

Physical activity level in the hospital linked to outcomes at discharge in elderly patients

ACP Hospitalist Weekly Staff

Elderly adults with low levels of in-hospital activity were at higher risk for bedsores and were less likely to return home after discharge, a new study found.

Researchers in Switzerland performed a cohort study in hospitalized patients ages 65 years and older to [assess levels of physical activity in the hospital and their association with functional decline and other outcomes at discharge](#). Physical activity during the daytime and over 24-hour periods was assessed by wrist accelerometers. The study's main outcome measures were functional decline (defined as a decrease of at least 5 points on the modified Barthel Index), risk for bedsores, length of stay, and inability to return home. The results were published Jan. 31 by *JAMA Network Open*.

One hundred seventy-seven patients who were admitted from Feb. 1 through Nov. 30, 2018, were included in the study. One hundred six (59.9%) were men, and the median age was 83 years. Patients were more likely to have lower physical activity levels during hospitalization if they had used walking aids before admission, if they were admitted for a reason related to functional decline, and if they were prescribed physiotherapy. At hospital discharge, 63 patients (35.6%; 95% CI, 25.6% to 43.1%) had functional decline, 78 (44.1%; 95% CI, 36.6% to 51.7%) had bedsores risk, and 82 (46.3%; 95% CI, 38.8% to 54.0%) were not able to return home. No association was found between daytime and 24-hour physical activity levels and functional decline ($P=0.69$ and $P=0.45$, respectively) or length of stay ($P=0.93$ and $P=0.52$, respectively) in multivariate analysis. Patients who were at risk for bedsores had significantly lower daytime and 24-hour physical activity levels compared with those who were not at risk ($P=0.008$ and $P=0.01$, respectively), and patients who could return home had significantly higher daytime and 24-hour physical activity levels than those who could not ($P=0.04$ and $P=0.009$, respectively).

The authors noted that the study involved only one hospital ward at one university hospital, that risk of bedsores rather than presence of bedsores was assessed, and that activities of daily living and physical activity can be interdependent, complicating interpretation of the results. However, they concluded that among the elderly, less physical activity during a hospital stay is associated with increased risk for bedsores and inability to return home at discharge but not with hospital-acquired functional decline or length of stay. "Future studies should try to estimate the minimum amount of [physical activity] needed to prevent increased in-hospital morbidity or [length of stay] in elderly hospitalized patients," the authors wrote.