

**Título: STAPHYLOCOCCUS AUREUS: PREVALENCE, PHENOTYPES OF RESISTANCE AND BIOFILM PRODUCTION IN STRAINS ISOLATES OF TWO PROFESSIONAL GROUPS**

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**ABSTRACT**

*Staphylococcus aureus* are gram-positive cocci and catalase, facultative anaerobes, with approximately 0.5 to 1.5 µm in diameter, non-motile, not sporulated and generally not encapsulated. The individual who carries the bacteria in the nasal cavity is more susceptible to colonization of the hands, and can become a source of infection. Therefore especially in the hospital environment, there is a need to be aware of the fact that patients, visitors and even professionals can be carriers of *S. aureus* and in this way they represent a risk for the spreading of the bacteria. The objective of this study was to evaluate the prevalence of *Staphylococcus aureus* in the nostrils, hands and mobile phones of employees of a health care center and trade workers from the city of Jataí, GO. Also the antimicrobial resistance of the strains and their biofilm formation capacity were evaluated. In total we collected three samples of 74 hospital staff and 74 trade workers. *Staphylococcus aureus* were isolated in 24 (10.81%) samples collected from hospital staff and 26 (11.71%) samples collected from trade workers. In the group of hospital workers isolated microorganisms showed higher resistance to antimicrobials penicillin (83.3%), clindamycin (54.2%) and erythromycin (45.8%). In the group of trade workers all 26 samples were sensitive to most antibiotics except for clindamycin and erythromycin, where 16 samples (61.54%) were resistant to both antibiotics. All 50 strains of *S. aureus* isolated in the study were tested for the production of biofilm. From 24 samples of hospital staff, 13 (54.2%) were shown to be producing biofilm and 26 samples collected from traders, seven (26.9%) were positive for the production of this virulence factor. There was no statistical difference in the prevalence of *S. aureus* in both groups surveyed; however, the strains found in hospital workers showed greater resistance to antibiotics, and also they were major producers of biofilm virulence factor.

**Keywords:** Antimicrobial resistance; Healthy carriers; Nasal carriers; *Staphylococcus aureus*.