

A REVIEW ON PATIENT COUNSELING FOR DIABETIC FOOT ULCER

Feba G.^{1*}, Dr. Nithin Manohar R.², Harisankar M. K.¹, Muhsina N.¹, Dr. Prasobh G. R.³

¹Student, Seventh Semester Bachelor of Pharmacy, Sree Krishna College of Pharmacy and Centre, Parassala, Thiruvanthapuram, Kerala, India.

²Professor & HOD, Department of Pharmacy Practice, Sree Krishna College of Pharmacy and Research Centre, Parassala, Thiruvananthapuram, Kerala, India.

³Principal, Sree Krishna College of Pharmacy and Research Centre, Parassala, Thiruvanthapuram, Kerala, India.

Article Received on 15 June 2026,
Article Revised on 05 July 2026,
Article Published on 16 July 2026,

<https://doi.org/10.5281/zenodo.21367468>

***Corresponding Author**

Feba G.

Student, Seventh Semester Bachelor of Pharmacy, Sree Krishna College of Pharmacy and Centre, Parassala, Thiruvanthapuram, Kerala, India.



How to cite this Article: Feba G.^{1*}, Dr. Nithin Manohar R.², Harisankar M. K.¹, Muhsina N.¹, Dr. Prasobh G. R.³ (2026). A Review on Patient Counseling For Diabetic Foot Ulcer. World Journal of Pharmaceutical Research, 15(14), 538-542.

This work is licensed under Creative Commons Attribution 4.0 International license.

ABSTRACT

Diabetic foot ulcer (DFU) is a major complication of diabetes mellitus, associated with significant morbidity, risk of infection, and a higher risk of lower-limb amputation. The condition arises from a multifactorial interplay of peripheral neuropathy, peripheral arterial disease, poor glycemic control, and infection, all of which contribute to delayed wound healing and disease progression. Patient counseling plays a crucial role in the prevention and management of DFU as an essential component of comprehensive care. A structured counseling approach was implemented, incorporating a four-step process that included preparation, patient interaction, delivery of counseling content, and session closure, supported by effective verbal and non-verbal communication techniques and systematic documentation using the SOAP format. Improved therapeutic outcomes were observed through better compliance,

early identification of symptoms, and appropriate self-care measures. Additionally, counseling promoted preventive practices such as regular foot inspection, proper hygiene, infection awareness, and lifestyle modifications. Overall, patient counseling plays a vital role in improving clinical outcomes and quality of life in individuals with diabetic foot ulcers, emphasizing the importance of integrating educational and behavioral strategies into routine

clinical care.

INTRODUCTION

- **Disease Burden and Challenges:** Diabetic foot ulcer (DFU) is a serious and common complication of diabetes mellitus, associated with significant morbidity, risk of infection, and increased likelihood of lower-limb amputation. Effective management remains challenging due to delayed wound healing and multiple contributing factors.
- **Multifactorial Etiology:** The development of DFU is influenced by several modifiable and non-modifiable factors, including peripheral neuropathy, peripheral arterial disease, poor glycemic control, infection, foot deformities, and inadequate foot care practices.
- **Modifiable Risk Factors:** Key behaviours that can be modified to improve outcomes include maintaining proper foot hygiene, regular self-examination of the feet, adherence to medication, glycemic control, use of appropriate footwear, and avoidance of trauma such as walking barefoot.
- **Role of Patient Counseling:** Patient counseling plays a crucial role in the prevention and management of DFU by promoting awareness, encouraging early detection of complications, and improving adherence to treatment and self-care practices.
- **Concept of Counseling in DFU:** Counseling in this context refers to a structured process of providing information, education, and support to patients, aiming to enhance their ability to manage their condition effectively and prevent complications.

REVIEW OF LITERATURE

Diabetic foot ulcers (DFUs) arise from a complex interaction of several pathological processes, primarily involving peripheral neuropathy, peripheral arterial disease, and infection. Sensory neuropathy reduces the ability to perceive pain and pressure, allowing minor injuries such as cuts, abrasions, or blisters to remain unnoticed and progressively worsen. In addition, motor neuropathy contributes to anatomical changes in the foot, leading to altered biomechanics and uneven distribution of plantar pressure, which further increases the likelihood of tissue breakdown. Impaired blood flow associated with peripheral arterial disease significantly compromises tissue viability by reducing the delivery of oxygen and essential nutrients required for wound repair. The presence of infection further aggravates tissue damage and may lead to severe complications, including deep tissue involvement, osteomyelitis, and gangrene. These combined factors contribute to delayed healing, increased hospitalization rates, and a higher risk of non-traumatic lower-limb amputations. Current evidence emphasizes that

preventive strategies, including regular foot screening, maintenance of optimal glycemic levels, patient education, and the use of appropriate footwear, play a crucial role in reducing the occurrence of DFUs. Moreover, coordinated care involving multiple healthcare professionals is considered essential for improving clinical outcomes and preventing recurrence.

