

Ambulatory management of diabetic foot complications

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Introduction

Diabetic foot infection (DFI) is the most common reason for diabetes-related hospital admissions and is the proximate cause in 60% of lower extremity amputations.¹ With a strong evidence base and respected published guidelines, the foundations are in place for the provision of high-quality care to those presenting at hospital with DFI.

In 2015, our hospital trust opened an ambulatory emergency care (AEC) unit to provide hospital-level urgent medical services without the need for an overnight stay (referred to by NHS England as same day emergency care (SDEC) services). Early identification of patients requiring admission is key and, where this isn't required, providing planned follow-up, 72-hour open access and hospital at home input minimises both admissions and re-admissions.²

Materials and method

To ensure consistent and safe management of patients presenting to the AEC unit with active diabetic foot disease, we developed a scenario-based pathway to aid decision making and improve patient outcomes (Fig 1). In collaboration with our established multi-disciplinary diabetic foot team (MDFT), six key presentations are detailed with clinical questions and prompts to guide care processes in an interactive pathway that can be readily accessed by all staff groups working within the AEC unit (Fig 2).

Results and discussion

The clinical questions posed ensure rapid identification of those requiring admission for emergency interventions, facilitating this under the correct specialism. The accompanying training provided to the medical and nursing teams focused on the clinical decision making required to correctly identify these priority patients.

Where ambulatory management is appropriate, the pathway guides the user on initiation of immediate therapies and investigations with the inclusion of hyperlinks to antimicrobial guidelines. Improved resource usage and rapid access to relevant MDFT specialisms is facilitated by working through the scenarios. The pathway also enables appropriate outpatient follow-up once AEC is no longer required.

Successful management of diabetic foot disease requires a multi-disciplinary approach. The benefits of rapid assessment/

Active Foot Disease

Foot ulcers / Blisters / Infection / Necrosis / Charcot Arthropathy / Other unexplained red hot swollen foot

- Assessment by AAU Doctor
- **Urgent referral to Podiatry** (EPR referral) – Mon-Fri 8am-4pm. If out of these hours seek advice from the **on call Diabetes registrar via switchboard** in addition to podiatry referral
- Observations and Bloods (FBC, U&Es, CRP, LFTs, Clotting, CG4 for Lactate, Blood cultures, HbA1c, Capillary Blood Glucose & Ketones)
- Offload pressure from heels if in bed ([Heel Offloading poster](#))
- Continue to assess skin and monitor for redness or skin changes if in bed (as per Trust Pressure Ulcer Prevention & Management Policy)
- Refer to protocols for the management of hyperglycaemia if indicated

Management dependent on assessment as per next 6 scenarios

Press click box to link to page

1	2	3	4	5	6
Foot Infection with signs of systemic sepsis	Limb Threatening Foot Infection - No signs of sepsis	Non-Limb Threatening Foot Infection - No signs of sepsis	Foot Ulcer with No Infection	Critical Limb Ischaemia	No Foot Ulcer/ Infection, but cause for concern

Fig 1. Scenario selection page.

treatment from relevant specialisms with the introduction of an MDFT and associated care pathways/protocols have been consistently demonstrated.³ Our existing MDFT echoes these findings with overall reductions in major amputations, inpatient admissions and total bed days since its conception.⁴ The cross specialism working and principles developed through

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1. FOOT INFECTION WITH SIGNS OF SYSTEMIC SEPSIS

- Evidence of sepsis where foot felt to be the source of infection

Requires Inpatient Management

- **Start treatment as per sepsis bundle consulting antimicrobial guidelines for 'Severe Diabetic Foot Infection'**

You can discuss with Micro/ID team for antibiotic queries (Bleep 4076 for JR AAU, Bleep 9799 for Horton RAU)

- **Does the patient require urgent foot surgery?**

Deep collection/abscess, non-salvageable foot/digit, gas in tissues, source control

Monday – Friday 8am-4pm – Request time critical podiatry review (telephone advice within 1 hour and physical review within 4 hours) to determine if urgent foot surgery needed

After 4pm, weekends and bank holidays - Request urgent on call vascular team review (contact via switchboard) to support decision making

- **If urgent foot surgery is not required...**

- **Does the patient have palpable foot pulses?**

- **YES** – Podiatry review only
- **NO** – Referral to Vascular Team + Podiatry (**Urgent** vascular review if signs of critical limb ischaemia) SpR ext40421 or via switchboard

- **Could the patient have osteomyelitis?**

- **YES** - request urgent foot xray +/- MRI. If positive, urgent referral to Foot & Ankle Team (Bleep #7404) and liaise with Micro/ID team (#4076)
- **NO** – Urgent podiatry review (will arrange inpatient MDT review as needed)

If not showing signs of improvement within 24hours reassess management

If patient deteriorates urgent reassessment required due to high risk of requiring surgical management

the MDT are now embedded within our new ambulatory care pathway as they are transferable to the emergency care setting. This supports the recommendation by the National Institute for Health and Care Excellence for robust protocols and clear local pathways across all settings, including emergency care.⁵

Conclusion

The introduction of a pathway for the ambulatory management of diabetic foot complications into our AEC unit has allowed us to embed an evidence-based approach to care. Using an interactive scenario-based approach has enabled early identification of those requiring admission for emergency interventions and facilitated doing so under the correct specialism. Where ambulatory management is appropriate, patients receive appropriate immediate therapies and investigations with rapid outpatient follow-up and ultimately better outcomes. The next step will be rolling out an adapted model within our non-ambulatory emergency care units (emergency department and emergency assessment unit). ■

References

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Fig 2. Scenario 1.