

**CURRENT CATEGORY:** Health Information Technology

**CURRENT SUB-CATEGORY:** None

**KEYWORDS:** behavioral intervention, physical activity/exercise, Health Information Technology.

**AWARDS:**

**Abstract**

**TITLE:** EFFICACY OF A COMPUTER-BASED INTERVENTION TO PROMOTE WALKING IN OLDER ADULTS

**AUTHORS (FIRST NAME INITIAL LAST NAME):** M. Paasche-Orlow<sup>1</sup>, R. Silliman<sup>2</sup>, M. Winter<sup>3</sup>, D. Cheng<sup>4</sup>, L. Henault<sup>1</sup>, T. Bickmore<sup>5</sup>

**INSTITUTIONS (ALL):** 1. GIM, Boston University, Boston, MA, United States.  
2. Geriatrics, Boston Medical Center, Boston, MA, United States.  
3. Data Coordinating Center, Boston University, Boston, MA, United States.  
4. Biostatistics, Boston University, Boston, MA, United States.  
5. College of Computer and Information Science, Northeastern University, Boston, MA, United States.

**ABSTRACT BODY:** Background: Physical activity has been shown to have a broad array of health benefits, however, most older adults are sedentary. We evaluated the efficacy of the Steps-to-Health system, which used a computer animated coach to promote walking in older adults. Methods: In a block randomized controlled trial, stratified by clinic and health literacy, all subjects were given a pedometer and intervention subjects were given a portable computer with a touch screen to use for 2 months. All subjects were followed for an additional 10 months. Subjects were recruited from three urban ambulatory care practices after primary care providers confirmed the safety of participation. Intervention subjects were directed to connect their pedometer to the computer and interact with the coach daily to discuss walking and set walking goals. The primary outcomes were: average daily step count for the 30 days prior to 2-month (T1) and 12 month interviews (T2), analyzed using linear regression models adjusted for site, health literacy, age, sex. Secondary outcomes included satisfaction with and use of the Steps-to-Health system.

Results: Of the 263 randomized subjects (131 control; 132 intervention), 63% were Black, 61% female; 51% had high school or less education. Mean age (SD) at enrollment was 71.3 (5.4). At T1, the intervention group had higher step counts (ratio of means 1.12, p=0.18) although the effect was not statistically significant. After further adjustment for step counts in the first 2 weeks of the program, the results became significant (ratio of means 1.14, p=0.025). Magnitudes of effect were similar for T2 although not statistically significant (p=0.097). Intervention subjects were very satisfied with the program and interacted with the coach an average of 33 out of 60 days.

Conclusions: The Steps-to-Health program appeared to increase walking during the 2 month active phase of the program, but this effect diminished thereafter. Implementation may promote walking in the elderly, but effective methods for maintenance of behavior change are needed.