

# Status of Diabetic Foot Treatment in the Nordic Countries

## ICELAND

3<sup>rd</sup> Nordic Diabetic Foot Symposium

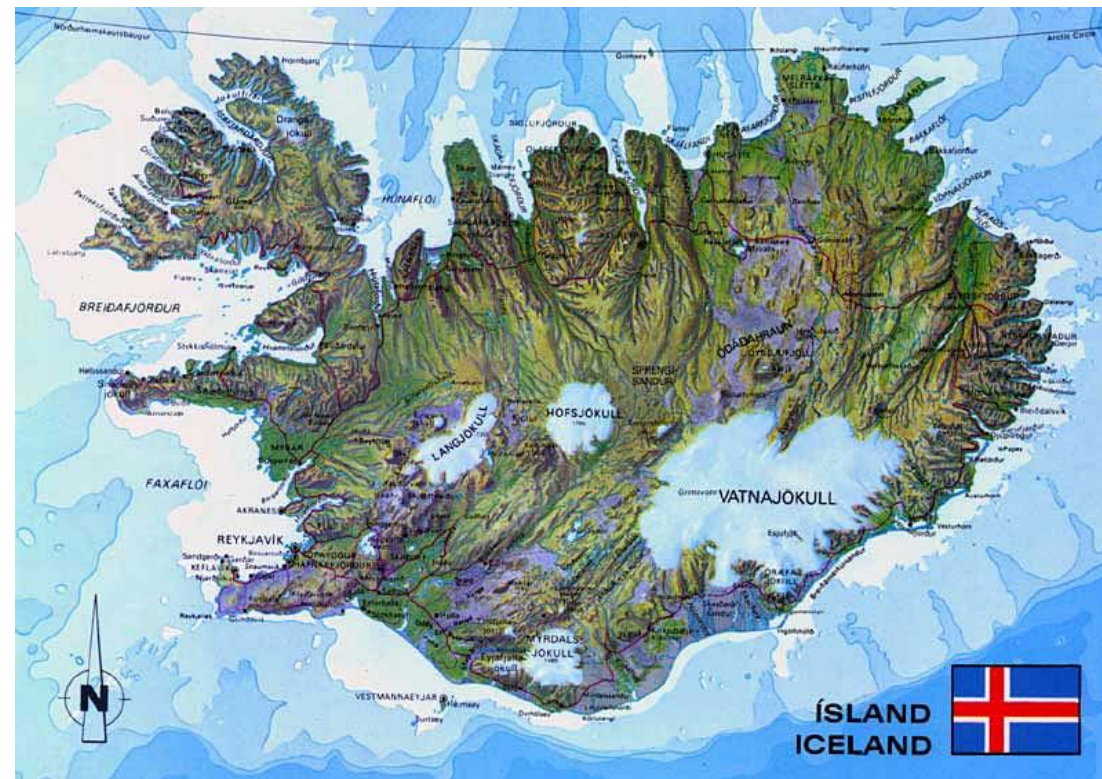
Helsinki - Finland

06.11.2018-07.11.2018

Icelandic Diabetic Foot Working Group

# Introduction

- 103.000 sqKm - 355.620 inhabitants
- 3.45 per sqKm
- **The most sparsely populated country in Europe**
- **Reykjavík**
  - 220.000 inhabitants
  - Landspítali – The National University Hospital
- **Akureyri**
  - 18.000 inhabitants
  - District general hospital
- **6 other smaller general hospitals**



