HAC 2016 ABSTRACT for Oral Presentations

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Project title
Measures for the successful implementation of peripheral venous cannula care bundle

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Introduction
Peripheral venous cannulation (PVC) is a common procedure that can have undesirable effects, the most common one being phlebitis. Moreover, up to 6.2 % of hospital-acquired bacteremia may be directly attributable to peripheral IV cannulation. Many adverse events related to the use of peripheral venous cannula are preventable by the use of multifaceted interventions. Overseas study had shown that regular “plan, do, study, act” (PDSA) cycles can help to improve the compliance of the implementation of ‘care bundle’ of these interventions.

Objectives
To standardize the peripheral venous cannula care practice, promote ‘care bundle’ approach and to reduce peripheral venous cannula related phlebitis in the participating wards (total of 4 wards) of the Department of Orthopaedics and Traumatology of TMH over a study period of 6 months

Methodology
The components of the care bundle included insertion, ongoing care and documentation. Insertion: proper aseptic technique and hand hygiene, skin preparation using 2% chlorhexidine gluconate in 70% isopropyl alcohol, application of sterile and transparent dressing. Ongoing care: proper hand hygiene, daily site inspection and evaluation of indication for continuation, decontaminate cannula access port by 2% chlorhexidine gluconate in 70% isopropyl alcohol, scheduled cannula replacement at 72 hours unless in patients with limited venous access, prompt removal of cannula with Visual Infusion Phlebitis (VIP) score greater than or equal to 2 / not in use for >24 hours, timely administration set replacement. Documentation of insertion and ongoing care was done by the health care workers using the peripheral venous cannula assessment record form. Monthly plan, do, study, act (PDSA) cycles was being conducted on sampled forms throughout the study period, from October 2013 to April 2014.

Result
At the end of study, 3525 assessment forms (by ward staff) were collected. The average compliance rate of proper documentation by ward staff was 90% (Range: 79.6% to 95.8%) from the sampled forms. Percentage of peripheral vein phlebitis assessed by Infection Control Team was significantly decreased from 10.7% before the study to 4.7% over the study period (p-value=0.003). PVC-related Staphylococcus aureus bloodstream infection (BSI) rate per 1000 catheter days remained as 0 before and over the study period.The implementation of PVC care bundle has successfully aroused the awareness among the staff in the participating wards to preventing PVC related complications. The reduction in PVC related phlebitis is encouraging. It is recommended to extend the implementation of the PVC care bundle to all clinical departments in NTWC as well as other hospitals.