

Livewell Southwest

**Podiatry Assessment and  
Intervention Protocol for Adult Patients with  
Diabetes**

Version No 2.3  
Review: January 2020

**Notice to staff using a paper copy of this guidance**

**The policies and procedures page of Intranet holds the most recent version of this guidance. Staff must ensure they are using the most recent guidance.**

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## Reader Information

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<b>Stakeholders</b>	Patients with Diabetes who attend the Podiatry Service Podiatry Staff Academic Staff at Plymouth University CCG
<b>Consultation process</b>	The following individuals have been consulted on the content of this document by the author: Deputy Locality Manager, Citywide Services Podiatry Lead for Diabetes, Podiatry Services Manager The Podiatry Service staff group and Academic staff of the University of Plymouth's Podiatry Programme have also been consulted with the penultimate final draft
<b>Equality Analysis Checklist completed</b>	A full Equality Assessment (EA) has been assessed as being unnecessary for this document.
<b>Is the Equality and Diversity Policy referenced</b>	[NA]
<b>Is the Equality Act 2010 referenced</b>	[NA]
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<b>Associated Documentation</b>	<ul style="list-style-type: none"> <li>• National Institute for Health and Clinical Excellence, Clinical Guideline 10</li> <li>• Peripheral Arterial Disease (PAD) Guidance for Podiatrists (Version 2.2)</li> <li>• Role &amp; Scope of Podiatry Assistants Policy (Podiatry Service, LSW Publication 2012)</li> <li>• High Quality Care For All NHS Next Stage Review Final Report, DH, Department of Health, Professor the Lord Darzi of Denham KBE, HonFREng, FmedSci, 2008</li> <li>• The NHS Outcomes Framework (2012), Department of Health</li> <li>• NHS London (2012) <i>AHP Diabetes Toolkit: How AHPs improve patient care and save the NHS money</i> NHS London</li> <li>• Jones, S. (2010) <i>Major and minor amputation rates for adults</i> Yorkshire and Humber Public Health Observatory</li> </ul>
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## Document review history

Version no.	Type of change	Date	Originator of change	Description of change
For previous review history please contact the PRG secretary.				
0.4	Editing	29/09/09	Podiatry Services Manager	Editing and formatting
1	Ratified	October 2009	Podiatry Services Manager	Adding section 8.
1:1	Reviewed	Aug 2011	Author	Reviewed, no changes made.
2.0	Redraft of policy	November 2013	Podiatry Clinical Lead	Complete redraft of policy with new Appendix A
2.1	Extended	December 2015	Podiatry Clinical Lead	Extended no changes
2.2	Extended	June 2016	Information Governance, Records, Policies & Data Protection Lead.	Formatted to LSW and Extended
2.3	Reviewed	November 2016	Podiatry Clinical Lead	Minor changes.

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# Podiatry Assessment and Intervention Protocol for Adult Patients with Diabetes

## 1. Introduction

### 1.1. Core Vision

“To prevent every patient with diabetes who attends the Podiatry Service from experiencing foot ulceration, amputation and early death as a result of lower limb complications of their diabetes.”

1.2. The focus of this protocol is the achievement of patient-centred outcomes that fall within the Domains of the NHS Outcomes Framework (2013-2014). The outcomes of this protocol fall into the following domains:

- Domain 1: Preventing people from dying prematurely
- Domain 2: Enhancing Quality of Life for people with long term conditions
- Domain 3: Helping people recover from episodes of ill health or following injury

1.3. The prevention of diabetes related foot problems is essential as:

- Foot ulceration increases the risk of future lower limb amputation
- Foot ulceration and lower limb amputation are associated with increased morbidity
- Foot ulceration and lower limb amputation is associated with increased secondary care contact, which is expensive to the local health economy
- Foot ulceration and lower limb amputation is associated with a reduced ability to work, and therefore contribute to the wider economy
- Foot ulceration and lower limb amputation is associated with a reduced ability to undertake activities of daily living
- Foot ulceration and lower limb amputation is associated with a reduced quality of life

1.4. It is estimated that £1 out of every £150 spent by the NHS is spent on treating foot ulcers or amputations on an annual basis. Additionally, it is estimated that 50% of those who experience a major amputation die within two years (NHS London 2012).

1.5. In 2010, the rate of major amputation in patients with Diabetes in Plymouth was lower than in the rest of the South West (excluding Torbay), with a rate of between 2.33-2.65 amputation per 1000 adults with diabetes (Jones, 2010). This figure falls around the national average of 2.51. There is therefore scope to reduce this figure, as there are areas of the UK with a rate lower than one.

