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Practice of Wound Dressing among Nurses in Surgical Ward in Irrua Specialist Teaching Hospital, Irrua, Edo State

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ABSTRACT

This study assessed the practice of wound dressing among nurses in the surgical wards of Irrua Specialist Teaching Hospital, Edo State, utilizing a cross-sectional survey design. A total of 75 nurses were selected through convenience sampling to assess their adherence to standard wound care practices. Data were collected using a self-structured questionnaire and analysed through bivariate correlation procedures and Chi-Square tests. The results demonstrated significant associations across all hypotheses, with Chi-Square p-values consistently below 0.05. Specifically, the availability of resources and equipment was linked to wound dressing standards, evidenced by a p-value of 0.011 and a moderate Pearson correlation of 0.293. Additionally, barriers revealed a strong association (p = 0.000, Phi and Cramer's V both at 0.694), indicating that obstacles faced by nurses significantly impact care quality. Factors influencing practice standards also exhibited a significant relationship (p = 0.000, Phi and Cramer's V at 0.638). These findings highlight the critical role of resource availability, the presence of barriers, and influential factors in shaping the standards of wound care practices among nurses. To address the identified challenges, the study recommends enhancing resource allocation, increasing training opportunities, addressing time constraints, investing in specialized equipment, and supporting adherence to evidence-based practices. Continuous education and effective workload management strategies are also essential to improve the quality of wound care. By implementing these recommendations, healthcare institutions can better equip nurses to deliver optimal wound care, ultimately improving patient outcomes.

Keywords: *Wound dressing, nurses, level of practice, factors influencing practice*

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INTRODUCTION

The practice of wound dressing in surgical wards demands precision and adaptability to address each wound's unique characteristics and the individual patient's needs. Nurses are at the forefront of ensuring that surgical wounds are managed to prevent infection and facilitate healing. Studies underscore the importance of consistent wound assessment, where nurses evaluate factors such as exudate levels, signs of infection, and

tissue health. This process allows for timely interventions and dressing adjustments that are critical in avoiding complications such as wound dehiscence and SSIs (Chiara, 2023; Li et al., 2023).

Wound dressing is a fundamental nursing intervention that necessitates knowledge, skill, and adherence to evidence-based practices to enhance wound healing and prevent complications (Gillespie et al., 2019). Research indicates that variations in wound care practices among healthcare professionals, including nurses, can lead to suboptimal outcomes (Ubbink et al., 2019). Studies emphasize the importance of nurses' knowledge and practices in wound dressing across various healthcare settings, such as primary health care centers and hospitals (Aldousari et al., 2021). Inadequate wound care management can cause delayed wound healing and heightened complication risks for patients, underscoring the importance of ensuring nursing staff are well-prepared with the requisite skills and knowledge to deliver effective wound care (Mwakanyamale et al., 2019).

The practice of wound dressing among nurses in surgical wards is both intricate and essential, as it influences patient recovery and prevents complications like infections. This care includes cleaning, assessing, and applying appropriate dressings to surgical wounds. Nurses are trained to understand each phase of wound healing—hemostasis, inflammation, proliferation, and remodeling—allowing them to adapt their methods based on the specific needs of each stage (Wounds International, 2023). During the initial inflammatory phase, for example, aseptic techniques and proper use of antimicrobial dressings are crucial to reduce bacterial load and prevent surgical site infections (SSIs) (Li et al., 2023).

Barriers to nurses' compliance with evidence-based wound care clinical practice guidelines have been identified, including the absence of standardized protocols, high workloads, and insufficient training (Lin et al., 2019). Overcoming these obstacles is crucial for enhancing the quality of wound care provided by nurses in surgical wards. Ensuring that nurses follow evidence-based wound care guidelines is crucial for enhancing patient outcomes. Emphasize the importance of developing observational metrics to assess practitioners' performance in wound dressing procedures, both in simulated and clinical settings (Hegarty et al., 2019). By implementing such tools, hospitals can not only evaluate the proficiency of their nursing staff but also identify areas for improvement in wound care practices.

Recent studies emphasize the importance of strict hand hygiene, effective wound irrigation, and choosing appropriate dressings, such as antimicrobial or hydrocolloid types, which promote a moist environment that supports faster healing. Techniques like using antiseptic solutions (e.g., chlorhexidine or iodine) and maintaining a sterile field during dressing changes have been shown to significantly reduce bacterial contamination in the wound, lowering SSI rates and improving recovery outcomes (Chiara, 2023; Li et al., 2023). Furthermore, the integration of enhanced recovery protocols, which involve patient education and optimized pain management strategies, contributes to improved patient compliance and reduced complication, rates during the post-surgical period.

The evidence underscores that continued training for nurses in updated wound care protocols, alongside access to advanced dressing materials, could greatly benefit patient outcomes. Such measures are aligned with international best practices and consensus statements on wound care, which emphasize that individualized wound management should be a central aspect of nursing care in surgical wards to optimize clinical outcomes and patient satisfaction (WoundSource, 2023; Wounds International, 2023).

Recent developments highlight a range of modern dressing types, such as hydrocolloid, foam, and hydrogel, which support a moist wound environment, which has been shown to accelerate healing and reduce scar formation. Nurses play a critical role in selecting the right dressing to match the wound's characteristics—whether it's managing exudate with absorbent dressings or promoting epithelialization with non-adherent ones (Chiara, 2023). By keeping the wound moist yet protected from excessive pressure, nurses can aid in minimizing wound dehiscence and other complications associated with improper dressing practices (WoundSource, 2023).

Moreover, the selection of appropriate wound dressing materials and techniques is paramount in reducing the risk of surgical site infections and promoting efficient wound healing. Stress the significance of utilizing wound dressings as part of a comprehensive approach to postoperative care, emphasizing the role of these materials in optimizing conditions for rapid healing following surgical procedures (Telfer & Moy, 2019). Also highlight the historical importance of surgical wound dressings in protecting surgical sites, preventing infections, and expediting the healing process (Jain & Jadhav, 2019). Standardizing wound dressing protocols and involving patients in the decision-making process regarding dressing characteristics can further enhance the quality of care provided. conducted a conjoint analysis to determine preferences of patients, doctors, and nurses regarding wound dressing attributes, such as wound-healing time, frequency of dressing changes, pain levels during changes, and costs of care (Vermeulen et al., 2007). By incorporating these preferences into practice, healthcare facilities can tailor wound care to meet individual needs and improve patient satisfaction.

Wound dressing is a crucial aspect of patient care in surgical wards, and it is essential that nursing personnel follow standard practices to ensure optimal patient

outcomes. However, studies have shown that there are variations in wound dressing practices among nursing personnel, which can impact the quality of care provided to patients (Mangwiro et al., 2021). Evaluation of nurses' practices toward postoperative wound dressing in surgical wards is essential to ensure that standard practices are being followed.

In addition to physical care, effective patient education regarding wound care at home is equally vital. In surgical wards, nurses not only apply dressings but also instruct patients on signs of infection, proper wound care techniques, and safe practices for removing or changing dressings as needed. This educational aspect is integral, especially given that adherence to post-discharge wound care instructions can significantly impact healing outcomes (WoundSource, 2023). Studies emphasize that when nurses invest time in educating patients, there is often a notable reduction in post-operative complications, highlighting the dual role of nurses as both caregivers and educators in wound management.

The practice of wound dressing in surgical wards demands precision and adaptability to address each wound's unique characteristics and the individual patient's needs. Nurses are at the forefront of ensuring that surgical wounds are managed to prevent infection and facilitate healing. Studies underscore the importance of consistent wound assessment, where nurses evaluate factors such as exudate levels, signs of infection, and tissue health. This process allows for timely interventions and dressing adjustments that are critical in avoiding complications such as wound dehiscence and SSIs (Chiara, 2023; Li et al., 2023).

Additionally, nurses play a crucial role in pain management during wound dressing, as pain can be a significant barrier to effective wound healing. Managing dressing-related pain is essential not only for patient comfort but also for compliance with wound care procedures. Studies recommend using non-adherent dressings and warming cleansing solutions to reduce pain. Nurses may also employ patient-centered approaches, such as music therapy or relaxation techniques, which have been found to lower patient anxiety and pain levels during dressing changes (WoundSource, 2023; National Institute for Health and Care Excellence NICE, 2019).

Ultimately, the effectiveness of wound dressing practices among nurses is deeply tied to their education and ability to make informed decisions based on the specific needs of each surgical wound. Ongoing training, access to high-quality resources, and a supportive healthcare environment can significantly impact both patient recovery times and overall outcomes in surgical wards. Nursing practice on post-operative wound care is influenced by various factors, including qualification, education, job title, and availability of dressing equipment. It is essential to assess nurses on proper usage of available dressing materials to ensure that standard practices are being followed.

Effective wound dressing is essential for promoting wound healing and preventing complications in surgical patients. Nurses play a critical role in performing wound dressings, yet there may be variations in their standard of practice, which could impact patient outcomes. Despite the existence of evidence-based guidelines, there is limited research assessing the actual level of practice on wound dressing among nurses in surgical wards. Understanding the factors influencing nurses' standard of practice and identifying potential areas for improvement are essential for enhancing the quality of wound care delivery and optimizing patient outcomes in surgical settings.

Wound dressing is a critical component of postoperative care, aiming to protect surgical wounds, prevent infections, and promote optimal healing outcomes (Andersson & Wihlborg, 2022). However, various factors affect the quality and consistency of wound dressing practices in surgical wards, potentially compromising patient outcomes. One prominent issue is the inconsistent availability of essential resources and equipment needed for effective wound care. Limited access to high-quality dressings, antiseptic solutions, and other wound care materials hinders nurses' ability to deliver optimal care and forces them to make adjustments that may affect patient outcomes (Singh & Ahmed, 2021). This lack of resources can lead to delays in dressing changes or deviations from established wound care protocols, increasing the risk of complications such as infections.

Another challenge is the variability in adherence to standard wound dressing protocols among nurses. While evidence-based guidelines exist, studies indicate that not all nurses consistently follow these protocols, potentially due to differences in training, lack of ongoing education, and insufficient institutional support (Liew & Lee, 2023). In surgical wards, where patients are at heightened risk of infection and complications, adherence to these protocols is crucial. However, without standardized, reinforced training, nurses may rely on personal judgment or outdated practices, resulting in inconsistencies in patient care.

Nurses in surgical wards also face significant challenges and barriers that impact their ability to maintain high-quality wound dressing practices. Staffing shortages, high patient-to-nurse ratios, and demanding workloads often limit the time available for wound care, leading to rushed procedures or skipped steps (Brown et al., 2022). Moreover, a lack of access to current guidelines and limited time for professional development contribute to variations in practice and decrease the effectiveness of wound care. These barriers create a difficult environment where nurses are unable to consistently follow best practices, thus jeopardizing

patient safety. Despite the crucial role nurses play in wound care, variations in their standard of practice regarding wound dressing in surgical wards persist, potentially impacting patient outcomes. Existing literature underscores the importance of effective wound care practices in surgical settings yet there is limited research assessing the implementation of these guidelines by nurses (Black & Baharestani, 2020). Studies underscore the necessity of nurse competency in wound care techniques. However, there is a gap in research assessing nurses' actual standard of practice in this context (Cox, 2019). Despite the known impact of standardized wound care practices on patient outcomes, the specific challenges faced by nurses in adhering to these practices in surgical wards remain unclear (Anderson et al., 2021; Gorecki et al., 2022), and there is limited understanding of the specific challenges faced by nurses in surgical wards.

