A Continuous Quality Improvement (CQI) Program of Prevention and Control of Multiple-drugs Resistant Organisms (MDROs) Infections in a Respiratory Medical Ward

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Introduction
There was Methicillin-Resistant Staphylococcus aureus (MRSA) endemic and Multiple-drugs resistant Acinetobacter (MDRA) upsurge in a respiratory medical ward since 2Q 2015. Patients with MDROs infection in respiratory system and required noninvasive ventilation (NIV) had dispersed the MDROs to environment significantly and caused a great challenge in infection control.

Objectives
This program aimed to control the spread of MDROs by bundle of infection control enhancement

Methodology
A pilot program conducted in this respiratory medical ward, from December 2015 to March 2016:
1. Engage staff in ward to develop the CQI program
2. Enhance the quality care for 5 basic care procedures: hand hygiene, urinary catheter care, nasogastric tube care, incontinence care and perianal care
3. Promote hand hygiene by training senior nurses in ward as advocates to monitor the compliance of different disciplinary staff and give concurrent feedback
4. Enhance the respiratory equipment decontamination by standardizing as high level disinfection or replaced by disposable equipment
5. Enhance environmental hygiene by creating checklists for high touch environment in respiratory cubicle and terminal disinfection of beds and isolation rooms
6. Facilitate isolation placement of MDROs patients by single room/cohort isolation and care from clean to dirty

Result
1. All ward staff (n=36) had been audited on 5 basic care procedures in 1Q-2016
2. Total 19 senior nurses in ward were trained to be the hand hygiene auditors. Hand hygiene overall compliance rate was improved from 77% to 96%
3. Disinfection of respiratory equipment in ward was eliminated. Respiratory equipment was either disposable or undergone high level disinfection.
4. Both MDRA and MRSA cases decreased in this ward. Monthly MRSA rate (per 1000 bed days) significantly decreased from 6.6 in July 2015 to 1.4 in April 2016. There had no new MDRA clinical cases from Nov 2015 to Mar 2016
5. The successful CQI program had been implemented to all other 9 medical wards in CMC

Conclusion
The multidisciplinary joint CQI program had controlled the MDROs in ward successfully.