1.6. In light of the serious and potentially negative consequence of complications related to the diabetic foot, it is vital that the Service follows this robust and fit-for-purpose protocol to:

- Assess patients for risk factors for foot ulceration
- Monitor patients' feet for changes that increase the risk of foot ulceration
- Educate patients about the risk factors for foot ulceration
- Empower patients to make positive choices to improve their foot health

- Provide interventions to improve and to prevent a deterioration in foot health including ulceration

## **2. Purpose**

- 2.1. The purpose of this protocol is to provide a framework for Podiatry Services staff to assess, treat and monitor the foot health status of patients who have diabetes. The Service is commissioned to provide assessment, monitoring and treatment of patients with diabetes who have identified risk factors for foot ulceration with the overall aim of preventing it, and ultimately amputation and early death. The guideline provides a framework to support this overall aim.
- 2.2. Integral to the assessment and monitoring of the patients is the guidance published by the National Institute of Care and Clinical Excellence's Guideline 10 (NICE CG10, 2004) entitled "Type 2 diabetes: prevention and management of foot problems". The tenets of this protocol are based upon the guidance laid down in this document. Demonstrating compliance with this guideline is not the core purpose of this document.

This document has been superseded by NICE NG19. However, the Podiatry Service is not currently commissioned against the standards laid down by this document. Non-compliance with certain aspects of this guidance is recorded on the Corporate Risk Register and NICE Compliance database.

- 2.3. Integral to the assessment and monitoring of the patients is the guidance published by the National Institute of Care and Clinical Excellence's Guideline 10 (NICE CG10, 2004) entitled "Type 2 diabetes: prevention and management of foot problems". The tenets of this protocol are based upon the guidance laid down in this document. Demonstrating compliance with this guideline is not the core purpose of this document.

## **3. Duties**

- 3.1. The Deputy Locality Manager (Citywide Services) will be responsible for the implementation and monitoring of this protocol.
- 3.2. This protocol applies to all Podiatrists and Podiatry Assistants employed by the Podiatry Service of Livewell Southwest.
- 3.3. The care of patients with diabetes by the academic staff and students of the Plymouth University's Podiatry Programme working under honorary contracts within Livewell Southwest is also governed by this and allied policies.
- 3.4. Qualified staff (HCPC Registered Podiatrists) will retain responsibility and accountability for the actions of students in their supervision.
- 3.5. The terms "staff" and "podiatrist(s)" are used in this document to encompass all those individuals detailed in paragraphs 3.2 and 3.3. All such persons are responsible for engaging with and implementing the content of this document in their clinical practice.

## 4. Definitions

DSP- Diabetes Specialist Podiatrist

GP- General Practitioner

HCPC- Health and Care Professions Council

MDT- Multi Disciplinary Team- in this context refers to the Diabetic Foot Team

MSK- Musculoskeletal

PA- Podiatry Assistant

PAD- Peripheral Arterial Disease

## 5. General Patient Management Approach

5.1. The purpose of the initial patient assessment is to identify any factors which place the patient at risk of developing a foot ulcer.

5.2. The initial assessment must consider and record the following factors:

Factor	Rationale
Foot health requirements from the patient's perspective	The establishment of the patient's chief complaint is a vital part of history taking. Neglecting to focus upon it can lead to non-compliance and dissatisfaction from the patient (Kroenke 1998)
Establish and record current symptoms (if present)	To determine the nature of the presenting problem, and to identify and 'red flag symptoms' that may indicate a serious underlying pathology
Record a complete medical and surgical history, including current medication	To establish any potential risks and co-morbidities that may affect the foot, and to determine the effect of this history on lower limb health, function and performance
Record and assess key personal information, including social need/difficulties, activity types and levels, smoking status, diet and nutrition	To determine if any of these factors have a role in the presenting problem, or present as barriers to improving foot health/function or future attendance with the Service
Patient's diabetes history and degree of glycaemic control	To determine the healing potential of the patient should they develop a wound, and to establish if the patient is at risk of developing or has already developed further diabetes related complications, e.g. neuropathy, retinopathy, nephropathy etc.
An assessment of the patients foot	To identify: <ul style="list-style-type: none"> <li>• Lesions</li> <li>• MSK issues that may result in abnormal pressure distribution</li> <li>• Areas prone to increased or prolonged loading, e.g. due to foot deformity</li> </ul>

	<ul style="list-style-type: none"> <li>• Skin integrity and condition</li> </ul>
An assessment of the patient's footwear	To ensure that footwear is not likely to contribute to the development of a foot pathology

5.3. The vascular supply to the lower limb must be assessed and recorded by:

- Palpating the dorsalis pedis and posterior tibial pulses.
- Using Doppler Ultrasound using an 8 MHz probe. If the patient has significant oedema, a 5 MHz probe can be used if available. As a minimum, staff must record the audible characteristics produced by the dorsalis pedis and posterior tibial arteries. Where appropriate, the Doppler sounds produced by the digital, anterior tibial, peroneal and popliteal arteries may be recorded
- Palpating the skin to assess the temperature gradient of the limb, and whether there are differences in the temperatures of the limbs.
- Measuring the sub-capillary refill time at the apex of the hallux to identify potential small vessel disease.
- Considering undertaking an Ankle Brachial Pressure Index, as per the current version of the guideline "Peripheral Arterial Disease (PAD) Guidance for Podiatrists" (LSW 2013).

