

OP 18: Identification of staphylococci contaminating clinical white coats of 4th year medical students

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Introduction: Infections caused by-resistant bacteria (ARB) have become a major global issue. Medical students' clinical white coats can harbor these organisms and function as a possible reservoir for ARB transmission during their clinical training. More common species that contaminate clinical white coats include *Staphylococcus aureus* and its antibiotic-resistant variation, Methicillin-Resistant *Staphylococcus aureus* (MRSA).

Objectives: To determine the prevalence of *S. aureus* and MRSA contamination of clinical white coats worn by medical students.

Methods: A cross-sectional study was done with the participation of 4th-year medical students of the Faculty of Medicine, University of Peradeniya. Swabs were taken from the pockets and sleeves of the clinical white coats, and *S. aureus* was identified using routine microbiological methods. Disc diffusion-based cefoxitin sensitivity test was used to identify MRSA isolates among the *S. aureus*.

Results: *S. aureus* has contaminated 53 (35.1%) of the 151 white coats of participants. MRSA was found in 20 (30.30%) of the isolates, accounting for 15 (9.9%) of the total participants. Factors analyzed, including sex, type of clinical appointment and frequency of washing white coats were not found to be significantly associated with contamination by either of bacteria.

Conclusions: Clinical white coats worn by medical students were found to be heavily contaminated with *S. aureus* and MRSA. As a result, these coats can be regarded as a potential mode of infection transmission between individuals. Therefore, steps should be taken to rectify the proper use and cleaning of medical students' white clinical coats.

Keywords: Bacterial contamination, Clinical White Coats, Sri Lanka, Medical Students