

Knowledge and Practices of Wound Care for Diabetic Ulcers Among Healthcare Providers in Rivers State University Teaching Hospital, Port-Harcourt

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Article History	Abstract	
Original Research Article	<i>Diabetic ulcers remain one of the leading causes of prolonged hospitalization, lower-limb amputation, and increased healthcare costs among patients with diabetes mellitus. Effective wound care depends largely on the knowledge and clinical practices of healthcare providers. This study assessed the knowledge and wound care practices of healthcare providers managing diabetic ulcers in Rivers State University Teaching Hospital (RSUTH) and the University of Port Harcourt Teaching Hospital (UPTH). A mixed-method research design was adopted. A total of 199 healthcare providers (nurses and doctors) were selected using simple random sampling. Data were collected using a self-structured questionnaire, observation, and review of patients' medical records. Descriptive statistics (frequency, percentage, mean, and standard deviation) and linear regression were used for data analysis at a 0.05 level of significance. The findings showed that healthcare providers had a high level of knowledge regarding diabetic ulcer wound care (grand mean = 3.30). However, the utilization of recommended wound care practices was generally low (grand mean = 1.63), with traditional gauze dressing being the most frequently used method, while advanced wound care techniques and patient education were poorly utilized. Regression analysis revealed no statistically significant relationship between healthcare providers' knowledge and healing outcomes ($R^2 = 0.020$, $p = 0.370$). Similarly, wound care practices did not significantly predict healing outcomes ($p = 0.090$). Although healthcare providers demonstrated good knowledge of diabetic ulcer wound care, this knowledge was not consistently translated into evidence-based clinical practice. Strengthening continuous professional education, ensuring availability of modern wound care resources, and promoting adherence to standardized clinical guidelines are essential for improving diabetic ulcer management and patient outcomes.</i>	
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Keywords: <i>Diabetic ulcer, wound care, healthcare providers, knowledge, wound care practices, healing outcomes.</i>		

Introduction

Diabetes mellitus is a chronic metabolic disorder characterized by high blood glucose levels, resulting from defects in insulin secretion, insulin action, or both¹. It is a major public health concern, affecting an estimated 463 million adults worldwide, with a projected increase to 578 million by 2030². Diabetes is a complex metabolic disorder, involving multiple physiological systems, including the pancreas, liver, muscles, and adipose tissue³. The disease is characterized by hyperglycemia, which can lead to serious

complications, such as cardiovascular disease, kidney damage, blindness, and lower-limb amputation.⁴

In recent years, prevalence of diabetes has increased dramatically, particularly in low- and middle-income countries Nigeria inclusive (International Diabetes Federation, 2020). This increase is attributed to numerous factors, including population growth, urbanization, and changes in lifestyle, such as decreased physical activity and unhealthy diet¹. Despite its high prevalence and debilitating

consequences, diabetes remains poorly managed in many parts of the world. This is due to a combination of factors, including inadequate healthcare infrastructure, lack of trained healthcare professionals, unhealthy dietary habits and limited access to diagnostic and therapeutic resources².

Diabetic Ulcer is a chronic, slow-healing wound that typically appears mostly on the feet of individuals with diabetes and results in substantial morbidity and mortality in such patients. Diabetic ulcers (DUs) are common complications of diabetes mellitus, affecting approximately 25% of patients with diabetes at some point in their lifetime⁵. They are characterized by chronic wounds that are resistant to healing, leading to increased morbidity, mortality, and healthcare costs⁶. The underlying etiology of DU is classified into three types: purely neuropathic (35%), purely ischemic (15%), and mixed neuro-ischemic (50%), which are based on the presence or absence of peripheral neuropathy (PN) and associated sensory loss (neuropathic), peripheral artery disease (PAD) (ischemic), or both (neuro-ischemic)⁷. Classic neuropathic ulcers present as painless, "punched out" round ulceration on the weight bearing surfaces of the foot with raised, macerated, or undermined margins and thick surrounding callous. Ischemic or neuro-ischemic ulcers are characteristically irregular lesions, often with a pale or necrotic base, sometimes presenting as gangrene or round ulcerations at points of ischemia and friction, such as the dorsal surfaces of toe joints. Ischemic and neuro-ischemic ulcers are more likely than purely neuropathic ulcers to present as larger ulcers, midfoot ulcers, or hind foot ulcers and to present with cellulitis, abscess, or osteomyelitis⁷. The prevalence of both PN and PAD increases with age, duration of diabetes, and higher glycated hemoglobin, and neuro-ischemic ulcers comprise of an increasing proportion of DU as the longevity of diabetes patients increases⁸.

