

TITLE: ANALYSIS OF CONTAMINATION BY *STAPHYLOCOCCUS AUREUS* RESISTANT TO METICILINE IN SUBWAYS OF THE METROPOLITAN REGION OF RECIFE-PE, BRAZIL.

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ABSTRACT:

Contamination of public transport users with *Staphylococcus aureus* can range from simple infections such as pimples, boils and cellulites, to severe infections such as septicemia, endocarditis, toxic shock syndrome, pneumonia, meningitis and others. This work aims to identify the occurrence of methicillin-resistant *Staphylococcus aureus* (MRSA) as a contaminant in the subway cars that circulate in the Metropolitan Region of Recife-PE. From April 16 to 18, 2018, the collection of 45 samples of wagons was carried out in an area of 24cm² with swabs. From each car, 5 samples were collected from the following locations: window, high handrail, seat, door and low handrail. Three lines were analyzed: Jaboatão, Camaragibe, and Cajueiro seco (south), of circulating subways in the metropolitan region of Recife. After the identification of *S. aureus*, the susceptibility test was applied using the disc-diffusion method on Mueller Hinton agar, and the antibiotics used were Clindamycin, Erythromycin, Cefoxitin, Sulfazotrim, Gentamicin, Chlorphenicol, Tetracycline and Ciprofloxacin. Erythromycin and Clindamycin-resistant samples were submitted to the D-test. Of the 45 samples collected in nine subways, three of each line, 29 (64.44%) were *S. aureus* positive. Of these positive samples, 13 (44.82%) were from the subway of the Jaboatão line, followed by the Camaragibe line and the Cajueiro Seco (South) line with eight (27.59%) samples each. All samples were sensitive to cefoxitin. The study did not identify the occurrence of MRSA as contaminants in the subway cars that circulate in the Metropolitan Region of Recife-PE, associated with the reports in Brazil and in some parts of the world, the increasing increase of resistance of *S. aureus* to erythromycin and clindamycin, an important finding for future studies to develop new mechanisms to decrease or prevent multidrug-resistant *S. aureus* contamination.

Keywords: MRSA, *S. aures*, contamination, subways