

NEW CODES AND STANDARDS

AHCA VIRTUAL DESIGN & CONSTRUCTION SEMINAR

NOVEMBER 16 -18, 2020

2018 FGI Guidelines Revisions to Mobile, Transportable, and Relocatable Medical Units

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1

OBJECTIVE

Learn the new revisions to the chapters for mobile medical units attached to hospitals and outpatient facilities.

2

OBJECTIVE

Understand why the “land based” architectural requirements are important to maintaining health and safety of the patients and staff.

3

OBJECTIVE

Be able to apply the detailed requirements discussed in this session to the next mobile medical unit for a hospital or outpatient client.

4

OBJECTIVE

Learn how to choose and to prepare a site for the connection of a medical mobile unit so that the site and location do not adversely affect the health, safety and welfare of the inpatient or outpatient who is using the medical unit.



The views and opinions expressed in this presentation are the opinions of the speaker and may not be the official position of FGI or the Health Guidelines Revision Committee.

Mobile Unit Issues

- FGI Precept: Physical environment requirements should be the same regardless of where service is provided...so what about mobile units? Should **all** Mobile units meet **all** the FGI Guidelines requirements?
- Should Mobile Units meet all of the requirements of NFPA 99 and other NFPA codes and standards?
- Why are Modular/Relocatable units in this chapter since they should just be reviewed as buildings?

Problems with 2014 FGI Guidelines

- No definitive location for patient support areas
- References to fire and building codes that did not make sense
- Limited MRI site restrictions and guidance
- Mechanical and electrical requirements that mobile units could meet
- Temporary or Permanent use of mobile units not well defined
- Responsibilities and certifications not defined
- Classification of use not defined...Are all or mobile units the same?

Steps to Revisions

- Should Mobile Medical Units even be allowed?
- FGI 2018 Comment Period revisions start to be made
- St. Louis All Hands Meeting and a raucous discussion
- Task Group Assigned to make recommendations for Revisions:
Udo Ammon, Tobias Gilk, Jack Chamblee, David Soens, Scott Waltz, Enrique Unanue, John Williams, Rick Ottolino, Rick Hermans, David Uhaze, Bart Miller and of course the FGI editors Pamala Blumgart and Heather Livingston

Questions for Task Group

Questions and Concerns

- Is there a need for these types of units and should they be part of the FGI Guidelines?
- Should the entire chapter be moved to the Appendix?
- Should the units be permanent, temporary or only for emergency use?
- What references should be made (if any) to other codes and standards?
- Can the units meet all the requirements of the FGI Guidelines or should there be exceptions provided?
- Are these medical units safe for all kinds of patient treatments?
- Are the requirements reasonable?

Answers from Task Group

2018 FGI Guidelines

- Agreed there is a need for these units in the Guidelines
- They are not regulated by any other code or standard
- Keep the chapter as requirements, not appendix material
- Make use of them as “Temporary” not “Permanent” as defined by AHJ
- Do not apply to medical units used for civil emergencies like “Mash Units”
- Remove Relocatable (Modular) Units from chapter (considered buildings)

Answers from Task Group (Cont.)

2018 FGI Guidelines

- Revise chapter name: *Specific Requirements for Mobile/Transportable Medical Units*
- Locate requirements in both the Hospital and Outpatient books.
Hospitals Book, Chapter 2.8; Outpatient Book, Chapter 2.13
- Make minimal references to other codes and standards
- Classify units by medical service provided and revise requirements to meet this new classification system.

Classification of Medical Units

- Different kinds of medical units:
 - Phlebotomy Units (Blood Mobile) or walk-in clinic
 - Lithotripsy
 - Radiology Diagnostic Units
 - Radiology Therapeutic Units
 - Surgical Units
 - Laboratories
 - Sterile Processing Units

Medical Unit Type Designations

Class 1 Medical Units: Meet requirements of Exam/Treatment room or Class 1 imaging room. (as modified)

Class 2 Medical Units: Meet the requirements of a Procedure Room or Class 2 imaging room. (as modified)

Class 3 Medical Units: Meet the requirements of an Operating Room or Class 3 Imaging room. (No modifications permitted)

Hemodialysis permitted in any Class of Unit

Mobile/Transportable Medical Unit Certification

- Manufacturer uses the services of Architect or Professional Engineer
- Third Party Nationally Recognized Laboratory (NRTL)
- Other Certification acceptable to the AHJ



Example of a Type of Certification

Who Is Responsible?

- Ultimately the Host Facility or organization
 - All new construction, renovation, and services
 - Fire ratings of materials and finishes
 - All testing, calibration of equipment
 - All maintenance of exterior elements
 - Testing after each relocation of the Mobile Unit

Temporary vs Permanent

- Define Temporary...1 month? 6 month? 2 years?
- What does permanent mean? Keep air in the tires?
- What about units that move from place to place?
- New revision submitted for 2022 regarding a 96 hour rule that would almost complexly deregulate most units in use from any review by an AHJ

Site Requirements

- Level Parking area or Concrete pad
- Cannot block egress to and from the host facility
- At least 25 feet separation from air intake and unit exhaust
- Tractors with up to 100 gallon fuel tank and not supporting medical unit at least 10 feet from host facility. NFPA 30 for more than 100 gallons of stored fuel
- Impact Barriers provided when located near vehicular drives or parking areas.

