SYNOPSIS

KEY POINT SUMMARY

OBJECTIVES

The objective of this study was to assess if the PX-UV light device used to clean and disinfect patient rooms had a positive impact on patient satisfaction.

DESIGN IMPLICATIONS

The introduction of a PX-UV light device for cleaning is not a design decision per se. However, if these are to be installed, charging and storage areas may be incorporated into the unit design.

Implementation of innovative pulsed xenon ultraviolet (PX-UV) environmental cleaning in an acute care hospital

Fornwalt, J. & Riddell, B. 2014 | *Risk Management and Healthcare Policy*. Volume 7, Pages 25-28

Key Concepts/Context

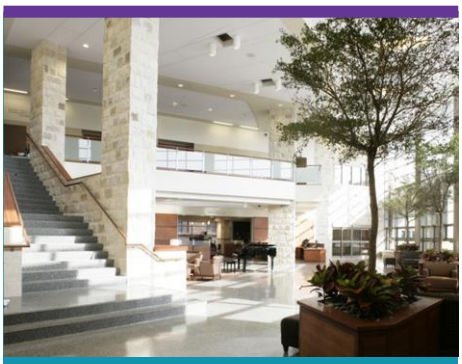
Cleaning of the hospital environment is considered crucial to the prevention of hospital-acquired infections (HAIs) and overall patient safety. The authors note that many European and American hospitals use new technologies like ultraviolet (UV) light and hydrogen peroxide vapor to clean their facilities, and that these have been effective in reducing the HAI rates. A pulsed-xenon (PX-UV) light system was introduced in an acute general medical and surgical hospital in Birmingham, Ala., to complement the existing cleaning procedure. In this study, patient satisfaction scores from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey were analyzed to evaluate patient response to hospital cleanliness. The study found that HCAHPS scores on hospital cleanliness increased in the period following the introduction of the device.

Methods

This research was a pre- and post-intervention study. Quarterly patient satisfaction scores, pertaining to hospital cleanliness, from the HCAHPS survey were compared before and after the introduction of the PX-UV device for cleaning and disinfecting of patient rooms. Prior to the first use of the device both staff and patients were familiarized with the device via an awareness campaign. HCAHPS scores for hospital cleanliness in 10 quarters preceding and in three quarters following the introduction of the PX-UV device were analyzed statistically.

Findings

The study yielded the following findings:



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- Prior to the introduction of the PX-UV system, hospital cleanliness scores were 48% and 65% (2010), 75.75% (2011), and 77.5% (first half of 2012).
- After PX-UV cleaning the first quarter saw the scores increase to 83% (last quarter, 2012). The difference in scores was significant (P=0.0221).
- Scores pertaining to communication and staff responsiveness also improved following use of the PX-UV device. Overall hospital scores also increased.

Limitations

The authors identified the following limitation to their study:

- The pre- and post-intervention design of the study did not allow for controlling other factors or changes (in the study period) that may or may not have impacted the study.

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AIA Academy of Architecture for Health of the American Institute of Architects

ASHE American Society for Healthcare Engineering, A personal membership group of the American Hospital Association

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