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Foot and Nail Care in Palliative Care: Experiences of Diabetes Care Nurses

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Abstract

Background. Palliative care patients with diabetes mellitus often experience foot and nail complications that affect their quality of life and increase the risk of infections and amputations. Proper foot care is an essential component of comprehensive nursing; however, in Lithuania, these services remain fragmented and insufficiently integrated into the provision of palliative care.

Aim. To reveal the characteristics of foot and nail care in palliative care for patients with diabetes mellitus.

Methods. A qualitative study was conducted using a semi-structured interview method. The study involved nine female participants – general practice nurses with a specialisation in diabetes nursing – who provide foot and nail care services to palliative care patients.

Results. The qualitative study revealed that diabetes nurse specialists face challenging working conditions, difficulties related to patients' physical conditions, a lack of knowledge and training, and limited collaboration with other healthcare professionals. Despite these challenges, they demonstrate adaptability, apply creative solutions, and value the importance of interdisciplinary teamwork. The study also highlighted the need to integrate podiatrists into palliative care teams and to establish clearer regulations for foot care services.

Conclusions. To improve the quality of palliative care, it is essential to strengthen the competencies of diabetes nurse specialists, ensure access to specialised training, enhance interdisciplinary collaboration, and integrate podiatrists into the healthcare system. These measures would help reduce the risk of complications and improve patients' quality of life.

Keywords: Palliative care; diabetes mellitus; foot care; diabetes nurse specialist; podologist

1. INTRODUCTION

Every year, more than 60 million people worldwide face serious health problems that cause significant suffering – suffering that could be alleviated through the provision of palliative care (Kwete et al., 2024). Palliative care is considered an integral part of the human right to health and an essential component of the healthcare system. Given the ageing population and the increasing prevalence of non-communicable diseases, its importance is expected to grow even further in the coming decades. Palliative care is based on a holistic, patient- and family-centred approach, multidisciplinary collabora-

tion, effective communication, and long-term patient relationships (Kim et al., 2020). It is provided to individuals of all ages suffering from both oncological and other chronic, life-threatening diseases, such as heart failure, chronic obstructive pulmonary disease, neurological disorders, or diabetes mellitus. The primary goal of palliative care is to relieve suffering and improve quality of life (Munday et al., 2024).

Diabetes mellitus (DM) is a chronic metabolic disease characterised by impaired glucose regulation in the blood due to insufficient insulin secretion or decreased tissue sensitivity to insulin (Piekutė, 2020). Long-term hyperglycaemia leads to damage to nerves, blood vessels, and other organs (Meena et al., 2024). According to the Lithuanian Institute of Hygiene (2024), approximately 170,000 people in Lithuania are living with diabetes, while about 589 million people worldwide are affected by the disease (International Diabetes Federation, 2025). Both forms of diabetes can cause severe complications, one of the most significant being the diabetic foot – a condition characterised by deep tissue damage, neurological impairments, and peripheral vascular disease. The diabetic foot greatly reduces a patient's quality of life, decreases independence, and often progresses to ulcers or limb amputation (Marzouk et al., 2025). In such cases, ongoing care is essential, and the first signs of foot deterioration are often noticed by the diabetes care nurse during routine examination (McDermott et al., 2023).

International researchers (Seim et al., 2024) note that diabetes management and foot care in palliative care remain underexplored areas. Healthcare professionals working in palliative settings often face a lack of knowledge regarding glycaemic control and foot care. Veiga-Seijo et al. (2023) point out that some foot pathologies develop as side effects of oncological treatments, yet clinical attention is typically focused on the primary disease, leaving comorbidities such as diabetes overlooked. Proper foot health is important not only for physical but also for psychological wellbeing, as it enables patients to remain active and preserve their dignity. Among older palliative patients, foot pain, ulcers, or deformities increase the risk of falls and functional decline. Therefore, systematic monitoring of foot and nail condition should be an integral part of palliative care (Mota et al., 2022).

The goal of palliative care is to ensure that the end-of-life process is as pain-free and dignified as possible. Nurses are among the key members of the palliative care team, maintaining close relationships with patients and their families. Observing the patient around the clock, they are often the first to notice changes in health status and, through extended practice roles, identify care needs and engage diabetes care nurses in addressing foot and nail care problems (Brant et al., 2020).

