Reviewer's report

Title: An Electronic Web-based Diabetes Management Program: From Design To Implementation: Joint Asia Diabetes Evaluation (JADE) Program

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Reviewer: Tim Kenealy

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Review for BMC Medical Informatics and Decision Making

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“An electronic web-based diabetes management program: from design to implementation: Joint Asia Diabetes Evaluation (JADE) program”

1. Is the question posed by the authors well defined?

The article is primarily descriptive. This is not explicitly stated until the end of the Background section. This could be more clearly indicated in the title.

2. Are the methods appropriate and well described?

The ‘Methods’ section, in this case, contains all the description of the system. There is no ‘Results’ section. Perhaps this section could be labeled ‘Describing the system’.

3. Are the data sound?

As a descriptive article no data, in the usual sense, are presented.

I do not have enough knowledge of the IT technicalities (Java, Apached, mySQL and Cocoon) to make any useful comment on these aspects.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

The e-portal cited (www.jade-adf.org) is not publicly accessible, so I cannot further comment on content. The screen shots give a useful idea of some functions although I would be interested to know more detail.

5. Are the discussion and conclusions well balanced and adequately supported by the data?

Each of the components of this work have been produced previously, i.e. risk prediction within an electronic medical record, annual clinical assessment, patient-specific recommendations based on risk prediction and other risk factors collected, trend reports for risk factors and population monitoring functions.1-5
So it is not, therefore, the first to implement a comprehensive care model (as claimed). Various regional computerised diabetes registers have existed from the 1980s or earlier. By 1992-3 the European Association for the Study of Diabetes had an international diabetes data collection and audit system, Diabcare, available of computer or on paper.

This is not to make light of the achievements of the team, merely to place it in a perspective that related developments are going on all around the world, and to request further description of what makes this system different, and / or what has been learned in the design and implementation.

The authors rightly state the importance of protocol-driven care. It is long known that systematic, protocol-driven care, whoever provides it, achieves better outcomes than non-systematic care, whoever provides it.6 Indeed this team have contributed substantively to that literature and reference a paper from their group published in 2006. This was presumably prior to the current JADE program, which is described as a prototype. The 2006 article therefore does not demonstrate that the current JADE process for providing systematic care is superior to any other method of providing systematic care, or even superior to their own previous methods.

The Background states that the system is also designed to improve patient self-management, and this is mentioned several times later but the mechanism is not clear to me. Are they referring to the ability to print patient-specific recommendations? Or perhaps the patient has on-line access to their own information?

I am surprised by the need for written consent to store anonymous data. This suggests that this is primarily a research programme. Or does it mean that this is a prototype for a full electronic medical record?

6. Are limitations of the work clearly stated?

One limitation, not of article but of the project itself is that it is disease-specific. It may be suitable for patients under care of single-disease specialists, such as secondary care in my country, but would not be applicable to multi-disease, longitudinal, family oriented care such as primary care in my country. As a clinical point it is worth noting that the majority of people with diabetes will have one or more additional long term condition. It is unclear whether or how well this system will link its clinical data to the rest of a patient record, given that most of these patients will, sooner or later, have more than one long term condition, and will need to see multiple health care professionals, some of whom will not be part of the JADE network.

Furthermore, the biggest gap in diabetes care may be support for patient self management and adherence, both dependent on structured and well-trained communication patterns within consultations. As noted above, it is not clear to me how this program supports self-management.
I accept that good IT and decision support is fundamentally important, but not sufficient in itself.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?

They acknowledge their own, impressive work. They do not acknowledge, or are unaware of, a large amount of similar and related work going on elsewhere.

8. Do the title and abstract accurately convey what has been found?

The title might more accurately state that the article is descriptive. The current title refers to ‘design’ and ‘implementation’. However, design is described only schematically, and implementation is described even more scantily, if by implementation is meant all the hard work that has obviously be undertaken to make this project happen.

9. Is the writing acceptable?

Yes

Overall comments

Fundamentally, I am not sure that sort of paper this is intended to be.

It is not an implementation paper as I would use the term. I would expect to see more detail about how they ‘rolled out’ the program and what barriers they identified and overcame, and what the costs were.

It is not a design paper. I would expect to see a lot more technical detail, and pros and cons of alternative designs, which of the various users specified which requirements, and what their priorities were.

It is not an epidemiology paper. No risk equations are given (they are valuable output from the same team but are reported elsewhere).

It is not a clinical paper. It is not an audit paper, although the system will enable audit.

It is not an effectiveness paper. Some clinical effectiveness data of a previous system from the same team is reported in a previous paper.

It is not a cost papers, nor a cost-effectiveness paper.

Governance and infrastructure details would be of interest, as would cost data.

More detail on the ‘role based access would be of interest. It is unclear how flexible this is, and in particular it is unclear if patients can see their own data and unclear if patients can assign access to whomever they specify.
I would find it very helpful to have some basic numerical data. It would help the reader to provide numbers and/or names of countries, clinics, patients and numbers of consultations collected.

This may or may not be available in some of the many cited publications from members of the same group. One of the key articles of interest, reference 24, is in press and therefore not accessible at present.

What are future plans for this program?

I sound negative. This is not intended as such. I want to know more about what sounds like a great program from a highly productive team.

Major compulsory revisions: clarify purpose of paper and expand significantly for example, in one of the directions listed above.


Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have not competing interests