

appointments, reported by 68.6%, was the most common enabler to compliance. **Conclusion:** Over one third of older ED patients referred by GEM for further specialized geriatric services are non-compliant with their community-based evaluation, while one in four older ED patients decline referral to these evaluations while in the ED. Future work should focus on interventions that promote increased referral acceptance and address barriers to attendance.

**Keywords:** geriatrics, elderly, out-patient referrals

#### LO78

##### **Frailty Assessments of Older Canadians Using Emergency Health Services: The FOCUS Study**

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**Introduction:** The Clinical Frailty Scale (CFS) has been validated internationally to predict adverse outcomes and mortality. Frailty assessments in the Emergency Departments (ED) are challenging to due to a lack of training and time. We studied the use of a tablet-based CFS that used graphics and short descriptors to assist choice of the 9 frailty categories. **Methods:** We conducted a prospective observational cohort study of people >65 years seen in the ED of 3 Canadian academic centers. We excluded critically ill patients, and those with significant visual impairment or inability to communicate in English or French. We compared agreement on the tablet-based CFS between 4 categories of assessors: Patients, ED Physicians, trained Research Assistance and Caregivers using the kappa statistic. **Results:** We enrolled 274/380 eligible patients who provided complete data (72.1%). Their average age was 75.8 years, and 48.9% were female. Their median MOCA score was 23/30 (IQR = 17-26) and their median OARS was 26/28 (IQR 22-28). Agreement between physicians and research assistants was good ( $\kappa = 0.60$ , 95% CI 0.50-0.70), as was physician-caregiver agreement and patient-caregiver agreement ( $\kappa = 0.66$ , 95% CI 0.40-0.93). Agreement between physicians and patients was only moderate ( $\kappa = 0.47$ , 95% CI 0.36-0.58). **Conclusion:** There was less agreement between physicians and patient self-assessments for the CFS compared to physicians-research assistant agreement and care-giver patient assessments of frailty. Future research should validate whether MD, patient, or caregiver rated CFS have higher predictive validity.

**Keywords:** frailty, emergency medicine, computer assisted assessments

#### LO79

##### **Patient-centred outcomes with use of CT angiography in patients presenting with acute stroke and TIA: a systematic review and meta-analysis**

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**Introduction:** It remains unclear whether widespread use of computed tomography angiography (CTA) in acute strokes and transient ischemic attacks (TIAs) has tangible benefits for patient outcomes or management. We conducted a systematic review and meta-analysis of observational studies and randomized controlled trials (RCTs) investigating the use of CTA and patient-important outcomes (recurrent stroke, mortality, disability, and emergency department (ED) revisits) or changes in management in patients presenting with acute stroke or TIA. PROSPERO: 349590 **Methods:** MEDLINE, EMBASE, and the Cochrane Registry were searched through May 24, 2016 for eligible trials. We included observational cohort studies and RCTs evaluating use of CTA against a control group for outcomes of interest in patients presenting acutely with suspected stroke or TIA. Two independent

reviewers extracted data and assessed study quality using the Newcastle Ottawa Scale. Data for mortality and stroke rate were pooled by the generic inverse variance method and expressed as risk ratios (RRs) with 95% confidence intervals (95% CI). Data for disability were reported as the mean difference (MD) and 95% CI. Heterogeneity was assessed using the Cochran's Q statistic and quantified by the  $I^2$  statistic. Overall strength of the evidence was assessed by the GRADE approach. **Results:** Three observational cohort studies involving 979 patients over an average of 1 year follow up met inclusion criteria; there were no eligible RCTs. CTA use in acute stroke or TIA patients was associated with a decreased mortality rate (RR = 0.55, 95% CI 0.33 to 0.91,  $P = 0.02$ ;  $P_{het} = 0.88$ ,  $I^2 = 0\%$ ). No changes were detected in stroke rate (RR = 0.84, 95% CI 0.40 to 1.73,  $P = 0.63$ ;  $P_{het} = 0.79$ ,  $I^2 = 0\%$ ). One study with data for disability showed no changes in mRS (MD = 0.01, 95% CI -0.70 to 0.73,  $P = 0.97$ ). There were no eligible studies with data for ED revisits or changes in management. The strength of the evidence was assessed as very low quality due to imprecision for mortality, stroke rate, and disability. **Conclusion:** CTA use was associated with significantly reduced mortality in acute stroke and TIA patients, possibly due to confounding from poor baseline status of patients not receiving CTA. No significant changes were found for stroke rate or disability. There is a need for RCTs to confirm the effects of CTA use on patient outcomes and management.

**Keywords:** stroke, transient ischemic attack, computed tomography angiography

#### LO80

##### **Chest radiograph ordering for acute asthma presentations to emergency departments in Alberta: regional, site, and physician level variation**

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**Introduction:** Most acute asthma presentations to the emergency department (ED) are uncomplicated and do not require chest radiographs (CXR). Evidence suggests that the proportion of acute asthma patients receiving CXRs in the ED is high and varies substantially within and across sites and studies. This study explored CXR ordering and variation in acute asthma presentations to Alberta's EDs. **Methods:** Administrative health data for Alberta was obtained from the National Ambulatory Care Reporting System (NACRS) for all adult (>17 years) acute asthma (ICD-10-CA: J45) ED visits from 2011-2015. Patients with a primary or secondary diagnosis of asthma were included, provided they had a Canadian Triage and Acuity Scale score of 2-5. NACRS data were linked with Alberta Health Services' (AHS) diagnostic imaging database. Preliminary analysis on variation in imaging at the zone, ED site, and physician level was completed using SAS (v.9.4). Physicians who saw less than an average of 10 asthma patients per year were excluded. **Results:** Overall, 51,511 acute asthma ED presentations occurred (~10,000/year). The average proportion of CXRs among presentations was 39.5% (2011-2015) with an average annual increase of 6.7%. From 2011-2015, CXR ordering varied across the five AHS zones (variation [V]: 25%; range: 26.0%-51.0%). Substantial variation was observed across ED sites V: 60%; range: 5.9-66.4%) and physicians (V: 89%; range: 1.4-90.6%). The mean CXR ordering among physicians was 44%. **Conclusion:** From 2011-2015, CXR use among acute asthma ED presentations has increased. Substantial variation in CXR use suggests that evidence-based interventions are needed to improve imaging appropriateness.

**Keywords:** diagnostic imaging, asthma, emergency department