Foot and nail problems among palliative patients are usually related to the primary disease or its comorbidities. Regular foot and nail care help prevent painful ulcers, ingrown nails, and infections, while improving overall wellbeing (Miranda et al., 2021). Effective collaboration between general nurses and diabetes care nurses enables quicker response to changing patient needs and contributes to a better quality of life (Kwan et al., 2024). However, according to Pala et al. (2024), diabetes care nurses are still rarely included in palliative care teams, despite their crucial role in managing chronic disease progression and providing comprehensive emotional, practical, and educational support to patients and their families – thereby maintaining quality of life (Svirbutaitė et al., 2025).

Given the growing prevalence and relevance of oncological and other chronic diseases, it is increasingly important to explore the experiences of diabetes care nurses, the challenges they face, and the strategies they use to ensure high-quality foot and nail care in palliative care. Currently, both Lithuanian and international scientific literature lack sufficient studies analysing the specifics of foot and nail care in palliative settings. Therefore, the research problem can be formulated as follows: *What are the characteristics of foot and nail care in palliative care?* Based on this problem, the aim of this study is to reveal the characteristics of foot and nail care in palliative care for patients with diabetes mellitus.

2. METHODS

2.1. Study design and participants – A qualitative research design was chosen for this study in order to explore the difficulties experienced by diabetes nurse specialists and the ways they address these challenges, as well as to identify their needs when providing foot and nail care to palliative care patients with diabetes. The study was conducted in November 2025. The investigation was carried out in both public and private healthcare facilities in Lithuania. Interviews were carried out at the informants' workplaces, specifically in foot care offices, at a time agreed upon in advance and convenient for the participants. With permission, interviews were audio-recorded using a mobile phone, and key observations were documented in writing. Audio recordings were used solely for data analysis purposes. All collected data were processed and presented in an aggregated form, without any personal identifying information. Each informant was assigned a code name (Informant 1, Informant 2, Informant 3, etc.) to ensure anonymity. The choice of research methods was justified by their suitability for comprehensively revealing the experiences, challenges, and needs of diabetes nurse specialists in providing foot and nail care within the context of palliative care.

2.2. Ethical approval and informed consent – Ethical approval for conducting the qualitative study was obtained from the Bioethics Committee of the Alytus Faculty of Kauno kolegija Higher Education Institution (Approval No. AF10-12; 28 October 2025). All informants completed informed consent forms prior to participation in the study. The research was conducted in accordance with the principles of beneficence, voluntary participation, confidentiality, privacy, anonymity, and justice.

2.3. Sampling and recruitment procedures – A purposive criterion-based sampling strategy was applied, which, according to Cohen et al. (2018), allows researchers to select participants based on their relevance to the phenomenon under investigation and their professional experience. The inclusion criteria were as follows: nurses holding a valid general nursing license, having a diabetes nurse specialist qualification, and possessing at least two years of experience in providing palliative care. In qualitative research, sample size is not strictly predetermined; it depends on the research strategy, data richness, and data saturation. According to Bitinas et al. (2008), such studies typically require between 5 and 30 participants, with the final number determined when no new insights emerge from additional data (Braun & Clarke, 2022; Žydžiūnaitė & Sabaliauskas, 2017). In this study, data saturation began after the seventh informant; therefore, the final sample consisted of nine diabetes nurse specialists.

2.4. Data collection procedures – Data were collected using a semi-structured interview method, which, according to Gaižauskaitė and Valavičienė (2016), enables the researcher to maintain the direction of the study while allowing informants to freely express their thoughts and experiences. The research instrument was a semi-structured interview guide consisting of two parts: a general section with three questions addressing participants' professional background, and a specific section containing seven questions related to foot and nail care practices for palliative care patients with diabetes. The interview guide was developed based on an analysis of scientific literature and the research problem. This format ensured consistency across interviews while allowing flexibility to ask additional probing questions and gain deeper insight into informants' experiences.

Data analysis. The collected data were analysed using qualitative content analysis, which enables systematic processing of textual information and reduces researcher subjectivity. The analysis was based on an inductive approach (Gaižauskaitė & Valavičienė, 2016; Žydžiūnaitė & Sabaliauskas, 2017). The data analysis process consisted of several stages: interviews were transcribed verbatim, repeatedly reviewed to gain an in-depth understanding of the content, then coded and grouped into themes, resulting in the formation of main categories and subcategories. Categories were derived from the informants' narratives, and data analysis was completed upon reaching data saturation. To ensure the trustworthiness

of the study, empirical generalisation was applied during data analysis, and the authentic language of the informants was preserved.