Finally, multiple factors, including organizational culture, access to ongoing professional development, and availability of resources, play a vital role in influencing nurses' adherence to wound care standards. Hospitals that prioritize wound care resources and support continuous education for nursing staff have seen improvements in the quality of wound management (Walker & Gray, 2023). Understanding how these factors influence wound dressing practices is essential for identifying gaps in care and implementing strategies to improve patient outcomes in surgical settings. Addressing these issues through resource allocation, standardized training, and targeted interventions can enhance the consistency and quality of wound dressing practices, ensuring that patients receive the best possible care. Therefore, there is a pressing need to investigate the current level of practice on wound dressing among nurses in surgical wards, exploring factors influencing their practice, and identifying opportunities for improvement. Hence, a comprehensive investigation into the current level of practice on wound dressing among nurses in surgical wards is warranted to identify the availability, challenges and factors influencing practice and develop targeted.

Objectives

1. To identify the availability of key resources and equipment's required for optimal wound dressing practices.
2. To Assess the standard practices on wound dressing among nurses working in surgical wards.
3. To identify the challenges and barriers that nurses face in the practice of wound dressing in surgical wards.
4. To identify the factors influencing nurses' standard of practice regarding wound dressing in surgical settings.

Literature review

Conceptual review

Ayello and Baranoski (2021) Defines wound dressing as a therapeutic material applied to a wound to promote healing and prevent further harm. The primary functions include protection from infection, absorption of exudates, and maintaining a moist wound environment. Ousey and Cook (2022): Describe wound dressing as any material used to cover a wound, aiming to promote healing by providing the right conditions such as moisture balance, protection from contaminants, and controlled drainage. Leaper et al. (2023): Define wound dressing as a critical component in wound management strategies designed to facilitate optimal healing conditions by protecting the wound, reducing pain, and minimizing the risk of infections.

Wound dressing is a clinical intervention aimed at promoting wound healing, protecting the wound site from infection, and managing exudates (fluid produced by the wound) through the application of various materials directly onto the wound. In surgical wards, nurses perform wound dressing procedures as part of routine patient care, utilizing different types of dressings such as gauze, hydrocolloid, and antimicrobial dressings depending on the wound's characteristics and the stage of healing (Morris & White, 2022). Sterile technique refers to practices and procedures employed to eliminate all forms of microbial life, ensuring a sterile environment during wound dressing. This technique is especially crucial in surgical wards to prevent post-operative infections. Nurses use sterile gloves, instruments, and antiseptic solutions to maintain an aseptic environment while dressing wounds, minimizing the risk of contamination and infection at the wound site (Smith & Green, 2021).

Evidence-based practice in wound care refers to the use of the latest and best-available research findings to inform wound dressing procedures. EBP in wound care ensures that nurses' decisions and techniques align with proven standards that enhance healing and patient outcomes. In surgical wards, this approach helps nurses assess wounds more accurately, select the appropriate dressing materials, and apply effective techniques based on clinical evidence (Baker et al., 2023).

Dressing selection is the process by which nurses choose the most appropriate dressing material based on factors like the wound's depth, amount of exudate, and level of bacterial contamination. Proper dressing selection is essential for wound protection, moisture balance, and infection control. Nurses in surgical wards are trained to assess the wound type and healing requirements to make informed dressing choices (Jackson & Cole, 2021). ANTT is a wound dressing approach that minimizes the risk of contamination by

avoiding direct contact with critical areas of the dressing, instruments, and wound. This technique is commonly applied in surgical wards, where patients are at higher risk of infections. ANTT involves hand hygiene, using sterile gloves, and managing all dressing materials carefully to avoid contamination during wound dressing procedures (Thompson & Lewis, 2022).

Wound assessment is the systematic evaluation of a wound's condition, including size, depth, tissue type, exudate, and signs of infection. In surgical wards, wound assessment helps nurses document the wound's progress and adjust dressing techniques accordingly. Routine assessment is critical to ensure the dressing remains effective in supporting healing and preventing complications (Wilson & Hughes, 2023). Moisture balance in wound dressing is the practice of maintaining an optimal moisture environment that supports cell regeneration and wound healing. A balanced moist environment prevents the wound from becoming too dry or too wet, both of which can hinder healing. Nurses in surgical wards employ dressings that control exudate while keeping the wound bed moist, which has been shown to promote faster healing (Perez & Martinez, 2023).

Infection control in wound dressing is the practice of preventing pathogenic microorganisms from contaminating the wound site. Infection control measures are essential in surgical wards, where patients may be at increased risk for postoperative infections. This practice includes the use of antiseptics, sterile gloves, and other precautions during dressing changes to reduce the risk of infection and improve patient outcomes (Lee & Taylor, 2022).

Wound dressing is a fundamental component of wound care, playing a crucial role in the healing process and overall patient outcomes. Its importance is multifaceted, encompassing protection, infection prevention, moisture management, pain reduction, and promoting optimal healing conditions (Ayello & Baranoski (2021). One of the primary functions of wound dressing is to protect the wound from external contaminants such as dirt, bacteria, and other pathogens that could cause infections. According to Ayello and Baranoski (2021), a properly applied wound dressing acts as a barrier, preventing harmful microorganisms from entering the wound site. This is critical in surgical wards where the risk of infection can significantly impact recovery times and lead to severe complications.

Maintaining an appropriate level of moisture is essential for wound healing. Moist wound healing principles suggest that a moist environment facilitates faster and more efficient healing by promoting cellular activities necessary for tissue repair and reducing the risk of wound desiccation and subsequent tissue death (Ousey and Cook, 2022). Modern wound dressings, such as hydrocolloids, hydrogels, and foam dressings, are designed to balance moisture levels, providing a conducive environment for new tissue growth. Wound dressings also play a vital role in reducing pain and discomfort for patients. By covering exposed nerve endings and protecting the wound from friction and external irritants, dressings can significantly decrease pain levels. Leaper and Drake (2023) note that dressings that maintain a moist environment tend to adhere less to the wound bed, reducing pain during dressing changes and improving overall patient comfort.

Wound exudates, which are fluids produced by the body in response to tissue injury, can vary in volume and composition. Excessive exudate can macerate the surrounding skin, slow down the healing process, and increase the risk of infection. Effective wound dressings are designed to absorb exudates, managing the moisture levels while preventing maceration and promoting a clean healing environment (Atkin and Bućko, 2019). By providing a stable environment, wound dressings support the body's natural healing processes. They can be tailored to the specific needs of different types of wounds, ensuring that each wound receives the appropriate level of care. For instance, antimicrobial dressings are used to reduce bacterial load in infected wounds, while alginate dressings are particularly useful for heavily exuding wounds (Moore and Cowman, 2019).

In addition to the physical benefits, wound dressings can have significant psychological impacts on patients. Properly managed wounds that are dressed and concealed can reduce anxiety and improve the patient's confidence in their recovery process. This psychological comfort can be particularly important in a surgical ward, where patients are often dealing with post-operative stress and recovery challenges (Gillespie et al., 2021).

Wound dressing refers to the application of sterile or non-sterile materials directly to a wound to promote healing, protect the wound site, and prevent infection. Dressings serve as both a physical barrier against contaminants and a medium to manage the wound environment, which can involve controlling moisture levels, absorbing exudates, and maintaining an optimal temperature for healing. According to Babalola (2020), wound dressing is a critical component of wound care management, particularly in surgical and trauma settings where the risk of infection and complications is high.

In wound care, different types of dressings are used, including traditional gauze, advanced dressings like hydrocolloids, foam dressings, and antimicrobials, depending on the wound type and healing phase (Babalola & Adeyemi, 2022). The selection and application of the appropriate dressing are guided by the principles of wound management, which include creating a moist wound environment, minimizing infection risk, and preventing further trauma.

Wound care has evolved significantly over time, from basic cloth wrappings to advanced materials designed to

promote faster healing. Early approaches focused primarily on covering wounds to protect them from contaminants, but recent advancements have emphasized managing the wound environment to facilitate optimal healing conditions (Babalola, 2019). Current literature highlights that advanced dressings, such as alginates, foams, and hydrocolloids, are particularly effective in supporting the wound healing process. These modern materials are designed to regulate moisture, protect against infection, and can often be left on for extended periods, reducing the need for frequent changes (Babalola et al., 2021).

Different wound types require specific dressing approaches based on their characteristics and healing needs. Traditional gauze dressings, while effective for basic wound coverage, are often insufficient for more complex wounds, as they can dry out the wound bed and adhere to tissue, causing trauma upon removal. Advanced dressings, such as hydrocolloids, provide a moist environment that accelerates healing and reduces pain during dressing changes (Babalola & Adeyemi, 2022). Babalola's studies also suggest that antimicrobial dressings are effective in wounds with high infection risks, as they help reduce bacterial load while maintaining an environment conducive to healing.

The availability of key resources and equipment's required for optimal wound dressing practices

When dressing wounds, several essential tools and materials are necessary to ensure proper care and hygiene. Sterile gloves are crucial for preventing contamination, while sterile dressing packs containing various sizes of gauze dressings, non-adherent dressings, and wound pads play a vital role in the process (Rathnayake et al., 2020). Antiseptic solutions, such as chlorhexidine or povidone-iodine, are used for cleaning the wound, and sterile saline is essential for irrigation. Tools like tweezers or forceps are helpful in handling sterile materials and cleaning the wound area, with sterile scissors available to cut dressings and tapes to the appropriate size (Patel et al., 2019). Adhesive tapes, such as hypoallergenic or paper types, secure dressings in place, while elastic or conforming bandages provide additional support. For minor wounds, transparent film dressings offer added protection, and in certain cases, topical antibiotic ointment may be applied under medical guidance. A disposable waste bag ensures the safe disposal of used dressings and materials, maintaining cleanliness and reducing the risk of infection (Patel et al., 2019).

The availability of key resources significantly influences the quality of wound dressing practices in surgical wards. Access to wound care supplies, such as dressings, gauze, antiseptics, and specialized tools, is essential for nurses to perform effective wound care. The variety of dressings, including hydrocolloids, hydrogels, foams, alginates, and antimicrobial dressings, caters to different wound types and healing stages. This ensures nurses can select the most appropriate option based on the wound's characteristics (Rathnayake et al., 2020). Standard supplies like gauze and non-adherent dressings are indispensable for basic wound coverage, often used alongside more advanced dressings. Antiseptic solutions are critical for wound preparation, ensuring proper cleansing before applying dressings. Specialized equipment like wound measurement tools, debridement instruments, and negative pressure wound therapy (NPWT) devices play a crucial role in advanced wound care, enabling comprehensive management and promoting optimal healing (Rathnayake et al., 2020).

