High Risk Population Using Mobile Logging Application Shows Significant Reduction in LBGI

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BACKGROUND

Using mHealth tools for diabetes self-management has been shown to have a beneficial impact on the quality of metabolic control. Based on a meta-analysis, the impact on glycemic control of digital tracking and remote coaching has been shown to be around -0.38% points (from 7.3% to 7.0%) 
indicating increased risk levels to lower ones at t2. From 9.0% to 7.7%)

RESULTS

The results shown in Table 1 indicate that there is no difference in the impact of logging on LBGI and HBGI between nationalities. A common trend of decrease in standard deviation is indicated in all groups, accompanying the rise in mean blood glucose levels.

The results shown in Table 2 indicate an insignificant difference in impact between genders.

DISCUSSION AND CONCLUSIONS

The significant reduction in LBGI, expressing the risk of severe hypoglycemic events, demonstrates that logging with the mySugr Logbook may have positively impacted the patient population. The LBGI in the investigated population was already at an acceptable level upon inclusion, indicating a rather well-controlled user base in general. While a larger change in HBGI was expected the insignificant change between t0 and t2 in the current study may have been a result of the frequency and severity of hypoglycemic events. Further, the observed effects are consistent across the investigated population and independent of nationality or gender, which seems to indicate a successful cultural adaptation of the mySugr application. While this study is providing valuable insights into real world data, its limitation is that it is retrospective and observational. However, these observational studies and comparisons will inform the design of future prospective observational and interventional studies.

In general, mHealth tools have been identified as tools that can positively change and impact the standard and quality of diabetes care. These findings should be confirmed in a prospective, controlled clinical trial. We further hypothesize that the now launched additions of mySugr Blox, and the Certified Diabetes Education and mySugr Coaching as well as integration with a growing number of CGM, BGm and insulin pumps can result in significant health care and health economics benefits across a broader range of users.

References

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