3. RESULTS

The study involved nine diabetes nurse specialists with varying professional experience, working in different healthcare settings. Their work experience in diabetology ranged from 2 to 14 years, while experience in palliative care ranged from 2 to 31 years. Some informants worked in private institutions (Informants 1, 2, 3, and 9), others in hospitals or polyclinics (Informants 4, 5, 6, and 7), and one nurse worked both in a hospice and a private institution (Informant 8). This diversity of participants allowed for a more comprehensive understanding of the specific aspects of foot and nail care in various palliative care contexts.

When analysing the challenges faced by diabetes nurse specialists in providing foot and nail care to palliative patients with diabetes, the study participants shared that the difficulties encountered in clinical practice directly affect both the quality of their work and the care provided to patients (see Table 1).

Table 1. **Category – Difficulties experienced by diabetes nurse specialists when providing foot and nail care to palliative patients with a diagnosis of diabetes mellitus**

Subcategory	Authentic statements of the study participants
Challenging working conditions	*"It is difficult to perform a pedicure for bedridden patients in bed, in uncomfortable positions." (Informant 1)* *"<…> Working in the patient's home is challenging; the working positions are very uncomfortable." (Informant 3)* *"In hospitals, there are absolutely no conditions provided to perform therapeutic pedicures for palliative patients." (Informant 5)* *"Some hospitals or wards lack proper dressings, do not provide wound care services, and there is a lack of practical experience." (Informant 6)*
Patients' condition	*"<…> The most challenging aspect is still the patient's condition — when there are severe complications and continuous care is required. <…> Numbness, circulatory disorders (ischemia), calluses, non-healing wounds, or trophic ulcers typical for diabetic patients <…>." (Informant 5)* *"They are often severely ill, bedridden, and have difficulty adapting or coming for more frequent care. <…> The patient often cannot take care of themselves: they cannot reach their feet, have poor vision <…> they do not feel their feet and therefore fail to notice problems. <…> Older people often can no longer care for their feet: their vision, hand motor skills, and hygiene habits deteriorate." (Informant 6)* *"<…> The patients' condition — both physical and psychological <…> they are unable to take care of their foot hygiene." (Informant 7)* *"<…> Patients are more sensitive, usually elderly. <…> Their skin is thin <…> nails are thickened, affected by fungal infections <…> and there are cases of ingrown nails that cause pain." (Informant 9)* *"<…> With foot numbness and circulation disorders. <…> I trimmed and cleaned the nails without touching them, because every touch caused additional pain." (Informant 4)*

Subcategory	Authentic statements of the study participants
Patients' condition	*"<…> The skin is extremely sensitive and easy to injure." (Informant 3)* *"<…> Many diabetic patients have already lost one or both legs. <…> Foot wounds are often present <…>." (Informant 1)*
Lack of knowledge	*"<...> They do not understand the seriousness of their condition." (Informant 6)* *"<...> Patients and their relatives have low awareness about foot care and show indifference. <...> We often encounter cases where even doctors are unaware of such specialists and the services they provide." (Informant 8)* *"<…> There is a lack of patient education and information on how to receive assistance or transport to a healthcare facility." (Informant 6)* *"<...> Some doctors are not even aware of foot care services <…>." (Informant 9)* *"<…> When managing their nails, patients often injure their skin until it bleeds, they 'cut' their nails with knives <…>." (Informant 3)*
Lack of training for professional development	*"<...> Specialists should be given the opportunity to deepen their knowledge through additional courses and training." (Informant 2)* *"I would always like to further expand my knowledge base." (Informant 3)* *"<...> Seminars, conferences, training sessions, etc., are quite expensive <...> only a small number of healthcare institutions willingly finance them <...> financially, it is often impossible for a diabetes nurse specialist to afford it, since salaries are low <...> to be a good specialist in this field, you must constantly improve and deepen your knowledge." (Informant 8)* *"<...> Continuous training for foot care specialists is very important — professional development in this field is essential." (Informant 9)*
Lack of collaboration	*"Social services could be more involved in the care of such patients. <…> There is a great lack of humanity and cooperation between services <…> not everyone has a social worker or a companion. <…> In Lithuania, there is a significant lack of teamwork principles." (Informant 6)* *"<…> Closer cooperation with healthcare professionals — dermatologists, surgeons, and others working with similar problems — is essential. <…> We do not receive feedback and therefore do not know what kind of assistance was provided to the patient afterwards. <…> In Lithuania, there is a lack of collaboration between foot care specialists, especially those working in private institutions, and dermatologists or surgeons." (Informant 9)* *"<…> When there is no collaboration, it is difficult to ensure the continuity of care." (Informant 1)* *"<…> I do not know what happened next, as there was talk about a finger amputation." (Informant 4)* *"<...> It is difficult to communicate with some healthcare professionals <...>." (Informant 8)*

An overview of Table 1 reveals that the first prominent issue identified was challenging working conditions. Nurses reported that they often have to *"perform a pedicure for bedridden patients in bed,*

in uncomfortable positions" (Informant 1), and that *"working in a patient's home is challenging"* due to *"the working positions* [being] *very uncomfortable"* (Informant 3). Some noted that *"in hospitals, there are absolutely no conditions provided to perform therapeutic pedicures for palliative patients"* (Informant 5).

