



Despite the benefits of antibiotic re-evaluation (decrease the emergence of bacterial resistance, adverse effects and costs) physicians do not systematically trace it in the prescription software. In our hospital, after the implementation in June 2013 of a day-2 antibiotic re-evaluation (AR) module in the prescription software and three awareness periods of prescribers, only 53% of AR were done for 10 high-risk antibiotics.

Objectives

The aim of this work is to evaluate the feasibility of a follow-up by pharmacy of antibiotic re-evaluation.

Methods

In a university hospital of 1500 beds, all antibiotic re-evaluation of the 10 antibiotics followed in 2017 were analyzed by pharmacy from the AR module (status of prescriber, indication, date of AR). This analysis was compared with the number of patients initiated under these antibiotics and delivered by pharmacy. In order to determine the feasibility of a follow-up, all antibiotic prescriptions were analyzed during two weeks to know the number of prescriptions and re-evaluation at day-2 and day-7 delivered by pharmacy per day.

Results

In 2017,
The AR was made on average at **4.3 days**.

Antibiotic	Patients treated	AR %
Cefepime	137	30,7
Ceftazidime	225	14,2
Ertapenem	36	16,7
Imipenem + Cilastine	308	12,3
Levofloxacin	590	22,0
Linezolid	464	7,3
Meropenem	77	11,7
Daptomycin	102	33,3
Antifungal	Patients treated	AR %
Caspofungin	126	4,8
Mycafungin	50	14,0

Infections requiring antibiotic therapy for more than 7 days

- Bacteremia related to *Staph aureus* (venous catheter),
- Suppurative thrombophlebitis,
- Infectious endocarditis,
- Meningitis with *Listeria* or Gram-negative bacillus,
- *Clostridioides difficile* infections,
- Acute pyelonephritis severe or at risk of complication
- Male urinary infections,
- High genital infections,
- Osteoarticular infections (SPILF Recommendations, March 2017),
- Sinusitis of the child,

Infectious disease physicians have validated an **exhaustive list of infections requiring antibiotic therapy for more than 7 days**, based on new international antibiotic therapy duration recommendations.



FEASIBILITY OF PHARMACY FOLLOW-UP OF ANTIBIOTIC RE-EVALUATION

A mean of 85 antibiotic prescriptions were analyzed and delivered by pharmacy per day. Among these prescriptions a daily mean of 31 prescriptions were sent to pharmacy at day-2 and four at day-7.



This list allows the pharmacy to check the indication of treatment and to dispense antibiotics or not at day-7.



Conclusions

Pharmacists have a crucial role to play in the AR through its follow-up. A day-7 AR module will be added in early 2019 to our prescription software. The day-7 follow-up of all antibiotic prescriptions by pharmacy and its ability to halt dispensing might reduce the emergence of bacterial resistance as mentioned by WHO and limit antibiotic consumption through a better traceability of AR.

