Implementing an integrated computerised information system about foot problems in diabetes is not enough to ensure adoption. Commentary on: General practitioners’ and nurses’ experiences of using computerised decision support in screening for diabetic foot disease: implementing Scottish Clinical Information – Diabetes Care in routine clinical practice

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Introduction

The Scottish Care Information – Diabetes Collaboration (SCI-DC) was developed to enhance the multidisciplinary management of patients with diabetes by sharing medical records. Of particular interest is the SCI-DC foot assessment tool, which uses data stored on the SCI-DC database to risk stratify patients’ feet (as per NICE guidance) and thus direct future care. In their qualitative paper in *Informatics in Primary Care* Crawford and colleagues document the attitudes of Scottish general practitioners to this newly established computer-based information system, with particular focus on the SCI-DC foot assessment tool. They found poor use of the SCI-DC foot tool in primary care, with only 40% of patients with diabetes having a foot screen (substantially less than reported by other PCTs in the recent National Diabetes Audit). The main reason cited for poor use of the SCI-DC was its failure to integrate into existing primary care IT systems.

The theory behind an integrated database is sound. Diabetes related foot disease is best managed by multidisciplinary teams between community and secondary care. Although this approach is effective it requires clear and effective lines of communication and pathways of care between the different care groups. The data recording and data recorded needs to be palatable, generic, inclusive and accessible to all involved in the management of these complex patients.
Such integration does not exist elsewhere in the UK. For example, in the London borough of Wandsworth patients have details recorded about their feet on at least three different databases, EMIS (Egton Medical Information Services) or Vision (GP), RIO (community podiatry) and the hospital information system. Additionally, a range of health professionals focus on different aspects of foot pathology. This both compromises patient care and is time wasting for busy clinicians who have to record data numerous times in order to keep their colleagues updated. The result is often poor communication between groups.

**Poor uptake**

Despite the clear potential benefits of an integrated IT system approach, Crawford et al have found poor use of the SCI-DC in primary care. General practitioners participating in the study trusted pre-existing screening systems and referral routes to specialist care and seemed to underplay the prevalence and severity of foot ulceration. The SCI-DC was seen as an additional system requiring data collection, making it a cumbersome and unappealing addition to the management of diabetes. It is worth noting that the study was limited by lack of responses from GPs asked to participate and thus may not reflect global opinions in general practice.

**The importance of good diabetic foot care, even though ulcers are rare**

Given that the annual incidence of a diabetic foot ulcer (DFU) is 4% it is unsurprising that some GPs interviewed had not encountered a DFU in clinical practice. Perhaps this explains the casual attitude some participants displayed to the DFU. Indeed screening for relatively rare conditions can become low priority and thus neglected. However, it is important to reflect that foot disease is a marker of severe systemic disease and an important risk factor for cardiovascular mortality. The mortality rate in patients with DFUs is double that of patients with diabetes without ulceration and 50% of all deaths result from ischaemic heart disease. Twenty five percent of all hospitalisations in patients with diabetes relate to foot ulceration and amputation rates for diabetes related ulcers remain unacceptably high. Thus, foot screening to prevent DFU remains a crucial part of reducing morbidity and mortality in patients with diabetes.

**Current systems have had no impact on the rates of amputation**

Evidence from systematic reviews verifies the predictive power of foot stratification. From 2004 onwards GPs in England have been paid specifically to undertake a foot examination, meaning some 80–90% of patients with diabetes undergo foot screening every year. Despite this, according to national diabetes audit data, there has been no reduction in amputation rates or evidence to suggest that there has been a reduction in ulceration rates since the introduction of mandatory foot screening.

**Incentives focusing on process rather than outcome are perverse**

Whilst financial incentives are an effective way to implement policy they can provide perverse incentives with prompts and reminders focussed on the process rather than the outcome measure. GPs are neither obliged to act upon the findings of a foot screen nor train screeners (usually practice nurses) to perform a correct examination. Data quality issues, around 5% of diagnostic coding in diabetes may be problematic, further compounds problems.

**Summary**

Given the current problems with integrated diabetic foot care it is concerning that adoption of the SCI-DC foot assessment tool in primary care was not perceived as clinically necessary. Perhaps the apathy stems from poor understanding of the weaknesses of the GP foot screen or lack of realisation of the significant morbidity and mortality associated with a DFU. It is plausible, though untested, that application of the Hayes principles might have led to development of a system that met user requirements and overcame the barriers to implementation.
This appears to be a further failed implementation of a new technology in primary care. The SCI-DC foot assessment tool alone does not appear to be welcomed as a tool that will dramatically improve the management of DFU. Additional input or new models of care are needed to improve the management of people with diabetes and foot disease.

REFERENCES


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