**Literature Evaluation Table**

**Student Name:**

**Change Topic (2-3 sentences):** How to reduce the occurrence of urinary tract infections in intensive care units within hospitals.

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| **Criteria** | **Article 1** | **Article 2** | **Article 3** | **Article 4** |
| **Author, Journal (Peer-Reviewed), and**  **Permalink or Working Link to Access Article** | American Nurses Association, ANA Journals, and <https://www.nursingworld.org/practice-policy/workforce/what-is-nursing/the-nursing-process/> | Bhatia, Daga, Garg, and Prakash; Journal of Global Infectious Diseases; and <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2889669/> | Burton, Edwards, Srinivasan, Fridkin, and Gould; Infection Control & Hospital Epidemiology; <https://www.cambridge.org/core/journals/infection-control-and-hospital-epidemiology/article/trends-in-catheterassociated-urinary-tract-infections-in-adult-intensive-care-unitsunited-states-19902007/836CC1A3539F70A4F0BF1ECA6F374229> | Chenoweth, and Saint; Critical Care Clinics; and <https://www.criticalcare.theclinics.com/article/S0749-0704(12)00082-6/abstract> |
| **Article Title and Year Published** | The Nursing Process, 2009 | Urinary Catheterization of medical wards, 2010 | Trends in catheter-associated urinary tract infections in adult intensive care units-United States, 1990-2007; 2015 | Preventing catheter-associated urinary tract infections in the intensive care unit, 2012 |
| **Research Questions (Qualitative)/Hypothesis (Quantitative), and Purposes/Aim of Study** | Hypothesis is identifying the nursing process. Aim is to identify the steps taken in achieving the nursing process. | Hypothesis is to determine the inappropriate use of catheterization in medical wards in the US, and the frequency of this use. Aims are determination of inappropriate catheterization frequency within medical wards together with reasons, and inappropriate catheterization inappropriate catheterization. | Hypothesis is to identify changes in CAUTI event rates. Aim is change examination in CAUTI event rates in adult ICUs in the United States, from 1990 to 2007. | Hypothesis is to identify the most effective strategies for dealing with UTIs in ICUs. Aim is to prevent catheter-associated urinary tract infections in the intensive care unit. |
| **Design (Type of Quantitative, or Type of Qualitative)** | Qualitative - Ethnographic research | Quantitative – descriptive design | Descriptive design | Experimental design |
| **Setting/Sample** | Hospital | Hospital-based | Hospitals | Hospital-based |
| **Methods: Intervention/Instruments** | Patients, assessment by nurse or diagnosis | Methods, or instruments applied were patients in tertiary care hospital medical wards, and patient profiles, too, were used. | CAUTI event identification was conducted using standards methods, by the infection preventionists; poissom regression was used in percent change estimation; and pooled mean annual SUTI and ASB rates. | Urinary catheter use limitation; urinary catheters insertion, and catheters through aseptic techniques; urinary catheter perioperative management; anti-effective catheter use, and use of indwelling urinary catheters as alternatives. |
| **Analysis** | The status of the patient, and the nursing care effectiveness ought to undergo continuous evaluation, and undergo modification, when needed. | Wide prevalence of inappropriate catheterization even in the case of a tertiary care medical center. Patients who did not require catheterization were catheterized, thus ended up acquiring CAUTI when diagnosed. Better infection control is required, thus calling for aseptic techniques being implementation on more stringent grounds. | With the decline in the CAUTI rates among adults in ICU, it is important to look into strategies applied, so that the decline can carry on, and prevention guidelines of CAUTI can further be implemented. | Many health care facilities have failed to adopt CAUTI prevention practices leading to an increase in patients being infected by UTIs. Urinary catheters are responsible for the greatest portion of UTIs. There is a likelihood of attention towards prevention of CAUTI increasing with time. |
| **Key Findings** | Nurse’s care plan of the patient. | A symptomatic urinary tract infection only affected 22.4% of the patients, with a similarity in the organism causing the infection, with 30.4% of the patients developing asymptomatic urinary tract infection. Majority of patients suffered from asymptomatic UTIs, with E.coli being the most pronounced organism in patients with BCFC. | 22,973 ASB, and 36, 282 SUTIs episodes resulted from the study. Significant declines were identified in SUTI, and ASB rates. | It was found that hospital leadership, intervention bundles, and collaborative are used in health care infection prevention initiative implementation since they are powerful tools. |
| **Recommendations** | Provision of continuous care to patient when hospitalized, and before discharge. | Sensitization of physicians on need evaluation in patients before taking on the catheterization intervention. | Prevention strategies used in CAUTI rate reduction to be further assessed, and new CAUTI prevention guidelines to be implemented. | Encouraging avoidance of urinary catheter placement, and appropriate promotion of early removal of urinary catheters. |
| **Explanation of How the Article Supports EBP/Capstone Project** | How best to play the nurse’s role in providing treatment to patients with UTIs (American Nurses Association, 2009). | How best to catheterize patients in medical wards, thus reducing infections (Bhatia, Daga, Garg, & Prakash, 2010). | Provide understanding about how best to deal with the UTIs at different stages, based on the trends following, and to know whether, or not there is improvement in treatment (Burton, Edwards, Srinivasan, Fridkin, & Gould, 2011). | How best to deal with UTIs, and the strategies to put in place in order to deal with the issue of UTIs (Chenoweth, & Saint, 2013). |

