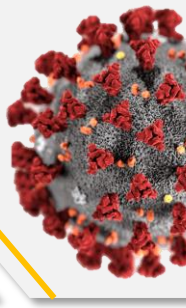
DISINFECTION OF OUTDOOR PLACES USING DRONE TECHNOLOGY



INTRODUCTION

Drone technology has been used previously as delivery modality for medical products such as blood samples and microbiological specimens.[1] It is used in agricultural industries for pesticide spraying despite its limitation in effectiveness in weather condition such as unpredictable speed and direction of winds.[2] Usage of drones technology in large scale misting of areas with disinfectants especially outdoor places recently used by few countries in battling COVID-19. Chlorine containing disinfectant such as sodium hypochlorite is common disinfectant used in large scale area disinfection using drone technology. However the effectiveness of the practice is still questionable.

EVIDENCE

There was no retrievable evidence from scientific databases such as Medline, EBM Reviews, via OVID, Pubmed or peer review journal that investigated the effectiveness and safety of large scale outdoor misting with disinfectant using drone technology. As the transmission of COVID-19 was through droplets and less frequently fomites, Centres for Disease Control and Prevention (CDC) recommends cleaning frequently touched surfaces such as doorknob, handles, toilet with liquid disinfectant effective for COVID-19. [3,4] Sodium hypochlorite that used in large area misting disinfection may cause skin irritation, upper airway and ocular irritation upon exposure through skin and inhalation.[5] United States Environmental Protection Agency (EPA) does not recommend use of fumigation wide-area spraying to control COVID-19.[6] To date, World Health Organization (WHO) made no recommendation supporting the use of spraying /misting chemical disinfecting agents in relation to COVID-19.[7]

CONCLUSION

There was no retrievable evidence from scientific databases regarding effectiveness and safety of large scale outdoor misting with disinfectant using drone technology. CDC recommended cleaning frequently touched surfaces with appropriate disinfectant for COVID-19.

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Based on available evidence up to 9 April 2020

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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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