



## **Why UVC Technology is Useful: The Prevalence of HCAI's**

Each year, hundreds of thousands of individuals in the United States are infected with Healthcare Associated Infections (HCAIs). In 2011 alone, there was an estimated 722,000 of HCAIs in acute care hospitals in the US, 75,000 of which died during their hospitalization (Centers for Disease Control and Prevention).

Globally, of every 100 hospitalized patients at a given time, 7 in developed countries and 10 in developing countries will acquire at least one HCAI (World Health Organization). With updated infection technology, including UVC disinfecting, these numbers can be greatly reduced and in turn reduce the number of patient and healthcare worker infections.

Healthcare associated infections are a range of infections acquired as a result of receiving medical treatment in a health care facility, including hospitals, acute care hospitals, and nursing homes (Centers for Disease Control and Prevention). Examples of these infections include MRSA (Methicillin resistant Staphylococcus aureus), a common bacteria carried by one out of three healthy individuals, and Clostridium difficile, a bacteria that can survive and multiply without oxygen and live for extended periods of time in the environment. Although both may be found in healthy individuals, sick hospital patients are highly liable to infection and HCAIs can be easily transmitted to these susceptible individuals (Doncaster and Bassetlaw Hospitals) . However, even though these HCAIs are a major threat to patient safety, they are also often preventable.



Although there are required steps in the prevention of infections, these traditional methods for hospital disinfection surveillance typically result in undercounting. According to Colin Furness, PhD, low sensitivity (false negative outcomes) and low specificity (false positive outcomes), “prevents the true burdens of HCAs from being understood and it hampers the measurement of interventions to reduce infections” (Furness).

Recognizing the prevalence of potential HCAs in healthcare facilities is extremely important to the safety of individuals expecting thorough health care treatment.

Each year financial losses are significant because of healthcare associated infections. It is estimated that approximately €7 billion in Europe and \$6.5 billion in the US go towards direct costs due to HCAs (World Health Organization).

Chemical disinfectants are not enough to battle bacteria and viruses caused by HCAs. In addition, there are many high touch surfaces that make disinfection via chemicals more difficult. UVC Cleaning Systems technology not only has the ability to disinfect hard to reach areas, but it has also been proven to be effective at killing HCAs by a 99.9% reduction rate. For example, *S. aureus* at a 99.99% reduction and *C. difficile* at 99% reductions. With the prevalence of HCAs throughout health care facilities, UVC surface and air treatments can be used as a second measure to combat these dangerous pathogens.



## References

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