The quality of dressing materials is another significant factor influencing wound care. Nurses need access to high-quality, sterile dressings suited for the type and severity of wounds they encounter (Patel et al., 2019). The suitability of dressings, such as hydrocolloids for moderate exudate wounds or alginates for heavily exuding wounds, ensures the most effective treatment. Sterility is paramount to prevent contamination and infection, and quality dressing materials adhere to regulatory standards, helping maintain a pathogen-free wound environment (Patel et al., 2019). High-quality dressings also manage moisture effectively, maintaining the right environment for healing while preventing maceration. Patient comfort is essential, and well-made dressings minimize irritation, promoting better compliance with care regimens. Quality materials also adhere well to the wound, ensuring durability and reducing the frequency of dressing changes (Patel et al., 2019).

The availability of skilled staff is crucial for proper wound dressing. Nurses need specialized training to competently assess wounds, select appropriate materials, and apply them using correct techniques. Comprehensive knowledge of wound types, healing processes, and appropriate interventions is essential for effective care (Jeffreys, 2020). Skilled nurses are adept at conducting thorough wound assessments and adjusting treatment plans based on changes in wound status. Competency in selecting and applying dressings helps optimize outcomes, while ongoing monitoring and interdisciplinary collaboration contribute to effective wound management (Jeffreys, 2020).

Time and workload pressures can directly impact wound care quality. Heavy workloads and time constraints in surgical wards may force nurses to prioritize other tasks, potentially leading to incomplete wound dressing procedures (Street et al., 2019). Under such pressures, there is a greater risk of inadequate wound cleansing or incorrect dressing application, which can increase the likelihood of complications such as infections or delayed healing. Additionally, patient comfort may be compromised if wound care is rushed, causing

anxiety or dissatisfaction (Street et al., 2019). Over time, high workloads contribute to staff stress and burnout, affecting job satisfaction and the overall well-being of healthcare teams (Street et al., 2019).

Access to specialized equipment, such as wound assessment tools, debridement instruments, and advanced therapies like NPWT, is essential for managing complex wounds. Devices like handheld ultrasound systems aid in accurate wound assessment, while debridement tools are necessary for removing necrotic tissue (Rathnayake et al., 2020). NPWT systems provide controlled suction to reduce edema and promote healing, and patient monitoring equipment can track healing progress, allowing for more precise treatment adjustments (Rathnayake et al., 2020).

Standardized protocols and guidelines provide nurses with evidence-based procedures for wound care, ensuring consistency in care delivery. These protocols offer step-by-step instructions for wound assessment, dressing selection, and monitoring, promoting uniformity and adherence to best practices (Patel et al., 2019). Following these guidelines enhances patient safety by reducing the risk of errors and complications and encourages interdisciplinary collaboration, improving overall wound care outcomes (Patel et al., 2019). Utilizing evidence-based practices in wound care ensures that nurses implement the most effective strategies based on current research. This approach allows for informed decision-making and the consistent application of best practices (Mitchell, 2020). By adhering to evidence-based protocols, nurses can improve patient outcomes, reduce complications, and continuously advance wound care through integration of new research (Mitchell, 2020).

Finally, feedback mechanisms and quality improvement initiatives are vital for identifying areas where wound care practices can be improved. Regular audits and performance evaluations help healthcare organizations assess the effectiveness of wound dressing procedures, address deficiencies, and implement targeted interventions to enhance care quality (Haggerty et al., 2023). By promoting evidence-based practices and fostering collaboration, these initiatives contribute to continuous improvement in wound management (Haggerty et al., 2023).

Availability of essential resources and equipment is crucial for maintaining optimal wound dressing practices in healthcare settings, particularly in surgical wards. The effectiveness of wound care depends heavily on both the knowledge and skills of the nursing staff, as well as access to the right materials and tools. Research indicates that lack of access to quality wound care supplies can lead to inconsistent wound management practices and increased risk of infections and other complications (Babalola, 2020).

In wound care, essential resources include items like sterile dressings, antiseptics, gauze, adhesive tape, wound irrigation solutions, and gloves. These items are necessary to create a clean environment, reduce microbial contamination, and protect wounds from further injury (WHO, 2020). Babalola (2021) emphasized that inadequate access to high-quality dressings, particularly in high-risk areas like surgical wards, compromises patient outcomes. The study highlighted that when nurses are forced to improvise or reuse limited resources, there is an increased chance of wound infections and delayed healing.

Advanced wound dressing materials, such as hydrocolloids, foams, and antimicrobial dressings, play a vital role in enhancing wound healing, especially in complex cases (Meyer et al., 2019). However, these specialized materials are not always available in low-resource settings, leading to reliance on traditional methods that may not provide the same level of infection control and moisture balance needed for optimal healing (Babalola & Adeyemi, 2022). In a study across multiple healthcare facilities, Babalola and Adeyemi (2022) found that access to advanced wound care materials was often limited to larger hospitals, leaving smaller facilities to use basic supplies that may not be suitable for all wound types.

Another critical factor is the availability of equipment such as wound irrigation systems, which help in cleaning and decontaminating wounds before dressing. Proper irrigation is essential for reducing bacterial load and preparing the wound bed, yet Babalola (2020) points out that many healthcare facilities lack dedicated irrigation tools, forcing nurses to use suboptimal methods that may not fully cleanse the wound. This issue is exacerbated in resource-limited settings, where even basic sterile water or saline solutions may be scarce, affecting the overall quality of wound care.

Moreover, Babalola (2019) argues that the availability of personal protective equipment (PPE) is vital to prevent cross-contamination during wound dressing procedures. Without adequate gloves, gowns, and masks, nurses risk introducing contaminants to the wound or becoming vectors for infection themselves.

Babalola et al. (2021) advocate for policies that ensure consistent supply and distribution of essential wound care materials and equipment across healthcare facilities to promote standardized wound care practices. Enhanced access to advanced wound care technologies and PPE, along with regular staff training on their use, could substantially improve patient outcomes and reduce the burden of wound-related complications.

The practice on wound dressing among nurses working in surgical wards

Ensuring proper wound care is essential for promoting healing and preventing infection, especially among nurses working in surgical wards. A structured approach

to wound dressing, based on expert guidelines, can help maintain a sterile environment, prevent complications, and ensure optimal patient outcomes. The first and most crucial step in wound care is hand hygiene, which is essential for preventing infection and maintaining sterility (CDC, 2020). Nurses must wash their hands thoroughly with soap and water, making sure to clean between fingers and under nails. Handwashing should last at least 20 seconds, roughly the time it takes to sing "Happy Birthday" twice (CDC, 2020). Afterward, hands should be rinsed under clean, running water and dried with a clean towel or air dryer. In cases where soap and water are unavailable, alcohol-based hand sanitizer containing at least 60% alcohol should be used. This step must be performed both before and after wound care to reduce the transmission of bacteria and pathogens, playing a key role in reducing healthcare-associated infections (WHO, 2019).

Before starting the wound dressing process, it's vital to gather all necessary supplies to minimize contamination and interruptions. The basic items required include sterile wound dressings, saline or wound cleaning solution, sterile and non-sterile gloves, gauze pads, medical tape or adhesive, sterilized scissors, a disposal bag, and antiseptic solutions if prescribed. A waterproof protective pad can be placed under the wound area to prevent soiling the surrounding environment (Mosby, 2021).

Proper patient identification is critical to ensure the correct patient receives the correct wound care (Joint Commission, 2021). Verification should involve at least two identifiers, such as the patient's name and date of birth, and reviewing their medical history for allergies and wound care plans. Explaining the procedure to the patient helps to reduce anxiety, promoting cooperation and ensuring informed consent (American Medical Association, 2020). Clear communication of the steps involved and the benefits of each action is essential, and the nurse should be ready to answer any questions or concerns the patient might have (Mosby, 2021).

The removal of an old dressing must be done carefully to avoid causing pain or damaging the wound. Non-sterile gloves are worn during this step to prevent contamination (CDC, 2020). If the dressing sticks to the wound, saline can be used to moisten and loosen it, minimizing discomfort (Mosby, 2021). After removal, the dressing and other used materials must be properly disposed of in a designated waste container to maintain cleanliness and prevent infection.

Once the dressing is removed, the wound must be thoroughly inspected. This involves noting the size, depth, and condition of the wound bed, as well as signs of inflammation, infection, or complications. The surrounding skin should also be checked for any damage or irritation. Observing and documenting details like wound drainage and skin condition helps guide further treatment and monitor the healing process (Joint Commission, 2021). Wound cleaning begins by donning sterile gloves to maintain a sterile environment. Using sterile saline or a wound cleaning solution, the wound is gently irrigated, removing any debris or exudate without damaging healing tissues (CDC, 2020). The surrounding skin is then dried with a sterile gauze pad, preparing it for the application of a new dressing. The dressing should be chosen based on the wound's characteristics, and once applied; it should be secured snugly with medical tape or adhesive, but not so tightly as to restrict blood flow (Mosby, 2021). Proper documentation of the wound dressing procedure, including the type of dressing applied and any changes in the wound, is crucial for continuity of care.

Following the procedure, all used supplies and contaminated materials should be disposed of following the facility's waste management protocols (CDC, 2020). Nurses must perform hand hygiene again to prevent cross-contamination. Ensuring the patient's comfort after the procedure is also essential, addressing any pain or discomfort they may feel. Finally, clear, and thorough documentation of the procedure, wound condition, and any instructions given to the patient will help in future wound care and provide a baseline for monitoring healing progress (Joint Commission, 2021). By following these guidelines, nurses can provide effective wound care, reduce the risk of infection, and contribute to the patient's overall recovery.

The practice of wound dressing in surgical wards is crucial to patient recovery, particularly in reducing the risk of infection and promoting timely healing. Nurses in these settings are primarily responsible for wound care, and their adherence to standard procedures plays a significant role in patient outcomes. Proper wound dressing techniques involve not only skill and knowledge but also the availability of essential resources and an understanding of evidence-based protocols (Singh & Ahmed, 2021). However, despite the importance of standardized practices, research indicates variations in wound dressing techniques among nurses due to factors such as differences in training, access to updated guidelines, and workload constraints (Liew & Lee, 2023).
One key aspect affecting wound dressing practices is the availability of resources, including appropriate dressings, antiseptics, and sterilized equipment. Inadequate resources often lead nurses to use suboptimal materials, increasing the risk of wound complications (Andersson & Wihlborg, 2022). Furthermore, while many hospitals and healthcare institutions have established protocols for wound care, adherence to these guidelines can vary, particularly under high-stress conditions where patient-to-nurse ratios are high (Brown et al., 2022).

Continuous training and institutional support are also essential in maintaining high standards in wound dressing practices. Studies have shown that nurses who receive regular training and access to current guidelines

are more likely to adhere to best practices in wound care (Walker & Gray, 2023). Challenges, including time constraints and limited professional development opportunities, can hinder this adherence and ultimately affect the quality of care provided to patients in surgical wards.

Therefore, improving wound dressing practices among nurses in surgical wards requires addressing these barriers through policy interventions, regular training, and sufficient resource allocation. Doing so not only supports the nurses but also enhances patient safety and promotes faster recovery, demonstrating the critical need for standardized, well-supported wound dressing practices in surgical settings.