Another common problem was the patients' condition. Nurses emphasised that the patients "*are often severely ill, bedridden <...> they do not feel their feet"*, which prevents them from noticing issues (Informant 6). According to the participants, their skin is very thin and sensitive – it is *"easy to injure"* (Informant 3) – and *"many diabetic patients have already lost one or both legs"* and often have wounds on their feet (Informant 1).

The study also revealed a lack of knowledge, both among patients and some healthcare professionals: *"they do not understand the seriousness of their condition"* (Informant 6). Nurses pointed out that *"some doctors are not even aware of foot care services"* (Informant 9), which sometimes leads to unsafe self-care practices – *"patients often injure their skin until it bleeds, they 'cut' their nails with knives <...>."* (Informant 3).

A lack of training and professional development opportunities was also evident – nurses expressed a desire for more courses, but training courses are expensive and *"only a small number of healthcare institutions willingly finance them"* (Informant 8).

Finally, there was a noticeable lack of collaboration among different services and healthcare professionals. *"In Lithuania, there is a significant lack of teamwork principles."* (Informant 6), and *"When there is no collaboration, it is difficult to ensure the continuity of care."* (Informant 1).

The study revealed that diabetes nurse specialists, when faced with various challenges, apply different strategies to overcome them. The main emerging subcategories were adaptation to the situation and team collaboration (see Table 2).

Table 2. **Category – Strategies used by diabetes nurse specialists to overcome challenges**

Subcategory	Authentic statements of the study participants
Adaptation to the situation	*"Even under difficult conditions, I try to help the person <...>." (Informant 1)* *"We recommend more frequent visits to ensure regular care." (Informant 2)* *"<...> I see the problem and start thinking about the right approach and solution." (Informant 4)* *"Each person is individual; I solve problems according to the situation <...>." (Informant 5)* *"<...> I try to organize the patient's visit — we discuss who could bring them and when it would be most convenient. <...> During the procedure, I not only trim the nails but also gently massage, apply cream, and say a kind word <...>." (Informant 6)* *"<...> I try to distract the patient's attention elsewhere, e.g., ask them to tell something interesting from their life. <...> I advise the patient to see a family doctor to get a referral to a surgeon who can remove an ingrown nail under anesthesia." (Informant 7)* *"I have prepared a memo for both patients and their family members, clearly and understandably outlining the main principles of problem nail and foot care. <...> I also chose to work additionally in the private sector so that training and professional development would be more affordable." (Informant 8)* *"<...> I try to work very carefully and precisely. <...> In each case, I assess the condition of the nails and choose the most appropriate care method." (Informant 9)*

