

Q5

Type of Project Grant

RESEARCH: To investigate a question and/or to develop a technology in pathology/lab medicine services that improves healthcare quality, cost, or access.

Q6

Estimate of Total Budget (no details at this time, just total value up to \$5,000 for one year)

5,000

Q7

Short title: (<4 words)

Pediatric liver biopsy utilization

Q8

Full Title:

Liver biopsy utilization and complications among hospitalized children in the United States in 1998-2014

Q9

Short Summary: (<250 words)

Quantifying the utilization of health services is essential for informing clinical practice and guiding evidence-based care. The utilization of liver biopsies among pediatric patients is understudied, and the indications, complications, and associated costs have not been well-characterized.

We propose to study inpatient liver biopsies among children using a large, nationally-representative database of discharge records, the Nationwide Inpatient Sample (NIS), which has been used extensively to study inpatient healthcare utilization. As the majority of liver biopsies in children occurs in the inpatient setting, the NIS data represents a valuable resource to characterize the epidemiology, inform guidelines, and estimate the complication rates of liver biopsies among pediatric patients. Using discharge records of over 10,000 pediatric patients who underwent an inpatient liver biopsy in 1998-2014, we propose to (1) analyze trends in the utilization of liver biopsies, (2) quantify rates of post-biopsy morbidity and mortality, and (3) characterize baseline co-morbidities and diagnoses.

My faculty mentor and I both have PhD-level training in epidemiology and biostatistics and extensive experience in data analysis; we believe the completion of this study is feasible within 4-6 months. We also have longstanding relationships with several pediatric hepatologists who can provide additional clinical context for the findings of our study. The funding provided by this grant will be used to purchase the NIS data (1998-2007) and software necessary for data analysis. We anticipate that our study could readily be extended to investigate inpatient healthcare utilization of biopsies of other organ systems.
