at: <http://www.iccsafe.org/Store/Pages/FreeCodes.aspx>

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA):

NFPA 1: Fire Prevention Code, 2000 Edition
NFPA 10: Standard for Portable Fire Extinguishers, 2007 Edition
NFPA 30: Flammable & Combustible Liquids Code, 2000 Edition
NFPA 31: Standard for the Installation of Oil-Burning Equipment, 2001
NFPA 49: Hazardous Chemicals Data, 1994 Edition
NFPA 50: Standard for Bulk Oxygen Systems at Consumer Sites, 2001
NFPA 54: National Fuel Gas Code, 1999 Edition
NFPA 55: Standard for the Storage, Use and Handling of Compressed and Liquefied Gases in Portable Cylinders, 1998 Edition
NFPA 58: Liquefied Petroleum Gas Code, 2001 Edition
NFPA 70: National Electrical Code®, 2008 Edition – used by AAC (1999 used by TJC)
NFPA 72: National Fire Alarm Code®, 1999 Edition
NFPA 86: Standard for Ovens and Furnaces, 1999 Edition
NFPA 99: Standard for Health Care Facilities, 1999 Edition
NFPA 101: Life Safety® Code (LSC), 2000 Edition
NFPA 110: Standard for Emergency and Standby Power Systems, 1999 Edition

PATIENT ACCESSIBILITY LAWS:

Americans with Disabilities Act (ADA), as amended 2008
Americans with Disabilities Act Accessibility Guidelines (ADAAG) Checklist for Buildings and Facilities, October 1992
Federal Rehabilitation Act Amendments (FRAA) of 1998
Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy Rule
The Privacy Act (PA) of 1974
The Rehabilitation Act of 1973
Uniform Federal Accessibility Standards (UFAS) of 1984

PHYSICAL ENVIRONMENT

American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Handbook, 2000
Facility Guidelines Institute (FGI), Guidelines for Design and Construction of Health Care Facilities, 2010 (see detailed explanation in [Appendix 1](#)). Read only copy available at: <http://www.fgiguideines.org/2010guidelines.html>
Lighting for Hospital and Health Care Facilities, an Illuminating Engineering Society of North America Recommended Practice (IES) - RP-29-06
Ventilation of Health Care Facilities (VHCF), ANSI/ASHRAE/ASHE Standard 170-2008, supplement to 2010 FGI Guidelines

THE JOINT COMMISSION (TJC)

2011 Standards for Ambulatory Health Care (see detailed explanation in [Appendix 1](#)).
Environment of Care (EC)
Emergency Management (EM)
Human Resource (HR)
Infection Prevention and Control (IC)
Information Management (IM)
Life Safety (LS)
Provision of Care, Treatment, and Services (PC)
Rights and Responsibilities of the Individual (RI)

TOPICAL REFERENCES:

ASBESTOS

Occupational Safety and Health Administration (OSHA), Asbestos (29 CFR 1910.1001). Available at: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9995

BLOODBORNE PATHOGENS

OSHA, Bloodborne Pathogen Standard (29 CFR 1910.1030), December 12, 2008, http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10051
NIOSH, Selecting, Evaluating, and Using Sharps Disposal Containers; DHHS (NIOSH) Publication No. 97-111, January 1998.

CHILD RELATED

American Public Health Association and the American Academy of Pediatrics, Caring for Our Children, National Health and Safety Performance Standards. Third Edition, 2011 (CFOC). Available at: <http://nrckids.org/CFOC3/index.html>

DENTAL

Centers for Disease Control and Prevention (CDC), Guideline for Infection Control in Dental Health-Care Settings, 2003 (CDC-ICDHS). Available at: <http://www.cdc.gov/oralhealth/infectioncontrol/guidelines/index.htm>
Organization for Safety & Asepsis Procedures (OSAP), From Policy to Practice: OSAP's Guide to the Guidelines, 2004

DEPARTMENT OF TRANSPORTATION

Transportation of Regulated Medical Waste (49 CFR 173.197), July, 8, 2011. Available at: <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=15c4069898339aaa466c8961192f763a&rgn=div8&view=text&node=49:2.1.1.3.9.5.25.32&idno=49> and <http://cms.h2e-online.org/ee/rmw/rmw-regulations/departement-of-transportation/>

FOOD

United States Food and Drug Administration (FDA), Food Code, 2009. Available at: <http://www.fda.gov/Food/FoodSafety/RetailFoodProtection/FoodCode/FoodCode2009/default.htm>

HAZARD COMMUNICATION

OSHA, Hazard Communication Standard (29 CFR 1910.1200), March 11, 1994. Available at: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10099

INFECTION PREVENTION (GENERAL)

Association for Professionals in Infection and Control and Epidemiology (APIC), APIC Text of Infection Control and Epidemiology, 3rd Edition, online, 2009.

APIC Guideline for Selection and Use of Disinfectants, Rutala, William A. PhD, MPH, CIC, American Journal of Infection Control. 24(4):313-342, August 1996.

Centers for Disease Control and Prevention (CDC) Healthcare Infection Control Practices Advisory Committee (HICPAC), Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008 (CDC-DS). Available at:

http://www.cdc.gov/hicpac/pdf/guidelines/Disinfection_Nov_2008.pdf

CDC Healthcare Infection Control Practices Advisory Committee (HICPAC), Guideline for Environmental Infection Control in Health-Care Facilities, 2003 (CDC-EIC). Available at: http://www.cdc.gov/hicpac/pdf/guidelines/eic_in_HCF_03.pdf

CDC and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force, Guideline for Hand Hygiene in Health-Care Settings, October 25, 2002 (CDC-HH). Available at: <http://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf>

CDC, Guide to Infection Prevention for Outpatient Settings: Minimum Expectations for Safe Care, 2011 (CDC FIPOS). Available at: http://www.cdc.gov/HAI/prevent/prevent_pubs.html

World Health Organization (WHO) Patient Safety, WHO Guidelines on Hand Hygiene in Health Care, 2009 (WHO-HH). Available at: http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf

LEAD

OSHA, Lead Standard (29 CFR 1910.1025), August 15, 1980. Available at:

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=10030

OSHA, Construction Lead Standard (29 CFR 1926.62), August 18, 2008. Available at:

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10641

PHARMACY

U.S. Pharmacopeia 23 National Formulary 18 (USP NF) (recognized in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 321 et seq.)).

RADIATION

Ionizing Radiation (29 CFR 1910.1096). Available at:

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10098

TUBERCULOSIS

CDC, Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Facilities, 1994 MMWR 43(RR13);1-132, December 30, 2005, (CDC-TB)., Available at:

http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm?s_cid=rr5417a1_e

OSHA, Respiratory Protection Standard (29 CFR 1910.134). Available at:

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=12716

I. BUILDING CONDITION AND DESIGN

NOTE: New design and construction should meet requirements in the most recent edition of the International Building Code (IBC) and/or the National Fire Protection Association (NFPA) 101 Life Safety Code and/or other relevant authority adopted by the State of Alaska or applicable accrediting entity.

Existing structures are governed by regulations stipulated in IBC 102.6 Existing structures and/ or NFPA 101: 1-4.1 New and Existing Buildings. Where specific requirements differ, the most stringent or appropriate code requirement should be followed. NOTE: Based on IBC definitions, most village clinics will be classified as Business Group B structures (IBC 304.1). In some cases, where overnight accommodations are provided, these clinics, or the portion of the clinic with sleeping accommodations, may also be regulated as Residential R-1 occupancies (IBC 310.1).

For related issues that may arise but are not addressed in this guideline, please contact the ANTHC/DEHE staff.

1.1. Building Condition

- A. The clinic exterior and interior should be of sound construction and be kept in good repair. The interior surfaces, including walls and ceilings, should be constructed of a smooth, easily cleanable material. The floor should be constructed of a material that is durable and easily cleanable (FGI 3.1-7.2.3, TJC: EC.02.06.01).
- B. New facilities should be sized, designed and constructed to be accessible and in compliance with the following:
 - The Rehabilitation Act
 - The Uniform Federal Accessibility Standards
 - Americans with Disabilities Act, Accessibility Guidelines (ADAAG) for Buildings and Facilities
- C. Existing facilities should be brought into compliance during any remodeling or renovation (TJC: EC.02.06.01).

Health care workers (HCWs) and staff surveying facilities should use the checklists provided by ADAAG for a one-time thorough survey for accessibility. Subsequent surveys should reference the thorough survey and comment on progress made toward accessibility.

Checklists for a complete ADAAG survey may be found at:

<http://www.access-board.gov/adaag/checklist/a16.html>

- D. Entrance and exit to exam rooms should be accessible to stretchers and backboards. A minimum 3 feet (ft.) 8 inches (in.) clearance should be available if transport in beds is provided. All other door openings should have a minimum clear width of 32 in. (FGI 3.5-7.2.2.1/.2, NFPA 101: 38.2.2.2, IFC 1008.1.1).

- E. An arctic entry should be provided, where necessary. It should be designed and maintained in such a manner as to ensure the proper regulation of temperatures in the clinic building and not impede entrance or egress (BMP, FGI 1.2-6.2.1.4).
- F. General purpose exam rooms should have a minimum 80 square feet of floor area (FGI 3.1-3.2.2.2). Exam rooms designated for a special purpose (minor surgery or cast procedures), if provided, should have a minimum 100 square feet of floor area (FGI 3.1-3.2.3.2).
- G. Entrance doors to the clinic should be equipped with high quality locking systems which may include deadbolt locks and/or electronic access options. These devices should be in working order and provide a secure building that is inaccessible to unauthorized persons (TJC: EC.02.01.01). If the deadbolt requires the use of a key from the deadbolt side a sign must be posted by the door with the following words: *"This door to remain unlocked when the building is occupied."* A key must be immediately available to any occupant inside the building when it is locked (NFPA 101: 7.2.1.5.1; IBC 1008.1.8.3).
- H. Adequate storage space should be provided (FGI 1.2-2.2.3.6). Furnace rooms and electrical rooms should not be used for the storage of combustibles (IFC 315.2.3). Custodian's closets and other storage areas should be organized to prevent tripping hazards, fire and explosion hazards, and pest harborage ([29 CFR 1910.176\(c\)](#)).
- I. The building design should be such that provisions for healthcare are optimized and patients' rights to privacy are maintained. This includes, but is not limited to, provisions for doors, curtains, and opaque windows as necessary to maintain privacy (TJC: RI.01.01.01 EP7, FGI 3.1-3.2.1.1).
- J. Bathrooms should be enclosed from floor to ceiling with a hard wall and locking door access (TJC: RI.01.01.01 EP7). Staff should have means to unlock patient bathroom doors, so occupants may be removed in an emergency (NFPA 101: 19.2.2.2.5 - though this applies to healthcare facilities, the remote nature of many clinics does not always allow for quick transport to a hospital. Consequently, clinic staff may be caring for patients that belong in a healthcare facility).

1.2. Combined Laboratory and Pharmacy

Having a "laboratory" and "pharmacy" combined in one room is not the ideal situation as it combines dirty processes (laboratory) with clean processes (pharmacy) in one space. With appropriate separation, facilities and processes with a combined laboratory/pharmacy may work if both the laboratory and pharmacy are limited in scope. The following should be evaluated:

- A. **Separation:** There should be a defined separation between pharmacy and laboratory processes. A sink may be shared between the two, but only if pharmacy is on one side of the sink and laboratory on the other. There should be no shared counter space unless the counter is divided by the sink.
- B. Individual staff should be prohibited from working in both laboratory and pharmacy areas at the same time. Either laboratory or pharmacy operations should be conducted at any one time. If a staff member is working on the laboratory side, they must clean and sanitize the laboratory area, then wash their hands before working on the pharmacy side.

- C. **Separate refrigerators:** If refrigeration is required for both pharmaceutical and laboratory functions then a separate refrigerator is needed for each function. The refrigerator should be in the space allotted for the appropriate function.
- D. **Sink:** A minimum of one sink is needed in the combined room, especially if lab specimens such as blood, other bodily fluids or feces will be manipulated. If there is only one sink, it should be at the demarcation point for the lab and pharmacy.
- E. **Hand hygiene:** If a shared sink is used, alcohol based hand rub should also be available on the pharmacy side. Alcohol based hand rub is still highly advised if sinks are provided for both pharmacy and laboratory processes. See [Hand Hygiene](#) section.
- F. **Pharmaceutical storage:** Pharmaceuticals stored in a combined laboratory/pharmacy should be stored in closeable storage units (such as shelving and cabinets with smooth, easily cleanable doors).
- G. **Secured:** A combined lab/pharmacy should be locked when not in use.

There are no known references that give guidance on combined, limited laboratory/pharmacy processes (either allowing or prohibiting them). Recommendations in these guidelines were made with consultation with the following: “[Biosafety in Microbiological and Biomedical Laboratories, 5th edition](#), HHS Publication No. (CDC) 21-112, revised December 2009” see p. 25 and 37 definitions of Biosafety Level 1 and 2; FGI - 3.1-4.1.2.2 & 3, 3.3-3.2.6.6

1.3. Electrical

- A. All electrical wiring should be installed and maintained in accordance with the latest edition of NFPA 70. All major repairs or changes to the electrical system should be done by a qualified electrician. (TJC: HR.01.02.05). Documentation of maintenance and repairs should be kept (TJC: EC.05.05 EP2) .
 - 1. Under [29 CFR 1910.333\(c\)\(2\)](#), OSHA outlines qualified persons, or those permitted to work on or near energized parts, “*shall, at a minimum, be trained in and familiar with the following:*
 - i. *The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment,*
 - ii. *The skills and techniques necessary to determine the nominal voltage of exposed live parts, and*
 - iii. *The clearance distances specified in 1910.333(c) and the corresponding voltages to which the qualified person will be exposed.*

Type of training: *The training required by this section shall be of the classroom or on-the-job type. The degree of training provided shall be determined by the risk to the employee” ([29 CFR 1910.333\(c\)\(2\)](#)).*
- B. Sufficient duplex grounded-type receptacles should be available for necessary task performance. Each examination and worktable area should have access to a minimum of two duplex receptacles (FGI 3.1-8.3.6.1 & .2).

- C. Ground Fault Circuit Interrupter (GFCI) should be located in bathrooms and outlets located within 6 feet of the outside edge of sinks, rooftops, and outdoor locations. The National Electric Code (NEC) does not require GFCI near sinks within patient care areas. The reason is to not disrupt care essential for patient life or survival. This is not a factor for most clinic exam rooms and the recommendation is to install a GFCI (NFPA 99: 3-3.2.1.2, NFPA 70: 210.8(b)).
- D. Clinics designed and built using the 2008 National Electrical Code should have water fountains plugged into a GFCI. Prior to 2008, this requirement was not listed. However, a risk assessment can determine other areas that will benefit from additional GFCI installations. (NFPA 99: 3-3.2.1.2, NFPA 70: 210.8(b)).
- E. Outlet or switch covers should be kept in good repair. All electrical receptacles intended to supply areas occupied by children should be listed tamper resistant or should employ a listed tamper resistant cover. As of the writing of these guidelines, the authors were unaware of any listed tamper resistant covers. Surveyors should closely scrutinize any claim that a cover is listed. Plastic child resistant plugs or caps should be discouraged since they are difficult to keep in place. Tamper resistant outlets are not required in health clinics by the NEC however; a risk assessment may determine the use of tamper resistant outlets is appropriate. If after a risk assessment it is determined to implement child resistant outlets, plastic child resistant plugs or caps should be the last selection choice since they are difficult to keep in place and can pose choking hazards. Leading safety organizations discourage and/or prohibit plastic plugs or caps in environments intended for children ([CFQC 5.2.4.2](#), BMP).

Risk assessment guidance for determining requirements for tamper resistant electrical outlets:

The ideal solution is a two step process requiring a risk assessment as recommended by TJC.

1. Determine which outlets you want to address.
2. Install tamper resistant receptacles.

Installation of tamper resistant receptacles negates the need to add caps or covers which only work when in use. As previously mentioned, most facilities have a difficult time keeping caps in the outlets they want to protect. In addition, some groups cite studies where caps are only effective for children under two years old. Older children often do not have trouble removing them. Some facilities consider use of outlet cover plates. However, due to their thickness, they may prevent the full insertion of a plug and as a consequence create additional hazards including potential fires. Ensure selection(s) are UL listed because many are not. Trial selection(s) before purchasing stock and applying to the areas identified to protect.

The NEC may be used to determine the most current thinking in regards to electrical safety. The 2002 NEC code regarding this issue is:

517.18 General Care Areas (C) Pediatric Locations: *Receptacles located within the rooms, bathrooms, playrooms, activity rooms, and patient care areas of pediatric wards shall be listed tamper resistant or shall employ a listed tamper resistant cover.*

- F. The circuits in the breaker boxes should be properly labeled. The breaker box should be covered, but accessible to authorized persons. A three-foot clearance should be available in front of electrical panels of 600 V or less. Refer to [Table S-1](#) under 19 CFR 1910.303 for additional information ([29 CFR 1910.303\(f\)](#), [29 CFR 1910.303\(g\)\(2\)\(i\)](#), [29 CFR 1910.303\(g\)\(1\)\(i\)\(A\)](#), Table S-1).
- G. Cords and plugs for electrical equipment, including portable equipment, should not be frayed, worn or damaged. Cords and plugs for should be visually inspected for damage and if damage is found the equipment must be removed from service until appropriately repaired ([29 CFR 1910.303\(b\)](#), [29 CFR 1910.334 \(a\)](#)).
- H. Extension cords and power strips should only be used according to their manufacturer's listing and the listed amperage rating should never be exceeded. Specifically, they should not be used as permanent wiring, permanently mounted or plugged together in sequence, one cord into another (daisy-chained). Extension cords should not pass through walls, doors or ceilings ([29 CFR 1910.305\(g\)\(1\)\(iii\)](#), [\(iv\)\(A-F\)](#)).
- I. Electrical appliances should be listed by an independent certifying safety lab such as Underwriters Laboratory (UL) ([29 CFR 1910.303\(a\)](#)).

1.4. Heating and Ventilation (Mechanical)

- A. For Airborne Infection Isolation (AII) room guidance (negative pressure rooms) see [Tuberculosis \(TB\)](#) section.
- B. Central heating appliances should be installed and maintained in accordance with manufacturer's instructions and the latest edition of the IMC or NFPA 30, 31, and 54 (where appropriate). All major repairs, renovations, or changes to the heating and ventilation system should be done by a licensed or qualified heating, ventilation, and air-conditioning technician (TJC: HR.01.02.05).
- C. Fuel gas piping and appurtenances (valves, connectors, etc) should be installed and maintained in accordance with the IFGC 403-415 or NFPA 54.
- D. Outside air should be supplied for combustion and ventilation (NFPA 54: 6.8.3, 86-4-3.2.1). Combustion air openings should be unobstructed for a distance of not less than six inches in front of the opening (IMC 306.1.1).
- E. The heating system should be arranged to provide uniform heat throughout the building at a minimum temperature of 68°F when occupied and not less than 50°F when unoccupied. Areas intended for patient care should be maintained at 75°F. (IBC 1204.1, FGI 3.3-8.2.1).

