

Preface

The 2010 edition is the latest in the 63-year history of this Guidelines document to aid in the design and construction of health care facilities.

The original *General Standards* appeared in the *Federal Register* on February 14, 1947, as part of the implementing regulations for the Hill-Burton program. The standards were revised from time to time as needed. In 1974 the document was retitled *Minimum Requirements of Construction and Equipment for Hospital and Medical Facilities* to emphasize that the requirements were generally minimum, rather than ideal standards. The 1974 edition was the first for which public input and comment were requested. Requirements relating to the preparation of plans, specifications, and estimates and to site survey and soil investigation, which had been a part of all previous editions, were removed. The Department of Health, Education, and Welfare's (DHEW) Office of Facilities Engineering published these requirements in a document titled *Technical Manual on Facility Design and Construction*.

In 1984 the Department of Health and Human Services (DHHS) removed from regulation the requirements relating to minimum standards of construction, renovation, and equipment of hospitals and medical facilities, as cited in the *Minimum Requirements*, DHEW Publication No. (HRA) 81-14500. Since the federal grant and loan programs had expired, there was no need for the federal government to retain the guidelines in regulation format. To reflect its non-regulatory status, the title was changed to *Guidelines for Construction and Equipment of Hospital and Medical Facilities*. However, the document was, and still is, used by many state authorities having jurisdiction for licensure or registration. Further, DHHS staff members use the Guidelines to assess Department of Housing and Urban Development applications for hospital mortgage insurance and Indian Health Service construction projects. For these reasons, regulatory language has been retained. The 1983–84 edition of the Guidelines was the last one revised and published by the federal government; at the same time, DHHS published and distributed an addendum to the Guidelines titled *Energy Considerations for Hospital Construction and Equipment*.

At the conclusion of the revision cycle that resulted in the 1983–84 edition, DHHS asked the American Institute of Architects Committee on Architecture for Health (AIA/CAH) to form an advisory group to work with, and be funded by, the Public Health Service for the next revision. When the revisions to the document were complete, the federal government declined to publish it document. The AIA/CAH asked several nonprofit agencies and professional associations to publish and distribute the Guidelines, and an agreement was finally reached with the AIA to publish the 1987 edition. At this point, revision of the Guidelines would have ceased, or the document would have ceased to exist, if three people had not taken it upon themselves to approach the Public Health Service and the Health Care Financing Administration and request a federal grant to fund a revision cycle. These same three people, working with the AIA/CAH, put together the first Steering Committee, which in turn set up the first Health Guidelines Revision Committee (HGRC) not under the aegis of the federal government.

The members of this multidisciplinary group came from the federal and state governments and the private sector and offered expertise in design, operation, and construction of health care facilities. The 1992–93 edition of the Guidelines was published and distributed by the AIA. The Steering Committee from the 1992–93 cycle requested and received federal funding from DHHS for another cycle. Substantial funding was also provided by the American Hospital Association and the AIA/CAH. The consensus process was enhanced and the input base broadened by asking the public to propose changes to the Guidelines and then to comment on the proposed changes accepted by the HGRC. Approximately 2,000 proposals and comments were received and processed. Three HGRC meetings—one on the East Coast, one on the West Coast, and one in the middle of the country—were held to discuss the merits of all proposals and comments. More than 65 experts attended these sessions and reached a consensus on the content of the 1996–97 edition of the Guidelines. A letter ballot was sent to all eligible members of the HGRC and the document was approved by a unanimous vote. To better reflect its content, the title of the document was changed to

Guidelines for Design and Construction of Hospital and Health Care Facilities. It was during this revision cycle that the AIA Committee on Architecture for Health became the AIA Academy of Architecture for Health (AIA/AAH).

In an effort to create a more formal process and to keep the document current, the Facility Guidelines Institute (FGI) was founded as an independent, not-for-profit 501 (c)(3) corporation in 1998. The main objectives of FGI are (1) to see that the Guidelines are reviewed and revised on a regular cycle with a consensus process carried out by a multidisciplinary group of experts from the federal, state, and private sectors, (2) to stimulate research in support of evidence-based guidelines, and (3) to reinvest all of the net revenue derived from FGI's share from the sale of Guidelines documents in research and development for improved future editions of the Guidelines.

