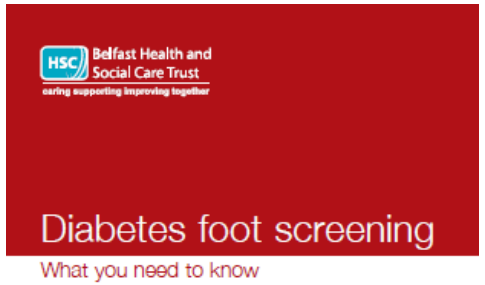
Diabetes training for practice nurses



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Diabetes – Northern Ireland

- There are over 108,000 people living with diabetes in Northern Ireland and this number is set to continue to rise.

- Diabetes prevalence in Northern Ireland is growing around 4% year on year and with an estimated 376,000 people living here at risk of type 2 diabetes

(Diabetes UK 2022)

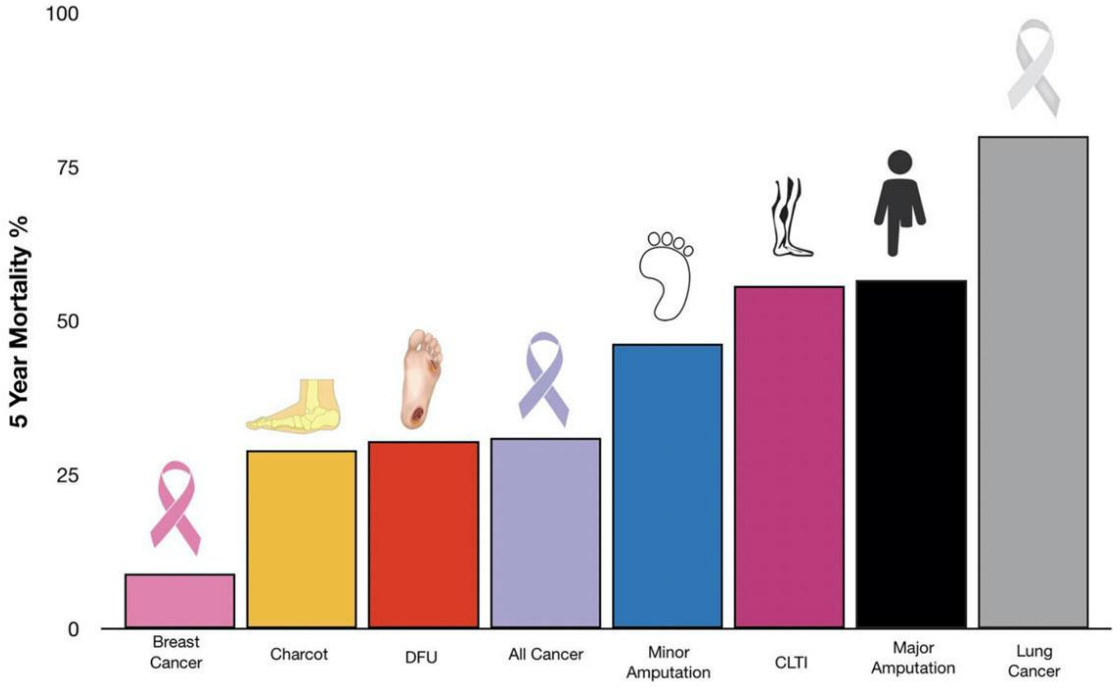
All the people with diabetes in Northern Ireland could fill Windsor Park

more than five times over

Foot complications in diabetes

- Peripheral neuropathy
- Peripheral arterial disease
- Diabetes foot ulceration
- Diabetes foot infection
- Critical limb ischaemia
- Lower limb amputation
- Charcot foot

Foot complications in diabetes



Five-year mortality and direct costs of care for people with diabetic foot complications are comparable to cancer

The mortality rate for people who undergo lower extremity amputation due to a DFU remains alarming:

