

Reduction of Diabetes and Cardiovascular Risk in a Workforce After Digital Behavioral Counseling

Background

- The US Preventive Services Task Force recommends screening for abnormal glucose levels when assessing cardiovascular disease (CVD) risk in overweight or obese patients (aged 40-70 years).¹
- The organization also recommends offering behavioral counseling to adults who are at risk for diabetes and have additional CVD risk factors.²
- Large national studies in the general population have shown that programs involving such interventions help prevent diabetes and CVD.¹⁻³
- **Objective:** The investigators of this study sought to determine if pairing digital behavioral counseling with employer-sponsored wellness screening can reduce risk of diabetes and CVD in a US workforce.

Methods

- Individuals were included in the study if they participated in an employer-sponsored wellness program and, at the 2015-2016 year-end, met the following criteria:
 - A body mass index (BMI) ≥ 26 kg/m²
 - Fasting glucose (FG) ≥ 100 mg/dL and/or HbA1c $> 5.7\%$
 - Agreed to enroll in a digital behavioral counseling program (Omada Health)
- Paired t-tests were used compare changes in screening results before (2015-2016) and after (2016-2017) the counseling program was implemented.
- Screening results included BMI, HbA1c levels, fasting glucose, triglyceride levels, and 10-year atherosclerotic cardiovascular disease risk (ASCVD) based on 2013 ACC/AHA guidelines.⁴

Results^a

- Of the 107 study participants, 74% were women; 62% were Caucasian and 27% were African American.
- At 2015-2016 year-end, mean age was 50 years, mean BMI was 37 kg/m², mean FG was 107 mg/dL, and mean HbA1c was 6.1%.
- Compared to changes from 2015 to 2016 (before counseling was implemented), changes from 2016 to were significantly improved:
 - BMI: +0.61 to -1.19 kg/m² ($P < 0.0001$)
 - HbA1c: +0.06% to -0.24% ($P = 0.001$)
 - FG: +5.64 to -3.38 mg/dL ($P = 0.02$)
 - Triglycerides: +11.0 to -17.3 mg/dL ($P = 0.02$)
 - 10-year ASCVD risk: +1.09% to -0.04% ($P = 0.047$)
- Both Hb1Ac and FG levels fell below prediabetic levels in almost a third (32%) of participants.

Conclusions

- The results of this study suggest that the combination of digital behavioral counseling and employer-sponsored wellness screening is associated with reduced risk of diabetes and CVD in a US workforce.

^a Data updated since abstract acceptance, as reflected in the conference poster.

Poster presentation at the American Diabetes Association 78th Scientific Sessions

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American Diabetes Association 78th Scientific Sessions

Orlando, FL

June 22-26, 2018

Date and time: June 25, 2018,

12:00 PM-1:00 PM

References

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