

"A descriptive study to find out the knowledge and practices of staff nurses regarding administration of IV therapy in selected hospital of Gwalior, M.P."

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ABSTRACT:

This descriptive study aims to investigate the knowledge and practices of staff nurses regarding the administration of intravenous (IV) therapy in a selected hospital in Gwalior, Madhya Pradesh. As intravenous therapy constitutes a vital aspect of modern healthcare delivery, understanding the proficiency of nursing staff in this domain is crucial for ensuring patient safety and optimizing clinical outcomes. The study objectives include assessing the level of knowledge and practices among staff nurses concerning IV therapy, exploring the correlation between knowledge and practices, and identifying any associations between knowledge levels and demographic variables. Hypotheses regarding the relationship between knowledge and practices are formulated to guide the investigation. Through a comprehensive analysis of staff nurses' understanding and execution of IV therapy protocols, this study aims to contribute valuable insights for enhancing nursing education and practice in intravenous therapy administration.

Keywords: Descriptive study, Staff nurses, IV therapy, Knowledge and practices, Patient safety, Clinical outcomes

Introduction:

Intravenous (IV) therapy stands as a cornerstone in modern healthcare, facilitating the administration of fluids, medications, and vital nutrients when oral intake is inadequate or contraindicated. The effective delivery of IV therapy relies heavily on the knowledge and practices of nursing staff, who play a pivotal role in ensuring patient safety and treatment efficacy. Despite its critical importance, there exists a gap in our understanding of the proficiency of staff nurses in administering IV therapy, particularly in specific healthcare settings such as hospitals in Gwalior, Madhya Pradesh. Therefore, this descriptive study aims to investigate the knowledge and practices of staff nurses regarding IV therapy administration in a selected hospital in Gwalior, M.P. By evaluating the level of knowledge, assessing adherence to best practices, and exploring potential correlations with demographic variables, this study seeks to provide valuable insights into the current state of IV therapy administration among nursing staff. Such insights are essential for informing strategies to enhance nursing education, improve clinical practice, and ultimately, optimize patient care outcomes in the context of intravenous therapy. Through this investigation, we endeavor to contribute to the ongoing efforts to ensure the safe and effective delivery of IV therapy in healthcare settings.

BACKGROUND OF THE STUDY

In the realm of medical care, the venous route stands as a cornerstone for the administration of fluids and medications when oral intake is either unattainable or unsuitable. This pathway, revered for its predictability and reliability, has emerged as a fundamental component in the provision of healthcare, particularly in scenarios

where traditional means of ingestion prove inadequate. Over the past few decades, the landscape of intravenous (IV) therapy has undergone a profound transformation. Once reserved solely for emergencies and critical care settings, IV therapy has burgeoned into a specialized mode of treatment, embraced by nearly 90% of hospitalized patients (Corrigan, 1995). This shift underscores the indispensability of intravenous therapy in modern healthcare practices.

However, amidst its widespread adoption, there exists a disconcerting notion that the delivery of IV services is often overlooked, relegated to the realm of routine and habit (Lundgren). This complacency belies the complexity and significance of IV therapy and care in contemporary healthcare delivery. The post-World War II era witnessed a contentious debate regarding the role of nurses in performing IV therapy. Initially, there was apprehension surrounding nurses' involvement in venipuncture, with some advocating for it to be solely within the purview of physicians. However, the tide turned with the recognition that nurses possessed the requisite skills for venipuncture, leading to a compromise wherein nurses were permitted to conduct venipuncture under physician supervision. This pivotal moment not only highlighted the evolving dynamics between nursing and medical practice but also underscored how technological advancements, coupled with ideological considerations, shape the delineation of professional domains.

In the United States alone, peripheral IV catheters are utilized in over 25 million patients annually, playing a crucial role in infusion therapy (Reference). Shockingly, infusion-related complications, including nosocomial bacteremias, account for a significant portion of hospital-



acquired infections, posing a grave concern for patient safety and healthcare providers alike. Central venous catheters (CVCs) further exemplify the advancements in vascular access technology, with an estimated 5 million catheters employed annually in the United States. Despite their utility, CVCs are not without risks, as evidenced by the escalating rates of CVC-related bloodstream infections in healthcare settings.

