O602
2-hour Oral Session
Tools and interventions to improve hospital antimicrobial prescription quality

Postprescription antimicrobial review by a multidisciplinary team using computerized tools in shared access

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Background: Controlling the use of antimicrobials is necessary in health establishments in order to limit their misuse and the emergence of bacterial resistance. We set up an innovative antimicrobial stewardship organization and analysed our results over 3 years.

Material/methods: Since 2012, a new organization for postprescription review has been implemented by a multidisplinary team, including a pharmacist, a microbiologist and an infectious disease physician (IDP). A list of controlled antimicrobials was defined by the local Anti Infective Drug Committee : Piperacillin/tazobactam, ceftazidim, cefepime, ceftaroline, all carbapenems, fluoroquinolones, colistin and antibiotics active against methicillin resistant staphylococci. A specific setting of these antibiotics in the computerized physician order entry allowed the record of all new prescription. The data concerning the patient, the antimicrobial(s) prescribed, the date of first prescription… were collected and registered on a spredsheet in shared access for each member the team. The microbiologist notified his opinion on the antibiotic choice according to local microbiology results. When both the microbiologist and the pharmacist did not approve the antimicrobial therapy after day 3, an alert was generated to the IDP on the same day. This alert led to a reevaluation of the treatement by the IDP.

Results: From 2012 to 2014, 2106 prescriptions of a controlled antibiotic were reviewed. Among them, 1224 were considered unjustified after microbiology results and the antimicrobial was discontinued by the first prescriber in 835 cases, without intervention. So 389 prescriptions (18.5%) led to an alert and 293 (13.9%) were reevaluated by the IDP. This one considered the prescription justified (according to complete patient's file) in 157 cases (53.6%) and recommendations (mostly de-escalation or discontinuation) were necessary for 136 cases (46.4%). The acceptance rate was 97%. The estimated time was 30 min per day for the pharmacist, 20 min for the microbiologist. The IDP spent an average of 28 min per control.

Conclusions: This computer shared access strategy of antimicrobial stewardship is effective to limit antibiotic misuse and consumption of broad-spectrum antibiotics and is time-saving.