

## Lighting Solutions for Your Medical Office

### Options that look great and won't break your budget

By Carrie Rossenfeld



Choices in lighting are more abundant than ever and can have a huge impact on your office's ambiance, your bottom line and the environment. With so many factors to consider, deciding which fixtures and bulbs work best for you can seem daunting, but it doesn't have to be. Use this primer to help you choose affordable lighting that functions well and sets the right tone for your office.

#### Lighting-choice challenges

While all offices need to be energy-conscious when making lighting decisions, medical offices are even more challenged because medical equipment can be a huge energy guzzler.

"Commercial spaces that do not include medical equipment use an average of 38 percent of total energy consumption to power lighting," says Al Near, senior vice president of sales and marketing for USA Illumination, a lighting manufacturer in New Windsor, N.Y. "In medical offices, an additional plug-load of medical equipment increases the energy consumption within the facility."

Lighting is considered one of the largest non-medical energy consumers in a medical facility, on par with HVAC systems, Near says. Trying to reduce expenditure on lighting energy without sacrificing quality of light is critical.

Another challenge is creating warm, inviting environments in a medical facility, and lighting is key in achieving this.

"The challenge is to create an environment which is functionally acceptable and creates an ambiance that is patient friendly, aesthetically pleasing, and meets budget and operating costs," sums up Wayne Lerman of W Lerman Architecture LLC in West Long Branch, N.J. "In my opinion, lighting is the most important factor in creating an environment which meets the demands of a successful medical office."

#### Trends in lighting

Typical medical office buildings tend to feature 2x4-ft. or 2x2-ft. parabolic fluorescent lighting, which is relatively low in energy consumption. But because of the advances in light-emitting diode (LED) lighting and compact fluorescent lamps (CFLs), a much wider variety of products is suitable for medical offices than ever before, says Near.

One of the biggest trends in medical-office lighting is using lighting to transform the space into a more comfortable, welcoming environment, allowing patients to feel at home, whether in the waiting room or in the exam room. LED lighting is one way to achieve this, and the technology has made great strides, providing the energy benefits of CFLs with the visual aesthetics and color rendition features of the incandescent lamps commonly seen in residential spaces.

Additionally, LED light sources are mercury free, so there's no environmental concern about lamp disposal as there is with CFLs. And LEDs have a lifespan of over 50,000 hours, decreasing maintenance and cost issues.

As these technologies continue to advance, buildings can achieve up to a 30 percent energy-usage reduction as compared to solutions of the past, while still achieving the ambiance medical practices desire.

Keep in mind that lighting needs in procedure or operating rooms, lab areas, and in some specialists' offices, may differ from lighting needs in other areas of your office, so what works in your reception area may not be right for your exam room.

#### Alternative options

While LED light solves many lighting problems, Lerman points out that it can be expensive and should be selected with your budget in mind. Instead of focusing on just one type of lighting, consider a variety of lighting types – including fluorescent, incandescent and metal halide – in different intensities in order to achieve the look you want that's within your budget.

"Combining different lighting types in combination with varying levels of illumination, in my opinion, creates an environment which is not monotonous, is more stimulating and less tiring on the eyes," he comments.

Also consider the use of directional lighting, such as recessed or track-mounted lights, to create ambiance. Indirect or ambient light, another trend, can be achieved through hidden cove fixtures, and fluorescent lighting offers many choices including standard prismatic lenses, parabolic lenses, and indirect fluorescent through a basket-type fixture.

#### The "green" light question

So which lighting choice is best for the environment? In addition to lasting longer than other forms, LED lighting minimizes heat gain, which optimizes a building's heating and cooling systems, says Lerman. However, lighting can also be designed whereby the heat gain is utilized to defray the heating costs of an office environment.

Natural light is the best "green" choice, and it's achieved through the use of windows, skylights and interior glass walls. Natural light is also best for helping workers remain more efficient on the job.

Timed motion detectors are becoming increasingly popular for saving energy and are another "green" choice. They work by shutting off lights in unoccupied rooms and turning on lights for a programmed amount of time when someone enters the room.

Zoning lights are also useful in controlling lighting usage. This system puts areas not frequently in use under a different operating system than areas that are used more.

While these options may not work for all of your office areas, they can be useful in areas that are only used intermittently, such as restrooms, some exam rooms and storage areas. They're also very compatible and flexible with LEDs and CFLs.