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ANTIMICROBIALS

# IMPROVEMENT OPPORTUNITIES IN THE USE OF



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## Background

The correct use of antibiotics in hospital environment is necessary to ensure the effectiveness of the treatment, the control of resi<mark>stances a</mark>nd also to avoid the occurrence of adverse reactions

### Purpose

Describe the pattern of antimicrobial use in hospitalized adult patients and identify opportunities of improvement

#### Material and methods

A cross-sectional descriptive study was carried out on 7 March 2017 in adult patients admitted to hospitalised antimicrobial treatment. The following data were collected: sex, age, allergies, service, antimicrobial treatment, type of treatment, culture, antimicrobial coverage by culture and kidney failure. Pharmaceutical interventions performed and opportunities of treatment improvement were assessed after a detailed review of all variables

#### Results

39% of the 307 patients admitted were treated with an antimicrobial agent, 58 men and 62 women, with a median age of 73.5 years (16-98).

69.2% of antimicrobial treatments were used as monotherapy, 24.2% were used as biterapia and 6.6% three antimicrobials were used together. In eleven of the cases, the treatments were targeted, ten prophylactics and most of the treatments were used empirically (99 patients). In fact, opportunities for improvement have been identified in 68 antimicrobial treatments.



#### Conclusions

The use of antimicrobial treatments in hospitalized patients is quite high, especially in medical services. Most prescribed treatments are empirical and monotherapy. Microbiological culture is necessary for the selection of antimicrobial agents and to optimize the effectiveness of the treatment. Dose adjustment in renal failure and patient allergies may affect patient safety, which justifies the need to implement an electronic prescription integrated with the patient's medical history.