

Identify the practices regarding effective wound cleaning among nurses aged 22 years and above working at Rakai General Hospital, Rakai District. A cross-sectional study.

Esther Namaweje, Hasifa Nansereko, Immaculate Prosperia Naggulu, Jane Frank Nalubega
Mildmay Uganda School of Nursing and Midwifery*

ABSTRACT

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Background:

Globally, nurses aged 25–50 years play a vital role in effective wound cleaning. The purpose of this study was to assess the practices of nurses aged 22 years and above regarding effective wound cleaning at Rakai General Hospital, Rakai District.

Methods:

A descriptive cross-sectional study design employing a quantitative research method was used to collect data from 32 nurses at Rakai General Hospital who were sampled using a purposive sampling technique within a period of 3 days. Data was collected with a structured questionnaire, coded, and analysed using Microsoft Excel (2019) programs, and findings were presented in frequency tables, graphs, and pie-charts.

Results:

16(50%) were between 25–30 years while smallest 2(6.25%) were 43 years and above. 18(56.25%) rarely wrote and reviewed wound notes whereas the minority 6(18.75) always did. 24 (75%) of the respondents used a combination of hand washing, gloves, and saline when cleaning wounds, and only 1 (3.1%) relied on gloves only. 16 (50%) reported using hand washing and sterile tools, and 2 (6.25%) reported using any available tool. 20 (62.5%) used saline, while a minority, 3 (9.4%), reported using sterile water. Half of the respondents, 16 (50%), admitted that they sometimes changed dressings late, while a few, 4 (12.5%), indicated that they rarely changed wound dressings.

Conclusion:

Most nurses followed essential infection-prevention steps, but delays in dressing changes, poor documentation, and limited mentorship affected the overall quality of wound management.

Recommendations:

Schools should integrate more hands-on wound-cleaning demonstrations and simulation sessions to ensure nurses graduate with strong practical skills.

*Keywords: Practices of nurses, Effective wound cleaning, hands-on wound-cleaning demonstrations, Rakai general hospital
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*Corresponding Author: Esther Namaweje
Mildmay Uganda School of Nursing and Midwifery*

Background

Globally, nurses aged 25–50 years play a vital role in effective wound cleaning, yet studies have shown gaps in knowledge and inconsistent practices still persist largely due to inadequate supervision and infrequent hands-on training sessions (Gizaw et al., 2022). In Saudi Arabia, 78% of nurses aged 30–50 have good knowledge, including proper use of antiseptics and dressing procedures; however, only 64% consistently apply this knowledge in clinical settings due to high workloads, lack of time, improper glove use, and lack of aseptic technique during dressing changes (Altaweli et al., 2023). In Kenya, 61% of nurses report knowing the effective wound cleaning techniques, but only 32% practice them consistently in clinical settings due to factors such as understaffing, lack of supervision, and high patient loads, which often lead to shortcuts in infection control procedures (Chumba et al., 2025). However, only 36% implemented these practices consistently in clinical work, often due to

understaffing, long shifts, and a lack of wound care supplies like saline prepared in non-sterile containers, resulting in increased cases of wound infection (Kabunga et al., 2024). At Rakai General Hospital in Rakai District, preliminary observations suggest similar challenges. Informal reports indicate that although many nurses aged 25–50 are aware of wound cleaning basics such as glove use and wound assessment, there is limited consistency in applying this knowledge during patient care. In a hospital in Vietnam, a study by Do et al. (2021) on documentation and follow-up in wound care found that nurses aged 25–50 documented wound status regularly and reviewed changes in 66% of cases due to electronic record systems and team-based accountability. Compared to a study in Malawi on nursing wound care routines, which revealed that only 35% of nurses completed full wound documentation, resulting from limited time and staffing shortages in outpatient clinics (Fitzpatrick et al., 2022). In Nigeria, a study by Sonoiki et

al. (2020) on compliance with aseptic techniques during wound care found that 70% of nurses aged 30–50 practised correct hand hygiene and used sterile materials largely due to regular in-service infection control training. The aim of the study is to identify the practices regarding effective wound cleaning among nurses aged 22 years and above working at Rakai General Hospital, Rakai District.

Methodology

Study Design

This study utilised a descriptive cross-sectional study design, which employed quantitative methods of data collection. A cross-sectional design allowed for data collection at a specific point in time, providing a snapshot of the study population.

