



# STANDARDIZED ORDER SETS FOR ANTIBIOTICS IN THE EMERGENCY ROOM

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## WHAT WAS DONE?

The dose of antibiotics that appeared by default in the pharmacological prescription program were adjusted with the aim of reducing overdose.

## WHY WAS DONE?

It has been observed that emergency physicians tend to prescribe higher doses of antibiotics even though a lower dose is enough for the most common pathologies. This implied a decrease in safety, a probable increase in bacterial resistance as well as an increase in cost.

## HOW IT WAS DONE?

The most common pathologies in the emergency room were taken into account and the pharmacist, in agreement with the emergency physicians and following the Antimicrobial Stewardship Program, programmed those doses by default in the order set. For example, 1g of ceftriaxone once a day instead of 2g is enough for urinary tract infections and community-acquired pneumonia and 1 or 2 doses of oral phosphomycin are enough to treat non-complicated urinary tract infection. Regarding weight-adjusted antibiotics (for example amikacin), it was proposed that the dose corresponding to 65kg should appear by default in the program, which is the average weight that our patients in the emergency room usually have. These measures were intended to make the prescription as safe as possible.

## WHAT WAS ACHIEVED?

The measures adopted by the Pharmacy Service achieved a drastic reduction in the overdose of antibiotics. The potential for medication errors was decreased and, therefore, patient safety improved. Unnecessary calls to prescribers for clarifications and questions about orders were also avoided. In economic terms, it has been possible to save almost 40% of the cost of treatment per patient. However, the aim of this measure was never resourcing optimization since most antibiotics used in the emergency room do not have a high cost.

## WHAT IS NEXT?

In addition to the treatment protocols according to pathologies that are usually predefined in order sets, these actions carried out (not just in antibiotics) can be useful in emergency departments and for medical professionals who are not as used to prescribing medication. The use of well-designed order sets requires vigilance and a team approach because if they are not carefully designed, reviewed, and maintained to reflect evidence-based care, they may contribute to errors.