

Review Group Membership

MaHTAS Reviewer:

Dr Hanin Farhana
Kamaruzaman
Datin Dr. Rugayah Bakri

External Reviewer:

Disclaimer:

Technology review is a brief report, prepared on an urgent basis, which draws on restricted reviews from analysis of pertinent literature, on expert opinion and / or regulatory status where appropriate. It is subjected to an external review process. While effort has been made to do so, this document may not fully reflect all scientific research available. Additionally, other relevant scientific findings may have been reported since completion of this review.

For further information please contact:

Health Technology Assessment
Section (MaHTAS)
Medical Development Division
Ministry of Health Malaysia
Level 4, Block E1, Precinct 1
Government Office Complex
62590 Putrajaya.

Tel: 603 8883 1246

Fax: 603 8883 1230

Available at the following
website: <http://www.moh.gov.my>

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Introduction

Ultraviolet germicidal irradiation (UVGI) is an established means of disinfection and can be used to prevent the spread of certain infectious diseases. UVGI can be used to disinfect air, water and surfaces, although surface disinfection is limited by microshadows and absorptive protective layers. Air disinfection is accomplished via several methods: irradiating the upper-room air only, irradiating the full room (when the room is not occupied or protective clothing is worn) and irradiating air as it passes through enclosed air-circulation and heating, ventilation and air-conditioning (HVAC) systems.

Objective/Aim

To assess the effectiveness, cost-effectiveness and safety of [REDACTED] ultraviolet germicidal irradiation indoor air purifier.

Results and Conclusions

There was one retrievable evidence on [REDACTED] indoor air purifier via Pubmed. Two full text articles were provided by the manufacturer, [REDACTED] Technologies Inc.. There were also two local technology reviews conducted by MaHTAS which assessed ultraviolet germicidal irradiation air purifier system. There was no retrievable evidence on the cost-effectiveness of [REDACTED] UVGI indoor air purifiers or other types of UVGI. As for safety issues, there was no recent retrievable evidence related to the adverse events of UVGI systems.

Based on the above review, there were few scientific evidences to support the effectiveness and safety of [REDACTED] UVGI indoor air purifier systems. As for other air disinfectant using UVGI, the technology may have potential benefit for airborne pathogen irradiation; however, more research is warranted. UVGI is feasible in its application and the adverse events can be avoided with proper precaution and maintenance.

Methods

Electronic databases were searched through the MEDLINE(R) In-process and other Non-Indexed Citations and Ovid MEDLINE(R) 1948 to present, EBM Reviews - Cochrane Central Register of Controlled Trials and EBM Reviews - Health Technology Assessment. Other database was PubMed, Cochrane Library, Australia & New Zealand Horizon Scanning Network (ANZHSN) and US Food & Drugs Administration (US FDA).