Subcategory	Authentic statements of the study participants
Team collaboration with other health-care professionals	*"I cooperate with my colleagues — I call them, send photos, and we discuss the situation." (Informant 3)* *"<…> if I see that this is beyond my competence, I refer the patient for further treatment. <…> If I see a risk of amputation or the situation is worsening, I don't wait — I immediately consult with a surgeon." (Informant 5)* *"Some patients have personal assistants or social workers with whom I coordinate the schedule. <…> I ask them to at least visually inspect the patient's footwear and notice any damage. <…> I often teach relatives or social workers how to properly prepare the patient for a visit, what shoes to choose, and how to examine them <…>" (Informant 6)* *"<…> we refer patients to dermatologists or surgeons if we cannot help them ourselves." (Informant 9)* *"Social workers usually organize everything, as they act as intermediaries between palliative patients and nurses. <…> I evaluate this cooperation very positively – interdisciplinary care must be included so that each specialist knows what to do, how to do it, and what has already been done." (Informant 1)* *"<…> collaboration with dermatologists, surgeons <...> I evaluate positively." (Informant 2)* *"I always cooperate. <…> I often consult and refer patients to surgeons and dermatologists, and we have excellent relationships." (Informant 3)* *"I cooperate successfully <...>." (Informant 4)* *"Yes, I communicate <…> each meeting enriches our knowledge <…> we maintain contact with fellow diabetes nurses, communicate at seminars, share experiences, and if something is complex, we call each other and consult <…> we often collaborate with surgeons <…> when more serious problems arise <…> nursing or pedicure alone is not enough <…> a vascular or general surgeon's help is needed." (Informant 5)* *"<…> cooperation is essential, especially when working with diabetic foot. <…> I contact surgeons if wound evaluation or intervention is needed. <…> I refer to traumatologists when it's necessary to correct pressure points or relieve load. <…> I consult dermatologists about skin issues. <…> much depends on doctors' humanity and willingness to help <…> when we manage to shorten treatment time, prevent complications or amputation – that's a big achievement." (Informant 6)* *"Yes. I communicate with surgeons – for example, when a toenail is ingrown so deeply that it can't be treated without anesthesia <...> with dermatologists <...> if I see that a patient has a fungal infection, I advise them to consult a dermatologist for antifungal treatment. <...> Communication goes well <...> since our facility is small, we cooperate well, friendly, and professionally." (Informant 7)* *"<...> with general practice nurses, family doctors, and, if necessary, with dermatologists, surgeons <...> and with the institution's social worker <...> I evaluate cooperation as partly good and partly satisfactory, since it is still difficult to communicate with some health care specialists about the necessity of these procedures or, for example, when patients need reimbursable supplies (dressings, etc.), some family doctors are reluctant to handle it." (Informant 8)* *"It's hard to evaluate. <…> There is no direct cooperation, but we refer patients to dermatologists or surgeons if we cannot help them ourselves." (Informant 9)*

Analysing the interviews with diabetes nurse specialists revealed two subcategories (see Table 2). The first subcategory – adaptation to the situation – demonstrated nurses' ability to respond to challenges creatively and empathetically. They strive to assist patients even in difficult conditions, as one informant stated: *"Even under difficult conditions, I try to help the person"* (Informant 1). Others emphasised an individual approach – *"Each person is individual; I solve problems according to the situation"* (Informant 5) – and highlighted holistic care: *"During the procedure, I not only trim the nails but also gently massage, apply cream, and say a kind word <...>."* (Informant 6). Some specialists also contribute to patient education: *"I have prepared a memo for both patients and their family members, clearly and understandably outlining the main principles of problem nail foot care."* (Informant 8).

The second subcategory – team collaboration with other healthcare professionals – revealed that nurses value the support of colleagues and the importance of a professional network. They often share experiences and consult with one another: *"I cooperate with my colleagues — I call them, send photos, and we discuss the situation."* (Informant 3). When situations become complex, nurses refer patients to other specialists*: "<...> if I see that this is beyond my competence, I refer the patient for further treatment. <...> If I see <...> the situation is worsening, <...> I immediately consult with a surgeon."* (Informant 5). They also work closely with social workers, who help organise patient care and monitor foot conditions (Informant 6).

Diabetes nurse specialists positively evaluate collaboration with other healthcare professionals and emphasise the importance of interdisciplinary teamwork in palliative care. According to the informants, social workers often act as intermediaries between patients and nurses: *"Social workers usually organize everything, as they act as intermediaries between palliative patients and nurses."* (Informant 1). Nurses reported close collaboration with surgeons, dermatologists, and general practitioners: *"I always cooperate. <...> I often consult and refer patients to surgeons or dermatologists"* (Informant 3), noting that such cooperation helps *"prevent complications or amputation"* (Informant 6).

The study also sought to identify the need for therapeutic pedicure services, their importance in palliative care, and the potential integration of podologists into palliative care teams (see Table 3).

Table 3. **Category – The need for therapeutic pedicure services, their significance, and the integration of podologists into palliative care**

Subcategory	Authentic statements of the study participants
Frequency of performing medical pedicure	*"<...> not often <...> but I often have to deal with wound care <...>" (Informant 1)* *"Often <...> definitely 5 times a week." (Informant 2)* *"Often <...> 2–3 times a week." (Informant 3)* *"Varies <...> such a procedure is often needed at home." (Informant 4)* *"<...> I wouldn't say often, about 3–4 patients per month." (Informant 5)* *"<...> because of long queues, patients usually get in about once every three months <...> for patients in more severe condition, that's definitely not enough. <...> If there are wounds, infections, or ingrown nails, I try to see them at least once a month, or more often if needed." (Informant 6)* *"I perform pedicures as needed – every 6–8 weeks." (Informant 7)* *"Often." (Informant 8)* *"We perform medical pedicures quite often, but I couldn't specify the exact frequency." (Informant 9)*