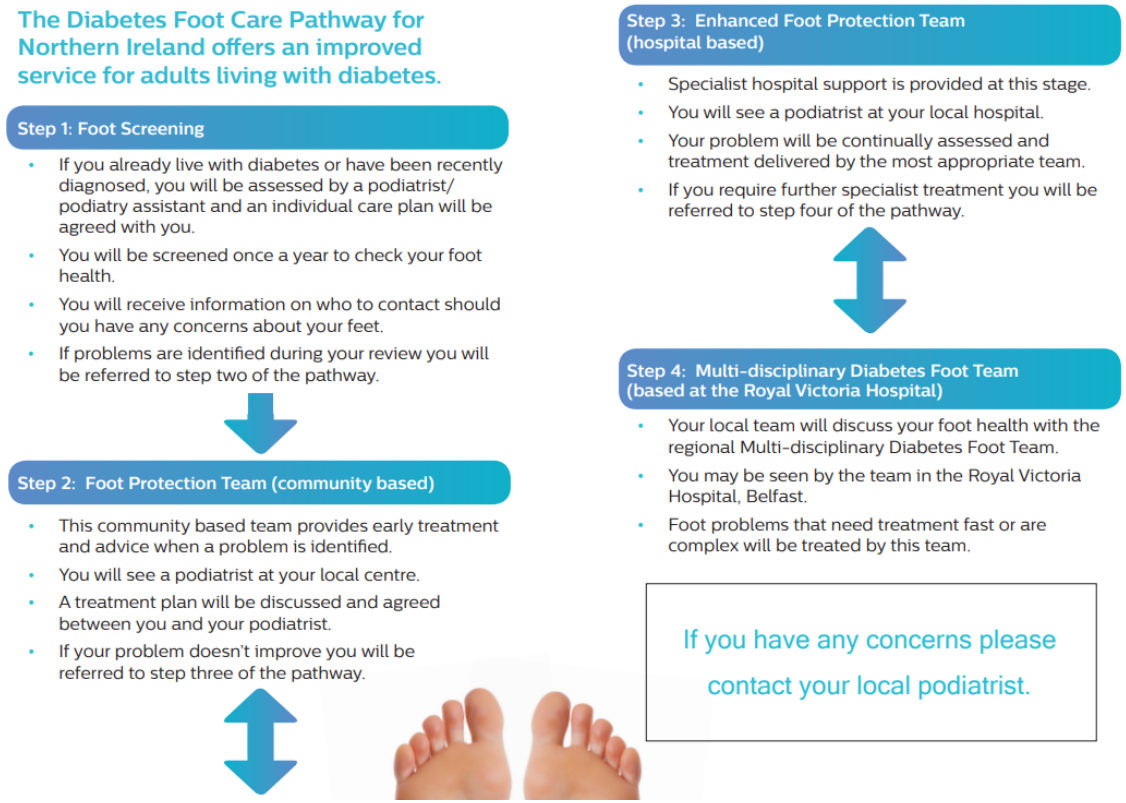
More than half of people with a major amputation will be dead in 5 years . 5 year mortality for Charcot (29%), DFU (30.5%), minor (46.2%) and major amputations (56.6%) (Armstrong 2020)

Foot complications in diabetes

- In the United Kingdom, people with diabetes account for more than 40% of hospitalisations for major amputations and 73% of emergency room admissions for minor amputations.