# Current Practice and Service Structure

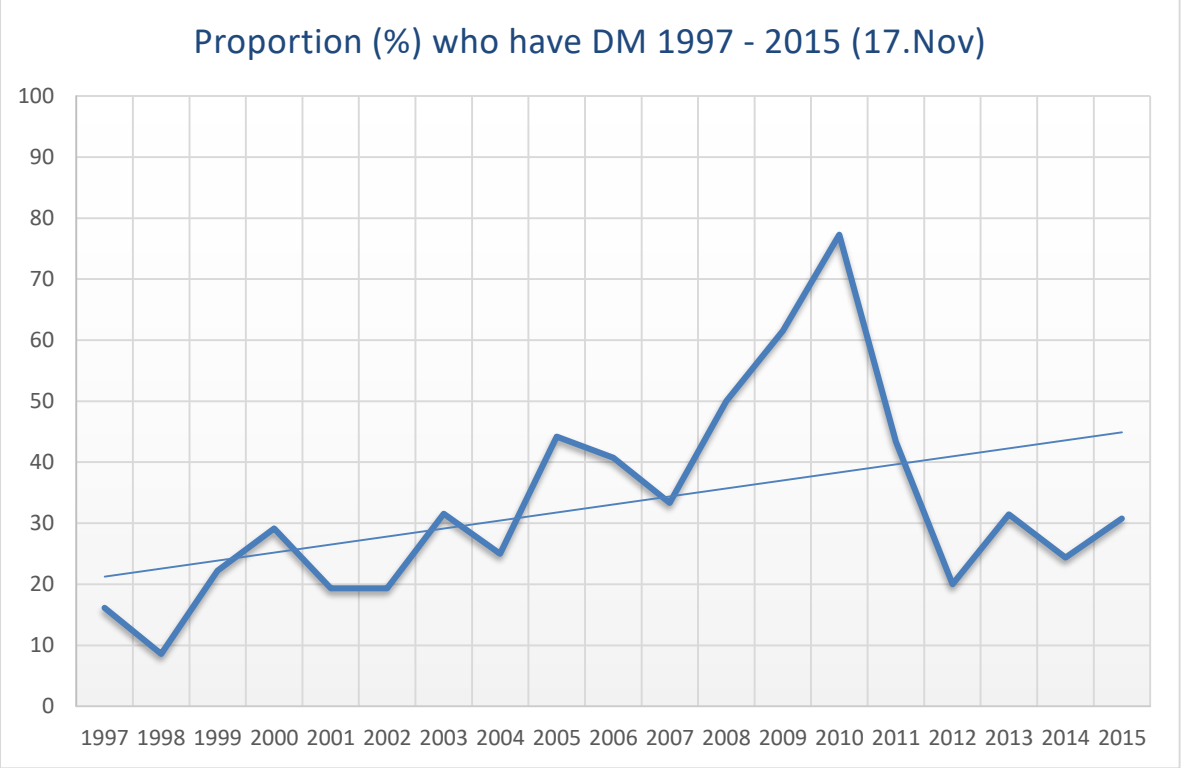
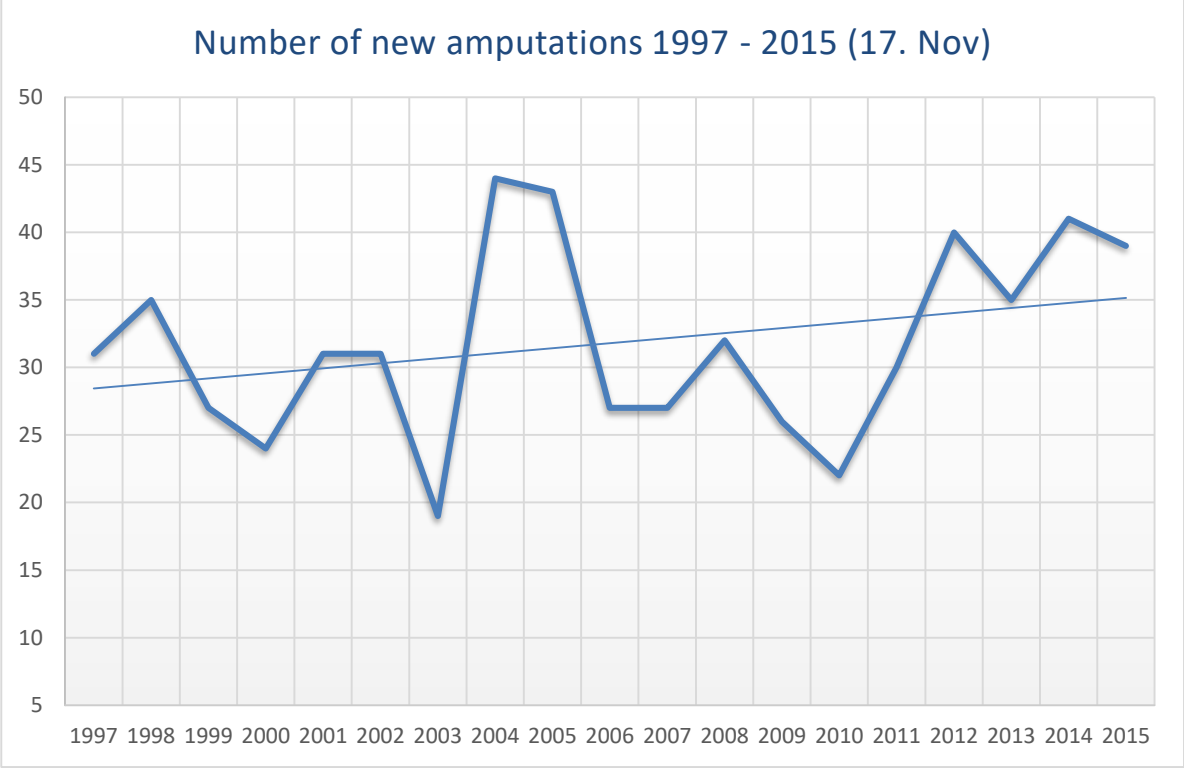
## Epidemiology

- **Limited robust epidemiological data**
- 12.2% of people with Type 2 DM have neuropathy (95% CI: 5.3-25.6)  
(Heimisdóttir Læknablaðið 2008; 94:109-114)
- Around 120 major amputations in the last decade (BKA, AKA)
  - Around 50% had Diabetes Mellitus (?)  
(L. Björnsdóttir, personal communication)
- Amputations: 2000 - 2007
  - 48 related to Diabetes Mellitus (44% of total)  
1,75 / 100.000 / year  
(E. Laxdal & K Logason personal communication)
- Point prevalence of all leg ulcers in May 2008: 0.072%, of those around 10% had Diabetes Mellitus.  
(Pálsdóttir et al. EWMA journal 2010. Vol 10. No:1)

## Current Guidelines

- **Clinical Guidelines for the Management of Type 2 DM**
  - Directorate of Health
  - Chapter on general screening, follow up, and management of symptomatic neuropathy
- **Landspítali – The National University Hospital**
  - Local guidelines on management of pressure ulcers
  - Local guidelines on management of foot ulcers
  - Local frameworks:
    - Wound care department: General referrals, including DM