Study Setting

This study was conducted at Rakai General Hospital, a public health facility located in Rakai District, Central Uganda. The hospital serves as the main referral facility for lower-level health centres within the district and handles both inpatient and outpatient cases, including surgical, maternity, medical, and emergency services. It had an average bed capacity of 100 and employed over 170 health workers, including doctors, nurses, midwives, and clinical officers. Rakai General Hospital was chosen for this study because it managed a high number of wound-related cases, including post-surgical wounds, trauma injuries, and chronic wound care. The hospital provides a practical setting for assessing the knowledge and cleaning practices of nurses aged 25 to 50 years, who are actively involved in effective wound cleaning in various departments such as surgery, outpatient, and maternity. The medical and outpatient wards received a high number of patients daily, and nurses were actively involved in cleaning and dressing various types of wounds, including traumatic injuries and chronic ulcers. These wards were adequately staffed with qualified nurses and midwives who work in shifts to ensure 24-hour service delivery. The selection of this facility was based on its moderate resource setting, diversity in wound types, and presence of both young and experienced nurses, which made it suitable for understanding gaps and strengths in effective wound cleaning practices. The hospital's geographical coordinates are approximately 0.7066°S, 31.4050°E.

Study Population and Rationale

The study focused on nurses working at Rakai General Hospital in Rakai District. These nurses were directly involved in effective wound cleaning in various hospital departments, including outpatient, surgical, and maternity wards.

Sample Size Determination

The sample size determination followed the guidelines provided by Krejcie and Morgan's table of 1970. According

to the Rakai General Hospital Register, there were 35 nurses providing healthcare services and using Krejcie and Morgan's table of 1970, a Population sample of 35 gives an appropriate sample size of 32. The study, therefore, considered N to be 35, and so **N=35 and S=32** according to the table.

Sampling Procedure

This study used a purposive sampling technique to select participants. This method was chosen because it allowed the study to intentionally select nurses aged 25 to 50 years who were directly involved in wound care at Rakai General Hospital. These participants were considered most knowledgeable and experienced in effective wound cleaning practices, making them suitable for the objectives of the study. The study identified and approached eligible nurses based on their role and experience in wound care services. Recruitment continued daily while sampling 11 available respondents daily until the required sample size of 32 respondents was reached, ensuring that all participants met the study criteria.

Inclusion Criteria

The study included all nurses aged 22 years and above who were willing to participate in the study, provided informed consent, and those who were only Ugandans, and those who had time to respond to the questions.

Exclusion criteria

The study excluded all nurses aged 22 years and above who were very busy on duty with no time to participate in the study, and those who had consented but were not present at the time of data collection.

Independent variables

The independent variables were characteristics of the study that could be manipulated by the study, and in this case, these were: Practices of nurses aged 22 years regarding effective wound cleaning.

Dependent variables

The dependent variable was a characteristic that could be manipulated by the study in order to see what outcomes it brought. In this case, it was the effective wound cleaning.

Research Instruments

The study used a structured questionnaire. The questionnaire consisted of three sections, and these mainly included: socio-demographic data, knowledge, and practices of nurses aged 22 years and above regarding effective wound cleaning. Each section contained closed-ended questions to assess nurses' responses objectively.

Data Collection

After obtaining a letter from the Dean, School of Nursing Mildmay Uganda school of Nursing and Midwifery, the study went ahead to ask permission from the administration of Rakai General and explained the purpose of the study, then after being given the permission, the Director allowed the study to go and met nurses where she made a clear self-introduction and explained the purpose of the study to each respondent and data collection was done within 3 days sampling 11 participants each day. Verbal permission and consent were sought by the study from respondents, where the main purpose of the study was clearly explained to them, and confidentiality was ensured to ensure their cooperation. Each respondent, after consenting to take part in the study, was made comfortable in a separate corner in the facility premises to ensure that the information given is kept confidential and only accessed by the study.

Data Management

After collecting data, each questionnaire was checked for completeness and accuracy. The data collected was edited, coded, and cleaned before analysis. Accurate and completely filled questionnaires were kept in a safe place to ensure no access to other people; this was done with maximum confidentiality.

Data Analysis

Data collected was analysed manually, after which the study entered data into the Microsoft Excel program (2019), and then findings were presented in the form of frequency tables, graphs, and pie-charts to support clear presentation and accurate interpretation of the study results.