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| **Criteria** | **Article 5** | **Article 6** | **Article 7** | **Article 8** |
| **Author, Journal (Peer-Reviewed), and**  **Permalink or Working Link to Access Article** | Conway, Pogorzelska, Larson, and Stone; American Journal of Infection Control; and <https://www.sciencedirect.com/science/article/pii/S0196655311012569> | Magill, Edwards, Bamberg, Beldavs, Dumyati, Kayner, Lynfield, Maloney, McAllister-Hollod, Nadle, Ray, and Thompson; The New England Journal of Medicine; and <https://www.nejm.org/doi/full/10.1056/NEJMoa1306801> | Marra, Camargo, Goncalves, Sogayar, Moura, Guastelli, Rosa, Victor, santos, and Edmond; American Journal of Infection Control; and <https://www.sciencedirect.com/science/article/pii/S0196655311001611> | Infectious Diseases Society of America; Oxford Academic; and [https://academic.oup.com/cid/article/46/2/i/461733#](https://academic.oup.com/cid/article/46/2/i/461733) |
| **Article Title and Year Published** | Adoption of policies to prevent catheter-associated urinary tract infections in United States intensive care units, 2012 | Multistate point-prevalence survey of health care-associated infections, 2014 | Preventing catheter-associated urinary tract infection in the zero-tolerance era, 2011 | Clinical Infectious Diseases, 2008 |
| **Research Questions (Qualitative)/Hypothesis (Quantitative), and Purposes/Aim of Study** | Hypothesis is to identify the relation between CAUTI incidence rates, and prevention policies. Aim is adherence, and recognition of CAUTI prevention policies, to help with relationship determination between CAUTI incidence rates, and prevention policies in place. | Hypothesis is the generation of estimates updated, regarding the national burden that is the infections. Aim is the conducting of a health care-associated infection point-prevalence survey on a multistate level. | Hypothesis is to identify intervention effect. Aim is the prevention of urinary tract infection of a catheter-associated nature in the era of zero tolerance. | Hypothesis is identification of the clinical infectious diseases. Aim is giving detailed information on the clinical infectious diseases. |
| **Design (Type of Quantitative, or Type of Qualitative)** | Descriptive design | Descriptive design | Experimental design | Experimental design |
| **Setting/Sample** | Hospitals | Hospitals | Critical care part of the hospital | Different people around the world |
| **Methods: Intervention/Instruments** | 441 hospitals used in the study, National Health care Safety Network | One-day surveys, use of trained data collectors, hospital personnel, use of survey, and sample data of patients on infections acquired. | Intensive care unit, step-down units, performance monitoring, evidence-based practices, and bladder bundles. | Patients around the world. |
| **Analysis** | SPSS version 19 used in analysis of data. Other analyses were conducted via mean, and median of CAUTI rates; generalized linear regression, and bivariate analysis made use of Mann-Whitney tests; bivariate analyses were conducted; and odds ratios, too, were used in analyses. | Version 9.3 of SAS software was used, and versions 2.3.1, and 3.01 of openEpi Software; patient comparison was conducted; discharge weighting was used; burden estimates were used; log-binomial regression was also applied; and mid-P exact method, too. | 2-sided statistical tests applied, generalized linear model, windows 17.0 SPSS used to conduct analyses, and Poisson distribution used. | Wide distribution of infections caused by P. Knowlesi, non-PC7 serotypes caused increase in infections in 2002, mortality higher in patients with vancomycin, mortality rate associated with CoNS native valve endocarditis related to that in S. aureus. |
| **Key Findings** | Only a small portion of the ICUs within the hospitals that were surveyed had policies implemented to aid in the UTI prevention. | 51.9% of patients within hospitals that were surveyed were scheduled for anti-microbial agents. 1 of every 25 patients on inpatient has an infection that is health care associated, and within acute care hospitals. | There was significant reduction in CAUTI from 7.6/1000 catheter-days to 5.0/1000 catheter-days. | Increase in infections in the presence of certain biological agents. |
| **Recommendations** | Further research on clarity in relationship identification between CAUTI incidence rates, and prevention recommendations’ adherence. | Health care associated infections epidemiology, and prevention success trends’ to be better understood. | CAUTI prevention ought to be further researched into. | Increase in application of combination anti-retroviral therapy. |
| **Explanation of How the Article Supports EBP/Capstone** | Viewing the effect that prevention policies will have on catheterization, and whether, or not infections will reduce as a result (Conway, Pogorzelska, Larson, & Stone, 2012). | Identification of the most affected states, and how best to deal with the issue of infections in these states (Magill, Edwards, et. al., 2014). | Effects that the zero tolerance era had on infections, and how to go about dealing with the infections in the same manner (Marra, Camargo, et.al., 2011). | Gaining knowledge about clinical infectious diseases, to understand UTIs, and know how to deal with them (Infectious Diseases Society of America, 2008). |