The management of diabetic foot ulcers also involves pharmacological approaches, although the healing process is often hindered by ongoing inflammation, compromised immunity, and poor vascularization. The use of antimicrobial agents remains a key component in treating infected wounds, as it helps limit microbial growth and prevents the spread of infection to surrounding and deeper tissues. In addition to conventional antibiotic therapy, newer therapeutic approaches, including growth factors and bioactive agents, have been explored for their role in enhancing tissue repair through mechanisms such as stimulation of cell proliferation, angiogenesis, and extracellular matrix formation. Topical preparations and advanced wound dressings contribute to maintaining a controlled moist environment, which supports effective healing and reduces the risk of contamination. However, drug therapy alone is insufficient to achieve complete recovery. Effective treatment requires a comprehensive approach that includes removal of devitalized tissue through debridement and reduction of mechanical stress using off-loading techniques. Integrating pharmacological and supportive wound care strategies has been shown to improve healing outcomes and decrease the incidence of complications in individuals with diabetic foot ulcers.

The prevalence of diabetic foot ulcers (DFUs) has increased in parallel with the rising global burden of diabetes, making it a significant clinical concern. Several risk factors contribute to the development of DFUs, among which peripheral neuropathy is considered a primary factor due to its role in reducing protective sensation and preventing the early detection of minor injuries such as cuts, burns, or blisters. If left unnoticed, these injuries may progress into chronic ulcers. Peripheral vascular disease further complicates the condition by impairing blood flow to the lower extremities, thereby delaying wound healing. Poor glycemic control also plays a crucial role by causing progressive damage to nerves and blood vessels, increasing susceptibility to ulcer formation. Additional contributing factors include foot deformities, inappropriate footwear, and inadequate awareness of foot care practices, including lack of regular foot examination and poor hygiene. Evidence suggests that early identification of high-risk individuals, along with preventive strategies such as routine foot assessment, patient

education, effective glycemic control, and the use of suitable footwear, can significantly reduce the incidence of diabetic foot ulcers and improve patient outcomes.

METHODS

The patient counseling process was conducted as a structured, two-way communication using the following steps and techniques:

- **Four-step Counseling Process**

- **Preparation for the Session:** Relevant patient information, including medical history, current medications, and prescription details, was reviewed to provide individualized counseling.
- **Opening the Session:** The pharmacist introduced themselves, greeted the patient appropriately, and used open-ended and reflective questions to assess the patient's understanding of their disease and treatment.
- **Counseling Content:** The main counseling session focused on providing essential information such as medication name, strength, indication, dosage regimen, duration of therapy, possible adverse effects, drug or dietary interactions, and storage instructions.
- **Closing the Session:** Patient understanding was evaluated using feedback questions, and key information was summarized to reinforce comprehension and ensure clarity.

- **Communication Techniques**

- **Verbal Communication:** Simple and clear language was used, avoiding complex medical terms. Appropriate tone, speed, and volume were maintained to ensure effective communication and patient comfort.
- **Non-verbal Communication:** Effective non-verbal cues, including maintaining appropriate interpersonal distance, eye contact, and empathetic facial expressions, were used to build rapport and enhance patient engagement.

- **Documentation (SOAP Note)**

- **Subjective:** Patient-reported symptoms, concerns, and medical history were recorded.
- **Objective:** Clinical findings, vital signs, and relevant investigation results were documented.
- **Assessment:** Clinical evaluation, diagnosis, and patient progress were noted.
- **Plan:** Treatment strategies, medication therapy, patient education, and follow-up plans were outlined.

RESULTS

Effective patient counseling, particularly in the management of diabetic foot ulcer (DFU), was associated with the following outcomes:

- **Improved Patient Understanding:** Patients demonstrated enhanced knowledge regarding their disease condition, risk factors, and the role of medications and wound care in treatment.
 - **Increased Medication Adherence:** Better compliance with prescribed drug therapy, wound care practices, and scheduled follow-up visits was observed.
 - **Improved Medication Safety:** A reduction in medication errors and adverse drug reactions was noted due to improved patient awareness and proper guidance.
 - **Enhanced Therapeutic Outcomes:** Improved effectiveness of treatment was achieved through appropriate medication use, timely wound care, and early identification of complications.
 - **Improved Quality of Life:** Patients experienced better physical comfort, mobility, and confidence in self-care, along with improved communication with healthcare professionals.
-
- **Specific Counseling Components for Diabetic Foot Ulcer**
 - **Foot Care Management:** Patients were educated on daily foot inspection, maintenance of hygiene, proper nail care, and early reporting of any abnormalities.
 - **Infection Prevention:** Awareness regarding early signs of infection such as redness, swelling, discharge, and pain was improved, promoting timely medical intervention.
 - **Lifestyle Modifications:** Adoption of healthy practices, including proper diet, regular monitoring, and avoidance of risk factors such as walking barefoot, was observed.