Author's response to reviews

Title: Web 2.0 systems supporting childhood chronic disease management: A general architecture compliant with the WHA eHealth resolution

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Author's response to reviews:

Response to reviewers

We would like to thank the reviewers for their relevant views and suggestions. Your comments have certainly improved the paper.

Reviewer: Juha Mykkänen

1. -The reported use of the described pattern language as well as the design patterns themselves are valid contributions. However, the relationship to WHA eHealth resolution is overemphasized and link from the main contributions to this generic resolution should be diminished (e.g. removed from the topic) or better justified (not just "also relevant for pediatric sector").

Authors response: We agree. The WHA eHealth resolution was over-emphasized in the previous version of the manuscript, even though it was used as a framework development of the pattern language. The concept has been removed from the title and study aims.

2. Introduction - "this set of..." - Web 2.0 is not generally considered to include sensors or actuators.

Authors response: We agree. The text has been revised accordingly.

3. Errors in table numbering in text. Specifically, Table 3 reference should include table 4 and current table 4 should refer to table 5 in text.

Authors response: Thank you. We have changed the references to the tables according to the remarks.

4. Typo in Fig.1 "Oranizational"

Authors response: Figure 1 has been updated accordingly.

5. Inconsistencies in table/figure texts, e.g. "community-adjusted" vs.
"community-based", check also use of "family" vs. "parent" empowerment terms
Authors response: We have changed community-adjusted to community-based in Figure 1. In addition, we have changed the reference in Table 2 to “Family empowerment”.

6. Errors in references - "?" included, wrong reference [21]?
7. A more solid reference 19 is needed.
Authors response: We are embarrassed. The correct references 19 and 21 have been added to the manuscript.

8. Table 5 - "The task of individual team members" - unclear sentence. "Disease specific disease teams" -> clinical teams.
Authors response: The sentence has been adjusted. ‘Disease teams’ has been changed to ‘clinical teams’.

9. Table 5 - “will enable users to extend functionality" - unclear - how is this enabled and accomplished?
Authors response: The section has been adjusted. The service quality analysis system is intended to support clinical teams to develop their clinical service provision based on their own resources and organizational conditions.

10. Graphical description of individual design patterns is mentioned in abstract and described to some extent in text - an example of individual graphical description should be included as an image.
Authors response: Thank you, this is an excellent point. The pattern language development process was not clearly described in the previous version of the text. The graphical representation at the lowest level was based on the use of topic-cards and card-sorting techniques. The text has been revised and a reference (Rugg G, McGeorge P: The sorting techniques: a tutorial paper on card sorts, picture sorts and item sorts. Expert Systems 1997, 14: (2):80-93) has been added.

11. The paper would merit from more in-depth discussion of responsibilities in the development of such an system - especially which features require continuous organizational service offerings and which can rely on the user community and how are these balanced along with apomediaries in your approach (e.g. accreditation, content creation, access management, workspace assignments, qualifications management, ethics / legal advisory group, information clearinghouse).
Authors response: Thank you, again, an excellent point. We do fully agree. In fact, we are addressing the responsibilities issue in a separate paper. A paragraph in the discussion has been added.

12. Introduction - the role and relevance of "alliances / co-operation with other diabetes programs" remains unclear.
Authors response: In Sweden, as in most countries, there are many different
organizations active in the diabetes area, ranging from patient support groups to local caregiver networks. These organizations seldom communicate with each other. The (Web 2.0) idea was that the system could mediate contact between individuals (patients, parents, relatives) and organizations sharing a diabetes-related interest or need, even though they are geographically distant from each other.

13 -Limitations of high-level programming languages such as Joomla or requirement to base patient / professional communication on confidential communication (e.g. encryption of email) are not discussed (mention if these are relevant for current or future work or not?).

Authors response: Thank you. This is an important point and an important area for future research. We have added a section to the paragraph discussing the use of high-level languages in the Discussion.

14 -The description of community-based clinical services and their support e.g. EHR system remains vague - although this is not the main contribution, the paper would benefit from more detailed description of four-stage process and the relationship with EHR or appointment scheduling systems (e.g. how is Web 2.0 system interfaced with the EHR, is it separate or special to the teams, another related project etc.?)

Authors response: The text in table 5 has been revised according to the remark.

15 -Should care planning system be discussed also in relation to disease-specific clinical teams (as implied in Fig. 1)?

Authors response: Thank you. Good point. In order to save space, we have used the acyclic directed tree format for the textual representation of the design patterns. However, shared leaves are noted in the graphical format.

Reviewer: Cornelia Ruland

Reviewer's report:

The paper would greatly benefit from describing in more detail the participatory design process. With the strong focus on user participation, who were the patients who participated? What were their roles in the process, how were their needs and requirements elicited? What was the age group? The target group for the system are children and adolescents where there are huge variations between 7 and 16 year olds. How did the group arrive at the specifications in Figure 1?

Authors response: This is a very good point. We have extended the description of the participatory design process in the Methods section. Following the Action Design method, we did not include children and parents in the core participatory design group, due to that we could not trust their availability over time. Therefore, the participation from children in the design process was “outsourced” to subgroups addressing specific task. We have read the reviewer’s recent JBI paper on the topic with great interest, and plan to report our experiences from working with children in design in a separate publication.
Unfortunately I wasn’t able to access the Website with the prototype which would have helped tremendously to make a better conclusion about the “soundness” of the approach and what was potentially missing. However, I understand the research team will do an evaluation of the prototype as the next step. It says however, on page 6 that the system was introduced to patients, parents and caregivers in 2006. Is it actually in use, and how is it used?

Authors response: Again, a good point. The sentence has been changed to indicate that it was introduced and has been online since 2006. The clinical trial has been extended, but if the reviewer contacts our clinical coordinator Dr Sam Nordfeldt (sam.nordfeldt@lio.se), we will send login information to the site.

Page 5 on top it says that intensive treatment reduces long-term complications. It is not necessary the intensity of treatment, rather than its appropriateness and calibration to obtain and stable glucose control.

Authors response: Thank you. We have adjusted the sentence according to the reviewer’s suggestion.