EuroSciCon

8th Edition of International Conference on

Infectious Diseases

June 07-08, 2018
London, UK

Jinjutha Kaewmak et al., J Prev Infect Cntrol 2018, Volume 4
DOI: 10.21767/2471-9668-C1-003

IMPACTS OF HOSPITAL ASSOCIATED INFECTIONS WITH INVASIVE DEVICES IN A TERTIARY CARE HOSPITAL, BANGKOK, THAILAND

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The objectives of this study were to determine impacts of hospital associated infections with invasive devices in a tertiary care hospital, Bangkok, Thailand. This descriptive study to determine impacts of hospital associated infections with invasive devices of ventilator-associated pneumonia (VAP), central line-associated bloodstream infection (CLABSI) and catheter-associated urinary tract infection (CAUTI) including mortality rate, case fatality rate, length of hospital stay, and direct cost of VAP, CLABSI and CAUTI treatment of patients undergoing insertion invasive devices who were admitted into 6 ICUs and 36 general wards during October 2016 to September 2017. VAP, CLABSI and CAUTI occurrence were collected by the researcher using definition of the Centers for Disease Control and Prevention (CDC) and followed daily until discharge from hospital or death. Data were analyzed using descriptive statistics. Mortality rate of VAP cases was 7.4 per 100 mechanically ventilated patients. Case fatality rate was 42.6 percent. Range of length of hospital stay was 5-246 days (Mode = 6 days). Eighty-nine percent of VAP cases developed VAP after 6 days of receiving mechanical ventilation (late onset). Total attributable cost of VAP was 103,285.56 USD. Mortality rate of CLABSI cases was 8.6 per 100 central lines patients. Case fatality rate was 51.9 percent. Range of length of hospital stay was 7-182 days (Mode = 8 days). Total attributable cost of CLABSI was 26,879.94 USD. Mortality rate of CAUTI cases was 1.7 per 100 catheter patients. Case fatality rate was 19.8 percent. Range of length of hospital stay was 4-297 days. Total attributable cost of CAUTI was 96,577.32 USD. The results revealed that impacts of VAP, CLABSI and CAUTI to patients and hospitals. Hospital personnel who take care of inserted invasive devices patients need to realize the impacts of VAP, CLABSI, CAUTI and strictly follow infection prevention activities.

Recent Publications

1. Al-Mousa H H, Omar A A, Rosenthal V D, Salama M F, Aly N Y, Noweir M E D and George S M (2016) Device-associated infection rates, bacterial resistance, length of stay, and mortality in Kuwait: international nosocomial infection consortium findings. American Journal of Infection Control 44(4):444-449.
2. Gonzales M, Rocher I, Fortin É, Fontela P, Kaouache M, Tremblay C and Quach C (2013) A survey of preventive measures used and their impact on central line-associated bloodstream infections (CLABSI) in intensive care units (SPIN-BACC). BMC Infectious Diseases 13(1):562.
3. Hu B, Tao L, Rosenthal V D, Liu K, Yun Y, Suo Y and Hao C (2013) Device-associated infection rates, device use, length of stay, and mortality in intensive care units of 4 Chinese hospitals: international nosocomial control consortium findings. American Journal of Infection Control 41(4):301-306.
4. Kumar S, Sen P, Gaind R, Verma, P K, Gupta P, Suri P R and Rai A K (2017) Prospective surveillance of device-associated health care–associated infection in an intensive care unit of a tertiary care hospital in New Delhi, India. American Journal of Infection Control 46(2):202-206
5. Mathai A S, Phillips A, Kaur P and Isaac R (2015) Incidence and attributable costs of ventilator-associated pneumonia (VAP) in a tertiary-level intensive care unit (ICU) in northern India. Journal of Infection and Public Health 8(2):127-135.

Biography

Jinjutha Kaewmak is a Professional Nurse. She works in the operating theater, specializing in Ophthalmic Surgery and expertise in Nursing Care of Patients with Infectious Diseases and Infection Control. Her present research is in Epidemiology and impacts of hospital-associated infections on older patients in tertiary care hospitals and has participated in the 28th Annual Academic Meeting Rajavithi Hospital, Bangkok, Thailand. In 2017, she was responsible and participated and she took part in project about effect of using collaborative quality improvement of infection prevention in her hospital.

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