- F. Bathrooms and janitor's closets should be mechanically ventilated.
- Existing bathrooms and janitor's closet should provide 10 room air changes per hour (ACH).
 - Clinics designed after 2006 have more specific requirements:
 - Janitor's closets should be provided with 10 room ACH, of which 0.5 cfm of outdoor air per square foot of floor space is required.
 - Bathrooms should allow for outdoor air at a rate of 75 cfm per water closet or urinal. (VHCF Table 7.1; IBC 1203.4.2.1 refers back to IMC; IMC Table M403.3).
- G. Exam rooms and labs should have ventilation at a minimum rate of 6 ACH (VHCF Table 7.1). Small clinics with less than four exam rooms are only required to have natural ventilation (FGI 3.3-1.1.1, 3.3-8.2.2).
- H. Heating systems should be thermostatically controlled allowing for adjusting temperature as appropriate for patient activities and comfort (FGI 3.3-8.2.1).
- I. Only listed portable heaters, for example, Underwriter's Laboratory (UL) listed, should be used as a back-up heat source in the facility and should only be used while the facility is occupied (NFPA 31: 1-7). As a best management practice, only space heaters equipped with an automatic tip over shut-off switch should be used and the heating element should not exceed 212°F (NFPA 101:19.7.8).
- J. Listed kerosene heaters such as Toyostove and Monitor should be installed in strict accordance with the manufacturer's guidelines and should meet all applicable requirements of the latest edition of NFPA 31.
- K. All fuel tanks and connections should be properly constructed and installed in accordance with the latest edition of IFGC 403-411 or NFPA 54 and NFPA 58.
- L. Fuel lines should be supported and protected to prevent unintentional releases. This includes support and protection against physical damage and excessive stresses arising from settlement, vibration, expansion, contraction, or ice conditions ([29 CFR 1910.106\(c\)\(4\)](#)).
- M. Fuel tanks should be located no closer than 100 feet from any private or community water supply. This separation does not apply to
- tanks that contain propane,
 - or to above-ground storage tanks or
 - drums that in the aggregate, have a storage capacity of less than 500 gallons of petroleum products, and that store only petroleum products necessary for the operation and maintenance of pumps, power generation systems or heating systems associated with a potable water source (ADEC [18 AAC 80.020](#)).

- N. In areas subject to frost heaves, fuel lines between the fuel tank and the building should be equipped with a listed and labeled flexible connector or other means to permit the tank or building to settle without impairing the tightness of the piping connections. Flexible connectors are often installed downstream from the ball valve attached to the tank. This should be incorporated into new clinics and suggested for existing clinics subject to frost heaves (IMC 1303.11, 1302.8; NFPA 54: 2.13.2).
- O. If total fuel tank storage capacity exceeds 1,320 gallons or if a single tank exceeds 660 gallons, the tanks should have secondary spill protection. If a spill from such a location could affect waterways and the total fuel tank storage capacity exceeds 1320 gallons, a Spill Prevention Control and Countermeasures Plan should be implemented (IFC 603.3.1; [40 CFR 112.7](#)).
- P. In the event of a fuel or hazardous material spill, use the [ADEC Spill Reporting Flyer](#), found in [Appendix 2](#), to contact the appropriate authorities. If fuel storage capacity exceeds 1,000 gallons, then this flyer must be posted in the clinic.

1.5. Lighting

- A. A minimum level of lighting (illuminance) should be provided in the clinic. Recommended minimum illuminance is specific to a task and light levels should be measured at the level of activity. [Table 3A: Determination of Illuminance Categories](#) is provided as [Appendix 17](#) and can be used as a guide to determine if minimum levels of illuminance are being met.
- B. The main clinic entrance should be provided with a functioning external light source sufficient to aid in safe ingress and egress of the clinic during dark periods (BMP, TJC: EC.02.06.01).
- C. Emergency lighting should be provided for all village health clinics. Clinics with floor space of 1,000 square feet or greater or with a stairway exit should have an emergency lighting system with battery back-up power wired into the main electrical circuitry of the clinic building. A similar emergency lighting system is recommended for clinics with less than 1,000 square feet but at a minimum, wall-mounted rechargeable flashlights should be provided for an emergency lighting source in the event of a power outage. (FGI 3.3-8.3.2.3). Testing requirements are outlined in section [4.1.E](#).
- D. All built-in light fixtures less than eight feet from the floor or in areas prone to breakage should be shielded to prevent unintentional contact with live parts ([29 CFR 1910.303\(g\) \(2\)\(i, ii\)](#)).

1.6. Plumbing

The State Department of Labor and Workforce Development adopted the Uniform Plumbing Code (UPC), 2006 edition, published by the International Association of Plumbing and Mechanical Officials (IAPMO) ([8 AAC 63.010](#) under authority of AS 18.60.705).

- A. All plumbing and plumbing fixtures should be installed according to the latest edition of the UPC or IMC. Existing systems should be maintained in proper operating condition (UPC 101.5.5, 310.4). Competent personnel familiar with the applicable provisions of the UPC or IMC should conduct plumbing work. This competency should be on file and available to the clinic (TJC: HR.01.02.05).

- B. If water under pressure is available to the clinic, at least one handwashing sink should be provided in each exam room. In addition, one handwashing sink should be provided convenient to the toilet room, exclusive of the exam room. Balancing potential risks of scalding against the risks of exposure to *Legionella*, APIC recommends facilities with running water provide a continuous supply of tempered water with a range between 105 °F and 120°F for handwashing (APIC CH 105-5). Facilities in freezing climates are encouraged to install cold temperature alarms to prevent damage from freezing.
- C. If water under pressure is not available to the clinic, a chemical toilet, box-and-pail type toilet, or other approved toilet system should be provided. Water for handwashing and for drinking should be provided as required by the water section of these guidelines (BMP).
- D. A utility sink should be provided in the custodian's closet. If plumbing is not available, acceptable means should be made available for cleaning. Vacuum breakers or backflow prevention devices shall be installed where a threaded hose bib or supply nozzle is used for connection of hoses or tubing (UPC 603.4.7, FGI 3.1-8.4.2.3(3)(b)).
- E. All fixtures should be kept clean and in good repair (EC.02.06.01).

II. DENTAL

The Clinic Guidelines should be used to assess dental areas of a clinic. This section highlights additional issues the environmental health specialist should consider in a dental area.

2.1. Dental Unit Waterline

Most dental unit waterlines (i.e., narrow-bore plastic tubing that carries water to the high-speed handpiece) are served by self-contained systems. Simply using potable water or distilled water in these systems will not eliminate bacterial contamination in treatment water if biofilms are not controlled. Consider the following when surveying clinics with dental services.

- A. Determine what type of water treatment device is used to control biofilms in the waterlines. Ensure the instructions for the treatment device are followed.
- B. The manufacturer's instructions for the treatment device should be followed to determine if and how often monitoring of the water quality is done. If monitoring is indicated by the manufacturer, acceptable water monitoring results would be < 500 CFU/ml. (CDC Guidelines for Infection Control in Dental Health-Care Settings, 2003, p. 28-29).

2.2 Sterilization

Many small clinics may not sterilize their medical equipment (it may be either disposable or sent to another facility for processing), but most dental operations will need to sterilize their equipment on site. Use the “[Disinfecting and Sterilizing Medical Devices](#)” section of these guidelines to assess the dental sterilization process.

Further information on dental unit waterline products and general dental safety and infection control issues may be found on the United States Air Force Dental Evaluation and Consultation Service website. A current link to this website may be found on the ANTHC IEH program website at: <http://www.anthc.org/cs/dehe/envhlth/ieh/>.

2.3 Waste Amalgam

Amalgam is an alloy of mercury with another metal. In dentistry, amalgam is used as a direct restorative material. Amalgam also contains silver. Both silver and mercury are Resource Conservation and Recovery Act (RCRA) toxic metals. References indicate that mercury in waste amalgam may leach in a landfill in excess of the specified amount in the Toxicity Characteristic Leaching Procedure (TCLP) test. Conducting a TCLP at the clinic level is likely not feasible, consequently, the surveyor should evaluate the waste disposal method for waste amalgam and encourage best practices.

- A. Best practices would include not disposing of waste amalgam in the garbage, infectious waste “red bag,” or sharps container. Amalgam waste should be recycled. The following steps from the American Dental Association (ADA, Best Management Practices for Amalgam Waste – October 2007, http://www.ada.org/sections/publicResources/pdfs/topics_amalgamwaste.pdf) should be followed ([Appendix 19](#)):
1. Stock amalgam capsules in a variety of sizes to minimize the amount of amalgam waste generated.
 2. Amalgam waste may be mixed with body fluids, such as saliva, or other potentially infectious material, so use personal protective equipment such as utility gloves, masks, and protective eyewear when handling it.
 3. Contact an amalgam waste recycler about any special requirements that may exist in your area for collecting, storing and transporting amalgam waste.
 4. Store amalgam waste in a covered plastic container labeled “Amalgam for Recycling” or as directed by your recycler. Your recycler may have their own requirements, so ask your recycler about containers and what may be placed in them.
 5. Look for recyclers who comply with the ADA-ANSI standard. This standard is meant to encourage recycling. The ANTHC/DEHE/EHS/IEH website may be consulted for more information and an updated list of recyclers

III. ENVIRONMENTAL SERVICES (HOUSEKEEPING)

3.1. Cleaning and Sanitizing

- A. The clinic should be maintained in a clean and sanitary condition. The clinic should post and implement a written cleaning schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area ([29 CFR 1910.1030\(d\)\(4\)\(i\)](#)).
- B. Respectively, each facility should have written policies and procedures identifying area being cleaned while outlining cleaning procedures, agents, equipment, personal protective equipment and specific schedules. (APIC CH 100-5).

3.2. Cleaning Schedule

- A. Cleaning schedules and procedures should begin with the least soiled area and progress to the most soiled area starting from high to low surfaces. A posted description and schedule for cleaning and housekeeping duties should be posted in the facility. Facility policies, procedures and schedules should be developed to meet the needs of an area. Items which should be addressed include but are not limited to:
 - 1. High touch surfaces such as bedrails, exam tables, doorknobs, patient equipment, light switches, television remotes, knobs on monitors, and blood pressure cuffs require frequent cleaning. Special attention should be given to these surfaces after each patient is seen and before the next patient.
 - 2. Exam rooms – clean on a daily basis (or more often if needed), the floors should be mopped with a disinfectant-detergent (or carpets vacuumed) and the waste containers should be emptied.
 - 3. Dusting should be performed using a chemically treated dust cloth or wet mop which will prevent the dispersal of dust.
 - 4. Horizontal surfaces including tables, beds, chairs, ledges, lights, wall fixtures, and tops of doors should be wiped daily with a clean cloth dampened with an EPA-registered disinfectant-detergent.
 - 5. Bathrooms should be cleaned and stocked at least daily.
 - 6. If the mop and bucket technique is used, the solution must be changed frequently and whenever used to clean gross spills of blood and other potentially infectious materials. Mops should be changed with the same frequency as the disinfectant solution and laundered.

Encourage staff to switch to microfiber mop use. This has many advantages including limited changing of the cleaning solution (as a new microfiber mop is used for each room) and lighter weight. The ANTHC/DEHE Institutional Environmental Health staff may be contacted for more information on microfiber mops.

If microfiber mops will not be used, staff should be encouraged to use the double bucket mop technique to extend the life of the cleaning solution.

More information on microfiber mops may be found at this EPA website:

<http://www.epa.gov/region9/waste/p2/projects/hospital/mops.pdf>

7. Detergent and water are adequate for cleaning administrative offices (non-patient areas) - weekly cleaning is sufficient unless visibly soiled. Waste should be collected daily. (APIC CH 100 and CDC Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008)
8. Glutaraldehyde is a high level disinfectant/sterilant and is neither recommended nor necessary for disinfection of environmental surfaces. Glutaraldehyde is too toxic and expensive for this application (APIC Guideline for Selection and Use of Disinfectants, p.329)

3.3. Cleaning Supply Storage

- A. A lockable custodian's closet with shelving, mop and broom holders, utility sink (if plumbed) and ample space for equipment and supplies should be provided (FGI 3.1-5.5.1.2). In existing facilities where it may not be feasible to install a custodian's closet, a lockable cabinet should be provided for storing cleaning supplies (EC.02.02.01). Chemicals should not be stored at or above eye height (BMP).
- B. Storage areas for housekeeping supplies should be identified (FGI A3.1-5.5.1.2).
- C. The Surveyor should closely evaluate the type of disinfectants used and whether or not they are dispensed in concentrated form. Many concentrated disinfectants are corrosive and cause permanent eye damage. If an auto mixing station is not used for concentrated chemicals, ensure splash resistant goggles are used and an eyewash is available. Always use appropriate PPE per MSDS guidance ([29 CFR 1910.132\(d\)\(1\)](#)).

For most ready to use disinfectants, nitrile gloves will suffice. For specific information on glove selection see [PPE section](#).

3.4 Laundry Services

- A. Clinics often use disposable table covers and gowns to prevent the need to launder contaminated items (APIC CH 49-5). The decision to use disposable items is determined by clinic management.
- B. If the clinic does not use disposable gowns, then contaminated laundry should be removed, containerized and marked as other contaminated items similar to the provisions for regulated medical waste ([29 CFR 1910.1030\(d\)\(3\)\(vi\)](#)), ([\(d\)\(4\)\(iv\)\(A\)\(2\)](#)). Contaminated laundry includes laundry which has been soiled with blood or other potentially infectious materials or may contain sharps ([29 CFR 1910.1030\(b\)](#)). Clean laundry should be stored separately from contaminated laundry (APIC CH 101-5).

Some clinics with residential type washing machines may choose not to launder contaminated laundry but either dispose of the contaminated laundry as regulated medical waste or send it to an institutional laundry (for example in a hospital). If contaminated laundry is routinely laundered at the clinic, the machines should either provide a hot water cycle with temperatures reaching 160°F at a minimum for over 25 minutes or a suitable chemical disinfectant (such as a total available chlorine residual of 50 – 150 parts per million)([CDC-EIC, 100-101](#)).

IV. FIRE SAFETY (LIFE SAFETY)

On the 14th of June 2006, the Alaska Administrative Code was updated with the 2006 Edition of the International Building Code, International Fire Code, and International Mechanical Code. TJC uses the NFPA Life Safety Code and other NFPA references in their survey process (refer to TJC standards for edition of the NFPA used). The following section references both codes. For existing clinics built before the state adopted the International Codes, the clinics should be in compliance with NFPA codes. For clinics approved for construction or renovated after 9/15/01, the most restrictive code should be used. This section was not written to be used for a plan review. Any new clinic or substantial renovation should have a plan review conducted to ensure compliance with the applicable codes. Most clinics built in Alaska will require State Fire Marshall plan review ([13 AAC 50.027](#), <http://www.dps.state.ak.us/Fire/contactus.aspx>). The ANTHC, DEHE staff are also available for plan reviews.

4.1 Exits and Exit Signs

- A. Clinics should have at least two remotely located exits. Exceptions do exist for one exit.
 - a. If the building is covered by IFC 1019.1, 2, one exit may be permitted if the building is one story and has less than 50 occupants with a travel distance of less than 75 feet to the exit.
 - b. If the building is covered by NFPA 101: 39.2.4.2, one exit may be permitted if the building has less than 30 occupants per floor and a total travel distance to the exit is less than 100 feet (for buildings not exceeding three stories).

Before either exception is used, the appropriate codes should be reviewed or authority having jurisdiction consulted (IFC 1005. 1, 2; NFPA 101: 39.2.4.2). A risk assessment should also be considered to determine if the exception is warranted (TJC: EC.01.01.01).

- B. Exits and exit access doors should be marked by an approved exit sign readily visible from any direction of egress travel. Access to exits should be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants ([29 CFR 1910.37\(b\)](#), NFPA 101: 39.2.10 and IFC 1011.1).
- C. Exit signs should be continuously illuminated by either external means (requires back-up power for emergency lighting), by internal means, or be self-luminous. External or internal lighting should provide 90 minutes of illumination if primary power is interrupted (NFPA 101: 7.10.5.2, 39.2.10; IFC 1006, 1011). Exit signs shall be visually inspected for operation of the illumination sources at intervals not to exceed 30 days. Exit signs connected to or provided with a battery-operated emergency illumination source shall be tested and maintained the same as emergency lighting as outlined in 4.1.E (NFPA 101: 7.10.9).
- D. Means should be provided to ensure exit access ways are continuously illuminated to at least one-foot candle during use. The Life Safety Code specifies the source of illumination should be from a reliable source (such as a public utility) (NFPA 101: 7.8.2.1). The International Fire Code requires an emergency system to automatically illuminate exit access ways in buildings requiring two or more exits (IFC 1006). Existing clinics should work toward having an emergency illumination for the exit access ways. This should be required in new or renovated clinics.

- E. Battery-powered emergency lighting should be functionally tested for a minimum duration of 30 seconds and documented at 30 day intervals and tested annually for a duration of 1.5 hours (TJC: EC.02.05.07, [29 CFR 1910.37\(a\)\(4\)](#)). Depending on the type of emergency light, the monthly test maybe performed by pressing the test button. Responsible staff may find it easier to do the 1.5 hour test by turning off the circuit breaker serving the emergency light. This should only be done after verifying there is no critical equipment on that circuit.
- F. All exits should be kept free of obstructions or impediments, including snow, to allow instant use in the case of fire or other emergency ([29 CFR 1910.37\(a\)\(3\)](#)).

4.2 General

- A. Smoke detectors are not required in one-story, village health clinics that do not allow lodging and the occupancy will not exceed 300 people (NFPA 101: 38.3.4.1, 39.3.4.1; IFC 907.2.2). "Lodging" is a term applied for use and not necessarily an area designated for lodging (NFPA 101: 3.3.156, 26.1.1.1; IBC 302.1). If a clinic allows people to spend the night, then the "lodging" provisions apply. If not required, existing smoke detectors should remain functional or be removed (NFPA 101: 4.6.12.2; IFC 901.6). For smoke detector requirements in clinics allowing lodging see [Lodging](#) section.
- B. Clinics should have fire extinguishers.
 - 1. The placement and distribution should be in accordance with NFPA 10. In general, the travel distance to a 2-A:10-B:C rated fire extinguisher should not be more than 30 feet.
 - 2. For effective use, it is recommended extinguishers be placed near exits and be placed so the top of the fire extinguisher is not more than 5 feet from the floor and not less than 4 inches above the floor.
 - 3. The extinguishers should be readily visible with the operating instructions facing outward and the extinguisher should not be blocked.
 - 4. The extinguisher should be on hangars or in brackets supplied by the manufacturer, mounted in cabinets, or placed on shelves. (NFPA 10: F.5.2.1)
- C. Extinguishers should be inspected monthly for proper condition. The date of inspection should be recorded either on a tag attached to the unit or kept on file. If inspection information is kept in a file, records shall be kept for at least the last 12 monthly inspections and available upon request (NFPA 10: 7.2.4.5). Clinic management can designate anyone to conduct this monthly check. [Appendix 6](#) provides a sample checklist provided by the State of Alaska.
- D. Extinguishers should undergo maintenance annually by someone recognized by the State of Alaska to hold a permit for inspecting portable fire extinguishers. [Appendix 6](#) provides a sample checklist provided by NFPA. Documentation should be available upon request.

The State of Alaska, Division of Fire and Life Safety issues permits for those responsible for installation, maintenance, and repair of portable fire extinguishers upon completion of specific requirements. Visit <http://www.dps.state.ak.us/fire/teb/fireextinguisherpermits.aspx> for more information. (NFPA 101: 39.3.5, 38.3.5; NFPA 10: 6.1.2 and F5.2.1; IFC 906.1, [13 AAC 50.030\(h\)](#))

- E. Stored-pressure fire extinguishers that are rechargeable and require a 12-year hydrostatic test also require a six-year internal examination (applies to most rechargeable extinguishers in clinics). When maintenance procedures are performed during periodic recharging or hydrostatic testing, the 6-year requirement shall begin from that date. If the fire extinguisher is newly installed, the 6-year visual inspection requirement begins from date of manufacture and should be maintained according to NFPA 10: 7.3.1.2.1 and 7.3.3.

If clinics choose to discard or recycle rechargeable fire extinguishers rather than recertify or recharge, contact the Alaska Division of Fire and Life Safety, Training and Education Bureau, Rural Fire Training Specialist, they may have resources to reuse the fire extinguishers, eliminating the burden on the landfill

(<http://www.dps.state.ak.us/Fire/contactus.aspx>).