FGI is primarily interested in consensus methodology and in overseeing the Guidelines revision process. Specifically, FGI wants to make sure the Health Guidelines Revision Committee

- is properly funded,
- has a balance of stakeholder representation from individuals with expertise or jurisdiction,
- uses the consensus process,
- requests public input in the form of proposals for change and comments on proposed changes,
- reviews and revises the Guidelines on a timely basis to maintain a balance between minimum standards and the state of the art in health care design and construction, and
- operates under a formal set of bylaws governing its purpose, scope, membership, and goals that include standing rules governing voting procedures, recognized duties and responsibilities for committee members, and established rules regarding appointments, terms, and officers.

FGI monitors public requests for interpretation of the Guidelines text. Goals are to make sure that requests are answered in a timely manner, interpretations are rendered by the individuals best equipped to reflect the intent of the committee when the document was written, and interpretations are made available to the public.

The 2001 edition of the Guidelines resulted from the first revision cycle to be completed under the aegis

and direction of FGI. It received major funding from DHHS/Health Care Financing Administration and the AIA/AAH. The American Society for Healthcare Engineering (ASHE), the National Institutes of Health (NIH), and the AIA provided staff and technical support. The HGRC met in Washington, D.C., and reviewed the 1996–97 edition of the Guidelines line by line to ascertain issues that needed to be addressed, including infection control, safety, and environment of care. The membership for this revision cycle included an increased number of state authorities having jurisdiction (AHJs), consistent with the increasing number of states utilizing all or portions of the Guidelines as state regulation by adoption. The work of the HGRC was greatly enhanced by the attendance and participation of these AHJs.

At the beginning of the 2001 revision cycle, an announcement requesting proposals for change to the document was made in health care industry publications. The HGRC received and gave serious consideration to 539 proposals to modify the document. After the HGRC met in Irvine, California, a document containing proposed changes was made available for public comment. The HGRC received and gave careful consideration to 1,030 comments on the proposed changes. For the first time, the Internet was used extensively to distribute the draft of the document and to receive proposals and comments.

The 2001 Guidelines were the result of many hours spent at three meetings, each attended by 82 to 86 members of the 97-member HGRC. Committee members spent countless hours in subcommittee and focused task groups reviewing the proposals for change and comments on them. The text for the 2001 edition of the Guidelines formally adopted at the final HGRC meeting in Denver was sent to the HGRC members for letter ballot. The result was an overwhelming endorsement of the document. The adopted Guidelines were approved by FGI and turned over to the AIA for publication and distribution. A major change in format was adopted for this edition, placing appendix material at the foot of the relevant pages in the main text. A glossary of terms and a form to request an interpretation were added to the book.

The 2006 edition of the Guidelines also received major funding from DHHS/Centers for Medicaid and Medicare Services, ASHE, and NIH, and the AIA again provided staff and technical support. This edition was also the result of many hours of formal and informal meetings on the part of more than 107 HGRC members.

There were never fewer than 85 members present at the three “all-hands” meetings in Washington, D.C.; Austin, Texas; and Irvine, California; and 67 individuals faithfully attended every session. Committee members spent untold hours at “all-hands” meetings and subcommittee and focused task group meetings, as well as time outside the meetings, writing proposals and reviewing proposed changes and comments. They reviewed 797 proposals for change and 1,156 comments on proposed changes. The HGRC reached a consensus at its final meeting and unanimously endorsed the revised guidelines to be sent out for letter ballot. The result of the letter ballot was unanimous approval of the 2006 document.

The 2006 HGRC took on the challenge of two goals stated in the preface of the 2001 edition: to prepare more committee-generated changes to reflect the collective knowledge and experience of the members and to improve the format, readability, and indexing or searchability of the document to make it a more useful, user-friendly tool. The HGRC developed a number of work groups and added time to the revision cycle to draft proposals for new language. The committee also approved a complete reorganization to make the Guidelines more accessible to users. This time-intensive effort resulted in a book presented in four parts: one with information applicable to all health care facility types, one on hospitals, one on ambulatory care facilities, and one for other health care facilities.