In response to this alarming trend, institutions such as the Winchester Medical Center (WMC) have taken proactive measures to mitigate the incidence of CVC-related infections. Recognizing the imperative to enhance patient safety, the WMC Infection Control Committee initiated efforts to curb nosocomial bacteremias associated with CVCs, acknowledging the significant impact such infections have on patient morbidity and healthcare outcomes.

In conclusion, the venous route remains a cornerstone of modern healthcare, offering a reliable and efficacious means of delivering fluids and medications to patients in need. However, the evolution of IV therapy underscores the importance of vigilant oversight and proactive measures to ensure patient safety and optimize clinical outcomes. As advancements in vascular access technology continue to unfold, it is imperative that healthcare providers remain steadfast in their commitment to delivering high-quality, evidence-based care to those entrusted to their charge.

Intravenous therapy has evolved dramatically over the past few decades. From being used only in emergencies and for critically-ill patients, intravenous therapy has become a specialized form of treatment used for almost 90% of hospitalized patients (Corrigan, 1995).

Intravenous (IV) therapy and care has become indispensable in today's modern healthcare environment. However, in a striking reversal of fortune, it has been suggested that the provision of IV services is often taken for granted and underpinned by routine and habit (Lundgren). After World War II, a debate ensued over whether nurses should perform intravenous (IV) therapy. The debate was resolved by permitting nurses to do venipuncture as physicians' agents and by recirculating the familiar tautology, if nurses were already doing venipuncture, they must be simple enough for nurses to do. The vein was a portal of entry for nurses, but one with limited access. What was ultimately ceded to nurses was not full jurisdiction over a domain of nursing practice, but rather a limited settlement in a domain of medical practice. The debate over IV therapy demonstrated how technology, in combination with ideology, can both create and destroy nursing jurisdictions. More than 25 million patients have peripheral intravenous (IV) catheters placed each year in US Hospital. Infusion therapy is believed to account for one third of all nosocomial bacteremias.

It has been estimated that 5 million central venous catheters are used in the United States each year. The medical market has been inundated with vascular access devices representing phenomenal

advancement in catheter technology. In 1997, the Winchester Medical Center (WMC) Infection Control Committee identified the need to reduce central venous catheter (CVC) related bloodstream nosocomial infections. Although the WMC infection rate was below the national rate for nosocomial bacteremia, infections related to CVCs doubled in 1996 and remained on the rise in 1997 with significant patient morbidity.

NEED OF STUDY

Intravenous therapy and care of vascular devices play a pivotal role in the delivery of modern healthcare treatment.

Intravenous therapy has become a major component of patient care in hospital and nursing homes. It is indicated for almost every individual who is admitted to the hospital and is used to support patient with acute and chronic problems (Creamer, 2000).

The management of the Intravenous therapy is now an accepted and often very relevant part of a nurse's role. Specialist in Intravenous therapy are also becoming, more common, taking the lead in assessing, inserting, managing and removing a verity of vascular access devices both in hospital and in the community.

Zingg and Pittet (2009) noted that as many as 80% of hospitalized patients will have a cannula in situ, and Hart (2008) suggested that patients who require IV therapy are often seriously ill and immunocompromised, thus are more susceptible to infection.

The Department of Health (2007) estimated that 6000 patients acquire a catheter-related bloodstream infection every year in the UK. Robust standards of practice are therefore paramount to ensure safe and competent practice, both in peripheral IV cannulation and IV care.

Using the chain of infection as a framework to review practice will enable practitioners to ensure thorough standards of practice, and the Royal College of Nursing (2005) stated that only trained and competent staff using strict aseptic techniques should be involved in IV or cannula care.

The Code (Nursing and Midwifery Council (NMC), (2008) stipulates all practitioners must deliver care based on the best available evidence and/or best practice, and that knowledge and skills for safe and effective practice must be kept up-to-date throughout each health professionals working life.

