Major Additions and Revisions

The 2022 edition of the *Guidelines* builds upon the previous work of the Health Guidelines Revision Committee (HGRC) to provide minimum requirements for hospitals, outpatient facilities, and residential care facilities in three independent documents: *Guidelines for Design and Construction of Hospitals*; *Guidelines for Design and Construction of Outpatient Facilities*; and *Guidelines for Design and Construction of Residential Health, Care, and Support Facilities*. Consistent with the structure of the HGRC during the 2018 *Guidelines* revision cycle, the 2022 HGRC was divided into three document groups to manage updates for each book.

In preparation for the 2022 edition of the *Guidelines*, several topic groups were formed to review the 2018 text, each through a specific lens, and to propose updates and revisions. Topic groups reviewed *Guidelines* language related to rural health, lighting, infection prevention, palliative care, inclusive environments, acoustics, and behavioral and mental health. The Outpatient Document Group also formed task groups to review the overall content of the 2018 edition. The proposals resulting from the work of all these groups were considered by the document group alongside other proposals from HGRC members and the public.

Although the three 2022 *Guidelines* documents were developed independently, special consideration was given to correlating language, structure, and new requirements across the documents. In this way, recommendations made to just one document group could be considered by all three. In several sections of the Outpatient *Guidelines*, explanatory text was added to the appendix to further delineate how the correlated requirements apply to outpatient settings.

Significant changes to the outpatient facility requirements are described below. As in previous editions, revised and new text is marked throughout the document by an adjacent vertical line.

Glossary

The HGRC Steering Committee made updates to the *Guidelines* glossary for the 2022 edition to clarify intent and address terms for which frequent inquiries have been received since the 2018 edition was published. For example, definitions were added for circulating sides and for Class 1, Class 2, and Class 3 imaging rooms. The terms for exam room, procedure room, and operating room have been updated to make clearer the distinctions between the room types. "Invasive fluoroscopy" was updated to "procedural fluoroscopy" to clarify its intended meaning.

As well, several terms have been updated in the 2022 glossary to keep pace with evolving usage in the industry. The term "behavioral and mental health" replaces "psychiatric" when referencing facilities, patients, and assessments as a result of input from two behavioral health-related topic groups, an industry survey of organizations operating in the medical behavioral and mental health sector, and careful consideration by the Steering Committee. The term "critical care unit (CCU)" has become "intensive care unit (ICU)" to avoid confusion with cardiac care unit (CCU). Finally, "patients of size" is now "individuals of size" to apply more broadly to patients, residents, participants, visitors, family members, staff, or vendors.

Part 1: General

Functional program. Language has been added to the main text and the appendix to clarify how the functional program should connect the health care organization's operational needs and objectives with the scope and purpose of a project. The added appendix language provides examples of how to identify the services applicable to a project's scope and the clinical and support areas that will be affected by the project as well as suggestions for how to describe operational requirements.

Safety risk assessment. The process for developing a safety risk assessment (SRA) has been tweaked to add "developing solutions" to the two prior steps of "identifying hazards" and "evaluating risks" from those hazards. The primary change in this section, however, is the addition of the disaster, emergency, and vulnerability assessment (DEVA) as part of the SRA. Built on the hazard vulnerability assessments many health care organizations already must perform, the DEVA was a result of the development of FGI's 2021 white paper "Guidance for Designing Health and Residential Care Facilities that Respond and Adapt to Emergency Conditions" (posted at https://fgiguidelines.org).

Infection prevention. The infection control risk assessment is now the deciding factor in whether an anteroom will be provided for an AII room, and new appendix language provides guidance for designers and facility owners as they decide where an anteroom is needed.

Behavioral and mental health. The behavioral and mental health elements of the SRA have been updated to assure that owners and designers consider patient safety concerns throughout a facility rather than only for clinical areas where behavioral and mental health patients will be seen. Revised appendix language outlines risk levels recognized by the behavioral and mental health community that can be used to identify risks in particular spaces: "high level" (areas where patient acuity poses increased risk), "moderate-high level" (areas where patients interact with less direct supervision), "moderate-low level" (areas where patients are supervised and/or under direct observation), and "low level" (e.g., staff support areas where patients are not allowed).

Diversity and inclusive environments. As health care organizations strive to meet the needs of the diverse populations they serve, the *Guidelines* likewise continues to foster accommodation of these populations through an inclusive approach to design of the built environment. Diversity considerations (e.g., age, body size, ability, cultural background, gender identity, visual acuity) for patients, staff, and visitors are addressed in the sections on user accommodations and cultural responsiveness in the 2022 Outpatient *Guidelines*. In particular, a new section on design criteria for inclusive environments describes a universal design process aimed at creating an environment that can be accessed, understood, and used to the greatest extent possible by all people, regardless of age, size, or ability. Recommendations and additional resources are also given.

