

## O0528 Antibiotic consumption in French hospitals 2009-2016: a positive impact of national warning messages on carbapenems and ceftriaxone?

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**Background:** Hospitals are required to implement ATB stewardship programmes including surveillance of ATB consumption. The ATB-Raisin surveillance network was set up to describe ATB consumption at hospital level, with a common method. We studied trends in ATB between 2009 and 2016 to assess the impact of activities intended to improve ATB use, namely the dissemination of guidance focussing on specific antibiotics: carbapenems and third generation cephalosporins (3GC).

**Materials/methods:** Antibacterials for systemic use (J01class, WHO Anatomical Therapeutic Chemical classification, ATC-DDD system), rifampin and oral imidazole derivatives were surveyed for inpatients in voluntarily participating hospitals and expressed in number of defined daily doses (DDD) per 1 000 patient-days (PD). Data were retrospectively collected from pharmacy records and administrative services each year.

**Results:** The number of participating hospitals in the network increased from 997 in 2009 to 1470 in 2016. Data were provided each year by 490 hospitals accounting for 33% of French hospitals in 2016. ATB use increased between 2009 and 2013 (+4.1%) and tended to decrease since then (-3.7% between 2013 and 2016), resulting in a global antibiotic use in 2016 similar to 2009 (382 DDD/1000PD vs 383; +0.3%). The percentage of broad-spectrum antibiotics (amoxiclav, fluoroquinolones (FQ), 3GC, carbapenems, etc) remained stable around 58%. However, whereas FQ use regularly decreased over the period (-30%), carbapenem and 3GC uses increased (+43% and + 30%). Interestingly, the use of carbapenems tended to stabilize in 2011 and 2012, after the release of guidelines advocating restricting their use. Moreover, ceftriaxone use started to decrease from 2014 (-2.1DDD/1000PD, -9%) when a warning message calling for preferred use of cefotaxime was issued by the ATB-Raisin steering committee (+3.1 DDD/1000PD, +65% for cefotaxime).

**Conclusions:** Recent surveillance data tend to show a stabilisation and even a decrease in antibiotic consumption, namely for ATB targeted by guidelines, highlighting the usefulness of specific recommendations with clear messages. However, in a context of decreasing length of hospital stay, and of political will to develop treatments outside hospitals, future surveys should explore links between the changes in hospital use and consumption in outpatients and in the community.