**Quality Control
Validity**

To ensure validity, the questionnaire was designed to align strictly with the study objectives, and this was done under the close supervision of my research supervisor. The questions were carefully designed to reflect the study’s focus and ensured they measured what they were intended to measure. Validity in this study helped to generate accurate findings that supported effective interventions of the identified research problem.

Reliability

The questionnaires were pre-tested at Kyotera Hospital on 6 nurses before using them in the research study to ensure consistency and dependability of the research instruments and their ability to tap data that could answer the objectives of the study. It was then re-tested among 3 respondents to make final adjustments before the formal study, and to ensure they matched and the tool gives dependable results.

Ethical Considerations

After obtaining a letter from the Dean, School of Nursing Mildmay Uganda school of Nursing and Midwifery, the study went ahead to ask permission from the administration of Rakai General and explained the purpose of the study, then after being given the permission, the Director allowed the study to go and meet nurses where she made a clear self-introduction and explained the purpose of the study to each respondent and data collection was done within 3 days sampling 11 participants each day to come up with a total of 32 nurses. All respondents were provided with a written informed consent after receiving a detailed description of the study. Eligible participants who consented in privacy and no incentives were given. Anonymity of the respondents was ensured at all stages of data analysis.

Results

Demographic information of respondents.

Table 1 shows the demographic information of respondents

Variable	Response	Frequency(n=32)	Percentage (%)
Gender	Male	12	37.5
	Female	20	62.5
Age	25-30	16	50
	31-36	8	25
	37-42	6	18.75
marital status	43 and above	2	6.25
	Single	10	31.25
	Widowed	4	12.5
level of education	Married	18	56.25
	Certificate	20	62.5
	Diploma	9	28.1
	Bachelor’s degree and above	3	9.4

Table 1: Results show that female participants were the majority, accounting for 20(62.5%), while males constituted 12(37.5%). Half of the respondents 16(50%) were between 25–30 years while smallest 2(6.25%) were 43 years and above. Majorities were married 18(56.25%) while widowed

participants made up 4(12.5%). Regarding the level of education, most 20(62.5%) respondents held a Certificate qualification, while a small proportion had a Bachelor’s degree and above, making up 3(9.4%)

The practices towards effective wound cleaning among nurses aged 22 years and above working at Rakai General Hospital, Rakai District.

Figure 1 shows the frequency of writing and reviewing wound notes.

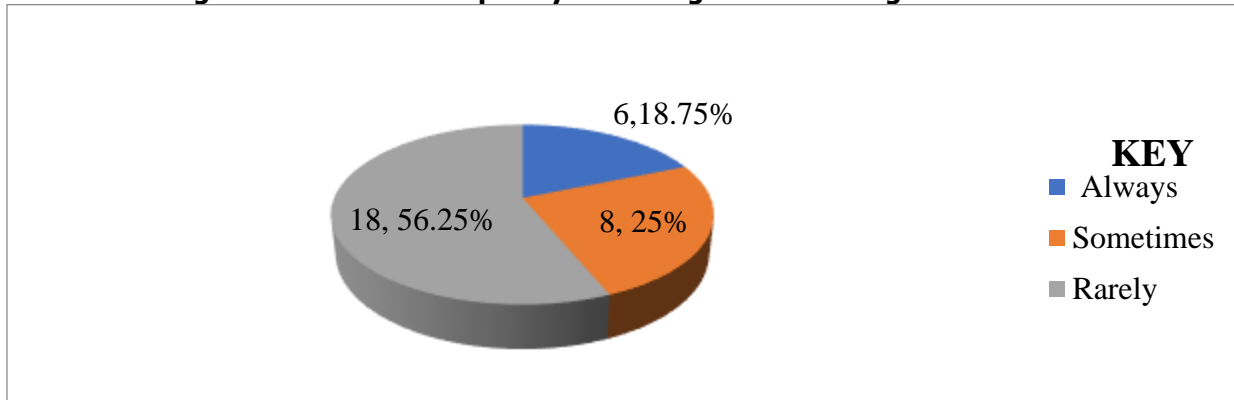


Figure 1 indicates that more than half, 18(56.25%), rarely wrote and reviewed wound notes, whereas the minority, 6(18.75%), always did.

Table 2 shows other practices towards effective wound cleaning.