The 2010 edition of the Guidelines also received funding from DHHS/Centers for Medicaid and Medicare Services, and ASHE provided staff and technical support. This edition was also the result of many hours of formal and informal meetings on the part of more than 116 HGRC members. There were never fewer than 91 members present at the three “all-hands” meetings in Baltimore, Maryland; San Diego, California; and St. Louis, Missouri. The voting process for 2010 was restructured to permit more time to debate the technical issues. More than 25 focus groups were formed in Baltimore to review specific sections of the 2006 document or to work on developing new sections for the 2010 edition. Two specialty subcommittees were formed to take on major projects on acoustic design and patient handling and movement. Expertise on these specialty subcommittees was bolstered by the contributions of outside technical and subject experts. HGRC members met for three week-long “all-hands” meetings that included time for subcommittee and focus group meetings and also spent time outside the meetings

writing proposals and reviewing proposed changes and comments. They reviewed 1,142 proposals for change and 1,688 comments on proposed changes. Voting on proposals and comments was conducted in the four part groups and only minority reports or items not reaching consensus were brought forward for the full HGRC to debate and vote. The HGRC reached a consensus at its final meeting and unanimously endorsed the revised guidelines to be sent out for letter ballot. The result of the letter ballot was unanimous approval of the 2010 document.

The 2010 HGRC took on numerous challenges to modernize the document and meet the needs of the enforcing, design and owner communities. Major new sections on acoustics, patient handling and movement, bariatric accommodations, cancer treatment/infusion therapy services, freestanding cancer treatment facilities, and telecommunications areas in hospitals were added by the committee, along with new material on wayfinding, patient safety assessments, and outpatient rehabilitation facilities. To make the usability of the Guidelines more consistent with other national standards, a further reorganization of the document was undertaken for the 2010 edition. Details about this appear in the essay on Major Additions and Revisions that follows the Acknowledgments section. The time-intensive reorganization effort has resulted in a book presented in six parts, including a common elements chapter at the beginning of Part 2 (Hospitals), Part 3 (Ambulatory Care Facilities), and Part 4 (Residential Care Facilities).

One monumental change in the 2010 edition is the incorporation of the 2008 edition of ANSI/ASHRAE/ASHE Standard 170: *Ventilation of Health Care Facilities* in the Guidelines. During the 2010 revision cycle, the HGRC voted to abandon the Guidelines ventilation table and partner with the American Society of Heating, Refrigerating and Air-Conditioning Engineers by adopting ASHRAE 170 along with all subsequently issued addenda as a part of the Guidelines document.

In 1999 ASHRAE identified the need for an ANSI-approved standard on the ventilation of health care facilities. The rationale was twofold—first, to keep its newly introduced HVAC health care design manual from becoming the de facto ASHRAE standard, and second, to generate a broader public review of new research and findings in the ventilation of health care facilities. In an effort to avoid having two standards addressing identical design issues, with real potential for significant conflict, the FGI Board of Directors approached ASHRAE in

2007 with a proposal to include Standard 170 as part of the Guidelines. Both organizations saw this as a great opportunity and have worked closely to make it a reality. As a result, Standard 170 is presented in its entirety as a new Part 6 of the Guidelines, making it the primary document on health care ventilation systems.

With any merger, the gain does not come without some interim adjustments. The 2010 Guidelines has retained all sections and paragraphs not covered by Standard 170, which may give some sections of the document an unfinished look. Further, Standard 170 has what ASHRAE terms “continuous maintenance” project status. A newly formed maintenance committee, comprising a mixture of HGRC and ASHRAE members to give it a broad expertise in health care environments, will take on the task of keeping 170 current with practice in the field. By having the standard under continuous maintenance, the committee can meet and develop proposed changes at any time rather than waiting for the end of the three-year revision cycle to issue a new document. The official addenda prepared by the committee will be published free of charge on the ASHRAE, ASHE, and FGI Web sites. It is the hope of the Standard 170 committee that state agencies will adopt these addenda as they are issued, as they represent the state-of-the-art thinking of the industry.