Subcategory	Authentic statements of the study participants
The importance of medical pedicure for patients in palliative care	*"It is an essential procedure that should be performed on a regular, planned basis. Unfortunately, this is not the case in Lithuania. <…>" (Informant 1)* *"Positive, because the patient can move more easily and the risk of infection is reduced." (Informant 2)* *"<…> essential and mandatory, because when patients take care of their nails themselves, they often injure the skin until it bleeds." (Informant 3)* *"A very necessary service. <…> How can we talk about quality when the service itself is simply not accessible?" (Informant 5)* *"Medical pedicure significantly improves quality of life. <…> After the procedure, patients often say they feel relieved, the pain is gone, they feel cleaner and 'lighter'. <…> I see how they recover and smile <…> the human touch and attention have great emotional importance." (Informant 6)* *"Medical pedicure is necessary — that is an undeniable fact <...> hygienically treated nails do not grow inward, thus preventing additional pain for patients <...> the skin is nourished with special cream <...>" (Informant 7)* *"Very good, even excellent. Patients are happy after the procedure, they say their 'feet feel lighter.'" (Informant 8)* *"<…> medical pedicure greatly contributes to patients' well-being <…> they feel lighter, their mobility and overall condition improve <…> well-groomed feet not only look better but also reduce pain, discomfort, and infection risk <…> they are very satisfied with the results and willingly return <…>" (Informant 9)*
The importance of involving a podiatrist in the team	*"<…> positively <…> they have the necessary qualifications and can work with both diabetic and non-diabetic patients. <…> Such a foot care team would be very important in palliative care <…> it would relieve part of the workload from general practice nurses." (Informant 1)* *"<…> strongly in favor, and there is a great shortage of them." (Informant 2)* *"I see only advantages <…> these specialists could provide even more professional assistance and help 'grow out' or resolve certain nail pathologies." (Informant 3)* *"I see only benefits, not drawbacks, as it provides patients with comfort and improves their quality of life." (Informant 4)* *"<…> only positively <…> the work would run smoothly. <…> Currently, such specialists are not trained in Lithuania – and that is the saddest part." (Informant 5)* *"A podiatrist in palliative care is essential. <…> It would help prevent bedsores, infections, ingrown nails, and amputations. <…> Every department or institution should have a specialist with the necessary equipment and competencies. <…> I've had cases where no one had cut a patient's nails for five years – he simply bought bigger shoes. Such situations are unacceptable today." (Informant 6)* *"A podiatrist in a palliative care team would be very useful <...> patients are unable to take care of their foot hygiene, and family members either don't know how or are unwilling to do it, for example, because of unpleasant odors." (Informant 7)*

Subcategory	Authentic statements of the study participants
The importance of involving a podiatrist in the team	*"I evaluate it very positively. <...> The benefit is significant <...> this specialist treats ingrown nails, performs safe medical pedicures, works on fungal infection prevention, foot injuries, calluses, and provides comprehensive professional assistance and consultation on proper foot and nail care. <...> Foot care is often dismissed as a non-essential service, which is wrong. <...> A podiatrist would solve these problems and reduce the workload of general practice nurses." (Informant 8)* *"I think it is very beneficial. <...> A podiatrist can professionally treat nails and feet, thus reducing pain and discomfort. <...> It would be a great help to patients <...> and would definitely contribute to better foot care in palliative nursing." (Informant 9)*

The study results revealed that the demand for therapeutic pedicure services in palliative care is high; however, the frequency and accessibility of these services vary (see Table 3). Some informants interpreted the question about frequency as the number of procedures performed – *"often <...> definitely five times a week"* (Informant 2), *"two to three times a week"* (Informant 3) – while others referred to how often patients attend appointments: usually *"every three months"*, which is insufficient, especially *"for those in more severe condition"* (Informant 6).

All informants agreed that medical pedicure is an essential part of palliative care, helping to reduce pain and infection risk, and improving mobility and overall wellbeing – *"the patient can move more easily and the risk of infection is reduced"* (Informant 2). Several also highlighted its emotional benefit, noting that the procedure provides patients with a sense of relief, cleanliness, and care – *"After the procedure, patients often say they feel relieved, the pain is gone, they feel cleaner and 'lighter'. <...> I see how they recover and smile"* (Informant 6).

It was also emphasised that this service is not sufficiently integrated into Lithuania's planned palliative care system, which results in patients receiving it too infrequently – *"it is an essential procedure that should be performed on a regular, planned basis. Unfortunately, this is not the case in Lithuania."* (Informant 1).