# Lower Limb Amputations at Landspítali: 1997 - 2015



# Major Amputations 2016-2018

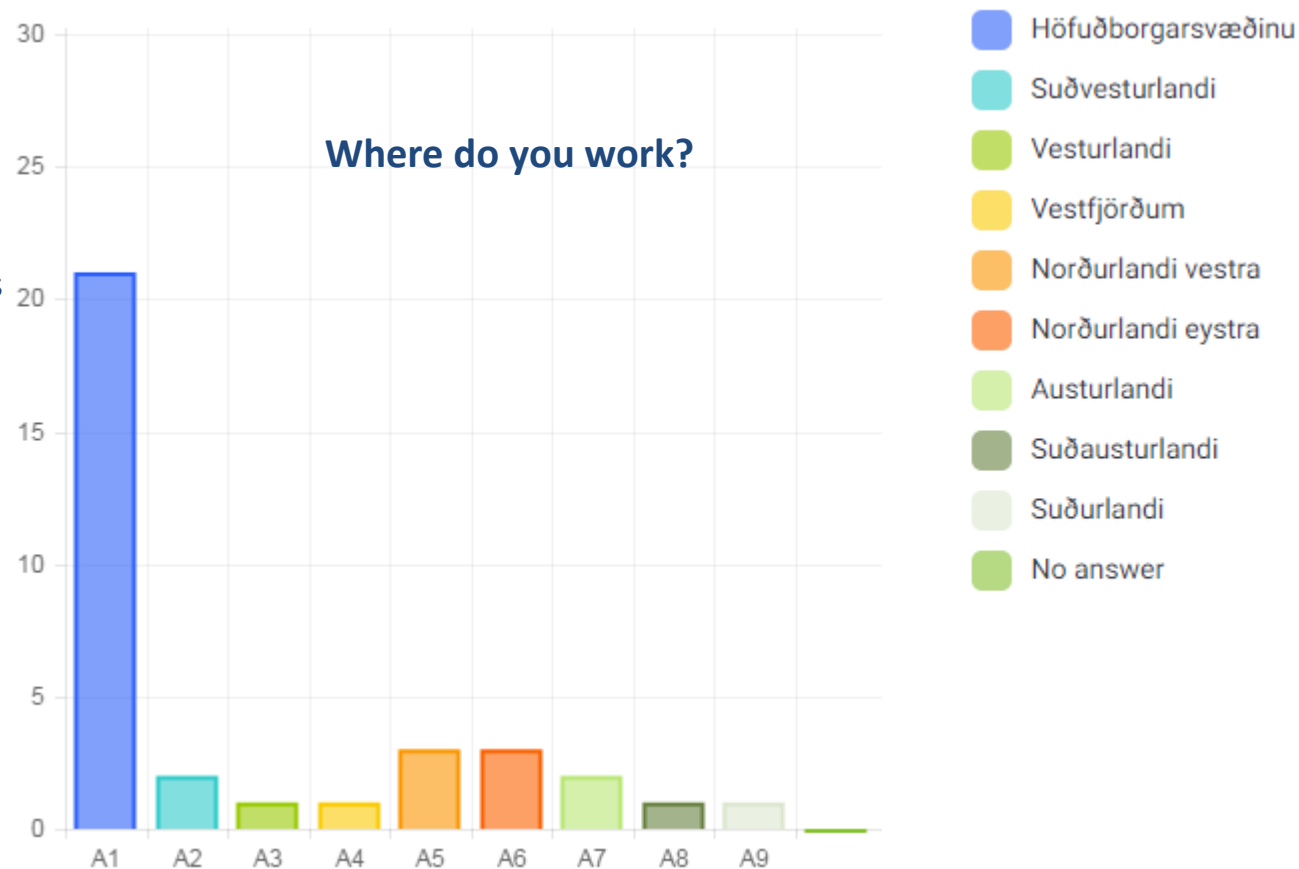
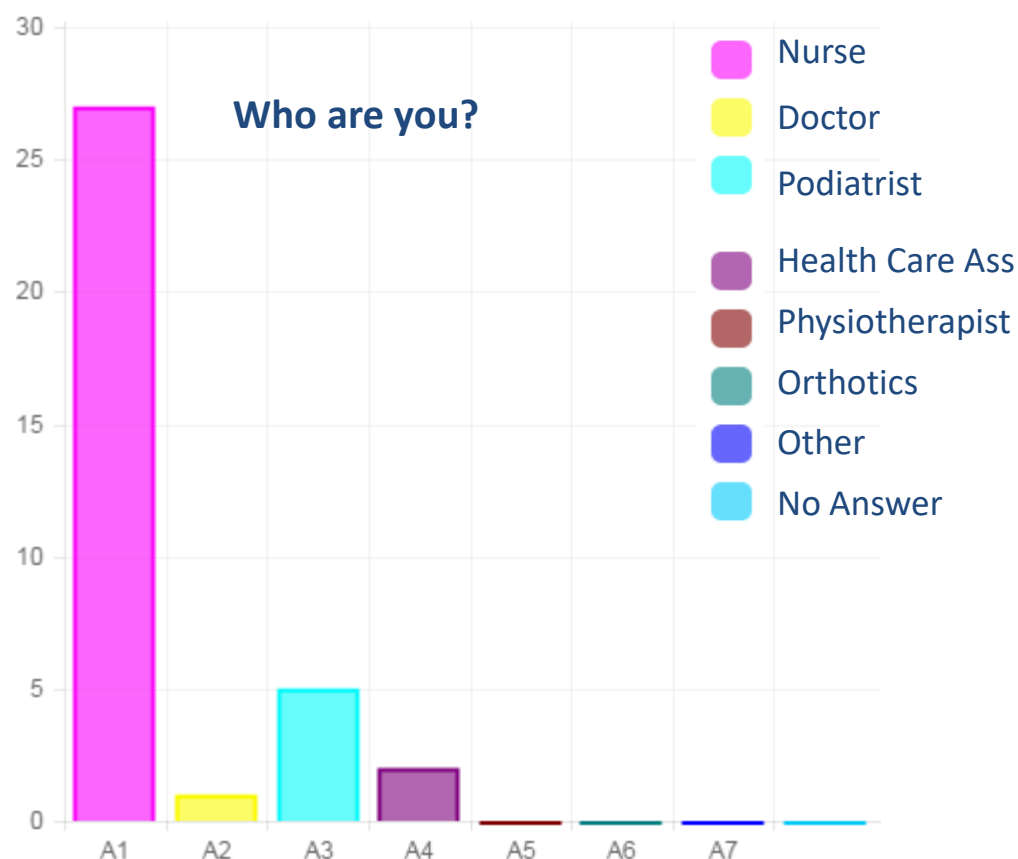
- 2016:
  - **14** major amputations on 12 patients
  - 42% had Diabetes Mellitus
- 2017:
  - **20** major amputations on 17 patients
  - 42% had Diabetes Mellitus
- 2018:
  - **18** major amputations so far
- Probably somewhat fewer amputations....., but a similar proportion of patients with DM

# Previous (Current) Practice and Service Structure

- **Fragmented and decentralised care.....**
  - No national diabetes registry
  - Limited collaboration and coordination between different service providers
    - Landspítali – the National University Hospital
    - Other hospitals
    - Primary care
    - The private sector
      - Endocrinologists
      - General Practitioners
      - Other specialists
      - Podiatrists
- **Variable adherence to different national-and local guidelines**
  - No nationally enforced screening programme
  - Limited information available