1. Nonrechargeable fire extinguishers are not required to be hydrostatically tested but shall be removed from service at a maximum interval of 12 years from the date of manufacture (NFPA 10: 7.3.1.2.3).
- F. Staff should receive annual fire extinguisher education to familiarize staff with the general principles of fire extinguisher use and the hazards involved with its use. This training should be documented ([29 CFR 1910.157\(g\)](#)).
- G. Staff should participate in annual fire drills. Documentation of drills should be maintained at the clinic (TJC: EC.02.03.03).
- H. Special attention should be paid to the installation of heating devices. A schedule for boiler maintenance should be established (TJC: EC.02.05.01). A boiler inspection schedule should also be established with the Alaska Department of Labor and Workforce Development, Labor Standards and Safety Division, Mechanical Inspection Section (907) 269-4925. Most boilers should be inspected every 2 years (AS 18.60.320). Automatic utility hot water heaters that are used for space heating using the potable water system are exempt from state inspection, if the hot water heater:
1. is equipped with a safety relief valve and operational controls required by the latest Boiler Construction Code published by the American Society of Mechanical Engineers that has been adopted by the Department of Labor and Workforce Development under AS 18.60.180;
 2. contains only water;
 3. does not exceed 120 gallons in capacity, a water temperature of 210 degrees Fahrenheit, a pressure of 150 pounds of square inch gauge pressure, or a heat input of more than 200,000 BTU an hour; and,
 4. contains a tempering valve that will regulate the outlet domestic water temperature at not more than 140 degrees Fahrenheit.

- I. Clinics accredited by TJC are expected to comply with the *Life Safety Code* which states. “Hazardous areas including but not limited to, areas used for general storage, boiler or furnace rooms... shall be protected in accordance with Section 8.4”. This requires the hazardous area to be:
 1. separated from other parts of the building by fire barriers with a rating of at least 1-hour and openings protected by 3/4-hour fire protection rated self-closing doors
 2. protected by an automatic extinguishing system (NFPA 101: 39.3.2.1/2; NFPA 101: 8.4)

The State of Alaska recognizes and enforces the International Building Code (IBC) which has specific requirements that differ from the *Life Safety Code*. The IBC requires a 1-hour fire-resistance-rated separation or an automatic fire-extinguishing system in furnace rooms where the largest piece of equipment is over 400,000 Btu per hour input (IBC 508.2.2).

The table below provides examples of fire ratings for construction types.

One-hour fire resistant barriers must comply with NFPA 251, Standard Methods of Tests of Fire Endurance of Building Construction and Materials. Below is a table of common fire resistance rated wall assemblies by rating:

Construction Type	Covering	Fire Rating
Steel stud, 24 in. on center (oc), max	5/8 in. X gypsum board on both sides	1-hour
Wood stud, 16 in. oc, max	5/8 in. gypsum board on both sides	1-hour
Masonry block, 6 in. width	N/A	1-hour
Steel, 24 in. oc, max	5/8 in. X gypsum doubled on both sides	2-hour
Wood stud, 16 in. oc, max	5/8 in. gypsum board doubled on both sides	2-hour
Masonry block, 8 in. width	N/A	2-hour

- J. All fixed-in-place fuel fired heating devices should be properly vented to ensure combustion product removal. Air for combustion, ventilation, and dilution of flue gases must be provided in accordance with the equipment manufacturers’ instructions which can include providing or exhausting air from outside the clinic environment (NFPA 54: 9.3.1; UPC 507.0).
- K. All pressure relief valves on water heaters should be vented at a safe height and direction, away from persons that may be in the vicinity (IMC 1006.6).
- L. Smoking should not be allowed in any of the clinic buildings (TJC: EC.02.01.03).

- M. If a life safety feature (device, equipment, system, condition, arrangement, level of protection, or any other feature) is required for compliance with the *Life Safety Code*, it must be continuously maintained with the applicable NFPA requirements or as directed by the authority having jurisdiction (AHJ). Additionally, existing life safety features not required by the *Life Safety Code* or AHJ but obvious to the public, must be maintained or removed (NFPA 101: 4.6.12.1/2).
- N. Ensure that alcohol-based hand sanitizer dispensers are not installed directly adjacent to, directly above or below an electrical receptacle, switch, appliance, device or other ignition source. The wall space between the dispenser and the floor shall remain clear and unobstructed (IFC 3405.5).

4.3 Lodging in Clinics (Life Safety)

The International, NFPA, and State of Alaska codes vary regarding requirements for lodging and transient sleeping quarters. Therefore, the NFPA codes are cited for existing clinics that allow visiting staff to spend the night. The table in [Appendix 10](#) shows explanations of the codes for existing and new clinics.

- A. Use of any portion of a clinic for overnight sleeping accommodations would classify the entire building in which the sleeping accommodations occurred as lodging or boarding under the Life Safety Code (NFPA 101: 26.1.1.1 & 26.1.2.1). The only exception to this would be a complete, fire rated separation between sleeping quarters and the clinic where egress paths are not shared (this arrangement has not been referenced during the revision of these guidelines).
- B. Clinics with gas fired appliances should have a CO detector in the sleeping quarters. All clinics built after 2008 and that allow lodging require the use of carbon monoxide detectors when gas fired appliances are operated ([13 AAC 50.020](#)). This is highly recommended for all clinics
- C. Approved single-station smoke alarm should be in all sleeping rooms. They can be battery operated and not interconnected provided that the clinic is able to demonstrate that their testing, maintenance, and battery replacement programs will ensure reliability (NFPA 101: 26.3.3.5).

A process should be established for system and single station smoke detector testing, maintenance, and battery replacement if required. Always follow manufacturer's recommendations in addition to the following:

1. Initial or reacceptance tests and inspections should occur with detectors in place and be documented.
 2. Visual inspection should occur when installed and every six-months.
 3. Detector sensitivity should be checked one year after installation and every two years thereafter. The sensitivity test should ensure smoke entry into the sensing chamber and an alarm response. Testing with smoke or listed aerosol approved by the manufacturer is permitted (NFPA 72: 7-2.2, 7-3.1, 7-3.2).
- D. For planning purposes, per the State of Alaska Fire Marshal, "*clinics built after 2008 that accommodate [lodging] will be an R-1 occupancy classification or fire area... An automatic sprinkler system must be provided throughout the building. Health clinics may utilize a 13D sprinkler system throughout the building or provide a fire wall with a NFPA 13R system throughout the R-1 occupancy; a fire wall can be utilized to separate buildings*". See [Appendix 16](#) for complete [statement made by the Alaska State Fire Marshal](#).

- E. Every sleeping room should have a primary means of escape and a secondary means of escape (NFPA 101: 26.2.1.1,2). The secondary means of escape can be a window if meeting requirements of NFPA 101: 24.2.2.3. Excerpt provided in [Appendix 18 - NFPA Secondary Means of Escape Criteria - Windows](#).
- F. If an existing clinic has a single-station smoke alarm with at least one manual fire alarm box arranged to initiate the smoke detection alarm then the clinic does not need a "fire alarm system" (NFPA 101: 26.3.3.1). Otherwise, the clinic should be provided with a fire alarm system to include (NFPA 101: 26.3.3.1):
 - 1. Initiation - by manual mean (NFPA 101: 26.3.3.2), a manual fire alarm box in the natural exit access path near each required exit (NFPA 101: 9.6.2.3), and
 - 2. Notification - automatically (NFPA 101: 26.3.3.3) with both audible and visible signals (NFPA 101: 9.6.3.2) operated throughout the building (NFPA 101: 9.6.3.7).

V. FURNISHINGS

5.1. Appliances

- A. A telephone line or secure method for communicating should be available for emergency communication and consultation to ensure patient privacy (HIPPA, TJC: RI.01.01.01(7) and IM.02.01.01).

5.2. Clinical

- A. Medical records and medical information should be kept confidential (PA, HIPAA). A locking filing cabinet should be provided for the storage of medical records and should be locked when not in use. Filing cabinets containing medical records should not be stored in public access areas such as the waiting room (TJC: RI.01.01.01(7) and IM.02.01.01).

5.3. Furniture

- A. Furniture that can readily absorb liquid should not be placed in areas where it will be exposed to spills or heavy spoilage. The placement and type of furniture should follow the same reasoning as for carpets. Select furniture appropriate for areas, specifically choosing furniture that is easily cleaned and not easily contaminated where infection control is a concern (FGI 4.1-7.2.4.2, APIC CH 106-5).
- B. Carpeting, if maintained in clean and good repair, is allowed in areas of the clinic not subject to frequent spillage or heavy spoilage. Examples of areas where carpet should be avoided include: kitchens, laboratories, restrooms, and utility rooms (APIC CH 106-5).
- C. Furniture should not obstruct exits (NFPA 101: 39.2.5.1, IFC 1018.1).

VI. INFECTION PREVENTION AND CONTROL

6.1. Blood and Potentially Infectious Material Spills

- A. Spills of blood or other potentially infectious materials should be disinfected ([29 CFR 1910.1030 \(d\)\(4\)\(ii\)\(A\)](#)). Clinics may use a pre-packaged spill kit for this purpose as long as the kit uses an EPA registered tuberculocide (list B) or EPA product registered against HIV/HBV(List D)(CPL 2-2.69(XIII)(D)(23)).

EPA approved disinfectants may be found at: <http://www.epa.gov/oppad001/chemregindex.htm>. Any EPA approved disinfectant should be used and mixed according to the manufacturer's directions. A dilute solution of bleach may also be used according to the following procedure:

- Put on gloves and other barriers, such as a face shield, if indicated.
- Wipe up excess material with disposable towels or other absorbent materials.
- Clean up spill with soap and water.
- Disinfect contaminated surfaces with a dilute solution of household bleach and water (1 part bleach in 99 parts water for smooth surfaces). Contact time for this solution is the time for the application to dry. The diluted bleach solution should not be more than 24 hours old (APIC 100-5; [CPL 2-2.69\(XIII\)\(D\)\(23\)](#)).

Dilution example: Approximately 1.5 ounces or 3 tablespoons of bleach per gallon of potable water.

- B. If an absorbent material (such as carpeting or furniture upholstery) still is stained with blood or other potentially infectious material after extraction cleaning procedures, the carpet should be discarded or the furniture replaced or reupholstered (APIC CH 100). Using square carpet tiles will facilitate this process.
- C. Broken glassware or other sharp objects that may be contaminated should not be picked up directly with the hands. These items should be cleaned up using mechanical means such as a brush and dust pan, tongs or forceps. The sharp object should be disposed in a sharps container and the device used to pick it up should be disinfected or discarded ([29 CFR 1910.1030\(d\)\(4\)\(ii\)\(D\)](#)), ([CPL 2-2.69\(24\)](#)).

6.2. Environmental Surfaces and Non-patient Care Items, Disinfecting

See [Environmental Services](#) (Housekeeping) section

6.3. Hand Hygiene (Handwashing)

The Centers for Disease Control and Prevention (CDC) Healthcare Infection Control Practices Advisory Committee (HICPAC) and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force issued the Guideline for Hand Hygiene in Health-Care Settings (2002). Both this guideline and the WHO Guidelines on Hand Hygiene in Health Care are the main handwashing references used in this document and are recognized as the leading resources for a comprehensive hand hygiene program. Both guidelines can be downloaded at the CDC's webpage, Hand Hygiene in the Healthcare Setting at: http://www.cdc.gov/HAI/prevent/prevent_pubs.html.

- A. All health care workers (HCWs) and staff surveying clinics should be familiar with the recommendations outlined in the CDC and/or WHO guidelines for successful hand hygiene practices. A thorough review of the guidelines is recommended prior to identifying processes that need improvement. Hand hygiene requires a comprehensive program including a hand hygiene policy, a culture of hand hygiene, monitoring, and a process for feedback. Key CDC recommendations for hand hygiene include:
1. Before touching a patient, even if gloves are worn
 2. Before exiting the patient's care area after touching the patient or the patient's immediate environment
 3. After contact with blood, body fluids or excretions, or wound dressings
 4. Prior to performing an aseptic task (placing an IV, preparing an injection)
 5. If hands will be moving from a contaminated-body site to a clean-body site during care
 6. After glove removal

An excerpt of the CDC guidelines and visual demonstration from the WHO guidelines are provided in [Appendix 12](#) and [Appendix 13](#).

"According to the Centers for Disease Control and Prevention, each year, millions of people acquire an infection while receiving care, treatment, or services in a health care organization. Consequently, health care-associated infections (HAIs) are a patient safety issue affecting all types of health care organizations. One of the most important ways to address HAIs is by improving the hand hygiene of health care staff" (TJC: NPSG.07.01.01).

**Clinics accredited by TJC must comply with the current CDC and/or WHO hand hygiene guidelines (TJC: NPSG.07.01.01).*

- B. Clinics must have handwashing stations readily available in all examination and toilet rooms. This includes an adequate supply of hand soap, warm water, disposable paper towels provided by a dispenser, all next to a handwashing sink and appropriate trash receptacle (other sanitary means to dry hands are permissible in toilet rooms, i.e. hand dryers). ([29 CFR 1910.1030\(d\)\(2\)\(iii\)](#), [CPL 2-2.69\(4\)\(b\)](#), HICPAC Part II. Recommendations: hand-hygiene practices of HCW's and WHO Guidelines, FGI 3.1-8.4.3.2).
- C. In Clinics without running water, acceptable alternatives for hand hygiene shall still be provided. This includes the following two examples :

1. Handwashing stations: Described as an insulated container with a faucet type spigot which can be secured in the open position, providing a continuous flow of handwashing water (see [Appendix 20](#)). A container should be placed below the spigot to catch wastewater from handwashing operations (BMP). *“The handwashing station should be placed in an area of the clinic where unattended children are not allowed. Infants and toddlers can drown in small amounts of water left in a 5-gallon bucket (<http://www.cpsc.gov/cpscpub/pubs/5006.html>).”*



2. Antimicrobial-impregnated wipes (i.e., towelettes): Are not considered a substitute for washing hands with soap and clean water. However, they may be used to clean visibly soiled hands. After cleaning hands, alcohol-based hand rub should be used prior to patient contact.

6.4. Insect and Rodent Control

Clinics should be maintained so as to prevent the entrance or presence of insects and rodents (29 CFR 1910.141(a)(5)). Although a written Integrated Pest Management (IPM) plan is not required in the clinics, IPM techniques should be practiced (APIC CH 100). [Appendix 5](#) contains more information on IPM, some items all clinics should have in place include:

- A. Facility Design - Facility design and maintenance should help to exclude pests, minimize pest habitat and promote proper sanitation. This includes
 1. Screens with at least 16 mesh per inch should be provided on all openable windows (IPMC 304.14, FGI 7.28.A9).
 2. Self-closing door devices should be used on all exterior doors (IPMC 304.14).
- B. Monitoring - Monitoring should be used in place of preventive pesticidal treatments. Though a formal monitoring program could be established (traps and frequent visual inspections), staff should be asked about the presence of pests during environmental health surveys. The presence of pests should trigger a more established IPM program.
- C. Sanitation and Facility Maintenance - Clutter and other harborage areas should be reduced. Food should not be left out. All cracks or seams on the outside of the building that could allow insects or rodents to enter should be sealed.
- D. Pest Control with Pesticides should be limited to areas of pest activity and should only use the least toxic product that would be effective. Bait stations (kept out of the reach of children) should be considered in these circumstances. Any applications using an EPA restricted use pesticide must be done by a certified pesticide applicator ([18 AAC 90.300](#)). The State of Alaska maintains a list of certified applicators at: <http://www.dec.state.ak.us/eh/pest/> Adherence to OSHA regulations dealing with Personal Protective Equipment and the Hazard Communication Standard must be followed. This would include allowing staff access to the Material Safety Data Sheets for the pesticides used ([29 CFR 1910.1200\(g\)\(8\)](#)).

A certified pest control applicator may also assist with the implementation of a complete IPM program. Contact ANTHC/DEHE for additional assistance.

6.5. Patient-care Medical Devices, Disinfecting and Sterilizing

The Centers for Disease Control and Prevention (CDC) Healthcare Infection Control Practices Advisory Committee (HICPAC) issued the Guideline for Disinfection and Sterilization in Healthcare Facilities (2008) and is the main reference used in this section. Additional references include the Guide to the Guidelines: From Policy to Practice published by the Organization for Safety & Asepsis Procedures (OSAP) and the Association for Professionals in Infection Control and Epidemiology (APIC) 2011 Text.

All health care workers (HCWs) and staff surveying clinics with sterilization processes must be familiar with the recommendations outlined in the CDC guideline for successful cleaning, disinfection, and sterilization practices. A thorough review of the guideline is strongly advised prior to reviewing processes and recommending improvements for clinics sterilizing patient-care devices and equipment.

For consideration during the survey, the delivery of sterile products for use in patient care depends not only on the effectiveness of the sterilization process but also on the following:

- ☐ Physical facilities
 - which include decontamination, sterilization, packaging and storage
- ☐ Operator competency including PPE selection
- ☐ Work flow (standardization of process)
 - receiving, holding, cleaning, preparing, packaging, sterilization, and storage
- ☐ Proper cleaning and decontamination
- ☐ Packaging, storage, and recall (event-related shelf-life practice, expiration dates)
- ☐ Proper loading of sterilizer
- ☐ Monitoring entire process; Quality Assurance (QA)
 - sterilant quality and quantity (log book)
- ☐ Appropriateness of cycle for contents (equipment, instruments)
- ☐ Other aspects of device reprocessing (manufacturers' recommendations)

Due to requirements for high-level disinfection/sterilization, many clinics may decide to use disposable medical equipment for items requiring high-level disinfection/sterilization. An infection control risk assessment should have been completed to determine whether it is necessary to sterilize patient-care medical devices at the clinic level.

If it is determined that clinic staff will sterilize patient-care medical devices, they must adhere strictly to both the cleaning, disinfection, and sterilization recommendations outlined by the CDC and to instructions on product labels. The actual sterilization process should be evaluated to ensure it is performed correctly. This includes dental operations that sterilize patient care devices and equipment.

Ensuring consistency of sterilization practices requires a comprehensive program. Staff who perform high-level disinfection /sterilization for patient care devices and equipment should have received training in these processes. The training should include occupational safety and health issues. This training should be documented and an annual assessment should be performed to ensure competency is retained (TJC: HR.01.02.05). This section will summarize the sterilization process and point out issues that should be reviewed.

- A. **Physical Facilities:** Items receiving sterilization or high-level disinfection should flow in a process from dirty to clean. Ideally, there should be physical separation between dirty and clean areas, but minimally, the flow of items must not allow for cross contamination. Items should not be allowed to backtrack.

Staff should perform most cleaning, disinfecting, and sterilizing of patient-care supplies in a central processing department in order to more easily control quality. The aim of central processing is the orderly preparation of medical and surgical instruments to protect patients from infections while minimizing risks to staff and preserving the value of the items being reprocessed. If the process being evaluated is not done correctly or is not feasible in the facility, surveyor recommendations might include discontinuing sterilization at the clinic level, using disposable products, or sending items out for sterilization.

