

Working the Bewitching Hours

What makes a workplace friendly or unfriendly when you're on the graveyard shift?

A little boy explores a magical, starlit bakery of oversized bowls and singing bakers in Maurice Sendak's beloved children's book, *In the Night Kitchen* (1970), and his antics cheer us.

A baker opens a Dunkin' Donuts shop in the dead of night ("Time to make the donuts"), and his punctuality is taken for granted by those who are awake and goes unnoticed by those who are asleep.

A call center operator processes a customer's catalog order at the stroke of midnight. A nurse updates a patient's family before going off-shift at dawn. A student pulls off an all-nighter to be ready for class the next day.

It's a big step from storytime to real time, but the U.S. Bureau of Labor Statistics (BLS) reports that over 15.5 million Americans are night shift workers, arriving when the 7:00 a.m.-6:00 p.m. crowd departs. According to the National Sleep Foundation (NSF), the total is growing 3 percent annually,



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by Roger Yee

MasterCard's facility in St. Louis

so it may be time to consider what makes a workplace friendly if you're on the graveyard shift at a 24/7 facility.

A 1997 BLS study showed that between 1991 and 1997, the number of white-collar workers working evening or night shifts increased by 11 percent, considerably faster than the 6 percent increase for blue-collar workers. Computer programmers, securities traders and call center operators are just some of the occupations now entering a sleepless global economy.

Of course, white-collar workers still represent a small portion of shift workers. The BLS reported that of over 27 million workers in managerial and professional positions, only 1.7 percent work the evening shift and 1.3 percent the night shift. By contrast, of over 11 million service workers, including those in public safety, cleaning and food preparation, 10.8 percent work the evening shift and 6.5 percent the night shift.

Paying for lost sleep

Why work nights? Some shift workers cite better pay, quieter working conditions with fewer supervisors, more daylight hours for child care or recreation, and more time to attend school.

Nevertheless, most say shift work was required or no other job was available. There are obvious social costs, such as less frequent contact with your children, your spouse and your family and friends, along with missed social events. Equally obvious are the physical costs. In a 1997 report entitled "Plain Language

About Shiftwork," the National Institute for Occupational Safety and Health (NIOSH) spelled out the body's response to shift work: "People who work in the late night or early morning hours often feel sleepy and fatigued during their shift. This happens because their body rhythm (also called a circadian rhythm) tells them to be asleep at those times. Night workers also must sleep during the day, when their circadian rhythm tells them to be awake."

If a night worker remains awake between midnight and 6:00 a.m., when the desire to sleep is strongest, and sleeps 1-1/2 to 4 hours less daily than day workers, he or she accumulates a "sleep debt." The debt must be repaid. Consequently, 10-20 percent of night workers admit they fall asleep on the job, particularly during the second half of their shift. They may also cover "debt" with accidents, low productivity and illness.

Can design make a difference?

No miracle cures for shift workers—not even such medications as modafinil for civilians and amphetamine for military pilots—surpass adequate sleep, good diet, sensible work schedule, and a reasonable balance between work and life, as NIOSH emphasizes. However, the design of the work environment can help.

Among the characteristics NIOSH and NSF identify are:

- bright lighting
- ample HVAC and lively acoustics
- rest and relaxation areas
- 24/7 access to foodservice.

Other studies, including the landmark Leap® Productivity and Health Impact Study that was coordinated by Health and Work Outcomes, an independent health research and consulting company, document that a good chair helps keep people awake, alert and on task.

What do successful 24/7 facilities offer?

Northwestern Memorial Hospital's new, 9,000-square foot Emergency Department Observation Unit in Chicago, designed by Loeb Schlossman & Hackl, strives for what Abigail L. Clary, AIA, CSI, associate principal for LSH, calls the "best patient experience." Clary notes, "The design gives patients comfort and privacy, streamlines work flow and maintains patient visibility."

Deb Livingston, RN, MS, Northwestern's director of emergency services, appreciates the facility's layout, convenient staff facilities, and soothing forms and colors, and she credits the adjustable lighting for late night effectiveness. "Keeping the central area bright is key," she says.

A different situation prevails at PeopleSoft's 999,702-square-foot Data Center in Pleasanton, California, designed by Gensler as executive architect and Hawley Peterson & Snyder as architect of record. Its interiors are color-coded, following Occupational Safety and Health Administration (OSHA) standards. They're connected by straightforward circulation paths and well illuminated, resembling a giant, three-dimensional, easy-to-read mechanical diagram.

Working the Bewitching Hours, continued

This intensive legibility pays off, as James Souza, a PeopleSoft facility manager, explains. "After 6:00 p.m., there are just five people here," he reports. "There's plenty to do, so boredom is not a problem. But the building is also interesting to look at, with its glass staircases and high-tech architecture."

While there may be no ideal 24/7 workplace, MasterCard's new, 520,000-square-foot Global Technology & Operations Headquarters in St. Louis, designed by Hellmuth, Obata & Kassabaum, shows how innovative design can ease our passage through the graveyard shift.



Inside the MasterCard's facility in St. Louis, zigzagged workstations and highly ergonomic Leap® chairs in bright-eyed colors offer stimulation on various levels for nighttime and daytime employees

"We designed MasterCard to stimulate people at many levels," observes Rick Focke, AIA, HOK's director of interior design.

