P0551
Poster Session II
Surveillance of healthcare-associated infections

INFECTION CONTROL POLICIES AND ICU-ACQUIRED ESBL-CASES IN GERMANY: A CROSS-SECTIONAL QUESTIONNAIRE SURVEY OF 224 ICUS

F. Maechler[1], F. Schwab[1], C. Geffers[1], A. Gropmann[1], P. Gastmeier[1]

[1]Infection Control, Charité, Berlin, Germany

Objectives:

Little information is available on infection control policies for extended-spectrum-betalactamase-producing *Enterobacteriaceae* (ESBL-E) in Germany, and evidence for the best approach to control the transmission of multidrug-resistant Gram-negative organisms is scarce. The aim of this cross-sectional study was to gain evidence about infection control (IC) practices for ESBL- carriers in German intensive care units (ICUs) and to evaluate the association between IC policies, structural parameters and new acquisition of ESBL-producing bacteria in the ICUs.

Methods:

A questionnaire survey was sent to all ICUs participating in the MDRO-module of the German nosocomial infection surveillance system KISS (n=350) in October 2011. Association of IC-policies with ICU-acquired ESBL-E was estimated using generalized linear modeling (GLM).

Results:

224 ICUs completed the questionnaire and submitted MDRO-data to the KISS-system (response rate 64%). There was wide variation of infection control policies for ESBL-E-carriers.

Common measures used were cohorting ESBL-carriers (87%) and barrier precautions for ESBL-E-carriers in shared rooms (79%). 18 % reported to put ESBL-E-carriers in single rooms at all times. 74% did not obtain ESBL-E-surveillance cultures from patients at admission. 34% reported obtaining surveillance cultures from contact patients and 21% demanded preemptive isolation for contact patients until proven negative. 40% (n=89) had no alert-system to identify former ESBL-E-carriers at readmission.

Median ESBL-acquisition within ICUs was 0.37/1000 patient days (pooled mean 0.76). In this project, we could not detect an influence of ESBL-policies on ESBL-acquisition rates in the participating ICUs. Factors impacting on ESBL-E-acquisition in the multivariate analysis were high prevalence of ESBL at admission (IRR 2.74, 95%CI 1.87-4.02), large hospitals with more than 600 beds (IRR 1.55, 95%CI 1.07-2.24) and the geographic location in the north or in the south-west of the country (IRR 0.42, 95%CI 0.23-0.79 and 0.38, 95%CI 0.22-0.67, respectively).

Conclusions:

Policies to control transmission or infection with ESBL-E differed widely between ICUs within a single healthcare system. This should be of particular concern, because so far ESBL-E continue spreading despite of all efforts to contain them and it would be devastating to experience a similar development in the case of carbapenem-resistant organisms.

Solid evidence for the optimal approach to control the spread of multidrug-resistant Gram-negative bacteria is urgently required to enable concerted action on a global scale.