

Good qsen - sepsis research paper example

[Law](#), [Evidence](#)



Introduction

The healthcare sector has changed significantly due to the rise of chronic and lifestyle diseases, and better educated clients who demand quality services. To meet these challenges nurses have embraced evidence based care to improve quality by enhancing aspects such as safety and efficacy of interventions. One of the most important aspects of delivering quality nursing care is ensuring that nurses have the necessary skills, knowledge and attitude needed to improve care. Giving nurses these skills, knowledge and attitude is the key goal of the Quality and Safety Education for Nurses (QSEN) program. This essay evaluates the clinical management of Sepsis by nurses from a QSEN point of view. Sepsis is a systemic inflammation in response to severe infection. The condition can be fatal since it persists long after the infection that caused the sepsis is treated. The essay emphasizes on patient centered care, evidence based care and quality improvement by conducting a population, intervention, comparison and outcome (PICO) analysis.

How Practice and Research have been integrated to Improve Quality

Sepsis is a complication of bacterial infection in organs such as the lungs, urinary tract and the abdomen. The body releases chemical into the bloodstream in response to the infection with this chemicals triggering general body inflammation. Severe inflammation can cause damage to various organs systems causing organ failure, reduced blood pressure, and septic shock. When not controlled adequately, septic shock is fatal especially in old people and in those with compromised immunity. The treatment of

sepsis includes antibiotics to treat the infection that lead to sepsis, administration of intravenous fluid to reduce septic shock, drainage of infected fluid collections and specialized support for the organs which have failed. There are different levels of sepsis each characterized by the number of symptoms a patient displays (Howell et al., 2011). To improve the quality of care for sepsis patients, it is important to provide patient centered care and evidence based care. This is in line with QSEN principle of basing care on quality and safety. Therefore, the interventions selected must not harm the patient (be safe) and must have a high efficacy (be effective and of quality). Patient centered care is directed care in which the interventions taken are in line with the patient's priorities and needs. For patients suffering from sepsis, the priority areas are controlling the infection and preventing further complications such as organ failure (Robson & Daniels, 2013). Since infections that lead to sepsis are usually bacterial in nature, broad spectrum antibiotics are the basis of pharmacological interventions meant to control infection. The antibiotics should be administered immediately after diagnosis since delay causes more complications and takes longer to control the infection. If the causative bacteria have been positively identified, a narrow spectrum antibiotic can be used to improve efficacy. Additionally, the spread of infection can be controlled by draining infected fluid accumulation using surgical methods. One of the leading patient centered care models for sepsis patients is early goal directed therapy. This model should be implemented within 6 hours of sepsis diagnosis. This is in line with QSEN training since timeliness is a dimension of quality in the healthcare sector. The first step when implementing early goal directed therapy is setting the goals of the

therapy based on identified patient priority areas. For instance, a goal can be to optimize cardiac preload and afterload. Goal identification is what qualifies early goal directed therapy as a patient centered care model since the goals are set based on the patient needs and priority areas. Once the goals are set, the nurse uses clinical knowledge and evidence to design and implement a care plan meant to meet these goals (Kleinpell, Aitken & Schorr, 2013). The nurse should then evaluate the efficacy of the interventions taken and take the necessary action. Early goal directed therapy is an effective way of managing sepsis especially in the ED. In a 4-year observational cohort study, Mei, Zhu & Chen (2011) found that patients with severe sepsis and septic shock who received early goal directed therapy had a significant reduction in length of stay in the ICU and reduced in-hospital mortality.

Evidence Based Care

Evidence based care is the practice of making all clinical decisions based on scientific evidence from credible sources. In the clinical management of sepsis, evidence based care is widely applied when selecting which interventions to use. The prospective interventions should be evaluated in terms of efficacy and safety in line with QSEN training. The evaluated articles below are based on impact of QSEN to evidence based care.