Temporary Impact Barriers



Site Requirements (Cont.)

- Avoid fire lanes
- Emergency Access for medical personnel
- Cannot block egress from the host facility
- Site utilities including electrical, mechanical, and plumbing
- Special conditions for magnetic field effects
- Radiation protection

Unit Access Requirements

- Access to the site for the unit and location of unit on the site
- Access for patients including covered walk way and parking
- For wheelchairs gurneys, stretchers and walkers
- Power lift connected to emergency power of host facility or mobile unit
- Stairs not part of unit to meet NFPA, Building, Accessibility

Sample Covered Entry Photos



Power Lift to Unit



Space and Clearance Requirements

Class 1 and 2 Units: Where cannot meet the Guidelines:

Class 1: Room dimensions sized to accommodate equipment, or governing body of the host facility shall complete a risk assessment

Class 2: If the unit cannot meet room dimensions, the governing body of the host facility shall provide a Risk Assessment and AHJ is permitted to approve based on the Risk Assessment

Class 3: Must meet all dimension/space requirements

Inside Class I Unit



All Units Require Hand-Washing Stations



Class I Unit: Portable Hand-Washing Station

Pre and Post Procedure Care

Class 1 and 2: Holding areas in unit or “readily accessible” which means “on the same floor of the host facility”

Class 2: Recover areas in the unit or “adjacent” which means “located next to but not necessarily connected to the identified area or room”

Support Area Requirements

Class 2: Shall meet the requirements of support areas for Imaging Services in or “directly accessible” which means “connected through a doorway or other opening without going through an intervening room or public space”

- This would mean all 22 rooms and spaces listed in the imaging services section would be impossible to achieve.
- NOTE: The term “directly accessible” has been reevaluated by the Task Group and is now revised to “readily accessible or adjacent.”

Support Area Requirements

Class 1 and 2: These rooms and areas can be “readily accessible”.

- Clean Workroom or Clean Supply Room
- Soiled Workroom
- Equipment and Supply Storage
- Environment Services Closet

Support Areas for Patients

Class 1 and 2:

Changing Area: Permitted either in the unit or “readily accessible” to the unit

Patient Toilet Room: Permitted either in the unit or “readily accessible” to the unit

Storage for Patient Belongings: Permitted either in the unit or inside of host facility

Public and Administrative Areas

All Units: Waiting Room permitted to be in the host facility to include:

- Drinking water
- Telephone access
- Public toilet

Class 1 and 2 Units: Waiting area for patients provided either in the unit or the host facility

HVAC System Requirements

- Shall meet 90 A and Section 2-8.2 as modified
- Class 1 Units: Non invasive and no anesthetics
 - Maintain air pressure relationships **where required** to meet ASHRAE 170
 - A minimum capacity of 75 degrees F
 - All areas ventilated by mechanical means with temperature control

Temperature Control



HVAC System Requirements

Class 2 shall meet all requirements of Class 1

Meet the requirement of ASHREA 170 for service provided

Includes filters, air changes, air pressure relationships, etc.

HVAC System Requirements

All units:

Outdoor air intakes:

Meet ASHRAE 170 for location

Twenty-five feet from sources of combustion, fans, plumbing vents, idling vehicles, etc.

Class 3: Meets all requirements

Electrical Requirements

Class I Units:

No Requirements inside the unit

Class 2 and 3 Units:

Must meet NFPA 99 and NFPA 70 for the service category provided

All electrical material and equipment installed to meet
NFPA 99 and NFPA 70

Emergency Power Supply

Class I units: No requirements

Class 2 and 3 Units:

Must have a Level I EPSS in accordance with NFPA 110 with at least 90 minutes of fuel supply or be connected to the host facility's EPSS

Lighting and Equipment

- All Units:
 - Emergency Lighting may be battery backup or served from the Life Safety Branch for 90 minutes
 - Portable or fixed examination light shall be provided
 - X-ray equipment shall conform to requirements of NFPA 70
 - Electrical receptacles in patient care ...hospital grade
- Class 2 and Class 3 units,
 - All electrical equipment and devices, receptacles, and wiring shall comply with NFPA 99 and NFPA 70 for the building service category provided in the unit.

Plumbing and Other Piping

- Waste shall discharge into the host facility or into utility sewage system
- Freeze protection shall be provided as required by geographical locations
- If installed, piped medical gas shall conform to the requirements of NFPA 99
- Backflow prevention shall be installed at the point of water connection on the unit.

Communication Systems

- Nurse Call and Code Blue as required (is required)
- Connection to hospital emergency communication system
- Telephone connection to PBX of host facility

Nurse Call with Code Blue Stations



Fire Alarm Systems

- Fire Alarm connection from unit to host facility and host facility to unit
- Manual pull station in unit with audible visual device
- Smoke detection as required for enclosed connectors
- Fire alarm shall automatically notify fire department or 3rd party respondent or initiate the host facility's fire alarm system

Fire Alarm Pull Station



Thank You for All You Do!

Skip Gregory, NCARB
gregoryskip@gmail.com

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Thank you for your attention!

