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Paper Poster Session

News on ESBL and AmpC

Implementing the ESBL-E toolkit in Italy: organization and results of a European project

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Background: : Within Europe, the prevalence rate of ESBL-producing *enterobacteriaceae* (ESBL-E) in the Mediterranean region, estimated at 25% of *E.coli* strains in Italy, is raising particular concern. The ESBL toolkit, which was developed and implemented in Southeastern France to manage patients with ESBL-E, both in primary care and in the hospital setting, was shown to improve antimicrobial stewardship. In view of its effectiveness, the ESBL-E Toolkit was introduced in a region of Italy.

Material/methods: As part of an EU-sponsored cross-border cooperation (ALCOTRA), this ESBL-E management procedure was extended to the neighbouring Italian region of Liguria, in an area including a population of 214,000, 3 hospitals, 4 elderly nursing homes, 31 long term care facilities, and 180 general practitioners. A hospital-based infectious diseases specialist was specially appointed to provide advice on managing patients infected or colonized with ESBL-E. The ESBL-E toolkit (treatment protocols, information sheet detailing hygiene measures, check-lists), was adapted to conform to antimicrobials available in Italy. In Italy, bacterial samples are mainly analysed in hospital laboratories. Once informed of the results, the infectious diseases specialist alerted the hospital-, community- or nursing home-based physician, providing advice and offering the use of the ESBL-E toolkit.

Results: : In 2014 ESBL *E.coli* was present in 13,7% of urinary samples of the territory (N=2142), 30,7% of hospital samples (N=605) and 59,6% of nursing home urinary samples (N=108). ESBL *K.pneumoniae* was respectively in 6,8% (N=329), 13,7% (N=220) and 19,2% (N=29) of the samples and *Proteus* was ESBL in 21% (N=173), 33% (N=91), and 50% (N=38) of the samples.

We included 496 patients over 12 months in 2014. Real-time advice was provided in 364 cases. Antimicrobial treatment was thus appropriate for these patients. Treatment was avoided in 140 instances of colonisation, while such situations had previously always resulted in antibiotic prescription. Hygiene measures were implemented in nursing homes thanks to a remarkable degree of awareness and involvement although no recommendations were previously available. Information

about antimicrobial resistance was given to the patient or family in 94% of cases . A specific patient care process (emergency consultation if required, direct hospital admission) was created as a result of the project and allowed 13 direct hospitalisations.

Conclusions: : The ESBL-E toolkit was easily adopted in a country with a very different healthcare system from the French one, thanks to its implementation in a specific region with centralized bacterial investigations restricted to a hospital laboratory. The successful uptake of this toolkit by healthcare professionals demonstrates their practical approach in response to their need for assistance in managing such ESBL-E-infected or colonized patients. The availability of expert advice and specific tools is essential in countries with high resistance rates.