- B. **Decontamination:** For items receiving high-level disinfection /sterilization, decontamination will consist of the following:
1. **Transportation:** After use, items should be placed in bio-hazardous marked receptacles for transportation to the decontamination area. These receptacles should be used even if items are transported within the clinic. Items should either be rinsed or kept moist until cleaned. This will prevent organic material from drying on the items.
 2. **Cleaning:** Items must be cleaned before high-level disinfection/sterilization. Cleaning removes foreign matter (organic matter, soil, etc). Without cleaning, the high-level disinfection/sterilization process may be ineffective. Self-enclosed cleaners such as ultrasonic cleaners or washers are preferred from an occupational health and safety point of view since they limit exposure to the process. If manual cleaning is performed, the employee should wear appropriate personal protective equipment including; eye protection, fluid resistant facemask, hair cover, impervious gown and utility gloves.
- C. **Packaging:** Many items are packaged before the sterilization process. The facility should develop and follow their own policy for marking packages. A system should be in place to allow tracking of packages sterilized in each batch. A dating system would suffice for low volume facilities. If the facility has a policy on expiration dates for their packages, it should be followed. Some facilities may use Event Related Sterility, where the sterilized package is considered sterile unless the package has been compromised (torn, etc.), as a result, expiration dates are not needed.
- D. **Sterilization/High Level Disinfection:**
1. The [Sterilization/High Level Disinfection](#) figure found in [Appendix 14](#) should be used to help determine the appropriate level of disinfection or sterilization. (APIC CH 21, Table 21-1).
 2. **Process monitoring:** The sterilization process should be monitored using chemical, mechanical, and biological monitoring. The manufacturer's recommendations for monitoring should be followed. If they are not available, the following information can be used. The following table is a guide of items that should be monitored:

Process	Mechanical	Chemical Indicator Color change indicates item exposed to sterilization, but not proof of sterilization.	Biological
Steam	Physical Monitoring (time, temperature, and pressure)	Place indicators on inside and outside of each pack on every load.	<i>Geobacillus stearothermophilus</i> at least weekly. Placed in most challenging location of sterilizer
Dry Heat	Review recording charts for each load		Check with spores of <i>Bacillus atrophaeus</i> at least weekly.
Chemiclave (Dental may use a formaldehyde/ethanol sterilizer)	As indicated by manufacturer	Place indicators on inside and outside of each pack on every load.	Check with spores of <i>Bacillus stearothermophilus</i> at least weekly.

Parameters are specified by the manufacturer. A positive control spore test should be conducted according to the manufacturer's directions (typically this is conducted with every biological indicator spore test, to ensure viable spores in the test pack). If recorded parameters are beyond the manufacturer's recommendations, actions must be taken to correct the problem. Written records should be kept of all process monitoring parameters.

- When staff remove packages from sterilizer, the packages should be dry. Hot packs are able to wick moisture which can introduce bacteria from hands. If packages are wet upon completion of the sterilization process, this may indicate overfilling of the sterilizer (CDC-ICDHS p.22, OSAP p. 52).

E. **Storage of Sterilized Packages and other Patient Care Items**

- Patient care items should be rotated to ensure first in first out (FIFO).
- The integrity of sterilized packages should be checked. The contents of torn packages should be reprocessed.
- Sterilized items and other patient care items should not be stored under sinks and should be stored up off the floor (CDC-DS p.75, CDC-ICDHS p. 25).

- F. **Recall**: The clinic should follow a policy on how and when to recall items from a sterilization batch where one of the process indicators has failed.

6.6 Personal Protective Equipment (PPE)

PPE must be provided to employees. This section describes PPE typically used to comply with the Bloodborne Pathogen (BBP) standard. PPE may be required for other tasks. All PPE should be selected by the employer after conducting a written workplace hazard assessment ([29 CFR 1910.132\(d\)\(2\)](#)). ANTHC, DEHE staff can provide resources for this assessment.

Personal protective equipment for compliance with the BBP standard will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used. Examples of PPE that may be required include: gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices ([29 CFR 1910.1030\(d\)\(3\)\(i\)](#)). Specific PPE and when it should be worn, include:

1. **Gloves:** Gloves should be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; when performing vascular access procedures, and when handling or touching contaminated items or surfaces ([29 CFR 1910.1030 \(d\)\(3\)\(ix\)](#)).
 - a. Disposable (single use) gloves such as surgical or examination gloves, should be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised ([29 CFR 1910.1030 \(d\)\(3\)\(ix\)\(A\)](#)).
 - b. Latex allergy consideration – the use of latex gloves should be limited as much as possible. If staff prefer latex, a risk assessment should be completed, including asking new staff and patients about latex sensitivities.
2. **Masks, Eye Protection, and Face Shields:** Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, should be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated ([29 CFR 1910.1030 \(d\)\(3\)\(x\)](#)). Typical prescription glasses do not offer adequate splash protection, though splash resistant goggles may be purchased with prescription lens.
3. **Gowns, Aprons, and Other Protective Body Clothing:** Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments should be worn in occupational exposure situations ([29 CFR 1910.1030 \(d\)\(3\)\(xi\)](#)). The occupations and exposure situations should be delineated in the clinic's Bloodborne Pathogen Program.

Note: Staff clothing commonly referred to as “scrubs” have become recognized as an acceptable healthcare worker uniform or general work clothes. Scrubs, or general work clothes/uniforms, are not typically intended to function as “*protection from a hazard*”. Appropriate PPE, including but not limited to gowns and laboratory coats, are used over the scrubs when PPE is required. In most cases, scrubs are not considered PPE. Any personal clothing should be changed if it becomes soiled (APIC CH 101-5)

6.7 Thermometers, Disinfection

APIC references thermometers as being “implicated in the spread of organisms such as *Clostridium difficile* and methicillin-resistant *Staphylococcus aureus* (MRSA)”. Both organisms survive well on inanimate objects (APIC CH 56-4).

- A. Disposable plastic sleeves should be used with digital thermometers. The probe body should be wiped with a disinfectant cloth after use (APIC CH 56-5).

Note: for other than digital thermometers

Per CDC Guidelines, soaking oral and rectal thermometers in ethyl or isopropyl alcohol at 70% to 90% concentration for >1 min (always follow manufacturer’s recommendations) is adequate. Oral and rectal thermometers should not be mixed at any time during handling or processing (CDC-DS).

6.8 Toys, Disinfection

- A. When toys are made available, only toys that can be washed and disinfected should be provided. Machine washable cloth toys may be used only if used by one individual at a time and cleaned between uses.
- B. Cleaning criteria includes:
 - 1. Set aside or cleaned after each use:
 - (a) All toys that go into the mouth (contact with saliva)
 - (b) Contact with any other body fluids
 - 2. Visibly contaminated
 - 3. All other used toys should be cleaned at the end of the day
- C. Toys should be rinsed after disinfection. A disinfectant appropriate for environmental surfaces should be used and should be compatible with the toy.
- D. Small toys with hard surfaces can be set aside for cleaning by putting them into a dish pan labeled “soiled toys”. This dish pan can contain soapy water to begin removal of soil, or it can be a dry container used to bring the soiled toys to a toy cleaning area later in the day. This container must be kept out of reach of children.
- E. Using a mechanical dishwasher is an acceptable labor-saving approach for plastic toys as long as the dishwasher can wash and sanitize the surfaces and dishwashing is approved by the toy manufacturer. ([Caring for Our Children 3.3.0.2](#)).

VII. JOINT COMMISSION (TJC) ACCREDITATION

Participation in TJC accreditation program is voluntary. Although some clinics do not actively participate, the intent of the Environment of Care (EC), Emergency Management (EM), and Life Safety (LS) standards, as described in Elements of Performance (EPs), are still relevant as best management practices (BMPs). If a clinic is accredited or is applying for accreditation either through their THO or as a stand-alone clinic the surveyor may use the most recent applicable standards to complete a review of the EC, EM and LS programs. When reviewing a clinic for accreditation compliance, please note there are other TJC standards to consider that are not thoroughly discussed in this document, such as Infection Control (IC). The appropriate TJC manual should be the guide for a comprehensive accreditation program review.

Outlines for the EC, EM, and LS chapters, provided by the 2011 Environment of Care Essentials for Health Care published by Joint Commission resources, represent all of the aspects required to successfully comply with TJC requirements for accreditation in respect to EC, EM, and LS chapters. The outlines can be found in [Appendix 9](#). Standards are applied relative to the type of accreditation recognized by TJC for each facility. Multiple EPs specify activities that are either time sensitive and/or identified as critical. A comparison of time sensitive and critical requirements for Ambulatory Health Care standards (AHC), Critical Access Hospital (CAH), and Hospital (HAP) is provided in the [Appendix 8](#). Activities required by a code or standard adopted by TJC are listed in the respective heading, such as fire drill requirements are listed under [Fire Safety](#) because all clinics should comply regardless of accreditation status.

Note: *Previously, the EC chapter addressed seven aspects of the environment. In the 2011 edition, Safety and Security were combined and Emergency Management and Life Safety are now located in separate chapters.*

VIII. SAFETY AND HEALTH

8.1. Asbestos

The intent of this section is not to describe all pertinent asbestos regulations, but to legally ensure appropriate clinic staff are aware of potential asbestos exposures. This awareness will help ensure compliance of other asbestos regulations when necessary.

- A. The following should be managed as Presumed Asbestos Containing Material (PACM) if in a building constructed before 1980 ([29 CFR 1910.1001\(j\)\(1\)](#)):
 1. Thermal System Insulation: insulation applied to pipes, fittings, boilers, tanks, ducts or other structural components to prevent heat loss or gain.
 2. Sprayed on and trowled surfacing materials.
 3. Asphalt or vinyl flooring.

- B. The PACM may be proven asbestos free under the following scenarios ([29 CFR 1910.1001\(j\)\(8\)\(ii\)](#)):
 - 1. A complete Asbestos Hazard Emergency Response Act (AHERA) inspection conducted per 40 CFR 763 Subpart E declares no ACM is present.
 - 2. An accredited inspector or Certified Industrial Hygienist (CIH) conducts an inspection of the material per 40 CFR 763.86 and declares the material asbestos free.
- C. Employees who perform housekeeping or maintenance operations in a clinic containing ACM or PACM should receive annual asbestos awareness training ([29 CFR 1910.1001\(j\)\(7\)\(iv\)](#)).

8.2. Bloodborne Pathogen Program (BPP)

Many of the items required in a BBP program are mentioned throughout these guidelines. A clinic should also have a written program that addresses items required in the OSHA Standard [29 CFR 1910.1030](#) and the Needle Stick Safety and Prevention Act. A clinic may be included in the THO BBP program. The exposure control plan should be available, and should address:

- 1. Identification of high exposure risk jobs or tasks
- 2. Employee training
- 3. Safe work procedures
- 4. Engineering controls
- 5. [Personal protective equipment](#) (provided and available to employees). Note: OSHA Standard, [29 CFR 1910.1030\(d\)\(3\)\(iii\)](#), requires that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar non-latex alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.
- 6. Labeling and disposal practices
- 7. Evaluation and monitoring of exposed employees
- 8. Medical records and training records maintenance
- 9. Confidentiality and rights of employees

8.3. Compressed Gases

Compressed gas cylinders, which include oxygen bottles, present several safety hazards. Proper precautions must be taken to ensure the safety of patients and staff (NFPA 99: 4-3.5.2.1, 4-3.5.2.2; IFC 3006 (cites NFPA 99). An excerpt of the NFPA 99 guidelines for oxygen cylinders is in the appendix. See IFC 4001-4005 for additional information.

- A. Compressed gas cylinders, specifically oxygen bottles, must be secured at all times including when not in use. This is to prevent cylinders from falling or tipping. Cylinders should always be secured in a stand, in a cart, or attached to an immovable object.
- B. To prevent combustion, all components of the oxygen supply system must be kept free of petroleum products, such as grease or oil.

- C. Cylinder-valve protection caps, where provided, should be kept in place and be hand tightened, except when cylinders are in use or connected for use.
- D. Manufacturers who fill compressed oxygen cylinders are not required to place expiration labels on the cylinder for the contents, but if there is an expiration label for the oxygen it must be followed. An attached expiration label should not be confused with the Department of Transportation (DOT) stamp on the cylinder.
- E. The DOT date stamped on the cylinder is to determine when the cylinder must be requalified for shipping purposes. The oxygen in the cylinder may be used after the date has passed. The refiller of the cylinder has the responsibility to retest and stamp the cylinder every five years. The date of the retest should be stamped on the cylinder. A retest is due every 10 years if the date has a five-point star by it. It is against the law to deface this date ([49 CFR 180.205](#), [49 CFR 180.209](#) and [49 CFR 180.213](#)).
- F. Very cold cylinders or containers should be handled with care to avoid injury (NFPA 99 4-3.5.2.1 (30)).

8.4. Hazard Communication

- A. A Hazard Communication Program as required by OSHA Standard [29 CFR 1910.1200](#) should be in place. A written hazard communication program should be available, and should address:
 - 1. A written hazard communication plan
 - 2. An inventory of all hazardous substances used
 - 3. Material Safety Data Sheets (MSDS)
 - 4. Product labeling and other forms of warning
 - 5. Employee information and training and recordkeeping
 - 6. Appropriate disposal of hazardous wastes
- B. MSDS should be maintained for all hazardous materials in the clinic, and should be available and accessible to employees at all times. All required items, such as personal protective equipment, should be provided and available to employees at all times ([29 CFR 1910.1200](#)).
- C. Physical Agent Data Sheets (PADS) should be maintained in the clinics for physical hazards that exceed the threshold established in the 1995-1996 edition of "Threshold Limit Values (TLVs) for Chemical Substances and Physical Agents and Biological Exposure Indices in the Work Environment" published by the American Conference of Governmental Industrial Hygienists (ACGIH). This may include cold stress, hand-arm (segmental) vibration, ionizing radiation, and noise ([8 AAC 61.1110](#)). Alaska Occupational Safety and Health has sample PADS on their website at: <http://www.labor.state.ak.us/lss/pads/pads.htm>.

D. The following mandatory posters should be posted in a common area that allows all employees to review them:

1. Equal Employment Opportunity Act
2. Alaska and Federal Minimum Wage
3. Employee Polygraph Protection Act
4. Alaska Human Rights Law as it pertains to the prevention of sexual harassment
5. Unemployment Compensation
6. Child Labor Laws
7. Anti-discrimination notice
8. Pay day notice
9. Emergency contact information
10. IRS Withholding Notice
11. Workers Compensation
12. Uniformed Services Employment and Reemployment Rights Act
13. Family and Medical Leave Act
14. OSHA Summary of Occupational Safety and Health Act and Right to Know Act
15. Alaska Occupational Safety and Health Laws (AS 18.60.010 to .105)

8.5. Injury Control

A survey of the clinic should take into account the hazards to which an unsupervised child could be exposed. Child specific hazards should be engineered out when possible. Though clinics are not childcare centers, the guidelines used for childcare centers are useful when designing and maintaining a child safe facility, accordingly, this section references the American Public Health Association and the American Academy of Pediatrics, Caring for Our Children, National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care, 2011 (CFOC).

- A. The clinic facility should be maintained to minimize potential injury hazards. Injury hazards identified should be corrected in a reasonable amount of time (TJC: EC.01.01.01).
- B. Unless a room is kept locked during business hours, it should be assumed a child could enter that room. All unlocked rooms should be surveyed for potential hazards. Items to consider include:
 1. Hazardous chemicals and sharps (contaminated or clean) should be in locked cabinets or out of the reach of children, separate from stored medications and food ([CFOC 5.2.9.1](#)).
 2. Any approved space heaters should be made inaccessible to children and stable ([CFOC 5.2.1.11](#) and [5.2.1.13](#)). Water pipes or baseboard heaters that exceed 110°F should be inaccessible to children by barriers such as guards or other devices ([CFOC 5.2.1.13](#)). Hot water temperatures at sinks used for handwashing, or at plumbing fixtures where the hot water will be in direct contact with children, should be at a temperature not exceeding 120°F ([CFOC 5.2.1.14](#)).

3. As much as practical, electric cords should be placed beyond children's reach ([CFOC 5.2.4.5](#) and [5.2.4.6](#)). Ensure children cannot pull on cords attached to hot equipment (coffee pots) or heavy equipment to the extent where the equipment could fall on them.
 4. Tables, chairs, and other furnishings or play equipment in the waiting room should be sturdy and free of sharp points or corners, splinters, protruding nails or bolts, or hazardous small parts ([CFOC 5.3.1.1](#)).
 5. Poisonous or potentially harmful plants should be inaccessible to children ([CFOC 5.2.9.10](#)). Unless the clinic has evidence of the safety of the plant, it should be assumed to be poisonous or potentially harmful.
 6. Children should not be allowed to play with or blow up latex gloves. This will limit exposure to latex and reduce possibility of latex sensitization (BMP).
 7. Strings and cords long enough to encircle a child's neck (6 inches or more) should not be accessible to children ([CFOC 5.160](#)). Ensure window shade cords within children's reach do not contain loops unless equipped with a break-away tassel (more info at www.cpsc.gov).
 8. Staff should be able to unlock bathroom doors or other doors in which a child or incapacitated person may lock themselves. This is to allow immediate access in case of a medical emergency or fire (NFPA 101: 17.2.2.2.5).
- C. Snow and ice removal from stairways should be provided as a function of routine maintenance or janitorial services. Building overhangs should be considered for all new clinic construction when stairways leading to the building will be subject to snow and ice accumulation, this is especially important for exit doors not used as a means of access ([29 CFR 1910.37\(a\)\(3\)](#)).
- D. Fall or trip hazards should be eliminated through the use of railings on steps, stairways or ramps (NFPA 101: 7.2.2.4.2) and non-slip surfaces on stairs, ramps, tubs, etc. (NFPA 101: 7.1.6.4 and BMP).

8.6. Lead

The use of lead in paint was banned in 1978 ([16 CFR 1303](#)) for consumer purposes. Clinics built around this time or earlier may have Lead Based Paint (LBP). Activities that could disturb this paint (including demolition of drywall, sanding, scraping, heat gun use) should not be conducted until one of the following have been met:

1. Competent sampling and accredited laboratory analysis determines the paint has no detectable levels of lead.
2. If sampling was not done, the paint should be presumed to contain lead and workers should take necessary precautions to protect themselves and the clinic workers ([29 CFR 1926.62](#) and [29 CFR 1910.1025](#)).

Though clinic staff will probably not be engaged in activities to disturb LBP, they may be in a position to ensure others do not disturb LBP before necessary precautions are taken.

8.7. Medicine and Poison Control

Pharmacy is often responsible for checking the items in this section. The environmental health specialist should check with the pharmacy provider to coordinate roles. Unless the environmental health specialist has received specialized training, their role for medicine and poison control should be limited to the realm described in this section.

- A. Drugs, medicines and other pharmaceuticals should be stored in a locked room or cabinet. Controlled substances should be stored in a securely locked substantially constructed cabinet. Where feasible, drug storage cabinets should be secured (bolted) to the wall or floor to prevent removal by unauthorized personnel ([21 CFR 1301.75](#) and TJC: MM.03.01.01).
- B. Outdated or expired medicines should be removed from the patient medicine storage area and should be returned to the regional hospital/health center or vendor for proper disposal (TJC: MM.05.01.19).
- C. Multiple-dose containers with antimicrobial preservatives should not be used beyond 28 days after it is initially opened or entered (e.g., needle-punctured), unless otherwise specified by the manufacturer (USP 797 page 41).
- D. Single-use items, such as sodium chloride irrigation bottles, should be discarded and not reused as per the manufacturers' guidelines.
- E. Toxic products or hazardous materials should be stored separately away from food or medicines ([29 CFR 1910.141\(g\)\(4\)](#); TJC: EC.02.02.01).
- F. Refrigerators, and where needed, freezers of adequate size should be provided for the safe storage of temperature sensitive medicines. A means must be provided to monitor the temperature continuously to ensure the temperature range for the refrigerator stays between 2°C and 8°C (36°F and 46°F). The range for medicines requiring freezer temperatures should be between -15°C and -25°C (5°F and -14°F). The means to monitor the temperature should be sensitive to power outages that may occur after hours. A recording thermometer that charts temperature over time is one means to accomplish this. The State of Alaska provides and requires "data loggers" for use in monitoring temperature in your main (bulk) storage refrigerators and freezers used for vaccines (<http://www.epi.hss.state.ak.us/id/iz/vaxpacket/default.htm>). As a backup monitor, if the refrigerator is part of a freezer, then a coin may be placed on top of a frozen cup of water in the freezer. If the coin sinks, there has been an interruption in temperature maintenance. The use of temperature logs might be acceptable, if the clinic can demonstrate how the system would be sensitive to after-hour situations (power outages, unintentional unplugging of the cord). The clinic should have and follow a policy on the disposition of drugs where the temperature range has been exceeded (USP23 NF18, page 11, APIC CH 61-5).
- G. Laboratory specimens, such as cultures, throat swabs or other contaminated items, should be physically separated and stored away from pharmaceuticals (APIC CH 61-5).
- H. The local poison control number should be posted and available to employees at all times. This number is 1-800-222-1222 for the state of Alaska http://www.hss.state.ak.us/dph/chronic/injury_prevention/poison.htm.