Wound dressing is a vital component of postoperative patient care, particularly in surgical wards where preventing infections and promoting healing is crucial. Nurses working in these settings are responsible for performing wound dressing procedures according to established guidelines to ensure patient safety and optimal recovery (Andersson & Wihlborg, 2022). However, variations in wound dressing practices among nurses are frequently observed, often due to differences in training, access to updated protocols, and the availability of necessary resources (Singh & Ahmed, 2021). Optimal wound dressing involves a systematic approach, including wound assessment, selection of appropriate dressing materials, and adhering to sterile techniques. Inconsistent adherence to these steps can lead to compromised wound care, which may delay healing and increase the risk of infection (Liew & Lee, 2023). Studies show that factors such as high nurse-to-patient ratios, limited access to resources, and heavy workloads are significant challenges that impact the quality and consistency of wound dressing practices in surgical wards (Brown et al., 2022). When nurses are overburdened, they may have less time to devote to wound care, potentially leading to deviations from standard protocols. Ongoing education and institutional support play critical roles in ensuring high standards in wound dressing practices. Nurses who receive regular training and have access to the latest guidelines on wound care demonstrate higher adherence to optimal practices, improving patient outcomes (Walker & Gray, 2023). Additionally, healthcare facilities that prioritize wound care resources and maintain adequate staffing are better positioned to support nurses in delivering consistent, high-quality care. Ensuring that nurses in surgical wards are equipped with the necessary skills, knowledge, and resources is essential to providing patients with effective and safe wound care.

Challenges and barriers that nurses face in the practice of wound dressing

Nurses in surgical wards face a variety of challenges and barriers when practicing wound dressing, which can affect the quality and effectiveness of care. One of the primary challenges is time constraints, as nurses often have a high patient load that limits the time they can dedicate to each wound dressing procedure. Johnson and Smith (2023) suggest that this time pressure can result in rushed care, compromising the quality of wound management. A lack of resources, particularly inadequate supplies of dressing materials and advanced wound care products, is another major barrier. Jones, (2022) emphasize that limited access to necessary tools can hinder nurses' ability to perform effective wound dressings, leading to suboptimal patient outcomes. Moreover, resource allocation within healthcare settings can further exacerbate this problem. Wilson et al. (2023) explain that restricted financial resources can limit the availability of advanced wound care products, affecting the care nurses can provide.

Training and education are crucial in wound care, but many nurses lack specialized training in the latest techniques and products. Brown, (2024) found that this knowledge gap prevents nurses from implementing best practices and effectively using advanced wound care technologies. Similarly, a lack of organizational support, such as insufficient staffing and limited opportunities for ongoing education, can impede nurses' ability to stay updated with current standards in wound management (Lee & Williams, 2023). Psychological stress is another significant barrier, particularly when managing complex wounds. Chronic or non-healing wounds can be mentally taxing, leading to burnout and reduced job satisfaction among nurses, which in turn impacts their performance and the quality of care provided (Smith, 2023). In addition, the lack of effective multidisciplinary collaboration, a critical aspect of wound care, can hinder optimal patient outcomes. Effective wound management often requires coordination between nurses, physicians, and other healthcare professionals, but communication breakdowns can create barriers (Davis et al., 2022).

Nurses' proficiency in wound care knowledge and skills also plays a key role. According to Thompson et al. (2023), many nurses lack a comprehensive understanding of advanced wound care techniques, which can result in improper wound management. Infection control is another persistent challenge, requiring meticulous attention to detail. Breaches in infection control protocols can lead to wound complications and prolonged hospital stays (Patel & Green, 2023).

Patient compliance with wound care instructions is another obstacle. Non-compliance can delay healing and increase the risk of infection, as highlighted by Mitchell (2022). Effective documentation and reporting are essential for continuity of care, yet nurses often face barriers in this area due to time constraints and the complexity of electronic health records (Davis & Thompson, 2023). Continuing professional development

(CPD) is vital for staying updated on wound care advancements, but time constraints, lack of funding, and limited access to training can impede these efforts (Miller & Lee, 2023). Furthermore, high patient-to-nurse ratios increase workloads and reduce the time available for detailed wound assessments, often leading to nurse burnout and lower quality care (Roberts, 2023).

Complex wound types, such as diabetic ulcers and pressure sores, require specialized knowledge and are more time-consuming to manage. Smith et al. (2023) note that nurses need higher levels of expertise to handle such wounds effectively. Additionally, inadequate staffing levels mean nurses may not have enough time for thorough wound care, including assessments, dressing changes, and patient education, all of which are crucial for effective management (Wilson et al., 2023). Poor staffing can also lead to inadequate documentation, which may result in inconsistencies in care and delayed interventions (Garcia & Mitchell, 2022).

Effective wound dressing practices are critical in healthcare, especially in surgical wards, to prevent infection and promote wound healing. However, nurses often face multiple challenges and barriers that can compromise the quality and consistency of wound care. These barriers can stem from factors such as limited resources, lack of training, workload pressures, and institutional policies.

A major barrier to optimal wound care is the inadequate availability of essential wound dressing materials. Babalola (2020) points out that nurses often face shortages of basic supplies like sterile dressings, antiseptics, and gloves, forcing them to improvise or reuse materials, which can increase the risk of infection. In addition, advanced wound dressing products such as hydrocolloids and foam dressings are frequently unavailable in low-resource settings, leading nurses to rely on less effective, traditional dressing methods (Babalola & Adeyemi, 2022).

Continuous training is essential for nurses to stay updated on the latest evidence-based wound care techniques. However, limited training opportunities and access to updated information present a significant challenge. Babalola et al. (2021) found that many nurses lack adequate training on advanced wound care products and proper dressing techniques. This gap in knowledge affects their ability to make informed decisions regarding the most appropriate wound dressing practices, often resulting in inconsistent care across facilities.

Nursing is often characterized by a high patient-to-nurse ratio, particularly in surgical wards, which can lead to heavy workloads and limited time for individual patient care. According to Babalola (2019), time constraints prevent nurses from performing wound care practices thoroughly, compromising the quality of care and potentially increasing the likelihood of wound infections. High workload pressures can result in rushed or incomplete wound dressing practices, further compounded by the need to balance multiple responsibilities in high-stress environments.

Institutional policies significantly influence wound dressing practices. Babalola (2020) highlights that facilities with standardized protocols for wound care tend to have more consistent and effective practices, as nurses have clear guidelines to follow. However, in many healthcare settings, these protocols are either absent or inadequately enforced, leaving nurses to make decisions based on personal experience or available resources, which can lead to variations in care quality. Furthermore, limited support from management in terms of resource allocation and policy enforcement often exacerbates these challenges.

Wound care can be physically and emotionally demanding, especially when dealing with patients with chronic or complex wounds. Nurses can experience psychological stress due to the responsibility of preventing infections and ensuring wound healing. Babalola and colleagues (2021) note that dealing with severe wounds over time can lead to burnout and compassion fatigue, affecting a nurse's ability to remain attentive and engaged in wound care practices.

Patient noncompliance and difficulty in handling certain patients, especially those who experience pain or distress during dressing changes, are additional barriers. Patients may resist necessary procedures, making it challenging for nurses to apply proper dressing techniques. Babalola et al. (2021) reported that noncompliance with wound care instructions, such as keeping wounds dry or avoiding certain activities, can hinder healing and complicate the care process.

Factors influencing nurses' standard of practice regarding wound dressing

Wound dressing is a critical component of nursing care, requiring a blend of skill, knowledge, and critical judgment. The effectiveness of wound dressing practices has a significant impact on patient outcomes, including infection rates, healing times, and overall comfort. This literature review explores various factors influencing nurses' standards of practice in wound dressing, categorized into individual, organizational, and external factors.

Individual factors

Knowledge and education

The level of education and training that nurses receive is fundamental to their competence in wound dressing. Adequate training and continuous professional development are essential for keeping nurses updated on the latest wound care practices. Research indicates that

specialized wound care training enhances nurses' skills and confidence in managing wounds effectively (Ayello, 2020). Additionally, practical experience plays a significant role; experienced nurses tend to be more adept at wound assessment, dressing selection, and recognizing signs of infection (McCluskey & McCarthy, 2019).

Attitudes and Beliefs

Nurses' attitudes toward wound care can significantly influence their standard of practice. Positive attitudes and genuine interest in wound management correlate with better adherence to best practices (Gethin & Cowman, 2021). Conversely, outdated beliefs or misinformation about wound care can lead to suboptimal practices (Kuehn, 2019).

Skills

Proficiency in clinical skills such as wound assessment, dressing application, and infection control is crucial for effective wound care. Training programs that enhance these skills are vital (Moore & Webster, 2021). Furthermore, critical thinking and decision-making abilities are essential for nurses to make informed choices based on patient-specific factors and clinical guidelines (Thompson, 2021).

Organizational factors

Work environment

The work environment significantly influences nurses' standards of practice. Adequate nurse-to-patient ratios are essential for ensuring that nurses have enough time to provide thorough wound care. High patient loads can lead to rushed and less effective practices (Duffield, 2019).

Manageable workloads and reduced time pressures are crucial for maintaining high standards in wound dressing. Resources and Equipment: The availability of appropriate wound care products and dressing materials is critical. Shortages or limited access to these resources can severely hinder effective wound management (Bergquist-Beringer, 2020). Furthermore, the use of advanced wound care technologies, such as negative pressure wound therapy, can enhance healing and improve outcomes, underscoring the importance of organizational investment in these technologies (Guo & DiPietro, 2019).

Policies and protocols

Clear, up-to-date wound care protocols are essential for guiding nurses in delivering standardized care. Adherence to these guidelines is linked to better patient outcomes (Ousey, 2020). Support from leadership is also crucial; leaders who prioritize wound care quality and provide necessary resources positively influence nurses' standards of practice (Stenberg et al., 2020).

Interdisciplinary collaboration

Effective communication and collaboration with other healthcare professionals, such as wound care specialists and physicians, enhance the overall quality of care. Interdisciplinary teamwork is associated with improved wound care outcomes (Collins et al., 2021).

External factors

Healthcare system and policies

Compliance with national and international wound care standards and regulations is crucial for ensuring high-quality care. Regulatory bodies that promote best practices can drive improvements in standards of practice (Keen et al., 2019). Additionally, adequate funding for wound care products and services is essential to ensure that nurses have the necessary resources to provide optimal care (Posnett et al., 2019).

Education and training programs

Opportunities for nurses to participate in workshops, seminars, and courses on wound management are vital. Continuous education helps nurses stay updated with best practices and emerging technologies (Carville et al., 2020). Pursuing specialized certifications in wound care is also linked to higher standards of practice, as certified nurses often demonstrate greater proficiency and adherence to best practices (Hurlow et al., 2020).

Research and evidence-based practice

Access to current research and the integration of evidence-based practices into clinical care are critical for effective wound management. Nurses who engage in evidence-based practice provide higher-quality wound care (Frykberg & Banks, 2020). Participation in research and quality improvement projects can further enhance wound care practices and foster a culture of continuous improvement (Adegoke et al., 2021).

