

ABSTRACT: ORAL PRESENTATION

Arresting an outbreak of a pan resistant organism in the COVID-19 Intensive Care Unit (ICU) of the National Institute of Infectious Diseases, Angoda - “Back to Basics”

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Introduction: In October 2021, a hospital acquired outbreak of a pan-resistant pathogen; *Acinetobacter* was detected in the COVID-19 ICU of the National Institute of Infectious Diseases. Despite intensified control measures the outbreak was uncontrollable and it was decided to withhold operations of the ICU on 12.11.2021.

Objective: To arrest the outbreak of a pan resistant organism in the COVID-19 Intensive Care Unit (ICU).

Methodology: After an in-depth analysis, the following interventions were done. Thorough environmental cleaning using 0.1% sodium hypochlorite was done for three consecutive days. Equipment were disinfected using 70% alcohol. This procedure was repeated before restarting the ICU. Mechanical ventilation and air conditioning system (MVAC) was optimized to maintain standard temperature (23^o C) and humidity (60%), which improved comfort for the health team to adhere to good infection control practices while wearing PPE for a prolonged duration.

An ante-room at the rear door of the ICU was created through partitioning as it was directly opening to the environment. Both ante rooms were supplied with HEPA filtered air and created a positive pressure. Dedicated rooms were created for high level disinfection of reusable ventilator parts. The local antibiotic policy was revisited and revised. Infection control practices including hand hygiene were audited. Training sessions on invasive procedures were done on identified needs.

Results: Before restarting the ICU the efficacy of the environmental cleaning was assessed by performing environmental swabs and all became negative.

The efficacy of the renovated MVAC system was assessed by performing settle plates and no pan-resistant *Acinetobacter* was found. ICU was re-opened in one month. Pan-resistant pathogen was not identified thereafter.

Discussion: Even though, emergence of an outbreak is mostly attributed to the poor infection control practices; its causality should be objectively analysed prior to interventions.

Conclusions & recommendations: Holistic approach and strategic interventions are required to arrest an outbreak of a pan resistant organism in an ICU.

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Presentation at 29th Annual Scientific Sessions -The College of Medical Administrators of Sri Lanka on 26th November 2022

Competing Interests: Authors have declared that no competing interests exist.