

Develop a clinical question in a pico format that will yield the best and most re...

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In this paper, the will identify a clinical setting which is a matter of great concern; the problems faced by patients in that setting and thereby, develop a PICO question which needs to be answered to handle the situation. Clinical setting The clinical setting that has been chosen is the increasing incidence of ventilator-acquired pneumonia in the healthcare settings. Ventilator Associated Pneumonia (VAP) refers explicitly to nosocomial bacterial pneumonia that occurs 48 hours after initiating mechanical ventilation and affects approximately 10-20% of patients in United States who are under mechanical ventilation (Chastre & Fagon, 2002, p. 868). List of concerns Ventilator-acquired pneumonia has been linked to increased ventilator time and hospital stays, increased cost, and increased mortality (Vincent, Barros & Cianferoni, 2010, 1927). It is a factual truth that VAP has surpassed all sorts of infection and has been deemed as the foremost cause of death amongst all types of nosocomial infection. Patients often hunt for a treatment or a combination of treatments which are effectual and leads to early recovery. It is very important that facts about the treatment and its efficacy must be communicated to the healthcare settings, staff, family, and patients since staying in the intensive care units is taxing for both the patient and family. Generally, patients go to a hospital which provides a cost-effective treatment and has low occurrence of VAP. Additionally, the effectiveness of the treatment forms the basis of the patients' selection and decision to continue in that treatment. If the selected treatment does not contribute to patients' recovery, they are likely to try a combination treatment or a new one. Most importantly, it has been observed that the mortality rates in combination therapies are much lower than in the case of

monotherapies. On clinically studying 200 patients with *P. aeruginosa* bacteremia, it was revealed that the mortality rates for VAP patients undergoing monotherapy was 88% (7 out of 8 patients) whereas rate for those undergoing combination therapy was 35% (7 of 20 patients) (Chastre & Fagon, 2002, p. 892). According to Arroliga et al. (2012), ventilator care bundles are evidence-based practices and multidisciplinary approaches that have significantly contributed in reducing the occurrence of VAP in the United States and in enhancing health outcomes (p. 688). This approach includes a string of evidence based interventions associated to ventilator care such as head elevation, daily sedation, assessment of readiness to extubate, and prophylaxis for peptic ulcer disease and deep vein thrombosis, which when implemented together will achieve significantly better results than when applied separately (Gillespie, 2002, 48). Clinical trials, preferably analyzed together in a meta-analysis, must be conducted in order to resolve the problem of increasing occurrence of VAP in healthcare settings. The purpose of conducting clinical trials is to ascertain the efficacy of each treatment and its combination, and determine which preventive or management strategy best facilitates in reducing ventilator-acquired pneumonia. Furthermore, conducting clinical trials will also determine whether combination treatments are better and cost-effective than single treatments. By researching the issue and developing a correct question, a resolution could be made to improve patient outcomes. Answerable Question

PICO question facilitates optimization and application of evidence-based practices. Formulating a PICO-format question is also the first step of an evidence-based practice. In accordance with the problem, purpose, and

resolution acknowledged, the author has come up with the research question as follows: P- In ICU adult patients receiving mechanical ventilation after 48 hours I- does combination treatment or ventilator bundles C- compared to traditional single treatment O- lead to reduced incidence of ventilator-acquired pneumonia? Evidence-based resources Some of the most relevant resources for evidence based practices are provided by databases and professional health organizations. In addition, bibliographic and web-based sources and appropriate peer-reviewed journals are equally important evidence-based resources. Internet has broadened the scope of accessibility to journal articles and other medical references, and has also hastened up bibliographic searches. Websites ending in “ dot gov” such as guideline. gov, cdc. gov, dhhs. gov are considered as credible resources. A researcher could also look for the websites belonging to the health department when the topic is health related (Weinfeld & Finkelstein, 2005). Evidence-based resources are indispensable components of any research or study as it reveals the reliability of a study applied through presentation of evidences. A high-quality evidence-based resource should be up-to-date, significant to the public health interest, and rationalize the agreement or contradiction to certain practice in nursing. For instance, for ventilator bundles to be considered better than single treatment, evidences must be recently published on a credible website or journal and can explain broadly how VAP is prevented in two set-ups. Online journals like PubMed, American journal of respiratory and critical care medicine, Respiratory care and so on, provide relevant information of this evidence based practice (Weinfeld & Finkelstein, 2005). Conclusion To determine the effectiveness of a treatment it is

imperative to conduct clinical trials. With this, patients are provided with more alternatives of the treatment that is both cost-effective and quality-focused. It has been revealed that the implementation of ventilator bundles has radically dropped the incidence of VAP in the United States. Therefore, comparative studies must be conducted in a larger sample with different demographic characteristics in order to generalize the findings to the overall population. The author is aware that not all part of the ventilator bundles are implemented in the healthcare settings which led to the examination of the effectiveness of each preventive or management strategy. Using the evidences and the result of possible study, this knowledge could be used to reduce the incidence of VAP, and achieve a definite and improved outcome for VAP affected patients in the ICU settings. References Arroliga, A. C., Pollard, C. L. , Wilde, C. D. , Pellizzari, S. J. , Chebbo, A., Song, J., Ordner, J., Meyer, T. (2012, May). Reduction in the incidence of ventilator-associated pneumonia: A multidisciplinary approach. *Respiratory Care*, 57(5), 688-696. Chastre, J. & Fagon, J. (2002, Jan. 17). Ventilator-associated pneumonia. *American journal of respiratory and critical care medicine*, 165, 867-903. doi: 10. 1164/rccm. 2105078 Gillespie, R. (2009, Nov. 16). Prevention and management of ventilator-associated pneumonia – The Care Bundle approach. *SAJCC*, 25(2), 44-51. Retrieved from <http://www.ajol.info/index.php/sajcc/article/viewFile/52974/41573> Keeley, L. (2007). Reducing the risk of ventilator-acquired pneumonia through head of bed Weinfeld, J. M., & Finkelstein, K. (2005, Jul-Aug.). How to Answer Your Clinical Questions More Efficiently. *Family Practice Management*, 12(7), 37-41. Retrieved from <http://www.aafp.org/fpm/2005/0700/p37.html> Vincent, J. L., Barros, D. S. &

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