5.4. The neurological supply to the lower limb must be assessed and recorded in the SystmOne record of the patient by:

- Asking the patient about any neurological symptoms they are experiencing, such as burning pain, electrical or stabbing sensations, paraesthesia, hyperaesthesia, and deep aching pain (Boulton *et al* 2005).
- Testing five sites on the foot with a Semmes Weinstein 10g monofilament.

**Note:** The sites to test are not specified, and there is no consensus in the medical literature about the sites and number of sites that should be tested (Feng *et al* 2009). Clinicians should test the area of the patient's foot that appear to be most prone to abnormal loading/pressure distribution. The patient should be given a score out of five for both feet.

- If a patient score 5/5 on a 10g monofilament test on **both** feet, the patient's vibration perception at the hallux, plantar aspect of the first metatarsophalangeal joint and the medial malleolus using a 128Hz tuning fork.

**Note:** Boulton *et al* (2008) suggest that combining tests for sensory neuropathy increase the sensitivity in detecting diabetes peripheral neuropathy to >87%. However, if peripheral sensory neuropathy is detected using a 10g monofilament, there is no need to undertake a vibration perception test.

5.5. Based on the information obtained in 4.1-4.4, the patient should receive a risk classification for foot ulceration:

- Low risk: The patient has at least one palpable foot pulse in each foot, and no evidence of peripheral sensory neuropathy, and no other significant risk factors that could result in foot ulceration.

- Increased risk: The patient has non-palpable foot pulses and/or evidence of peripheral sensory neuropathy, or another significant risk factor.
- High risk: In addition to the features that make a patient at increased risk, the patient has foot deformity, skin changes, or a history of foot ulceration.
- Ulcerated Foot: The patient has an active foot ulcer.

5.6. The patient should receive foot health education in order to help reduce their risk of ulceration. Verbal education must be supported with written information where available and evidenced in the patient record.

5.6.1. Dorresteijn *et al* (2012) state that diabetes education is only effective in the short term. Therefore, patients must be empowered to make positive changes to their foot health at each appointment.

5.6.2. Clinicians must be mindful that patients with capacity (as deemed by the Mental Capacity Act 2005) have the right to make decisions that may be detrimental to their health when they have all of the information they require to make an informed decision. These patients should not be castigated or discriminated against or receive less favourable treatment. Where there are concerns about a patient's capacity, advice in the first instance should be sought from Service Managers or the Adult Protection Team.

5.7. The clinician should consider if any onward referrals would be beneficial to the patient, e.g. to the Orthotics Service, to the Musculoskeletal Podiatry Team, etc.

5.8. Patients who are deemed at low risk of ulceration will be discharged from the Podiatry Service back to the GP, unless their podiatric need is sufficient to qualify for an episode of care according to the Service's current access criteria (v 1.8 2010). Annual foot assessments should be undertaken by appropriately trained GP practice staff. A discharge letter from the Service must be sent to the patient's GP, which must contain a summary of the test results, and the caveat that the patient can be referred back to the Service if it is felt that the risk status or care needs of the patient have increased.

5.9. Patients who are at increased risk of foot ulceration will be reviewed by the Podiatry Service on an at least 6-monthly basis, or sooner if clinically indicated e.g. by foot pathology etc.

5.10. Patients who are at high risk of foot ulceration will be reviewed by the Podiatry Service on an at least 3-monthly basis, or sooner if clinically indicated e.g. by foot pathology etc.

5.11. A review of the patient does not require that the patient has a full re-assessment as per points 5.1 to 5.10. At a review appointment, the assessments conducted should be based upon the patient's clinical signs and symptoms. If the patient has no new signs and symptoms, this should be recorded in the patient record as justification for not repeating previously conducted tests.

5.12. Foot reviews should take place as per the Podiatry Services Diabetes Management Plan (Appendix A).

- 5.13. A Waterlow Assessment and SSKIN Bundle form must be completed if the patient is suspected to be at risk of or has developed a pressure ulcer.
- 5.14. A care plan should be set with the patient to cover a twelve-month period from the full assessment. This care plan should document what the Service will provide for the patient, and who will provide it (i.e. Podiatrist or Podiatry Assistant), the expectations of the patient, recall frequency, and how the patient can contact the Service should they have a foot health problem.
- 5.15. Where there is any uncertainty about any aspect of the assessment, advice should be sought from a Diabetes Specialist Podiatrist or Diabetes Foot Protection Lead.
- 5.16. The outcomes of this assessment must be communicated to the patient's GP in writing by the assessing clinician. Any significant changes during the episode of care should be communicated to the patient's GP in an appropriate format.
- 5.17. Review appointments will be conducted by either Podiatrists or Podiatry Assistants. Eligibility criteria for review appointments to be conducted by Podiatry Assistants are documented in the current version of the Podiatry Assistant Role and Scope Document.
- 5.18. Patients must be fully reassessed as a minimum on an annual basis using the guidance in 5.1-5.17. This must be conducted sooner if there is a significant change to the patient's foot health status.

