

Documents

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Assessing the impact of a multidimensional approach and an 8-component bundle in reducing incidences of ventilator-associated pneumonia across 35 countries in Latin America, Asia, the Middle East, and Eastern Europe (2024) *Journal of Critical Care*, 80, art. no. 154500, . Cited 5 times.

DOI: 10.1016/j.jcrc.2023.154500

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Abstract

Background: Ventilator associated pneumonia (VAP) occurring in the intensive care unit (ICU) are common, costly, and potentially lethal. Methods: We implemented a multidimensional approach and an 8-component bundle in 374 ICUs across 35 low and middle-income countries (LMICs) from Latin-America, Asia, Eastern-Europe, and the Middle-East, to reduce VAP rates in ICUs. The VAP rate per 1000 mechanical ventilator (MV)-days was measured at baseline and during intervention at the 2nd month, 3rd month, 4–15 month, 16–27 month, and 28–39 month periods. Results: 174,987 patients, during 1,201,592 patient-days, used 463,592 MV-days. VAP per 1000 MV-days rates decreased from 28.46 at baseline to 17.58 at the 2nd month (RR = 0.61; 95% CI = 0.58–0.65; P < 0.001); 13.97 at the 3rd month (RR = 0.49; 95% CI = 0.46–0.52; P < 0.001); 14.44 at the 4–15 month (RR = 0.51; 95% CI = 0.48–0.53; P < 0.001); 11.40 at the 16–27 month (RR = 0.41; 95% CI = 0.38–0.42; P < 0.001), and to 9.68 at the 28–39 month (RR = 0.34; 95% CI = 0.32–0.36; P < 0.001). The multilevel Poisson regression model showed a continuous significant decrease in incidence rate ratios, reaching 0.39 (p < 0.0001) during the 28th to 39th months after implementation of the intervention. Conclusions: This intervention resulted in a significant VAP rate reduction by 66% that was maintained throughout the 39-month period. © 2023

Author Keywords

Developing countries; Device-associated infection; Healthcare-associated infection; Hospital infection; Limited resources countries; Low-income countries; Network; Nosocomial infection; Ventilator-associated pneumonia

Index Keywords

adult, Article, Asia, developing country, device infection, Eastern Europe, female, healthcare associated infection, hospital infection, human, low income country, major clinical study, male, Middle East, resource limited setting, South and Central America, ventilator associated pneumonia, cross infection, incidence, infection control, intensive care unit, procedures, ventilator associated pneumonia; Asia, Cross Infection, Europe, Eastern, Humans, Incidence, Infection Control, Intensive Care Units, Latin America, Middle East, Pneumonia, Ventilator-Associated

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Publisher: W.B. Saunders

ISSN: 08839441

CODEN: JCCAE

PubMed ID: 38128216

Language of Original Document: English

Abbreviated Source Title: J. Crit. Care

2-s2.0-85180749651

Document Type: Article

Publication Stage: Final

Source: Scopus