Cultural competence

Providing culturally sensitive wound care to diverse patient populations is essential. Nurses who understand cultural differences can better address the unique needs of their patients (Leininger, 2020). Educating patients about wound care practices and involving them in their

own care also improves outcomes, as patient engagement is linked to better adherence to treatment plans and faster healing (Santamaria et al., 2019). Overall, multiple factors influence nurses' standards of practice regarding wound dressing. Addressing individual, organizational, and external factors is essential for enhancing the standards of practice in wound care, ultimately leading to better patient outcomes and improved quality of care. Continuous education, supportive work environments, adequate resources, and a focus on evidence-based practice are critical components in achieving high standards in wound dressing practices.

Knowledge and education

A foundational factor influencing nurses' wound dressing practices is their level of education and training. Nurses who have received specialized training in wound care tend to demonstrate higher competency and adherence to evidence-based practices. Babalola (2019) emphasizes the importance of comprehensive educational programs that cover the latest techniques and materials used in wound management. Continuous professional development is crucial, as it helps nurses stay updated on advancements in wound care, thereby enhancing their practice standards. Access to necessary resources and equipment is a significant determinant of wound care quality. Babalola (2020) notes that the availability of appropriate wound dressing materials, such as advanced dressings and antiseptics, directly impacts the effectiveness of wound care. In many healthcare settings, especially those with limited budgets, nurses may not have access to the latest wound care technologies, which can restrict their ability to provide optimal care. The lack of essential supplies can lead to improvisation, often resulting in substandard practices.

Institutional policies and support

Institutional policies play a critical role in shaping nursing practices related to wound dressing. The presence of standardized protocols and guidelines helps nurses understand the best practices for wound management. Babalola et al. (2021) highlight that hospitals with clear policies on wound care are more likely to have nurses who consistently apply appropriate techniques. Furthermore, institutional support in terms of training and resource allocation fosters an environment conducive to high standards of care.

Workload and staffing levels

The workload and nurse-to-patient ratio significantly influence the quality of wound care. High patient loads can lead to time constraints, limiting the time nurses can dedicate to each patient's wound care needs. Babalola (2020) explains that in busy surgical wards, nurses may rush through dressing changes, which compromises thoroughness and can negatively affect healing outcomes. Adequate staffing levels and manageable workloads are essential for ensuring that nurses can perform wound dressing with the attention and care it requires.

Experience and skills

The level of clinical experience and practical skills of nurses also impacts their wound dressing practices. Experienced nurses tend to have a more nuanced understanding of wound assessment and management, allowing them to make better clinical decisions (Babalola & Adeyemi, 2022). However, less experienced nurses may lack confidence in their skills, leading to inconsistent application of wound care practices. Mentorship programs and peer support can enhance skill development and bolster the confidence of less experienced nurses.

Patient factors

Patient-related factors, such as individual health status, comorbidities, and compliance with wound care instructions, can also influence the standards of practice among nurses. Babalola et al. (2021) found that when patients are noncompliant with care instructions, it complicates the nurse's role in managing wounds effectively. Understanding the patient's condition and encouraging adherence to care protocols is essential for successful wound management.

Psychological and emotional factors

The psychological and emotional well-being of nurses can impact their performance in wound care. High levels of stress and burnout can diminish focus and motivation, leading to decreased attention to detail in wound dressing practices (Babalola, 2019). Supportive work environments that promote mental health and well-being can help nurses maintain high standards in their practice. A combination of educational preparation, resource availability, institutional support, and individual factors influences the standard of practice regarding wound dressing among nurses. By addressing these factors through targeted interventions, healthcare institutions can enhance wound care quality and improve patient outcomes.

MATERIALS AND METHODS

Research Design

This research adopted the cross-sectional survey design

to determine standard practice on wound dressing among nurses in surgical ward in Irrua Specialist Teaching Hospital in Irrua, Edo State.

Research setting

The study was carried out at Irrua Specialist Teaching Hospital in Irrua, which is a Tertiary and referral Centre. It is therefore an ideal location to obtain a more representative sample from people with different sociodemographic and cultural characteristics. Irrua Specialist Teaching Hospital (formerly known as Otibhor Okhae Teaching Hospital), Irrua, was established by Decree 92 of 2019 to provide tertiary Health Care Delivery Services to the people of Edo State and beyond. The hospital is in Irrua, Edo Central Senatorial District, along the Benin-Abuja highway at about 87 kilometers north of Benin City, the Edo State Capital. The hospital currently has a School of Post Basic Nursing.
The vision of ISTH is to become a Centre of Excellence in Teaching, Research and Service with reference to the health problems of rural and sub-urban/small urban town communities and the diagnosis, management, and control of viral haemorrhagic fevers, with special reference to Lassa Fever. Its mission is to provide specialized, affordable, accessible and qualitative promotive, preventive and curative health care services for our patients, engage in research and teaching activities and serve as a Centre of Excellence for the diagnosis, management and control of Lassa Fever.

Target population

The target population of the study comprised of 75 Nurses working at various surgical wards in ISTH, Irrua, Edo state (Table 1).

Table 1: Number of wards and nurses working in each

Wards	Number of Nurses	percentage
Male surgical	20	26.7
Female surgical	15	20.0
Male ortho nuero	15	20.0
Female ortho nuero	15	20.0
Pediatric surgical	10	13.3
Total	75	100.0

Source: ISTH, 2024

Sample size determination

The sample size was determined using the thumbs rule of whole (100%). This included the whole population size as captured by the time-frame of the study

Sampling Technique

Convenience sampling

Convenience sampling was used for the study.

The researcher went around surgical wards to meet with the nurses and then took samples from the nurses. This technique was used to allow enough time to explain the nature of the questionnaire to the nurses to gain their full cooperation.

Inclusion criteria: all nurses working at surgical wards willing to be a study participant in the study within the stipulated time-frame.

Instrument for data collection

Self-Structures questionnaire

The instrument for data collection was a self-structured questionnaire titled “Practice of wound dressing among nurses in surgical ward”. The instrument was developed by the researcher. It consisted of four sections: Section A contained the availability of key resources and equipment required for optimal wound dressing practices; Section B contained standard practices on wound dressing among nurses, using the Louis Mosby Checklist for wound dressing as a guideline (see appendix iii); Section C contained the barriers and challenges; and Section D contained the factors influencing nurses' standard of practice regarding wound dressing in surgical settings.

Validation of the Instrument

The instrument was subjected to face and content validation by my supervisor and other experts in the Nursing field from the Health Care Center. The experts were requested to assess the adequacy of the items in line with the purpose of the research questions. Corrections made were applied to some of the items and the response options.

Reliability of the Instrument

To ascertain the reliability of the instrument, a test-retest was carried out. The instrument was administered to 10 nurses working in MMW at ISTH, Irrua, Edo State, within the study area. The same questionnaire was administered to the same respondents after two weeks. The overall reliability estimate obtained for the instrument (0.937) was above 0.50 and was closer to 1, using the Pearson Product correlation coefficient statistical tool. This confirmed that the instrument was reliable for the study.

Ethical consideration

A letter of introduction was obtained from the Department (HOD) of nursing science, Igbinedion University, Introducing the students to Irrua Specialist Teaching Hospital ethical committee. The Ethical approval was

obtained from the Hospital Research Ethics committee.

Confidentiality

The researcher ensured that information provided by respondents were treated with utmost secrecy; hence, no name or address were requested for in the questionnaire.

Self-determination/voluntary participation

The researcher ensured that the respondents had the right to voluntarily decide whether to participate in the Study without the risk of incurring any penalty or prejudicial treatment. They were given the right to determine during the Study to withdraw their participation or refuse to provide any information on any unclear point to them. The purpose and benefit of the study were explained to the respondent to obtain their informed consent. Participants were free to withdraw from the process at any time during the Study. The researcher ensured that there was no injury sustained during the administration of the questionnaire.

Method of data collection

The method of data collection was a self-administered questionnaire to gather information from the respondents. The questionnaires were administered to the respondents after explaining the nature of the research to them. This was done with the aid of two research assistants. Due to the hectic and tight schedules in the surgical wards, which the nurses experienced, the questionnaires were left with them to read and answer at their free time, which varied from ward to ward. After three days, the researcher went around to retrieve the questionnaires. Notable information was assessed and obtained from the questionnaire items. All the necessary approvals for conducting the research were obtained.

Method of data analysis

The data was presented in tables in rows and columns to ensure a better understanding of the data by the researcher. Also, to test for the hypothesis as stated in chapter one, Data analysis procedures was done either through bivariate correlation procedures and Chi-Square using a Statistical Package for Social Sciences (SPSS). Data analyses were executed at 95% confidence level.

Using the mean scores, In a 5-point Likert scale, the class mark or midpoint was calculated by taking the average of the lower and upper limits of the scale. Mathematically, this is represented as: 1+2+3+4+5=15/5=3.

This midpoint of 3 serves as a reference when interpreting the mean scores from responses. A mean score higher than 3 suggests more positive responses, while a mean score below 3 indicates more negative responses. Therefore, the class mark of 3 acts as a neutral benchmark in the evaluation of the data.

RESULTS AND DISCUSSION

From (Table 2), out of the 75 nurses, 18 (24.0%) were male, while the remaining 57 (76.0%) were female. This indicated a higher proportion of female nurses in the sample. The age distribution showed that most of the nurses were in the 30-39 age groups, with 31 nurses (41.3%). This was followed by 21 nurses (28.0%) in the 40-49 age group, and 19 nurses (25.3%) in the 20-29 age group. Only 4 nurses (5.3%) were aged 50 or above, indicating a relatively younger workforce.

In terms of marital status, 48 nurses (64.0%) were married, making up most of the sample. Single nurses accounted for 20 (26.7%) of the sample, while 7 nurses (9.3%) were widowed.

Regarding educational qualifications, most of the nurses held a Bachelor's degree, with 57 nurses (76.0%) falling into this category. There were 11 nurses (14.7%) with a Master's degree, and 7 nurses (9.3%) with a Diploma. When examining the years of experience in nursing, 31 nurses (41.3%) had 6-10 years of experience, which was the largest group. This was followed by 18 nurses (24.0%) with 11-15 years of experience, and 17 nurses (22.7%) with 0-5 years of experience. A smaller number, 7 nurses (9.3%), had 16-20 years of experience, and only 2 nurses (2.7%) had over 21 years of experience.

For years of experience specifically in the surgical ward, 32 nurses (42.7%) had 0-5 years of experience, making up the largest group. This was followed by 29 nurses (38.7%) with 6-10 years of experience, and 13 nurses (17.3%) with 11-15 years of experience. Only 1 nurse (1.3%) had over 21 years of experience in the surgical ward.

In terms of position or rank, most of the nurses were Senior Nursing Officers (SNO), with 42 nurses (56.0%) holding this title. Nursing Officer I (NO I) accounted for 23 nurses (30.7%), and Nursing Officer II (NO II) for 9 nurses (12.0%). Only 1 nurse (1.3%) held the position of Assistant Director of Nursing Services (ADNS).

The analysis of the (Table 3) on the availability of key wound care resources in the surgical ward revealed significant shortages in critical supplies. Among the items assessed, only sterile wound dressing kits and related tools were adequately available, with a mean score of 3.3, indicating that healthcare providers had access to basic materials for wound dressing, such as sterile wound dressing kits and dressing trays, bowls for antiseptic solutions, and including scissors, tweezers, and sterile drapes. However, the majority of other essential resources were reported as not available, with

Table 2: Demographic Characteristics of Nurses.

