

Commentary

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Web-based health applications provide useful and cost-effective tools; however, they should include key clinical variables and incorporate a coding or classification system

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Introduction

The use of a web-based application to monitor diabetes in India is to be welcomed.¹ The St Vincent Declaration set out aspirations for diabetic care in Europe, and has largely been successful.^{2,3} One of the goals of this declaration was that there should be:

... monitoring/control systems using state of the art IT systems for quality assurance of diabetes healthcare provision and for laboratory and technical procedures in diagnosis, treatment and self-management of diabetes.⁴

In addition it was agreed that all computer systems should aim to use the same minimum data set:

All computer systems specified locally and used for diabetes care should conform to the field structure and definitions of the complete minimum data set and should support data transfer via 'quote comma delimited' format and open standards (e.g. ODBC/JCBC) where possible.⁵

The system described in this paper is clearly a step in the right direction; however, I have concerns that some key clinical variables are not included or prominent within the application, and that the fields in the program do not appear to be linked to an established coding or classification system.

Clinical issues

about patients' smoking habits is not contained within the software. It is clear that the Indian subcontinent is not free of these problems, and it is a major risk factor for coronary heart disease.^{6,7}

Glycosylated haemoglobin (HbA1c) is included as a measure of diabetic control in studies published about diabetic control from India, though reported as being a test not readily available in some places.⁸⁻¹¹ Whilst it is listed in the variables list supplied, it is listed in the 'other tests' section – and it is not sufficiently prominent in the application. HbA1c, like smoking, creatinine, renal disease, microalbuminuria and proteinuria, is not mentioned anywhere within the text of the paper.

Although ideal weight is calculated, it might be useful to calculate body mass index (BMI). This would allow comparison of results in this population with others.^{7,12}

Informatics issues

The program could be improved by adopting an already established data set, as this would enable compatibility of the data with those collected elsewhere, maybe linking the fields to a clinical coding or disease classification such as Read, International Classification for Primary Care (ICPC) or International Classification of Disease (ICD).¹³⁻¹⁵ An example of a freely available data set is that used in Scottish primary care.¹⁶

Little is said about how confidentiality and privacy are ensured within this application.

Although there are narrative references to the effectiveness of this application, it is essentially descriptive in nature. Mitchell and Sullivan describe much of the informatics literature as 'descriptive feast but evaluative famine'.¹⁷

Summary

The challenges that face the authors are for them to:

- justify the data items in the dataset used compared with other published data sets, or add items to follow recommended clinical practice

- map the contents of their data set to an established and freely available coding or classification system, so that comparisons of the effectiveness of their program with others can be made
- a before and after or comparative study might provide useful insight into the effectiveness of this application. The authors should consider looking at the control of risk factors before and after the implementation of the application. Alternatively they could measure surrogate markets of diabetic care (e.g. numbers with HBA1c <7) using this system and compare the control achieved with this system compared with others. Ideally moving on to conduct a randomised controlled trial of its effectiveness.
- designing a website that offers more than some currently existing online resources, such as the International Diabetes Federation website.¹⁸

As described, the application is not considered comprehensive enough to help family doctors provide evidence-based care of patients with diabetes, but it provides a good basis for further development.

Caveat: This commentary is written based solely on the paper submitted to *Informatics in Primary Care*, comments of reviewers, plus additional supporting material. The online or other functioning version of this application has not been seen or tested.

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CONFLICTS OF INTEREST

None.

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