

Indwelling catheter essay



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Primum non nocere (first do no harm) is an ancient Latin phrase that reminds nurses that the first principle of healthcare is not to harm those entrusted to our care (Nazarko, 2008).

A research article in health has the main objectives of obtaining evidence to solve healthcare problems and investigating healthcare issues (Richardson-Tench, Taylor, Kermode, & Roberts, 2011). This paper will critique a research article on urinary catheterisation and attempt to critically analyse the effectiveness of the researcher's ability to solve and investigate issues.

Other research articles of matching topic and will be used in comparison. The research article of interest in this analysis was composed in 2006 by Seymour, C. It is titled ' Audit of catheter-associated UTI using silver alloy-coated Foley catheters'.

It is sourced from the British Journal of Nursing, and is located in volume 15, issue number 11, on pages 598-603. The title of the article is suitable to the research. It is presented clearly and is proven to be appropriate through its integration in numerous arguments of the article. The main issue discussed in this research article is the high prevalence of nosocomial infection in patients from the use of varying types of Indwelling Catheter (IDC). This article infers that the use of silver alloy-coated Foley catheters is more successful in reducing the rate of infection than the use of the standard catheters available. The above argument correlates with Nazarko (2008) where it is said that the use of silver-coated catheters can reduce the risks of infection.

Throughout the article, there is wide discussion on varying aspects of the topic. This includes the types of catheter used, the reason for use, the time period of insertion and the rates of associated infection. All of this discussion can be viewed as relevant as it ties in with core aspects of the research and analysis (Pomfret, Tew, & Eustice, 2009). The researcher's purpose was to evaluate the reduction in the rate of nosocomial Catheter-Associated Urinary Tract Infection (CAUTI) experienced using a pre-test/post-test design. A major downfall in the article was its failure to include an exact number of patients that were used in evaluation.

The research involved patients using the standard catheter system being compared to patients using a silver alloy-coated catheter over a 20-week period. The main objectives of the article encompassed: * Obtaining a baseline measure of the rate of CAUTI over a 10-week period * Evaluate the rate of CAUTI over a 10-week period following the introduction of a silver alloy-coated catheter into practice across the hospital * Measure length of stay of catheterized patients in the baseline and evaluation periods * Identify reasons for catheterization Provide an economic analysis of any cost avoidance potential arising from the use of silver alloy-coated Foley catheter. The above outlined objectives are all reasonable and measurable making them appropriate for the research article. The hypothesis of this quantitative research was that the use of silver alloy hydrogel-coated catheters instead of standard catheters was expected to cause a reduction in CAUTI by 20%. The approach included 10 weeks using standard catheters (baseline period) and 10 weeks using silver alloy hydrogel-coated catheters (evaluation period). This structure is similar to that used in Kassler, & Barnett (2008) where there

was a set control of 4 months for patients using the standard catheters, followed by 4 months of the introduction of the new ‘ silver’ catheter.

The purpose of using the ‘ silver’ alloy coated catheters is backed up by Nazarko (2008) where it states “ third century writings indicate that our ancestors believed that silver protected from infection”. Another article was in agreeance with the use of silver, suggesting that it has properties that inhibit bacterial colonisation (Bardsley, 2009). The approach and hypothesis can therefore be viewed as effective as all research articles are in congruence. The methods used in the focus article utilised the nursing staff that were integrated in the care of the focus groups. The urology nurse specialists and urology research nurse managed the day-to-day data collection activity, assisted by the infection control clinical consultant.

Newly catheterized patients’ records were examined three times a week for signs and symptoms of CAUTI, including microbiological evidence (to ensure accuracy). When this was recorded they were documented on a form by the working group, minimizing any effects of the audit process on the nursing staff workload. The method of only allowing specific nursing staff to document does minimise the impact of the research on uninformed nurses’ workload and also allows for reduced risk of error as the nurses involved have complete control over the documentation. The working group entered the data onto an Excel spread sheet that calculated descriptive data. It is important to note that patient-related data were handled confidentially at all times (McGowan, 2012) Major conclusions included the results showing that the evaluation period had a reduced risk rate of CAUTI by 71.