One of the common interventions to alleviate septic shock and prevent organ failure is the administration of intravenous fluids. Hydroxyethyl starch (HES) is a common intravenous fluid component which is widely used because of ideal characteristics. However, Perner at al., (2012) found that HES is not safe for use in patients with severe sepsis compared to Ringer's acetate. A PICO analysis of this research helps to place it in a nursing context for use as

a source of evidence. The population included in the study were patients with a positive sepsis diagnosis and showing the at least two symptoms of sepsis. The intervention under study was using HES in the resuscitation fluid administered intravenously. The comparison was using Ringer's acetate while the outcome was 90-day mortality rate and other complications that may increase length of hospital stay or the increase patient suffering.

The researchers observed that sepsis patients who received HES had an increased 90-day mortality rate and were more likely to require renal replacement therapy than the patients who received Ringer's reagent. The findings are significant to nursing practice and ASEN training because they highlight a practice that is not safe and can potentially harm the patient thereby reducing the quality of care offered.

The alternative to using HES in intravenous fluid is resuscitation with albumin-containing solutions. To evaluate the efficacy and safety of albumin as a resuscitation fluid for patients with sepsis, McIntyre et al., (2012) conducted a pilot randomized controlled trial. This study design is suitable since it enables the generation of strong evidence. In the PICO analysis for this study, the population under study was patients suffering from severe sepsis and septic shock. The intervention under review was use of albumin as a resuscitation fluid while the comparison was using normal saline for resuscitation. The outcome on which a comparison was made was patient mortality. The researchers found out that use of albumin-containing solution to resuscitate patients with sepsis was associated with lower mortality compared to normal saline. The significance of this study to nursing practice is that it provides evidence that albumin is safe and effective for use as a

resuscitation fluid for patients suffering from sepsis. This gives nurses the knowledge to formulate effective management plans for patients suffering from sepsis.

In another study, Vasu et al., (2012) used a systemic review of randomized clinical trials to compare the efficacy and safety of norepinephrine and dopamine for the treatment of septic shock. The population was patients suffering from septic shock while the intervention was use of norepinephrine. The comparison was use of dopamine and the outcome reviewed was 28-day mortality rate. The researcher found that norepinephrine has superior efficacy and safety compared to dopamine. In another study, Opal et al., (2013) evaluated the effects of eritoran on mortality of patients with severe sepsis. The research was a randomized double blind placebo controlled trial. The population was patients with severe sepsis and the intervention was eritoran. The comparison was placebo and the outcome was 28-day mortality rate. The researchers found that eritoran does not reduce 28-day mortality rates compared to placebo. Jones et al., (2010) investigated goal setting for early goal directed therapy. The population under study was patients with severe sepsis. The intervention was setting the goal of lactate clearance while the comparison was the goal of central venous oxygen saturation. The comparison was the rate of in-hospital mortality. The researchers found that promoting lactate clearance does not significantly reduce in-hospital mortality compared to normalized ScvO₂.

Using Evidence to improve Patient care and Outcomes

The research findings can be used as evidence to improve the quality of care and patient outcomes. The first impact of evidence based care is improving

safety. For instance, avoiding the interventions that can harm a patient will contribute to safety and reduced complications, length of hospital stay, and patient suffering. From the reviewed studies above, HES is not safe for use as a resuscitation fluid component for patients with sepsis and eritoran does not reduce mortality significantly. The second impact of evidence based care is to improve quality by ensuring that only the interventions with proven efficacy are used. For instance, albumin which has proven safety and efficacy can be used to resuscitate patients suffering from sepsis and septic shock. Norepinephrine has proven efficacy over dopamine and is suitable for use in the clinical management of sepsis.

Conclusion

QSEN training seeks to give nurses the knowledge, skills and attitudes needed to deliver safe and quality health care services. QSEN training can be implemented in the clinical management of sepsis in terms of patient centered care and evidence based care. Patient centered care enables the patient's priority areas to be identified and addressed. This increases acceptability of care and reduces suffering. Evidence based care means using evidence to make clinical decisions. Published research articles are best evaluated using PICO analysis in order to generate evidence. From the evaluated articles, various safe and effective interventions such as using albumin based resuscitation intravenous fluids and norepinephrine have been identified. Unsafe practices such as HES based intravenous fluids and futile practices such as using eritoran have also been highlighted. This will help practice nurses to optimize interventions for the clinical management of sepsis.

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