Background

Indiscriminate use of broad-spectrum antibiotics implies a threat to public health and may cause multidrug-resistant pathogen infections. 25,000 deaths every year in the EU from infections caused by multidrug resistant bacteria.

Objective

The aim of this study is to analyze the quality of antibiotic prescription (indication and duration of treatment) based on the recommendations of our Antibiotic use Optimization Program (AOP).

Material and methods

A retrospective study (January 2020 to April 2021) of hospitalized patients taking carbapenems, ureidopenicillins, quinolones, cephalosporins or glycopeptides was carried out. We collected demographic information, antibiotic regimen, type and site of the infection and microbiological data. Pharmaceutical interventions over antibiotic prescriptions were mainly associated with starting, interrupting, broadening the spectrum or switching to oral therapy.

Results

75 Patients with an antibiotic prescription; 64% Men; 67.7 Years Mean age (± 13.4); 10.3 Days Average stay

Antibiotics in which we had impact on

- Glycopeptides: 22.5%
- Carbapenems: 19.8%
- Ureidopenicillins: 18.0%
- Cephalosporins: 11.7%
- Quinolones: 4.5%

Most common infections localization

- Soft tissue: 37.7%
- Intraabdominal: 24.8%
- Meningeal: 7.5%
- Respiratory: 15.1%
- Urinary: 15.1%

Type of pharmaceutical interventions

- Withdrawal: 33.1%
- Change: 26.8%
- Start: 20.4%
- Switch to PO: 18.3%
- Continue: 1.4%

Conclusion and relevance

Our study shows that hospital pharmacists and the Infectious Control Group play an important role in optimizing antibiotic regimes in a variable clinical context. Pharmaceutical recommendations have been widely accepted and should be particularly targeted on specific antibiotic classes. All these measures may contribute to decrease the incidence of multi-resistant bacterial infections in the hospital.