

POSTER PRESENTATION

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Evaluation of two different control charts (I and U) in the study of multiresistant bacteria contact precautions dynamics in a non-endemicity hospital setting

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Introduction / objectives

Data about usefulness of Statistical Process Control in the study of contact precautions (CP) dynamics for control of resistant bacteria are scarce.

Methods

Retrospective cohort study. All admitted patients colonized or infected by MRSA, MDR-PAE and *Abaumannii* from 2005 to 2010 were included. Period I (01/2005-04/2008) without active surveillance; Period II (05/2008-12/2010), active surveillance in all patients admitted to the Intensive Care Unit and in readmitted previously colonized patients. Clonality was studied by PFGE. Charts: I-graph (Y axis shows the days between two consecutive CP; X axis: consecutive number of CP) and U-graph (CP per 10.000 patients days clustered by quarters).

Results

The average days between two consecutive CP in period I and period II were: 20 vs 31 days for MRSA, 41 vs 46 days for MDR-PAE and 53 vs 59 days for Ab, respectively. The average rate of patients under CP per 10.000 patient-days were: 3.19 vs 2.51 for MRSA, 1.40 vs 1.49 for PAE MR and 1.35 vs 1.09 for Ab (period I and II respectively). All outbreaks were coincident for special negative causes in graph I while the U graph only detected 2 out of 5 (type II error). All special positive causes was detected by graph I just after outbreak intervention (more days between consecutive CP). Although

graph I often showed positive special causes in 5 out of 12, a type I error could not be ruled out.

Conclusion

In a non endemic setting when few events are present, the I graph is more sensitive and less specific, while the U graph is more specific but less sensitive.

Disclosure of interest

None declared.

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