

How to improve Antibiotic prescription?

Barriers and antibiotic stewardship interventions in two Portuguese hospitals

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INTRODUCTION

Antimicrobial resistance is one major worldwide problem frequently associated with antibiotics overuse and incorrect prescription^{1,2}. In Portugal, antibiotic consumption is still higher than European average, (45.6% vs 35.8% of hospitalized patients received antibiotics)³. Since physicians play an important role on antibiotic use, understand their antibiotic prescribing habits is fundamental⁴.

The aim of this study was to identify barriers in antibiotic prescription process, in two Portuguese hospitals, in order to design and implement effective antibiotic stewardship interventions.

METHODS

The study was conducted under the scope of HAItoOL project - A Toolkit to Prevent, Manage and Control Healthcare-Associated Infections in Portugal. A self-administered questionnaire was distributed to 30 physicians in two Portuguese hospitals in 2016.

RESULTS

Difficulties and barriers on antibiotic prescription process

Table 1. Difficulties and barriers identified by participating physicians on the antibiotic prescription process.

Difficulties and barriers	% (n)
Lack of (or delayed) microbiological results	30.0 (9)
No access to antibiotic susceptibility patterns	16.7 (5)
Lack of antimicrobial prescribing guidelines adapted to hospital epidemiology	13.3 (4)
Quality of clinical data	13.3 (4)
Colleagues opinion	10.0 (3)
Patient clinical situation	6.7 (2)
Prior authorization request for some antibiotics	6.7 (2)
Patients not aware of antibiotic resistance problem	3.3 (1)
Lack of experience	3.3 (1)
Antibiotic availability in hospital pharmacy	3.3 (1)

Strategies to effectively improve antibiotic prescription

Table 2. Strategies identified by participating physicians to effectively improve antibiotic prescription.

Strategies	% (n)
Education and training on antibiotic prescription	43.3 (13)
Availability of local epidemiological data	16.7 (5)
Antimicrobial prescribing guidelines adapted to hospital epidemiology	16.7 (5)
Prescription control	13.3 (4)
Use restriction	10.0 (3)
Communication with microbiology laboratory	6.7 (2)
De-escalation	6.7 (2)
Informatics tools	3.3 (1)
Close to 1/3 of physicians described "lack of (or delayed) microbiology results" as major barrier for antibiotic prescription.	
"Education and training" was suggested as the most effective strategy to improve antibiotic prescription.	

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