

An episode of delirium increases hospital LOS by about a week and therefore could contribute to ED overcrowding.

**Keywords:** delirium, length of stay

#### LO023

##### Association between ED-induced delirium and cognitive & functional decline in seniors

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**Introduction:** Delirium is a common medical complication among seniors in hospital setting. In the emergency department (ED), its prevalence varies between 7 & 14%. Delirium is associated with increased mortality & longer hospital stay. This condition is also associated with functional & cognitive decline in hospitalized seniors and higher risk of institutionalization up to 2 years after their discharge. However, no data is currently available for ED patients. The aim of this study was to evaluate the association between ED-induced delirium and functional & cognitive decline in seniors at 60 days. **Methods:** This study is part of the *Incidence and Impact measurement of Delirium Induced by ED-Stay (INDEED)* study, an ongoing multicenter prospective cohort study in 5 Quebec EDs. Patients were recruited after 8 hours in the ED and followed up to 24h after admission. A 60-day follow-up phone assessment was also conducted. Delirium was measured by the validated Confusion Assessment Method & the Delirium Index. Functional status was measured by the validated OARS. Cognitive status was measured using the validated TICS-M. Functional and cognitive decline were obtained by comparing the baseline and 60-days follow-up scores. **Results:** 380 seniors were recruited and 280 had 60-day follow-up data available. ED-induced delirium was 8.4% of seniors. There was a difference in mean functional decline among seniors with and without ED-induced delirium 2.95(1.23-4.67) vs 1.55(1.20-1.91,  $p_{\text{wlicoxon}} = 0.05$ ) Proportion of seniors showing a decline  $\geq 2$  points on the OARS was significantly higher in those with ED-induced delirium (65.0 % vs 40.18 %,  $p = 0.03$ ). Seniors with ED-induced delirium also showed a significant decline in mean TICS scores [3.31 (0.82-5.84) vs -0.01 (-0.071-0.75)],  $p_{\text{wlicoxon}} = 0.009$ ]. There was no significant difference in the proportions of seniors showing a decline  $\geq 3$  OARS points between those with or without delirium ( $p = 0.06$ ). **Conclusion:** ED-induced delirium seems to be associated with poor functional and cognitive outcomes in older patients 60 days after discharge from the hospital. Further studies are required to confirm clinical importance ED-induced delirium delayed complication.

**Keywords:** delirium, geriatrics, emergency department

#### LO024

##### Time to perform ultrasound guided femoral nerve block in older hip fractures patients by emergency physicians

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**Introduction:** Ultrasound-guided femoral nerve block (USFNB) is optimal for providing analgesia for patients with hip fractures, but is rarely performed. Time of the procedure was cited as a barrier in our previous survey. **Methods:** We conducted a knowledge-to-practice intervention that included a two-hour training session on USFNB, use of a block kit, and reminders to improve uptake of USFNB. We measured the time it took for trained EPs to complete the block during a 20 month period. **Results:** Of

36 EPs, 34 (94.4%) were not routinely performing USFNB at the beginning of the study, and 4 declined to participate, leaving 30 participants who received training. The 30 trained EPs performed 100 USFNB over the next 20 months (range 1 to 20 blocks per EP). The mean reduction in pain was -4.47 on a 10 point numeric rating scale. The median time to perform the blocks was 15.0 minutes (IQR, 10 to 20 minutes), and 90 % of blocks took less than 30 minutes. The most common reason given for not performing a block was excessive clinical load. **Conclusion:** Given that we included 88.2% of eligible EP's and included the first time EP's performed a USFNB, our estimates of time to perform USFNB block should generalize to other Canadian academic ED's. Time to complete USFNB is in keeping with other commonly performed ED procedures and should not be a barrier to optimizing analgesia.

**Keywords:** older adults, hip fracture, regional anesthesia

#### LO025

##### In support of Choosing Wisely: variation in CT ordering for patients presenting to emergency with minor head injury

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**Introduction:** Individual and institutional disparities in CT imaging rates for patients with head injuries have long been recognized, leading to the development of well-validated clinical decision rules designed to standardize clinical practice. To assess their impact on current practice, we sought to evaluate variation in CT imaging by emergency physicians for patients presenting with head injury across the province of Alberta. **Methods:** A unique data warehouse merging administrative, clinical, and imaging platforms for 11 Alberta emergency departments (EDs) was created. Unique identifiers were obtained for all emergency physicians who were included in this analysis if they evaluated in excess of ten ED patients presenting with a chief complaint of "head injury". Patients with high triage acuity (CTAS 1) were excluded, as were patients who were admitted to hospital. Descriptive statistics were employed to describe variation between physicians and sites for a 24 month period from 2013-2015. **Results:** 311 emergency physicians treating 20,797 patient encounters for head injury were included. Overall a total of 8,245 head injury patients (40%) received one or more CT scans. Physician variation across the 11 sites ranged from 4% -100% of head injury patients receiving a CT. Within sites CT ordering between physicians varied from 9-fold (4% - 36%) at the lowest variation site, to more than 20-fold (4% - 90%) at the highest variation site. After removing the 5% lowest and highest ordering physicians, variation in ordering continued to range from 10% - 72%. No trends were observed across the two years examined. **Conclusion:** This is the largest study to date examining physician level variation in CT ordering practices for ED head injury patients. We have identified marked persistent practice variation despite the presence of well-validated clinical decision rules and a relatively low risk medicolegal environment. Variable risk tolerance and limited use of validated clinical decision rules are likely contributors making this area an ideal focus for targeted interventions to improve imaging appropriateness and reduce practice variation.

**Keywords:** Choosing Wisely, CT scans, practice variation

#### LO026

##### Outcomes of a provincial cardiac reperfusion strategy: a population-based, retrospective cohort study

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