- We need to ensure that people access or are referred for treatment in and the right time, at the right place, and with the appropriate healthcare professional

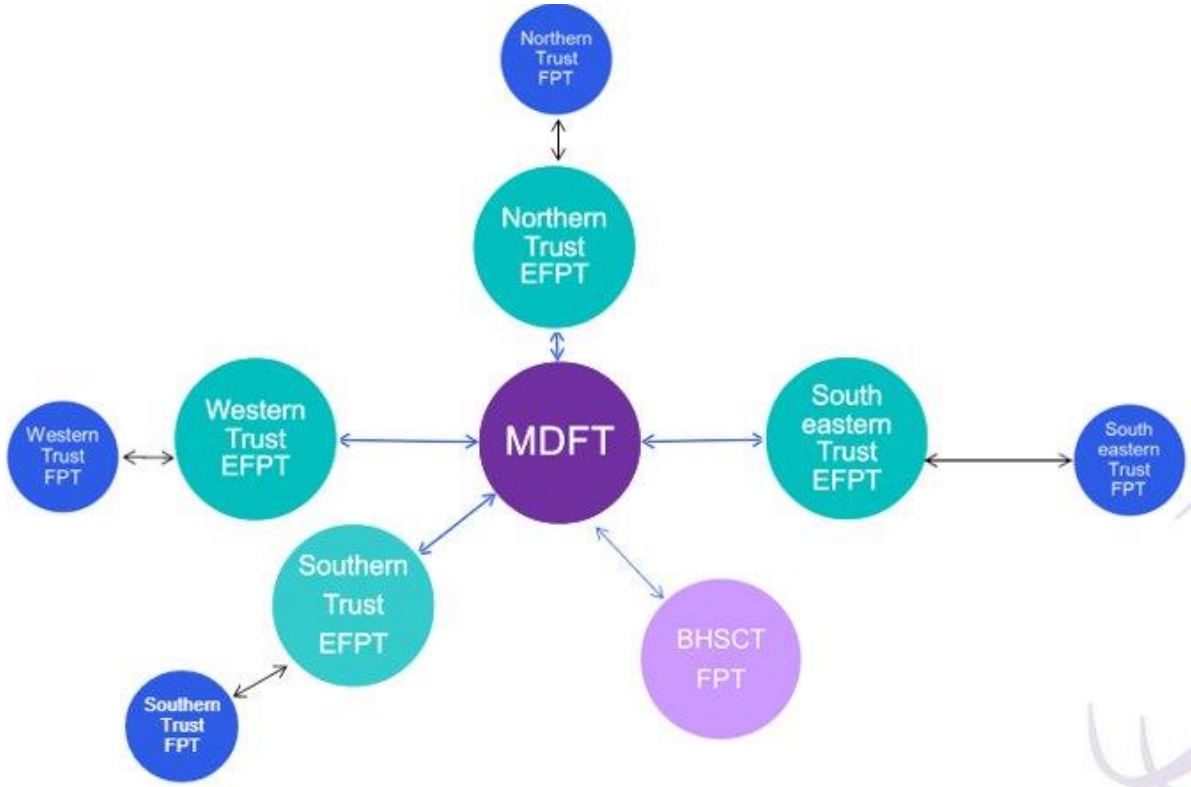
Northern Ireland Diabetes Foot Care Pathway



The Diabetes Network as an action from the Diabetes Strategic Framework for Northern Ireland launched a new Foot Care Pathway to improve services for adults living with diabetes in November 2019.

- The new Diabetes Foot Care Pathway enables all adults with diabetes to access the same services no matter where they live in Northern Ireland.
- The pathway encompasses routine screening, early treatment and care, specialist hospital support, and care when a person needs it from the Multi-Disciplinary Diabetes Foot Team based in the Royal Victoria Hospital in the Belfast HSC Trust.
- Diabetes Foot Care Pathway - HSCB (hscni.net)

Structure of pathway



Belfast foot protection team statistics

There are > 22,000 people within Belfast living with diabetes

BHSCT podiatry team have a total of 9158 patients with diabetes on their case load

All patients with diabetes need to be assessed by a podiatrist in line with the Northern Ireland regional diabetes foot pathway

Of those patients with diabetes who had been referred - 24.25% of this population did not engage.

