

**MP34****Evaluation of real-time virtual support for rural emergency care**

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**Introduction:** In many rural and remote communities in BC, family physicians who are providing excellent primary and emergency care would like to access useful, timely, and collegial support to ensure the highest quality of health services for their patients. We undertook a real-time virtual support project in Robson Valley, located in northern BC, to evaluate the use of digital technologies such as videoconferencing for on demand consultation between family physicians at rural sites and emergency physicians at a regional site. Telehealth consults also occurred between rural sites with nurses at community emergency rooms consulting with local on-call physicians. Our aim was to use telehealth to facilitate timely access to high quality, comprehensive, coordinated team-based care. An evaluation framework, based on the Triple Aim sought to: 1) Identify telehealth use cases and assess impact on patient outcomes, patient and health professional experience, and cost of health care delivery; and 2) Assess the role of relationships among care team members in progressing from uptake to normalization of telehealth into routine usage. **Methods:** Using a participatory approach, all members of the pilot project were involved in shaping the pilot including the co-development of the evaluation itself. Evaluation was used iteratively throughout implementation for ongoing quality improvement via regular team meetings, sharing and reflecting on findings, and adjusting processes as required. Mixed methods were used including: interviews with family physicians, nurses, and patients at rural sites, and emergency physicians at regional site; review of records such as technology use statistics; and stakeholder focus groups. **Results:** From November 2016 to July 2017, 26 cases of telehealth use were captured and evaluated. Findings indicate that telehealth has positively impacted care team, patients, and health system. Benefits for care team at the rural sites included confidence in diagnoses through timely access to advice and support, while emergency physicians at the regional site gained deeper understanding of the practice settings of rural colleagues. Nevertheless, telehealth has complicated the emergency department work flow and increased physician workload. Findings demonstrated efficiencies for the health system, including reducing the need for patient transfer. Patients expressed confidence in the physicians and telehealth system; by receiving care closer to home, they experienced personal cost savings. Implementation saw a move away from scheduled telehealth visits to real use of technology for timely access. **Conclusion:** Evidence of the benefits of telehealth in emergency settings is needed to support stakeholder engagement to address issues of workflow and capacity. This pilot has early indications of significant local impact and will inform the expansion of emergency telehealth in all emergency settings in BC.

**Keywords:** quality improvement and patient safety, telehealth, rural

**MP35**

**An educational and audit-and-feedback approach to decreasing unnecessary intravenous therapy in low-acuity emergency patients**  
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**Introduction:** Intravenous (IV) therapy in the emergency department (ED) is associated with risk of harm from IV complications, higher ED monitoring requirements and increased ED length of stay (LOS), the

latter a measure most cumbersome in lower-acuity patients that are eventually discharged from the ED. The aim of this quality improvement project was to evaluate the effectiveness of educational and audit-and-feedback interventions, with a goal of relative reduction of ED IV therapy by 20% over eight week periods, in lower-acuity patients in the high-turnover intake area of the ED who were discharged from the ED. **Methods:** The first cycle of the project was education about IV therapy use and alternatives in lower-acuity, ED patients (Canadian Triage Acuity Scale (CTAS) 3 and 4) from July 2 to August 31, 2017. Education was delivered through email information, posters, education sessions with nurse educators, and working groups sharing information. The second cycle of the project, from October 16 to December 15, 2017, also integrated an audit-and-feedback tool whereby physicians received their own pooled ordering data of IVs from the same period the previous year and then trial period as well pooled comparison averages for the physician group in the population of interest. Measures were the percentage of IVs ordered by physicians and administered by nurses in the population of interest in each time period. **Results:** From July 2 to August 31, 2017, when the intervention was education only, the rate of IV therapy changed from 31% to 37%, which reflects a 19% relative increase in IV use. In the beginning of the second cycle utilizing both education and audit-and-feedback interventions, from October 16 to December 15, 2017, 35% of patients had IV therapy. At the end of the second cycle, 25% of patients had IV therapy, a 28% relative decrease in IV therapy rates. When both cycles are reviewed sequentially, IV therapy rates decreased from 31% to 25%, a relative reduction of IV usage of 19%. **Conclusion:** In this quality improvement project, an educational initiative for the interdisciplinary team alone did not reduce IV use in lower-acuity patients. Concurrent education and audit-and-feedback interventions were more effective than education alone in decreasing IV therapy in appropriately selected patients in a tertiary ED. **Keywords:** quality improvement and patient safety, audit and feedback, intravenous therapy use

**MP36**

**Can one emergency physician improve department flow? A proof-of-concept trial of a physician float role**

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**Introduction:** Emergency departments (EDs) are overcrowded and patient acuity and volumes are ever-increasing. While changes to the flow of ED patient input and output are outside the control of frontline ED teams, the efficiency of ED throughput can be optimized. One widely studied intervention is the implementation of a physician liaison role to assist in managing overall ED flow. The Physician Float (PF) acts as a triage liaison, second physician for resuscitations, ED procedural sedation physician, and fields ED referral calls. This is a first-iteration proof-of-concept trial to plan, implement and evaluate if the PF role could decrease ED length of stay (LOS) by a goal of 30 minutes, over a four-week period, without adverse changes to left without being seen (LWBS) and bounce-back rates. **Methods:** The PF role was implemented as a scheduled emergency physician shift in the fall of 2017. Ongoing iterations of this role implementation are being reviewed for re-implementation. The primary outcome measure was ED LOS; secondary outcomes included time-to-physician initial assessment (PIA), EMS offload rates, and LWBS and 72-hour bounce-back rates. Qualitative data including patient concerns and physician feedback were also collected. Data were collected after the trial from a