

The Business Case for Reduction in Surgical Complication Rates in the VA

Mary Vaughan Sarrazin, PhD

CRIISP, Iowa City, IA

BACKGROUND

The VHA expends considerable resources on surgery. System-wide expenditures for surgery were \$1.6 billion in 2003 and grew 17% from in the two-year period 2001 to 2003. Surgical complications contribute significantly to these costs; preliminary studies indicate that some complications may increase costs by upwards of \$50,000 per occurrence. Importantly, surgical complications have serious adverse effects on morbidity and mortality, yet are often preventable.

OBJECTIVES

The project has four aims: (1) Determine the costs of surgical complications in VHA, adjusting for patient level determinants of costs and hospital-level variation; (2) Determine variations in the costs of surgical complications across individual hospitals; (3) Determine variations in the costs of complications for different types of surgical procedures; and (4) Calculate the reduction in costs within VHA nationally associated with specific levels of system-wide reductions in surgical complication rates.

METHODS:

The study will utilize merge data for a 6-year period (fiscal years 2001-2006) from the VHA National Surgical Quality Improvement Program (NSQIP) and VA Decision Support System (DSS). NSQIP provides detailed information on preoperative risk factors and on the occurrence of 19 specific postoperative complications in patients undergoing surgery in all VHA hospitals, while DSS provides detailed cost data of all hospitalizations within VHA using state-of-the-art cost accounting methods. Aims 1-3 will be addressed using hierarchical linear models to estimate the costs associated with each of the 19 potentially preventable complications, adjusting for patient-level determinants of costs (e.g., type of surgery, demographics, comorbidity, severity) and hospital-level variation in costs. Analyses will consider costs of the index hospitalization costs of subsequent 30 day readmissions and will examine total costs and costs within specific categories (e.g., nursing, operating room, laboratory). Aim 4 will be addressed by creating simulation models that use the results from Aims 1-3 to estimate the savings if all VAMCs had complication rates that are at or below the extant: 1) 25th percentile (i.e., best case scenario); 2) 50th percentile (i.e., median performance); and 3) 75th percentile.

FINDINGS / RESULTS:

No results to report at this time.

PUBLICATIONS:None at this time.