My Diabetes Care (MDC): Enhancing patient engagement in diabetes care

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Background

- My Diabetes Care (MDC) is a patient portal app designed to help patients better understand their diabetes health data while promoting and supporting self-management.
- Our prior research suggested MDC may improve patient's understanding of health data (e.g., A1c) and increase self-efficacy.

Objective

- Expand diabetes health data in MDC beyond HbA1c, blood pressure, and cholesterol to include urine microalbumin and body weight/BMI.
- Enhance access to Spanish-speaking patients.

Methods

- User-centered Design Sprint methodology to design a revised MDC user interface prototype to include urine microalbumin and body weight/BMI.
- Purposive sampling to ensure representation of participants aged ≥65 and with limited health literacy.
- Participants rated overall satisfaction and ease of use from 1-worst to 5-best and completed the 10-item System Usability Scale (SUS) scored 0-worst to 100-best.
- Community engagement studio (CES) with Spanish-speaking patients to inform a planned Spanish version of MDC.

Participant Characteristics	N=12
Mean HbA1c	7.9
Female	6 (50%)
Age ≥65	3 (25%)
Limited health literacy	4 (33%)

Results

- Round 1 (n=6) participants indicated needing clarification on how to enter and edit goal weight and whether home or clinic weight was displayed.
- The mean overall ease of use was 4.8, and satisfaction was 4.2

Figure 1. MDC prototype screenshots of laboratory values and home weight display.

- For round 2 participants (n=6), the mean ease of use remained high (4.7), and overall satisfaction rose to 4.7.
- SUS scores were high in both rounds, consistent with excellent usability (mean 92 and 95, respectively).
- Participants recommended including additional resources to assist patients in discussing diabetes with their family and friends to engage their support in self-care.

Conclusions

- Overall, participants could navigate MDC easily and were satisfied with the feature.
- Revisions led to an improved user interface for entering and tracking body weight, considering the importance for the patient for both starting weight and goal weight displayed on the screen.
- These findings suggest that the fully programmed version of MDC will likely meet the needs of target users.
- CES findings highlighted the need to translate app language with an awareness of cultural nuance.

Limitations

- Sample size small
- Selection bias
- Social desirability bias
- Hawthorne effect

Next Steps

- Further testing of usability and patient comprehension
- Test pragmatic RCT
- Further research is underway to test the usability of fully programmed English and Spanish versions of MDC.

Acknowledgements

Funding from: NIH/NIDDK R01DK131129

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