

# Multidisciplinary diabetic foot project - Samoa



The World Health Organization and the International Diabetes Federation have stated that up to 85 percent of diabetic lower extremity amputations are preventable

But every 20 seconds a lower limb is amputated due to complication of diabetes



# Meet the Otago diabetic foot team

- Rebecca Aburn – Vascular nurse
- Emil Schmidt – Wound care nurse
- Jacqui Jouneaux – Podiatrist
- Brent Fischer – Orthotist
- Jenny Rayns – Diabetic nurse
- Stephanie Farrand - Endocrinologist
- Chris Birks – Orthopaedic Surgeon
- Jo Krysa – Vascular Surgeon

# Diabetic foot clinic – why bother?

- Significant reduction in acute admissions to hospital
- Significant reduction in the number of amputations
  
- **Early referral and multidisciplinary working are the key to saving legs**

# Three great pathologies

- Neuropathy
- Infection
- Ischaemia



# Impact of neuropathy

- Signs and symptoms may be minimal
- Nevertheless pathology proceeds rapidly
- The end stage of tissue death is quickly reached
- “There is a limited window of opportunity”



# Diabetic foot clinic triage

**URGENT  
ACTION**

Active ulceration, spreading infection, critical ischaemia, gangrene or unexplained hot, red, swollen foot with or without the presence of pain.

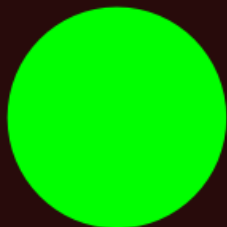
**Immediate referral to diabetic foot clinic** (may require same day assessment as an in patient or review in a diabetic foot clinic within 72 hours).



High risk: Previous ulceration or amputation or more than one risk factor present e.g. loss of sensation or signs of peripheral vascular disease with callus or deformity. **Early referral to diabetic foot clinic.** (Patient education, emergency contact numbers and annual follow up)



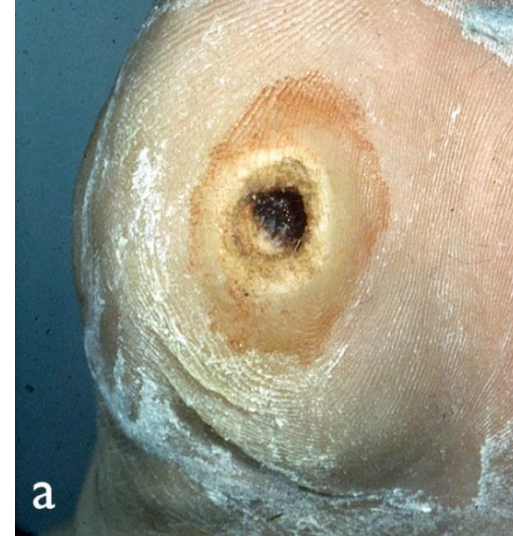
Moderate risk: One risk factor present e.g. Loss of sensation or signs of peripheral vascular disease without callus or deformity. **Assessment by a community podiatrist.** (Patient education, emergency contact numbers and annual follow up)



Low risk: No risk factors present e.g. no loss of sensation, no signs of peripheral vascular disease and no other risk factors. **Assessment by a suitably trained health care professional.** (Patient education and emergency contact numbers)

# Neuropathic foot ulcer

- Debridement
- Clinic
- Operative
- Off-loading
- Total contact cast
- Removable cast walker





