Preventing foot complications in diabetes: the St Vincent Declaration 26 years on

The St Vincent Declaration on the treatment of diabetes

In October 1989, a group of patient representatives, governmental representatives and diabetes experts met in St Vincent, Italy, to discuss the growing problem of diabetes across Europe. The meeting, organised under the auspices of the World Health Organization and the International Diabetes Federation, resulted in the St Vincent Declaration. Some fundamental goals and tasks necessary to reduce the individual and societal burden of diabetes were identified and a number of recommendations for member states to adhere to were agreed.

One of the aims was to implement effective measures for the prevention of costly complications and the target set for feet was to reduce the numbers of limb amputations for diabetic gangrene by 50% in a five-year period. Equity of access and strong partnerships in care for people with diabetes were another target. Momentum for major improvements in many countries across Europe in the way diabetes was perceived and treated was created. The British Department of Health and the British Diabetic Association (now Diabetes UK) jointly set up a task force in 1992 and produced some ‘Key Facts’ and some ‘Priority needs’, as set out in Box 1. Most health districts in the UK set up local diabetes service advisory groups to try and achieve these aims. Follow-up meetings in Istanbul in 1999 and in Glasgow in 2009 showed that changes necessary to bring about improvements in care had been introduced all too slowly and the provision of health care for people with diabetes remained far from ideal.

Current situation

Worldwide, diabetes-related complications result in the amputation of a lower limb every 30 seconds. In 2009/10 there were more than 6000 lower limb (leg, foot or toe) amputations in people with diabetes. This is over 120 amputations a week. In Scotland, there are 490 amputations a year. If current trends continue, amputation rates are set to rise to more than 7000 in 2015/16 in England.

There are huge geographical variations in amputation rates – across England there is a 10-fold variation in the incidence of major amputation. While racial and demographic factors account for some of the observed variation, much of it reflects differences in clinical practice, for example differences in the availability and organisation of specialist services (multidisciplinary foot teams) and differences in speed of referral.

About half of lower limb amputations are in people with diabetes. The lifetime risk for any diabetic patient for developing a foot ulcer is up to 15%. More than half of all foot ulcers will become infected, requiring hospitalisation, and 20% of infections result in amputation. The five-year survival for people with diabetes following a new foot ulcer is between 40% and 50%, worse than that for many cancers (Figure 2).

Amputations are costly to the NHS. In England in 2010–11 NHS expenditure on diabetic foot ulceration and amputation was estimated to be between £639m and £662m (0.6–0.7% of the NHS budget). This is approximately £1 in every £150 the NHS spends. The total inpatient expenditure on amputations (based on major amputations, lower amputations and procedures on amputation stumps) was estimated to be between £43.5m and £48.9m. In Scotland, it is estimated that over £60m is spent annually on foot ulcers and amputations.

Foot examination focusing on the presence of peripheral neuropathy, peripheral artery disease and abnormal foot anatomy can predict patients at high risk of developing foot ulcers. However, more than half of people with diabetes surveyed in 2007 said that they did not realise that having the condition put them at more risk of having an amputation. Patients are not getting a good-quality annual foot

Key facts

- Half of all non-traumatic lower limb amputations are a consequence of diabetes. In people with diabetes the risk of amputation is increased 15-fold
- Some risk factors – smoking, high blood pressure, abnormal blood lipids – are reversible. Others, such as diabetic neuropathy and foot deformity, can be detected early and mitigated
- Systematic and regular foot care has been shown to reduce the risk of chronic ulceration and amputation in the lower limb by 50% or more. Diabetic foot/leg disease accounts for the majority of hospital bed usage by people with diabetes with a diabetes-related primary diagnosis. Almost half of all diabetes-related admissions are for lower limb disease

Priority needs

- Regular systematic screening of feet and legs for detection of and correction of reversible risk factors
- Immediate access to qualified foot care for those at high risk
- Systematic patient education in foot care to reduce chronic ulceration and need for surgery
- Establishment of multidisciplinary foot care teams, including podiatrist, shoe fitter, nurse, surgeon (vascular, orthopaedic) and physician to provide care for those with complex needs

Box 1. Key facts and priority needs highlighted by the British Department of Health and the British Diabetic Association task force in 1992
check or are not being informed about their risk status at the end of their check. Some people with active foot disease are not being referred to a team of specialists quickly enough.

The National Diabetes Audit (NDA) 2009–10 reported that, in England and Wales, 32.2% of patients with type 1 diabetes and 14.8% of patients with type 2 diabetes did not receive foot examinations, and the National Diabetes Inpatient Audit (NaDIA) reported that in 2009–10 less than a third had their feet examined at any time during an admission to hospital and 2.2% developed a new foot ulcer while an inpatient. Over a quarter (26.8%) of hospitals have no inpatient podiatry service.