Acoustic design. Guided by the expertise of the Acoustics Proposal Review Committee (APRC), the HGRC approved several changes in acoustic requirements, adding requirements for telemedicine rooms and updating required noise reduction coefficients.

Improvements in acoustic ceiling panel design since the 2018 *Guidelines* was published have made it possible for ceiling tiles to deliver higher sound absorption with minimal cost impact. Thus, the minimum absorption rating requirement for several room types and areas has increased from 0.15 to 0.20 in the Outpatient document. While a change in the average absorption rating from 0.15 to 0.20 is an increase, both ratings are considered "mostly reflective" and are each classified in the same low value as noted by the International Organization for Standardization. Nonetheless, this minimal increase is considered helpful in reducing overall noise levels and protecting patients' health information.

For some other areas, acoustic requirements were relaxed and moved from the main text to the appendix in the Outpatient document. Both the APRC and the HGRC recognize that as current Outpatient *Guidelines* language exempts all tenant improvement construction from compliance with exterior noise classifications, related requirements need not apply in outpatient settings. As well, appendix language was added to encourage review and documentation of acoustic design requirements by the project team early in project planning.

Sustainable design. While the 2018 edition addressed sustainable design, construction, and maintenance practices to improve building performance, the 2022 *Guidelines* points to the establishment of sustainability goals by a multidisciplinary team. Code, reference, and green building rating system citations have been updated, and information about water measurement devices has been added to the explanatory language addressing potable water quality and conservation. It is noted that outpatient facilities that will be located in an established building may not be able to meet particular sustainability recommendations.

Part 2: Outpatient Facilities

Common Elements

Clinical service rooms. Two new exam room types have been added in Chapter 2.1, Common Elements for Outpatient Facilities: a dual entry exam room and a sexual assault forensic room.

An FGI-led workshop at the July 2018 Summer Leadership Summit, co-hosted by the American Institute of Architects Academy of Architecture for Health and the American College of Healthcare Architects, explored existing exam room types in the 2018 *Guidelines* and considered new exam room types needed to stay current with clinical practice. Based on the work of this group, the HGRC accepted a proposal to add design requirements for a single-patient exam/observation room with dual entries to the Outpatient *Guidelines*. Dual-entry exam/observation rooms are larger than typical exam rooms because additional space is needed to accommodate the swing of both doors and the resulting impact on circulation.

The sexual assault forensic exam room first appeared in the 2018 Hospital *Guidelines*. New to the Outpatient document as an option, this room must meet the requirements for a single-patient exam/observation room with a few exceptions. A private toilet room with a shower and storage space for clothing, shoes, linens, and bathing products is required to be immediately accessible to the sexual assault forensic exam room. Lockable storage for forensic collection kits and lab supplies, including collected evidence, and a readily accessible room for consultation, family, support services, and law enforcement are also required.

Hyperbaric oxygen therapy facilities. The section addressing hyperbaric oxygen therapy facilities in the Hospital document was reworked to add facilities for this clinical service to the Outpatient *Guidelines* as these services are sometimes provided in outpatient facilities. Included are design requirements for spaces that house multiplace and monoplace chambers, pre-procedure areas, and support areas for staff and patients.

Pharmacy areas. Requirements for pharmacy areas provided in outpatient facilities have been clarified, including where relevant *U.S. Pharmacopeia* or local requirements are to be followed. In addition, as hazardous drugs must be stored separately from non-hazardous drugs, a dedicated room for hazardous drug storage is now required where these items are part of outpatient pharmacy services.

Imaging facilities. The imaging requirements in the Outpatient *Guidelines* remain virtually identical to those in the Hospital document. For the 2022 edition, clarifying language has been added to inform users the requirements apply to both single- and multiple-modality imaging systems. Clearances have been added for Class 1 and Class 2 imaging rooms, although they do not apply to locations where small mobile ultrasound or similar imaging devices will be used. Clearances have been added for an anesthesia work zone in imaging rooms of any class where an anesthesia machine will be used.

For Class 2 and Class 3 imaging rooms that have a control room, omission of the control room door is permitted where the control room serves only one imaging room and has the same architectural details and environmental controls as the imaging room. Laminar flow diffusers and low returns are not required in the control room.

