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STEPS TO SUCCESS

9 considerations when selecting floor materials for longevity & useability

Flooring is ubiquitous throughout any building, but not all flooring is created equal. When designing or replacing floor in a healthcare setting, material and aesthetic considerations are only half of the equation.

The wide range of flooring materials available, installation options from tiles, planks or sheets to fluid-applied seamless flooring, plus the maintenance and lifecycle costs must all be weighed to make an informed decision. For best practice, a nine-step decision making process will help project stakeholders arrive at the right floor for every space within a facility based on use and function.

1 SAFETY
First and foremost, design details must prevent patient, visitor and staff trips or falls, which most often happen in transition areas. These areas are typically between major public spaces, such as a lobby, and more restricted destinations, such as a patient care unit. Trips and falls can be avoided by clearly signaling transitions between spaces with colors. Barriers such as doorways or counters, furniture placement, color and texture in the floor signal a change for users with low visual acuity. First and foremost, design details must prevent patient, visitor and staff trips or falls, which most often happen in transition areas. These areas are typically between major public spaces, such as a lobby, and more restricted destinations, such as a patient care unit. Trips and falls can be avoided by clearly signaling transitions between spaces with colors. Barriers such as doorways or counters, furniture placement, color and texture in the floor signal a change for users with low visual acuity.



Use of flooring with texture can help patients and visitors with diminished eyesight or with sensory sensitivities. Pro tip: when considering flooring texture for projects, analyze patient demographics and the use of the space. (left)

Use of colored paths or various textures in flooring can aid in wayfinding for patients and visitors. (right)

2 ERGONOMICS
Material selection can generate fatigue in areas where individuals stand for longer than three hours, which is common in pharmacies and labs, but staff injuries related to repetitive cleaning activities also impact musculoskeletal discomfort. Making intentional decisions about the functionality and efficiency of the flooring could improve staff performance over time. Work mats and rollout padding present cleanliness challenges, as does carpet or cork flooring, particularly in ORs, or other treatment-intensive areas where standing for long periods is required. But vinyl and linoleum with felt or cork underlayment is still an option that provides more long-term comfort, while balancing the need for an easily sanitized, nonporous surface.

3 DON'T TRY TO OUTSMART THE CODE.
Covid-19 has introduced the industry to new innovations, such as UV lights and probiotic-based disinfection products, but many healthcare facilities continue to rely on traditional chemical compounds. Choosing flooring that emphasizes cleanability can help to limit the spread of infectious diseases in both the patient care areas and public waiting spaces of healthcare facilities.

4 SUSTAINABLE DESIGN AND MATERIAL WELLNESS
Product origin considers renewable materials, but with construction and renovation schedules increasingly fast-tracked, local stock from regional manufacturers should be strongly considered. Not only should materials aim for renewable options, but indoor air quality related to either off-gassing or how materials respond to cleaning chemicals or infectious agents are equally important considerations.

5 SOUND
Noise from footfalls, as well as equipment movement, impact the quality of experience for patients and staff, alike. When selecting flooring in areas adjacent to patient rooms, consider the material's sound reduction rating. Areas adjacent to neonatology will need the highest level of dampening, and footfall is of considerable concern for ophthalmic surgical suites.

6 SIGHT
Far beyond simple aesthetics, flooring can produce or eliminate glare to brighten or dim a space, as well as detract or contribute to wayfinding. Solar modeling will identify if a flooring choice is going to cause discomfort for users when the sun is at its highest or dilute the natural light that is available. Wayfinding and designating spaces for particular use in flooring can be as simple as colored paths but can also be influenced by textures.

7 TEXTURAL
Individuals with diminished eyesight rely on changes in texture felt through feet, canes, walkers or wheelchairs and texture also impacts equipment roller mobility. Individuals with sensory issues or sensory sensitivities such as patients on the autism spectrum may need low or soft sensory engagement. Analyze patient demographics and the use of the suite and space when considering texture.



8 THERMAL

From color to texture, the selection of flooring material can modify how temperature is perceived in a space, which can soothe or energize occupants. Consider the entire patient journey from the waiting room to the patient care areas and how thermal aspects of healthcare flooring can calm nerves and improve the patient experience.

9 MAINTENANCE

Initial installation plus the long-term maintenance costs must be considered for a full understanding of floorings' return on investment. Research1 conducted in 2015 showed that maintenance costs of hard and resilient flooring after one year of installation were 200% and 300% of the initial costs, respectively. While hard flooring may be most suitable for some areas, making the correct initial choice is essential for long-term savings.

Despite infection control challenges, soft flooring is a cost-effective and desirable material in administrative or light-duty areas. Recent research specific to three "soft" materials (terrazzo, rubber and carpet tile) studying sound absorption, comfort, light reflectance, employee perceptions and preferences, and patient satisfaction found that carpet tile performed better for sound attenuation by absorption. Patients perceived the noise levels to be lower with carpet tiles, improving patient satisfaction ratings. Overall, modular carpet tile flooring showed a longer service lifespan and easier replaceability in addition to superior sound dampening when compared to other forms of soft flooring. With recent advances in UV lights and probiotic based disinfection products, we may see more use of modular carpet tiling in a wider variety of low- to mid-intensity administrative and public areas.



HED

By Sharon Woodworth FAIA, ACHA | Associate and
Healthcare Market Sector Leader
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