Can workstations joined in a zig-zag configuration, an overhead "zip strip" delivering news, weather and stock quotes, two different 24-hour cafés at the main corridor's ends, and a lakeside landscape illuminated at night for strolling really keep us awake? Those who work at MasterCard are staying up to find out.

24/7/365

The Internet and ever-more-ubiquitous computing are making it possible for many people to extend their working hours into the late evening and early morning hours.

People working on laptops are now as common in coffee shops as sugar and cream.

And on many campuses, on-line classes now allow students to "attend" anytime they choose. According to Linda Seestedt-Stanford, assistant dean at the Herbert H. and Grace A. Dow College of Health Professions at Central Michigan University, most students enrolled in on-line classes access them sometime between midnight and dawn - not during the day when they used to be offered as large lecture classes where snoozing could easily overcome best intentions. At CMU, small group discussions complement the on-line sessions to make for learning that's active and personal.

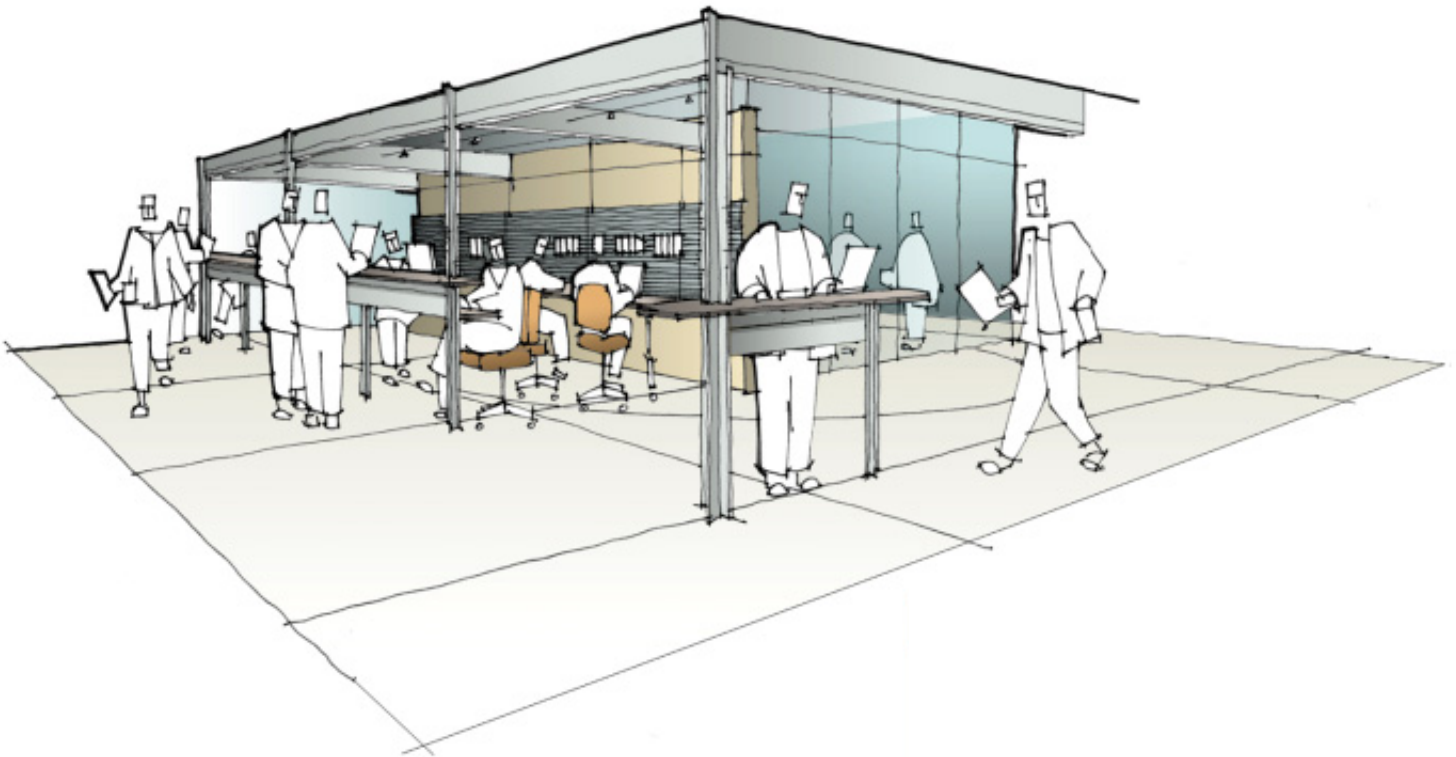


Affecting the Quality of Care

Nurses work long hours, whether they're on the night shift or days. They cover a lot of distance on the job and their activities often require strength.

The average nurse is mid-forties. Absenteeism is 8.5% nationally, complicating a severe nursing shortage. It's a challenging and hectic job, so hospitals have to work hard to retain their nursing staffs. Nurses appreciate anything that alleviates their exhaustion, aids with multi-tasking on the go, helps keep everyone organized and reduces medical error.

Nurses hubs that anticipate and accommodate varying waves of activity and enable people to freely circulate can support shift changes, computer work and collaboration, whether it's quick or prolonged.



This highly accessible nurses hub has been designed to accommodate quick touch-down work around the periphery, sit-down or "step in"