When possible, the Guidelines standards are performance oriented for desired results. Prescriptive measurements, when given, have been carefully considered relative to generally recognized standards. For example, experience has shown that it would be extremely difficult to design a patient bedroom smaller than the size suggested and still have space for the normally expected functions and procedures.

Authorities adopting the Guidelines should encourage design innovation and grant exceptions where the intent of the standard is met. These standards assume that appropriate architectural and engineering practice and compliance with applicable codes will be observed as part of normal professional service.

The Guidelines change to keep pace with evolving health care needs and in response to requests for up-to-date guidance from health care providers, designers, and regulators. It is recognized that many health care services may be provided in facilities not subject to licensure or regulation, and it is intended that these Guidelines be suitable for use by all health care providers. It is further intended that when used as regulation, some latitude be granted in complying with these Guidelines as long as

the health and safety of the facility’s occupants are not compromised.

The Guidelines and the methodology for revising them have been, and still are, evolving. When first published, the document comprised a set of regulations developed by a single department of the federal government as a condition for receiving a federal hospital construction grant under the Hill-Burton Act. Even in those early days, the document was highly respected and influential throughout the world. From the time it was first issued and enforced, U.S. hospitals have become the ideal and the goal to be achieved by those building hospitals in all nations.

Gradually, state hospital authorities and other federal agencies were added to the HGRC, then private, nongovernmental health care professional societies, practitioners, and designers. Educational programs and seminars were introduced in the 1980s to inform the public about the subjects addressed in the Guidelines and the reasons for inclusion of certain requirements. Very slowly, public input was requested by the committee in the form of comment on proposed changes. This has now exploded into the current avalanche of proposals and comments. In each succeeding cycle, the committee has been enlarged to increase the base of expertise and to allow more public representation. Further, the consensus procedure was adopted for all decision-making.

As the process became more complex, as the committee grew larger, as more and more public proactive and reactive input was requested and received, as the practice of health care delivery and the buildings that house it began to change at an ever faster rate, a more formal and expeditious process became mandatory. Adding to the complexity of the process is the expansion in the scope of the document from covering only acute care general hospitals to including nursing homes, rehabilitation facilities, ambulatory care facilities, psychiatric hospitals, mobile health care units, hospice care, assisted living, and so on.

It is the desire of the Health Guidelines Revision Committee to continue working with the Facility Guidelines Institute to make certain the Guidelines and the revision process continue. The HGRC does, however, wish to maintain its independence as an objective, multidisciplinary committee, operating without pressure from any organization and arriving at conclusions candidly, fairly, and knowledgeably through an open consensus process.

It is also the desire of the HGRC to see that the process continues to improve with each passing cycle. Some

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ongoing goals follow:

- Seek public input from a wider base, not only from professionals but from patients and other consumers.
- Encourage and sponsor research projects to support the evidence-based decision-making process.
- Work constantly to improve the process and the content of the Guidelines to keep it a dynamic document that truly reflects the state of the art.
- Have the courage and wisdom to adopt requirements that are forward looking and address the needs of the future, looking backward only to discover what not to do.
- Strive for a document that is credible, reasonable, and knowledge-based and that will maintain the tradition of the American health care physical environment as the role model for other countries.
- Work with state agencies to adopt the most recent edition of the Guidelines so that health facility

projects are regulated using current industry concepts.

This publication supersedes the *Guidelines for Design and Construction of Health Care Facilities*, 2006 edition.

Inquiries or questions about the content of the Guidelines may be addressed to the Facility Guidelines Institute, as follows:

interpretations@fgiguidelines.org (if the text of the Guidelines is unclear)

advisoryopinions@fgiguidelines.org (when more technical information is needed)

Questions about the Guidelines revision process, use of the document, or sale of the document may be addressed to info@fgiguidelines.org.

To order copies of the Guidelines, visit the Facility Guidelines Institute Web site at www.fgiguidelines.org for options and instructions.