Comparisons of Quality of Surgical Care between the US Department of Veterans Affairs and the Private Sector

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The Department of Veterans Affairs (VA) is the largest integrated health system in the United States. Since its establishment in 1930, the VA has provided medical and surgical care to veterans of US military service. VA services are provided primarily by salaried federal employees working in government-operated facilities.[1,2]

By the 1990s, the VA had developed a negative reputation, with widespread concerns about poor quality of care and systematic inefficiencies.[1-3] An overhaul of the organization took place in the mid-1990s to improve both clinical care and the greater VA health system. With regard to quality of surgical care in the VA, changes began as early as 1986, when Congress passed Public Law 99-166 mandating that the VA compare its postoperative morbidity and mortality rates with the national average. Efforts to fulfill this mandate led to the establishment of the National Surgical Quality Improvement Program (VA NSQIP) in 1994, a comprehensive program based on prospective data collection that provides hospital systems with reports of their-risk adjusted outcomes, benchmark data, and consultation services in an effort to inform and empower local quality improvement initiatives. The VA NSQIP has been attributed with substantial reductions in postoperative morbidity and mortality.[2,4,5] In 2001, the American College of Surgeons (ACS) partnered with the VA on the Patient Safety in Surgery Study, which ultimately led to development of the ACS NSQIP for private-sector hospitals.[6,7]

Despite the profound organizational transformation that began in the VA in the 1990s, it remains unclear where the VA is in the spectrum of care currently available in the United States. During the past 2 decades, reports in the peer-reviewed literature[4,8,9] and in the lay press[10,11] have continued to provide both favorable and unfavorable perspectives on the quality of VA care. In order to gain a better understanding of the evidence, we performed a systematic review of studies that compared the quality of surgical care provided by the VA with that provided by relevant non-VA health care facilities and systems.

METHODS

Data sources/study selection

We completed a Medline search of published studies between January 1990 and August 2009 using the following search terms: *hospitals, veterans, hospitals, veterans/standards, hospitals, veterans/statistics and numerical data, united states department of veterans affairs, united states department of veterans affairs/standards, united states department of veterans affairs/statistics and numerical data*, and *united states department of veterans affairs/utilization*. Because of the focus on US health care, we searched Medline only.

We included articles that presented a comparison of quality of care for surgical conditions in VA and US non-VA settings. Quality of care was defined using the standard Donabedian framework of quality (ie, structure, process, and outcomes)[12]; studies focusing solely on patient satisfaction were excluded. A bibliographic search performed on all included articles identified additional studies.

Two physicians trained in the critical analysis of literature (SM, AT) screened all articles. Basic information about the articles was collected on initial screening and included study years, data sources, geographic areas, clinical conditions or interventions studied, feature of quality

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Abbreviations and Acronyms

ACS NSQIP = American College of Surgeons National Surgical Quality Improvement Program
CI = confidence interval
OR = odds ratio
VA = US Department of Veterans Affairs

assessed, and similarity of assessments among VA and non-VA samples. Differences in inclusion or exclusion of articles were discussed with all other members of the review team (SA, PG, and PS) to reach consensus.

All articles meeting initial inclusion criteria then underwent a secondary screening. During this screening, we abstracted the following data: sample size for both VA and non-VA sources, years of data collection covered for both sources; control variables; primary outcomes; and secondary or associated findings.

Conceptual framework

Our conceptual framework used 6 domains to determine the level of quality of the comparison studies: (1) similarity of performance measures, looking for comparable assessments across VA and non-VA samples; (2) use of similar time frames for quality comparisons; (3) use of representative or national study populations; (4) whether the assessments focused on well-established clinical outcomes or processes that are strongly associated with improved clinical outcomes; (5) whether quality was measured with indicators of high clinical or public health significance; and (6) if the methods used sufficient sample size and appropriate statistical techniques for the stated study hypothesis(es).

Assessment of data quality

Each article was then graded using the conceptual framework. Grades of A, B, or C were assigned to each domain; however, the overall grade of an article was predicated on a global assessment allowing for articles with a single yet critical flaw to be designated a "C," even if other factors were satisfactory. Differences of opinions about grading were resolved by consensus.

Data synthesis

Articles were categorized by clinical content area (eg, general surgery or vascular surgery). The evidence synthesis is narrative because of the heterogeneity of studies, which precluded meta-analysis.

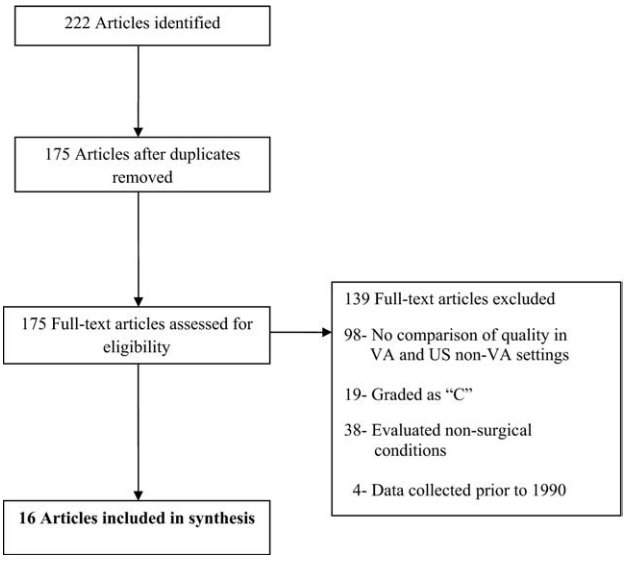

Figure 1. Literature search flow diagram.

RESULTS

Description of studies identified by the literature search

Our search identified 175 unique articles (Fig. 1). Of these, full-text articles were rejected for the following reasons: no comparison of quality in VA and US non-VA settings (n = 98); collection of study data before the cutoff date of 1990 (n = 4); receipt of an overall grade of C (n = 19); and exclusive focus on patient satisfaction (n = 2) or nonsurgical care (n = 36). Therefore, 16 studies formed the basis of our analysis (Table 1). (The nonsurgical articles were reviewed by our team, as well, and are presented in a companion article.[13])

The following clinical content areas were addressed: general surgery (4 articles),[14-17] vascular surgery (3 articles),[18-20] solid organ transplantation (3 articles),[21-23] surgical oncology (3 articles),[24-26] cardiac surgery (1 article),[27] and endocrine surgery (2 articles).[28,29] Ten of the 16 articles reported results from the Patient Safety in Surgery Study, which was conducted between October 1, 2001 and September 30, 2004. The Patient Safety in Surgery Study grew out of collaboration between the ACS and the VA, and aimed to determine if implementation of the NSQIP in the private sector could reduce postoperative mortality and morbidity in non-VA settings. This study compared risk-adjusted postoperative morbidity and mortality for a number of general and vascular surgical conditions between the VA system and 14 university medical centers that volunteered to be early non-VA adopters of the NSQIP.[6,30]