

complicated culture rate had increased significantly from 35% to 72%. **Discussion/Impact:** In the ED, ordering of cultures for patients being discharged, regardless of type, is commonly associated with concern of result follow up, which may take up to 72 hours. This discrepancy system was implemented to ensure that all urine cultures ordered had appropriate follow up, thus supporting physicians in ordering cultures when indicated. The significant improvement in culture rate from 35% to 72% is balanced by one single culture of all 9 simple UTIs (11%). In PDSA cycle 2, we hope to increase rates to 90% by improving current challenges with the system.

**Keywords:** complicated urinary tract infection, quality improvement and patient safety, urine culture

#### P010

##### An examination of sample size selection in medical record reviews in emergency medicine journals

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**Introduction:** Medical record review (MRR) studies are commonly used in Emergency Medicine (EM) research. It is not always clear how sample size calculations are reported, or the methods by which they were derived. This scoping review sought to examine reporting and justification of MRR sample sizes from the EM literature. **Methods:** Using Web of Science, we identified the top ten journals, based on impact factor rating in 2018, within the field of Emergency Medicine. Journals were excluded if they were not in English or did not include sufficient articles for analysis. Within each of these ten selected journals, we searched for chart reviews and related terms: "medical record", "outpatient record", "inpatient record", "clinical record", and "nursing note". From this search subset, five articles were randomly selected from each journal. Data about sample size and sample size selection were extracted and analyzed by two reviewers independently for each article. **Results:** Of the 50 articles randomly selected, 48 articles were retrospective MRRs and two articles were prospective MRRs. 78% (39 articles) chose sample size based on availability, 14% (seven articles) chose sample size based on power calculations, 4% (two articles) chose sample size based on a previous study's methodology, and 4% (two articles) did not give details on sample size selection. **Conclusion:** While some emergency medicine MRRs based sample size selection on power or previous studies, the vast majority are based on availability with study-specific exclusion/inclusion criteria. This may indicate they are using a smaller sample size than necessary to be sufficiently powered to assess their end goal. More work is required to determine the effect of this on outcomes and interpretability of results, as well as which method is most accurate and efficient.

**Keywords:** medical record review, sample size calculation, sample size decision making

#### P011

##### A learning module for better medical record review research.

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**Innovation Concept:** The objective of this research study was to create a flipped classroom, interactive, experiential learning module on how to do a medical record review study. It is designed for medical students, residents, physicians, and researchers to have a remote, online, but interactive experience that expands on textbook concepts. The "flipped classroom" means that learners will guide their own

education. This learning module will include a pre-test, interactive video module, and a post-test. These components will ensure each learner reaches previously set learning goals and not only solidify the learning of learners but validate the educational method, proving its value. **Methods:** A review of the literature indicates that medical record review is a valuable method of research in emergency medicine however researchers may encounter methodological difficulties, and sometimes medical record reviews are performed in a suboptimal manner due to these difficulties. We are creating a learning module that builds off of the chapter in the Royal College Research Guide and elaborates on various elements, including sample size calculation. Previous work indicates that a flipped classroom approach in medicine to learning has been well developed and is backed by evidence as well as learner preference to guide their own learning. **Curriculum, Tool, or Material:** The learning module was initiated from the Royal College Research Guide chapter on how to conduct medical record review research. The module is a white board drawing style video that combines elements of explanation and elaboration of the chapter information and a step by step, learner-interactive example of a medical record research project creation. **Conclusion:** Medical record review research is accessible to many researchers due to the availability of data. This innovation would help ensure that with this availability, good research is being conducted. Future steps will involve testing and validating this learning module using the pre and post-tests, and expanding to create other, similar modules for other Royal College Research Guide chapters.

**Keywords:** flipped classroom, innovations in EM education, medical record review

#### P012

##### Does physician burnout differ between urban and rural emergency medicine physicians? A comparison using the Maslach Burnout Inventory tool

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**Introduction:** Previous literature suggests that emergency medicine physicians experience high levels of work-related burnout. However, these results are drawn primarily from physicians working in large urban emergency departments. The aim of this study was to compare physician wellness between emergency medicine physicians working in urban versus rural settings. **Methods:** Emergency medicine physicians were recruited to complete a wellness survey from both urban and rural emergency medicine departments in Southwestern Ontario. The primary outcome measure of interest was physician burnout as measured by the Maslach Burnout Inventory-Human Services Survey (MBI-HSS). This survey tool measures physician burnout in the three domains of emotional exhaustion, depersonalization, and personal accomplishment. Descriptive statistics, paired t-tests and Mann-Whitney U tests were used to analyze parametric and non-parametric burnout domain data respectively. **Results:** Surveys were completed by 67/99 (68%) and 22/66 (33%) of urban and rural emergency medicine physicians, respectively. An emotional exhaustion score  $\geq 27$  OR a depersonalization sub-score  $\geq 10$  was considered the threshold for burnout and was found in 71.4% (40/56) of urban physicians surveyed and 85.7% (18/21) ( $P = 0.20$ ) of rural physicians. No statistically significant difference in mean emotional exhaustion, depersonalization, or personal accomplishment was noted between groups. **Conclusion:** High levels of burnout were noted amongst both urban and rural emergency medicine physicians. No statistically