Foot structure is majorly affected by diabetic ulcer which affects the bones, muscles, blood vessels and nerves. Managing diabetic foot lesions is always a challenge to health professionals⁹. Diabetic Ulcer treatment requires a comprehensive approach that includes patient's education, improved access to specialized care, and the implementation and adherence to standardized treatment protocols¹⁰. Therefore, enhancing healthcare provider training and fostering multidisciplinary collaboration are also crucial steps towards improving patient outcomes. Studies have shown that, only one in five health care professionals receive post-graduate training in Diabetes, while less than one in two people with diabetes and less than one in four family members of people with diabetes have access to diabetic education program¹¹. This makes patient education, a fundamental of diabetes care that should be readily available. Primary prevention of DU

includes maintenance of strict aseptic wound dressing by health care professional, foot / wound care education, maintenance of good nutrition and glyco-metabolic control, among others¹¹.

Several wound care methods are available for the management of Diabetic Ulcers, these include traditional wound dressings, advanced wound dressings, negative pressure wound therapy (NPWT), and hyperbaric oxygen therapy (HBOT)¹². However, the outcomes of these wound care methods vary widely, and there is limited evidence on their effectiveness in promoting wound healing and preventing complications in diabetic foot patients¹³. Diabetic foot management available in Nigeria and their corresponding outcomes includes; Gauze dressings which are effective for managing wound exudates and promoting a moist environment, topical herbal remedies where some patients use honey and aloe vera to promote wound healing¹²; negative pressure wound therapy (NPWT) was found to promote wound healing and reduce bacterial load¹²; surgical intervention which involves Debridement (removal of dead tissue to promote wound healing) and amputation often resorted to when further complications is to be prevented. Other forms of interventions include off-loading techniques and Antibiotics therapy¹³. However, effectiveness of these methods varies depending on individual patient factors and the severity of the diabetic ulcer. Hence, this study seeks to assess the Knowledge and Practices of Wound Care for Diabetic Ulcers Among Healthcare Providers in Rivers State University Teaching Hospital, Port-Harcourt.

Materials and Methods

Research Design

The study employed a mixed method research design, combining quantitative and qualitative approaches to provide a holistic understanding of the healing outcomes of wound care practices for diabetic ulcer. The quantitative component involves the use of questionnaire to assess the outcome of different healing methods, while the qualitative component used observation and patient records to assess the outcome of wound care practices.

Area of Study

The study areas were The Rivers State University Teaching Hospital (RSUTH) formerly Braithwaite Memorial Specialist Hospital (BMSH) which is a government-owned hospital, located in No 5-8 Harley Street, Old GRA, Port Harcourt, Rivers State. It was named after Eldred Curwen Braithwaite, a British doctor and a pioneer of surgery

Also, University of Port Harcourt Teaching Hospital was used. University of Port Harcourt Teaching Hospital (UPTH), a public tertiary teaching and research facility is

located in Port Harcourt, Rivers State, Nigeria. Founded in 1980 and expanded over subsequent decades, UPTH now operates under the Federal Government mandate with approximately 782 beds and handles over 400,000 outpatients and more than 3,000 surgical cases annually.

Population of Study

The population of study comprised of Nurses (218) and Doctors (110) (Ward and Unit Rosters 2025) that have clinical contact and participation in wound care

management of diabetic ulcer within the: Surgical Outpatient Department (SOPD), Female Surgical Ward (FSW), Male Surgical Ward (MSW), Male Medical Wards (MMW) and Female Medical Wards (FMW) in Rivers State University Teaching Hospital (RSUTH) and University of Port Harcourt Teaching Hospital (UPTH). Based on hospital records and patient attendance statistics obtained from the departments listed above, the healthcare providers in the studied centers are shown in the table below:

Table 1: The total population of study

Wards	No of Nurses in RSUTH	No of Doctors in RSUTH	No of Nurses in UPTH	No of Doctors in UPTH	Grand Total
SOPD	17	11	22	15	65
FMW	15	10	31	12	68
MMW	17	10	24	11	62
FSW	20	12	22	12	66
MSW	19	12	25	12	68
TOTAL	88	55	124	62	329

Sample Size and Sampling Technique

To ensure that the findings of this study are statistically valid and generalizable to the target population, an appropriate sample size was determined using the Slovin's Formular (1960) since the study population is finite (less than 10,000), a 5% margin of error was applied.

