

four-month pilot evaluation of medical scribes in the emergency department of the Queensway-Carleton Hospital in Ottawa, Ontario. Eleven scribes were utilized in the study ranging in age from 18 to 23 years old. Following scribe training and an initial two-month acclimation period for both scribes and physicians, data collection began January 2015. Twenty-two full or part time emergency physicians were followed in this study, who received shifts with and without a scribe over the next four months. Physician work hours as well as the number of patients seen by each physician on each shift was documented. From these metrics, PPH per physician was calculated for each shift. Across the four months, the average PPH was determined for each physician during shifts with a scribe and shifts without a scribe. Two-tailed paired-samples t-tests ($\alpha = 0.05$) were used to compare mean (SD) PPH within physicians based on presence or absence of a scribe. **Results:** A total of 463 physician hours were documented without use of a scribe and 693.75 physician hours were documented with use of a scribe. Across all 22 physicians in the study, 18 (81.8%) demonstrated a greater PPH with use of a scribe. Overall, PPH per physician was significantly greater (12.9%) during shifts with a scribe (mean 2.81, SD 0.78) compared to shifts without a scribe (mean 2.49, SD 0.60) ($p = 0.006$). Sensitivity analyses revealed that PPH per physician during shifts without a scribe during the study period were similar to the year prior, before scribes were introduced to the hospital ($p = 0.315$). **Conclusion:** Use of medical scribes resulted in an increased PPH per physician in our hospital. While these results were from an evaluation at a single centre, they support broader implementation and evaluation of scribes in more centres across Canada.

Keywords: health systems, productivity, wait times

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Novel role of physician navigators on performance indicators in the emergency department

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Introduction: Burnout rates for emergency physicians (EP) continue to be amongst the highest in medicine. One of the commonly cited sources of stress contributing to disillusionment is bureaucratic tasks that distract EPs from direct patient care in the emergency department (ED). The novel position of Physician Navigator was created to help EPs decrease their non-clinical workload during shifts, and improve productivity. Physician Navigators are non-licensed healthcare team members that assist in activities which are often clerical in nature, but directly impact patient care. This program was implemented at no net-cost to the hospital or healthcare system. **Methods:** In this retrospective study, 6845 clinical shifts worked by 20 EPs over 39 months from January 1, 2012 to March 31, 2015 were evaluated. The program was implemented on April 1, 2013. The primary objective was to quantify the effect of Physician Navigators on measures of EP productivity: patient seen per hour (Pt/hr), and turn-around-time (TAT) to discharge. Secondary objectives included examining the impact of Physician Navigators on measures of ED throughput for non-resuscitative patients: emergency department length of stay (LOS), physician-initial-assessment times (PIA), and left-without-being-seen rates (LWBS). A mixed linear model was used to evaluate changes in productivity measures between shifts with and without Physician Navigators in a clustered design, by EP. Autoregressive modelling was performed to compare ED throughput metrics before and after the implementation of Physician Navigators for non-resuscitative patients. **Results:** Across 20 EPs, 2469 shifts before, and 4376 shifts after April 1, 2013 were analyzed. Daily patient volumes increased 8.7% during the period with Physician

Navigators. For the EPs who used Physician Navigators, Pt/hr increased by 1.07 patients per hour (0.98 to 1.16, $p < 0.001$), and TAT to discharge decreased by 10.6 minutes (-13.2 to -8.0, $p < 0.001$). After the implementation of the Physician Navigators, overall LOS for non-resuscitative patients decreased by 2.6 minutes (1.0%, $p = 0.007$), and average PIA decreased by 7.4 minutes (12.0%, $p < 0.001$). LBWS rates decreased by 43.9% (0.50% of daily patient volume, $p < 0.001$). **Conclusion:** The use of a Physician Navigator was associated with increased EP productivity as measured by Pt/hr, and TAT to discharge, and reductions in ED throughput metrics for non-resuscitative patients.

Keywords: performance, physician productivity, efficiency

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Validation of the Ottawa 3DY in community seniors in the ED

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Introduction: Cognitive dysfunction is getting more common in geriatric emergency department (ED) patients, as the number of seniors visiting our EDs is increasing. ED guidelines recommend a systematic mental status screening for seniors presenting to the ED. As the existing tools are not suitable for the busy ED environment, we need quicker and easier ways to assess altered mental status, such as the O3DY. The purpose of this study is to assess the effectiveness of the French version of the O3DY to screen for cognitive dysfunction in seniors presenting to the ED. **Methods:** This is a planned sub-study of the INDEED project, which was conducted between February and May 2016 in 4 hospitals across the province of Québec. Inclusion criteria were: patients aged ≥ 65 , with an 8-hour ED stay, admitted on a care unit, independent or semi-independent in their activities of daily living. Exclusion criteria were: patient living in a long-term nursing facility, with an unstable medical condition, pre-existing psychiatric condition or severe dementia, a delirium within the 8-hour exposure to the ED. A trained research assistant collected the following data upon initial interview: socio-demographic information, cognitive assessment (TICS-m), functional assessment (OARS) and delirium screening (CAM). The O3DY was also administered at initial interview and during patient follow-ups, as well as the CAM. **Results:** This study population was composed of 305 participants, of which 47.7% were men. Mean age was 76 years old (SD: 10.8). Nine of these participants had a previous history of dementia. 151 of these participants (47.04%) had a negative O3DY and 154 (47.98%) a positive O3DY at the initial encounter. When compared to the CAM, the O3DY presents a sensitivity of 85.0% (95% CI [62.1, 96.8]) and a specificity of 57.7% (95% CI [51.8, 63.6]) for prevalent delirium. When compared to the TICS, the O3DY presents a sensitivity of 76.7% (95% CI [66.4, 85.2]) and a specificity of 68.1% (95% CI [61.3, 74.3]) for cognitive impairment. The **combined measure** presents a sensitivity of 76.7% (95% CI [66.6, 84.9]) and a specificity of 68.4% (95% CI [61.7, 74.5]). **Conclusion:** A negative result to the O3DY indicates the absence of prevalent delirium or undetected cognitive impairment. The O3DY could be a useful tool for the triage nurses in the ED.

Keywords: validation, Ottawa 3DY, seniors

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Risk factors associated with acute in-hospital delirium for patients diagnosed with a hip fracture in the emergency department

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