



Treating Your Building as a Patient: Improving Environmental Hygiene Using Continuous Environmental Disinfection

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Healthcare Acquired Infections (HAIs) are a problem facing all healthcare providers and patients causing approximately \$1.7M infections with an excess cost of approximately \$35-50B annually. Within a hospital, the operating room (OR) is often thought of as, "the cleanest room in the hospital". While this title may be debated, the importance of environmental hygiene in the OR has been clearly identified by multiple authors. Today, healthcare providers are considering a variety of ways to improve environmental hygiene throughout their facility including the use of new disinfection technologies. These technologies are commonly referred to as, "no-touch", "whole room", and/or "automatic" which emphasizes the fact that they cover a large area with (nominally) less human intervention.

In general, these technologies fall into one of two categories: those which operate continuously, and those which operate episodically. Additionally, these technologies can be integrated into the facility or made to be mobile. Together, these considerations require facility managers, engineering, and operations to carefully understand how each technology will be integrated into the built environment potentially during the construction process.

This presentation will introduce the audience to the subject of HAI and explain how infections can be acquired through the environment. It will then outline the range of solutions that healthcare providers are implementing to address this issue while examining the benefits and disadvantages of each category. Finally, it will examine a new type of continuous environmental disinfection technology using visible light with laboratory and clinical data to support its efficacy claims.

Learning Objectives:

- Identify the types of Healthcare Acquired Infections (HAIs) and their collective impact upon the US healthcare system
- Explain how infections can be acquired through the built environment
- Describe the range of solutions to improve environmental hygiene which are available to healthcare

providers

- List the characteristics of specification-grade light fixtures that can reduce the spread of pathogens within the environment
- Recognize the benefits of continuous environmental disinfection and the areas within a healthcare setting where it is best used