18th World Congress on
Infection Prevention and Control
9th International Conference on
Polymer Science and Polymer Chemistry
22nd World Congress on
Medicinal Chemistry and Drug Design
July 04-05, 2022
WEBINAR

Hospital environmental sampling of SARS-CoV-2 during COVID-19 pandemic

Chun-Hsi Tai
Taichung Veterans General Hospital, Taiwan

Environmental sampling is a process to monitor hospital environmental cleaning efficacy. The aim of this study is implement regular environmental sampling to monitor the efficacy of UV-C and bleach for terminal disinfection of hospital environment and identify the surfaces types contaminated by SARS-CoV-2 during the COVID-19 Pandemic. The hospital environment was disinfected by 10 minutes of UV-C irradiation and 1000 ppm bleach solution according to cleaning practice guideline. The environmental sampling was carried out at the negative pressure isolation wards for COVID-19 patients and emergency room. The samples were collected from the patient rooms, nursing stations, and staff rest areas. The samples were then analyzed using real-time reverse transcription polymerase chain reaction (RT-PCR). In the negative pressure isolation wards, SARS-CoV-2 RNA was detected on 1 (0.65 %) of 152 samples from environmental surfaces, i.e. the patient's pillow.

In the other areas, only 3 (0.12%) of 2489 samples were detected, including the nursing station bench, nursing station telephone and emergency elevator buttons. During the pandemic period, there were no staffs infected. This indicates effective cleaning can reduce the risk of fomite transmission. However, some surface types may facilitate the survival, persistence, or spread of SARS-CoV-2. We suggest that careful cleaning for these surface types should be emphasized in the education and practice of cleaning procedures. Regular hospital environmental sampling of SARS-CoV-2 during COVID-19 pandemic is essential to implement infection control practice, protect the hospital staff and patients, and prevent nosocomial transmission.

Biography

Chun-Hsi Tai is an infection control medical examiner from the infection control center of Taichung Veterans General Hospital in Taiwan. She is interested in microbiology and molecular biology. She once studied HIV drug resistance in the infectious disease department, which can be applied to the patient's drug cocktail treatment and the bacterial drug resistance gene expression. Both are related to the epidemiology of microorganisms and relevance to infection control. Research papers and posters have been published. Now she is an infection control medical examiner at Taichung Veterans General Hospital. Mainly monitoring the environment, operating room air, Legionella in the water supply system, microorganisms in the water supply system and the efficacy of reused medical equipment and MDRO monitoring in the hospital, will be further studied and analyzed. She is now a member of the Taiwan Society for Infection Control.

Received: April 27, 2022; **Accepted**: April 29, 2022; **Published**: July 04, 2022