

Physical activity trends of adults with chronic conditions participating in a digital health program

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Participants tracking physical activity with Balanced Rewards for Healthy Choices digital health program averaged 3.7 miles per day.



OBJECTIVE

- Physical activity is one of the most impactful health behaviors; however, many American adults are insufficiently active. The recent increased use of wearable physical activity devices not only facilitates the tracking and promotion of individual activity, but also enables monitoring population-level trends.
- The Balance Rewards for healthy choices (BRhc) program is a digital health program that provides participants financial incentives for being physically active. The purpose of this study is to assess activity rates across BRhc participants.

METHOD

- We conducted a cross-sectional study of BRhc participants enrolled between January 2014 and December 2016. All activity data were objectively collected through wearable devices.

RESULTS

- Participants (N=241,013) were on average 39.7 years old and 65.7% were female. Participants walked an average of 3.7 miles per day.
- Younger adult participants age 20-39 had higher rates of cardiovascular disease (CVD) (14.7%) and diabetes (3.7%) compared to Americans age 20-39 (12.5% and 2.6%, respectively) (see Figure 1). On the other hand, middle-age (40-59) and older (60+) adults in our study had lower rates of CVD (middle-age=28.6% vs. 40.4%; older=38.5% vs. 77.4%) and diabetes (middle-age=6.7% vs. 12.7%; older=8.5% vs. 20.8%) compared to population-based rates for Americans in the same age group^{1,2}.
- Risk ratios determined that overall, those with CVD and diabetes were significantly less likely (75.69%, 95% CI: 74.44%-76.97%) to be sufficiently active than users without CVD or diabetes (see Figure 2). Increasing age also impacted the association between condition status and obtaining sufficient physical activity.

Figure 1: Comparison of CVD and diabetes rates between BRhc physical activity participants and population rates

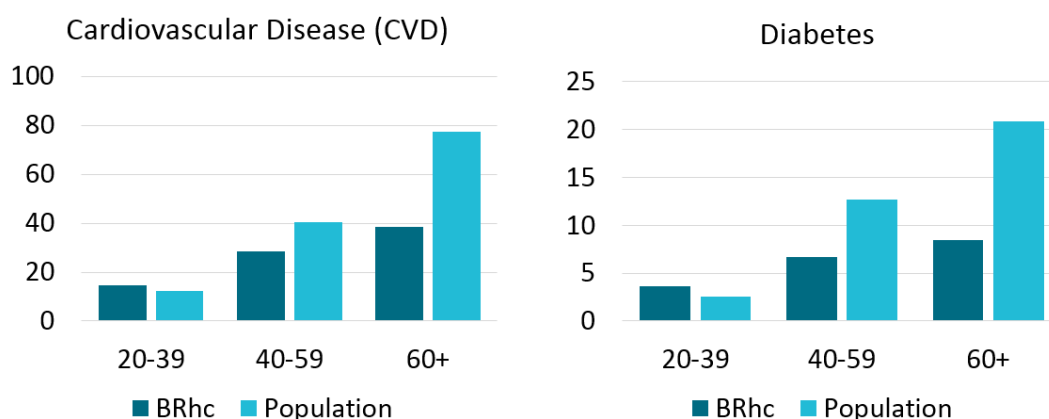
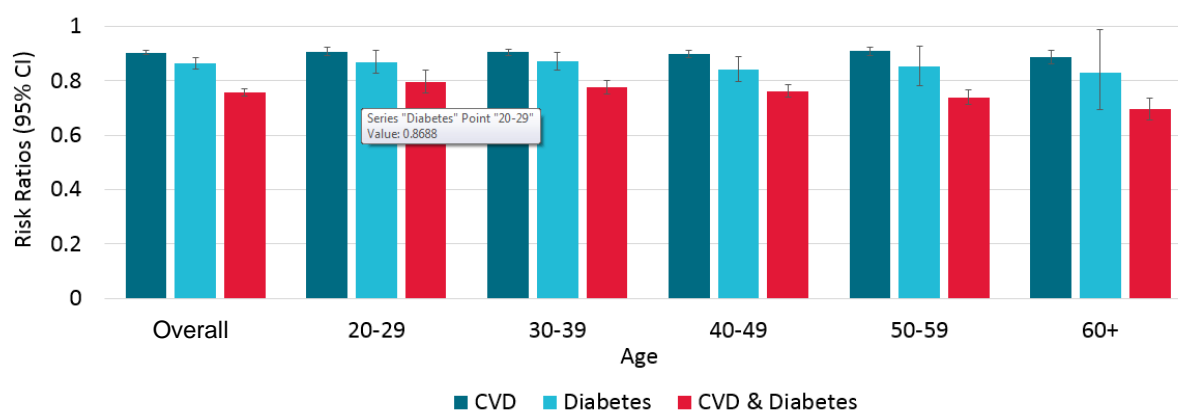


Figure 2: Risk ratios for obtaining sufficient physical activity by condition and age group



CONCLUSIONS

- Physical activity participation among American adults is low. This study reinforced previous findings that participants with diabetes and/or CVD are less likely to be sufficiently active than participants who were not being treated for either condition.
- Through its digital format, BRhc efficiently reaches a large number of Americans and keeps participants engaged over long periods of time. Broadly disseminated digital health programs, such as BRhc, should be leveraged to increase activity among adults in the United States, especially those with CVD and diabetes.

References:

1. Benjamin E, Blaha M, Chiuve S. Heart disease and stroke statistics – 2017 update. Circulation; 2015 135, e1-e458. (2) Centers for Disease Control and Prevention. National diabetes statistics report, 2017. <https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf>. Accessed August 28, 2017.

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Contributing Authors:

Renae Smith-Ray, PhD¹; Nima Nikzad, PhD¹; Tanya Singh, MPH¹; Jenny Zhou Jiang, MS¹; Michael S. Taitel, PhD¹; Giorgio Quer, PhD²; Jean Cherry, MBA¹; Greg Orr, MBA¹

¹ Walgreens Center for Health and Wellbeing Research; ² Scripps Translational Science Institute

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