TITLE: Ultraviolet Germicidal Irradiation for Surface Disinfection in Operating Rooms: Clinical and Cost-Effectiveness and Guidelines

DATE: 07 June 2011

RESEARCH QUESTIONS

1. What is the clinical effectiveness of ultraviolet germicidal irradiation for surface disinfection in operating rooms?

2. What is the cost-effectiveness of ultraviolet germicidal irradiation for surface disinfection in operating rooms?

3. What are the evidence-based guidelines for ultraviolet germicidal irradiation for surface disinfection in operating rooms?

KEY MESSAGE

Limited evidence suggested that ultraviolet germicidal irradiation for surface disinfection in operating rooms may be an effective decontaminant; no information on its cost-effectiveness and no evidence-based guidelines for ultraviolet germicidal irradiation for surface disinfection in operating rooms were identified.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2011, Issue 5), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2006 and May 25, 2011. Internet links were provided, where available.
The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, economic evaluations, and evidence-based guidelines.

One non-randomized study was identified regarding the clinical effectiveness of ultraviolet germicidal irradiation for surface disinfection in operating rooms. No literature was identified regarding the cost-effectiveness of ultraviolet germicidal irradiation for surface disinfection in operating rooms. No evidence-based guidelines were identified regarding ultraviolet germicidal irradiation for surface disinfection in operating rooms. Additional references of potential interest can be found in the appendix.

OVERALL SUMMARY OF FINDINGS

The efficacy of ultraviolet C (UVC) light in decontaminating bacterial cells (specifically Acinetobacter baumannii) on hospital-related surfaces was evaluated in a non-randomized study.\textsuperscript{1} UVC was observed to be effective at decontaminating bacterial cells from operating tables made of stainless steel.
REFERENCES SUMMARIZED

Health technology assessments
No literature identified.

Systematic reviews and meta-analyses
No literature identified.

Randomized controlled trials
No literature identified.

Non-randomized studies


Economic evaluations
No literature identified.

Guidelines and recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Review articles


Additional references

Non-randomized studies - not specific to operating room


Other