8.8. Radiation Protection

ANTHC/DEHE Radiation Protection Surveyors perform radiological health surveys at clinics with medical and dental x-ray producing equipment. These surveys are conducted, in part, to evaluate compliance with [18 AAC 85](#), AS 08.36.075 and TJC. ANTHC/DEHE Radiation Protection Surveyors may be contacted for more information.

If a renovated or newly constructed clinic will have x-ray producing equipment, plans for the clinic should be evaluated by ANTHC/DEHE Radiation Protection Surveyors or other qualified entities to ensure appropriate x-ray shielding.

8.9. Tuberculosis (TB) Precautions

- A. The clinic should have written policies detailing infection control procedures as recommended by the CDC Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005 and [29 CFR 1910.134](#) to be used in the care of suspected cases or patients with active TB cases. At a minimum these policies should include:
 1. Procedures to identify patients with active TB.
 2. Procedures that describe symptoms and actions to be taken when dealing with a patient suspected of active TB.
 3. Procedures describing isolation precautions for patients with active TB.
 4. Procedures to protect employees from exposure to TB.
- B. The clinic should conduct initial and ongoing evaluations of the risk for transmission of M. tuberculosis, regardless of whether or not patients with suspected or confirmed TB disease are expected to be encountered in the setting. The TB risk assessment determines the types of administrative, environmental, and respiratory-protection controls needed for a setting and serves as an ongoing evaluation tool of the quality of TB infection control and for the identification of needed improvements in infection-control measures. The TB Risk Assessment Worksheet (Appendix B of the CDC Guidelines) can be used as a guide for conducting a risk assessment.
- C. If the risk assessment determines that everyone needs to don N-95 respirators, then plans for environmental controls that include technologies for the removal or inactivation of airborne M. tuberculosis should be established. These technologies include airborne infection isolation rooms (a.k.a. negative pressure isolation rooms), local exhaust ventilation, HEPA filtration or UVGI. A summary of environmental controls and their use in prevention of transmission of M. tuberculosis is provided in the CDC Guidelines (visit [CDC online](#) for supplement, Environmental Controls), including detailed information concerning the application of environmental controls.
- D. Prior to donning N-95 respirators, the requirements of [29 CFR 1910.134](#) must be met, including completion of the respiratory protection medical questionnaire, medical clearance, proper respirator selection and annual fit testing and training. See the “Respiratory Protection” section of the CDC Guidelines and [29 CFR 1910.134](#).

IX. SANITATION

9.1. Refuse

A. Classifications and Practices

1. Refuse (or solid waste) includes all putrescible and non-putrescible waste, except human body waste. Proper solid waste management practices are essential for the control of disease-carrying vectors, elimination of injury hazards and prevention of the spread of infectious disease (BMP).

B. Collection Frequency

1. Solid Waste and Regulated Medical Waste (except for Sharps Containers) should be collected from patient care areas daily (APIC CH 100-5).
2. Sharps containers should be replaced before they overfill ([29 CFR 1910.1030\(d\)\(4\)\(iii\)\(2\)\(iii\)](#)). Most sharps containers have an overfill line that should be visible and used to determine when to replace the container (NIOSH Publication No. 97-111, p. 25).
3. Storage and frequency of transport for the solid waste should be designed so as not to attract domestic animals, wildlife, or disease vectors. The solid waste should not create a health hazard or pollute run-off water ([18 AAC 60.010\(a\)](#)).

C. Inside Storage

1. All non-infectious refuse should be stored in durable, watertight, nonabsorbent and easily cleanable containers made of rust resistant and corrosion resistant metal or equivalent heavy duty plastic. A sufficient number of containers should be provided to hold all putrescible waste materials that accumulate between daily collections. All containers should be kept clean and maintained in a sanitary manner (BMP).
2. Containers that are broken or otherwise fail to provide safe, sanitary storage of solid waste should be discarded and replaced with acceptable containers (BMP, TJC: EC.02.06.01).

D. Outside Storage Areas

1. All solid waste storage cans should have lids and should be stored on racks or platforms. These should be constructed in such a manner as to prevent spillage by dogs or other animals. Storage can lids should be secured to the cans in windy areas ([18 AAC 60.010\(a\)](#)).
2. Bulk storage containers (dumpsters) may be used for the storage of non-infectious waste materials when compatible with local collection vehicles. These containers should be constructed and maintained in a sanitary manner (BMP).
3. Rubbish, abandoned vehicles, appliances, oil drums, scrap metal, construction waste or other waste materials should not be allowed to accumulate in or around the clinic ([18 AAC 60.010\(a\)](#)).

E. Regulated Medical Waste (RMW)

1. **Definitions**, For the purposes of rural health clinics in Alaska:
 - a. **Regulated medical waste** (RMW) includes:
 - contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed
 - items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling
 - liquid or semi-liquid blood or other potentially infectious materials
 - discarded cultures
 - used and unused discarded sharps
 - pathological waste - human body tissue, organs or other parts
([18 AAC 60.990\(78\)](#); [29 CFR 1910.1030\(b\)](#))
 - b. **Other potentially infectious materials** (OPIM) includes human body fluids. Semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids ([18 AAC 60.990\(78\)](#); [29 CFR 1910.1030\(b\)](#)).
 - c. **Non-regulated medical waste** includes: wastes not described in the above definitions.
2. **Policy**: A clinic should have a written policy locally or through their THO defining medical waste and identifying procedures for handling waste ([29 CFR 1910.1030\(d\)\(4\)\(i\)](#)).
3. **Accessibility**: Regulated medical waste, including sharps, should be stored in a way to limit access by children. In storage areas (inside or outside), regulated medical waste should be stored in areas that are inaccessible to the public and wildlife ([18 AAC 60.030\(a\)](#); APIC CH 102-5).
4. **Storage**: For economic reasons, non-regulated medical waste should be discarded separately from regulated medical waste. To avoid confusion between non-regulated medical waste and infectious waste, red bags should not be used for non-regulated medical waste. Red bags are an indicator that the contents are infectious waste and if not separated, all waste would be treated as regulated medical waste.

Regulated medical waste containers should be:

- **closable**. Containers with foot operated lids are recommended for exam rooms ([29 CFR 1910.1030\(d\)\(4\)\(iii\)\(B\)\(1\)\(i\)](#)). Kick buckets may be allowed in urgent care rooms where patient care needs necessitate quick access to the container. The bag lining the kick bucket should be closed and disposed after every patient encounter.
- **closed** prior to removal. Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping ([29 CFR 1910.1030\(d\)\(4\)\(iii\)\(B\)\(1\)\(iv\)](#)).

- **constructed** to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping; ([29 CFR 1910.1030\(d\)\(4\)\(iii\)\(B\)\(1\)\(ii\)](#))
- **labeled** with the biohazard label (see below) or stored in red bags or red containers. Biohazard labels are not required for use in clinics (if the regulated medical waste is in red bags or containers). However, labels are required for shipping containers (see below: F. Shipping) ([29 CFR 1910.1030\(g\)\(1\)\(i\)\(A-E\)](#)).



FIGURE 1: BIOHAZARD LABEL EXAMPLE

Label should be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color([29 CFR 1910.1030\(g\)\(1\)\(i\)\(C\)](#))

5. **Shipping:** Once an item is considered to be regulated medical waste, it must be appropriately disposed. The State of Alaska does not allow disposal until the medical waste has been treated according to the manufacturer's instructions:
- in an autoclave,
 - by a decontamination process other than an autoclave, or
 - in a medical waste incinerator ([18 AAC 60.030](#)).

Considering most clinics do not have the capacity to treat regulated medical waste, it is assumed most will ship or mail their regulated medical waste to a place where this can be accomplished.

As the packaging requirements to ship untreated regulated medical waste are very specific and not easily attained at the clinic level, most clinics will likely use approved packaging provided by the facility treating the waste. This is preferred. The approved packaging should come as an assembly with instructions. The packaging instructions should be followed ([49 CFR 173.197\(b\)](#)).

Staff at the clinic who prepare untreated regulated medical waste for shipping should have documentation they have received training to conform to Department of Transportation (DOT) training requirements. At a minimum, training should occur every three years. Further information can be found in the federal regulations [45 CFR 173](#).

If the clinic wants to pursue purchase and use of approved packaging, the ANTHC Institutional Environmental Health program may be contacted for more information.

6. Unless regulated by the local wastewater authority, waste blood and body fluids may be poured down the drain. If this procedure is done, water should not be running while pouring the bodily fluid. After disposing of the bodily fluid, large amounts of water should be allowed to go down the drain. (CDC-HICPC Guidelines for Environmental Infection Control, p.116; APIC CH 60-5).

F. Storage and Disposal

1. The clinic should have safe and sanitary storage of all solid waste materials generated at the facility. All solid waste should be disposed of in accordance with ADEC [18 AAC 60](#) Regulations.

G. Sharps

1. Needles should not be recapped. Though the Bloodborne Pathogen Standard allows exceptions for recapping needles, these circumstances do not exist in most clinics ([29 CFR 1910.1030\(d\)\(2\)\(vii\)](#)). An exception to this might be in dental where the dentist should use a recapping device that allows for one-handed operation.
2. Used sharp objects such as scalpels or needles and syringes should be placed in approved puncture resistant containers ([29 CFR 1910.1030\(d\)\(2\)\(viii\)](#)).
3. Approved containers should be:
 - Closable.
 - Puncture resistant.
 - Leak-proof on sides and bottom.
 - Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries) ([29 CFR 1910.1030\(d\)\(4\)\(iii\)\(A\)](#)).
 - Within horizontal reach of personnel using the container. The mounting height for the inlet opening of the sharps container depends if the provider is sitting or standing ([NIOSH Publication No. 97-111, p. 4](#)):

Sitting: 38 inches to 42 inches

Standing: 53 inches to 56 inches

(These are recommended heights. Judgment may have to be used. The intent is for the inlet opening to be below the eye level of 95% of female workers.)
 - Equipped with guards to prevent hands or fingers from entering (especially in exam rooms where children may be left unattended or unsupervised)([NIOSH Publication No. 97-111, p. 3](#)).
 - Secured while ensuring accessibility. There is no requirement for sharps containers to be mounted, but mounting is often the most effective means to ensure they are accessible, out of reach of children and reasonably secure (BMP).

The NIOSH document on Sharps ([NIOSH Publication No. 97-111](#), referenced in [Appendix 4](#)) contains useful information for evaluation and placement of sharps containers.
4. Shipping concerns are similar to those for regulated medical waste.

9.2. Sewage Disposal

A. Community Sewage System

1. Where available, the health clinic should be connected to an approved community sewer system (UPC 305).

B. Disposal Methods

1. Liquid waste should be disposed of in accordance with the UPC and ADEC [18 AAC 72](#) regulations. Liquid waste systems should be operated as designed and be properly maintained (UPC 101.5.5).

C. Individual Sewage Systems

1. Where a community sewer system is not available, and an individual septic tank system is used, the location of the tank(s) should be identified to allow sludge depth measurement and the entire system should be protected with fences or other means to prevent damage by heavy vehicles (IPSC 802.6; GMP). In addition, the location of said system should be at least 100 feet from the mean annual high water level of any surface water source and should be at least 100 feet from the clinic's drinking water source, unless otherwise codified ([18 AAC 72.020\(c\)](#)).
2. Septic tank sludge levels should be measured and pumped annually, or as specified by the system's operation and maintenance manual (IPSC 506.1/2).
3. Sludge from septic tanks, chemical, or box-and-pail toilet systems should be disposed of only at a site or facility holding an ADEC permit for that type of disposal ([ADEC 18 AAC 72.055](#)).
4. Honey buckets should be emptied a minimum of once per day (BMP for a clinic).
5. Pit privies, where used, should be well constructed, fly tight, ventilated and should be maintained in a safe and sanitary manner (UPC 101.5.5).

9.3. Water Supply

A. Distribution

1. Provisions should be made for conveniently accessible drinking water to both staff and patients. This may include a drinking fountain, bottled water or single service cups in a sanitary dispenser (FGI 3.1-6.1.6).

B. Source

1. Potable water should be provided in all clinics ([29 CFR 1910.141\(b\)\(1\)\(i\)](#)). Potable water should meet ADEC Drinking Water regulations ([18 AAC 80](#)).
2. If a piped, public water system meeting ADEC Drinking Water regulations is available, the health clinic should be connected (FGI 1.3-2.4; UPC 601.1).

C. Storage and Disinfection

1. If the clinic is not plumbed to a community water system but is equipped with a closed haul-type system, water should be delivered to the clinic from the public water system in an approved vehicle ([18 AAC 80.220](#)). During a survey, the residual chlorine should be tested. The free residual chlorine should be at least 0.2mg/l if the water comes from a chlorinated source (guidance from [18 AAC 80.035\(c\)\(1\)](#)). If the source of the water is not chlorinated, the Infection Control Committee for the clinic or the environmental health specialist should conduct a risk assessment to determine if local chlorination or other acceptable means of disinfection of the stored water should be implemented (TJC: IC.01.03.01).
2. If water is hauled and the clinic does not have a closed system, potable drinking water dispensers should be provided. These should be designed, constructed, and serviced so that sanitary conditions are maintained, should be capable of being closed, and should be equipped with a tap. Open containers where the water must be dipped or poured should not be used for drinking or handwashing ([29 CFR 1910.141\(b\)\(1\)\(iii, v\)](#)). The water containers should be cleaned and sanitized when the water is changed or refilled.
3. If the clinic does not receive water from a community water source or from another tested source, then the water should be treated at the clinic.

If the source of water is surface water or a source under the influence of surface water, then the treatment should be capable of reducing at least 99 percent of giardia-sized particles. A filter listed with National Sanitation Foundation (NSF Standard 53) for Cyst reduction will fit this requirement, as will devices listed by ADEC.

If the source of water is from a well with an intact sanitary seal but not tested or approved, then treatment should be applied to insure disinfection to a level meeting the intent of [18 AAC 80.035\(c\)](#). This includes a free chlorine residual of 0.2 mg/l.

Though there are not standards specifying this treatment, many guides recognized by TJC assume a clinic will provide potable water. The treatment of water from an unapproved source brings a clinic closer to this requirement. An Infection Control Committee for a clinic or environmental health specialist may approve another methodology to ensure safe, potable water.

4. During emergency operations (temporary interruption of potable water supply or a boil water notice from the community water system) a clinic may need to disinfect their supply. This may be done by one of two means (see [Appendix 3: ADEC flyer](#)).
 - a. Water for drinking may be disinfected by boiling (full rolling boil) for a minimum of one minute (after boiling, the flavor of the water may be improved by pouring the water from one clean container to another several times).
 - b. Water for drinking may also be disinfected by adding common household unscented bleach containing 5 ¼ percent chlorine. To achieve adequate disinfection, the chlorine treated water must be mixed thoroughly according to Table 1 below and allowed to stand for 30 minutes before use.

TABLE 1: BLEACH DISINFECTION TABLE

Amount of Water	Bleach to Add (Clear Water)	Bleach to Add (Cloudy Water)
1 Quart	2 Drops	3 Drops
5 Gallons	1.25 ml (cc)	2.5 ml (cc)

D. Testing

1. If the clinic has its own well source, the system should be protected, maintained, and have the water tested as determined by its classification ([18 AAC 80](#) (Article 3)). Records of sample results should be maintained at the clinic and should be available to clinic staff and environmental health specialists. Sanitary surveys should be conducted per ADEC regulations (ADEC [18 AAC 80.430](#)). If the ADEC regulations do not stipulate any testing, the Infection Control Committee that covers the clinic should do a risk assessment to make testing recommendations (TJC: IC.01.03.01). Lacking an infection control committee, the environmental health specialist should make a professional judgment regarding testing based on source, treatment and level of service provided at the clinic. The goal is to achieve a level of assurance that potable water is being provided.

APPENDICES

Appendix 1 [REFERENCES EXPLANATIONS \(FGL, TJC\)](#)

THE FACILITY GUIDELINES INSTITUTE

The 2010 Guidelines for Design and Construction of Health Care Facilities published by the FGI are specific to design and construction. The Guidelines have routinely been cited by The Joint Commission as one of the standards or guidelines that should be used when planning renovation or new facilities (TJC: EC.02.06.05 EP1). The Guidelines go back 63 years and originally appeared in the Federal Register in 1947. The Guidelines were removed from regulations in 1984.

The content of some of the Guideline citations used in this document have not changed over the years. An existing clinic should have complied with the Guidelines in existence at the time the clinic was designed or renovated. The current Guidelines were cited for several reasons.

The current guidelines reflect the most current thinking in the design and construction of health care facilities. If an existing clinic met the Guidelines when it was designed but does not meet the current Guideline, then it would still be useful to cite the current Guideline. This documentation can be used when funding becomes available to help ensure renovations meet current Guidelines.

This document would be too long and cumbersome to go back and cite the years when certain portions of the Guidelines came in effect. If doubt exists on whether or not the Guideline citation applied when the clinic was built, the environmental health specialist can go back and research the Guideline document or federal regulation in effect when the clinic was designed or went under substantial renovation.

Though its use on existing clinics could be debated, the Guideline can be referenced to existing clinics as a good management practice. If clinics can reasonably attain these standards, they would provide the current standard of care in these areas. At a minimum, the environmental health specialist should cite standards based on the Guideline with an explanation that future construction or renovation should incorporate the standards.

THE JOINT COMMISSION

The Joint Commission (TJC) is a not-for-profit organization that sets performance expectations for safety and quality of care in healthcare facilities. These standards aim to improve outcomes but are not intended to emphasize how an organization might achieve these outcomes. Facilities accredited by TJC are deemed to meet the requirements of the Medicare Conditions of Participation (CoPs). Meeting these standards are required to receive Medicare funds. Other public and private third party payers require this or another similar accreditation to receive payment.

