

**MP26****Rate and outcome of incidental findings among abdominal computed tomography scans in the emergency department**

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**Introduction:** With the increased accessibility of computed tomography (CT), use in the emergency department has increased. Increased use has led to a reduction in missed diagnoses but also an increase in radiation burden and the increased likelihood of incidental findings. In this study, we sought to characterize the use of abdominal CTs at an academic tertiary center in order to quantify the rate and clinical significance incidental findings. **Methods:** This was a retrospective chart review of radiological database of all abdominal CT ordered by the emergency department from January 1<sup>st</sup> to March 21<sup>st</sup> 2015. Incidental findings requiring follow up were defined by the American college of radiology guidelines. Clinically significant incidental findings were defined as those that resulted in a finding of malignancy or comparably serious disease. Abdominal CTs were excluded if they were ordered together with CT thorax. The data was abstracted by one trained reviewer using a standardized data collection sheet and 10% of the data was verified by a second reviewer. Inter-rater reliability reported by Kappa statistic. Data were reported as mean and standard deviation. A sample size of 770 was calculated based on an expected difference in prevalence between significant and non-significant incidental findings of 80% ( $\alpha = 5\%$ , Power = 90%). **Results:** A total of 1882 imaging studies were included (56.3% female, age 59.4 years (16.3), CTAS 3 (1.3). The most common presenting complaints: abdominal pain (980, 52.1%), flank pain (196, 10.4%) and nausea/vomiting (111, 6%). Indications included rule out (r/o) obstructing renal stones/colic (329; 17.5%), r/o diverticulitis/colitis (307; 16.4%) and abdominal pain not yet differentiated (283; 15.1%). The most common final diagnoses as a result of CT were renal stone/colic (212, 11.3%), colitis/diverticulitis (191, 10.2%), and bowel obstruction (111, 6%). Incidental findings recommending further imaging occurred in 93 (4.9%). Of these, 43 were completed, and 15 resulted in clinically significant findings: cancer of the colon (2), lung (2), bladder (2), metastatic cancer (2), adnexa (4), endometrium (1), lymphoma (1), and venous thrombus (1). **Conclusion:** Incidental findings are far less common (5%) than previously reported (as high as 30%) and rarely clinically significant.

**Keywords:** abdominal computed tomography, emergency department

**MP27****Costs of emergency syncope care in Canada**

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**Introduction:** Syncope is a common emergency department (ED) presentation and constitutes 1% of all ED visits, approximately 160,000 visits annually across Canada. Lack of standardized syncope care has economic and cost implications. Currently, emergency medical services (EMS) is over utilized, variations in ED management exist and a substantial proportion (46.5%) are hospitalized for cardiac monitoring. Our previous studies have proposed ways to reduce health care utilization through development of EMS clinical decision tool, ED risk scores and remote cardiac monitoring. We sought to: 1) Estimate costs associated with syncope care in the pre-hospital, ED and inpatient settings; and

2) Determine potential cost savings if the proposed alternate strategies were adopted. **Methods:** A prospective cohort study was conducted in five Canadian EDs from 2010-2014. We enrolled adult ( $\geq 16$  years) syncope patients and excluded those with prolonged loss of consciousness, mental status changes, seizure, significant trauma, or alcohol/illicit drug abuse. Demographics, medical history, mode of arrival, EMS time points, reasons for hospitalization, ED and inpatient length of stay, final ED diagnosis and any serious adverse event within 30 days of index visit were collected. Descriptive and inferential statistics were used. **Results:** Out of 4,064 patients enrolled, 67.3% were transported to the ED by EMS and the average cost per event was \$262.78 (range at study sites: \$156.43-\$553.03). The average cost per ED visit was \$267.98 (range: \$174.66-\$374.95). 12.9% of the patients were admitted and the average of cost per admission was \$9,886.15 (range: \$9,715.23-\$10,277.98). Syncope is associated with an estimated total annual cost of \$257 million. In Canada, we estimate that diverting low-risk patients will save \$5 million in the pre-hospital setting and \$15 million in the ED annually, and implementing a remote cardiac monitoring strategy will save \$50 million annually. **Conclusion:** It is estimated that the proposed strategies will save \$70 million annually. This is likely an under-estimation as cost savings due to reduction in investigations related to diversion of ED patients, reduction in ED length of stay and hospitalization are unaccounted. Adoption of similar strategies will likely lead to significantly higher cost savings in countries with higher resource utilization for syncope management.

**Keywords:** syncope, cost analysis, resource utilization

**MP28****A randomized comparative trial of the usage, knowledge retention and media preferences in undergraduate medical students using podcasts and blog posts**

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**Introduction:** Podcasts and blog posts are gaining popularity in Free Open Access Medical education (FOAMed). However, there remains a paucity of research comparing the two media for undergraduate medical education. This study aims to investigate if there are differences in medical students' usage conditions, knowledge retention and preferences in the two types of media (podcasts, blog posts). **Methods:** Medical students were block-randomized to either the podcast or blog post group according to their year of schooling. They completed an online assessment of their baseline knowledge on the subject matter and preferences within the various types of media. Participants then received access to learning materials and were given four weeks to complete the follow-up assessment. Simple descriptive statistical data were used to detail student preferences. Paired samples t-tests and a Repeated Measures Analysis of Variance (RM-ANOVA) were conducted to assess knowledge acquisition. A carry forward analysis was used to impute missing data from students lost to follow-up. **Results:** A total of 65 medical students participated in our study (podcasts n = 33, blog posts n = 32). The initial survey suggests that students prefer general topic discussion and "approach-to" themes (68% and 84%, respectively). 55% of students in the podcast group preferred podcasts that were less than 30 minutes. None of the blog post group preferred a shorter text, and each blog post required a mean of 25 minutes to read. Completion of at least one follow-up assessment was comparable (68% podcasts, 70% blog posts). The podcast listeners tended to engage in multiple activities while using the learning material (e.g. at least 2-3 of the following: driving, eating, chores, taking notes, exercising), while the blog readers tended to do fewer activities (e.g. only 1 of the