References

American Nurses Association, Nursing World. The Nursing Process (2009). *American Nurses Association.*[http://www.nursingworld.org](http://www.nursingworld.org/).

Bhatia, N., Daga, M. K., Garg, S., & Prakash, S. K. (2010). Urinary catheterization in medical wards. *Journal of global infectious diseases*, *2*(2), 83.

Burton, D. C., Edwards, J. R., Srinivasan, A., Fridkin, S. K., & Gould, C. V. (2011). Trends in catheter-associated urinary tract infections in adult intensive care units—United States, 1990–2007. *Infection Control & Hospital Epidemiology*, *32*(8), 748-756.

Chenoweth, C., & Saint, S. (2013). Preventing catheter-associated urinary tract infections in the intensive care unit. *Critical care clinics*, *29*(1), 19-32.

Conway, L. J., Pogorzelska, M., Larson, E., & Stone, P. W. (2012). Adoption of policies to prevent catheter-associated urinary tract infections in United States intensive care units. *American journal of infection control*, *40*(8), 705-710.

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Magill, S. S., Edwards, J. R., Bamberg, W., Beldavs, Z. G., Dumyati, G., Kainer, M. A., ... & Ray, S. M. (2014). Multistate point-prevalence survey of health care–associated infections. *New England Journal of Medicine*, *370*(13), 1198-1208.

Marra, A. R., Camargo, T. Z. S., Gonçalves, P., Sogayar, A. M. C. B., Moura Jr, D. F., Guastelli, L. R., ... & Edmond, M. B. (2011). Preventing catheter-associated urinary tract infection in the zero-tolerance era. *American journal of infection control*, *39*(10), 817-822.