COMING TO THE LIGHT
Impact of Ultraviolet Technology on Incidence of Pseudomonas in a Neonatal Intensive Care Unit
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BACKGROUND
There have been numerous publications and presentations on the effectiveness of ultraviolet light disinfection (UVD). Most of them focus on the impact of multidrug resistant organisms and Clostridium difficile spores in the environment. Pseudomonas aeruginosa, a ubiquitous organism, can be found on a multitude of surfaces in the healthcare environment, including respiratory equipment in critical care units. With such a pervasive organism, the exposure risk and potential transmission to vulnerable patients makes it a leading cause of healthcare acquired respiratory tract infections. The purpose of this abstract is to describe the effects of UVD on the incidence of Pseudomonas in a Neonatal Intensive Care Unit (NICU).

RESULTS
From January 2012 through June 2013, there were 32 total positive Pseudomonas cultures (3.17 per 1,000 patient days) which involved 13 infants (2.34% of total admissions). From July 2013, when UVD was implemented, through September 2014, there was only one positive Pseudomonas culture (0.10 per 1,000 patient days) involving one infant (0.17% of total admissions). Further review also revealed UVD was not used during the 3rd quarter 2014, due to high census.

CONCLUSIONS
After implementation of UVD, a dramatic decrease in the incidence of Pseudomonas was noted, potentially avoiding numerous infants from becoming colonized or infected. Despite not always being used routinely, the use of UVD is a worthwhile adjunct to terminal cleaning in the NICU.

METHOD
A retrospective review of the incidence of positive Pseudomonas lab cultures was done beginning in 2012, the year prior to implementing UVD. The aim was to use UVD as an adjunct to periodic terminal cleaning on a quarterly and as-needed basis. Incidence rates were calculated based on the number of positive lab results as well as on the number of impacted patients.

REFERENCE

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