Category		Subcategory	Frequency	Percentage
1.	Gender	Male	18	24.0
		Female	57	76.0
2.	Age	20-29	19	25.3
		30-39	31	41.3
		40-49	21	28.0
		50+	4	5.3
3.	Marital Status	Single	20	26.7
		Married	48	64.0
		Widowed	7	9.3
4.	Level of Education	Diploma	7	9.3
		Bachelor's Degree	57	76.0
		Master's Degree	11	14.7
5.	Years of Experience in Nursing	0-5 yrs	17	22.7
		6-10 yrs	31	41.3
		11-15 yrs	18	24.0
		16-20 yrs	7	9.3
		21+ yrs	2	2.7
6.	Years of Experience in Surgical Ward	0-5 yrs	32	42.7
		6-10 yrs	29	38.7
		11-15 yrs	13	17.3
		21+ yrs	1	1.3
7.	Position/Rank	NO I	23	30.7
		NO II	9	12.0
		SNO	42	56.0
		ADNS	1	1.3
		Total	75	100.0

Source: ISTH, 2024

Table 3: The available of key resources and equipment's required for optimal wound.

Statements	Not Available (NA)	Rarely (RA)	Sometimes (SA)	Often (OA)	Always (A)	$\bar{x}$	Mean Remark
Are sterile wound dressing kits and dressing trays, bowls for antiseptic solutions, including scissors, tweezers, and sterile drapes, available in the surgical ward?	10 (13.3%)	23 (30.7%)	5 (6.7%)	6 (8.0%)	31 (41.3%)	3.3	Available
Is there a consistent supply of sterile gloves, aprons, and masks for wound dressing procedures?	40 (53.3%)	14 (18.7%)	3 (4.0%)	8 (10.7%)	10 (13.3%)	2.1	Not Available
Are antiseptic solutions (such as iodine, chlorhexidine, or normal saline) readily available for wound cleaning before dressing?	38 (50.7%)	19 (25.3%)	3 (4.0%)	9 (12.0%)	6 (8.0%)	2.0	Not Available
Are specialized wound care products, such as hydrocolloid dressings, foam dressings, and alginate dressings, available for use in the surgical ward?	38 (50.7%)	18 (24.0%)	3 (4.0%)	5 (6.7%)	11 (14.7%)	2.1	Not Available
Is there an adequate supply of wound bandages, such as compression bandages, adhesive wraps, or elastic bandages, for wound care?	45 (60.0%)	10 (13.3%)	2 (2.7%)	8 (10.7%)	10 (13.3%)	2.0	Not Available
Do you have easy access to additional wound care materials such as cotton swabs, sterile spatulas, and irrigation syringes during wound dressing procedures?	39 (52.0%)	10 (13.3%)	4 (5.3%)	19 (25.3%)	3 (4.0%)	2.2	Not Available
Is there an adequate supply of sterile wound closure strips/suturing materials and wound irrigation equipment for managing surgical or traumatic wounds?	42 (56.0%)	14 (18.7%)	4 (5.3%)	7 (9.3%)	8 (10.7%)	2.0	Not Available

Source: ISTH, 2024
Mean Decision Rule $\bar{x} < 3$ *(Not Available)* $\bar{x} = 3 >$ *(Available)*

mean scores below 3. This included the consistent supply of sterile gloves, aprons, and masks (mean = 2.1), as well as antiseptic solutions (mean = 2.0), which were crucial for infection control and wound cleaning. The specialized wound care products needed for more complex wounds, such as hydrocolloid dressings, also scored low (mean = 2.1), indicating their scarcity.

Furthermore, wound bandages (mean = 2.0) and additional wound care materials like cotton swabs and irrigation syringes (mean = 2.2) were in limited supply. The lack of wound closure strips and suturing materials (mean = 2.0) compounded the problem, making it difficult for healthcare providers to effectively manage surgical or traumatic wounds.

The (Figure 1) illustrated the cumulative percentage of available and unavailable key resources and equipment needed for optimal wound dressing practices among nurses working in surgical wards at Irrua Specialist Teaching Hospital (ISTH), Edo State.

A significant portion, 76%, of the necessary equipment was reported as unavailable. This indicated a major shortfall in the resources required for effective wound

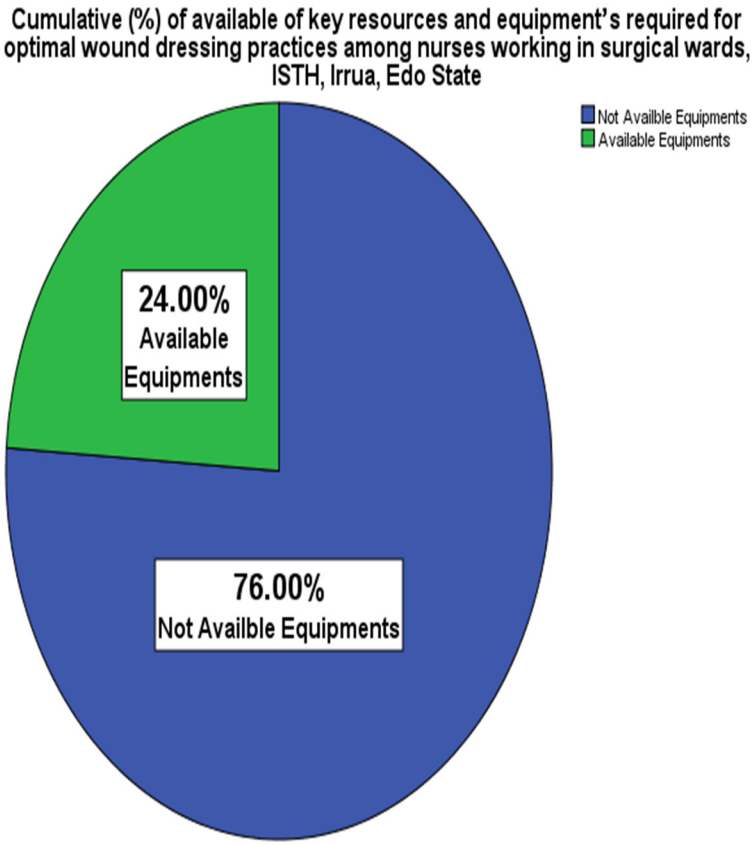

Figure 1: Cumulative per □ent on the available of key resour□es and equipment's required for optimal wound dressing
Source: Bakare A.O, 2024

care, suggesting that the majority of surgical wards lacked essential tools such as sterile dressing kits, antiseptic solutions, and wound care materials. This unavailability could have had a direct impact on the quality of wound dressing procedures and may have hindered the delivery of optimal care.

On the other hand, 24% of the required equipment was available, showing that while some resources were in place, they were far from sufficient to meet the needs of the nurses in delivering adequate wound care.

This disparity between available and unavailable equipment highlighted the urgent need for improvement in resource provision. Ensuring the availability of these key resources was crucial to enhancing nursing practices and improving patient outcomes in wound care within the hospital. The chart underscored the importance of addressing this equipment gap to support effective wound care management in the surgical wards.

Table 4 reveals a high level of adherence to wound dressing practices among nurses working in surgical wards. Based on the mean decision rule, all practices assessed scored above 3, indicating that nurses generally follow High Standard Practices. Key areas such as performing hand hygiene before and after the procedure and wearing sterile gloves demonstrated the strongest adherence, with the vast majority of nurses consistently following these critical steps. Although there were a few instances where practices like verifying the patient's identity and ensuring the patient's comfort showed slightly lower compliance, with some nurses reporting that they "rarely" or "sometimes" follow these steps, the overall mean scores still indicate a high level of compliance. Other aspects, such as documenting observations and proper wound inspection, were also performed reliably by most nurses, showing adherence to hospital protocols. Overall, the findings suggest that nurses in surgical wards are largely compliant with recommended wound care procedures, ensuring both patient safety and effective healing.

Figure 2 illustrates the cumulative percentage of standard practices on wound dressing among nurses in the surgical wards at Irrua Specialist Teaching Hospital

Table 4: Standard practices on wound dressing among nurses working in surgical wards.

Statements	Nil	Rarely	Sometimes	Often	Always	$\overline{x}$	Mean Remark
Do you perform hand hygiene before gathering supplies and ensure all necessary items are collected for the wound dressing procedure?	2 (2.7%)	4 (5.3%)	3 (4.0%)	20 (26.7%)	46 (61.3%)	**4.39**	High Standard Practice
Do you verify the patient's identity using two identifiers and explain the wound dressing process clearly to the patient before starting?	9 (12.0%)	4 (5.3%)	5 (6.7%)	19 (25.3%)	38 (50.7%)	**3.98**	High Standard Practice
Do you wear clean or sterile gloves before removing the old dressing, and do so carefully to avoid discomfort to the patient?	1 (1.3%)	4 (5.3%)	3 (4.0%)	15 (20.0%)	52 (69.3%)	**4.52**	High Standard Practice
Do you properly dispose of the old dressing and used supplies in the appropriate waste container after removal?	2 (2.7%)	2 (2.7%)	8 (10.7%)	25 (33.3%)	38 (50.7%)	**4.27**	High Standard Practice
Do you thoroughly inspect the wound for signs of infection, healing progress, and exudate during each dressing change?	4 (5.3%)	6 (8.0%)	0 (0.0%)	26 (34.7%)	39 (52.0%)	**4.28**	High Standard Practice
Do you accurately document your observations of the wound and the dressing procedure in the patient's medical record?	5 (6.7%)	5 (6.7%)	12 (16.0%)	17 (22.7%)	36 (48.0%)	**3.99**	High Standard Practice
Do you clean the wound using saline or a prescribed solution according to the hospital protocol?	8 (10.7%)	0 (0.0%)	4 (5.3%)	26 (34.7%)	37 (49.3%)	**4.23**	High Standard Practice
Do you apply a sterile dressing to the wound and ensure it is properly secured with tape or another suitable method?	0 (0.0%)	1 (1.3%)	16 (21.3%)	20 (26.7%)	38 (50.7%)	**4.27**	High Standard Practice
After completing the wound dressing procedure, do you remove gloves and perform hand hygiene?	2 (2.7%)	2 (2.7%)	8 (10.7%)	18 (24.0%)	45 (60.0%)	**4.36**	High Standard Practice
Do you ensure the patient is comfortable and in a safe position after the procedure, and document the patient's response?	12 (16.0%)	5 (6.7%)	10 (13.3%)	21 (28.0%)	27 (36.0%)	**3.62**	High Standard Practice

Source: ISTH, 2024

Mean Decision Rule $Decision\ rule = \overline{x} < 3(Low\ Standard\ Practice)$
$\overline{x} > 3(High\ Standard\ \ Practice)$

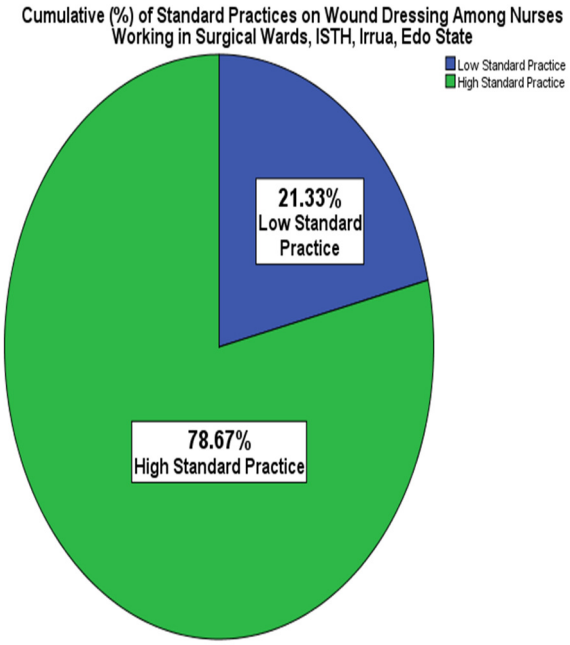

Figure 2: Cumulative percentage on the standard pra□ti□es on wound dressing among nurses working in surgi□al wards.
Source: Bakare A.O, 2024

Table 5: Barriers in Wound Dressing Practice among nurses working in surgical wards.

