

Novaerus Study Summary Report

Overview

Children's Comprehensive Care Center (CCCC) implemented Novaerus technology in November 2013. This technology controls airborne infections by eradicating viruses, bacteria, mold, and allergens as well as harmful contaminants such as MRSA, C-Diff, Norovirus and influenza. Additionally, CCCC's population consists of highly debilitated and compromised patients, such those that have tracheostomies and require ventilators for respiratory support. CCCC implemented the Novaerus technology in selected rooms and areas, as indicated on the attached facility map. This study (which is not a clinical study) compares the nosocomial (facility acquired) infection rates related to respiratory etiologies before and after the implementation of Novaerus technology.

Methodology

A 20-month review was performed on CCCC to evaluate the results that the CEO stated that his facility had benefitted from. A Nurse Risk Manager Consultant visited the facility for two days to pull the facility information and to review the following data:

- Admission, transfer, and discharge data for all residents,
- Monthly infection control records, reports, and surveillance,
- Individual resident infection control examination results (x-rays, cultures, etc.), and
- A map of the facility, which displays selected areas where the Novaerus system implemented.

The period selected for this study compares the January thru August timeframes of 2013 (prior to Novaerus implementation) and 2014 after implementation. Comparison of like periods in both years reduces the risk of skewed data related to seasonal variances that might occur with infection rates. This study tallies and compares the nosocomial infection occurrences related to respiratory etiologies in 2013 to the nosocomial infection occurrences related to respiratory etiologies in select rooms installed with the Novaerus units in 2014. Moreover, this study credits an occurrence of nosocomial infection if the patient was treated for symptoms of infection, where there is no diagnostic evidence of infection (i.e. labs, cultures, x-rays, etc.).

Conclusion

Prior to implementation of Novaerus technology in selected rooms and areas, the facility sum total of nosocomial infections related to respiratory etiologies tallied 29. In the period after Novaerus implementation the facility sum total of nosocomial infections related to respiratory etiologies in Novaerus installed rooms tallied 14, **which is a decline of 51.72%**. (Please see the attached graph). Clearly, implementation of the Novaerus technology has contributed significantly to the infection control as well as quality improvement efforts at CCCC. The attached graph illustrates this comparison.

