TITLE: EVALUATION OF NASAL COLONIZATION OF HEALTH PROFESSIONALS BY METICILLIN RESISTANT Staphylococcus aureus

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ABSTRACT:

Staphylococcus aureus is considered an opportunistic pathogen and is frequently associated with infections acquired in the community and in the hospital environment. Infections caused by *S. aureus* may be aggravated when these bacteria are resistant to antimicrobials used in the treatment of these diseases. These bacteria are also resistant to oxacillin, a semisynthetic penicillin that determines resistance to methicillin (MRSA). MRSA has become a challenge and a concern in the hospital environment, since these strains show resistance to all β-lactam antimicrobials making treatment difficult, methicillin resistance is determined by the *mecA* gene, which encodes the supplemental penicillin binding protein (PBP 2a). This gene is carried in a specific mobile genetic element called the staphylococcal chromosome cassette (*SCCmec*), and there are about 11 different types of *SCCmec*, types I, II and III predominate in MRSA isolates in hospital settings and type III has a coding of resistance genes being an important pathogen in hospitals. In these hospital environments, health professionals are subject to colonization by *S. aureus*, as carriers, disseminators and responsible for possible outbreaks of infection. The Family Health Program (FHP), currently defined as Family Health Strategy (FHS), which aims to meet the health demands of the population that needs a less complex type of care, may include professionals colonized by *S. aureus*. Thus, this work determined the prevalence of *Staphylococcus aureus* and MRSA in health professionals and to evaluate the susceptibility of these microorganisms to antimicrobials. Samples were collected from nasal cavities of 50 health professionals from 5 different ESF and 30% were colonized by *S. aureus* and 55% from MRSA. All *S. aureus* isolates presented multiresistance to the tested antimicrobials. Thus, measures to control the spread of multiresistant *S. aureus* in the community by FHP health professionals are needed to ensure greater safety and efficacy during patient care.

Keywords: *S. aureus*, FHS, MRSA, IRAS

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