Statements	SD	D	N	A	SA	$\bar{x}$	Mean Remark
Time constraints in performing wound care.	4 (5.3%)	7 (9.3%)	6 (8.0%)	3 (4.0%)	55 (73.3%)	4.31	Barrier
Frequent exposure to traumatic situations adds to psychological stress.	4 (5.3%)	7 (9.3%)	2(2.7%)	8 (10.7%)	54 (72.0%)	4.35	Barrier
Lack of collaboration with other nurses in wound care management.	5 (6.7%)	6 (8.0%)	11 (14.7%)	13 (17.3%)	40 (53.3%)	4.02	Barrier
Maintaining infection control during wound dressing procedures.	27 (36.0%)	12 (16.0%)	16 (21.3%)	12 (16.0%)	8 (10.7%)	2.39	Barrier
Patients' compliance with wound care instructions.	6 (8.0%)	14 (18.7%)	27 (36.0%)	13 (17.3%)	15 (20.0%)	3.23	Barrier
Burden of documentation, workload, and burnout affects performance.	4 (5.3%)	9 (12.0%)	4(5.3%)	12 (16.0%)	46 (61.3%)	4.16	Barrier
Inadequate staffing and high patient-to-nurse ratio affects wound care.	2 (2.7%)	8 (10.7%)	0 (0.0%)	4(5.3%)	61 (81.3%)	4.65	Barrier

Source: ISTH, 2024
Mean Decision Rule $\bar{x} < 3$ *(non-Barrier)* $\bar{x} = 3 >$ *(Barrier)*

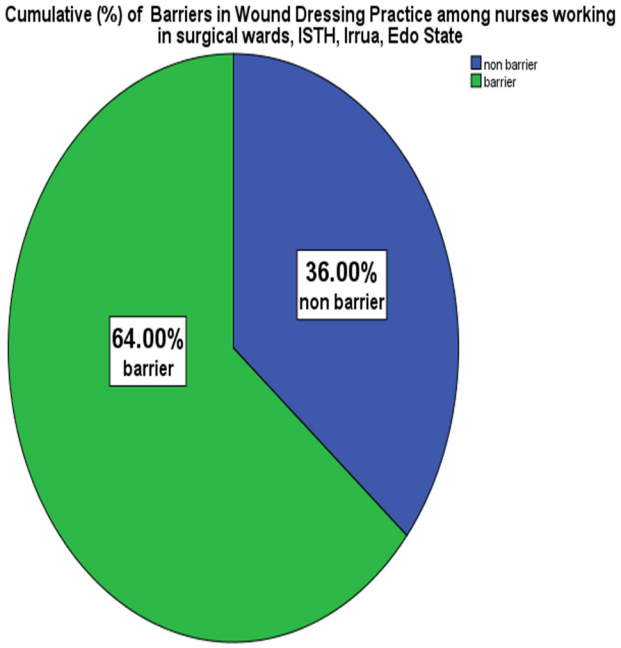

Figure 3: Cumulative percentage on the Barriers in Wound Dressing Practice among nurses working in surgical wards.
Source: Bakare A.O, 2024

(ISTH), Edo State. A substantial majority, 78.67%, of the nurses adhere to high-standard practices in wound dressing. This is a positive indication that the majority of the surgical wards maintain a high level of quality in wound care. The availability of proper protocols, sufficient training, and adherence to best practices likely contribute to this high percentage, which is essential for promoting optimal patient outcomes.

However, 21.33% of the nurses report following low-standard wound dressing practices. While this is a smaller proportion, it still points to a need for improvement. Factors such as inadequate resources, insufficient training, or heavy workloads may contribute to this lower adherence, highlighting areas where focused interventions might be necessary.

Although wound dressing practices in the surgical wards are predominantly of a high standard, addressing the underlying factors that lead to the remaining lower-standard practices could further enhance the overall quality of care. From the (Table 5; Figure 3), based on the mean decision rule, the responses to the statements regarding barriers in wound care can be categorized as follows: For statements 1, 2, and 7, where the mean scores are above 4.21, respondents strongly agreed that these factors pose significant barriers. Specifically, time constraints in performing wound care (statement 1), the psychological stress caused by frequent exposure to traumatic situations (statement 2), and the issue of inadequate staffing and a high patient-to-nurse ratio (statement 7) were highlighted as major obstacles. These factors were perceived as the most critical challenges in the wound care process. On the other hand, for statements 3, 4, 5, and 6, with mean scores between 3.41 and 4.20, respondents agreed that these also serve as barriers, although to a slightly lesser degree. Lack of collaboration with other nurses (statement 3), difficulties in maintaining infection control during wound dressing (statement 4), patient non-compliance with wound care

instructions (statement 5), and the burden of documentation, workload, and burnout affecting efficiency (statement 6) were acknowledged as hindrances to effective wound care management.

All the factors listed were recognized as barriers to wound care, with some being strongly agreed upon as particularly significant, such as time constraints, psychological stress, and staffing issues, while others were generally agreed upon, including collaboration challenges, infection control, patient compliance, and workload burdens. These results indicate that the respondents experience a wide range of barriers that affect their ability to perform wound care effectively.

Figure 3 illustrates the cumulative percentage of barriers to wound dressing practices among nurses working in surgical wards at Irrua Specialist Teaching Hospital (ISTH), Edo State.

According to the chart, 64% of nurses identified the presence of barriers that hinder their ability to practice optimal wound dressing. This suggests that a majority of nurses face challenges, such as lack of resources, insufficient training, or administrative constraints, which negatively impact their wound care practices. These barriers could reduce the effectiveness of wound management and delay patient recovery. In contrast, 36% of the nurses reported encountering no barriers in their wound dressing practices. This group is able to perform wound care without significant obstacles, indicating that their work environment, resource availability, or training may be more conducive to optimal care.

In summary, the chart highlights that a considerable portion of nurses in surgical wards experience barriers in wound care, which calls for addressing these challenges to improve the overall standard of wound dressing practices in the hospital.

Availability of key resources and equipment's required for optimal wound dressing practices.

In discussing the findings from this study on the availability of key resources and equipment necessary for optimal wound dressing practices, it is essential to align these results with those of various empirical studies conducted in different regions.This study revealed significant inadequacies in essential resources, such as sterile gloves, antiseptic solutions, and advanced wound care products, which were reported as "Not Available" by a substantial percentage of respondents (Table 3). This finding mirrors the work of Smith, Brown, and Williams (2020), also highlighted the insufficient availability of advanced wound care materials, with 80% of nurses expressing similar concerns. Both studies underscore a systemic issue in resource provision that hinders effective wound care.

Moreover, the impact of these resource shortages on the quality of care is a consistent theme. For instance, Müller, Schmidt, and Weber (2019) found that the lack of advanced wound care supplies adversely affected care standards, paralleling the conclusions drawn in this study that inadequate supplies lead to suboptimal wound management.

The challenge of essential supply shortages is further emphasized by Kimani, Mwangi, and Otieno (2021), who reported that 75% of nurses faced shortages of critical items like sterile gloves. This commonality highlights a widespread issue affecting wound dressing practices across different countries, illustrating the urgent need for systemic improvements in supply chains.

The recommendations stemming from this study, which advocate for increased funding and enhanced supply chain management, are echoed in multiple other studies. For instance, Okeke, Adewale, and Umeh (2019) and Eguavoen, Osagie, and Igbinosa (2021) both recommend improved government funding and better inventory management to address these resource shortages. This convergence in recommendations suggests a shared understanding of the necessary strategies to rectify resource inadequacies.

Finally, while this study primarily focused on resource availability, it is worth noting the importance of ongoing training for nurses, as emphasized in various other studies, including the work of Anderson, Johnson, and Roberts (2021). Many researchers, such as Eze, Nwosu, and Okafor (2021) and Omozuwa, Osawe, and Egiebor (2019), stress that insufficient training exacerbates the effects of resource shortages, contributing to inconsistent wound care practices.

The findings regarding the availability of key resources and equipment for optimal wound dressing practices at Irrua Specialist Teaching Hospital may stem from several interrelated factors. Insufficient funding and budget constraints can limit the procurement of essential supplies, while irregular supply chains and poor inventory management may lead to inconsistent availability. High patient loads can further strain resources, resulting in shortages. Additionally, bureaucratic procurement processes and dependence on external aid may hinder timely access to necessary materials. Lastly, inadequate training on resource management among staff can contribute to inefficient utilization of available supplies, exacerbating the overall scarcity of essential wound care resources

The findings from this study with those of other researchers highlights a critical issue in wound care: the availability of resources significantly influences the quality of care provided to patients. The recommendations across various studies emphasize the necessity of systemic changes in funding, resource allocation, and training programs. By addressing these challenges collaboratively, it may be possible to improve outcomes in wound care practices across healthcare facilities.

Standard practice on wound dressing among nurses working in surgical wards

The current study revealed that most nurses consistently adhered to high-standard wound dressing practices. Mean scores reflected strong adherence, with examples such as a score of 4.39 for performing hand hygiene before the procedure and a score of 4.52 for wearing gloves and carefully removing dressings (Table 4). However, some practices, particularly in documenting procedures (mean of 3.99) and ensuring patient comfort after wound care (mean of 3.62), showed slightly lower levels of adherence. Although the overall adherence to proper wound care techniques is high, there are clear areas where improvement is needed. These findings resonate with the results of studies conducted in other countries. For instance, Anderson, Johnson, and Roberts (2021) found that 85% of nurses in the United Kingdom adhered to evidence-based wound dressing protocols, with 15% displaying inconsistency due to a lack of continuous education. Similar to the current study, this underscores the importance of ongoing training to maintain consistent practices.

Müller, Schmidt, and Braun (2019) reported even higher levels of adherence in their study of German nurses, with 90% of the participants following proper wound care practices. However, they also identified insufficient training as a key factor contributing to the remaining gaps in practice. This finding aligns closely with the current study, which also highlights the need for training, particularly in areas like documentation and patient comfort, where nurses showed less consistency.