Slovin's Formular

$$n = \frac{N}{1 + N(e)^2}$$

where (N)= Population size =329

Margin of error (e)=5%=0.05

$$n = \frac{329}{1 + 329(0.05)^2}$$

$$\frac{329}{1 + 0.8225}$$

$$\frac{329}{1.8225}$$

$$n = 180.55$$

$$n = 181$$

Thus, the minimum sample size used for this study was 181 respondents.

Adjustment for non-response:

To account for possible non-response or incomplete data, a 10% buffer was added:

10% of 181

$$n = 181$$

$$n = 181 * 0.10 = 18.1$$

$$\text{Adjusted sample size} = 181 + 18 = 199$$

Therefore, the final sample size for this study was 199 healthcare providers, selected from the total population across RSUTH and UPTH.

Sampling Technique

This study employed a simple random sampling technique to select the participants. The sampling process balloting was used to recruit respondents (Nurses and Doctors) from each designated unit who have direct clinical contact with the diabetic ulcer patients.

Inclusion Criteria

The research included only.

- Nurses and Doctors of RSUTH and UPTH working in the selected study units (SOPD, MSW, FSW, MMW, FMW) within the period of study, (June to November 2025) as they were responsible for wound care practices, monitoring of patient progress, prescription and evaluation of treatment methods.
- Willing to participate and provide informed consent.

Exclusion Criteria

- Healthcare providers (Nurses and Doctors) in the selected units but who are on sick, study, maternity or annual leave.
- Healthcare providers who are not willing to participate or provide informed consent.

Instrument for Data collection

Self-Structured hardcopy questionnaire titled "Wound Care Practices and Healing Outcomes of Diabetic Ulcer among

Healthcare Providers in Tertiary Hospitals Rivers State was used to collect quantitative data (Appendix1). The questionnaire with six (6) sections was used on healthcare providers to elicit information. Section A used 8 items to elicit information on their socio demographic data; Section B used 9 Items to elicit information on the nurse's level of knowledge on wound care practices for diabetic ulcer. Section C used 7 items for different wound care practices utilized by the healthcare providers for diabetic ulcer. The items on the questionnaire had close-ended questions like 'Yes' or 'No' as well as Likert's 4 points scale: Strongly Agree, Agree, Disagree and Strongly Disagree response format respectively.

Validity of Instrument

Validity refers to how accurately a measurement tool (questionnaire or test) measures what it is intended to measure. Both face, construct and content validity of the instruments were ascertained by submitting copies of the initial questionnaire to the researcher's supervisor and experts in evaluation and measurements (senior lecturer from Rivers State University) who critically examined the items of the instrument with specific objectives of the study. Their assessment and input were used to modify the instrument to suit its purpose.

Reliability of the instrument

Reliability is the consistency and repeatability of the measurement tool which will yield same or similar results under same conditions. The reliability of the instrument was conducted using 10% (20) of sample size by the researcher using a test-retest of the instrument on healthcare providers caring for patients with diabetic ulcer in similar setting outside the study area (Madonna University Teaching Hospital) which share same characteristics with the study institutions. The instrument was administered and readministered to the same group of care providers at Madonna University Teaching Hospital within two weeks interval. When the questionnaire was completed, data was coded and analyzed using Pearson Product Moment Correlation test and a reliability index of 0.77 was obtained for the pilot surveying procedure. This implies that the instrument was adequate, relevant and reliable for gathering data for the study.

Procedure for data collection

Researcher recruited, trained and used twelve (12) research assistants from each setting (2) from each unit participating in the study. They assisted researcher both in recruiting participants as well as administering the instrument. Questionnaire was administered to 199

health care providers (Nurses and doctors) in the studied areas. Observation was used on the nurses during wound dressing to determine how they interact with patients, the practices they adopt during wound care and physically assessing patient overall appearance.

Records were obtained from the medical records department, Nursing and progress notes gotten from the nurse's report book and patient's chart to inspect patient's vital signs, medical history, including their diagnoses, laboratory investigations and progress notes from the healthcare providers, updates on patient's condition, treatment plan and healing outcomes were as well obtained.

