Proposal on IV Changing

Name

Institution
Abstract

Nurses are supposed to adhere to the best practices of the IV therapy. The therapy is provided according to the established standards by the organization and regulatory bodies. However, the procedures and policies might not be in the best interest of a patient. Nurses should evaluate the working environment and conditions of their patient to provide IV therapy that will go in line with those conditions. Among the factors that can influence the process of healing in the IV therapy are the time period and decontamination state. This paper suggests carrying out a study on the influence of time and decontamination status on the intravenous therapy process.

Key words: intravenous therapy, time period, contamination, infection
Proposal on the IV Changing

Most patients in clinics require the IV infusion therapy. It is necessary that nurses understand the cost-effectiveness and safety of employing the intravenous tubing sets commonly known as the IV changing at a certain time. The recommended 72 hour period is expensive both to the nurse and the patient. For hospitalized patients, the IV changing could be used after 4 to 7 days without adversely affecting the condition of the patient. On the other hand, frequent IV changing can expose the patient to contaminations related to infusion linked to the frequent replacement of tubing sets. Thus, one has to consider both the desire to reduce the costs and safety related to IV the tubing sets. Moreover, nurses are expected to make a selection on the particular IV tubing sets that are appropriate to their patients, for example, in terms of therapy duration. For instance, for patients who require less than 7 days therapy, it is recommended to use peripheral IV access as the preferred catheter. However, whatever choosing the recommended catheter, nurses are also expected to observe the peripheral IVs, as well as peripheral centrally placed catheters.

On the other hand, the environment hygiene, in which the changing is done, is also of great concern to the effectiveness of the IV changing. This is because, if the environment is not hygienic, there are high possibilities of infections being introduced to the patient. Nurses are advised to decontaminate their hands before palpating the catheter sites, performing any insertion, or changing the peripheral IV. This study will focus on the appropriate period of the IV tubing sets changing and the factors that determine the period of the IV changing in the contemporary nursing. The recommended time is 72 hours, but other factors such as the environmental conditions and the particular ailment being treated are also coming up as
influential determinants of the period to change the IV tubing sets. This study will target patients of 45 years and above who require the IV infusion in the university clinic center.

The study will evaluate the records of patients who required the IV infusion at the clinic to determine the influence of the changing time on their healing period. It will also focus on the environmental factors that existed in different situations and analyze how they affected the IV infusion and ultimate healing of the patient. This study will collect demographic, infusion-related data, and microbiological information from all participants. It is anticipated that the outcome will show that the catheter or infusion related contaminated environment, as well as contamination of the IV tubing, determine the healing period that a patient is likely to take in the IV tubing treatments.

**Problem Statement**

Cost-effectiveness and safety are the key issues that determine the time period in the IV tubing sets. In case the environment is contaminated (for example, unhygienic hands by the nurses), the healing period can be prolonged. Recommended standards require nurses to ensure that the environment, in which they perform the IV tubing, is sterilized and decontaminated. This issue is crucial because this factor has a great influence on the healing process, and thus the IV changing interval. With many patients requiring the IV infusion, the IV tubing sets changing time can influence the effectiveness of the clinic to manage such cases. The duration recommended by various bodies is true for the ideal conditions. However, this is never the case in many clinics. Therefore, the overall decision on the duration to perform the IV changing is based on the prevailing conditions such as hygienic environment and the presence of any infections. Consequently, it is essential that nurses put into consideration the prevailing
conditions before performing the IV changing to any patient numerous factors can influence the result of the IV tubing sets.

**Statement of Purpose**

The focus is put on the influence of time and environmental factors, such as contamination, on the healing process of patients who require intravenous treatment. Each of the elements in the treatment influences the process in general (Band & Maki, 2009). With recommended clinical standards of practice, there are possibilities that the patient might require a different time period to heal in the same conditions. Qualified nurses are allowed to perform intravenous cannulation in the intravenous therapy sessions. Therefore, from the initial stage of treatment to changing of the tubing sets, nurses play an essential role in the whole process. Their duties include decontamination of the tubes and changing them after sometime to prevent infection and occlusion complications. This study will measure the influence of the time period and state of contamination on the rate of healing in patients who require intravenous therapy (Josephson, 2004).

**Review Question**

What are the influences of clinically recommended time for the IV changing against the extended time on patients who receive intravenous therapy in normal and simulated settings?

**Literature Review**

Nurses use the intravenous infusion therapy to deliver medications, fluids, blood products, and other substances into the circulation systems of their patients. The IV route is commonly used in outpatient, home care, and inpatient treatment. However, this practice is susceptible to risks as many factors come into play during the therapy (Webster, 2010). The level of risk for intravenous therapy is particularly high because of the possible irretrievable effects on
the infused substance. Therefore, there is a serious risk of complications associated with the time period taken to change the tubing sets or the possibility of contamination during the changing process. Risks associated with the IV changing include infection, air embolism, infiltration, catheter embolism, and venous thrombosis related with the catheter (Band & Maki, 2009).

