costs). We used multivariable logistic regression to study the association between living alone and ED admission, and ran two-part models (probit & generalised linear model) to estimate the association of living alone on inpatient days and hospitalization cost. We found that compared to living with others, living alone was associated with a higher odds of ED admissions [Odds Ratio (OR) 1.28, 95% Confidence Interval (CI) 1.08-1.51)], longer inpatient days (+0.61, 95% CI 0.25-0.97) and higher hospitalization costs (+322 USD, 95% CI 54-591). Compared to those living with others without multimorbidity, living alone with multimorbidity was associated with higher odds of ED admission (OR 1.64 95% CI 1.33-2.03), longer inpatient days (+0.73, 95% CI 0.29-1.17) and higher hospitalization costs (+567 USD, 95% CI 230-906). In conclusion, living alone is associated with higher odds of ED admission, longer inpatient days and higher hospitalization costs among older adults, particularly among those with multimorbidity.

HOSPITAL-ASSOCIATED DISABILITY ASSOCIATED WITH DELIRIUM AMONG OLDER ADULTS

Richard Kennedy,[1] Hyun Freeman,[2] Roy Martin,[1] Caroline Whittington,[2] John Osborne,[2] Alayne Markland,[2] Thomas Buford,[1] and Cynthia Brown,[3] *1. University of Alabama at Birmingham, Birmingham, Alabama, United States, 2. University of Alabama at Birmingham, University of Alabama at Birmingham, Alabama, United States, 3. Louisiana State University Health Sciences Center - New Orleans, New Orleans, Louisiana, United States*

Hospital-associated disability (HAD), defined as a loss of activities of daily living (ADLs) occurring during hospitalization, is a common complication among older adults. Delirium is also a common complication during hospitalization and is associated with multiple long-term sequelae. We sought to determine the effect of delirium and known covariates on the risk of incident HAD in hospitalized older adults. We examined electronic health record (EHR) data for 35,201 older adults ≥ 65 years of age admitted to the general inpatient (non-ICU) units of UAB Hospital from January 1, 2015 to December 31, 2019. Delirium was defined as a score ≥ 2 on the Nursing Delirium Screening Scale (NuDESC) during hospital admission, and HAD defined as a decline on the Katz ADL scale from hospital admission to discharge. Generalized linear mixed models were used to examine the association between delirium and HAD, adjusting for covariates and repeated observations for individuals with multiple admissions. We found that 21.2% of older adults developed HAD during their hospitalization and experienced higher delirium rates as compared to those not developing HAD (25.2% vs. 16.3%). Presence of delirium, medical comorbidity score, baseline cognitive status, and baseline ADL function were associated (all $p < 0.001$) with incident HAD. Mediation analyses also showed that 8% of the effect of comorbidity on incident HAD was due to delirium ($p < 0.001$). Reducing rates of delirium can be one component of a comprehensive approach to reduce rates of HAD in older adults.

PREDICTING UNSCHEDULED EMERGENCY DEPARTMENT REVISITS LEADING TO ACUTE HOSPITAL ADMISSIONS AMONG OLDER ADULTS

Tony Rosen,[1] Yufang Huang,[2] Matthew McCarty,[3] Michael Stern,[3] Yiye Zhang,[4] Daniel Barchi,[5] Rahul Sharma,[3] and Peter Steel,[3], *1. New York, New York, United States, 2. Weill Cornell Medicine, New York, New York, United States, 3. NewYork-Presbyterian Hospital Weill Cornell Medical Center, New York, New York, United States, 4. Weill Cornell Medical College, New York, New York, United States, 5. NewYork-Presbyterian Hospital, New York, New York, United States*

Background: Unscheduled emergency department (ED) revisits leading to acute hospital admission (RVA) are tantamount to a failed discharge, associated with physician error, mis-prognosis, and inadequate care planning. Previous research has shown RVA to be associated with adverse outcomes such as ICU admissions, long hospitalizations and mortality. Given the limited impact of pre-existing screening tools for older adults, we developed and validated a machine learning model to predict individual patient risk of RVA within 72 hours and 9 days of index ED visits.

Method: A machine learning model was applied to retrospective electronic health record (EHR) data of patients presenting to 2 geographically and demographically divergent urban EDs in 2019. 478 clinically meaningful EHR data variables were included: socio-demographics, ED and comorbidity diagnoses, therapeutics, laboratory test orders and test results, diagnostic imaging test orders, vital signs, and utilization and operational data. Multiple machine learning algorithms were constructed; models were compared against a pre-existing adult ED-RVA risk score as a baseline.

Results: A total of 62,154 patients were included in the analysis, with 508 (0.82%) and 889 (1.4%) having 72-hour and 9-day RVA. The best-performing model, combining deep significance clustering (DICE) and regularized logistic regression, achieved AUC of 0.86 and 0.79 for 72-hour and 9-day ED-RVA for older adult patients, respectively, outperforming the pre-existing RVA risk score (0.704 and 0.694).

Discussion: Machine learning models to screen for and predict older adults at high-risk for ED-RVA may be useful in directing interventions to reduce adverse events in older adults discharged from the ED.

REJECTION OF CARE IN HOSPITALIZED PERSONS LIVING WITH DEMENTIA: THE IMPACT OF NURSE COMMUNICATION

Clarissa Shaw,[1] Caitlin Ward,[1] Jean Gordon,[1] Kristine Williams,[2] and Keela Herr,[1], *1. University of Iowa, Iowa City, Iowa, United States, 2. University of Kansas School of Nursing, Kansas City, Kansas, United States*

Rejection of care (RoC) by persons living with dementia (PLWD) has yet to be measured in the hospital setting. Elderspeak communication (i.e., baby talk or infantilization) is an established antecedent to RoC in nursing home dementia care. The purpose of this study was to determine the impact of elderspeak communication by nursing staff on RoC by hospitalized PLWD. Eighty-eight care encounters between 16 PLWD and 53 nursing staff were observed for RoC using the Resistiveness to Care scale in one Midwestern hospital. Audio-recordings of the care encounters were transcribed verbatim and coded for semantic, pragmatic, and prosodic features of elderspeak. Over one-quarter (28.7%) of the duration of nursing staff speech towards PLWD constituted elderspeak and nearly all (96.6%) of the 88 care encounters included some elderspeak. Almost half of the observations (48.9%) included RoC behaviors by PLWD. Rejection of care was modeled as