865

Yatim J[1]
1. *Singapore General Hospital*

AN INTEGRATIVE REVIEW OF EVIDENCE-BASED STRATEGIES TO PREVENT CATHETER-ASSOCIATED URINARY TRACT INFECTION

Hypothesis / aims of study
Prolonged catheterization is the primary risk factor for Catheter-associated Urinary Tract Infection (CAUTI). CAUTI has generated a lot of interest in medical practice and research. CAUTI comprises 30-40% of all institutionally acquired infections, and 80% of these infections are virtually caused by indwelling urinary catheters (UC). This paper is a report of an integrative review aimed at examining the findings of existing research studies of evidence-based strategies to prevent CAUTI.

Study design, materials and methods
Systematic computer searches were conducted of the MEDLINE and Cochrane databases, the PubMed Journals and MeSH databases, Google Scholar, CINAHL and EMBASE databases, including Up-to-Date, covering the period of 2003 to 2016. A narrative review summarises evidence-based CAUTI prevention strategies including study designs, patient populations and the interventions employed to avoid unnecessary catheter placement or to prompt catheter removal. The qualities of the evidence base of the studies were assessed using methods from the GRADE criteria.

Results
14 studies and a meta-analysis, were identified and summarised, that met the inclusion criteria. The studies employ reminders and/or stop orders to prompt removal of unnecessary urinary catheters that reported at least one CAUTI or UC use. Most of these interventional studies involved reminder systems to elicit the review for continued use of indwelling urinary catheters. 2 key interventions emerged: nurse-led and informatics-led with two sub-types – computerized reminders and chart reminders. 3 studies also evaluated other interventions, such as using Bladder Bundle which aimed at reducing infection risk or catheter use, in addition to the reminder or stop-order intervention.

Concluding message
The literature supports nurse-led or chart reminders to stimulate consistent daily assessment of the continuing need for a catheter and to remove it as soon as possible. Similarly, this allows firm conclusions regarding the benefit of certain interventions that are applicable to practice. Implementation strategies are important because reducing UC use involves changing well established habits.

References
1. Adams, D., Bucior, H., Day, G. & Rimmer, J.A. (2012). HOUDINI: make that urinary catheter disappear – nurse-led protocol. Journal of Infection Prevention, 13(20, 44-46.
2. Apisarnthanarak, A., Thongphubeth, K., Sirinvaravong, S., Kitkangvan, D., Yuekyen, C., Warachan, B.,…Fraser, V.J. (2007). Effectiveness of multifaceted hospitalwide quality improvement programs featuring an intervention to remove unnecessary urinary catheters at a tertiary care center in Thailand. Infection Control Hospital Epidemiology; 28(7), 791–798.
3. Bagshaw, S. & Laupland, K. (2006). Epidemiology of intensive care unit-acquired urinary tract infections. Current Opinion Infectious Disease, 19, 67-71.

Disclosures
Funding: Nil **Clinical Trial:** No **Subjects:** NONE