Debridement of neuropathic ulcer

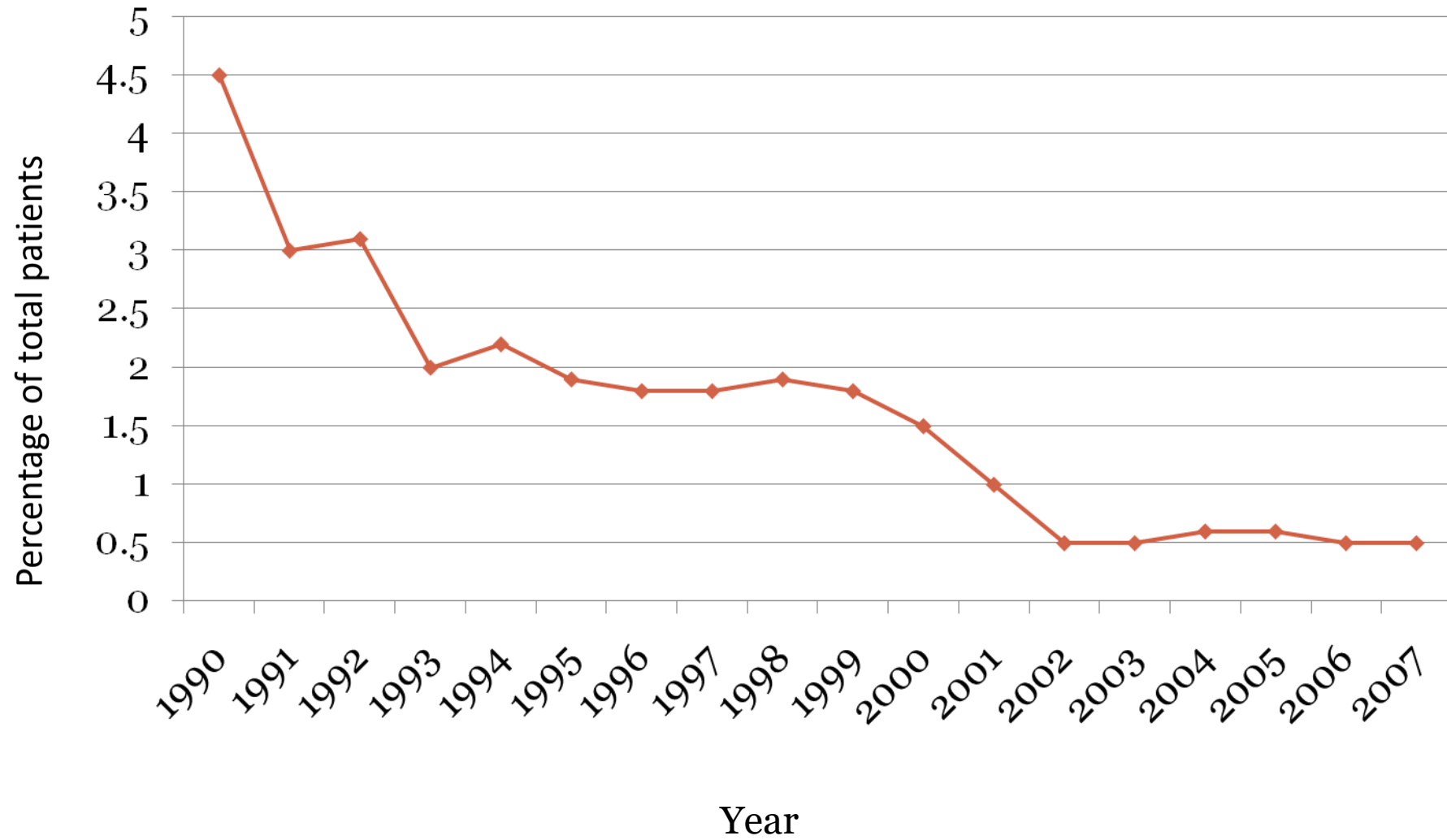


Total contact cast    Aircast





# Major amputations



# Good News

- Up until recently, the diabetic foot has defeated every health care system in the world
- Early referral and interdisciplinary working have lead to improvements in care
- Ulcers are now healed and amputations prevented

# The 10 Foot Commandments

1. I am thy foot forever. Take good care of me, for thou shalt have no foot other than me
2. Thou shalt regularly debride me, when I develop callosities and ulcers
3. Thou shalt fit me with casts and insoles to offload my high pressure areas
4. Thou shalt carefully look for early signs of infection in me and treat it aggressively
5. Thou shalt diagnose ischaemia without delay and revascularise me
6. Thou shalt educate all patients how to examine me and take care of me
7. Thou shalt carefully inspect the shoes that I have to wear and encourage the use of appropriate footwear
8. Thou shalt continuously aim to achieve tighter blood glucose control for me
9. Thou shalt not commit amputation on me, unless there is a compelling reason
10. Thou shalt not covet thy neighbour's amputation rates, but try to improve yours

