

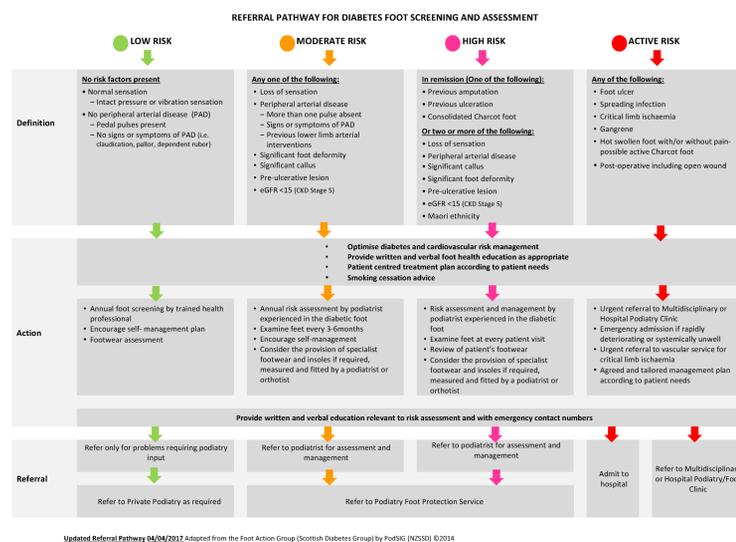
## Background/ Introduction

Diabetes related foot disease is estimated to contribute up to 33% of the costs of treating diabetes complications [1]. For people with diabetes (PWD) the estimated life time incidence of foot ulcers is between 19% and 34%. Well organised, accessible evidence based diabetic foot management has been demonstrated to improve outcomes [2].

The Ministry of Health Quality Standards for Diabetes Care 2014, Standard 11 ; recommends that access to foot care services is basic expectation for people with diabetes. "All PWD should be assessed for the risk of foot ulceration and, if required, receive regular review. Those with active foot problems should be referred to and treated by a multidisciplinary foot care team (MDT) within recommended timeframes"[3].

All PWD should receive an annual foot check to ascertain their level of risk. Foot screening information signposts the appropriate level of care required to manage the diabetic foot. There is a well-developed evidence-based National Diabetes Foot Screening and Risk Stratification Tool (NDFSRST) (Fig 1) that offers comprehensive advice on foot screening and assessing risk status [4]. The NDFSRST has been integrated into the Auckland Regional Health Pathways which are used by all the PHOs in the Auckland Metro Region.

Figure 1



A 2016 review of diabetes related foot care services for Auckland and Waitemata DHBs highlighted gaps in services that could potentially contribute to people experiencing preventable diabetes related ulcers and amputations. Identified key areas for improvement were foot screening, timely access to appropriate foot care services, workforce development, clinical governance and integration of services. The review has led to the implementation of an ambitious 12 month project with 2 work streams that aim to improve the early identification and management of diabetic foot complications.

## Aim

To reduce the rate and number of diabetes related foot ulcers and amputations through early risk identification and management of risk factors. This is being achieved by:

1. Building the capability of primary care to undertake foot screening and risk assessment.
2. Building the capability of community podiatry services to provide appropriate care for people with moderate and high risk of diabetes related foot disease
3. Meeting the podiatry needs of people with healed ulcers enabling them to be monitored and managed appropriately in the community setting .
4. Developing quality standards, a credentialing framework and clinical oversight and support for primary care and community podiatrists.

## Activity

The goal is a quality integrated care model for identification and management of the diabetic foot that ensures equitable outcomes.

### Work stream 1- Clinical leadership

A podiatry professional clinical leader has been engaged to drive aims 1, 2 and 4 and support aim 3. The role involves working with local, regional and national key stakeholders and also provides a point of contact where they can flag concerns.

Activity to date includes:

- ✓ Working closely with the DHB diabetes governance group to identify areas of clinical risk and develop risk management strategies
- ✓ Engaging with community podiatry providers and PHOs
- ✓ Reviewing and developing clear referral pathways
- ✓ Providing support and education for foot screening
- ✓ Developing service indicators and standards
- ✓ Reviewing the learning needs for contracted podiatrists and implementing a CPD programme for metro Auckland in collaboration with the high risk foot services
- ✓ Collaborating with external providers including the orthotic services, universities and professional bodies
- ✓ Supporting the development of Māori health gain initiatives
- ✓ Developing a Northern region governance and clinical advisory group for the diabetic foot

- ✓ Facilitating research and audit projects
- ✓ Auditing referral pathways and processes and initiating quality improvement projects

### Work stream 2- Care for those with in-remission diabetes related foot disease

A new model of care was developed to enhance podiatrist's skills and support timely care. The Diabetes High Risk Foot Service at Auckland and Waitemata DHBs each has an additional FTE to provide care to PWD with in-remission diabetes foot disease. Six podiatrists already working within the community have been employed on a part time basis. The services have been in place for 8 and 3 months respectively.

Advantages demonstrated by the new model of care are;

- ✓ Close mentoring and support from experienced podiatrists
- ✓ Working with a higher caseload of high risk patients
- ✓ Patients care is stepped down rather than discharged from service
- ✓ Other high risk patients are identified particularly those with end stage renal disease
- ✓ New and recurring ulcers are identified with rapid escalation of care
- ✓ Working within an MDT
- ✓ Networking and increased collaboration with other health care providers in the primary and secondary care settings
- ✓ Learning is carried over into patient care in the primary setting

## Next Steps

Future work will focus on providing quality assurance of the Auckland and Waitemata DHBs diabetes related foot care services by improving the measurement of structures, processes and outcomes. This will include developing service level measures, clinical governance mechanisms, a knowledge and skills framework and a credentialing framework.

References  
1. Boulton, A.J.M., et al., *The global burden of diabetic foot disease*. Lancet, 2005. 366(17): p. 19-24.  
2. Parker, C.N., et al., *Differences between national and international guidelines for the management of diabetic foot disease*. 2019. 35(2): p. e3101.  
3. Ministry of Health, *Quality standards for diabetes care*, M.o. Health, Editor. 2014, Ministry of Health: Wellington.  
4. Garrett, M., et al. *Diabetes foot screening and risk stratification tool- 2017 Update*. 2017 [cited 2015 14/02/2019]; Available from: [https://nzssd.org.nz/content/17\\_12\\_2\\_REFERRAL\\_PATHWAY\\_FOR\\_DIA.pdf](https://nzssd.org.nz/content/17_12_2_REFERRAL_PATHWAY_FOR_DIA.pdf).