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Data Driven Approaches to Improving Risk Prediction of Pulmonary Complications After Major Inpatient Surgery

Abstract

This grant will improve our understanding of major pulmonary complications after surgery. These complications are devastating to patients and are a leading cause of death and prolonged hospitalization. Utilizing the Multicenter Perioperative Outcomes Group database, a unique resource based the University of Michigan, my project is based on a wealth of electronic medical record derived data describing contemporary practice in over 50 institutions throughout the United States. We will seek to understand of who is at risk of developing these complications and what factors in during anesthesia care may be associated with them. Through the clinically informed application of contemporary data science methods, I hope to be able to better inform decisions made prior to surgery and identify ways of reducing risk and improving patient outcomes.