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Title

Acceptability, Perceived Validity and Use of a Type-2 Diabetes Smart Phone App Assessment among Primary Care Patients

Priority 1 (Research Category)

Evaluation of diagnostic or screening test

Presenters

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Abstract

Context: Of the 96 million (38%) American adults who have overly high blood sugar levels to qualify as Type-2 pre-diabetes state, less than 14% are aware of their condition and fewer than 20% received treatment with recommended programs. In prior focus group study, patients expressed desire for risk communication and clarification about seriousness of prediabetes. Objective: Study Type-2 diabetes (T2D) risk perceptions and acceptability of a pre-visit patient self-assessment tool administered through a phone App. Study Design and Analysis: Mixed-method study involving interview and survey. Setting: Primary care, academic family medicine clinic. Population Studied: Adult patients with a smart phone and no prior diagnosis of diabetes. Instrument: 1. Interview and paper survey of perceived T2D seriousness, personal risk and validity of T2D risk score assessment. 2. Responses (entered via App) to: ADA T2D risk assessment, PROMIS measures for physical and mental health and self-efficacy, and a motivation scale. 3. Phone interview after 3-5 days, concentrating on whether results were shared with the physician. Outcome Measures: Descriptive and non-inferential statistics of scored data; thematic analysis of interview responses. Results: Prior to assessment, 24 of 25 patients expressed interest in knowing their risk test result. Patients' time to enter responses to the full question set on their phone averaged 4:15 minutes. BMI ranges were high (76% over 25; of these, 32% over 30). While 52% of patients thought themselves at risk for T2D prior to assessment, over 76% obtained an ADA T2D risk calculation (5+ on 10pt scale) considered high risk. Many (40%) did not perceive their risk result to be accurate, and 48% indicated that a high risk score predicts T2D progression <10% of the time. Even still, most remembered their risk score in a follow-up call (78% correct) showing impact. Nearly all (88%) desired that their physician know their assessment score even while only 4 patients reported sharing the result with them. Other visit needs and/or being a new patient were primary reasons for not discussing. Conclusions: This study sought to assess the value of a pre-visit app-based assessment tool and potential for use in facilitating weight and diabetes prevention discussions. We found that knowledge of T2D risk and discussion of treatment strategies is of interest to patients, but remains difficult to incorporate in primary care visits in the limited time available.