

incorrectly assuming a finding was seen by the EP. Our aim was to develop an IT-based system that permitted Radiologists to view EPs documented x-ray interpretations real-time. Based on engagement with both groups, it was essential that the system be user friendly and not add significantly to an already busy workload. **Methods:** An online reporting system was introduced in 2011, but with complaints that interpretations were not readily accessible, nor automatic. A revised system was launched in 2014 with 2 improvements: i) EP entered interpretation onto “sticky note” in PACs directly; and ii) EP interpretation “popped up” when a film was opened by Radiologist. **Results:** Both systems allowed data collection of the percentage of events EPs entered an interpretation. Prior to 2011, 0% of films had EP interpretations available to Radiologist, 33% with initial, and 53% with PACS. The revised system has enabled EPs to enter their x-ray interpretation which has resulted in improvement both *subjectively*, based on regular feedback from both EPs and Radiologists, and *objectively*. **Conclusion:** From this and other quality improvement initiatives, we have learned the importance of engaging frontline practitioners in process changes, specifically the impact on workflow. Also, utilizing existing IT systems and resources can result in positive change with minimal costs.

**Keywords:** communication, x-ray, quality

#### P086

##### **Accuracy of the Ottawa Ankle Rules when applied by allied health providers in a pediatric emergency department**

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**Introduction:** The Ottawa Ankle Rules (OAR) are a clinical decision tool used to minimize unnecessary radiographs in ankle and foot injuries. The OAR has been shown to be a reliable rule to exclude fractures in children over 5 years of age. However, there is limited data to support its use by other health care workers in children. Our objective was to determine the sensitivity and specificity of the OAR, to detect clinically significant fractures, when applied by allied health providers (AHPs). **Methods:** Children aged 5 to 17 years presenting with an acute ankle or foot injury were enrolled. Patients assessed by a physician prior to an AHP, presenting for reassessment or > 24 hours after the injury, having open, penetrating or neurovascular injury, or multiple injuries were excluded. Patients with metabolic bone disease, a previous x-ray, or the inability to communicate or ambulate before the injury were also excluded. Baseline data on x-ray use was collected in a convenience sample of 100 patients. AHPs then completed an OAR learning module. Then in phase 2, AHPs applied the OAR to a convenience sample of 186 patients. Both AHPs and physicians performed inter-observer assessments. **Results:** When AHP's applied the ankle portion of the OAR, the sensitivity was 88% (95% CI 46.7-99.3) and the specificity was 32.5% (95% CI 24.5-41.6) for clinically significant fractures. When AHP's applied the foot portion of the OAR, the sensitivity was 87.5% (95% CI 46.7-99.3) and the specificity was 15.6% (95% CI 7.0-30.1) for clinically significant fractures. In total, 2 clinically significant fractures (1 foot fracture and 1 ankle fracture) were missed by AHP's. Inter-observer agreement was  $\kappa = 0.24$  for the ankle rule and  $\kappa = 0.32$  for the foot rule. The missed ankle fracture had a positive OAR when performed by a physician as an inter-observer assessment. The missed foot fracture was a distal metatarsal fracture that was outside of the “foot zone” as defined by the OAR. **Conclusion:** The sensitivity of the OAR when applied by AHP's was very good. Both clinically significant fractures that were missed by AHP's would likely have been picked up by a physician assessment. More training and practice using the OAR

would likely improve AHP's inter-observer reliability. Our data suggest the OAR may be a useful tool for AHP's to apply as a screening tool prior to physician assessment.

**Keywords:** Ottawa Ankle Rule, radiography, allied health providers

#### P087

##### **Overview of reviews: relevant treatment modalities for management of low back pain in the emergency department**

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**Introduction:** Low Back Pain (LBP) remains a condition with relatively high incidence and prevalence. It affects 70-85% of people at some point in their lives and causes significant disability. LBP management may be best suited to a primary care setting, yet it is one of the most common reasons for presentation to Emergency Departments (ED). Nationally representative data from the United States found that LBP related disorders are a frequent cause of ED visits, accounting for 2.7 million visits to US EDs annually. There are numerous treatment modalities for LBP, however the task is identifying those that have relevance in an ED setting. Although there is extensive research available on management of LBP in primary care settings, treatment outcomes differ from that in the ED setting. This makes management of LBP a challenge for ED physicians. Few studies and no systematic reviews focus on treatment of LBP in the ED setting. **Methods:** The objective of our study is to compare effectiveness of treatment modalities relevant for management of LBP in the ED setting. We conducted an Overview of Systematic Reviews following robust methods advocated by Cochrane. We included systematic reviews of randomized controlled trials (RCTs). A medical librarian assisted in completing of an extensive search of the Cochrane Library, PubMed, and EMBASE. We used transparent criteria to select relevant reviews and assess interventions for ED relevance. We collected key data points from the included reviews including pain and functional limitation outcomes. Evidence will be synthesized for important outcome measures following the approach of Jones et al (2012). **Results:** We screened 4740 citations and identified 346 likely relevant systematic reviews. Comparative effectiveness review synthesis will be completed before the conference. We will report effectiveness of each of the included interventions and as well as make head to head comparisons of said relevant interventions. **Conclusion:** Currently most LBP patients presenting to the ED are inundated with a variety of potential treatment modalities, all alleging efficacy in LBP management. Physicians may use the evidence from this synthesis, and related knowledge translation tools, to guide decisions in effectively treating patients presenting to the ED with LBP.

**Keywords:** low back pain, emergency department, treatment effectiveness

#### P088

##### **British Columbia emergency practitioner workforce and training survey**

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**Introduction:** Understanding physician human resources in British Columbia's (BC) emergency settings is essential to plan for training, recruitment and professional development programs. In 2014 we conducted an online and phone survey to the site leads for the 95 Emergency Departments (ED) attached to hospitals in BC. **Methods:** A