Method of Data Analysis:

This was done in two phases- Qualitative and Quantitative

Quantitative Data Analysis

The retrieved copies of filled questionnaire were cleaned by checking for errors (incomplete and missing forms) amongst others. Data was analyzed using statistical software; Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics summarized demographic and clinical characteristics and research questions while Inferential statistics, (frequency, percentage, mean) was used to test hypothesis at 0.05 level of significant.

Qualitative Data Analysis

Observation and patient's medical records were used. The nurses and doctors were observed when rendering wound care during wound dressings, reviews during ward rounds and handing over of patients during close of shift while medical records (folders) were sorted from the records department (for those who were discharged before the end of the study) by using nurses report book to identify patients that has diabetic ulcer and their folders were used.

Ethical Considerations

An introduction letter from Head, Department of Nursing for ethical approval from the human and ethics research committee of the Faculty of Basic Medical Sciences (RSU/FBMS/REC/25/283), Rivers State University (RSUTH/REC/2025798) and subsequent clearance was obtained from the research and ethical committee of University of Port Harcourt Teaching Hospital (UPTH/ADM/90/S.11/VOL.X1/1975). Confidentiality of respondent's responses and identity was anonymous, and all information were used for research purpose only with no intention of doing any harm.

Table 2. Respondents Demographic Data

Variables	Categories	Frequency	Percentage (%)
Age	20 – 29 years	47	23.6
	30 – 39 years	70	35.2
	40 – 49 years	51	25.6
	50 and above	31	15.6
	Total	199	100.0
Gender	Male	116	58.3
	Female	83	41.7
	Total	199	100.0
Religion	Christianity	194	97.5
	Islam	5	2.5
	Total	199	100.0
Marital Status	Single	47	23.6
	Married	147	73.9
	Divorced	5	2.5
	Total	199	100.0
Years of working experience	1 – 3 years	49	24.6
	4 – 6 years	67	33.7
	7 – 9 years	83	41.7
	Total	199	100.0
Years of working experience in medical and surgical Unit:	1 – 3 years	85	42.7
	4 – 6 years	47	23.6
	7 – 9 years	35	17.6
	10 years and above	32	16.1
	Total	199	100.0
Level of Professional Education	RN	10	5.0
	RN/RM	68	34.2
	BSC	113	56.8
	MSC	5	2.5
	PhD	3	1.5
	Total	199	100.0
Hospital	University of Port-Harcourt Teaching Hospital	105	52.8
	Rivers State University Teaching Hospital	94	47.2
	Total	199	100.0

Table 2 presents the respondents demographic data. The study involved a total of 199 healthcare providers. The majority of the respondents were within the age range of 30–39 years (35.2%), followed by those aged 40–49 years (25.6%). Males constituted a larger proportion of the participants (58.3%) compared to females (41.7%). Most respondents were married (73.9%) and identified as Christians (97.5%). In terms of professional experience, the highest proportion had 7–9 years of general working

experience (41.7%), while 42.7% had 1–3 years of experience specifically in medical and surgical units. Regarding professional education, the majority held a Bachelor of Science (BSc) degree (56.8%), followed by RN/RM qualifications (34.2%). The participants were drawn from two teaching hospitals in Rivers State, with 52.8% from the University of Port Harcourt Teaching Hospital and 47.2% from the Rivers State University Teaching Hospital.

Table 3: Summary of descriptive statistics (Mean & Standard Deviation) on the Knowledge Level of Healthcare providers on various wound care practices for diabetic ulcer in RSUTH and UPTH

S/N	Knowledge Level of Healthcare Providers on Wound care Practices	UPTH (n=105)		RSUTH (n=94)		Total (n=199)	Decision
		Mean	SD	Mean	SD	Mean	
1.	Familiar with wound care practices	3.33	0.91	3.33	0.58	3.33	High
2.	Received training on wound care protocols	3.33	0.97	3.14	0.91	3.24	High
3.	Employed different wound care methods in my practice	3.19	0.60	3.48	0.60	3.33	High
4.	Ability to classify wound severity appropriately using clinical grading	2.81	0.93	3.29	0.78	3.05	High
5.	Knowledgeable in cleaning and disinfecting wounds	3.33	0.66	3.33	0.80	3.33	High
6.	Familiar with standard precautions in wound care	3.48	0.75	3.38	0.80	3.43	High
7.	Understand the role of nutrients in wound healing	3.67	0.48	3.43	0.60	3.55	High
8.	Aware of the importance of patient education in wound healing	3.14	0.65	3.38	0.59	3.26	High
9.	Collaborate regularly with other healthcare professionals about patient wound care.	3.14	0.85	3.19	0.75	3.17	High
	Grand Total	3.27	0.76	3.33	0.71	3.30	High

Table 3 presents the summary of descriptive statistics on the knowledge level of healthcare providers regarding wound care practices for diabetic ulcers in the two studied hospitals.

