Impact of physician navigators on measures of emergency department efficiency

A. Leung, MD, Z. Gong, MSc, B. Chen, PhD, M. Duic, MD; Department of Family Medicine, Kingston, ON

Introduction: The Physician Navigator (PN) is a novel position created to manage patient flow in real-time at a very-high volume emergency department (ED). When paired with an emergency physician, PNs actively track patient wait times, and direct the physician to see and re-assess patients in a particular order to improve measures of emergency department efficiency, and maximize patient flow. Anecdotal evidence has shown that PNs decrease length-of-stay times for non-resuscitative patients in the setting of increased patient volumes, and without additional nursing or physician hours. The objective was to study the operational impact of PN on emergency department patient flow.

Methods: A 48-month pre-/post-intervention retrospective chart review at an urban community emergency department from September 2011 to September 2015. The PN program started on March 1, 2013. The main outcome is emergency department length-of-stay (LOS). Secondary outcomes include time to physician-initial-assessment (PIA), left-without-being-seen rates (LWBS), left-against-medical-advice (LAMA), and physician satisfaction rates. Autoregressive integrated moving average models were generated for Canadian Triage and Acuity Scale (CTAS) 2 to 5 patients to quantify the immediate impact of the intervention on the outcome levels, and whether the impact was sustained over time.

Results: Interim results are provided. 399,958 patients attended the ED during the study period. Daily patient volumes increased 11.2% during the post-intervention period. There were no significant increases in the number of physicians shifts/day, and physician hours/day during the post-intervention period. Post-intervention, for CTAS 2-5 patients, there was a reduction in average LOS by 0.04 hours/PN (p = 0.05), and 90th-percentile LOS by 0.14 hours/PN (p = 0.05). For secondary outcomes, there was a decrease in overall average PIA by 6.37 minutes/PN (p = 0.05), and 90th-percentile PIA by 8.29 minutes/PN (p = 0.05). LWBS rates decreased by 40.8% (p = 0.05). There were no significant changes in LAMA rates.

Conclusion: The implementation of Physician Navigators is associated with significant reductions in LOS, PIA, and LWBS rates for non-resuscitative patients at a very-high volume emergency department.

Keywords: patient flow, efficiency