



006

## Multidrug-resistant bacteria in an intensive care unit: a review of management

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**Introduction:** Antimicrobial resistance is considered a global health problem, which compromises the effectiveness of antibiotics, making the treatment of common infections unfeasible.<sup>(1)</sup> Microorganisms can undergo genetic mutation when exposed to antimicrobial drugs and are referred to as “superbugs.” Healthcare-related infections have an impact on hospital mortality, length of stay and costs. Developing countries suffer from a higher burden of these infections, which can be up to 20 times higher than developed countries.<sup>(2,3)</sup> **Objective:** Review the literature highlighting what actions should be taken in the presence of infections caused by multidrug-resistant bacteria. **Methods:** The scope question was formulated by inserting the identification of essential words in order to enable the location of primary studies available in the databases, namely: “What are the most effective procedures to combat multidrug-resistant bacteria in intensive care environments?” The search was carried out in the following databases: PubMed, Scielo and Medline. Original articles available in full in the databases or in the selected Virtual Library were selected, in open online access, in Portuguese, English, Spanish or French. The search has been contemplated

for the last 25 years. Then, the full texts were read, seeking to choose the studies that answered the research question. **Results:** The review included 17 articles and the approaches found were early diagnosis, guided antibiotic therapy, creation of an isolation unit, hand washing and continuing education. **Discussion:** The first step to be taken is the identification of potentially colonized or infected patients. Once diagnosed, isolation of the patient is mandatory. It is necessary to develop and follow specific protocols for assistance. Regarding antibiotic therapy, whenever possible guided by cultures and antibiograms<sup>5</sup>. When started empirically, escalate as soon as possible, enabling adequate treatment, minimizing resistance and contributing to the prophylaxis of future colonization and/or infections by “superbugs”. Continuing education is a tool that enables the continuous improvement of prophylaxis, encourages monitoring of hand washing and the rational use of antibiotic therapy. Hand washing should be encouraged and emphasized among professionals involved or not in assistance, with information also provided among family members and visitors. **Conclusion:** Early diagnosis is the approach that guides the treatment of infections caused by multidrug-resistant bacteria. The review found that isolation is essential for preventing spread and hand washing is the most important measure in the prophylaxis of cross-infections. It is suggested, based on the scarce literature, that new research using this topic be carried out and enable the translation of scientific knowledge into health practice in Intensive Care Units.

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