

## Impact of a web-based clinical decision-support system on pulmonary embolism diagnoses

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### Introduction

Pulmonary embolism (PE) is a disease that offers a diagnostic challenge for physicians. Literature suggests a gap remains between PE diagnostic guidelines and adherence to such guidelines in practice. While computerized decision support systems (CDSS) for PE exist, evidence is lacking on their impact in clinical settings.

### Objectives and Approach

The objective is to evaluate the impact of a web-based PE-CDSS on physician adherence to diagnostic guidelines by collecting and linking chart review data, hospital administrative data, and PE-CDSS usage data from six months before and after the CDSS is deployed. This CDSS was integrated into an electronic medical record system and deployed at two inpatient hospital sites in early 2018. Pre- and post-intervention workups are assigned a score based on their adherence to PE diagnostic guidelines, then compared. Data from a third hospital site with no access to the PE-CDSS will be used as a control.

### Results

Preliminary results will be available by mid-2018. Based on previous research, the investigators expect to see increased provider adherence to diagnostic guidelines for PE in settings where the PE-CDSS was deployed.

### Conclusion/Implications

Implementing a PE-CDSS may increase provider adherence to evidence-based diagnostic guidelines by providing supportive information about PE diagnosis and addressing uncertainties about clinical decision making. This could result in greater diagnostic accuracy for PE and improved outcomes for patients with suspected PE.