Community foot protection role

- Annual screenings for everyone with diabetes
- Offload at risk areas of the foot
- Education
- Onward referrals e.g.) footwear, vascular
- Podiatry treatment for high-risk patients
- Management of active risk patients

FPT Role- Active risk

- Medical history
- Medications
- Hba1c
- Aetiology
- Neurological assessment
- Vascular assessment

- Deformity
- Footwear
- Wound assessment
- SINBAD

- Debridement
- Dressing choice
- Managing infection
- Patient's mobility
- Offloading

- Huddle/team work
- Patient's views and engagement
- Onward referral - MDFT
- GP communication

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Infection

Usually starts as simple skin lesion

May spread rapidly leading to major limb loss despite adequate blood supply

Multidisciplinary Diabetic Foot Team (MDFT) Referral Pathway

Referral information would generally include

Medical

- WCC, CRP and assessment of renal function and glucose status
- Foot x-ray (weight bearing AP, oblique and lateral views)
- If infection suspected initiate appropriate antibiotics as per Trust Antimicrobial guidelines for diabetic foot infection

Podiatric:

- Complete foot neuro-vascular assessment recording the presence or absence of foot pulses and ABPI (CTA may be requested by MDFT)
- Record ulceration and SINBAD score
- Photograph of wound

Condition	Referral Route		Review by MDFT
Diabetic Foot Emergencies Abscess Gas in Tissues Wet Gangrene Rapidly deteriorating Critical Limb Ischaemia Systemic Sepsis secondary to Foot Infection	→	**BHSCT** Emergency Department Foot Protection Team (FPT) **Other Trusts** Enhanced Foot ProtectionTeam (EFPT)	Refer within 12 hours →	Urgent transfer to Multidisciplinary Diabetic Foot Team (OP or IP)
Osteomyelitis or exposed tendon/joint Ulcer with ischaemia Suspected Charcot (Hot, red swollen foot without ulceration) Reulceration with Deformity Consolidated Charcot Stable Dry Gangrene Non healing Ulcer >12 weeks duration	→	**BHSCT** GP Emergency Department Foot Protection Team (FPT) **Other Trusts** Enhanced Foot Protection Team (EFPT)	Refer within 2 working days →	Within 15 working days

How to Refer

Diabetic Foot Emergencies Mon-Fri 8.30-4 contact MDFT (tel) Out of hours contact vascular SpR on call (tel)

All other Diabetic Foot referrals Insert agreed referral mechanism e.g. CCG

NOTE

Patients who have diabetes and symptoms of peripheral arterial disease and do **not** have tissue loss should be referred to the Regional Vascular Service

Who to refer to podiatry?

Every patient with diabetes

In particular -

- ACTIVE foot ulceration- will be reviewed within 48hours
- Ingrown infected nail- will be reviewed within 48hours
- Red hot swollen foot- will be reviewed within 48hours
- Those identified as high risk of foot ulceration – refer urgently

Remember; podiatry do not provide personal foot care such as nail cutting and hard skin removal .

Routine treatment is provided when a person is at a high risk of foot ulceration when required

How to refer to podiatry

- North and West Belfast referrals: 028 9615 8100
- South and East Belfast referrals: 028 9056 5565

Referral lines are open:

- Monday to Thursday from 8.30am to 5pm
- Friday from 8.30am to 4.30pm

Electronic referrals can be made via GP

Diabetes screening

- Every person with diabetes should have a diabetes foot assessment by a podiatrist
- However, 25% of referrals into BHSCT podiatry team do not engage
- Diabetes screening can be carried out by any health care professional or health worker involved in the care of a patient with diabetes, if they have the competence and training to do so.
- Quickly identify issues with protective sensation/ circulation

Community Podiatry Communication

- GP electronic data transfer from Jan/Feb 2023
- NIECR Diabetes report will be found under assessment tab
- If someone deemed High risk, diabetes foot screening is not required as their risk will not change

Diabetes foot screening

Observations

- Foot pathologies e.g.) callus /ulceration/ foot deformity
- History of foot ulceration or amputation
- Vascular assessment
- Neurological assessment

