

Title :The collaborative quality improvement project on the incidence of Ventilator-associated pneumonia (VAP) in Rajavithi hospital and network. Bangkok,Thailand.

Author(s) :Warugee Chujit, Pragoub Thavesuk, Chutima Saenthaveedamrongkul, Suthasinee Pongfu,Thanuch Buddhawarang et al. Rajavithi Hospital.

Objective :The purpose of this action research and knowledge management aim to collaborate the quality improvement and decrease the Incidence of Ventilator-associated pneumonia.

Method : This study divided into 2 phases, phase I: action research in Neurosurgery Intensive care unit after that action research in 4 general medicine wards and continuous quality improvement were conducted in 2002-2008. Phase II: knowledge management were to collaborate the quality improvement in Rajavithi hospital and network in 2009-2010. Data collection during the project monthly Ventilator-associated pneumonia surveillance was performed in patient who was receiving mechanical ventilator and observation ventilator bundle were strengthened, diagnosis VAP definition criteria of the Centers for Disease Control and Prevention in 2009 and data was confirmed by Infectious doctor, nosocomial infection VAP interview. Data was analyzed by using descriptive statistics, Z-test, Spearman rank correlation co efficiency and Multiple regression analysis by stepwise method.

Result : In phase I, the staff nurse in neurosurgery intensive care unit was significantly increased in using VAP bundle in practice 90% ($p < 0.01$) and incidence of VAP decreased from 30 to 14.5 episodes per 1,000 ventilator days. While the 4 general medicine wards showed that the incidence of VAP was decreased from 11.5 to 9.8 episodes per 1,000 ventilator days ($p < 0.05$). Phase II, the collaborative quality improvement and network revealed that over all VAP rates were decreased from 10.8 to 7.8 episodes per 1,000 ventilator days and comparison with network the score was excellent. The guidelines were developed for VAP bundles ,VAP surveillance system ,decontamination ventilator circuits and equipments system ,and innovations for decreased Ventilator-associated pneumonia in Rajavithi hospital and network.

Conclusion : Over all VAP incidence density rate has decreased respectively. The collaborative intervention has significantly reduced VAP rate.