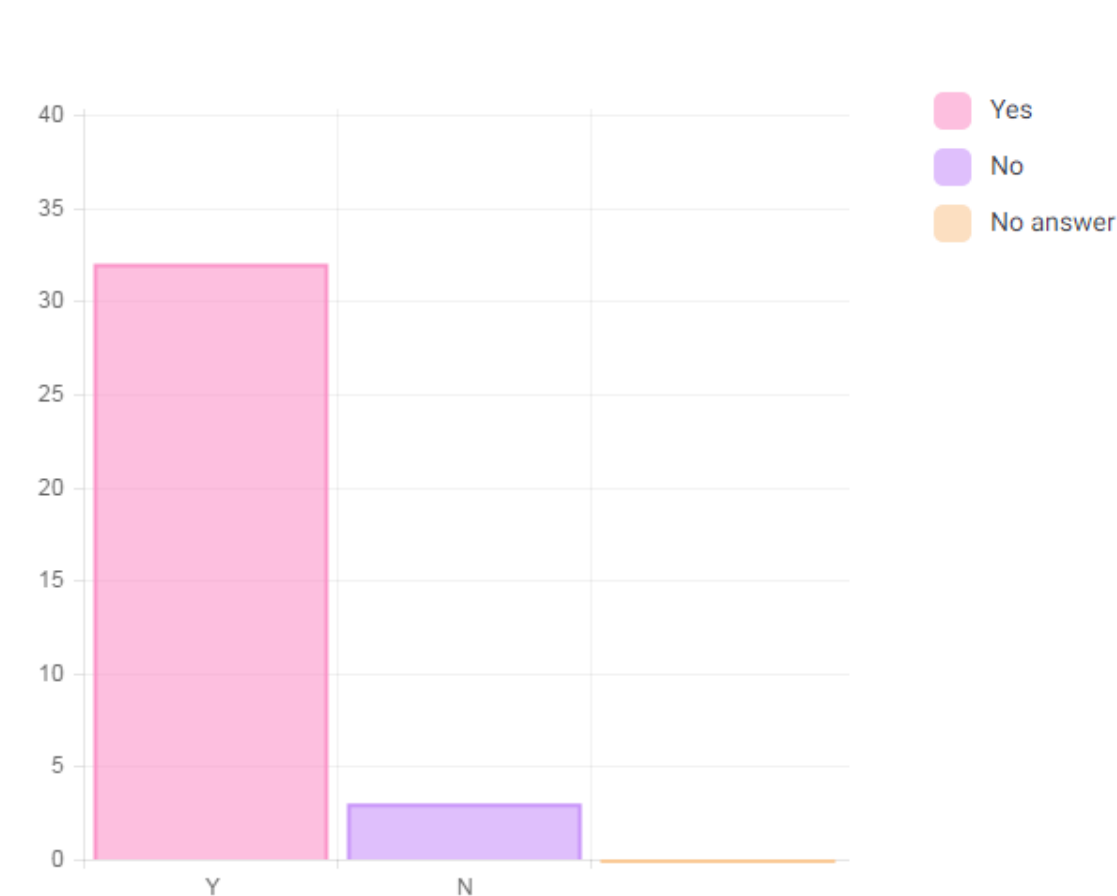
# Survey of Services

- All members of SUMS – the Icelandic Wound Care Association
- Multidisciplinary and nation-wide: 43 responders

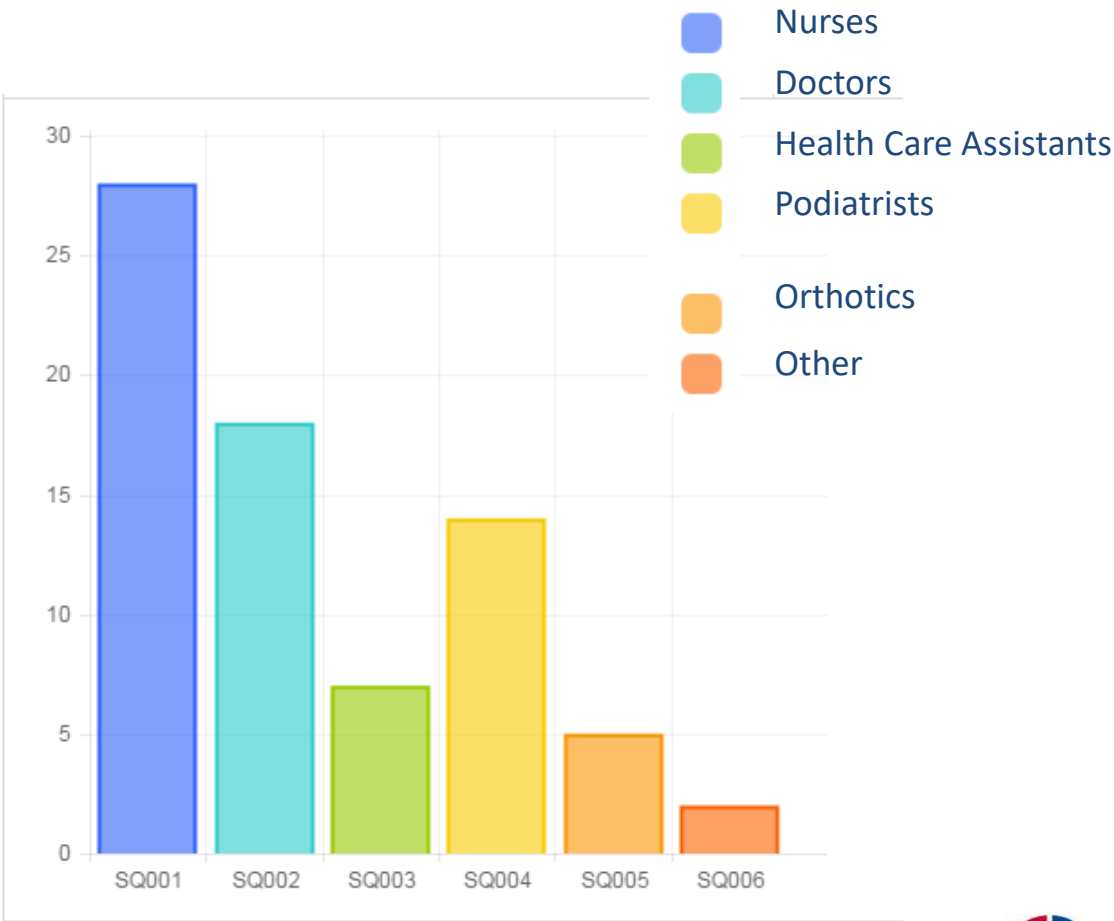


# Survey of Services

Do you treat diabetic feet?



