

Indigo-Clean™ Lights Continually Reduce Bacteria 88% at Maury Regional Medical Center

Unique LED Technology Provides a Safer, Cleaner Operating Room Environment by Continuously Reducing Harmful Bacteria



Project: Maury Regional Medical Center
Location: Columbia, Tennessee

“Although we knew the Indigo-Clean™ lights would give us substantial results given the thorough research and studies done on the lights at medical centers across the nation, we were thrilled when our results were even greater than we anticipated.”

- Lynnelle Murrell, Director of Infection Prevention,
Maury Regional



Indigo Disinfection Mode can be used when room is not in use

Project Summary

Challenge: The Infection Prevention team at Maury Regional Medical Center in Columbia, Tennessee, set a goal to completely eradicate healthcare-acquired infections (HAIs) from its facility.

Solution: Indigo-Clean™, a ceiling light fixture that employs a patented, continuous disinfection technology, utilizing 405nm LED light to safely and automatically kill bacteria on hard and soft surfaces.

Indigo-Clean Benefits

- Indigo-Clean is clinically proven to reduce harmful bacteria in the operating room, including MRSA and C. diff, 70% or more, beyond routine cleaning
- Unlike UV devices, Indigo-Clean is safe for patients and healthcare providers
- Indigo-Clean's automated operation minimizes human error and operating room downtime, while lowering operational costs
- Switchable between White Disinfection Mode and Indigo Disinfection Mode



Killing Harmful Bacteria, including MRSA and C. Diff with Indigo-Clean's Patented Continuous Environmental Disinfection Technology



Indigo-Clean M4SEDC

Maury Regional Medical Center in Columbia, Tennessee, is a long-established and highly-respected flagship medical facility that serves more than one quarter-million people in Southern Middle Tennessee. The hospital has earned numerous awards and citations, and in 2016 it was ranked first in the state for overall hospital and surgical care in the areas of both medical excellence and patient care safety by CareChex.

To further improve patient care, Maury Regional leadership now aspires to reduce the incidence of hospital-acquired infections (HAIs) to zero. To help achieve that goal, Maury Regional Medical Center participated in Indigo-Clean's Clinical Partnership Program and installed Indigo-Clean light fixtures in one of their operating rooms in October 2016.

After installation, the team measured the Indigo-Clean disinfecting lights' effect upon bacteria levels throughout the room 15 days before installation and 15 days after. Maury Regional Medical Center found an average bacterial reduction of 88% when comparing the pre- and post-installation period for the single room in which Indigo-Clean was used. This reduction is significant, given that the room had a 54% greater usage rate while Indigo-Clean was in use, as compared to the baseline period.

"Although we knew the Indigo-Clean lights would give us substantial results, given the thorough research and studies done on the lights at medical centers in other parts of the U.S., we were thrilled when our results were even better than we anticipated."

— Lynnelle Murrell, Director of Infection Prevention for Maury Regional Medical Center

"Our results suggest that Indigo-Clean can substantially reduce bacteria in the environment, providing a safer, cleaner patient environment, even in highly occupied operating rooms. Patient safety is our number one concern and Indigo-Clean is one more tool to help us with our mission of zero hospital acquired infections," she concluded.

Indigo-Clean fixtures use light-emitting diodes (LEDs) to generate visible white light that also contains a narrow spectrum of indigo-colored light. This 405 nanometer (nm) light automatically, safely and continuously disinfects the air, as well as hard and soft surfaces. The 405nm light is absorbed by molecules within the bacteria, producing a chemical reaction that kills the bacteria from the inside out, just as if common household bleach had been released within the bacterial cells. When the OR is not being used, the lights can be switched to an Indigo-only mode, providing a higher degree of disinfection that is still safe for occupants of the room.

"Other disinfecting technologies are currently available to hospitals and health systems, but most are used for episodic cleaning (methods resulting in a "clean room" for a short period of time). They also use harmful UV light, which requires long periods of room downtime, that can

be difficult in a busy hospital environment," said Cliff Yahnke, Ph.D., Kenall's Director of Clinical Affairs for Indigo-Clean. Dr. Yahnke continued, "Indigo-Clean uses visible light to continuously and safely disinfect and kill harmful bacteria 24/7, in the air and on hard and soft surfaces, requires no room downtime, and protects patients and staff whenever the lights are on."

The Medical Center is so confident of its results with Indigo-Clean that they are planning to install them in additional ORs in the coming months.

Indigo-Clean Features:

- Available sizes: 1'x4', 2'x2' and 2'x4'
- One-piece sealed housing; smooth exterior doorframe and lens for infection control, resulting in and simplified cleaning protocols
- Diffused high-efficiency lens for reduced glare
- Contributes to the ambient light levels in the room

Benefits for Maury Regional Medical Center:

- Bacteria was reduced by an average of 88%, when comparing the pre- and post-installation periods for the single room in which Indigo-Clean was used
- Continuous environmental disinfection kills bacteria missed during routine cleaning
- Unlike UV devices, Indigo-Clean does not require a technician or long periods of downtime to operate
- Requires no special staff training to use
- Does not use consumables
- Designed to last 10 years without maintenance