Vascular assessment

Pulse palpation

Doppler – if available

Signs and symptoms

- Colour
- Temperature
- Hair growth
- Skin
- Intermittent claudication - Edinburgh questionnaire

Claudication Questionnaire

Is the pain identified in the calf, thigh or buttocks	☐ YES	☐ NO
If yes proceed to Claudication Questionnaire		

Criteria (Asterisk indicates requirements for diagnosis of PVD)

Leg pain with walking*	☐ YES	☐ NO
Pain has onset while standing or sitting*	☐ YES	☐ NO
Pain occurs while walking fast or uphill*	☐ YES	☐ NO
Pain resolves within 10 minutes or less of standing still*	☐ YES	☐ NO
Evidence of claudication	☐ YES	☐ NO
Rest pain longer than 2 weeks	☐ YES	☐ NO
Evidence tissue loss	☐ YES	☐ NO

Vascular assessment

Palpation of dorsalis pedis

Located lateral to the extensor hallucis longus tendon

Vascular assessment

Palpation of posterior tibial pulse

Located above and behind the medial malleolus

Vascular assessment

If either pulse can be felt then it is unlikely that there is significant ischaemia

Check both feet

Listen to Doppler sounds

- Triphasic – Indicates healthy artery
- Biphasic – Indicates healthy artery in the absence of clinical signs and symptoms
- Monophasic – Indicates diseased Artery

Neurological assessment

Clinical Symptoms (can include - 1 or more of the below):

- Numbness
- Pins and needles
- Tightness
- Shooting pains
- Sensation of walking on cotton wool/ pebbles
- Burning

Symptoms alone are not a risk factor although if they are an issue refer to GP for pain management

Neurological assessment

- Monofilaments – Pressure/Light touch
- Neuro-tips – Pain/Sharp
- Neurothesiometer –Vibration perception threshold (VPT)

Neurological assessment

10g monofilament test- light touch

- Demonstrate test on patient's forearm first
- Test these 5 sites on each foot: Apex 1st & 3rd Toes + 1,3 &5 MTPJ
- Do not test over callus
- 2 or more fails in either foot = sensory neuropathy

Neurological assessment

10g monofilament test

Neurological assessment

10g monofilament test

- Replace monofilament after 100 uses or if damaged

- Use only approved monofilaments

Bailey's Instruments; or Owen Mumford (Neuropen)

Neurological assessment

Neuro-tip test – sharp touch/pain

- Demonstrate test on patient's forearm first
- Test these 5 sites on each foot: Apex 1st & 3rd Toes + 1,3 & 5 MTPJ
- Do not test over callus
- 2 or more fails in either foot = sensory neuropathy

