

**TITLE:** PREVALENCE AND ANTIBIOTIC RESISTANCE OF *Staphylococcus aureus* STRAINS ISOLATED FROM NURSING WORKERS AT A BRAZILIAN UNIVERSITY HOSPITAL.

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**ABSTRACT:**

*Staphylococcus aureus* is considered the main etiological agent of nosocomial infections. The severity of these infections is intensified in cases of multidrug resistant strains, especially MRSA (*S. aureus* resistant to oxacillin), VRSA (*S. aureus* resistant to Vancomycin) and VISA (*S. aureus* intermediate to Vancomycin). In Brazil, the first VRSA strain was found in 2000, but new isolations after that was rare. Therefore, the monitoring of the circulation of multidrug resistant strains is important, being even more important in health professionals, since they can transmit them to patients in health treatment. This is a cross-sectional study carried out with nursing professionals from an University Hospital located in Sergipe, Brazil. This study involved isolation, biochemical identification and evaluation of the resistance profile to seven different antibiotics, among them Oxacillin. For *S. aureus* identified as MRSA, we established the minimum inhibitory concentration (MIC) for Vancomycin, classifying them as VRSA, VISA and Vancomycin-sensitive *S. aureus* (VSSA). Eighty samples were collected, of which 48% were positive for *S. aureus*. Of these, 63% had resistance to Azithromycin, 34% to Amoxicillin + Clavulanic Acid, 50% to Ciprofloxacin, 58% to Erythromycin, 18% to Oxacillin, 32% to Tetracycline and no resistance to Mupirocin was found. Among the MRSA isolates, 57% have shown vancomycin resistant, 28% were VISA and only 15% were sensitive for vancomycin. These finds highlighted the difference between the present study and the vast majority works, which had shown low prevalence of these microorganisms. The peculiarities of this hospital environment that led to this result still need to be explored. In addition, the microbial resistance data collected will help the hospital antibiotic purchasing plan, as well as directing the work of the Hospital Infection Control Committee.

**Keywords:** *Staphylococcus aureus*, MRSA, Multidrug resistant, VRSA.