

Stepwise Treatment Concept Proposed for an mHealth Enabled Diabetes Intervention:

Including examples of key concepts for inclusion in the data-sharing interface



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Background

Mobile health (mHealth) tools allow people to more individually set the pace and focus of their disease self-management. However, research studies and clinical practice struggle to adapt their protocols and practices to the rapid development of technology. The developed system for use in our intervention dynamically presents diabetes Type 1 and Type 2 patient-gathered data from mHealth devices during clinical consultations.

Methods

The design and functionalities of the system are based upon workshops and studies involving patients and health professionals (HPs) [1, 2]. Feedback suggests that in order for such a system to provide actionable treatment support, it must display the data based on the individual's knowledge, background and situation, and must also have the possibility to evolve with the individual's capacity to self-manage their own diabetes.

Results and Discussion

Through several workshops and analysis of related mHealth interventions, a common data-sharing platform was conceptualized to best utilize data from the patients' own mHealth devices. Its function combines "stepwise treatment" and "experiential learning" concepts – enabling treatment and self-management to be discussed with or without patient-gathered data (Figure 1). When data is available, the system will be able to display whatever data the patient gathers, thanks to HL7 and FHIR standards, while still presenting information in a way that is understandable and usable by both parties (see Figure 1B for examples of common information that are relevant for both patients and HPs and should be used to form the consultation discussion).

Conclusion

For a complex illness like diabetes, we cannot expect patients to change their lifestyle nor clinicians to change their practice quickly. Therefore, by basing the pace of treatment on patients' own self-management capabilities, it has been suggested by stakeholder feedback that such a system could enable more collaborative and practical diabetes management.

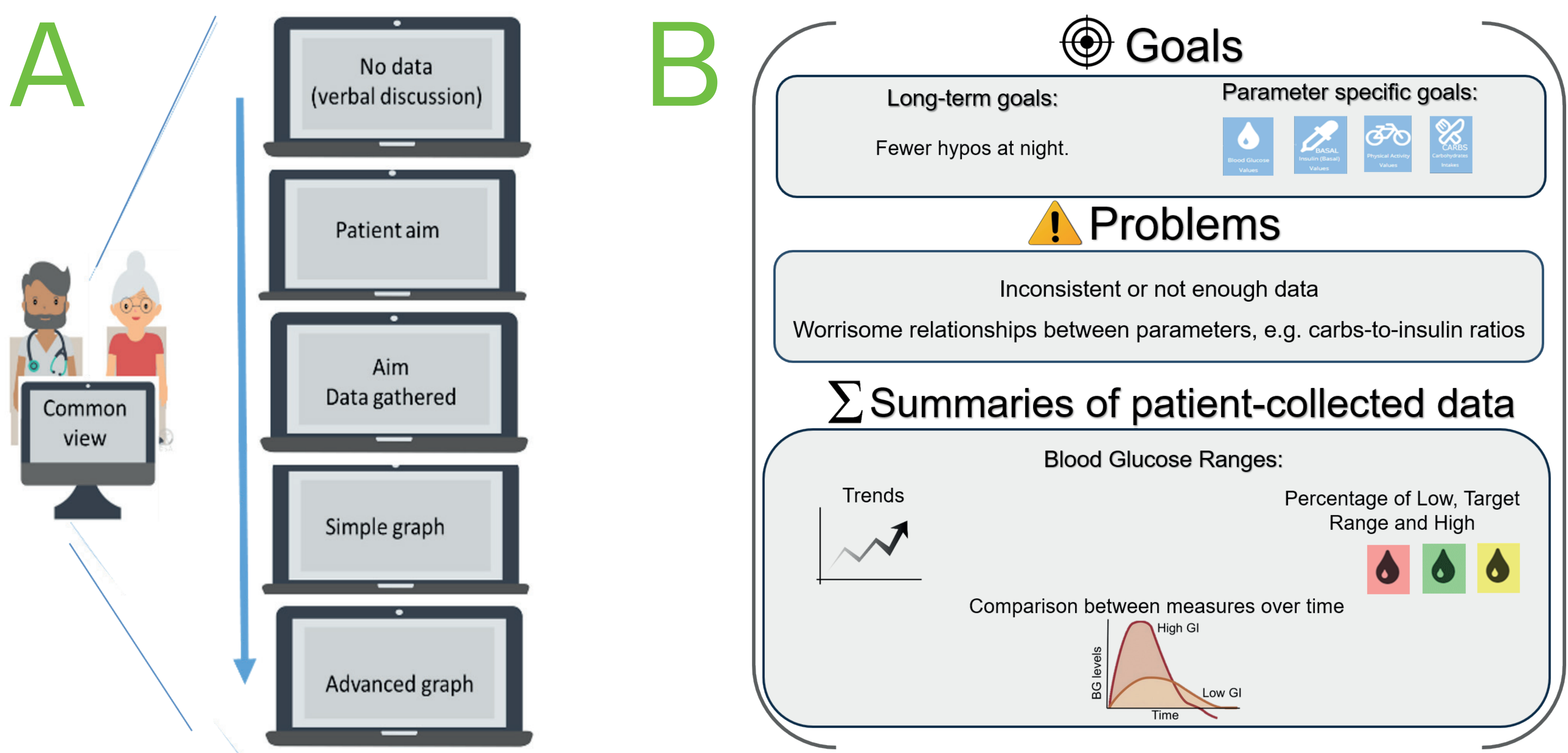


Figure 1. A) Illustration of the stepwise intervention concept and flow and B) examples of key elements of the consultation interface displaying commonly relevant pieces of information for both patients and health practitioners.

References

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