



World Health
Organization



IFMBE
Clinical Engineering Division

WHO-CED COVID19
CRITICAL TOPIC WEBINARS

DECONTAMINATION-DISINFECTION
OF CRITICAL COVID-19 EQUIPMENT,
HEALTH WORKERS AND PATIENTS

JULY 16, 2020
10AM ET

FREE REGISTRATION: [HTTPS://BIT.LY/2D5D2VX](https://bit.ly/2D5D2VX)

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Panelists

Chairs: Kathy Warye and Elliot Sloane

WHO: Adriana Velazquez, Cai Long, Ale Velez

Infection Transmission Experts: Ruth Carrico,

Maureen Spencer

AAMI: Amanda Benedict

ECRI: Andrew Furman

LMIC: Benedito Fernandes de Lima

CED: Tom Judd, Yadin David

AGENDA

- 1. WHO perspective, Adriana Velazquez** (10 min)
- 2. Environment expert focus on surfaces** (assets & people), **Ruth Carrico**, PhD, RN (10 min)
- 3. Environment expert re airborne** (assets & people), **Maureen Spencer**, MEd, BSN, RN, FAPIC (10 min)
- 4. AAMI standards perspective, Amanda Benedict**, Vice President of Standards (10 min)
- 5. ECRI clinician perspective, Andy Furman**, MD, Executive Director for Clinical Excellence (10 min)
- 6. LMIC perspective (Brazil)** re Ventilators & Anesthesia Machines, **Benedito Fernandes de Lima**, Clinical Engineer, Albert Einstein Hospital, Sao Paulo, Brazil (10 min)
- 7. Q&A** (whole audience, May Townhalls averaged 200 registrants from 60 countries each) 30 min

Disclaimer & Conflict of Interest

Disclaimer

- The opinions shared by non-WHO presenters are their own individual experiences relevant to the topics and or are those from their organizations.
- The presenters when able will attempt to share any gaps they identify between their views and those expressed by WHO guidelines for the topic area.

Conflict of Interest

- Presenters will identify any possible conflicts of interest with organizations noted in their presentations.
- When specific companies are noted, typically they will be part of a group of different companies who can provide a relevant product for the topic under discussion. They will be seen as examples only and not as promotion of any specific company and product.

COVID-19 and Environmental Surfaces

Ruth Carrico PhD DNP FNP-C CIC FSHEA FNAP
Professor

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Objectives

- Review what we currently know about SARS-CoV-2 and vulnerability to germicidal agents
- Describe interventions currently targeting the virus on environmental surfaces
- Discuss the impact of the current interventions on workers and workplace settings
- Emerging questions

SARS-CoV-2 and the use of Germicidal Agents

6 Steps for Safe & Effective Disinfectant Use



Step 1: Check that your product is EPA-approved

Find the EPA registration number on the product. Then, check to see if it is on EPA's list of approved disinfectants at: epa.gov/listn



Step 2: Read the directions

Follow the product's directions. Check "use sites" and "surface types" to see where you can use the product. Read the "precautionary statements."

Step 3: Pre-clean the surface

Make sure to wash the surface with soap and water if the directions mention pre-cleaning or if the surface is visibly dirty.



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journal homepage: www.elsevier.com/locate/jhin

Review

Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents

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Cleaning and disinfection of environmental surfaces in the context of COVID-19

Interim guidance

15 May 2020

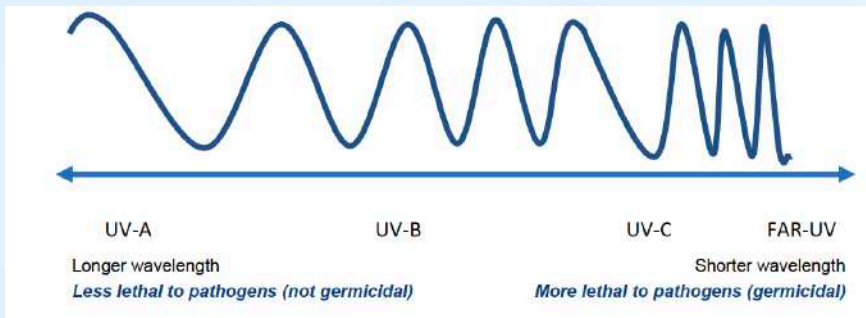


Background

Coronavirus disease 2019 (COVID-19) is a respiratory infection caused by SARS-CoV-2 (COVID-19 virus). The COVID-19 virus is transmitted mainly through close physical contact and respiratory droplets, while airborne transmission is possible during aerosol generating medical procedures.¹ At

buildings, faith-based community centres, markets, transportation, and business settings.^{10,11} Although the precise role of fomite transmission and necessity for disinfection practices outside of health-care environments is currently unknown, infection prevention and control principles