Requirements for system component rooms have been reworked to allow more flexibility in design. The system component room can open into Class 1 imaging rooms and also into Class 2 imaging rooms as long as no procedures meeting the definition of "procedural fluoroscopy" will be performed there. System component rooms may also be shared by multiple imaging rooms where this is permitted by the imaging equipment manufacturer.

Some design restrictions were loosened due to advances in imaging technology. For example, because new MRI systems that use minute amounts of cryogen do not typically use quench pipes, a revision was made to clarify that cryogen venting/quench pipes are not required when not indicated by the MRI manufacturer. In addition, entry vestibules will not be required where an MRI's magnetic induction measurement does not extend beyond the MRI device.

Support areas for staff. The 2022 *Guidelines* is the first edition to recommend lactation rooms for staff in the Outpatient document. Appendix language in the section on support areas for staff in the common elements chapter provides design suggestions and notes that sharing a lactation room between clinical service areas should be acceptable.

Ligature- and tamper-resistant design features for patient toilet rooms. The common elements chapter now has guidance on ligature-resistant design features

for patient toilet rooms that is cross-referenced from other chapters. Ligature-resistant features include outward-swinging or double-acting patient toilet room doors; ligature-resistant grab bars; anti-ligature lever handles; and tamper- and ligature-resistant light fixtures, fire sprinklers, electrical receptacles, and other appurtenances in the patient toilet room. In addition, where patient toilet rooms are required to have ligature-resistant design features, towel bars and lever handles are not permitted. Where indicated by the safety risk assessment, patient toilet room doors are required to be equipped with keyed locks that allow staff to control access to the toilet room.

Architectural details. Revisions made in the architectural details section in the common elements chapter provide clarity, support project flexibility and cost savings, strengthen infection prevention measures, and support patient safety.

The requirement for monolithic floor and wall base assemblies has been extended to soiled workrooms and soiled holding rooms, pharmacy compounding rooms and anterooms, and trauma rooms in freestanding emergency facilities.

Whereas monolithic ceilings previously were required in all restricted areas, a revision has been made to allow use of a modular or prefabricated laminar (or controlled) flow ceiling system in operating rooms and Class 3 imaging rooms where certain conditions are met.

Special attention to requirements supporting patient safety led to the addition of appendix table A2.1-c (Resources for Grab Bar Configurations), which provides information on the placement of grab bars. In addition, revisions were made to clarify the association between falls and flooring materials and characteristics (e.g., flooring transitions, floor patterns, floor contrast, floor reflectivity).

Medical gas systems. Where inhalation anesthesia (including nitrous oxide) will be used, a waste anesthetic gas disposal (WAGD) system is required; however, in some outpatient facilities use of portable delivery and scavenging equipment is permitted in lieu of a permanently installed WAGD system.

Specific outpatient facility types

General and specialty medical services facilities. The list of sample facility types that may fall into the general and specialty medical services category was expanded in the appendix to help users determine applicability of the chapter. A section on special ventilation and exhaust systems was added to clarify the requirements for rooms where processes involving hazardous particulates or material grinding or cutting will be performed.

Birth centers. A task group assembled to determine, among other things, the feasibility of achieving the 200 square feet required by the 2018 edition for birthing rooms in birth centers located in residential-style dwellings. Noting birthing rooms provide alternatives to home births, the task group suggested reducing the minimum birthing room size to 120 square feet to align better with typical home bedroom sizes. This change is supported by a national study of birth centers that found many birthing rooms in existing birth centers were less than 200 square feet. Other revisions include a required emergency safety plan for building systems and removal of several on-site food service requirements, instead referring users to NSF International standards and other applicable codes for facilities where food service is provided.

Urgent care centers. The requirements for patient care and diagnostic areas in urgent care centers have been revised for clarity and to add several new requirements. The triage area must include access to language translation services and means to alert staff or local authorities if assistance is needed. At least one of the two patient care stations required as a minimum must be a single-patient exam room. More detail is provided for design of a multiple-patient exam room. Design flexibility is offered through permission to share some spaces for different purposes; for example, nurse stations may share space with the reception and information area and initial patient interviews may take place in the triage area, a patient care station, or a consultation room.

Outpatient surgery facilities. Changes to support flexibility in design were made to this chapter as well. Omission of a clinical sink in a soiled workroom is permitted, for example, where an alternative method of fluid waste disposal is provided. Storage for clean equipment and clean and sterile supplies is permitted in one room or area or a combination of rooms and/or areas. The clean workroom of a sterile processing facility in the semi-restricted area is allowed to serve this purpose. Language was clarified for design of the clean equipment and clean and sterile supply storage room or area where it is directly accessible to operating rooms arranged around it (this arrangement is often called the clean core).