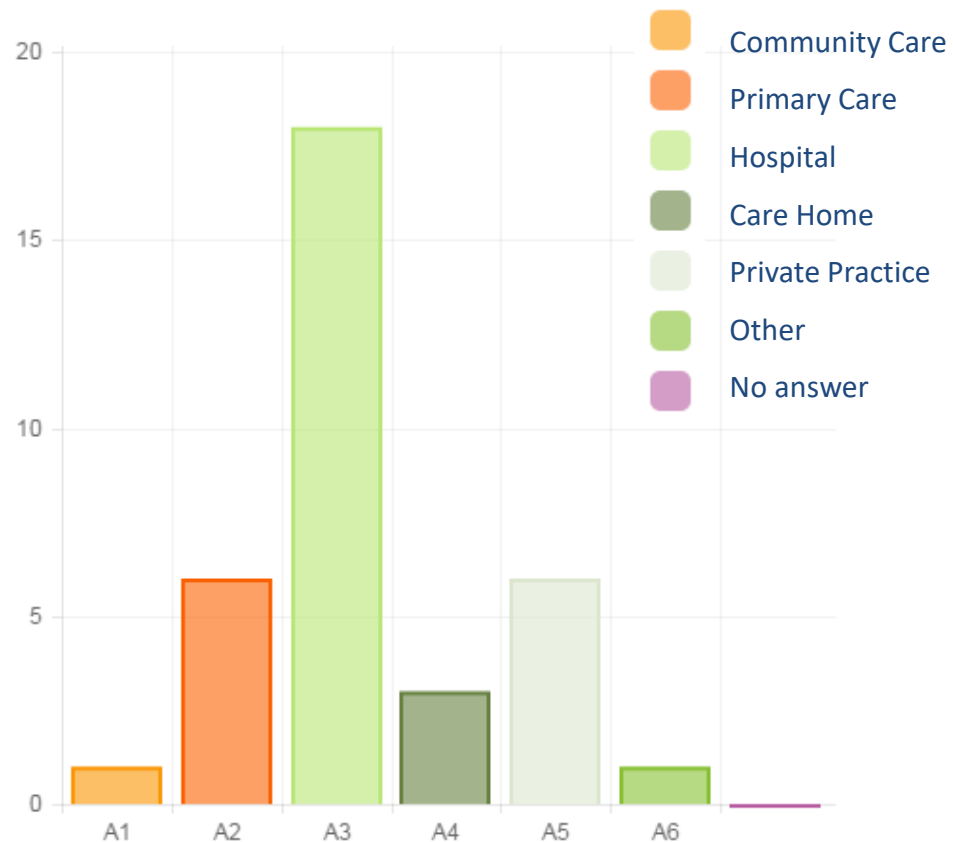
Who treats diabetic feet at your workplace?