REFERENCES APPLIED (IN DEVELOPMENT, INTENTIONALLY BLANK)

Appendix 2 **ADEC DIVISION OF SPILL PREVENTION AND RESPONSE**

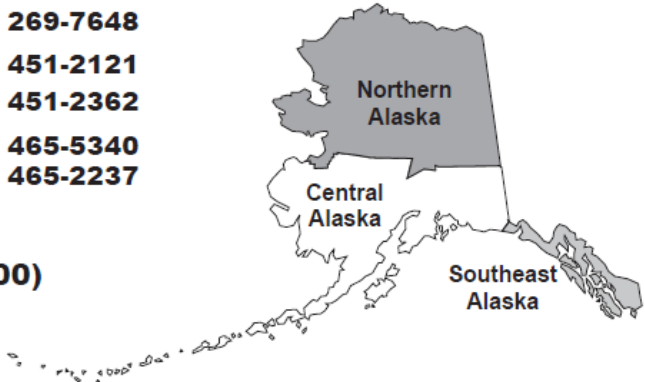

ADEC Spill Prevention and Response webpage: <http://www.dec.state.ak.us/spar/spillreport.htm#requirements>

REPORT ALL OIL AND HAZARDOUS SUBSTANCE SPILLS

ALASKA LAW REQUIRES REPORTING OF ALL SPILLS
During normal business hours
contact the nearest DEC Area Response Team office:

Central Alaska	Anchorage	phone:	(907) 269-3063
		fax:	(907) 269-7648
Northern Alaska	Fairbanks	phone:	(907) 451-2121
		fax:	(907) 451-2362
Southeast Alaska	Juneau	phone:	(907) 465-5340
		fax:	(907) 465-2237

Outside normal business hours, call:
1-800-478-9300 (International 1-907-428-7200)



Alaska Department of Environmental Conservation
Division of Spill Prevention and Response

rev. June/2010

http://www.dec.state.ak.us/spar/perp/docs/placard_current.pdf

Alaska Department of Environmental Conservation		
Discharge Notification and Reporting Requirements		
AS 46.03.755 and 18 AAC 75 Article 3		
Notification of a discharge must be made to the nearest Area Response Team during working hours:		
Anchorage	(907) 269-3063 (907) 269-7648 (FAX)	Fairbanks (907) 451-2121 (907) 451-2362 (FAX)
		Juneau (907) 465-5340 (907) 465-2237 (FAX)
OR		
to the 24-Hour Emergency Reporting Number during non-working hours: 1-800-478-9300 (International 1-907-428-7200)		
Notification Requirements		
Hazardous Substance Discharges		
Any release of a hazardous substance must be reported as soon as the person has knowledge of the discharge.		
Oil Discharges		
■ TO WATER		
• Any release of oil to water must be reported as soon as the person has knowledge of the discharge.		
■ TO LAND		
• Any release of oil in <i>excess of 55 gallons</i> must be reported as soon as the person has knowledge of the discharge.		
• Any release of oil in <i>excess of 10 gallons, but 55 gallons or less</i> , must be reported within 48 hours after the person has knowledge of the discharge.		
• A person in charge of a facility or operation shall maintain, and provide to the Department on a monthly basis, a written record of any discharge of oil <i>from 1 to 10 gallons</i> .		
■ TO IMPERMEABLE SECONDARY CONTAINMENT AREAS		
• Any release of oil <i>in excess of 55 gallons</i> must be reported within 48 hours after the person has knowledge of the discharge.		
Special Requirements for Regulated Underground Storage Tank (UST) Facilities*		
If your release detection system indicates a possible discharge, or if you notice unusual operating conditions that might indicate a release, you must notify the Storage Tank Program at the nearest DEC Office within 7 days:		
Anchorage	(907) 269-7886 (907) 269-7679	
*Regulated UST facilities are defined at 18 AAC 78.005 and do not include heating oil tanks.		
rev. June/2010		

http://www.dec.state.ak.us/spar/perp/docs/placard_current.pdf

<http://www.dec.state.ak.us/spar/spillreport.htm#requirements>

Appendix 3 ADEC, DRINK IT PURE, DISINFECTION PROCEDURES FOR SURFACE WATER AND WELL WATER SOURCES

SURFACE WATER DISINFECTION

- **Method One** — Boil water for one (1) minute. Allow to cool. If the water has a flat taste, pour it back and forth between two clean containers two or three times.
- **Method Two** — Add two drops of fresh, unscented chlorine bleach, such as Clorox or Purex (containing 5.25 to 6% available chlorine) to each quart of water. If water is not clear, add three (3) drops to each quart of water. Mix thoroughly and allow to stand for 30 minutes before drinking. If larger quantities of water are to be disinfected with chlorine bleach, use this table for proper dos-

Gallons of Water	5	10	20	30	40	50
Clear Water	1/4 tsp. *	1/2 tsp.	3/4 tsp.	1 tsp.	1 1/4 tsp.	1 1/2 tsp.
Cloudy Water	1/2 tsp.	1 tsp.	1 1/2 tsp.	2 tsp.	2 1/2 tsp.	3 tsp.

*Tsp. — Teaspoon

Note: If a tablespoon is used for measuring, use 1 tablespoon for each three teaspoons.

DISINFECTION OF WELLS AND SMALL DISTRIBUTION SYSTEMS

Please read all the instructions before proceeding.

- 1.) During this procedure the water will not be drinkable so plan to disinfect late at night or at other times when there is little need for water. Obtain one-half gallon fresh household bleach (unscented) which contains 5-6% sodium hypochlorite. Large diameter or very deep wells may require more chlorine. Dilute the chlorine in a large bucket of water.
- 2.) Remove the sanitary seal and pour the chlorine solution down the well casing. Using a clean hose, run water down the casing until you smell chlorine in the water from the hose. Turn off the hose and replace the sanitary seal.
- 3.) Let the water run at each tap in the distribution system until you smell the chlorine, then turn off the water. The goal is to get the chlorine solution to all parts of the plumbing. Do the same for hot water taps and flush toilets until chlorinated. If there are any in-line filters, they should be removed, and replaced with new filters after the disinfection is completed. (Carbon filters are notorious for breeding bacteria.)
- 4.) Hold the chlorine in the pipes for a minimum of two (2) hours, preferably overnight.
- 5.) Let the water at each tap flush out the chlorine solution until you can no longer smell it at any of the taps. Your well and distribution system should now be disinfected.
- 6.) Follow-up sampling should be done after all trace of chlorine is gone to insure that the disinfection procedure was successful. ADEC Drinking Water personnel will advise public water suppliers of their sampling requirements.


NOTE: Large amounts of chlorine can damage the resin in water softeners, so if there is a softener, it should be by-passed before disinfecting the plumbing. Contact the manufacturer or distributor for the correct method for disinfecting the softener.

For more information please contact ADEC at (907) 451-2108 or on the web, <http://www.dec.state.ak.us/eh/dw>

<http://www.dec.state.ak.us/eh/docs/dw/brochures/Pure.pdf>

Appendix 4 [NIOASH PUBLICATIONS, PREVENTING NEEDLESTICK INJURIES](#)

CDC Home




Centers for Disease Control and Prevention
CDC 24/7: Saving lives, protecting people, reducing health costs

[NIOASH](#)
[All CDC Topics](#)

SEARCH

A-Z Index for All CDC Topics

NIOASH Publications and Products



NIOASH Publications & Products


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- Preventing Needlestick Injuries in Health Care Settings**
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DHHS (NIOASH) Publication Number 2000-108 November 1999

Preventing Needlestick Injuries in Health Care Settings

These injuries can be avoided by eliminating the unnecessary use of needles, using devices with safety features, and promoting education and safe work practices for handling needles and related systems. These measures should be part of a comprehensive program to prevent the transmission of bloodborne pathogens.



This Alert provides current scientific information about the risk of needlestick injury and the transmission of bloodborne pathogens to health care workers. The document focuses on needlestick injuries as a key element in a broader effort to prevent all sharps-related injuries and associated bloodborne infections. The document describes five cases of health care workers with needlestick-related infections and presents intervention strategies for reducing these risks. Because many needleless devices and safer needle devices have been recently introduced and the field is rapidly evolving, the Alert briefly describes an approach for evaluating these devices.

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Appendix 5 **INTEGRATED PEST MANAGEMENT (IPM) INFORMATION**

CDC Approach to Integrated Pest Management in a Research Facility

IPM is an important part of managing a research facility. Many pests, such as flies and cockroaches, can mechanically transmit disease pathogens and compromise the research environment. Even the presence of innocuous insects can contribute to the perception of unsanitary conditions.

The most common approach to pest control has been the application of pesticides, either as a preventive or remedial measure. Pesticides can be effective and may be necessary as a corrective measure, but they have limited long-term effect when used alone. Pesticides also can contaminate the research environment through pesticide drift and volatilization.

To control pests and minimize the use of pesticides, it is necessary to employ a comprehensive program approach that integrates housekeeping, maintenance, and pest control services. This method of pest control is often referred to as IPM. The primary goal of an IPM program is to prevent pest problems by managing the facility environment to make it less conducive to pest infestation. Along with limited applications of pesticides, pest control is achieved through proactive operational and administrative intervention strategies to correct conditions that foster pest problems.

Prior to developing any type of IPM program, it is important to define an operational framework for IPM services that helps promote collaboration between IPM specialists and facility personnel. This framework should incorporate facility restrictions and operational and procedural issues into the IPM program. An effective IPM program is an integral part of the facility's management. An IPM policy statement should be included in the facility's standard operating procedures to increase awareness of the program.

Training sources for the principles and practices of structural (indoor) IPM programs are available through university entomology departments, county extension offices, the Entomological Society of America, state departments of agriculture, state pest control associations, the National Pest Control Association, suppliers of pest control equipment, and IPM consultants and firms. Several universities offer correspondence courses, short courses, and training conferences on structural pest management.

IPM is a strategy-based service that considers not only the cost of the services, but also the effectiveness of the program's components. Each IPM program is site-specific, tailored to the environment where applied.

Laboratory IPM services will be different from those in an office building or an animal care facility. Interrelated components of "Environmental pest management" follow.

FACILITY DESIGN

IPM issues and requirements should be addressed in a research facility's planning, design, and construction. This provides an opportunity to incorporate features that help exclude pests, minimize pest habitat, and promote proper sanitation in order to reduce future corrections that can disrupt research operations.

MONITORING

Monitoring is the central activity of an IPM program and is used to minimize pesticide use. Traps, visual inspections, and staff interviews identify areas and conditions that may foster pest activity.

SANITATION AND FACILITY MAINTENANCE

Many pest problems can be prevented or corrected by ensuring proper sanitation, reducing clutter and pest habitat, and by performing repairs that exclude pests. Records of structural deficiencies and housekeeping conditions should be maintained to track problems and determine if corrective actions were completed and in a timely manner.

COMMUNICATION

A staff member should be designated to meet with IPM personnel to assist in resolving facility issues that impact on pest management. Reports communicated verbally and in writing concerning pest activity and improvement recommendations for personnel, practices and facility conditions should be provided to the designated personnel. Facility personnel should receive training on pest identification, biology, and sanitation, which can promote understanding and cooperation with the goals of the IPM program.

RECORDKEEPING

A logbook should be used to record pest activity and conditions pertinent to the IPM program. It may contain protocols and procedures for IPM services in that facility, Material Safety Data Sheets on pesticides, pesticide labels, treatment records, floor plans, survey reports, etc.

NON-PESTICIDE PEST CONTROL

Pest control methods such as trapping, exclusion, caulking, washing, and freezing can be applied safely and effectively when used in conjunction with proper sanitation and structural repair.

PEST CONTROL WITH PESTICIDES

Preventive applications of pesticides should be discouraged, and treatments should be restricted to areas of known pest activity. When pesticides are applied, the least toxic product(s) available should be used and applied in the most effective and safe manner.

PROGRAM EVALUATION AND QUALITY ASSURANCE

Quality assurance and program review should be performed to provide an objective, ongoing evaluation of IPM activities and effectiveness to ensure that the program does, in fact, control pests and meet the specific needs of the facility program(s) and its occupants. Based upon this review, current IPM protocols can be modified and new procedures implemented.

TECHNICAL EXPERTISE

A qualified entomologist can provide helpful technical guidance to develop and implement an IPM program. Pest management personnel should be licensed and certified by the appropriate regulatory agency.

SAFETY

IPM minimizes the potential of pesticide exposure to the research environment and the staff by limiting the scope of pesticide treatments.

REFERENCES

Robinson WH. Urban entomology: insect and mite pests in the human environment. New York: Chapman and Hall; 1996.

Bennett GW, Owens JM, editors. Advances in urban pest management. New York: Van Nostrand Reinhold Company; 1986.

Olkowski W, Daar S, Olkowski H. Common sense pest control: least-toxic solutions for your home, garden, pests and community. Newton (CT): The Taunton Press, Inc.; 1991.

National Pest Control Association [<http://www.pestworld.org>]. Fairfax (VA): The Association; [cited 2006 Sept 25]. Available from: <http://www.pestworld.org>.

Biocontrol Network [<http://www.biconet.com>]. Brentwood (TN): Biocontrol Network; c1995-2006 [updated 2006 Sept; cited 2006 Sept 25]. Available from: <http://www.biconet.com>

Appendix 6 **FIRE EXTINGUISHER MONTHLY AND ANNUAL INSPECTION PROCEDURES**

INSPECTION PROCEDURES

The owner or designated agent or occupant of a property in which fire extinguishers are located shall be responsible for such inspection, maintenance, and recharging. Fire extinguishers shall be inspected when initially placed in service and thereafter at approximately 30-day intervals (monthly inspection). Fire extinguishers may be inspected at more frequent intervals when circumstances require. The monthly inspection may be accomplished by any trained individual approved by the facility manager/owner.

Monthly Inspections should include the following elements:

- a. Located in the designated place.
 - Confirm that the extinguisher is in the correct location, mounted in the cabinet or hanger correctly and is available for use.
- b. Extinguisher is unobstructed and visible.
 - In its correct location, the extinguisher should be unobstructed and visible from any location in a room or space. If the extinguisher itself is not visible, a sign shall be placed that identifies the location.
- c. Operating instructions are on extinguisher, legible and facing outward.
 - The monthly inspection includes making sure that the each extinguisher has the instructions on the face of the unit and that they are easily readable and facing outward toward the user.
- d. Safety seals and tamper indicators are not broken or missing.
 - All safety and tamper seals must be in place. These may not be replaced unless a person holds a Class II permit, even though it appears that the unit has not been used and is still in an operational condition.
- e. Pressure gauge reading or indicator is in the operable range or position.
 - The pressure gauge or indicator must be in the green or operable condition or range. This is the indication that the unit is still charged and ready to be activated.
- f. Initial and date the inspection tag.
 - At the completion of the monthly inspection the inspector must initial and date the tag on the unit. This indicates that the above items have been completed and that the unit is ready to operate in case of an emergency.

DEPARTMENT OF PUBLIC SAFETY DIVISION OF FIRE AND LIFE SAFETY



This list is provided by the Alaska Department of Public Safety, Division of Fire and Life Safety, Training & Education Bureau, Class I Fire Extinguisher Training & Testing Pamphlet, October 2010:

<http://www.dps.state.ak.us/fire/teb/docs/FireExtTest.pdf>

Additional information can be found in NFPA 10: Standard for Portable Fire Extinguishers.

TRAINING & EDUCATION BUREAU

Annual Inspections should include the following elements:

NFPA 10: Annex A Explanatory Material

A.7.3.2

The annual maintenance of a fire extinguisher requires the services of a trained and certified technician who has the proper tools, listed parts, and appropriate manufacturer's service manual. Maintenance of fire extinguishers should not be confused with inspection, which is a quick check of the extinguishers that is performed at least every 30 days. Because the detailed maintenance procedures for various extinguisher types and models differ, the specific procedures specified within service manuals need to be followed.

The following list is a sample of maintenance procedures and checks that are commonly associated with rechargeable, stored-pressure dry chemical hand portable fire extinguishers:

- (1) Remove the extinguisher from hanger, bracket, or cabinet and visually examine it for damage.*
- (2) Verify that the hanger, bracket, or cabinet is the proper one for the extinguisher.*
- (3) Ensure that the hanger, bracket, or cabinet is secure, undamaged, and properly mounted.*
- (4) Ensure that the nameplate operating instructions are legible and facing outward.*
- (5) Confirm that the extinguisher model is not subject to recall and is not obsolete.*
- (6) Check extinguisher records to determine internal examination and hydrostatic test intervals.*
- (7) Thoroughly examine cylinder for dents, damage, repairs, or corrosion.*
- (8) Remove the pull pin to ensure that it functions properly and is not damaged or corroded.*
- (9) Examine the handle and levers to ensure that they are undamaged and operable.*
- (10) Ensure that the valve stem is correctly extended and not corroded or damaged.*
- (11) Verify that the pressure gauge or indicator is in the operable range.*
- (12) Examine the pressure gauge to ensure that it is not damaged, bent, or cracked.*
- (13) Verify that the gauge-operating pressure corresponds with the nameplate instructions.*
- (14) Verify that the gauge face corresponds with the proper agent type.*
- (15) Verify that the gauge threads are compatible with the valve body material.*
- (16) Remove the nozzle or hose assembly or both and ensure that they are unobstructed.*
- (17) Confirm that the nozzle and hose assembly are correct for the model of extinguisher.*
- (18) Examine exposed thread areas for corrosion, wear, or damage.*
- (19) Ensure that the hose and couplings are not cut, cracked, damaged, or deformed.*
- (20) Examine internal valve port surfaces and threads for signs of leakage or corrosion.*
- (21) Reinstall the nozzle and hose assembly securely.*
- (22) Ensure that the hose retention band is secure and properly adjusted.*
- (23) Weigh the extinguisher to verify that it corresponds to the weight listed on the nameplate.*
- (24) Reinstall the ring pin and install a new tamper inspection seal.*
- (25) Clean exposed extinguisher surfaces to remove any foreign material.*
- (26) Record the maintenance on the extinguisher tag or label.*
- (27) Return the extinguisher to the hanger, bracket, or cabinet.*

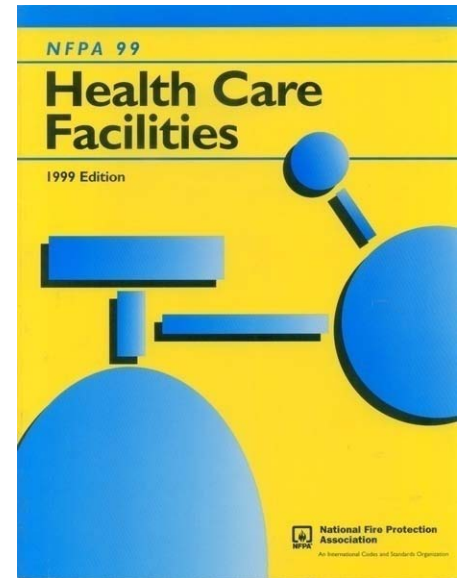
Appendix 7 NFPA 99: HEALTH CARE FACILITIES, SPECIAL PRECAUTIONS FOR OXYGEN CYLINDERS

COPIED FROM NFPA 99, 1999 STANDARD FOR HEALTH CARE FACILITIES

4-3.5.2 Gas Systems Policies – Level 1

4-3.5.2.1 Gases in Cylinders and Liquefied Gases in Containers — Level 1.

- (a) *Handling of Gases.* Administrative authorities shall provide regulations to ensure that standards for safe practice in the specifications for cylinders; marking of cylinders, regulators, and valves; and cylinder connections have been met by vendors of cylinders containing compressed gases supplied to the facility.
- (b) *Special Precautions — Oxygen Cylinders and Manifolds.* Great care shall be exercised in handling oxygen to prevent contact of oxygen under pressure with oils, greases, organic lubricants, rubber, or other materials of an organic nature. The following regulations, based on those of the CGA Pamphlet G-4, Oxygen, shall be observed:
 - (c) Oil, grease, or readily flammable materials shall never be permitted to come in contact with oxygen cylinders, valves, regulators, gauges, or fittings.
 - (d) Regulators, fittings, or gauges shall never be lubricated with oil or any other flammable substance.
 - (e) Oxygen cylinders or apparatus shall never be handled with oily or greasy hands, gloves, or rags.
 - (f) Particles of dust and dirt shall be cleared from cylinder valve openings by slightly opening and closing the valve before applying any fitting to the cylinder.
 - (g) The high-pressure valve on the oxygen cylinder shall be opened before bringing the apparatus to the patient or the patient to the apparatus.
 - (h) The cylinder valve shall be opened slowly, with the face of the gauge on the regulator pointed away from all persons.
 - (i) An oxygen cylinder shall never be draped with any materials such as hospital gowns, masks, or caps.
 - (j) Oxygen fittings, valves, regulators, or gauges shall never be used for any service other than that of oxygen.
 - (k) Gases of any type shall never be mixed in an oxygen cylinder or any other cylinder.
 - (l) Oxygen shall always be dispensed from a cylinder through a pressure regulator.
 - (m) Regulators that are in need of repair or cylinders having valves that do not operate properly shall never be used.
 - (n) .Oxygen equipment that is defective shall not be used until it has been repaired by competent personnel. If competent in-house repairs cannot be made, such equipment shall be repaired by the manufacturer or his or her authorized agent; or it shall be replaced.
 - (o) Oxygen cylinders shall be protected from abnormal mechanical shock, which is liable to damage the cylinder, valve, or safety device. Such cylinders shall not be stored near elevators, gangways, or in locations where heavy moving objects will strike them or fall on them.
 - (p) Cylinder-valve protection caps, where provided, shall be kept in place and be hand tightened, except when cylinders are in use or connected for use.
 - (q) Cylinders shall be protected from the tampering of unauthorized individuals.
 - (r) Valves shall be closed on all empty cylinders in storage.
 - (s) Oxygen shall be referred to by its proper name, oxygen, not air. Liquid oxygen shall be referred to by its proper name, not liquid air.
 - (t) Oxygen shall never be used as a substitute for compressed air.
 - (u) Cylinders or cylinder valves shall not be repaired, painted, or altered.