The results indicate a high overall knowledge level among the 199 respondents, with a grand mean score of 3.30. All individual knowledge items were rated as high, ranging

from 3.05 to 3.55. The highest mean score was recorded on understanding the role of nutrients in wound healing (3.55), while familiarity with standard precautions in wound care also scored highly (3.43). Knowledge levels were consistently high in both hospitals, with RSUTH recording a slightly higher overall mean (3.33) compared to UPTH (3.27).

Table 4: Summary of descriptive statistics (Mean & Standard Deviation) on Wound Care Practices utilized by Healthcare Providers in the management of Diabetic Ulcers

S/N	Wound care Practices utilized by healthcare providers for diabetic ulcer	UPTH (n=105)		RSUTH (n=94)		Total (n=199)	Decision
		Mean	SD	Mean	SD	Mean	
10.	Always carrying out Wound Assessment	2.29	1.06	2.62	1.07	2.45	Moderate
11.	Practiced traditional wound dressing (gauze)	2.81	1.17	2.90	1.04	2.86	High
12.	Using Hydrocolloid dressing during wound care	1.10	0.30	1.19	0.40	1.14	Low
13.	Used Antibiotic therapy during wound dressing	1.00	0.00	1.19	0.40	1.10	Low
14.	Practiced Negative Pressure wound Therapy	1.05	0.22	1.10	0.30	1.07	Low
15.	Patients' education on signs and symptoms of wound infections	1.10	0.30	1.24	0.44	1.17	Low
	Grand Total	1.56	0.51	1.71	0.61	1.63	Low

Table 4 presents the summary of descriptive statistics on wound care practices utilized by healthcare providers in the management of diabetic ulcers. The results showed a generally low overall utilization of recommended wound care practices among the 199 respondents, with a grand mean score of 1.63. Out of the six practices assessed, only the use of traditional wound dressing (gauze) was rated high (mean = 2.86). Wound assessment was moderately practiced (mean = 2.45), while the utilization of modern and advanced practices such as hydrocolloid dressing (1.14),

antibiotic therapy (1.10), negative pressure wound therapy (1.07), and patient education on signs of wound infection (1.17) were all rated low. RSUTH recorded a slightly higher overall mean (1.71) compared to UPTH (1.56).

Testing of Research Hypotheses

HO₁: There is no significant relationship between healthcare provider's level of knowledge of wound care practices and healing outcomes for diabetic ulcer.

Table 5: Summary of regression analysis showing the relationship between Healthcare Provider's Level of Knowledge of Wound Care practices and Healing Outcomes among Diabetic Ulcer

Part A: Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.142 ^a	.020	.0018	.781
a. Predictors: (Constant), Knowledge				

Part B: ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.0502	1	.0502	.823	.370 ^b
	Residual	24.371	197	.609		
	Total	24.873	198			
a. Dependent Variable: Outcome						
b. Predictors: (Constant), Knowledge						

Part C: Co-efficient						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.831	.885		3.198	.003
	Knowledge	-.241	.266	-.142	-.907	.370
a. Dependent Variable: Outcome						

From Table 5. above, the results of the linear regression analysis show a very weak relationship between healthcare provider's level of knowledge of wound dressing practices and healing outcomes among diabetic ulcer ($R=0.142$). The R Squared value of 0.020 shows that the healthcare providers' level of knowledge of wound dressing practices accounted for only 2% of the variance in healing outcomes, which is negligible. According to the regression equation $y = 2.831 - 0.241x$ and the F-statistic finding ($F_1, 197$)

$=0.823, p > .05$), the healthcare provider's level of knowledge of wound dressing practices do not significantly affect or predict variations in the healing outcomes of patients with diabetic ulcers. Thus, the null hypothesis one was retained and the alternative hypothesis one rejected at 0.05 significance level.

HO₂: There is no significant relationship between the different wound care practices and healing outcomes of diabetic ulcer (DU).