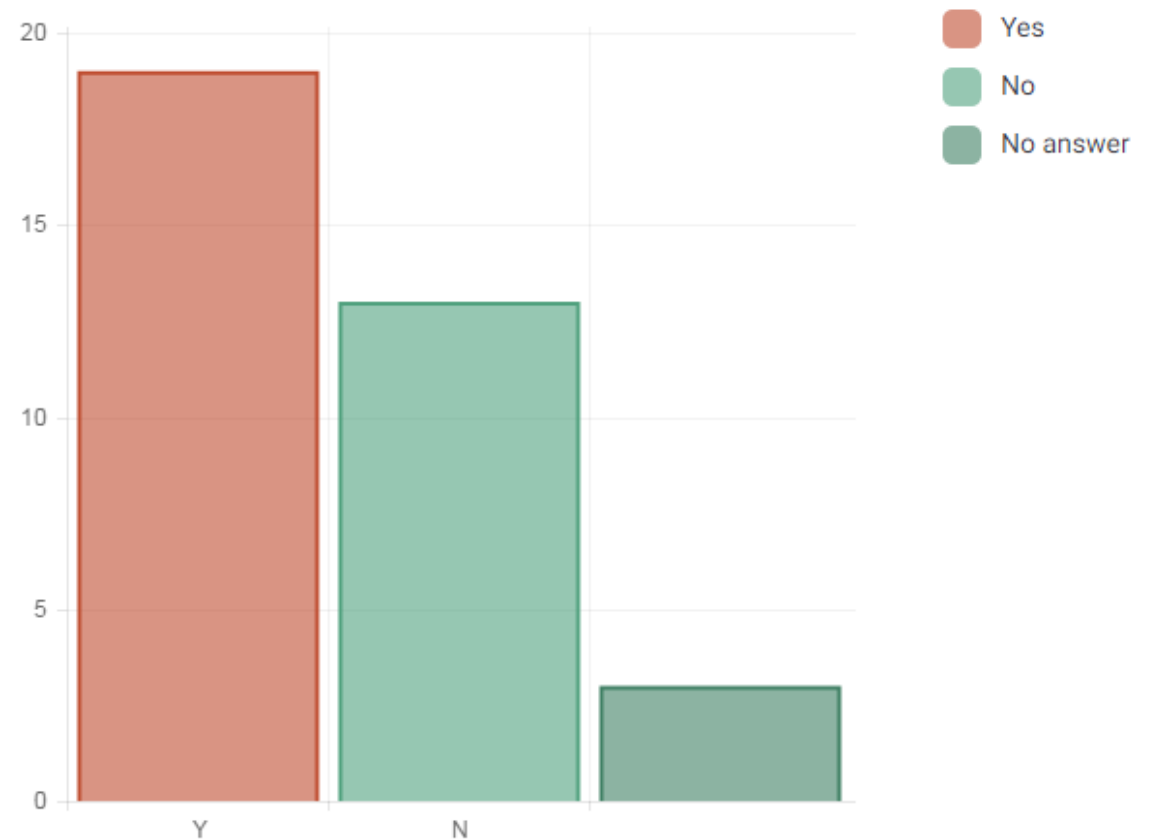


# Survey of Services

## Type of workplace?

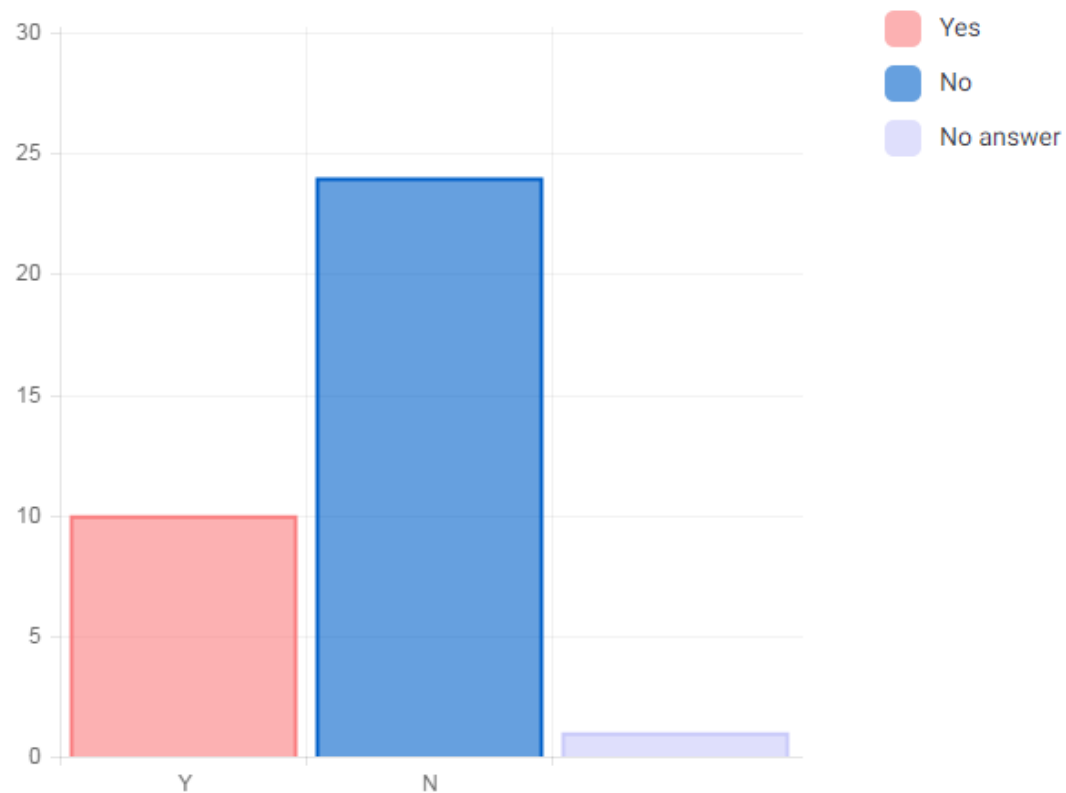


## Do you follow guidelines?

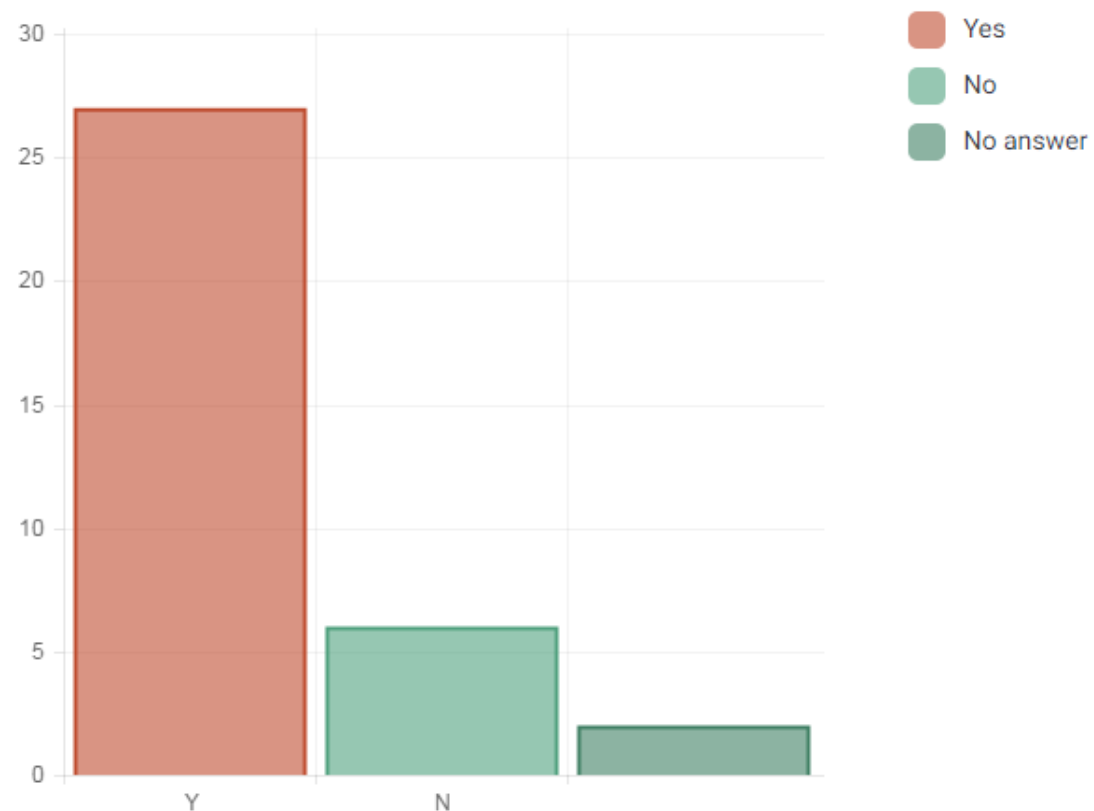


# Survey of Services

## Do you assess risk?



## Prevention?



# Survey of Services

- **Conclusion:**

- Variable care and poorly defined roles

- Different providers, different settings, different – often “googled” guidelines
    - Referral pathways are poorly defined – but access very easy ->inefficient

- Need for education and support

- Providers think they are assessing risk, providing preventive care, and following guidelines...
      - We know some of this does not exist.....