In an ever dynamic nursing environment, as well as changing roles of nurses, there is a need to review regularly the recommended standards for the intravenous therapy. It is especially true for timing and the state of contamination. The need for an effective intravenous therapy should be based on the available evidence and research findings. Nurses require updated standards to help them be efficient while providing treatment to patients in all care settings (Band & Maki, 2009). The incidences of infections associated with the intravenous therapy are important in the provision of the better services to patients. The Department of Health Care provides a standard for the practice of intravenous therapy. These standards are based on the need to save lives and improve service delivery to patients. Despite the existence of these standards, nurses still face difficulties when offering intravenous therapy since strict adherence to these standards tend to yield poor performance to patients. For example, the recommended 72 hours for the IV changing are a longer period. In most cases, it can result in an infection in the patient rather than healing. The environmental factors also could be contributing to high risks of contamination in intravenous therapy practice (Melnyk & Fineout-Overholt, 2011).

Cases of nurses giving intravenous therapy without hand-washing have been reported constantly. Sometimes nurses also forget to clean the skin of the patient before doing the intravenous therapy. Most nurses are well acquainted with the standards in the IV care including the aseptic non-touch technique. However, based on the high number of patient or a busy schedule, they may fail to follow all these standards as recommended by the regulatory bodies.
In cases the nurses’ behaviors affect the state of the patient, time period for the IV tubing to be changed can make a great difference in the overall healing process (Sorrentino & Remmert, 2013).

In some hospitals, the IV therapy is not accorded the seriousness it deserves. This is rampant especially when nurses have some other things to do. A number of factors come into play. For instance, infections are not instantaneous; thus, a nurse feels detached from their responsibilities in the whole process of the patient getting contaminated (Sorrentino & Remmert, 2013). Some nurses might also feel that the risk of contamination is low and does not require much of their attention.

The risk of contamination in intravenous therapy is relatively low when compared to other therapies. However, the consequences of eventual contamination can be fatal as in the case where the patient develops septicemia (a bloodstream infection). Therefore, it is important for nurses to prevent any chance of contamination in their patient, whether it is caused by the time period of changing the tubing sets, contaminated equipments, or hands used for the intravenous therapy (Band & Maki, 2009). In order to prevent these low-probability but fatal risks, nurses can perform a review of their competency in the intravenous therapy while also ensuring that recommended standards provide the minimum level of practice in the intravenous therapy. For instance, the use of the IV tools and other devices should follow the prescribed procedures, but nurses can go overboard to ensure a high standard of practice in the intravenous and IV changing practice. An example could be a case where the nurse determined that adhering to the recommended standard of 72 hours would definitely result in an infection of the patient. Timby (2009) advised that, in such cases, the nurse should go ahead and change the tubes after 48 or 36 hours to prevent infection. According to him, the nurse has the overall responsibility to ensure
that the patient is safe, and the safety is improved according to the patient’s condition (Timby, 2009).

The Mode of Conducting the Study

The study’s focus is put on the effects that time and contamination have on patients who require the IV tubing change. Patients aged 30 and older in the health center that requires tubing sets will be observed from the beginning of their treatment. The study will measure the effect of different times of the IV tubes changing and the influence of the environmental factors on the rate of healing.

Location

The study will be carried out at a local hospital among patients who require the catheter and other tubing sets. The hospital has a capacity of 130 units for patients who need intravenous therapy and staff of 60 members who are committed to providing the clinically standardized services in the IV changing. On average, the intravenous unit services 30 patients per day, and 15 of them require intravenous therapy.

Sampling Technique

The study will evaluate the effect of time and contamination on the rate of healing among patients requiring intravenous therapy to prevent infections and complications. The researcher will receive permission to survey the patients on arrival at the unit. The patients with similar needs will be divided into two groups on a random basis. The first group will receive regular standardized IV changing service and normal conditions of decontamination. The second group will receive improved service in terms of both time and conditions. The timing for the IV changing will be less than the recommended time and the conditions will be more enhanced.
Design Type

The study will use a quantitative approach, in which patients will be randomized. The researcher will compare the effect of the time period and contamination on the healing process in patients who require the IV changing. Improvement will be noted between the two groups while determining the effect of the time period on the IV changing. The study starts upon the commencement of the intravenous therapy and concludes after 72 hours. By analyzing the progress of the two groups, the researcher will make comparisons on the effect of the time period and decontamination on the healing process of patients in the intravenous therapy.

Major Concepts

Registered nurses are allowed to carry out the IV changing to the intravenous therapy patients, according to the recommended standards. As such, the time period and the state of decontamination play a crucial role in ensuring that patients heal faster. However, nurses can take enhanced measures when performing the IV changing to prevent complications and improve the rate of healing.

Variables

The variables among participants in this study include age, sex, and whether they have had intravenous therapy before or not. The IV-changing can be affected by the patient’s conditions that encompass their belief in medical procedures, age, and sex. With the proper approach, all these factors are constant. The researcher will review the literature to be able to account for these variables among patients.

Limitations

This study will be limited by the number of patients who will show the willingness of participating. Some patients are likely to object to prolonged time for their IV tubes changing;
others might reject a new therapy of the IV changing. The effects of variables might affect the outcome of the study. For example, people aged 40 but of different sex may not heal at the same rate when all other factors are constant.

**Nursing Implication**

The study findings will be useful to nurses performing the IV changing. Nurses will be able to provide services according to the conditions of the patient. Time period and therapeutic conditions determine the final cost of the services. Patients who require less time for the IV changing because of their faster healing mechanism will spend less money while the hospital staff will receive time to deal with the other issues in the hospital (Josephson, 2004).
References


