UV Disinfection Best Practices

SUZANNE CISTULLI RN, BSN, CIC

APIC SAN FRANCISCO BAY AREA CHAPTER - MAY 2015

Disclaimer:

None ☺

Learning Objectives

- **The participant will be able to describe the basic difference between Continuous UV (UV-C) Disinfection and Pulsed Xenon UV Disinfection**
- **The participant will be able to list at least 3 advantages to UV-C disinfection**
- **The participant will be able to identify 3 implementation and workflow challenges**

UV Disinfection Market Analysis

- Germicidal UVC Energy
- Researching Efficacy of UV Disinfection Systems

Building the Business Case

- Trials
- Culture Testing
- Capital Request Process
- Top-Down Approach
- Return-On-Investment

Implementation and Workflow Challenges

- Working with EVS Leadership
- Working with Department Managers
- Hospital-Wide & Community Education
- Use Cases

Satisfying JCAHO Documentation

- Standard Operating Procedures
- Safety Documentation

Results Monitoring

- Usage Tracking
- Results Monitoring & HAI Rate Correlations
- Results at O'Connor Hospital

Also our rates are this.

	QE 9/13	QE 12/13	QE 3/14	QE 6/14	QE 9/14	QE 12/14	QE 3/15	FY2013 LHM Target
Definition - C. difficile Infection rate = Number of hospital onset CDI cases / Number of patient days X 100,000 (excluding NICU and well baby patient days)								
CDI Numerator (# of HAI/hospital onset lab identified CDI)	**11**	**8**	**5**	**2**	**10**	**10**		
CDI Denominator (# of patient days, exclude NICU, Nursery)	**9884**	**11001**	**10306**	**9191**	**10041**	**9486**		
HAI Clostridium difficile Infection Rate	**11.13**	**7.27**	**4.85**	**2.18**	**9.96**	**10.54**		
		TRU-D Trial 10/13	**TRU-D Launch 03/14**		**EVS Mgmt Turnover 07/14**		**Review of Usage Optimization**	

Other ‘Best Practice’ Tips

- True ‘Cost’ of UV Disinfection Systems
- Culture Testing vs. ATP Testing
- UV Disinfection vs. Other Advanced Terminal Disinfection Technologies

Q&A Session

- How can I help provide further guidance?

References

1. *Decontamination of Targeted Pathogens from Patient Rooms Using and Automated Ultraviolet C-Emitting Device*, Deverick J. Anderson, MD, MPH; Maria F. Gergen, MT (ASCP); Emily Smathers, MPH; Daniel J. Sexton, MD; Luke F. Chen, MBBS, MPH; David J. Weber, MD, MPH; William A. Rutala, PhD, MPH; CDC Prevention Epicenters Program; Infect Control Hosp Epidemiol 2013, Vol 34(5) 466--471

2. *Evaluation of an automated ultraviolet radiation device for decontamination of Clostridium difficile and other healthcare--associated pathogens in hospital rooms*, Michelle M Nerandzic, Jennifer L Cadnum, Michael J Pultz and Curtis J Donskey MD.., BMC Infectious Diseases 2010, 10:197

3. *Evaluation of a Pulsed Xenon Ultraviolet Disinfection System for Reduction of Healthcare-Associated Pathogens in Hospital Rooms*, Michelle M. Nerandzic, Priyaleela Thota, Thriveen Sankar C., Annette Jencson, Jennifer L. Cadnum, Amy J. Ray, Robert A. Salata, Richard R. Watkins and Curtis J. Donskey Infection Control & Hospital Epidemiology, January 2015, pp 1 – 6 DOI: 10.1017/ice.2014.36

4. *Inter-hospital Variation in Time Required for Hospital Room Ultraviolet (UV)-C Irradiation*
Anderson DJ,1 Rutala WA,2 Knelson LP,1 Moehring RW,1 Chen LF,1 Weber DJ,2 Sexton DJ,1 and the CDC Prevention Epicenters Program 1 – Duke Infection Control Outreach Network, Durham, NC, USA; 2 – UNC Health Care, Chapel Hill, NC