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**Paper Poster Session**

**News on outpatient antibiotic prescribing quality**

**Misuse of antibiotics reserved for the hospital settings in outpatients: A single-center prospective study**

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**Background:** A number of serious infections could be rapidly managed in the ambulatory. The administration of antibiotics in the outpatient setting is possible as long as the clinical situation allows. In this case, the antibiotics that are usually reserved for the exclusive use in hospitals for severe infections may be delivered to the outpatient.

**Materials:** We performed a 30-days audit of outpatient antibiotic prescription in the four university hospital centers with 4,000-bed in Marseille, France. We evaluated the relevance of outpatient antibiotic prescribing by measuring of the appropriateness of national antibiotic prescription guideline and the respect to antibiotic resistance.

**Results:** We performed a real-time analysis of 60 prescriptions of antibiotics reserved for the hospital settings during the study period. Seven antibiotics prescriptions due to insufficient clinical data. The mains classes of antibiotics usually prescribed were metronidazole, piperacillin/tazobactam, ertapenem, cefotaxim, amikacin, linezolid, teicoplanin, vancomycin and colistin. In 64% of cases, the antibiotics reserved for the hospital settings was started in hospital cares; and 36% of cases in ambulatory care. We observed that only 25% of cases were prescribed in infectious disease specialist. In other 75% of cases, antibiotics reserved for the hospital settings were prescribed by physicians of other specialties

Among the 53 cases included, 30% of cases were infected with Gram-negative bacteria, 9% of anaerobia bacteria, 2% of Gram-negative cocci, 24% of Gram-positive cocci. In 19% of cases have negative bacterial-cultures; and 19% were prescribed as prophylactic settings without microbial data. Besides this, prescriptions were frequently prescribed in outpatient setting in febrile neutropenia in 17% of cases, and bone and joint infection in 17%. The mean duration of antibiotic treatment prescribed was 37.5 days ( $\pm$  50.1 days, 95% confidence interval).

The analysis of appropriateness of the prescription showed that only 21 cases (40%) were considered as appropriate prescription, and 32 cases (60%) were considered as an unnecessary or inappropriate prescription according to French Infectious Diseases Society and ANSM guideline. Among the 32 cases of unnecessary or inappropriate prescription, 3 cases were considered as unnecessary antibiotherapy with lack of microbial arguments, one case was not adequate to the infection type and

the ecology of microorganisms, one case with incorrect in antibiotic dosage, one case with incorrect interval of dose administration, 3 cases with other therapeutic alternatives more adapted for ambulatory settings, and 23 cases with no recommendation mentioned in national guidelines.

**Conclusions:**

The result of our real-time analysis of outpatient's prescriptions of antibiotics reserved for the hospital settings showed that only 40% of prescription were appropriate. This low rate of correct prescription was related to a small proportion of infectious diseases advises in initial prescription. Implication of infectious diseases expertise in this monitoring care has improved the quality of antibiotic use.