Variable	Response	Frequency(n=32)	Percentage (%)
What respondents used most when cleaning wounds	Wash hands + gloves + saline	24	75
	Gloves only	1	3.1
	Water only	7	21.9
How respondents keep wounds germ-free during care	Wash hands + sterile tools	16	50
	Clean with any tool	2	6.25
	Not sure	14	43.75
The solution used most often to clean wounds	Saline	20	62.5
	Sterile water	3	9.4
	Antiseptic mix	9	28.1
Frequency of changing wound dressings	As advised daily/regularly	12	37.5
	Sometimes late	16	50
	Very rare	4	12.5

The findings in Table 3 indicated that the majority, 24 (75%) of the respondents used a combination of hand washing, gloves, and saline when cleaning wounds, and only 1 (3.1%) relied on gloves only.

Regarding how respondents keep wounds germ-free during care, half 16 (50%) reported using hand washing and sterile tools, and 2 (6.25%) reported using any available tool. For the solution used most in wound cleaning, the majority, 20 (62.5%), used saline, while a minority, 3 (9.4%), reported using sterile water. In terms of dressing-change frequency, half of the respondents, 16 (50%), admitted that they

sometimes changed dressings late, while a few, 4 (12.5%), indicated that they rarely changed wound dressings.

Discussion

The study aimed at assessing the practices of nurses aged 22 years, and the study results indicated that the majority (56.25%) rarely wrote and reviewed wound notes. This was potentially due to high workloads or limited emphasis on documentation during routine care. This aligns with the problem statement of this study, which implies that inadequate documentation may hinder continuity and evaluation of wound-healing progress. This is in

disagreement with a study carried out in a hospital in Vietnam by Do et al. (2021) on documentation and follow-up in wound care, which found that nurses aged 25–50 documented wound status regularly and reviewed changes in 66% of cases due to electronic record systems and team-based accountability.

The majority (75%) of respondents used a combination of hand washing, gloves, and saline when cleaning wounds, and this was possibly due to the availability of basic infection-prevention supplies and adherence to standard safety precautions, illustrating that most nurses practiced recommended wound-care procedures.

The objective of the study was to find out about the practices of nurses on effective wound cleaning, and findings indicated that half (50%) reported using hand washing and sterile tools. This could be due to understanding the importance of aseptic techniques in preventing wound contamination. This hints that aseptic practices are moderately well observed among nurses. This is in line with a study conducted in Nigeria by Sonoiki et al. (2020) on compliance with aseptic techniques during wound care, which found that 70% of nurses aged 30–50 practiced correct hand hygiene and used sterile materials largely due to regular in-service infection control training.

In terms of dressing-change frequency, the objective of the study was achieved as the study found that half (50%) admitted that they sometimes changed dressings late. This seemed to be due to excessive workloads, limited supplies, or competing clinical priorities, which is in line with the problem statement of this study. This signifies that delayed wound dressing may compromise healing and increase infection risks.

Study Limitations

The study relied on self-reported information, which introduced recall bias. Some nurses did not accurately report their wound-cleaning practices or knowledge levels, limiting the precision of the findings. Data was collected from one health facility, which reduced the generalizability of the results. The findings did not reflect wound-cleaning knowledge and practices of nurses in other hospitals or regions. The study was conducted in a busy clinical environment where nurses experienced high patient loads. This affected their ability to give detailed responses or demonstrate their actual wound-care practices.

Conclusion

Most nurses followed essential infection-prevention steps, but delays in dressing changes, poor documentation, and limited mentorship affected the overall quality of wound management.

Recommendations

Schools should integrate more hands-on wound-cleaning demonstrations and simulation sessions to ensure nurses graduate with strong practical skills. Nursing Training

Institutions should also strengthen continuous assessment of students' wound-care competencies during clinical placements. This can be done through regular supervision, mentorship, and skills checklists to ensure learners gain confidence and consistency in performing wound cleaning before they qualify for practice.

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List of acronyms

ICP: Infection Control Procedures

Source of funding

The study was not funded.

Conflict of interest

The author did not declare any conflict of interest.

Data availability

Data is available upon request.

Author contribution

Esther Namaweje collected data and drafted the manuscript of the study.

Hasifa Nansereko supervised the study.

Immaculate Naggulu supervised the study.

Jane Frank supervised the study.

Author biography

EN is a student of a diploma in nursing at Mildmay Uganda School of Nursing and Midwifery.

H N is a Research supervisor at Mildmay Uganda School of Nursing and Midwifery.

IP N is a Research supervisor at Mildmay Uganda School of Nursing and Midwifery.

J FN is a Research supervisor at Mildmay Uganda School of Nursing and Midwifery.

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