Papanas, Edmonds et al BMJ 2005 331(7531):1497

# Why Samoa..

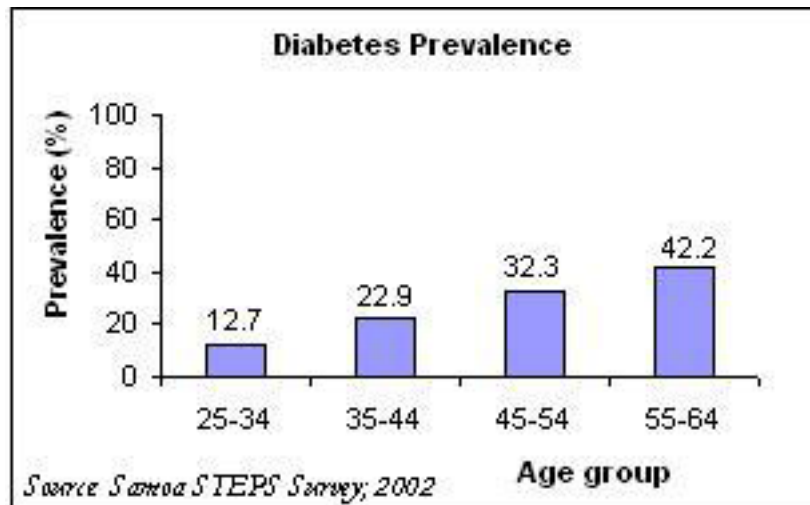
- High prevalence of diabetes (25% and rising)
- 1 in 5 will require major amputation
- A single podiatrist has left

# Modern diet in Samoa

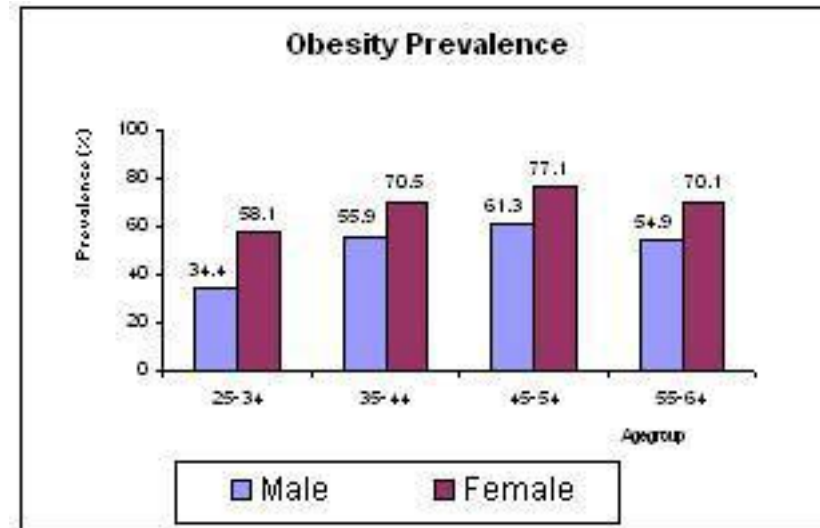
- High in fat and starch such as coconut cream
- Rice Mutton flaps (fatty part of a sheep's belly)
- Turkey tails
- Corned beef
- Corn and potato crisps
- Canned soda pop
- Fast foods
- Imported white rice and flour are replacing local food:
- Taro
- Yams
- Breadfruit
- Sweet potato

# Result of poor diet and reduced exercise

- 25% diabetes



- 60% obesity



20% depression



# Our hope

- To share the benefits of a multidisciplinary approach to a complex problem
- Long term collaboration between clinicians in Samoa and Dunedin to establish sustainable pathways to prevent and manage diabetic foot sepsis
- Get involved in education in schools, nursing school and medical school.
- To provide ongoing support through regular telemedicine links

# Focus

- Nutritional support
- Education (diabetes/ wound care/ multidisciplinary approach)
- Identifying sustainable dressings and offloading methods
- Raising the profile of a diabetic foot

# Challenges

- Ministry take over of the NHS
- Competing priorities for limited resources
- Late presentation
- Poor diabetic control
- Lack of offloading footwear and dressings