



## Prevention of Catheter-Associated Urinary Tract Infection Among Adult Patients in an Intensive Care Unit: A best practice implementation project

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### Abstract:

The objective of this evidence based implementation project was to promote evidence based best recommendations to implemented practice in the prevention catheter-associated urinary tract infection (CAUTI) in an intensive care units in Taipei. CAUTI caused adverse events of patient discomfort, prolonged hospital stay and increased cost and mortality. The infection rate of CAUTI was 2.19-10.58% in the ICU on 2018. The main causes of CAUTI are indwelling urethral catheter indwelling days and care. The effective prevention plan of CAUTI require an evidence-based approach. A clinical audit was undertaken using the JBI PACES tool. We evaluated nine audit criteria that represented best practice recommendations needed to apply for indwelling Foley care for CAUTI. Baseline and follow up audits and multiple strategies execution to overcome obstacles throughout an eight-week period in the ICU. The results showed improvement in compliance with seven guideline recommendations. The guideline recommendations that healthcare providers have received education regarding Foley catheter care from 23% to 100% compliance. Compliance with daily assessment and documentation of ongoing need to continue the Foley catheter compliance improved 56%. To decrease the incidence of catheter associated UTIs, focused on reducing the number of Foley catheter device days from 10.85 to 7.67days. Conclusions: Overall the project was achieved and significant improvement in evidenced-based practice in prevent CAUTI. Criteria-based Foley catheter guidelines, a decision-making algorithm, and a daily checklist were implemented that led to a significant reduction in Foley catheter device days and a decrease in catheter-associated urinary tract infections..

### Biography:

Yi-Hung Yang is currently a Ph.D. candidate of School of Nursing, National Yang-Ming University, Taipei. YiHung Yang is a part-time lecturer in the Department of Nursing, Chang Gung



University, also has 25 years of clinical care including 13 years of intensive care experience in the Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan. Yi-Hung Yang is also publishing research in related journals and seminars.

### Recent Publications:

1. Ling, M. L., A. Apisarntharak and G. Madriaga, 2015. The burden of healthcare-associated infections in Southeast Asia: a systematic literature review and meta-analysis. *Clinical Infectious Diseases*, 60: 1690-1699
2. Li, Y., 2017. Urethral Catheter (Indwelling Shortterm): Urinary Tract Infection. The Joanna Briggs Institute EBP Database, JBI@Ovid, JBI594
3. Voutilainen, A. T. Saaranen and M. Sormunen, 2017. Conventional vs. e-learning in nursing education: a systematic review and meta-analysis. *Nurse education today*, 50: 97-103
4. Wei-Zen Chen, Yi-Hung Yang: An 8 Gbps, 4: 1 transition-aware self-toggling multiplexer. *APCCAS 2014*: 659-662
5. Wei-Zen Chen, Tai-You Lu, Yan-Ting Wang, Jhong-Ting Jian, Yi-Hung Yang, Guo-Wei Huang, Wen-De Liu, Chih-Hua Hsiao, Shu-Yu Lin, Jung Yen Liao: A 160-GHz receiver-based phase-locked loop in 65 nm CMOS technology. *VLSIC 2012*: 12-13

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