APPLICATION CASE STUDY



Valley Health System in Nevada adds Indigo-Clean Fixtures to Second Hospital's Hybrid Surgical Suite



"Providing high-quality patient care, while maintaining a safe, clean environment for our patients is our number one priority. Knowing Indigo-Clean is a proven disinfectant technology, we felt it was important to partner Indigo-Clean with our current cleaning protocols within our new hybrid cardiac suite."

- Leonard Freehof, CEO/Managing Director, Spring Valley Hospital

Project Summary

Spring Valley Hospital completed a new, \$1.8 million-dollar hybrid cardiac operating suite this spring. The 930-square-foot suite is used for advanced procedures, such as thoracic aneurysm repair, minimally-invasive heart surgeries and cardiac catheterizations.

Challenge: Maintaining a safe and clean environment for hospital patients while minimizing operating room downtime.

Solution: Indigo-Clean Continuous Environmental Disinfecting lights: this is Valley Health System's second installation. New sister facility Henderson Hospital integrated Indigo-Clean fixtures in their ORs, Triage and C-Section Rooms in 2016.

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
- Switchable between White Disinfection Mode and Indigo Disinfection Mode



Indigo-Clean™ light fixtures installed to help keep patients safe in new hybrid cardiac surgical suite



The Valley Health System is a six-hospital health care system in Las Vegas and Southern Nevada that serves more than two million people. In the fall of 2016, its newest facility, Henderson Hospital, installed Indigo-Clean Continuous Disinfection Technology fixtures in its OR and recovery spaces to proactively kill harmful bacteria that could cause surgical site infections. Other Valley Health System hospitals have been eager to follow suit, and recently Spring Valley Hospital became the second to add Indigo-Clean to its OR.

Spring Valley Hospital CEO/Managing
Director Leonard Freehof said, "We designed
our new hybrid cardiac operating suite
with our patients and community in mind.
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maintaining a safe, clean environment for our
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cardiac suite."

The \$1.8 million hybrid cardiac operating suite is 930 square feet and is used for advanced procedures like thoracic aneurysm repairs, minimally invasive heart surgeries and cardiac catheterizations. According to hospital literature, "Hybrid ORs make it possible to conduct catheter-based and open procedures on a patient at the same time... surgeons using the hybrid OR can perform high-risk, minimally invasive procedures and to switch to open surgery in the same room if

necessary." 1 The Valley Health System seeks the best high-tech solutions for achieving positive patient outcomes and considers Indigo-Clean to be one of these. "We appreciate the ease of use of Indigo-Clean. Because the system is automated, safe and continuous, it doesn't require a person to operate it, which reduces risk of human error, and there is no room downtime, which is important in a busy operating room," Freehof 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 indigo color uses a wavelength of 405 nanometers (nm) to automatically, safely and continuously disinfect the air, and hard and soft surfaces. The 405nm light is absorbed by molecules within bacteria, producing a chemical reaction that kills the bacteria from the inside, as if common household bleach has been used. When the OR is not in use, the lights can be switched to an Indigo-only mode, providing a higher degree of safe disinfection.

Indigo-Clean bolsters current cleaning protocols to reduce the harmful bacteria that causes hospital-acquired infections (HAIs), but unlike UV light, it is safe for room occupants. Recent hospital research studies have proven significant antimicrobial kill rates of more than 70 percent using Indigo-Clean, including proven efficacy in killing MRSA* and C-diff**.

According to the CDC, surgical site infections are the most common and costly of all hospital-acquired infections, accounting for 31 percent of all HAIs. Healthcare facilities around the United States are now employing Indigo-Clean Continuous Environmental Disinfection Technology as part of a comprehensive HAI reduction program. For other Indigo-Clean success stories, visit indigo-clean.com.



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- ¹ https://www.springvalleyhospital.com/services/cardiology/open-heart-surgery
- *Maclean M., S.J. MacGregor, J.G. Anderson, G.A. Woolsey, J.E. Coia, K. Hamilton, I. Taggart, S.B. Watson, B. Thakker & G. Gettinby (2010). Environmental Decontamination of a Hospital Isolation Room using High-Intensity Narrow-Spectrum Light. Journal of Hospital Infection, 76(3); 247-251. DOI: 10.1016/j.jhin.2010.07.010
- **Antimicrobial Activity of a Continuous Visible Light Disinfection System by Rutala, et. al, ID Week 2016.

Indigo-Clean Features:

- Available in $1' \times 4'$, $2' \times 2'$ and $2' \times 4'$
- One-piece, sealed housing; smooth exterior doorframe and lens for infection control and simplified cleaning protocols
- Diffused high-efficiency lens for reduced glare
- The Indigo-Clean fixture contributes to the ambient light levels in the room

Benefits for Spring Valley Hospital:

- Continuous environmental disinfection kills bacteria missed during routine cleaning
- Unlike UV devices, Indigo-Clean does not require a technician or long periods of downtime
- Requires no special staff training to use
- Does not require consumables

For more information, please visit us on the web at www.kenall.com