Table 6: Summary of regression analysis showing the relationship between the different Wound Care practices and Healing Outcomes of Diabetic Ulcer (DU)

Part A: ANOVA^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.746	1	1.746	3.021	.090 ^b
	Residual	23.127	197	.578		
	Total	24.873	198			
a. Dependent Variable: Outcome						
b. Predictors: (Constant), Wound care methods						

Part B: Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.437	.661		2.175	.036
	Wound Care practices	.693	.399	.265	1.738	.090
a. Dependent Variable: Outcome						

According to the result from Table 6, the linear regression analysis shows a positive but weak relationship between the different wound care practices and healing outcomes of diabetic ulcer (DU) patients. Furthermore, the regression equation $y = 1.437 + 0.693x$ and the F-statistic finding ($F_{1, 197} = 3.021, p > .05$) shows that there is no statistically significant relationship between the different wound care practices and healing outcomes of diabetic ulcer (DU). Thus, the null hypothesis two was retained and the alternative hypothesis two rejected at 0.05 significance level.

Discussion Of Findings

The result reveals a high knowledge level (Mean=3.30) among healthcare providers regarding wound care practices for diabetic ulcer (DU) in the tertiary hospitals studied. This finding is a positive indicator for the quality of DU management at these facilities. This aligns with empirical evidence underscoring the critical link between nutritional statuses and healing outcomes. As noted by Zhang *et al.*,¹⁴ nutritional status deteriorates as the severity of a DU increases and is an independent predictor of prognosis. Furthermore, Lee *et al.*,¹⁵ found that serum levels of key nutrients like albumin, hemoglobin, iron, and zinc were significantly low in most diabetic foot patients, negatively affecting wound healing. The high level of awareness among providers in this study is therefore crucial, as it forms the basis for initiating necessary nutritional interventions and education for patients. In another study,

Hekmatpou *et al.*¹⁶ found that educational interventions significantly improved patients' adherence to self-care practices and healing outcomes. Similarly, Alsaigh *et al.*¹⁷ highlighted that while knowledge among patients and relatives might be good, poor practice persists, emphasizing the need for persistent and effective education from healthcare providers. However, the ability to classify wound severity using clinical grading received the lowest mean score, though it still reflects a positive self-assessment. Proper classification using systems like the Wagner Scale or University of Texas system (UTS) is critical as it directly guides treatment selection and predicts outcomes like amputation risk¹⁸.

The result from Table 4 indicates that the overall utilization of wound dressing practices by healthcare providers in RSUTH and UPTH in managing diabetic ulcers is very low (Mean=1.63). This suggests a limited adoption of comprehensive wound care practices that are critical for optimal diabetic ulcer management. Although the general utilization was low, the most commonly used practice was the changing of dressings. This reflects the common reliance on routine, traditional wound dressing techniques, a trend consistent with reports that many Nigerian healthcare facilities still depend on basic gauze dressings due to cost and availability constraints¹⁹. Traditional dressings are widely accessible and inexpensive, but evidence shows they may not provide adequate moisture balance or infection protection, leading to prolonged healing and poorer outcomes (Brem & Kirsner, 2017).

However, other essential wound care practices such as wound assessment, involving patients in wound care decisions, considering nutritional status, educating patients on prevention strategies, and teaching patients signs of infection were found to be rarely utilized. Thus, the observed pattern of practice underscores the need for enhanced wound care training, increased adoption of advanced and evidence-based dressing methods, and stronger patient education strategies to improve healing outcomes for diabetic ulcer patients in RSUTH and UPTH.

Conclusion

This study assessed the knowledge and wound care practices of healthcare providers involved in the management of diabetic ulcers in Rivers State University Teaching Hospital and the University of Port Harcourt Teaching Hospital. The findings showed that healthcare providers in Rivers State University Teaching Hospital and the University of Port Harcourt Teaching Hospital possessed a high level of knowledge regarding diabetic ulcer wound care. However, the utilization of evidence-based wound care practices was generally low, with traditional gauze dressing remaining the predominant method. No statistically significant relationship was found between healthcare providers' knowledge, wound care practices, and healing outcomes.

Recommendation

Healthcare institutions should strengthen the implementation of evidence-based diabetic ulcer wound care through regular practical training, provision of modern wound care materials, and strict adherence to standardized clinical protocols. Continuous supervision and periodic clinical audits should also be instituted to ensure that healthcare providers effectively translate their knowledge into routine practice, thereby improving patient healing outcomes.

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