Moreover, most informants emphasised that podologists should be included in palliative care teams, as their involvement could significantly improve patients' quality of life and ease nurses' workload. As one participant stated, *"A podiatrist in palliative care is essential. <...> It would help prevent bedsores, infections, ingrown nails, and amputations."* (Informant 6). Others highlighted that such specialists would provide more professional care and contribute to patient comfort (Informants 3, 4, 9), while their integration into the team would *"reduce the workload of general practice nurses"* (Informant 1).

During the study, participants were also asked to share their opinions and suggestions for improving medical pedicure services in palliative care (see Table 4).

Table 4. **Category – Improvement and recommendations for medical pedicure services in palliative care**

Subcategory	Authentic statements of the study participants
Lack of specialists and positions	*"<…> the main problem is the lack of podologists. <…> The specialization of diabetic nurses is also too narrow and insufficient. <…> To my knowledge, neither hospitals, polyclinics, nor palliative care institutions provide such services for palliative patients, and there are no established positions for this. <...> For example, in Germany, contracts are made with health insurance funds – special foot care providers (podologists) regularly visit nursing homes to take care of residents' feet. This is very important, but in Lithuania, such practice is lacking." (Informant 1)*
Lack of specialists and positions	*"<…> there are no positions dedicated to providing foot care for palliative patients. <…> They usually visit private clinics." (Informant 3)* *"<…> workplaces should be created and equipped with the necessary tools." (Informant 4)* *"First of all – there is a shortage of specialists. <…> If a person is hospitalized, they cannot receive diabetic foot care, podology services, or a specialist consultation. <…> Positions should be created so that qualified specialists could work in hospitals and nursing homes. Our society is aging, atherosclerosis and diabetes are spreading, problems are increasing, and there are no services." (Informant 5)* *"Firstly – there is a lack of human resources. There are too few specialists who can visit patients at home. <…> Each department or institution should have a specialist with the necessary equipment and competencies. <…> Another problem is the preparedness of healthcare institutions. <…> I have encountered cases where a patient with a diabetic ulcer was not examined at all – only the main diagnosis was treated, while the leg was left without care. This is a very sad situation, reminiscent of medical backwardness." (Informant 6)* *"<...> there are not enough trained specialists for each palliative care team to have a foot care professional. <...> Each institution should have at least one such specialist. <...>" (Informant 7)* *"<...> there is an obvious shortage of specialists in the system." (Informant 8)* *"<…> healthcare institutions' resources should be strengthened to employ more foot care specialists, as these services are very necessary. <…> In Lithuania, these services are still not fully regulated. <…> There are very few foot care specialists in polyclinics and hospitals." (Informant 9)*
The need to strengthen specialist training and education	*"<...> regular and comprehensive training sessions on foot care should be organized — this is something that Lithuania greatly lacks." (Informant 8)* *"<…> continuous education for foot care specialists is very important — professional development in this field is essential." (Informant 9)* *"At present, such specialists are not being trained in Lithuania — and that is the saddest part." (Informant 5)* *"Specialists working outside the private sector should be given opportunities to deepen their knowledge through additional courses and training, as well as be provided with proper positioning equipment." (Informant 2)*

Subcategory	Authentic statements of the study participants
Strengthening interinstitutional and interdisciplinary cooperation	*"<...> closer collaboration with healthcare professionals — dermatologists, surgeons, and others dealing with similar issues — is essential. Such teamwork would make patient care much more effective." (Informant 9)* *"<...> cooperation between specialists should be encouraged." (Informant 8)* *"<...> there is a great lack of empathy and cooperation between institutions <...> the principle of teamwork is severely lacking in Lithuania." (Informant 6)*

During the study, all informants emphasised that improving medical pedicure services in palliative care requires strengthening both human and material resources (see Table 4). Participants highlighted that the main problem is the lack of podologists and that in hospitals and polyclinics such services are not provided, and there are no designated positions (Informants 1, 3, 5). It was also noted that institutions need not only more job positions but also proper equipment – as one nurse stated, *"workplaces should be created and equipped with the necessary tools"* (Informant 4).

Another important subcategory was training and qualification improvement. Respondents pointed out that *"such specialists are not being trained in Lithuania — and that is the saddest part"* (Informant 5) and that *"regular and comprehensive training sessions on foot care should be organized"* (Informant 8).