Current Environmental Interventions



UV Disrupts the DNA or RNA of microorganisms



Impact of Interventions on Worker and Workplace Safety

Intervention	PPE Requirements (Safety Data Sheet [SDS]))	Physical Examination	Exposure Opportunities
Liquid germicide	According to manufacturer. Usually limited to gloves, eye protection	None	Splash; skin contact
Germicide + Electrostatic Sprayer	According to manufacturer + respirator for vapor pressure (EPA)	Yes, respirator use	Respiratory; skin contact; eyes
Ultraviolet light (radiation)	Out of the environment during	None unless exposure	Eyes; skin



Environmental Cleaning and Disinfection of Patient Environment

- Full PPE including respirator if patient is in the room
- Following discharge, PPE worn according to manufacturer's instructions outlined on Safety Data Sheet (SDS)
- Consider air exchanges in the room similar to what is currently done for patients with active *Mycobacterium tuberculosis*. Generally wait ~30 minutes.

(<https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html#tableb1>)

- Much current attention to the air and relationship to transmission
- No current data indicating increased risk among this HCW group

SARS-CoV-2 and Community Surfaces

- Community transmission
- Same considerations with respect to disinfecting surfaces and items
- Problematic glove use in the community (e.g., instead of hand hygiene)
- Public restrooms and SARS-CoV-2 in stool
- Presence of disease in congregate settings
- Limited published reports among homeless populations (some reports of disease in shelters)
- Broader understanding is hampered by lack of testing capacities

Resources

- Ong SWX, Tan YK, Chia PY, et al. Air, Surface Environmental, and Personal Protective Equipment Contamination by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) From a Symptomatic Patient [published online ahead of print, 2020 Mar 4]. *JAMA*. 2020;323(16):1610-1612. doi:10.1001/jama.2020.3227
- Fathizadeh H, Maroufi P, Momen-Heravi M, et al. Protection and disinfection policies against SARS-CoV-2 (COVID-19). *Infez Med*. 2020;28(2):185-191.
- Kampf G, Todt D, Pfaender S, Steinmann E. Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents [published correction appears in *J Hosp Infect*. 2020 Jun 17;:]. *J Hosp Infect*. 2020;104(3):246-251. doi:10.1016/j.jhin.2020.01.022

Resources

- Eslami H, Jalili M. The role of environmental factors to transmission of SARS-CoV-2 (COVID-19). *AMB Express*. 2020;10(1):92. Published 2020 May 15. doi:10.1186/s13568-020-01028-0
- Ren SY, Wang WB, Hao YG, et al. Stability and infectivity of coronaviruses in inanimate environments. *World J Clin Cases*. 2020;8(8):1391-1399. doi:10.12998/wjcc.v8.i8.1391
- Wu S, Wang Y, Jin X, Tian J, Liu J, Mao Y. Environmental contamination by SARS-CoV-2 in a designated hospital for coronavirus disease 2019 [published online ahead of print, 2020 May 12]. *Am J Infect Control*. 2020;S0196-6553(20)30275-3. doi:10.1016/j.ajic.2020.05.003

Resources

- Ye G, Lin H, Chen S, et al. Environmental contamination of SARS-CoV-2 in healthcare premises [published online ahead of print, 2020 Apr 30]. *J Infect.* 2020;S0163-4453(20)30260-7. doi:10.1016/j.jinf.2020.04.034
- WHO. Cleaning and disinfection of environmental services in the context of COVID-19. 2020. <https://www.who.int/publications/i/item/cleaning-and-disinfection-of-environmental-surfaces-inthe-context-of-covid-19>



THANK YOU!

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