Queen Elizabeth Hospital Birmingham
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assure dialysis services

Improved diabetes foot screening and signposting to referral pathways on the haemodialysis unit

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Background

The National Institute for Clinical Excellence (NICE) defines patients with diabetes on haemodialysis at "high risk of foot disease".
Dialysis and chronic kidney disease (CKD) are independent risk factors for the development of diabetic foot ulceration (DFU) and the need for lower extremity amputation. (LEA) [2]
From the early stages of CKD, DFU and LEA risk is doubled, in comparison to those with minimal or no renal impairment.[3]
As CKD progresses to end stage renal failure (ESRF) and the need for dialysis, DFU and LEA risk escalates in line with renal function decline.[3]
On initial commencement of dialysis, risk is heightened further and has been shown within the first year to increase DFU risk by 20%.[4]
Compared to the general diabetes population those with end stage renal disease (ESRD) have a 4.2 fold higher risk of foot complications and a tenfold increased risk of amputation. Survival post-amputation is significantly reduced with a threefold increase in mortality.[5]
Ulcer risk is 5 times higher when compared against end stage renal failure patients not on dialysis. With 40% of patients on dialysis, with diabetes having a past or current ulceration [2]
The Joint British Diabetes Societies (JBDS) guidelines, published in 2016, defined for the first time national standards and markers of good quality diabetes care on the dialysis unit.[6]
JBDS and NICE recommended:

- Regular foot inspections and patient education on basic foot care.
- Ongoing involvement by podiatry of this high risk group.
- Timely referral for active diabetic foot problems to the diabetes foot multidisciplinary team.
- Supported by clear local pathways for cross-service integrated care, to improve foot disease management.

Evidence of how well diabetic foot disease is managed on dialysis units is limited. With shared experiences and data against standards we can re-define quality care, optimise outcomes of diabetic foot disease and demonstrate that care is being improved.

Aims

- To audit current foot care standards, prior to implementation of JBDS recommendations.
- Identify diabetes prevalence in this representative cohort.
- Establish the history of foot disease (active and/or prior) ulceration and lower extremity amputation.
- Review current care against national standards. As a baseline, to demonstrate improved and evidenced based care.

National Standards

- **JBDS recommends: All patients with diabetes on dialysis should have regular review by the podiatry team.**
- **NICE recommends: Continued integrated foot care across all settings.**
- **NICE recommends: Clear information and explanation on basic foot care should be provided at initial diagnosis, then regularly afterwards.**

Local Standard

- **Standard 1 – All diabetes patients on dialysis should have been reviewed by podiatry or a foot care specialist in the past year.**
- **Standard 2 – All diabetes patients on dialysis should receive foot care**
- **Standard 3 – All diabetes patients on dialysis should have received foot care advice since diagnosis.**

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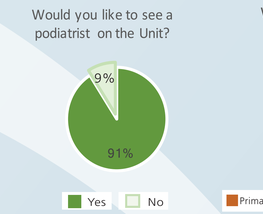
Methods

Setting
- The audit was undertaken in a community haemodialysis unit in the West Midlands.

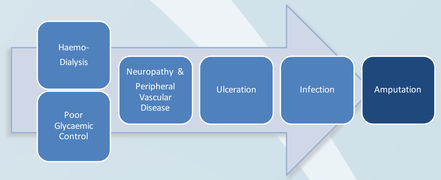
Inclusion Criteria
- All patients with diabetes dialysing at the unit.

Data Collection
- Data was collected via a questionnaire completed by the patient and dialysis nurse
- It included demographics and risk factor profile, foot ulceration history, foot care provision, and foot education recall.

Analysed with IBM SPSS



Risk factors leading to diabetic foot ulceration and or amputation



Conclusions

- **52% of patients on dialysis had diabetes**
- **Over half of these high-risk patients received no regular podiatry review with some receiving no regular foot care**
- **Patient preference was for podiatry to be provided at the dialysis unit**
- **All patients with active foot ulcers were receiving foot care however not all with specific foot protection team involvement (33%)**
- **Less than half of patients recall no provision of foot care advice.**

Recommendations

- **Creation of local dialysis foot guidance including weekly foot inspections and improved pathway signposting.**
- **Increase awareness of local foot referral pathways**
- **Improved podiatry review, ideally on the dialysis unit as captive, frail, multi-morbid population often experience difficulty accessing community podiatry appointments.**
- **Improved staff and patient awareness of basic foot care and risk of development of DFU and LEA.**

What has been done since the audit?

- **Feedback to Teams: Renal MDT meeting, Diabetes Team meeting, Dialysis unit staff.**
- **Launch of Weekly Diabetes Foot Check Guidelines at three dialysis units.**
- **Staff education by podiatrist and diabetes renal clinical nurse specialist, as part of launch.**
- **Improved signposting to existing local pathways though unit posters.**
- **Planned re-audit to review if care has been improved before launch to other dialysis units.**

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