FRAILTY ASSESSMENT IN HOSPITALIZED OLDER ADULTS USING THE ELECTRONIC HEALTH RECORD

Deborah A Lekan[a], Thomas McCoy[a] & Debra C Wallace[a]
[a]University of North Carolina at Greensboro, USA

Introduction: Frailty is a clinical syndrome of decreased physiologic reserve and dysregulation in multiple physiologic systems that are associated with increased risk for adverse outcomes.

Purpose: The aim of this retrospective, cross-sectional, correlational study was to characterize frailty in older adults admitted to a tertiary care hospital using a biopsychosocial frailty assessment and to determine associations between frailty and adverse outcomes including time to in-hospital mortality and 30-day rehospitalization.

Methods: The sample included medical inpatients ≥55 years at a tertiary care hospital (N=278) in the U.S. Frailty was determined using existing clinical data from the electronic health record for symptoms, syndromes, conditions, and laboratory data for four serum biomarkers. A Frailty Risk Score was created from 16 risk factors and relationships between Frailty Risk Score and outcomes were examined.

Results: The mean age was 70.2 years and mean Frailty Risk Score was 9.4 (SD, 2.2). Increased Frailty Risk Scores were significantly associated with increased risk of death (HR=1.77 to 2.27 for 3 days ≤ LOS ≤ 7 days) but depended upon length of stay ($p < 0.001$). Frailty was marginally associated with rehospitalization for those who did not die in-hospital (AOR=1.18, p=0.086, AUC=0.66, 95% CI for AUC= (0.57, 0.76)). The Frailty Risk Score may reflect complexity more than individual assessments of symptoms, diseases, or age; age was significantly associated with Frailty Risk Score (β= 0.039, t= 3.16, p = 0.002) but no longer significant in regression controlling for other variables, and higher risk of death was associated with increased Frailty Risk Scores, controlling for age, gender, race.

Discussion: Readily available data in electronic health records can be used for frailty assessment. Informatics may facilitate data aggregation and decision support. Because frailty is potentially preventable and treatable, early detection is crucial to delivery of tailored interventions to achieve optimal patient outcomes.

Biography

Deborah A Lekan is a board certified gerontological nurse with a research focus on frailty in middle aged and older adults and the use of big data and data science to use the abundant already collected, data from the electronic health record to examine problems such as frailty. She is particularly interested in how health disparities and social determinants of health, especially psychosocial factors, impact health status and risk for frailty and associated adverse health outcomes and risk-reduction interventions to promote patient recovery and how novel data analytics can illuminate some of these complex issues.

dalekan@uncg.edu

J Gerontol Geriatr Res, an open access journal
ISSN: 2167-7182

ICAG 2017
June 26-27, 2017

Volume 6, Issue 3 (Suppl)

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