Risk tool

Low Risk

No Risk Factors

Refer to podiatry for annual diabetes screening

Moderate Risk

One Risk Factor

Refer to podiatry for 6 monthly reviews

High Risk

Two or more Risk Factors

Refer to podiatry for regular review and routine care where needed

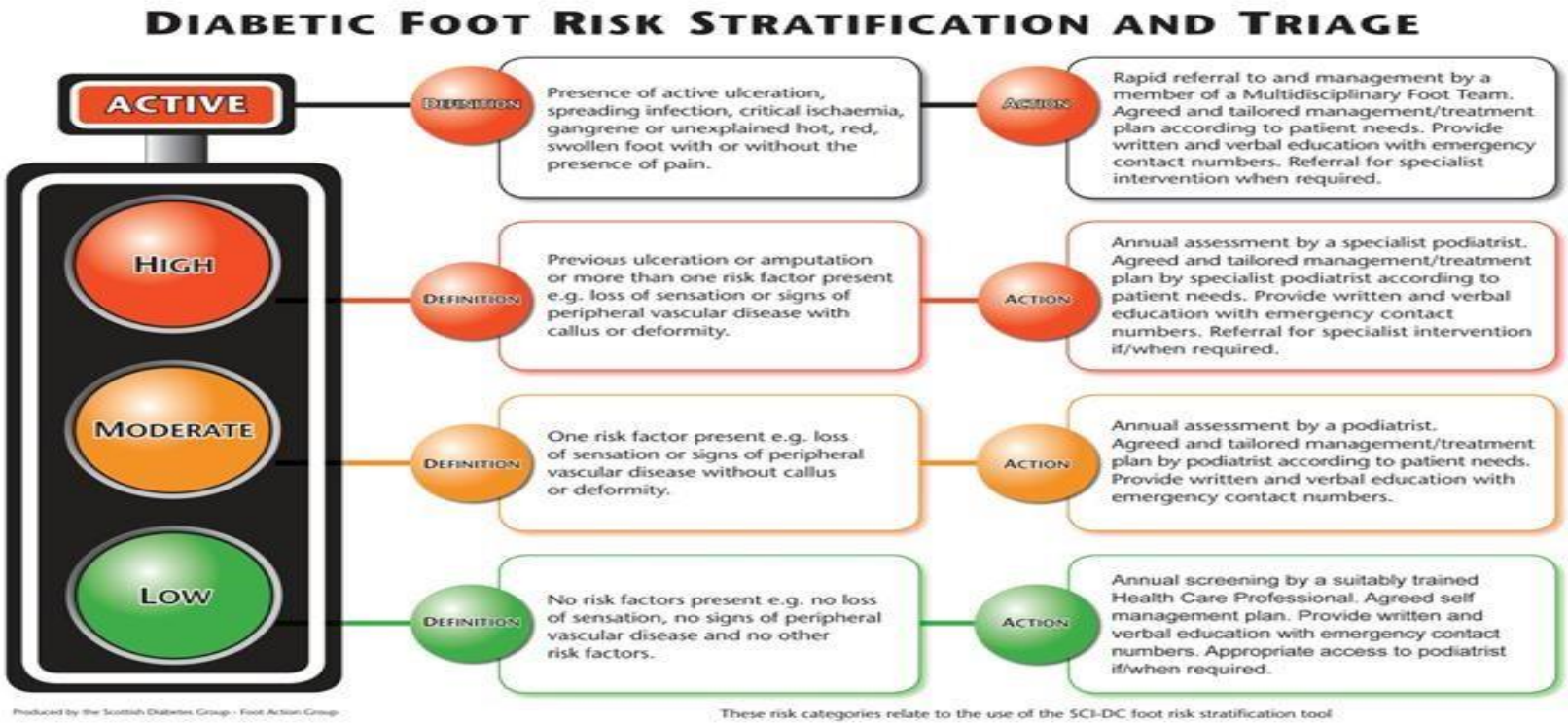
Active Risk

Ulcer, Charcot, Infection, Hot Red Swollen Foot

Urgently refer to podiatry for urgent assessment, active management and onward referral to MDFT by podiatry

Risk allocation and review by FPT

- ***D4.1.3 Diabetic Foot Risk Stratification and Triage "Traffic Lights"***



Resources

Diabetes Foot Care Pathway - HSCB (hscni.net)

Diabetes: Footcare Advice & Support | Belfast Health & Social Care Trust (hscni.net)

Recommendations | Diabetic foot problems: prevention and management | Guidance | NICE

Guidelines - IWGDF Guidelines

Questions?

Now it is your turn

- Small groups
- Complete neurological assessment
- Vascular assessment
- Discuss clinical scenarios

Case study 1

- 74-year-old female patient with Type 2 diabetes attending dialysis attend your clinic.
- When carrying out a foot screening you notice a new wound on her foot
- Pulses not palpable
- Sensation reduced

What do you do?

Case study 2

- 56 year old man with Type 2 diabetes
- When carrying out a foot screening you notice hard skin on the sole of his foot and a high arch foot with clawed toes
- His sensation is reduced
- Pulses palpable
- What risk of ulceration would you assign him?

What do you do?