- (v) Safety relief devices in valves or cylinders shall never be tampered with. Sparks and flame shall be kept away from cylinders; a torch flame shall never be permitted under any circumstances to come in contact with cylinder valves or safety devices. Valve outlets clogged with ice shall be thawed with warm — not boiling — water.
- (w) The markings stamped on cylinders shall not be tampered with. It is against federal statutes to change these markings without written authority from the Bureau of Explosives.
- (x) Markings used for the identification of contents of cylinders shall not be defaced or removed, including decals, tags, stenciled marks, and upper half of shipping tag.
- (y) The owner of the cylinder shall be notified if any condition has occurred that might permit any foreign substance to enter a cylinder or valve, giving details and cylinder number.
- (z) Even if they are considered to be empty, cylinders shall never be used as rollers, supports, or for any purpose other than that for which they are intended by the supplier.
- (aa) When small-size (A, B, D, or E) cylinders are in use, they shall be attached to a cylinder stand or to therapy apparatus of sufficient size to render the entire assembly stable. Individual cylinder storage associated with patient care areas are not required to be stored in enclosures.
- (bb) Cylinders and containers shall not be dropped, dragged, or rolled.
- (cc) Freestanding cylinders shall be properly chained or supported in a proper cylinder stand or cart.
- (dd) Cylinders shall not be chained to portable or movable apparatus such as beds and oxygen tents.
- (ee) Cylinders shall not be supported by, and neither cylinders nor containers shall be placed in proximity of, radiators, steam pipes, or heat ducts.
- (ff) Very cold cylinders or containers shall be handled with care to avoid injury.
- (gg) Cylinders and containers shall not be handled with hands, gloves, or other materials contaminated with oil or grease.
- (hh) Making Cylinder and Container Connections.
- (ii) Wrenches used to connect respiratory therapy equipment shall be manufactured of steel or other suitable material of adequate strength.
- (jj) Cylinder valves shall be opened and connected in accordance with the following procedure:
- (kk) Make certain that apparatus and cylinder valve connections and cylinder wrenches are free of foreign materials.
- (ll) Turn the cylinder valve outlet away from personnel. Stand to the side — not in front and not in back. Before connecting the apparatus to cylinder valve, momentarily open cylinder valve to eliminate dust.
- (mm) Make connection of apparatus to cylinder valve. Tighten connection nut securely with an appropriate wrench [see 4-3.5.2.1(c)1].
- (nn) Release the low-pressure adjustment screw of the regulator completely.
- (oo) Slowly open cylinder valve to full open position.
- (pp) Slowly turn in the low-pressure adjustment screw on the regulator until the proper working pressure is obtained.
- (qq) Open the valve to the utilization apparatus.
- (rr) Connections for containers shall be made in accordance with the container manufacturer's operating instructions.
- (ss) Care of Safety Mechanisms.
- (tt) Personnel using cylinders and containers and other equipment covered in this chapter shall be familiar with the Pin-Index Safety System (see 8-3.1.2) and the Diameter-Index Safety System (see 8-3.1.3), both designed to prevent utilization of the wrong gas.
- (uu) Safety relief mechanisms, noninterchangeable connectors, and other safety features shall not be removed, altered, or replaced.

Appendix 8 COMPARING TJC ACCREDITATION STANDARDS – AHC, CAH, AND HAP (DEVELOPING)

The comparison of standards for AHC, CAH, and HAP accreditation programs provided below is only a snapshot of activities with time restrictions to comply with the EC, EM, and LS standards. For complete details for all standards and EPs please review the appropriate TJC accreditation manual. Contact the ANTHC/DEHE office at 907-729-3600 for additional assistance. (adapted from the 2011 *Environment of Care, Essentials for Health Care* published by the Joint Commission Resources)

EC.01.01.01: The organization plans activities to minimize risks in the environment of care.	AHC	CAH	HAP
(3-8): The organization has a written plan for managing the following: Safety, Security, Hazardous Materials and Waste, Fire Safety, Medical Equipment, Utility Systems. <i>Note: The plans may all be contained in a single document, separate plans are not required. Clinics affiliated with a THO may be included in the organizational management plans and would not need to develop their own clinic specific management plans</i>	X	X	X
EC.02.03.03: The organization conducts fire drills.	AHC	CAH	HAP
(1): The organization conducts quarterly fire drills in each building defined as an ambulatory health care occupancy by the <i>Life Safety Code</i> . <i>Note: Evacuation of patients during a drill is not required. In leased or rented facilities, drills need be conducted only in the areas of the building that the organization occupies.</i>	X	X	X
(2): The organization conducts fire drills every 12 months from the date of the last drill in each area that is defined as business occupancy by the <i>Life Safety Code</i> .	X	X	X
EC.02.03.05: The organization maintains fire safety equipment and fire safety building features.	AHC	CAH	HAP
(1): At least quarterly, the organization tests supervisory signal devices. The completion date of the tests is documented.	X	X	X
(2): Every 6 months, the organization tests valve tamper switches and water-flow devices. The completion of the date of the tests is documented.	X	X	X
(3): Every 12 months, the organization tests duct detectors, electromechanical releasing devices, heat detectors, manual fire alarm boxes, and smoke detectors. The completion of the date of the tests is documented.	X	X	X
(4): Every 12 months, the organization tests visual and audible fire alarms, including speakers. The completion of the date of the tests is documented.	X	X	X
(5): Every quarter, the organization tests fire alarm equipment for notifying off-site fire responders. The completion of the date of the tests is documented.	X	X	X
(6): For automatic sprinkler systems: Every week, the organization tests fire pumps under no-flow conditions. The completion of the date of the tests is documented.	X	X	X
(7): For automatic sprinkler systems: Every 6 months, the organization tests water storage tank high and low water level alarms. The completion of the date of the tests is documented.	X	X	X
(8): For automatic sprinkler systems: Every month during cold weather, the organization tests water storage temperature alarms. The completion of the date of the tests is documented.	X	X	X
(9): For automatic sprinkler systems: Every 12 months, the organization tests main drain at system low point or at all system risers. The completion of the date of the tests is documented.	X	X	X
(10): For automatic sprinkler systems: Every quarter, the organization inspects all fire department water supply connections. The completion of the date of the tests is documented.	X	X	X
(11): For automatic sprinkler systems: Every 12 months, the organization tests fire pumps under flow conditions. The completion of the date of the tests is documented.	X	X	X
(12): Every five years, the organization conducts water-flow tests for standpipe systems. The completion of the date of the tests is documented.	X	X	X
(15): At least monthly, the organization inspects portable fire extinguishers. The completion of the date of the tests is documented. <i>Note: There are many ways to document the inspections, such as using bar-coding equipment, using check marks on the tag, or using an inventory. Inspections involve a visual check for the presence and correct type of extinguisher, broken parts, full charge, and ease of access. (Reference NFPA 10 for more information. See Alaska Fire Extinguisher Checklist for example.)</i>	X	X	X
(16): Every 12 months, the organization performs maintenance on portable fire extinguishers. The completion of the date of the tests is documented. (See Alaska Fire Extinguisher sheet for more information)	X	X	X
(17): The organization conducts hydrostatic tests on standpipe occupant hoses 5 years after installation and every 3 years thereafter. The completion of the date of the tests is documented.	X	X	X
(18): The organization operates fire and smoke dampers at least every 4 years to verify that they fully close. The completion of the date of the tests is documented.	X	X	X
(19): Every 12 months, the organization tests automatic smoke-detection shutdown devices for air-handling equipment. The completion of the date of the tests is documented.	X	X	X

(20): Every 12 months, the organization tests sliding and rolling fire doors for proper operation and full closure. The completion of the date of the tests is documented.	X	X	X
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EC.02.04.01: The organization manages medical equipment risks.	AHC	CAH	HAP
(3): The organization identifies the activities for maintaining, inspecting, and testing for all medical equipment on the inventory	X	X	X
(4): The organization identifies frequencies for inspecting, testing and maintaining medical equipment on the inventory based on criteria such as manufacturers' recommendations, risk level, or current organization experience.	X	X	X

EC.02.05.07: The organization inspects, tests, and maintains emergency power systems.	AHC	CAH	HAP
(1): At 30 day intervals, the organization performs a functional test of battery-powered lights required for egress for a minimum duration of 30 seconds. The completion date of the tests is documented.	X	X	X
(2): Every 12 months, the organization either performs a functional test of the batter-powered lights required for egress for a duration of 1 ½ hours; or the organization replaces all batteries every 12 months and, during replacement, performs a random test of 10% of all batteries for 1 ½ hours. The completion date of the tests is documented.	X	X	X

EC.04.01.01: The organization collects information to monitor conditions in the environment.	AHC	CAH	HAP
(12): The organization conducts environmental tours every 6 months in patient care areas to evaluate the effectiveness of previously implemented activities intended to minimize or eliminate environment of care risks.		X	X
(13): The organization conducts annual environmental tours in nonpatient care areas to evaluate the effectiveness of previously implemented activities intended to minimize or eliminate risks in the environment.		X	X
(15): Every 12 months, the organization evaluates each environment of care management plan, including a review of the plan's objectives, scope, performance, and effectiveness.	X	X	X

EM.03.01.03: The organization evaluates the effectiveness of its Emergency Management Plan.	AHC	CAH	HAP
(1): As an emergency response exercise, the organization activates its Emergency Management Plan twice a year at each site included in the plan. <i>Note 1: If the organization activates its Emergency Management Plan in response to one or more actual emergencies, these emergencies can serve in place of emergency response exercise.</i> <i>Note 2: Staff in freestanding buildings classified as a business occupancy, as defined by the Life Safety Code), that do not offer emergency services nor are community designated as disaster receiving stations need to conduct only one emergency management exercise annually.</i>	X	X	X
(2) For each site of the organization that offers emergency services or is a community designated disaster receiving station, at least one of the organization's two emergency response exercises includes an influx of patients. <i>Note: Tabletop session, though useful, cannot serve for this portion of the exercise.</i>	X	X	X

LS.01.02.01: The organization protects occupants during periods when the Life Safety Code is not met or during periods of construction. <i>Note: This standard applies to sites of care where four or more patients at the same time are provided either anesthesia or outpatient services that render the patients incapable of saving themselves in the event of an emergency in the organization.</i> <i>Lodging situations should also be taken into consideration.</i>	AHC	CAH	HAP
(1): The organization notifies the fire department (or other emergency response group) and initiates a fire watch when a fire alarm or sprinkler system is out of service more than 4 hours in a 24-hour period in a an occupied building. Notification and fire watch times are documented.	X	X	X

Appendix 9 TJC EC, EM, LS CHAPTER OUTLINES

Adapted from the 2011 Environment of Care, Essentials for Health Care published by the Joint Commission Resources

EC CHAPTER OUTLINE

- I. Plan (EC.01.01.01)
- II. Implement
 - A. Safety and Security (EC.02.01.01, EC.02.01.03, EC.02.01.05)
 - B. Hazardous Materials and Waste (EC.02.02.01)
 - C. Fire Safety (EC.02.03.01, EC.02.03.03, EC.02.03.05)
 - D. Medical Equipment (EC.02.04.01, EC.02.04.03)
 - E. Utilities (EC.02.05.01, EC.02.05.03, EC.02.05.05, EC.02.05.07, EC.02.05.09)
 - F. Other Physical Environment Requirements (EC.02.06.01, EC.02.06.05)
- III. Staff Demonstrate Competence (EC.03.01.01)
- IV. Monitor and Improve (EC.04.01.01, EC.04.01.03, EC.04.01.05)

EM CHAPTER OUTLINE

- I. Foundation for the Emergency Operations Plan (EM.01.01.01)
- II. The Plan for Emergency Response
 - A. General Requirements (EM.02.01.01)
 - B. Specific Requirements
 - 1. Communications (EM.02.02.01)
 - 2. Resources and Assets (EM.02.02.03)
 - 3. Security and Safety (EM.02.02.05)
 - 4. Staff (EM.02.02.07)
 - 5. Utilities (EM.02.02.09)
 - 6. Patients (EM.02.02.11)
 - 7. Disaster Volunteers
 - a. Volunteer Licensed Independent Practitioners (EM.02.02.13)
 - b. Volunteer Practitioners (EM.02.02.15)
- III. Evaluation (EM.03.01.01, EM.03.01.03)
 - A. Evaluating the Planning Activities (EM.03.01.01)
 - B. Evaluating the Plan Through Exercises (EM.03.01.03)

LS CHAPTER OUTLINE

- I. Administrative Activities
 - A. Statement of Conditions (LS.01.01.01)
 - B. Interim Life Safety Measures (LS.01.02.01)
- II. Health Care Occupancy
 - A. All Health Care Occupancy Buildings
 - 1. General Building Requirements (LS.02.01.10)
 - 2. Means of Egress Requirements (LS.02.01.20)
 - 3. Protection (LS.02.01.30)
 - a. Fire Alarm (LS.02.01.34)
 - b. Extinguishment (LS.02.01.35)
 - 4. Special Provisions (LS.02.01.40)
 - 5. Building Services (LS.02.01.50)
 - 6. Operating Features (LS.02.01.70)
- III. Ambulatory Health Care Occupancy
 - A. All Ambulatory Health Care Occupancy Buildings
 - 1. General Building Requirements (LS.03.01.10)
 - 2. Means of Egress Requirements (LS.03.01.20)
 - 3. Protection (LS.03.01.30)
 - a. Fire Alarm (LS.03.01.34)
 - b. Extinguishment (LS.03.01.35)
 - 4. Special Provisions (LS.03.01.40)
 - 5. Building Services (LS.03.01.50)
 - 6. Operating Features (LS.03.01.70)

Appendix 10 COMPARING NFPA AND INTERNATIONAL CODES FOR LODGING (UNDER REVIEW)

Issue	NFPA Codes	International Code
Occupancy Classification for sleeping portion	Lodging or rooming house (LSC 26.1.1.1)	Residential Group R-1 (IBC 310.1)
Mixed use occupancy	According to the Life Safety Code, if sleeping accommodations are provided the whole building should comply with the most restrictive requirements among the occupancies (LSC 26.1.2.1, 6.1.14.2).	If a designated bunk room or other designated sleeping room exceeds 10% of the total floor area of the clinic, then the sleeping area should be separated from the clinic by a two-hour fire rated barrier (IBC 302.2, Table 302.3.3). Otherwise construction requirements and fire protection system requirements should be met by the most restrictive of the R-1 or B provisions, other requirements are based on the use of the portion of the building (IBC 302.3.2).
Separation of Sleeping Rooms	Sleeping rooms should be separated from escape route corridors by walls and doors that are smoke resistant. Air passages should not penetrate the wall unless they are properly installed heating and utility installations (LSC26.3.4).	
Smoke Detectors: placement and numbers	Single-station smoke alarms in each sleeping room. Do not have to be interconnected (LSC 26.3.3.5).	A single or multiple station smoke alarm in the sleeping area (907.2.10.1.1). This section specifies installation not maintenance.
Smoke Detector Maintenance	A schedule for smoke detector inspection should be established. This should include a six-month visual inspection (NFPA 72 7-3.1) and a sensitivity test one year after installation and every two years thereafter (NFPA 72 7-3.2). The sensitivity test should ensure smoke entry into the sensing chamber and an alarm response. Testing with smoke or listed aerosol approved by the manufacturer is permitted (NFPA 72 7-2.2).	In accordance with IFC and Chapter 7 or NFPA 72 (IFC 907.20) IFC requirements same as NFPA 72 for items of concern.
Approved Automatic Sprinkler (new)	New lodging or rooming houses shall be protected <u>throughout</u> by an approved automatic sprinkler system (LSC 26.3.5.2). Sprinkler systems complying with NFPA 13R, <i>Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including four stories in Height</i> shall be permitted (LSC 26.3.5.1) <i>Exception:</i> If the sleeping room has a door opening directly to the outside a sprinkler system is not required (LSC 26.3.5.2).	The IBC has essentially the same requirement (with reference to NFPA 13R) for sprinklers as NFPA (IBC 903.2.7). <i>Exception:</i> If the sleeping room has a door opening directly to the outside a sprinkler system is not required (IBC 903.2.7).
Fire Alarm System (new)	Should be provided (LSC 26.3.3.1): Initiation - by manual mean (LSC 26.3.3.2), a manual fire alarm box in the natural exit access path near each required exit (LSC 9.6.2.3). Notification - automatically ((LSC 26.3.3.3) with both audible and visible signals (LSC 9.6.3.2) operated throughout the building (LSC 9.6.3.7).	A manual fire alarm system and an automatic fire detection system (IFC 907.2.8). System smoke detectors are not required if the single-station smoke detector in the sleeping room are connected to the emergency electrical system and are annunciated by the guestroom at a constantly attended location from which the fire alarm system is capable of being manually activated (IFC 907.2.8.1)
Fire Alarm System (existing)	Don't need a "Fire Alarm System" if existing clinic has a single-station smoke alarm with at least one manual fire alarm box arranged to initiate the smoke detection alarm (LSC 26.3.3.1). Otherwise, comply with "new" Fire Alarm System.	IFC 907.3.1.7 - same as for NFPA for existing.
Exits	Every sleeping room should have a primary means of escape and a second means of escape (LSC 926.2.1.1, 2). The secondary means of escape can be a window if meeting requirements of LSC 24.2.2.3.	Two exits, unless occupant load is less than 10 and travel distance less than 75 (IBC Table 1005.2.2)
Bathroom Doors	Should be designed to allow opening from outside during an emergency when locked (LSC 26.2.5).	

Appendix 11 VILLAGE HEALTH CLINIC SURVEY FORM EXAMPLE – (UNDER REVIEW)

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Appendix 12 **HAND HYGIENE EXCERPTS FROM CDC AND WHO GUIDELINES**

The following recommendations are designed to improve hand hygiene practices of healthcare workers and to reduce transmission of pathogenic microorganisms to patients and personnel in health-care settings:

1. Indications for hand hygiene:

- Wash hands with soap and water when visibly dirty or visibly soiled with blood or other body fluids or after using the toilet.
- If hands are not visibly soiled, use an alcohol-based waterless antiseptic agent for routinely decontaminating hands in the following clinical situations:
 - before or after touching the patient (taking a pulse or blood pressure, or lifting a patient)
 - before handling an invasive device for patient care
 - after contact with body fluids or excretions, mucous membranes, non-intact skin, or wound dressings, as long as hands are not visibly soiled
 - if moving from a contaminated body site to a clean body site during patient care
 - after contact with inanimate objects (including medical equipment) in the immediate vicinity of the patient
 - after removing sterile or non-sterile gloves
- Before handling medication perform hand hygiene using an alcohol-based handrub or wash hands with either plain or antimicrobial soap and water.
- Antimicrobial-impregnated wipes (i.e., towelettes) may be considered as an alternative to washing hands with non-antimicrobial soap and water. Because they are not as effective as alcohol-based hand rubs or washing hands with an antimicrobial soap and water for reducing bacterial counts on the hands of HCWs, they are not a substitute for using an alcohol-based hand rub or antimicrobial soap

2. Hand hygiene Technique:

- Apply a palmful of alcohol-based handrub and cover all surfaces of the hands. Rub hands until dry. Follow manufacturer's recommendations regarding the volume of product to use. (The technique for handrubbing is illustrated in Figure II.1)
- When washing hands with soap and water, wet hands with water and apply the amount of product necessary to cover all surfaces. Rinse hands with water and dry thoroughly with a single-use towel. Use clean, running water whenever possible. Avoid using hot water, as repeated exposure to hot water may increase the risk of dermatitis. Use towel to turn off tap/faucet. Dry hands thoroughly using a method that does not recontaminate hands. Make sure towels are not used multiple times or by multiple people (The technique for handwashing is illustrated in Figure II.2).
- Liquid, bar, leaf or powdered forms of soap are acceptable When bar soap is used; small bars of soap in racks that facilitate drainage should be used to allow the bars to dry.

