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Lighting for Hospitals and Healthcare Facilities



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**Lighting for Hospitals
and Healthcare Facilities**

Publication of this Standard
has been approved by IES.
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should be directed to IES.

Prepared by:
The IES Healthcare Facilities Committee

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1.0 INTRODUCTION

Fifty years ago, the Illuminating Engineering Society recognized that healthcare facilities have unique and specialized illumination needs, resulting in the publication of the first version of this recommended practice. In the fifty years that have passed since the inaugural RP-29 publication, and in the ten years that have elapsed since the previous version, the only constant in both the healthcare and lighting arenas has been change. Technological advances (both within the lighting industry and within the medical equipment industry), changing regulations and guidelines, clinical breakthroughs, and philosophical shifts in healthcare delivery models have created a theme of “Health for Life” for this rewriting of ANSI/IES RP-29-06.

The mission of healthcare facilities is to save lives, enhance lives, and facilitate life’s transitions. Whether as a patient, supportive visitor, caregiver or resident, an encounter with a care environment is almost inevitable in one’s lifetime, and experiences within these settings can be intimidating or joyous, despondent or hopeful. Operationally, there are also considerations of the life and longevity of the physical infrastructure, fiscally responsible practices for owning long-term real estate, and sustainable practices. Designers working on healthcare projects have a unique opportunity to positively influence the lives of thousands of people who are in need of help, comfort, and care. The distinctly important nature of designing healthcare facilities places a tremendous responsibility on the practitioner, but it also presents an invaluable chance to make a profound contribution through informed facility design. The authors of this document, therefore, emphatically encourage healthcare designers to unleash their creativity, immerse themselves in relevant subject matter, adopt innovative, evidence-based design approaches and, above all, embrace the opportunities to make a difference, because their work truly matters.

Healthcare facilities are, arguably, the most complex of architectural facility types (see **Figure 1**). They

house the entire human drama, from birth to death. People are at their best, their worst, and certainly their most vulnerable within these buildings. There are a variety of occupancy types, such as public spaces, areas that are restricted to staff only, and patient care areas. Numerous people form the caregiving team that supports each patient both directly and indirectly. Examples of direct caregivers include physicians, nurses, residents and therapists, as well as friends and family. Examples of indirect caregivers include maintenance, pharmacy, food service, laundry and administrative personnel.

The objective of this document is to provide context, define challenges, and identify recommended lighting design practices for healthcare-specific environments. This document is not prescriptive but is intended to provide guidance and to inspire by identifying possibilities that enable designers to develop the appropriate solutions for complex situations and spaces.

This document is organized to complement other authoritative references, such as the *Guidelines for Design and Construction of Health Care Facilities* by the Facility Guidelines Institute (FGI).¹ Part I of this document addresses the many design considerations important for healthcare facilities, while Part II identifies specific room types that have unique lighting needs. These room names and the chapter organization follow the format found in the FGI *Guidelines*. Utilizing a common language and approach helps foster integrated, collaborative project teams that include architects, medical planners, interior designers, engineers and lighting designers.

1.1 Types of Facilities

The FGI categorizes healthcare facilities as acute care, ambulatory care, or long-term care. The Center for Health Design has published a working paper on consumer perceptions of the healthcare environment.² This report identifies how important factors vary by facility type, some of which are excerpted and summarized in **Table 1**. While the needs of the facility often vary by category, seven



Figure 1. Hospitals face multiple complexities and challenges. (©iStockphoto)

Table 1. Primary Consumer Concerns in Healthcare Facilities

| | Acute Care | Ambulatory Care | Long-Term Care |
|------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Connection to Staff | Patient rooms: staff can see or get to them in an emergency | Waiting rooms: able to see or hear staff when called | Staff can connect and respond to cognitively impaired residents; emergency call systems |
| Sense of Well-Being | Facilitates healing, areas of respite, and positive distraction | Facilitates relaxation while fostering a sense of quality | Sense of home and independence |
| Convenient, Accessible | Parking, drop-off areas, wayfinding | Anything that gets the patient in and out quickly | Emergency egress; bathroom access |
| Confidentiality, Privacy | Private patient rooms and bathrooms; quiet places for families to "get away" | Intake interview not audible in the waiting room; i.e., occupants not able to hear through exam room walls | Single-occupancy rooms when possible; partitions that enable visual and acoustic privacy for semi-private rooms |
| Family Support | Space utilization that accommodates periodic and overnight visitors | Sufficient seating in waiting areas; accommodations for children | Encourages daily interactions between family members and residents |
| Accommodates Physical Impairments | Ambulation with equipment or cognitive impairment; traversing distances | Diversity of furnishings in waiting area; signage | Designed not just for ADA compliance, but for staff assistance with hygiene facilities; maximize mobility |
| Connection to Nature | Access to outdoor areas; indoor nature; windows in patient rooms with outside views | Waiting rooms: windows to outside; indoor nature; fresh air | Outdoor activities; outside views from patient rooms; indoor gardens |

consistent themes surfaced as characteristics that were desired in the healthcare environment:

- The facility bolsters connections to staff and caregivers.
- The facility fosters a sense of well-being.
- The facility is convenient and accessible.
- The facility supports confidentiality and privacy.
- The facility personnel care for family needs.
- The facility design is considerate of physical impairments.
- The facility has a connection to nature and the outside world.

It is beneficial for designers to understand what is important to the people who will be using the facility that they are designing. A basic understanding of what healthcare consumers value allows designers to begin discussions by addressing how lighting can support these common needs and concerns, and delve into how these design concepts may be tailored to the specific facility.

1.2 Trends in Healthcare Design

There are many trends in healthcare design and operations; those that affect lighting design are