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Al Near September 28, 2011

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Though important, aesthetics can no longer be the driving force behind finishing products specified for the long-term care environment. With the evolution of evidence-based design theories, product specification goes beyond simply picking a chair, table or surface because it fits within a facility's feng shui. There are an increasing number of architects, designers and facility managers that utilize research-driven design, recognizing that the physical environment of a space can have a measurable influence on the well-being of its occupants, especially in a long-term care setting.

As evidence-based solutions are specified from the floor to the ceiling of a long-term care facility, one design element that has become increasingly more important to the equation of a healing environment and its inhabitants is lighting. Lighting is a significant factor in creating an efficient, safe and comforting space. Through evidence-based design, lighting specifiers are able to make design interpretations based on reliable research that not only contribute to the building's décor, but also to its bottom line, as well as the health and safety of inhabitants, all without sacrificing the quality of light. With the advances of LED (light-emitting diodes) lighting and the numerous benefits it provides over traditional CFLs (compact fluorescents) – a current lighting standard in most long-term care facilities – more buildings are now turning to this advanced illumination solution to not only expand their energy savings, but also to provide for the safety and comfort of their residents.

Why LEDs are a Bright Idea for Long-Term Care Facilities

With the ability to increase the efficiency and enhance the color quality of a space, LED light sources help meet both the energy requirements of a facility and the needs of those who work, live and visit there. LED lighting assists in transforming the environment to maximize staff productivity and suit the needs of its everyday inhabitants by offering bright, functional light and providing a warm, pleasant, home-like atmosphere.

However, high-performance LED light sources are not the sole requirement to creating a long-term care environment that is lit to instill a sense of comfort and safety. Just as essential as the light sources are the controls that manage the illumination. Applying daylight harvesting systems in these facilities, for example, optimize the use of natural daylight, which is proven to positively impact inhabitants. The benefits afforded by the use of LED lighting control systems in residents' rooms, include:

- Providing more control, allowing the creation of a more personalized space
- Offering safety with the absence of mercury content as well as the ability to maintain proper levels of illumination while reducing energy consumption with relatively maintenance-free fixtures, allowing the lit space to remain free of contaminants, such as dust and germs that can invade a space during lamp change-outs
- Improving mood through utilization of natural daylight in combination with daylight harvesting sensors, which dim light levels when natural light is sufficient in the space and brighten light levels when it is cloudy or dark outside

Just like residents, staffs of long-term care facilities also experience benefits from a well lit space, including:

- Increased exposure to sunlight during their shift leads to higher job satisfaction, which in turn leads to increased motivation and satisfaction, ultimately enhancing job performance
- Better lighting and overall vision comfort throughout a facility can lead to increased alertness and potentially reduce the risk of errors
- Through the specification of LEDs, which radiate much less heat than incandescent bulbs, an optimum working environment can be created for the whole staff and even provide the opportunity to set HVAC systems a few degrees warmer, which further reduces energy spend
- Promoting safety, LEDs are ideal for use in wet location fixtures and are also mercury free compared to CFL counterparts, posing less of a hazard to staff

Lighting for Long-Term Cost Savings

LED lighting not only affords benefits to residents and staff, but also to the facility's bottom line. Facility managers are challenged with the ongoing issue of trying to reduce energy spend without sacrificing the quality of light. LED lighting solutions offer facilities the flexibility for creating more hospitable environments while maintaining low energy costs. Energy-efficient lighting controls facilities should consider include:

- Occupancy sensors – turn lights on in a vacant space when an individual enters; ideal for areas such as activity rooms
- Vacancy sensors – turn lights off when an individual leaves a space; great for use in public lavatories
- Daylight harvesting systems – ideal for use in resident rooms, lobbies, lounges and other common areas which consume high levels of natural light within a space

With the continuous evolution of the lighting industry, LED illumination solutions can provide buildings with up to 20% to 30% energy reduction compared to those solutions of the past. This reduction can be enhanced by adding sensors and lighting controls. Facility managers of today are looking for the energy-efficient solutions of tomorrow to help them reach their sustainability goals. Due to a long-lasting lifespan of as much as 20 years or more, dramatically reducing maintenance costs, LEDs can further enhance these initiatives. Not only do LEDs afford long-term care facilities with greater lighting efficiency, but they can also improve the buildings' impact on the environment as there are no lamp disposal issues to address.

As more facilities continue to use this evidence-based design to support their efforts in creating lighting solutions, the overall long-term care experience will be further enhanced for those working, living in and visiting these facilities. Considering the needs of residents, staff and administrators, healthcare facility managers can support their energy-efficient initiatives with lighting solutions that speak to creating a home away from home, while satisfying the needs of its various occupants.

Al Near is senior vice president of sales and marketing for [USAI Lighting](#), an industry leader shining an entirely new light on the way commercial and residential properties address point source lighting. To learn more, visit www.usalighting.com or call 845-565-8500.