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Improving urology care in the emergency department through implementation of an Acute Care Urology model

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Introduction: Renal colic is one of the most common presentations to the emergency department (ED), and often requires complex interdisciplinary collaboration between emergency physicians and urology surgeons. Previous literature has shown that adoption of interdisciplinary rapid referral clinics can improve both timeliness of care and patient outcomes. However, these Acute Care Surgery models have not yet been commonly adopted for urology care in the ED. **Methods:** In July 2016, we adopted the intervention of an Acute Care Urology (ACU) model through the creation of a rapid referral clinic dedicated to ED patient referrals, the addition of an ACU surgeon, and enhanced use of daytime OR blocks. We conducted a manual chart review of 579 patients presenting to the ED with a complaint of renal colic. Patient data was collected in two separate time periods to analyze trends before implementation of the ACU model (pre-intervention, September - November 2015), to examine the model's impact (post-intervention, September - November 2016). Secondary methods of evaluation included a survey of 20 ED physicians to capture subjective feedback through Likert scale data. **Results:** Of the evaluated 579 patients with a complaint of renal colic, 194 patients were discharged from ED with a diagnosis of obstructing kidney stone and were referred to urology for outpatient care. The ED-to-clinic time was significantly lower for those in the ACU model ($p < 0.001$). The mean time to clinic was 15.76 days (SD = 15.47, range 1-93) pre-intervention versus 4.17 days (SD = 2.33, range = 1-12) post-intervention. Furthermore, the ACU clinic allowed significantly more patients to be referred for outpatient care ($p = 0.0004$). There was also higher likelihood that patients would successfully obtain an appointment following referral ($p = 0.0055$). Decreasing trends were shown in mean ED wait time, in addition to time from assessment to procedure. Results of the qualitative survey were overwhelmingly positive. All 20 surveyed ED physicians were more confident that outpatients would be seen in a timely manner (85% strongly agree, 15% agree). Qualitative feedback included the belief that follow-up is more accessible, that ED physicians are less likely to page the on-call urologist, and that they are able to discharge patients sooner. **Conclusion:** The ACU model for patients with renal colic may be beneficial in reducing ED-to-clinic time, ensuring proper follow-up after ED diagnosis, and improving patient care within the ED.

Keywords: colic, renal, urology

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Emergency physicians' self-reported management of benign headache in Alberta emergency departments

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Introduction: Benign headache (BHA) management varies across emergency departments (EDs). This study documented current BHA management by Alberta emergency physicians (EP) in order to develop a provincial intervention to improve standardized practice. **Methods:** A convenience sample of Alberta EPs completed an online

survey exploring their ED BHA management practices. Results are expressed as proportions. **Results:** A total of 73 EPs (73/192; 38%) who were mostly male (63%) and practiced emergency medicine for at least 15 years (51%) responded. EPs reported routine ED orders for metoclopramide (97%), ketorolac (90%) and IV fluids (85%) for patients with BHA showing no signs of pathological headache. For moderate-severe BHA's that did not improve with routine treatment, preferences were: IV narcotic (58%), IV dexamethasone (44%), and IV/IM dihydroergotamine (27%). Typically, EPs reported not ordering investigations for moderate-severe BHA presentations (88%); however, for those not improving the most common investigation was computed tomography (CT; 47%). CT ordering was associated with the following clinical scenarios: 1) not responding to traditional therapy and consulted to specialist (64%); 2) not responding to traditional therapy and being admitted (64%); 3) first presentation and afebrile (19%); 4) severe pain (11%); and 5) responding to traditional therapy and febrile (11%). One-quarter of EPs (27%) believed their patients usually or frequently expected a CT. Most EPs (60%) reported being completely or mostly comfortable discussing CT risks. Only 44% reported always or usually discussing risks prior to ordering. EPs reported that they were most frequently prevented from discussing risks because the patient was critically ill (42%) or because they believed explaining risks would not alter patient expectations (21%). These concerns were mirrored in the barriers EPs anticipated to limiting imaging, specifically the fear of missing a severe condition (62%), and patient expectation/request for imaging (48%). **Conclusion:** Self-reported treatment preferences for uncomplicated BHAs appear to be relatively consistent. Chart reviews could help assessing the reliability of self-reported BHA management practices. Perceived patient expectation appears to be an important influence on EP imaging ordering. Studies examining the communication between EPs and their patients are needed to explore how these expectations and perceived expectations are negotiated in the ED.

Keywords: benign headache, computed tomography, emergency department

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Do QR codes effectively engage patients in research while visiting the emergency department?

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Introduction: Efforts to engage patients in research when presenting to emergency departments (EDs) have explored the utility of online tools; for example, through QR-based applications. It is unclear whether these are effective strategies for engaging patients in research activities while saving costs of in-person surveys. This study evaluated whether patients would participate in QR codes or short URL-linked surveys available in EDs across Alberta. **Methods:** A patient waiting room poster was developed as part of a stepped-wedge randomized controlled trial. The waiting room poster was introduced in 15 urban and regional Alberta EDs with a median annual volume of approximately 60,000. A QR-code and short URL were placed on the poster inviting patients to participate in an online survey and evaluate the poster's usefulness and acceptability. Additionally, written discharge instructions, which were part of the intervention materials, were distributed with QR-code and short URL link to surveys for patients to share their ED care experience. Patients were not