In addition, informants stressed the need to strengthen collaboration between professionals, as *"teamwork is severely lacking in Lithuania"* (Informant 6) and it is necessary to encourage *"closer collaboration with healthcare professionals — dermatologists, surgeons, and others"* (Informant 9).

In summary, it can be stated that diabetes care nurses strive for foot care to be recognised as an essential part of palliative care – one with clear regulation, appropriate specialist training, and stronger interdisciplinary cooperation.

4. DISCUSSION

The results of this study revealed that diabetes care nurses, when providing foot and nail care to palliative patients, face numerous challenges related to difficult working conditions, patients' physical condition, lack of knowledge and training, limited interdisciplinary collaboration, and an underdeveloped foot care service system. Despite these difficulties, nurses demonstrate adaptability, a willingness to improve, and emphasise the need to strengthen interdisciplinary cooperation and integrate podologists into palliative care teams.

First, the study showed that working conditions and patients' health status have a significant impact on the quality of care provided. Nurses often work in uncomfortable positions, in inadequately equipped facilities or patients' homes, which increases physical strain and complicates procedures. These findings are consistent with Dunning and Martin (2019) and Mendonça et al. (2022), who emphasised that diabetes-related complication management in palliative settings requires not only medical knowledge but also proper working conditions and resources. The informants also noted that patients are often in poor health, suffering from neuropathy, circulatory disorders, or non-healing wounds, making even simple procedures challenging. This aligns with Seim et al. (2024), who found that palliative care professionals often deal with complex clinical cases where symptom management outweighs curative treatment.

Another key finding was the lack of knowledge and training. Participants indicated that both patients and some healthcare professionals still lack awareness of the importance of foot care. This observation corresponds with Koumaki et al. (2023), who found that insufficient patient education and limited staff competencies often delay the recognition of complications. The participants also stressed that Lithuania lacks specialised foot care training, echoing Verdin and Rao (2017), who argued that continuous professional development is essential for wound care specialists, but access is often limited by financial constraints.

The study also confirmed the importance of interdisciplinary collaboration. Diabetes care nurses emphasised that cooperation with doctors, social workers, and other professionals ensures higher quality care, though such cooperation remains insufficient. Similar conclusions were drawn by Johansen et al. (2022), who noted that effective teamwork is one of the key factors in improving palliative care outcomes. In Lithuania, however, collaboration barriers often stem from poor communication and inadequate coordination between institutions.

One of the most significant aspects of the study was the emphasis on the role of the podologist in palliative care. Most informants indicated that including podologists in interdisciplinary teams could reduce the risk of complications, infections, and amputations while improving patients' quality of life. These findings align with Ziegler et al. (2024), who demonstrated that podologist involvement in diabetic foot care can reduce amputation rates by up to 60%. The originality of this study lies in the fact that, for the first time in Lithuania, it provides empirical evidence supporting the need to systematically integrate podologists into palliative care structures.

Another emerging issue was service regulation and accessibility. Informants pointed out that foot care services in Lithuania are still not clearly regulated, meaning patients often receive such care only through private services. These findings are consistent with Svirbutaitė et al. (2025), who highlighted that the healthcare system still lacks mechanisms to ensure timely access to qualified foot care. By comparison, Germany's model – mentioned by informants – integrates podological services into the reimbursed healthcare system, ensuring regular foot care for patients.

In summary, this study extends previous international research by revealing the unique Lithuanian context – highlighting the role of diabetes care nurses and the challenges they face in a palliative care system where foot and nail care are still insufficiently integrated. The findings emphasise the need to strengthen interdisciplinary collaboration, systematically train foot care specialists, ensure adequate working conditions, and establish clear service regulations. These steps would promote a holistic approach to patient care, enhance comfort and quality of life, and reduce the risk of complications in the palliative stage.

5. CONCLUSIONS AND PERSPECTIVES

The study results showed that diabetes care nurses, when providing foot and nail care to palliative patients, face challenging working conditions, patients' complex physical conditions, a lack of knowledge and training, and limited interdisciplinary collaboration. Despite these obstacles, they demonstrate adaptability, strive to ensure patient comfort, and maintain professional flexibility. The research revealed the need for systematic training of foot care specialists (podologists) and their integration into palliative care teams, as this could reduce the risk of complications and amputations while improving patients' quality of life.

Looking ahead, it is essential to strengthen the qualifications of diabetes care nurses, enhance interdisciplinary cooperation, and establish clear regulations for foot care services in Lithuania. Future

research should include a broader range of healthcare professionals and evaluate the impact of foot care on the quality of palliative care and patients' overall wellbeing.

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