

**TITLE:** PROFILE OF SUSCEPTIBILITY TO ANTIMICROBIALS IN MEDICAL IMPORTANCE GRAM-POSITIVE COCCI ISOLATED FROM THE ICU OF A ESPIRITO SANTO STATE HOSPITAL: A RETROSPECTIVE STUDY

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**ABSTRACT:**

Patients hospitalized at health institutions are exposed to a variety of pathogenic microorganisms, especially in Intensive Care Units (ICUs), where invasive procedures are performed regularly, potent and broad spectrum antimicrobials are used in treatments. The risk of acquiring a multidrug-resistant micro-organism increases when hospitalized. Microbial resistance is a problem that causes great concern in clinical practice and it is involved in increased morbidity, lethality, and increased costs in the health system. The present study consists of a quantitative nature field research, where data were obtained through the documentary collection of the microbiology laboratory of a tertiary philanthropic hospital. 2219 records were analyzed during the period of which [1267 (51.1%)] recorded bacterial growth. The gram-positive cocci annotations of major medical importance in the present hospital, *Staphylococcus aureus*, *Enterococcus* spp. *Staphylococcus coagulase negative* (ECN), from the ICU of the hospital, from January 2014 to December 2015 represented [472 (37.2%)] even though the diversity of species was small, only three. The source of isolation and antimicrobial susceptibility profile was investigated. In our study, *S. aureus* and ECN showed blood culture as the major source of isolation, with 39% and 83%, respectively. *Enterococcus* sp had the largest source of urine isolation (55%), demonstrating similarity with Brazilian studies. There was a predominance of  $\beta$ -lactam resistance, mainly penicillin, with 30% for *S. aureus* and 20% for ECN. Oxacillin was introduced as a substitute for penicillin in the treatment of penicillin-resistant *Staphylococcus* infections, but resistance to oxacillin has gradually increased in the hospital setting. *Enterococcus* resistant to vancomycin accounted for 45%, becoming one of the main pathogens responsible for systemic infections, mainly in immunosuppressed patients. In public or private hospitals, the ICU is the place with the highest number of infections, being a constant concern for health professionals, demonstrating the importance of a Hospital Infection Control Commission formed by a multidisciplinary team, so that they can elaborate and execute Programs that minimize or eliminate the risk of infection in inpatients.

**Keywords:** Gram-positive cocci, antimicrobial resistance, ICU