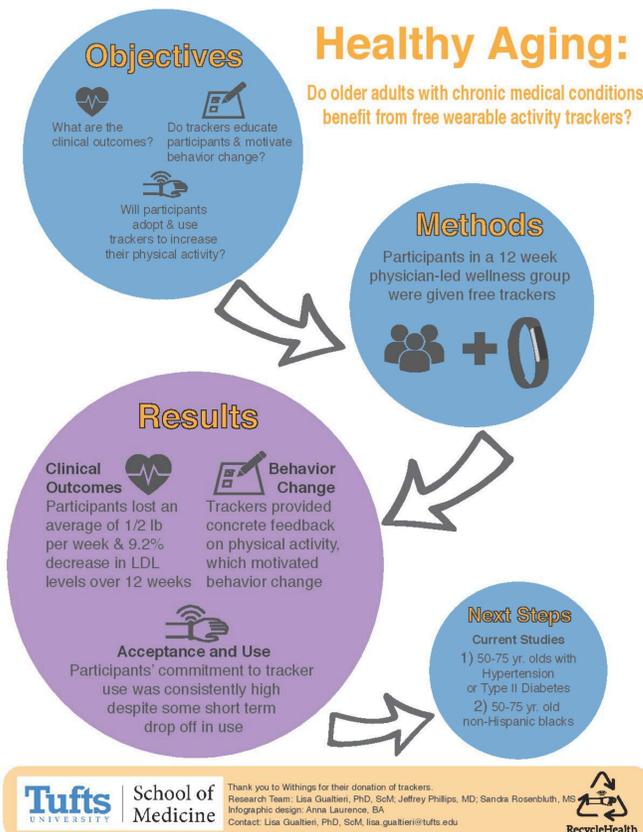


Can a free wearable activity tracker change behavior?

The impact of trackers on adults in a physician-led wellness group

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Background

Wearable activity trackers (trackers) are increasingly popular devices used to measure and track step count and other health indicators. Trackers have the potential to benefit those in need of increased physical activity, such as adults who are older and face significant health challenges. These populations are least likely to purchase trackers and most likely to face barriers when using them, yet may derive educational, motivational, and health benefits from their use once these barriers are removed.

Objectives

Our primary research questions were:

- 1) If participants would **accept and use** trackers to increase their physical activity;
- 2) If there were **barriers to use** besides cost and training;
- 3) If trackers would **educate participants** on their baseline and ongoing activity levels and support behavior change;
- 4) If **clinical outcomes** would show improvements in participants' health.

Methods

- 10 patients in a 12 week physician-led Wellness Group offered by Family Doctors, LLC
- Median age: 63
- Patients were given trackers in the second week of the Wellness Group and were interviewed 2-4 weeks after it ended.
- The study investigators analyzed the interview notes to extract themes about the participants' attitudes and behavior changes
- The study investigators analyzed changes in participants' clinical data, including weight and LDL-Cholesterol (LDL), over the course of the study.

Results

- Improvements in clinical outcomes, attitudes towards the trackers, and physical activity behaviors.

Clinical Outcomes

- Participants lost an average of a **half-pound per week** (SD=0.408), with a mean total weight loss of 5.97 pounds (p=0.0038).
- **9.2% decrease** in LDL levels (p=0.0377).
- All participants reported an **increase in well-being** and confidence in their ability to lead more active lives.

Themes: We identified six major attitudinal themes from our qualitative analysis of the interview notes:

- 1) Barriers to tracker purchase included **cost, perceived value, and choice confusion**;
- 2) Attitudes towards the trackers shifted for many, from half of the participants expressing excitement/hope and half expressing hesitation/trepidation, to **all participants feeling positive** towards their tracker at the time of the interviews;
- 3) Trackers served as **educational tools** for baseline activity levels;
- 4) Trackers provided concrete feedback on physical activity, which **motivated behavior change**;
- 5) Tracker use **reinforced** Wellness Group activities and goals;
- 6) Although **commitment to tracker use** did not waver, external circumstances influenced some participants' ongoing use.

Conclusions

Our findings suggest that adding trackers to wellness groups comprising primarily older adults with chronic medical conditions can support education and behavior change to be more physically active.

The trackers increased participant self-efficacy by providing a tangible, visible reminder of a commitment to increasing activity and immediate feedback on step count and progress towards a daily step goal.

While acceptance was high and attitudes ultimately positive, findings suggest that training and support are needed and short-term drop-off in participant use is to be expected.

Future research will further consider the potential of trackers in older adults with chronic medical conditions who are unlikely to purchase them, and studies will use larger samples, continue over a longer period of time, and evaluate outcomes independent of a wellness group.