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Abstract (oral session)

Improved quality of care for patients infected or colonised with extended-spectrum beta-lactamases (ESBL)-producing Enterobacteriaceae in a French teaching hospital: a before-and-after, uncontrolled, interventional, prospective study

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Objectives: The increasing incidence of ESBL-producing Enterobacteriaceae (ESBL-E) in France has prompted the diffusion of national recommendations in February 2010. In our teaching hospital, the Infection Control (IC) team has been giving recommendations to the physicians in charge for all ESBL-E positive samples since 2005. Since 2007, all physicians have also been advised on the microbiology report to call the Infectious Diseases (ID) and IC specialists for advice for patients infected with ESBL-E. Since July 2012, an additional strategy has been implemented, with results of microbiological samples positive for 3rd-generation cephalosporin-resistant Enterobacteriaceae being e-mailed to the physicians in charge of the patients, as well as the multidisciplinary antibiotic stewardship management team (ID specialists, microbiologists, IC specialists and pharmacists). We wanted to assess the impact of this new strategy on quality of care standards recommended nationally regarding the management ESBL-E. Methods: A before and after uncontrolled interventional prospective study was conducted in our teaching tertiary-care hospital. We compared standards of care for two 3-month periods in 2010 and 2012 (from 16th July to 16th October), using the Chi-2 test or Student-t test depending on the variable. The following data was collected from the computerised medical record: ID specialist’s recommendations and information provided to the family physician. Results: The table presents the main standards of care recommended nationally for ESBL-E infections/colonisations. Compliance with these recommendations was significantly improved after the intervention: improved documentation of an ID specialist piece of advice, faster ID advice after ESBL-E identification, and information delivered to the family physician more frequently documented in the computerised medical record. Conclusions: Our multidisciplinary strategy has improved the quality of care for patients infected or colonised with ESBL-E, improving compliance with national recommendations. This strategy is currently rolled out in primary care and in other hospitals in our region.

Table. National standards of care regarding the management of ESBL-producing Enterobacteriaceae, and their evolution between 2010 (pre-intervention period) and 2012 (post-intervention period)

	2010	2012	p
Number of ESBL-producing Enterobacteriaceae colonised or infected patients	87	92	-
Documentation in the computerised medical record of an Infectious Diseases specialist piece of advice	16 (18%)	90 (98%)	$<10^{-3}$
Number of days between the ESBL-E identification and Infectious Diseases specialist advice	5.25	0.46	$<10^{-3}$
Information to the family physician documented in the computerised medical record:	14 (16%)	54 (58%)	$<10^{-3}$
- regarding the presence of multi-resistant bacteria	12	30	
- regarding the presence of multi-resistant bacteria and the infection control measures to implement	2	24	