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three research questions: 1. Is the Toolkit feasible to implement in the ED? 2. Are EDs better able to identify and manage cases of elder mistreatment when they implement the Toolkit? 3. How does implementation of the Toolkit affect other aspects of ED operations? To answer these questions, this study utilized a mixed-methods approach. Quantitative data included staff’s baseline and follow-up assessments of ED practices related to EM; staff changes in knowledge before and after participation in training about screening for and responding to suspected cases of EM; aggregated hospital-level data on indicators of ED functioning; and patient-level data on screening rates and EM risk factors. ED staff provided rich qualitative information on the extent to which the Toolkit achieved seven feasibility criteria: practicality, acceptability, utility, implementation, integration, adaptability, and initial efficacy.

Results: We present preliminary findings organized by evaluation question. Staff training resulted in significant increases (p < 0.05) in knowledge and efficacy. Staff at all sites were receptive to the two-stage screening approach and found tools easy to use. The Toolkit was implemented differently in terms of which ED staff conducted the two-staged screening (ie, triage nurse, bedside nurse, social work). The proportion of patients screened at each site varied widely (18% to 87%), but screening rates increased over time at all sites. Of the older adults who were brief screened (n=15,710), 1% screened positive in the brief screening stage and were then screened intensively using the triggered screen. Of these, 32% (n=42) were designated as suspected cases of elder mistreatment.

Conclusion: An elder mistreatment screening and response toolkit may be successfully implemented in EDs. Training led to increases in staff knowledge about EM following training. Rates of screening increased, and ED providers found the toolkit useful. We found variations between EDs in how the toolkit was adapted, deployed, and integrated into ED workflow.

EMF

Validation of the Admission for Geriatric patients in the Emergency department (AGED) Algorithm
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Study Objectives: Identifying high risk older adults in the emergency department (ED) is essential for resource allocation and targeted interventions. The goal of this study was to develop and validate a geriatric risk score predicting emergency department admission using data available on initial assessment.

Study Design/Methods: The risk score was developed using an observational cohort of patients age 65 years and older who visited an urban academic ED between 9/1/19 and 2/28/20. The score was then validated using visits between 6/3/20 and 12/31/20. Patients were excluded if they left without being seen, against medical advice, were seen by the geriatric specialty service, or had been seen in the ED within the past 9 days. Forty-four key variables available upon triage were identified using the EMR including Estimated Severity Index (ESI), Clinical Frailty Scale (CFS), triage vital signs, demographics, comorbidities, and chief complaint. A Random Forest model with all key variables was performed to predict admission. The fifteen most important variables were included in a logistic regression model. These were compared to logistic regressions using CFS alone, ESI alone, and CFS, ESI, sex, and age. Secondary outcomes included ED return visit within 9 days and subsequent admission within 60 days of ED visit. The model was then validated using the second dataset for all 3 outcomes.

Results/Findings: Of 6863 visits of patients age 65 and older, 5606 (81.7%) met inclusion criteria for this study. Mean age was 74.5 years, 45.6% male. The Random Forest model with all predictors had an AUC of 0.800 (95% Confidence interval (CI): 0.789, 0.812), sensitivity of 76.0% and specificity of 69.3% for admission compared to AUC of 0.661 (CI: 0.647, 0.675) for CFS alone and AUC of 0.681 (CI: 0.666, 0.695) for ESI alone. The logistic regression with the top 15 predictors for admission had an AUC of 0.786 (CI: 0.775, 0.798), sensitivity of 66.3% and specificity of 76.3%. The Random Forest model for ED return visit had an AUC of 0.540 (CI: 0.507, 0.573) and for subsequent admission, AUC was 0.632 (CI: 0.610-0.655).

Conclusion: A risk prediction algorithm, the AGED algorithm, that integrates clinical characteristics known about older adults at triage in the ED including CFS can predict hospital admission with moderate accuracy. The AGED algorithm has poor predictive performance for ED return visit within 9 days and subsequent admission within 30 days of ED visit. Next steps include incorporating the AGED algorithm into clinical practice to see if it has an impact on patient-centered and administrative outcomes.