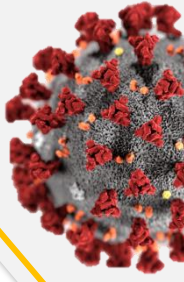




AIRZING™ UV LAMP FOR COVID-19

Based on available evidence up to 15 April 2020



INTRODUCTION

Recently, innovative approaches have been developed in the disinfection process to assist in reducing the transmission of COVID-19. Among the disinfection systems are ultraviolet (UV) emitting devices, which are used to kill pathogens associated with infectious disease and infections. These devices work through the use of lamps that produce ultraviolet C (UV-C).¹

Currently, most UV disinfection devices utilize UV-C radiation with wavelengths between 200 and 270 nm. At particular wavelengths such as 253.7nm and 254 nm, UV-C light is able to destroy the molecular bonds and disrupt DNA or RNA via pyrimidine dimerization, causing death of a variety of environmental microorganisms.²

AirZing™ UV lamp is made in Europe, used UV-C at 253.7nm wavelength. It can be installed on ceilings or on walls. It is claimed to have >99.9% sterilization efficiency with no ozone emission and safe by having switch off system function with 30 second delayed starts. Coverage area is between 80 to 150sqm² depends on installation height. As claimed, it has been used in Wuhan Province, China during the COVID-19 pandemic.³ Hence, this rapid evidence review is conducted to provide brief information on the safety, effectiveness and cost-effectiveness of AirZing™ UV lamp based on request from the Policy and International Relations Division, Ministry of Health Malaysia following proposal by a company to introduce the technology to Ministry of Health Malaysia.

EVIDENCE ON EFFECTIVENESS AND SAFETY

There was no article retrieved from the scientific databases such as Medline, EBM Reviews, PubMed and from the general search engines [Google Scholar and US Food and Drug Administration (USFDA)] on AirZing™ UV lamp.

Previously, there were four Technology Review reports (2006, 2008, 2010 and 2013) conducted by Health Technology Assessment Section (MaHTAS), Medical Development Division, Ministry of

Health Malaysia which were related to ultraviolet germicidal irradiation (UVGI) that used UV-C at 254nm wavelength. The latest report concluded that there were few scientific evidence to support the effectiveness and safety of Sanuvox 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. Moreover, UVGI is feasible in its application and the adverse events can be avoided with proper precaution and maintenance.⁴⁻⁷ An information brief conducted in 2016 concluded that there was limited evidence on the efficacy/effectiveness of UVGI for reduction of bacterial and fungal in healthcare setting. However, the evidence provided is not supported by a proper scientific write-up.⁸ Meanwhile, latest information brief on UV-C conducted in 2020 concluded that there was very limited evidence retrieved on the effectiveness of UV-C in reducing the bacteria, viral and spore. Hence, more research is warranted.⁹

CONCLUSION

There was no evidence retrieved from the scientific databases on the effectiveness, safety and cost-effectiveness of AirZing™ UV lamp to reduce transmission of COVID-19. Further study to ascertain its effectiveness is suggested to support its use.

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Disclaimer: This rapid assessment was prepared to provide urgent evidence-based input during COVID-19 pandemic. The report is prepared based on information available at the time of research and a limited literature. It is not a definitive statement on the safety, effectiveness or cost effectiveness of the health technology covered. Additionally, other relevant scientific findings may have been reported since completion of this report.

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