One-Year, Weekly Online Survey to Monitor Healthcare Visits and Its Association With Walking-Speed in Older Adults.

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Background: Walking speed is recognized in the literature as an indicator of health status. Lower walking speeds in the elderly population have been associated with poorer health outcomes, lower survival rates from chronic health conditions such as cardiovascular and hematologic conditions and higher hospitalization rates for heart failure and hematologic cancers. Conversely, higher walking speeds in this population have been associated with better health outcomes. Walking speed has also been highlighted as an important biomarker of healthy aging. Studies have indicated the need to incorporate walking speed monitoring as part of routine care for the elderly population in order to better predict clinical and health outcomes. This is an exploratory study that is focused on evaluating the association between walking speed and health care visits in community dwelling older adults aged 60 years and above. This is with a view to further explore the possibility of the use of walking speed as a predictive measure of health care utilization based on the already established relationship between walking speed and health status or health outcomes within the literature.

Methodology: Study Design and Participants: Data from a longitudinal cohort study which was developed by the Oregon Center for Aging and Technology (ORCATECH) was used in this study. Participants were independent, able to live alone, not wheelchair bound and had no precluding medical conditions for participating in the study. Participants were assessed to have normal cognition and normal average health status for age. Health status in the past week including participation in the study. Participants were assessed to have normal cognitive examinations and the geriatric depression scale. Care was taken to select study participants that were considered in relatively good health conditions to avoid the selection of study participants with co-morbidities or uncontrolled health conditions that could result in confounders in the analysis.

Clinical Assessment procedures: Baseline stopwatch measured walking speed of participants’ average pace was measured at the outset of the study, measurement was based on a 15 foot out and back timed walk.

Other baseline clinical assessments included standard cognitive tests, health status evaluations, mental state examinations and the geriatric depression scale. Care was taken to select study participants that were considered in relatively good health conditions to avoid the selection of study participants with co-morbidities or uncontrolled health conditions that could result in confounders in the analysis.

Statistical analysis: Spearman’s rank correlation coefficient was used to assess the strength of association between the frequency of planned and unplanned (ER) healthcare visits and average baseline walking speed.

Inferences and Conclusion: Participants with lower walking speeds may need more monitoring by health care providers to prevent unplanned health care utilizations. Increasing walking speed with increasing planned healthcare utilization may be indicative of improving health status due to adequate clinical care by healthcare providers. Overall, there is an opportunity for further studies with a larger number of ER users to explore the use of walking speed to predict health care utilization and also the exploration of the use of digitally enabled walking speed monitors (e.g. in-home sensors and sensors in wearable devices) as potential predictors of unplanned health care utilization in this population. Future research on walking speed variability and (sudden) decline can help in understanding how walking speed can be utilized as an important biomarker for aging in different populations and its relationship to health care.

Bibliography:
- The Oregon Center for Aging and Technology (ORCATECH) website: https://orcotech.org/
- "The Oregon Center for Aging and Technology (ORCATECH)". ORCATECH. Oregon Clinical Translational Research Institute. https://orcotech.org/
- "The Oregon Center for Aging and Technology (ORCATECH)". ORCATECH. Oregon Clinical Translational Research Institute. https://orcotech.org/
- "The Oregon Center for Aging and Technology (ORCATECH)". ORCATECH. Oregon Clinical Translational Research Institute. https://orcotech.org/