3. Recommendations for surgical hand preparation:

- Remove rings, wrist-watch, and bracelets before beginning surgical hand preparation.
- Prior to performing minor surgical procedures such as suturing use either an alcohol-based handrub or an antimicrobial soap, preferably with a product ensuring sustained activity, before donning sterile gloves.
- Brushes are not recommended for surgical hand preparation.

4. Selection, handling, and placement of hand hygiene agents:

- if alcohol-based waterless antiseptic agents are used then ensure dispensers are accessible at the point of care (the entrance to patient care rooms or at the bedside and in other convenient locations)
- wall-mounted dispensers containing alcohol-based handrubs shall not be installed directly adjacent to, directly above or below and electrical receptacle, switch, appliance, device or other ignition source. The wall space between the dispenser and the floor shall remain clear and unobstructed (IFC 3405.5(3)).
- wall-mounted dispensers shall be mounted so that the bottom of the dispenser is a minimum of 42 inches and a maximum of 48 inches above the finished floor (IFC 3405.5(4)).
- ensure dispenser system for the alcohol-based handrubs is approved for flammable materials
- ensure that dispensers function adequately and reliably and deliver an appropriate volume of the product
- do not add soap or alcohol-based formulations to a partially empty soap dispenser. If soap dispensers are reused, follow recommended procedures for cleansing. This practice of “topping off” dispensers can lead to a bacterial contamination of the soap. The use of refillable soap dispensers that take pre-packaged refills are preferable to refillable containers that take bulk liquid soap.

5. Skin care:

- When alcohol-based handrub is available in the health-care facility for hygiene hand antisepsis, the use of antimicrobial soap is not recommended.
- Soap and alcohol-based handrub should not be used at the same time.

6. Use of gloves:

- The use of gloves does not replace the need for hand hygiene.
- Wear gloves when it can be reasonably anticipated that contact with blood or other potentially infectious materials, mucous membranes, or non-intact skin will occur.
- Remove gloves after caring for a patient. Do not wear the same pair of gloves for the care of more than one patient.
- When wearing gloves, change or remove the gloves during patient care if moving from a contaminated body site to either another body site (including non-intact skin, mucous membrane or medical device) within the same patient or the environment.

7. Other considerations:

- Monitor HCWs’ adherence to recommended hand hygiene practices and provide them with performance feedback.
- Encourage partnerships between patients, their families, and HCWs to promote hand hygiene in health care settings.
- Provide HCWs with access to a safe, continuous water supply at all outlets and access to the necessary facilities to perform handwashing.
- Provide HCWs with a readily accessible alcohol-based handrub at the point of patient care.
- Ensure HCWs have dedicated time for infection control training, including sessions on hand hygiene.

Appendix 13 WHO HAND HYGIENE TECHNIQUES DEMONSTRATED

Figure II.1
How to handrub



FIGURE 2: WHO HAND HYGIENE TECHNIQUE WITH ALCOHOL-BASED FORMULATION

Figure II.2
How to handwash



FIGURE 3: WHO HAND HYGIENE TECHNIQUE WITH SOAP AND WATER

Complete document available at: http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf

Appendix 14 **METHODS FOR DISINFECTION AND STERILIZATION OF PATIENT-CARE ITEMS AND ENVIRONMENTAL SURFACES****Table 21-1.** Methods for Disinfection and Sterilization of Patient-Care Items and Environmental Surfaces^a

Process	Level of Microbial/ Inactivation	Method	Examples (with processing times)	Healthcare Application (examples)
Sterilization	Destroys all microorganisms, including bacterial spores	High temperature	Steam (~40 min), dry heat (1–6 hr depending on temperature)	Heat-tolerant critical (surgical instruments) and semicritical patient-care items
		Low temperature	Ethylene oxide gas (~15 hr), hydrogen peroxide gas plasma (~50 min)	Heat-sensitive critical and semicritical patient-care items
		Liquid immersion	Chemical sterilants ^b : >2% glut (~10 hr); 1.12% glut and 1.93% phenol (12 hr); 7.35% HP and 0.23% PA (3 hr); 7.5% HP (6 hr); 1.0% HP and 0.08% PA (8 hr); ≥0.2% PA (~50 min)	Heat-sensitive critical and semicritical patient-care items that can be immersed
High-level disinfection (HLD)	Destroys all microorganisms except high numbers of bacterial spores	Heat-automated	Pasteurization (~50 min)	Heat-sensitive semicritical items (respiratory therapy equipment)
		Liquid immersion	Chemical Sterilants/HLDs ^b : >2% glut (20–45 min); 0.55% OPA (12 min); 1.12% glut and 1.93% phenol (20 min); 7.35% HP and 0.23% PA (15 min); 7.5% HP (30 min); 1.0% HP and 0.08% PA (25 min); 650–675 ppm chlorine (10 min)	Heat-sensitive semicritical items (GI endoscopes, bronchoscopes)
Intermediate-level disinfection	Destroys vegetative bacteria, mycobacteria, most viruses, most fungi, but not bacterial spores	Liquid contact	EPA-registered hospital disinfectant with label claim regarding tuberculocidal activity (e.g., chlorine-based products, phenolics-exposure times at least 60 sec)	Noncritical patient care item (blood pressure cuff) or surface with visible blood
Low-level disinfection	Destroys vegetative bacteria, some fungi and viruses, but not mycobacteria or spores	Liquid contact	EPA-registered hospital disinfectant with no tuberculocidal claim (e.g., chlorine-based products, phenolics, quaternary ammonium compounds-exposure times at least 60 sec) or 70–90% alcohol.	Noncritical patient care item (blood pressure cuff) or surface (bedside table) with no visible blood

^a Modified from^{1,13,16}. Abbreviations: glut-glutaraldehyde; HP-hydrogen peroxide; PA-peracetic acid; OPA-orthophthalaldehyde; ppm-parts per million; EPA-Environmental Protection Agency; FDA-Food and Drug Administration; GI-gastrointestinal.

^b Consult the FDA-cleared package insert for information about the cleared contact time and temperature, and see text for discussion why one product is used at a reduced exposure time (2% glutaraldehyde at 20 min, 20°C). Increasing the temperature using an automated endoscope reprocessor (AER) will reduce the contact time (e.g., OPA 12 min at 20°C but 5 min at 25°C in AER). Tubing must be completely filled for high-level disinfection and liquid chemical sterilization. Material compatibility should be investigated when appropriate (e.g., HP and HP with PA will cause functional damage to endoscopes).

Appendix 15 NFPA CODES REFERENCED BY TJC, ENVIRONMENT OF CARE (EC) NEWS, SEPTEMBER 2009

NFPA Codes Referenced by The Joint Commission

NFPA Codes Currently Used

- *Life Safety Code (101-2000)*
- *Fire Safety Evaluation System (101-A 2001)*
- *Health Care Facilities (99-1999)*
- *Fire Alarm Code (72-1999)*
- *Maintain, Test & Inspect Sprinklers (25-1998)*
- *Sprinkler Systems (13-1998)*
- *Fire Extinguishers (10-1998)*
- *Flammable & Combustible Liquids (30-1996)*
- *National Electric Code (70-1999)*
- *Emergency Power Supply Systems (110-2005)*
- *Stored Emergency Power Supply Systems (111-1996)*
- *Commercial Cooking Operations (96-1999)*
- *Fire Door Assemblies (80-1998)*
- *Waste & Linen Chutes (82-1999)*
- *Installation of AC & Ventilation (90A-1999)*
- *Damper Issues (hospitals only)*
 - *Fire Damper: NFPA 80-2007*
 - *Smoke Damper: NFPA 105-2007*
- *Damper Issues (hospitals only)*
 - *NFPA 90A-1999*

Appendix 16 **STATE OF ALASKA FIRE MARSHALL STATEMENT**



State of Alaska
Department of Public Safety
Division of
Fire Prevention

Sarah Palin, Governor
John D. Glass, Acting Commissioner

Policy 08-4

September 12, 2008

TO: State of Alaska Architects/Engineers

FROM: Department of Public Safety
 Division of Fire and Life Safety
 Plan Review Bureau

SUBJECT: Health Clinic and Cabins (R-1)
 Occupancy Suppression System Modification Policy

The State Fire Marshal's policy is that all newly built health clinics within the State Of Alaska will have a B occupancy classification (IBC 304.1) with the exception of transient sleeping quarters (IBC 310.1) which will be an R-1 occupancy classification or fire area. In addition, rental cabins used for short term stays that are considered an R-1 occupancy and have potable water will also be considered under this policy.

The modification to be utilized for the State Of Alaska (13 AAC 50.020 Building Code) Amendment 40, subsection 903.2.7.1 is revised to read "Group R-1. An automatic sprinkler system or a residential sprinkler system installed in accordance with Section 903.3.1.2 must be provided throughout all buildings with a Group R-1 fire area.

Health clinics may utilize a 13D sprinkler system throughout the building or provide a fire wall with a NFPA 13R system throughout the R-1 occupancy; a firewall can be utilized to separate buildings.

The State Fire Marshal realizes that most locations can't handle a full sprinkler system, so the reduction to a 13D sprinkler system has been authorized with the correct R-1 fire rating separations, all other applicable international codes will apply. Carbon monoxide detectors are required with gas operated appliances.

If you have any questions on this matter, please contact the plans review bureau.

Sincerely,

David L. Tyler
Alaska State Fire Marshal

Protecting Alaskans from fire for 50 years - 1955 to 2005

5700 East Tudor Rd. - Anchorage, AK 99507 - Voice (907) 269-5604- Fax (907) 269-0098

Appendix 17 LIGHTING: DETERMINATION OF ILLUMINANCE CATEGORIES

Determination of Illuminance Categories (ANSI/IESNA RP-29-06), page 44, Table 3A		
Orientation and simple tasks. Visual performance is largely unimportant. These tasks are found in spaces where reading and visual inspection are only occasionally performed. Higher levels are recommended for tasks where visual performance is occasionally important. Measured in footcandles (fc)		
A	Public Spaces	3 fc
B	Simple Orientation for short visits	5 fc
C	Working spaces where simple visual tasks are performed	10 fc
Common visual tasks. Visual performance is important. Recommended Illuminance levels differ because of the characteristic of the visual task being illuminated. Higher levels are recommended for visual tasks with critical elements of low contrast or small size.		
D	Performance of visual tasks of high contrast and large size	30 fc
E	Performance of visual tasks of high contrast and small size, or visual tasks of low contrast and large size	50 fc
F	Performance of visual tasks of low contrast and small size	100 fc

TABLE 2: DETERMINATION OF ILLUMINANCE CATEGORIES

Lighting Design Guide for Health Care Facilities (ANSI/IESNA RP-29-06), excerpt from page 45-49, Table 3B	Illuminance Horizontal (fc)
General exam and treatment room, local	100
General exam and treatment room, general	50
Specimen collecting	50
Medication station	50
Lobby	30
Pharmacy, general	30
Toilets	30
Utility room	30
Waiting areas, reading	30

FIGURE 4: MINIMUM AVERAGE ILLUMINANCE

Appendix 18 **NFPA SECONDARY MEANS FOR ESCAPE CRITERIA - WINDOWS**

(c)* It shall be an outside window or door operable from the inside without the use of tools, keys, or special effort and shall provide a clear opening of not less than 5.7 ft² (0.53 m²). The width shall be not less than 20 in. (51 cm), and the height shall be not less than 24 in. (61 cm). The bottom of the opening shall be not more than 44 in. (112 cm) above the floor. Such means of escape shall be acceptable where one of the following criteria are met:

- (1) The window shall be within 20 ft (6.1 m) of grade.
- (2) The window shall be directly accessible to fire department rescue apparatus as approved by the authority having jurisdiction.
- (3) The window or door shall open onto an exterior balcony.
- (4) The window shall have a sill height below the adjacent ground level and shall be provided with a window well meeting the following criteria:
 - a. The window well shall have horizontal dimensions that allow the window to be fully opened.
 - b. The window well shall have an accessible net clear opening of not less than 9 ft² (0.82 m²) with a length and width of not less than 36 in. (91.4 cm).
 - c. A window well with a vertical depth of more than 44 in. (112 cm) shall be equipped with an approved permanently affixed ladder or with steps meeting the following criteria:
 1. The ladder or steps shall not encroach more than 6 in. (15.2 cm) into the required dimensions of the window well.
 2. The ladder or steps shall not be obstructed by the window.

Ladders or steps that comply with the requirements of 24.2.2.3(c)(4) shall be exempt from the requirements of 7.2.2.

Exception: Existing approved means of escape.

Above * denotes: ANNEX A EXPLANATORY MATERIAL

A.24.2.2.3

For use of emergency escape devices, refer to A.7.1.1.

*A.7.1.1

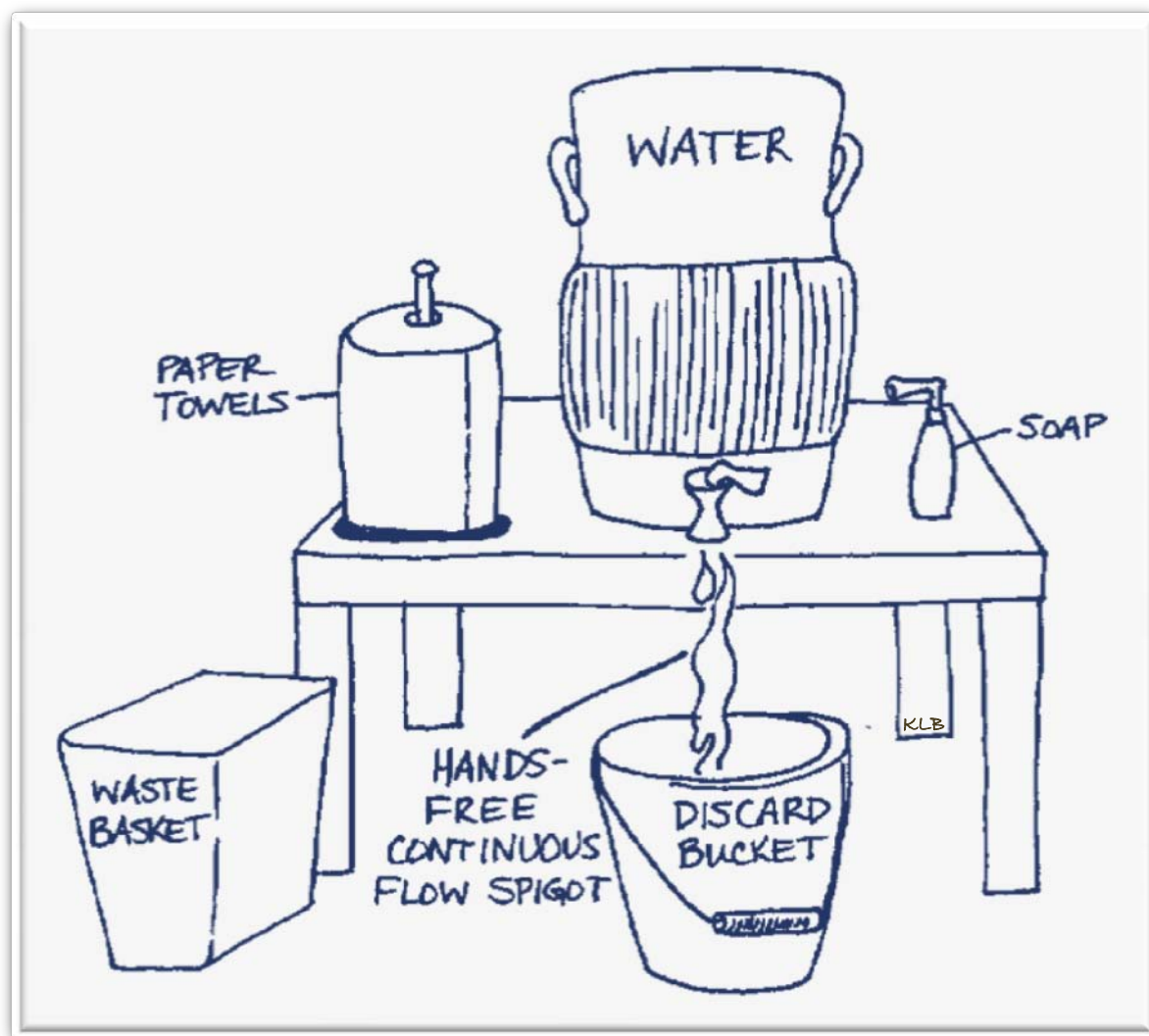
A.7.1.1 Portable ladders, rope fire escapes, and similar emergency escape devices can have a useful function in facilitating escape from burning buildings lacking adequate exits of the stair or other standard type, but they are not the equivalent of standard exits, and their use is not in any way recognized by this Code as satisfying the requirements for means of egress. Furthermore, many such devices are of types unsuitable for use by aged or infirm persons or by small children. Therefore, such devices can provide a false sense of security and should not be used as an excuse for not providing standard exit facilities

Appendix 19 **BEST MANAGEMENT PRACTICES FOR WASTE AMALGAM: AMALGAM WASTE**

Best Management Practices for Amalgam Waste	
DO	DON'T
Do use precapsulated alloys and stock a variety of capsule sizes	Don't use bulk mercury
Do recycle used disposable amalgam capsules	Don't put used disposable amalgam capsules in biohazard containers, infectious waste containers (red bags) or regular garbage
Do salvage, store and recycle non-contact amalgam (scrap amalgam)	Don't put non-contact amalgam waste in biohazard containers, infectious waste containers (red bags) or regular garbage
Do salvage (contact) amalgam pieces from restorations after removal and recycle the amalgam waste	Don't put contact amalgam waste in biohazard containers, infectious waste containers (red bags) or regular garbage
Do use chair-side traps, vacuum pump filters and amalgam separators to retain amalgam and recycle their contents.	Don't rinse devices containing amalgam over drains or sinks
Do recycle teeth that contain amalgam restorations. (<i>Note:</i> Ask your recycler whether or not extracted teeth with amalgam restorations require disinfection)	Don't dispose of extracted teeth that contain amalgam restorations in biohazard containers, infectious waste containers (red bags), sharps containers or regular garbage
Do manage amalgam waste through recycling as much as possible	Don't flush amalgam waste down the drain or toilet
Do use line cleaners that minimize dissolution of amalgam	Don't use bleach or chlorine-containing cleaners to flush wastewater lines

FIGURE 5: ADA BEST MANAGEMENT PRACTICES FOR AMALGAM WASTE

APPENDIX 20 HANDWASHING STATION EXAMPLE (WITHOUT RUNNING WATER)



Handwashing stations, at a minimum ,should include:

- An insulated container with a faucet type spigot which can be secured in the open position, providing a continuous flow of handwashing water
- A container should be placed below the spigot to catch wastewater from handwashing operations.
 - *“The handwashing station should be placed in an area of the clinic where unattended children are not allowed. Infants and toddlers can drown in small amounts of water left in a 5-gallon bucket (<http://www.cpsc.gov/cpscpub/pubs/5006.html>).”*Hand soap
- Paper towels or acceptable means to dry hands
- Waste basket (trash can)

The Institutional Environmental Health (IEH) team would like to thank everyone who participated in the process to revise the Guidelines for Environmental Health Practices at Village Health Clinics. The IEH team anticipates providing future revisions as necessary and they welcome feedback and comments as you use the most current version. Updates will be posted on our webpage. If you would like to submit information to suggest improvements or to offer general comments please contact our office at the below information:



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