**Progress**

In March 2012, Diabetes UK launched the ‘Putting Feet First’ campaign, which aims to improve foot services for people with diabetes and reduce the rate of lower limb amputations in people with diabetes by 50%, by 2017. The aim is to raise awareness of the importance of good foot care among people with diabetes and all those who are involved in their care, and also raise awareness of the services that should be provided and ensure that these are in place in all localities.

The concept of an Integrated Footcare Pathway was introduced. This describes a stratified model of care based on a person’s risk of contracting diabetes-related foot disease and it has been promoted with clinical commissioning groups and general practices through email and postal letters and with people with diabetes through local foot care networks. Local events to raise awareness, repeated at intervals, are targeting areas with high amputation rates. The aim is to inform people how to maintain good ‘foot health’.

NICE guidance sets out best practice recommendations for prevention and management of foot problems for people with diabetes. This includes: providing an annual foot check to everyone with diabetes and assessing their risk status; having foot protection services for all those at increased risk of diabetic foot disease; and ensuring rapid access to a multidisciplinary foot care team (MDFT) for people who are having a ‘foot attack’. NICE recommends that all patients with diabetes must have a foot assessment within 24 hours of admission and the MDFT must see any patient either showing signs of foot disease or at a high risk of developing a foot lesion while in hospital.
Diabetes UK’s ‘Putting Feet First’ campaign also highlights how important the guidelines are in preventing complications. In 2012, Diabetes UK stated: ‘The scandal of preventable amputations is one we hope to bring to an end with our Putting Feet First campaign. Over the next five years, we want the number of amputations in people with diabetes to reduce by 50%. Raising awareness of the issue will be a big part of this.’

The NaDIA results from 2013 show that, since the audit started in 2010, there has been improvement in foot care. More patients are having foot examinations, the number of hospitals with MDFTs has increased, and there is a significant reduction in people developing foot lesions while in hospital (2.2% [257 patients] in 2010; 1.4% [196 patients] in 2013). However, 28% of hospitals said that they did not have an MDFT, and more than half of inpatients with diabetes did not have a foot assessment (Table 1).\footnote{\textit{Table 1. Percentage of patients with diabetes who had a foot assessment on hospital admission, 2010–2013. (Data derived from the National Diabetes Inpatient Audit [NaDIA] 2013. Health and Social Care Information Centre, 2014).}}\footnote{**Statistically significant difference between the two bold-highlighted text values (p<0.05).}

The 2015 NaDIA results reported that 8.9% of patients with diabetes in England and Wales were admitted with active foot disease compared to 9.3% in 2010; 58% of patients were seen by the MDFT within 24 hours of admission compared to 51.3% in 2010. However, in 2015 only 34% of patients received a foot-risk assessment during their hospital stay compared to 43.7% in 2013, and 28.7% of patients received a foot-risk assessment within 24 hours of admission in 2015 compared to 37.5% in 2013.\footnote{New figures released by Diabetes UK in April 2014 reported that the overall diabetes-related amputation rate had not improved at all, with 2.6 per 1000 people with diabetes per year having a lower limb amputation and even more unacceptably the gap between the worst and best performing areas has got bigger. In July 2015, Diabetes UK reported that new figures have revealed that the number of diabetes-related amputations each week in England had reached an all-time high of 135 (more than 7000 amputations a year), seven more amputations each week.}

Recommendations

We need to improve education and training of all health care professionals looking after people with diabetes to ensure they understand the risk of diabetic foot disease and know how to carry out foot checks properly, and people with diabetes should be empowered to be involved more in their own care.

Hospital teams need to do more to make sure people with diabetes get the foot checks and foot care they need to prevent any problems getting worse.

Standards of care should be monitored nationally, and the impact on amputation rates should be measured.

All staff should participate in audits. The first National Diabetes Foot Care Audit (NDFA), launched in July 2014, will enable all diabetes foot care services to measure their performance against NICE clinical guidelines and peer units, and to monitor adverse outcomes for people with diabetes who develop diabetic foot disease.

Local and national results were published on 31 March 2016.\footnote{The NDFA found that people with diabetes presenting with a foot ulcer are just as likely to have had a NICE recommended routine foot check in the preceding year as other people with diabetes (85% in both groups). Almost 36% of patients self-presented; 40% of patients who did not self-present were not seen by the foot care service until two weeks or more after the first health care contact for their ulcer. More than one in 10 of those patients who did not self-present were not seen for two months or more from the first health care contact. The foot ulcers were more likely to be severe the longer the delay before being seen by the diabetic foot care team. For those patients who had a 12-week ulcer status recorded, 50% were ulcer-free 12 weeks from first expert assessment. Patients who self-presented or who were seen by the specialist foot care service within two weeks of first assessment by another health care professional had higher rates of ulcer healing than those seen later. Patients presenting with more severe ulcers were almost twice as likely not to be ulcer free at 12 weeks after first expert assessment.}

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