### **Diabetic Foot Attacks**

- 5.19. All patients must be educated about the key signs and symptoms of a developing foot problem that warrants immediate further investigation and this advice should be reiterated at each appointment.
- 5.20. All patients must be informed about ways in which they can contact the Service if they have a diabetic foot attack, e.g. wound development.
- 5.21. When a patient contacts the Service to request an emergency appointment, they must be offered an appointment as appropriate to their needs. Where this is not possible or the patient is not available to attend, they must be advised to contact their GP or local Emergency Department depending on the nature and severity of the problem.
- 5.22. Any patient with diabetes who develops any of the following presentations must be referred for a review with the Multidisciplinary Diabetic Foot Team at Derriford Hospital within 24 hours, using the current referral form. Urgent referrals may be seen on the same day by arranging this with the multidisciplinary team via the telephone:
  - A new foot ulcer
  - An acutely ischaemic foot (clinicians should write to the patient's GP to request a Vascular Referral as well)
  - Suspected Charcot Arthropathy
  - Suspected Osteomyelitis

- Acute lower limb infection
- 5.23. If an urgent hospital admission is required, and it has not been possible to contact the Diabetic Foot Team, Podiatrists should contact the Medical or Surgical Assessment Units (MAU and SAU respectively) as appropriate via the Derriford switchboard (01752 202082) for advice on admission/further management of the patient.
- 5.24. Podiatrists may book patients back in for one review (within 7 days) prior to referring a patient to the Diabetes MDT in the following conditions. The rationale for the decision must be recorded in the patient record:
- Simple wound without signs of infection
  - Interdigital maceration with shallow fissure formation
  - Mild Onychocryptosis with pus formation
  - Small blister formation
  - Superficial tissue breakdown beneath hyperkeratotic lesions
- 5.25. Podiatrists should not delay referral to the Diabetes MDT if the patient's pulses are not palpable, or the patient has a history of ulceration unless the patient specifically declines to be referred.
- 5.26. If a patient declines a referral to the MDT, this must be documented in the patient's record. Where possible, this patient's care should be transferred to a Community Foot Protection Lead or Diabetes Specialist Podiatrist if the patient is willing to be seen elsewhere in the community.
- 5.26.1. If there are concerns about the Mental Capacity of the patient, advice from Service Management should be sought to ensure appropriate capacity assessments are undertaken and that any intervention is in the "best interests" of the patient.
- 5.27. All domiciliary patients who refuse to attend the MDT must be referred for review by a Diabetes Foot Protection Lead or Diabetes Specialist Podiatrist within a timeframe based upon clinical presentation.

## **6. Monitoring Compliance and Effectiveness**

- 6.1. The Deputy Locality Manager (Citywide Services) will retain overall accountability and responsibility for the content, monitoring and implementation of this policy document.
- 6.2. Periodic clinical audit, patient satisfaction surveys and an annual peer review of staff compliance and competency will be included in the on-going process to monitor quality, compliance and effectiveness.
- 6.3. Audits and patient satisfaction surveys will be registered, published and actioned in line with current Livewell Southwest policy whilst peer reviews will be subject to internal scrutiny and a part of the KSF (Knowledge & Skills Framework) and annual appraisal processes.

## 7. Training and staff support

- 7.1. The Podiatrists within the team have a competency framework in place that includes competences on all areas of diabetes assessment, treatment, and footcare.
- 7.2. To ensure that the Livewell Southwest Podiatry Service delivers high quality care for patients with diabetes regular training will be provided to all staff. The Diabetes Foot Protection Leads will be responsible for the delivery of training, with the support of the Clinical Lead as required. The training delivered will be appropriate to the role and scope of the clinician.
- 7.3. The Head of Podiatry Programme at the Plymouth University is responsible for ensuring that the academic staff and students are provided with appropriate level of training and updating relating to this policy.

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**All policies are required to be electronically signed by the Lead Director. Proof of the electronic signature is stored in the policies database.**

**The Lead Director approves this document and any attached appendices. For operational policies this will be the Locality Manager.**

**The Executive signature is subject to the understanding that the policy owner has followed the organisation process for policy Ratification.**

Signed: Director of Operations

Date: 4<sup>th</sup> January 2017