% which far exceeded the audits expectation of 20%. This is congruent with a similar research article that claims a 100% reduction in CAUTIs when trialling the new silver alloy catheters in an aged care setting (Kassler, ; amp; Barnett, 2008). There was a consensus throughout all literature researched, that the use of the new silver alloy coated Foley catheter reduced the chance of infection when using an IDC (Bardsley, 2009). Another positive conclusion from the article of focus was that the introduction of a new silver alloy coated Foley catheter was successfully implemented in a busy clinical setting. A different article researched did not agree with this in saying that more research needs to be conducted on this new and innovative catheter before it is introduced into the wards (Turner, ; amp; Dickens 2011).

A negative result of the main article is it was not possible to demonstrate a reduction in the average length of stay of patients with urinary catheters following the introduction of the new catheters. Infection delays recovery and the patient who develops an infection will remain in hospital for longer than a person who does not (Nazarko, 2008). The research article made up for failing to reduce length of stay, by improving the economical side of IDC use. Cost savings were made and the new silver alloy coated catheter proved to be cost-effective compared with costs of catheters used during baseline.

Turner, ; amp; Dickens (2011) again disagreed stating that more research needs to be conducted to prove the new ‘ silver’ catheters are in fact more cost effective in the long term. Throughout the article, fact is correlated with interpretation. The analysis of results draws rational and evidential conclusions which are linked with the statistics outlined prior to the

investigation. In analysing this article it was found that the abstract provides a specific outline of the intentions and findings of the research. In addition to this it supplies a brief summary of the purpose, hypothesis, method, results and recommendations of the research. It is in correct order and form, and clearly identifies the core aspects of the article.

The introduction of the article could be considered as informative however does not make the purpose of the article clear. It comprises mainly of factual information regarding the topic and does not outline the intention of the research being conducted. Although the purpose is not clearly stated in the introduction, the factual evidence in the introduction provides a solid baseline of information for readers to base their interpretation of the research findings on. The author has made numerous reference to other research articles in order to support their argument.

This is essentially the use of pertinent literature to solidify findings and arguments. There are some ideas in the article that have been overemphasized. This includes the hypothesis of reducing the risk of infection by 20% and that number being blown up to 71. % in the findings. This evidence is repeated several times throughout the article and its repetition implies that the author is trying to convince the reader that the research was successful. The introduction of the article could potentially be condensed to encourage reader's interest.

It should also be tailored to include the purpose of the article so as to give a clearer outline of the information that follows. One aspect of this article that has been missed is the consideration of the patient and the additional pain

and suffering that is associated with UTI's (Hart, 2008). This is a crucial aspect of nursing care and is something that deserves merit when referring to infection control. Integrated all the way through this article, the author has consistently used clear statements.

The topic can be seen as essentially objective however contains some down falls. This is identified in the limitations of the research, where the author identifies some limitations that relate to objectivity such as the results of the research indicating a tendency towards replication of the results of larger studies. This implies that the data is not objective in relation the authors study alone. It raises the question of how much data was replicated from previous larger studies performed. It also remains unknown how much information the author has left out in order to enhance their desired argument and opinion.

Therefore the author can be deemed to have the underlying assumption that the current management of IDC and infection is inadequate and are trying to convince the audience of their argument. The study design and methods are appropriate for the purposes of the study however the procedures are not presented in enough detail to enable a reader to duplicate them. A downfall to this research article is that the ' standard' catheter used in the baseline period of data collection was never identified. This means that nurses cannot rule out one individual catheter to be less effective than the silver alloy coated catheter as the ' standard' catheter brand and type is unknown (Scott, 2010). The objective can be considered important as Urinary tract infection (UTI) is the most common type of HCAI (Nazarko, 2008). This makes

the research valuable as it provides an opportunity to reduce the prevalence of HCAI from IDC insertion.

There were several weak points at which the article fell short of what is professionally expected. Overall the article was informative, accurate and innovative. REFERENCES: Bardsley, A. (2009). Coated catheters – reviewing the literature. *Journal Of Community Nursing*, 23(2), 15-16.

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