# Service Development

## Screening

- Head of Complication Screening Services appointed
  - All people attending diabetes clinics at Landspítali
  - Formal examination
  - Risk stratification
  - Treatment/Follow up Pathways
  - Patient Education
  - Prevention
- Close collaboration with our Lead Podiatrist and the Multidisciplinary Foot Clinic

## Risk assessment/stratification

- Examination
  - 5-10 minutes
    - Circulation assessed
    - Sensation assessed
      - 10 gr. monofilament
    - Vibration
      - If monofilament is not felt
    - Deformity, ulcers, callus etc..
    - Foot wear assessed
- Risk stratification according to examination

# Risk stratification/Patient Pathways



## Meðferðarferli fyrir fólk með sykursýki

### Árleg skimun - skoðun fóta

- Skynpróf m/ 10 gr. monofilament þræði
- Púlsar þreifðir
- Skór
- Eru aflaganir?
- Er hörð húð?
- Eru verkir?
- Er sárasaga?
- Eru sár sjáanleg nú?

#### STIGUN ÁHÆTTU Á FÓTAMEINUM

##### SKILGREINING

##### Fótasár

Fótasár, sýking, drep eða alvarleg blóðþurrð. Óútskýrður hitastigsmunur milli hægri og vinstri útlíma með eða án verkja, úttaugakvilli með verkjum og Charcot fótur.

##### Mikil áhætta

Sárasaga eða aflimun, fleiri en einn áhættuþáttur þ.e. skyntruflanir, útæðasjúkdómur ásamt harðri húð eða aflögunum.

##### Miðlungs áhætta

Merki um skyntruflun eða útæðasjúkdóm án harðrar húðar eða aflögunar fótur.

##### Lítill áhætta

Engar skyntruflanir, engin merki útæðasjúkdóms eða aðrir áhættuþættir.

##### MEÐFERÐ

Tilvísun á sáramiðstöð í heilsugátt.

Árleg fótaskoðun hjá fóttaðgerðarfræðingi sem metur þörf á þéttara eftirliti. Fyrirmæli um meðferð sem einstaklingurinn framkvæmir sjálfur og samþykkir. Munn- og skrifleg fræðsla ásamt upplýsingum um hvert skal leita ef upp koma neyðartilfelli.

Árleg fótaskoðun hjá sérhæfðum starfsmanni eða fóttaðgerðarfræðingi sem metur þörf á þéttara eftirliti. Munn- og skriflegar leiðbeiningar ásamt upplýsingum um hvert skal leita ef upp koma neyðartilfelli.

Árleg fótaskoðun hjá sérhæfðum starfsmanni eða fóttaðgerðarfræðingi. Ráðleggingar um umhirðu fóta sem einstaklingurinn framkvæmir sjálfur. Munn- og skrifleg fræðsla ásamt upplýsingum um hvert skal leita ef bráðra breytinga á fótahélsu verður vart.

Áhættumat framkvæmt og niðurstöður kynntar fyrir viðkomandi.

#### RÁÐLEGÐU SJÚKLINGI AÐ:

Athuga fætur daglega

Gefa merkjum skynskerðingar gaum

Athuga aflaganir

Nota ekki salisýlsýru eða raspa

Klippa neglur oft en lítið í einu

Nota skó sem passa

Viðhalda góðri blóðsykurstjórn

Fara í reglubundið eftirlit

Þýtt of staðfært með leyfi The Scottish Diabetes Group - Foot Action Group

## Service Development – Patient Education/Information

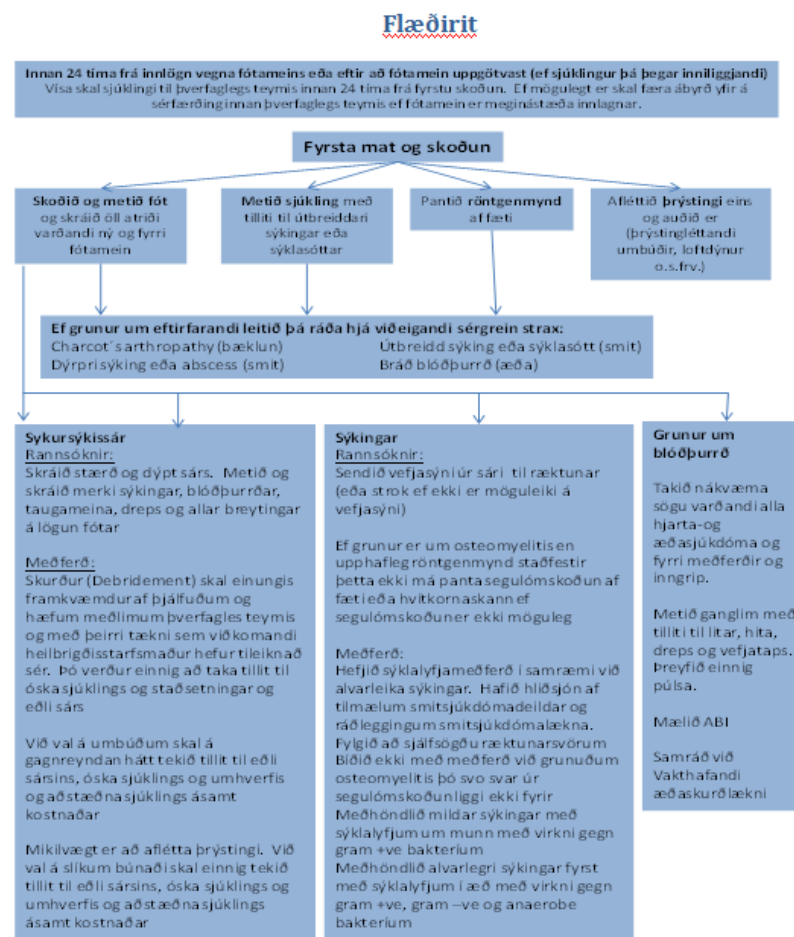


# Service Development

## Multidisciplinary Foot Clinic

- Weekly sessions
- Growing Multidisciplinary Team
  - Wound Care Nurses
  - Podiatrist
  - Screening co-ordinator
  - DSN
  - Vascular Surgeon
  - Endocrinologist
  - Other specialists as needed
- Orthotics stock and facilities – Developmental collaboration with Industry
- Formal link with screening services
- Structured electronic referral system
- Starts with an MDT

## Inpatient Services



# Service Development

## Referral Pathways

- All providers within the National Health Service have access to the electronic referral system
- Part of a new initiative to structure Diabetes Care in Iceland across primary and secondary care
  - Screening, risk assessment, management pathways, and referral systems are being implemented
- ?Private Sector?

