Individualized Risk Assessment in Patients with Multiple Chronic Conditions

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Description

Although complication rates from major surgery rise with age and multiple conditions, the effect of specific combinations or sequences of comorbid conditions on outcome is not well understood. The availability of a reliable, easy to use and accessible risk prediction tool in surgery is essential. The focus of the project is on the enhanced risk prediction ability of novel dynamic statistical models that will relate the timing, sequence, and clustering of chronic conditions to effectiveness, safety, resource use, and cost of the 10 most commonly performed major elective surgical procedures.

Specific Aims

1. Predict the risk of adverse events following a major elective surgical intervention in patients with MCC, and compare the model's predictions to those derived from conventional models using comorbidity indices.
2. Determine the relative contributions of specific combinations, sequences, and timing of MCC to health care utilization and cost of common elective surgical procedures.

Main Objective

Develop better risk prediction tool for adverse events in surgery focusing on clustering and temporal sequencing of chronic conditions.

Chronic Conditions Considered

Not specified

Study Design, Data Sources & Sample Size

A large commercial payer database of >100 million lives between 2007 and 2011.

Strategies Addressed from the HHS Strategic Framework on Multiple Chronic Conditions

4.B.   Understand the epidemiology of multiple chronic conditions

4.C.   Increase clinical health research

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