Freestanding emergency care facilities. Several changes were made to improve patient throughput in a freestanding emergency facility during periods with a high volume of patients. Trauma/resuscitation rooms may be subdivided to accommodate two patients when not in use for a trauma patient, although the physical space and operational plan must accommodate quick conversion back to a trauma room when needed and each resulting patient care station must meet the requirements for the service to be provided. As well, design requirements for low-acuity patient treatment stations have been added. Provision of this type of treatment space has been shown to improve patient flow, increase space use, and improve cost efficiency. However, these patient treatment stations are not permitted to be the sole type of treatment space provided in an emergency care facility.

The other major change in this chapter is an increased focus on accommodations for behavioral and mental health patients. The Behavioral and Mental Health Topic Group, composed of a wide range of experts in the field, offered a number of proposals for HGRC consideration. In the 2022 document, health care organizations are directed to conduct a behavioral and mental health risk assessment to determine which types of rooms, and how many, will be provided to serve behavioral and mental health patients in a freestanding emergency facility. Design guidance is included for a ligature-resistant patient toilet room located immediately accessible to the secure holding room; a flexible secure treatment room, which can be easily converted from a single-patient treatment room to a secure holding room; a treatment room intended specifically for behavioral and mental health patients; and a seclusion room. Also added are requirements for a behavioral health crisis unit, a dedicated space that is clearly separate from other clinical areas in the freestanding emergency facility where services can be provided to behavioral and mental health patients presenting in a state of crisis.

Renal dialysis facilities. This chapter received a lot of attention during the 2022 revision cycle. Primary revisions include requirements for fluid disposal sinks in the treatment area and for a dedicated room for patients with special precaution needs to prevent contact transmission of infectious microorganisms (e.g., Hepatitis B). The nurse station requirements have been clarified to support direct visual observation of a patient's face and vascular access, with a maximum height for casework and fixed obstructions in sight lines between the nurse station and patient care stations.

Outpatient behavioral and mental health facilities. Additions to this chapter include design guidance for transcranial magnetic stimulation rooms and intensive outpatient and partial hospitalization program facilities. Language has been added to support provision of tamper- and ligature-resistant features in areas where the behavioral and mental health portion of the safety risk assessment identifies suicide risk or staff safety concerns.

Mobile/transportable medical units. This chapter, which also appears in the 2022 Hospital *Guidelines*, is intended to apply to mobile/transportable medical units that are used on a temporary basis. For this edition of the *Guidelines*, the HGRC agreed providing additional language to define "temporary basis" would be useful. In the absence of state and local standards, temporary basis in this chapter is defined as "a period of time not exceeding six months during any twelve-month period from the time procedures commence inside the mobile/transportable unit until the time procedures cease and it is transported off the host facility's site." The chapter does not apply to mobile/transportable units that remain on-site for less than 96 hours.

Several revisions have been made to increase design flexibility throughout this chapter, specifically for Class 1 mobile/transportable units. For example, where a Class 1 mobile unit is not connected to a host facility, it may have self-contained site utilities (e.g., power, waste, water). Provision of a hand sanitation dispenser in lieu of a handwashing station is permitted for a Class 1 imaging mobile unit, and a cabinet or closet is permitted to meet the requirement for a clean workroom or clean supply room and for a soiled workroom.

Recognizing the size limitations of mobile/transportable medical units, a provision is made for Class 1 units that cannot physically meet the corridor width and/or ceiling height requirements in the common elements chapter. In this case, corridors in the Class 1 mobile unit are permitted to have a minimum clear width of 2 feet 8 inches and a minimum clear ceiling height of 6 feet 8 inches.

Part 3: Ventilation of Outpatient Facilities

Beginning with the 2010 *Guidelines* edition, ANSI/ASHRAE/ASHE Standard 170: *Ventilation of Health Care Facilities* has been incorporated into the *Guidelines*

as minimum requirements for ventilation systems. FGI reprints Standard 170, with permission, in the *Guidelines* documents as a convenience to its users. Included in the 2022 *Guidelines for Design and Construction of Outpatient Facilities* is the 2021 edition of Standard 170 dated November 2021, which incorporates addenda c and d. The 2021 edition of Standard 170 is the first to present distinct ventilation requirements for outpatient facilities, divided into tables for specialized and general spaces.

FGI continues to work with ASHRAE to revise and update Standard 170. ASHRAE keeps Standard 170 under a continuous maintenance process, which permits official changes to be made at any point over the life cycle of the document. It is FGI's intent that published addenda to ASHRAE Standard 170-2021 shall be considered part of the 2022 *Guidelines for Design and Construction of Outpatient Facilities*.