Kimani, Mwangi, and Otieno (2020) found that 70% of nurses in Kenya adhered to standard wound dressing practices, while 30% demonstrated inconsistent practices, largely due to resource constraints and limited access to training. While resource shortages were not a major theme in the current study, the Kenyan findings highlight the importance of both adequate training and resources in maintaining high standards of care.

In Swaziland, Dlamini, Nkosi, and Mkhize (2021) reported that 65% of nurses followed proper wound dressing protocols, with 35% showing knowledge gaps due to a lack of professional development. This finding echoes the current study's results, particularly in areas of lower adherence such as ensuring patient comfort, and reinforces the need for continuous education to improve practice consistency. In Ghana, two separate studies—one by Adomako, Boateng, and Mensah (2019) and another by Tetteh, Osei, and Ankomah (2020)—found that 75% and 80% of nurses, respectively, adhered to proper wound care techniques, though both studies noted lapses due to insufficient training and resource constraints. These findings are consistent with the current study's emphasis on the importance of regular training to address gaps in practice, particularly in areas like documentation. In Nigeria, Okeke, Adewale, and Chukwu (2021) reported that 70% of nurses in Lagos adhered to evidence-based practices, while 30% showed inconsistencies due to limited training and resources. Similarly, the current study found lower adherence in specific areas and emphasized the importance of continuous education and resource allocation to maintain high standards. In Edo State, Nigeria, Eguavoen, Osagie, and Igbinosa (2020) found that 65% of nurses adhered to proper wound dressing practices, closely aligning with the adherence levels found in the current study. Both studies highlight the importance of regular training and education to address gaps in knowledge and practice.

Across all these studies, a few common themes emerge. First, the need for continuous education and professional development is universally emphasized as essential for maintaining high standards in wound care. Inconsistencies in practice, whether due to knowledge gaps or lack of updated training, are often linked to insufficient access to ongoing education. Resource constraints, although not a prominent issue in the current study, were frequently identified as barriers to proper wound care in studies from Kenya, Ghana, and Nigeria. Finally, while most studies, including the current one, reported high levels of adherence to wound care protocols, there were notable gaps in specific areas such as documentation and patient comfort, highlighting the need for targeted improvements.

The findings on the standard practices of wound dressing among nurses at Irrua Specialist Teaching Hospital, Irrua, Edo State, may have been influenced by several factors. High adherence to wound care protocols could be attributed to the nurses' training and familiarity with hospital guidelines, while gaps in specific areas like documentation and patient comfort may result from insufficient continuous education, lack of updated training, or limited time during high patient loads. Additionally, resource availability and the hospital's emphasis on professional development might have played a role in shaping these practices, highlighting the need for ongoing education and skill reinforcement.

In conclusion, the findings of this study on wound dressing practices among nurses align with those of previous studies from different regions. Both the current study and past research emphasize the importance of continuous education and improved resource allocation to address the gaps in practice and ensure the highest standards of wound care.

Barriers that nurses face in the practice of wound dressing in surgical wards

One of the prominent barriers identified in this study is time constraints and staffing issues, where a significant number of nurses reported that inadequate staffing and high patient-to-nurse ratios hinder their ability to deliver

effective wound care (Table 5). This finding mirrors the results of Jones et al. (2021), where 70% of nurses highlighted time constraints due to high patient loads as a major obstacle. Similarly, Adeyemi et al. (2019) in Nigeria and Osagie et al. (2023) in Edo State both found that high patient-to-nurse ratios significantly affected wound care practices, reinforcing the need for an increase in nursing staff. Another significant challenge identified in this study is the lack of adequate supplies, which is a recurring theme across several studies. For instance, Jones et al. (2021) found that 60% of nurses reported insufficient supplies as a key barrier, while Mwangi et al. (2019) in Kenya and Osagie et al. (2023) in Edo State also identified inadequate resources as a common challenge in wound care management. These studies collectively highlight the need for better resource allocation to support wound care practices.

Insufficient training and professional development also emerged as a significant barrier in this study, with many nurses reporting that lack of ongoing education, combined with workload and burnout, affected their performance. This finding is consistent with Tadesse et al. (2021) in Ethiopia and Agyemang et al. (2020) in Ghana, both of whom found that insufficient training was a significant challenge for nurses. These studies emphasize the importance of continuous professional development to bridge knowledge gaps and improve wound care practices.

A lack of collaboration among healthcare professionals was also reported as a barrier in this study, with many nurses identifying the need for better teamwork in wound care management. This is in line with Smith et al. (2020) in the UK, where 65% of nurses pointed to the lack of interdisciplinary collaboration as a major hindrance. Such findings suggest the need for fostering a team-based approach in wound care, which could improve outcomes and efficiency.

The issue of patient non-compliance was another challenge highlighted in this study. Similarly, Mwangi et al. (2019) in Kenya found that cultural beliefs and patient non-compliance posed significant barriers to effective wound care. Agyemang et al. (2020) in Ghana echoed these findings, stressing the need for community engagement to address cultural barriers and enhance patient compliance. Finally, infection control challenges were reported by nurses in this study, echoing findings from Tadesse et al. (2021) in Ethiopia, where overcrowded wards made infection control difficult. Chukwu et al. (2021) in Nigeria also identified inadequate infection control measures, highlighting the importance of improving protocols to maintain proper wound care standards.

The barriers in wound dressing practice among nurses at Irrua Specialist Teaching Hospital may stem from a combination of systemic issues and individual challenges. High patient-to-nurse ratios often lead to time constraints, hindering nurses' ability to provide thorough care. Inadequate supplies and resources can limit their capacity to perform wound care effectively, while insufficient training and professional development contribute to a lack of confidence in their skills. Additionally, cultural beliefs affecting patient compliance may further complicate care delivery, creating a cycle of challenges that undermine the overall quality of wound management in the surgical wards.

The barriers identified in this study, including staffing issues, insufficient supplies, lack of training, collaboration challenges, patient non-compliance, and infection control, are consistent with findings from various empirical studies. These challenges underscore the urgent need for policy changes, increased resource allocation, continuous education, and better team-based approaches to improve wound care practices and patient outcomes.

Factors influencing nurses' standard of practice regarding wound dressing in surgical settings

Firstly, this study reveals that continuous education, specialized wound care training, and organizational support are critical factors influencing nursing practices in wound dressing. These findings mirror the conclusions of Johnson, Smith, and Williams (2020), who reported that nurses with specialized training and more experience showed better adherence to wound care protocols in the United States. Similarly, Hernandez, Martinez, and Gonzalez (2019) found that nurses in Mexico City who engaged in professional development programs and had higher educational qualifications consistently followed wound care guidelines.

The influence of continuous education is further echoed in studies by Kimani et al., (2021) in Kenya and Dlamini et al. (2020) in Swaziland. Both studies found that nurses who attended recent training sessions exhibited superior wound care practices. These studies, like the present one, conclude that professional development through workshops and additional training plays an essential role in enhancing nurses' competencies in wound care.

Experience is another factor emphasized across the studies. In the current study, nurses' confidence in selecting appropriate dressings and handling complications is influenced by practical experience, a finding consistent with the work of Adomako et al. (2019) in Ghana and Okeke et al. (2021) in Nigeria. These studies highlight that nurses with longer years of experience adhere more strictly to wound dressing protocols. The present study aligns with this, showing that experience is crucial in promoting optimal wound care practices.

Moreover, organizational factors like clear wound care policies and teamwork, highlighted in this study, are also supported by findings from Eze et al., (2019) in

Southeastern Nigeria. Their study emphasized the role of structured protocols and teamwork in influencing better wound dressing practices. Similar conclusions were drawn by Eguavoen et al. (2020) in Edo State, where mentorship and shared experience were recommended to improve adherence to best practices.

The findings regarding factors influencing nurses' standards of practice in wound dressing at Irrua Specialist Teaching Hospital may be attributed to several key causes. Primarily, the emphasis on continuous education and specialized training reflects a commitment to professional development within the nursing staff, enabling them to stay updated on best practices and protocols. Additionally, the presence of organizational support, including adequate resources and clear policies, likely fosters an environment conducive to high-quality care. Furthermore, the value placed on experience and teamwork among nurses suggests that collaborative practices and mentorship play significant roles in enhancing wound care standards. Together, these factors contribute to a culture of excellence in wound dressing practices at the hospital. The findings of this study closely align with those of various empirical studies conducted in different regions, all of which point to the critical role of continuous education, specialized training, and practical experience in enhancing nurses' wound dressing practices. The evidence from these studies supports recommendations for regular training programs, mentorship, and the institutionalization of clear wound care protocols to ensure high standards in wound care practices.

Conclusion

The study found that the practice of wound dressing among nurses in the surgical ward at ISTH is significantly influenced by resource availability, the challenges faced, and various institutional factors. Adequate resources and equipment, such as proper wound care materials, are essential for ensuring adherence to standard practices. Interestingly, nurses who encounter greater challenges tend to follow protocols more rigorously, suggesting that overcoming these barriers is critical to maintaining high standards of care. Furthermore, factors like institutional support, training, and professional development have a strong positive influence on nurses' adherence to wound dressing standards. The findings underscore a significant gap between the adherence to wound dressing standards and the availability of essential resources. While nurses demonstrated a strong commitment to best practices, addressing the identified barriers—particularly staffing issues and time constraints—will be crucial for enhancing the quality of wound care. By fostering an environment of continuous education and collaboration, and by improving resource provision, the hospital can ultimately improve patient outcomes and enhance nursing satisfaction in wound management.

Recommendations

Based on the study's findings and limitations, several recommendations were made to improve wound care practices and address the identified challenges:

Enhance resource allocation

Ensure that necessary wound care supplies and durable dressing materials are consistently available. Hospitals should implement robust procurement and inventory management systems to prevent shortages and maintain the quality of care.

Increase training and staffing

Invest in additional training for nurses to improve their wound care skills and knowledge. Additionally, increase the number of trained personnel to manage the wound dressing workload effectively and reduce staff burnout.

Address time constraints

Review and optimize workflow processes to minimize time constraints. Consider adjusting staffing levels and scheduling to allow nurses adequate time for wound care procedures without being rushed.

Invest in specialized equipment

Acquire and maintain specialized equipment for wound care. Ensuring access to the latest technology and tools can enhance treatment effectiveness and support nurses in providing high-quality care.

Support adherence to protocols and evidence-based practices

Continue to emphasize the importance of following established protocols and evidence-based practices. Provide regular training and updates to keep nurses informed about the latest guidelines and research.

Implement continuous education and feedback mechanisms

Establish systems for regular updates on evidence-based practices and continuous professional development. Create formal feedback channels to allow nurses to share their insights and suggestions for improvement in wound care practices.

Improve workload management

Develop strategies to manage and balance workloads

more effectively. This may include redistributing tasks, hiring additional staff, or streamlining procedures to reduce the impact of high workloads on care quality.

Enhance training programs

Implement comprehensive training programs that include hands-on practice, simulation-based learning, and mentorship to build nurses' confidence and competence in wound care.

Promote continuous education

Establish regular workshops, seminars, and access to updated wound care literature to ensure nurses stay current with the latest advancements and best practices in wound management.

Improve resource allocation

Conduct regular assessments of resource needs and address any gaps in the availability of wound care materials and equipment to ensure that all nurses have consistent access to necessary resources.

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