## Propaganda

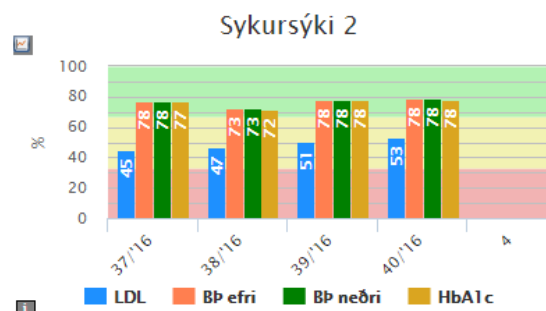
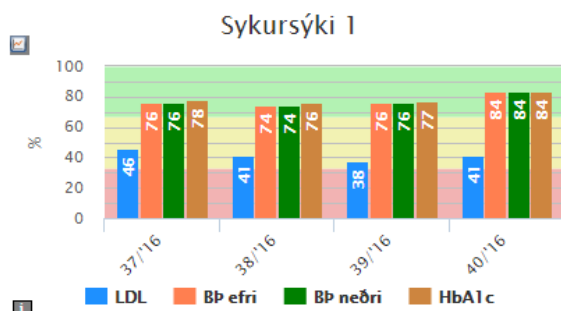
- Primary Care
- Hospitals
- Private Sector
- Patient Association
- National Conferences
- Media



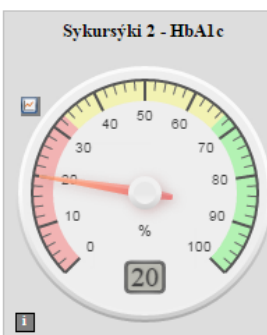
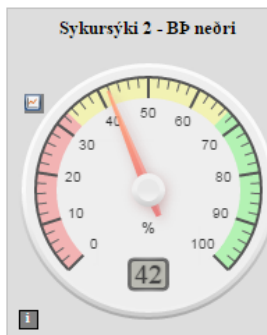
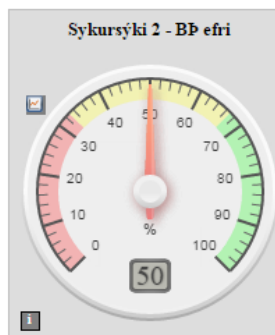
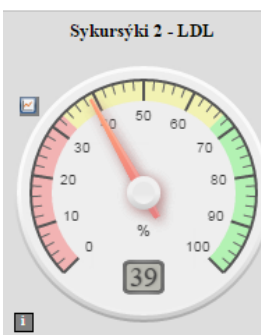
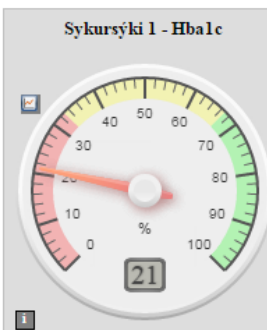
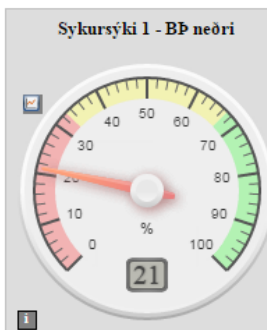
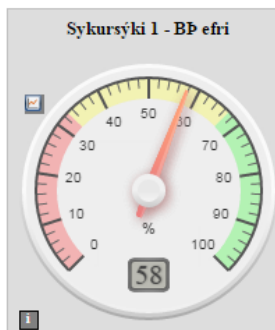
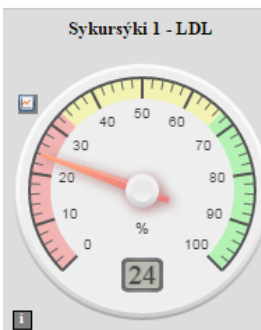
# Monitoring and Quality Control

## Innkirtladeild - árangursmælar

### Hlutfall sjúklinga sem komu sl. 30 daga og eru með skráð markmið



### Hlutfall innan markmiða hjá þeim sem komu sl. 30 daga



### Meðaltöl allra sem mættu sl. 30 daga

#### Meðaltöl nýjustu gilda - Sykursýki 1

	júl	ágú	sep	okt	Meðaltal	Miðgildi
LDL	2,4	2,4	2,2	2,2	2,3	2,3
BP efri	125,0	127,0	128,0	126,0	126,5	126,5
BP neðri	77,0	78,0	78,0	77,0	77,5	77,5
HbA1c %	7,9	8,1	8,2	8,1	8,07	8,1
HbA1c mmól/mól	59,4	62,7	65,8	65,6	63,37	64,15

#### Meðaltöl nýjustu gilda - Sykursýki 2

	júl	ágú	sep	okt	Meðaltal	Miðgildi
LDL	2,3	2,0	2,1	2,1	2,13	2,1
BP efri	133,0	137,0	138,0	137,0	136,25	137
BP neðri	80,0	80,0	83,0	83,0	81,5	81,5
HbA1c %	8,1	7,9	8,0	8,0	8	8
HbA1c mmól/mól	64,6	59,4	61,0	62,7	61,92	61,85

## Augn-,fóta-,þvagskoðun - hlutfall

### Hlutfall sl. 30 d. sem fóru í A-F-Þ rannsókn innan 2ja ára frá komu. --- Þarfnast skoðunar

	ágú	sep	okt	nóv
Sykursýki 1 - Augnskoðun	26	40	44	38
Sykursýki 1 - Fótaskoðun	53	69	66	71
Sykursýki 1 - Þvagskoðun	71	70	65	70
Sykursýki 2 - Augnskoðun	23	38	44	37
Sykursýki 2 - Fótaskoðun	49	70	65	70
Sykursýki 2 - Þvagskoðun	66	69	63	67

Thank you!