Peripheral intravenous device (IVD) complications were traditionally thought to be reduced by limiting dwell time. Current recommendations are to resite IVD5 by BG hours with the exception of children and patients with poor veins. Recent evidence suggests routine resite is unnecessary, at least if devices are inserted by a specialized IV team.

No published studies assess the knowledge of staff nurses regarding intravenous connectors, yet connectors remain a primary cause of infection and mortality. Anonymous survey (N = 100) in acute hospitals revealed 78% of nurses were uninformed about different connector types and their different care and 43% could not name two complications of connectors. No significant relationship was found

between education ($r = 0.121, p < 0.05$) or nursing specialty ($r = -0.059, p < 0.05$) and identifying types of connectors. Sixty-four per cent were involved in 5-6 hours of intravenous therapy and maintenance per 12-hour shift, hence connector care is significant. Education about connectors has implications for nursing associated with catheter-related bloodstream infections, occlusion and thrombosis.

Intravenous fluid administration is an integral component of clinical care. Errors in administration can cause detrimental patient outcomes and increased healthcare cost, although little known about medication administration errors associated with continuous infusion.

When IV therapy is required, the nurse must know the correct solution, equipment needed, and procedures required to initiate an infusion regulate the fluid infusion rate maintain the system, identify and correct problems and discontinue the infusion. We know that staffs nurses who are working in hospitals have lot experience but at the time administer of IV therapy they are not follow proper procedure, aseptic technique and scientific principles.

Thus by the taking all above factors into consideration the investigation felt the need to find out knowledge and practice of staff nurses regarding administration of IV therapy.

STATEMENT OF THE PROBLEM

"A descriptive study to find out the knowledge and practices of staff nurses regarding administration of IV therapy in selected hospital of Gwalior, M.P."

Objectives of the Study

- To find out the knowledge of staff nurses regarding administration of IV therapy.
- To assess the practices of staff nurses regarding administration of IV therapy.
- To know the correlation between knowledge and practices of staff nurses regarding administration of IV therapy.
- To know the association between knowledge of staff nurses regarding administration of IV therapy according to demographic variables.

Hypothesis

H0 There will be no significant relationship between knowledge and practices of staff nurses regarding administration of IV therapy.

H1 There will be significant relationship between knowledge and practices of staff nurses regarding administration of IV therapy.

Assumptions of the study

- I assume that staff nurses working in the hospitals have some knowledge and practices related to the IV therapy.
- I assume that staff nurses will express frankly their knowledge related the IV therapy.

Limitations of the Study

- This study is limited to staff nurses working in selected hospital.
- This study is limited to staff nurses who are available during the study

period and are willing to participate in the study.

Operational Definition

- Study- It refers to scientific investigation.
- Knowledge- Range of information of staff nurse regarding administration of IV therapy.
- Practice- knowledge, skill and experience of staff nurse regarding administration of IV therapy.
- Staff Nurse- A person who has registered in state nursing council and employed as staff nurse.
- IV therapy-It is the parenteral administration of fluids, medications, nutritional support, blood products and the transfusion of blood. Fluids are delivered through a vascular access device, which is inserted into a peripheral or central vein.

SUMMARY

This chapter deals with summary of the study and is based on objectives and findings presented in brief. The present study was concerned with "A descriptive study to find out the knowledge and practices of staff nurses regarding administration of IV therapy in selected hospital of Gwalior, M.P.", with following objectives:

- To find out the knowledge of staff nurses regarding administration of IV therapy.
- To assess the practices of staff nurses regarding administration of IV therapy.
- To know the correlation between knowledge and practices of staff nurses regarding administration of IV therapy.
- To know the association between knowledge of staff nurses regarding administration of IV therapy according to demographic variables.

The study attempted to examine the following hypothesis.

H0 There will be no significant relationship between knowledge and practices of staff nurses regarding administration of IV therapy.

H1 There will be significant relationship between knowledge and practices of Staff nurses regarding administration of IV therapy.

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