Quality Improvement in the VA

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150 medical centers

900 outpatient clinics

2008 treated 5.1 million veterans (22% of the nation’s population of veterans)

At cost of $40 billion

⅓ has greater than 10% service connection, ⅓ has very low income, 5% recent combat veterans

80% enrolled has other health care
1970’s and 80’s

Poor reputation

VHA underwent major transformation in quality and efficiency in care

   Eliminating underutilized inpatient beds and facilities

   Expanding outpatient clinics

   Restructuring eligibility rules

   Tracking of performance indicators including quality of care measures

   And holding senior managers accountable for improvement in those measures
VASQIP History- CICSP

1972 Cardiac Surgery Consultants work group  
   Chief Medical Director of the Bureau of Veterans Affairs  
      now UnderSecretary for Health of the Department of Veterans Affairs  
   Ongoing review/assessment of outcomes for VHA cardiac surgical programs  
   Evolved into Continuous Improvement in Cardiac Surgery Program (CICSP)

1985 VA Health Care Amendments (PL99-166) mandated VHA to report surgical outcomes annually.

1987 CICSP  
   Annual reporting of unadjusted and risk-adjusted outcomes across VA cardiac surgery programs  
   Performed site visits - enhance facility structure/quality improvement processes when concerns
Public Law 99-166

Came about December 1986

VA should report its surgical outcomes in comparison to the national average.

VA should report its surgical outcomes with risk-adjustment, accounting for the severity of patient illness.
VASQIP History - NSQIP

1991 - developed from a Special Purpose Workgroup under VHA’s Office of Patient Care Services

Purpose - to monitor and report non-cardiac surgical processes

Utilized unadjusted and risk-adjusted outcomes in conjunction with site visit for facility with outcome of concern

The first national, validated, outcome-based, risk-adjusted peer controlled program for the measurement and enhancement of the quality of surgical care

Annals of Surgery 1998;228:491-507
NS-QIP 1990s results


11 VAMCs were low outliers for risk-adjusted observed-to-expected mortality ratios.

13 VAMCs were high outliers for risk-adjusted observed-to-expected mortality ratios.

Identification of high and low outliers by unadjusted mortality rates would have ascribed an outlier status incorrectly to 25 of 39 hospitals, an error rate of 64%.

The 30-day mortality and morbidity rate for major surgery have fallen 9% and 30%, respectively.
NSQIP II

10 Regional Coordinator with 8-10 centers

National Data director

NSQIP manager at each center

Guided by an outside expert advisory panel

2005 VHA Office of Medical Inspector (OMI) conducted project to validate NSQIP data and performance at 15 locations

Nurse abstracted data was valid and reliable

Recommendations for

- improved data abstraction
- education and staffing,
- process sharing with other VAs and structure
Value of NS-QIP as a Research Tool

5 validation and best practice studies

4 to specific procedures

5 to specific patient populations

2 to focused outcomes or risk factors
Cost in 2000 dollars

Total direct cost approximately $4 million dollars annually

Salaries make up about 85% of the expenditures

Overall, $12 dollars for each procedure and $38 for each major procedure assessed by program
VASQIP Structure - National

2009, NSQIP and CICSP combined to form the VA Surgical Quality Improvement Program (VASQIP)

Resides under the VHA Office of the Deputy Under Secretary for Health for Operations and Management (DUSHOM/10N)

DUSHOM/10N is within the National Surgery Office (NSO)

Oversight under National Director of Surgery
VASQIP Process - tenets

Surgical Morbidity and mortality rates determined by patient-related risk factors
Primary disease, extent of disease, co-morbid conditions, sociodemographics
Health care providers, facilities, and institutional policies

Aggregate reports of observed to expected (O/E) ratios for M&M outcomes for
each facility are foundation for monitoring improving the quality of care

QI requires site visit process to provide evaluation of facility structure and process
in relationship to outcomes
Open Reporting of Surgical Outcomes

Established by the NSO for each VISN

One facility can view outcomes data from any other facility in the VISN

Has encouraged a community of practice with dialogue amongst peers and dissemination of best practice
VASQIP

The primary tool for measurement of quality of surgical outcomes

Collected locally from all facilities

Designated types of surgical procedures based on probability of adverse events accordance with standardized data definitions

Validated, formatted, both unadjusted and risk-adjusted

Determine levels of concern
Levels of Concerns

Emerging: single quarter mortality outlier status (defined as a statistically sig high VASQIP mortality observed to expected ratio O/E ratio)

Confirmed: one rolling 12-month period of mortality outlier status.

Ongoing: 3 consecutive quarters of rolling 12-month mortality outlier status.

Critical: 6 consecutive quarters of rolling 12- month mortality outlier status.
VASQIP Structure - Regional

Veterans Integrated Service Network (VISN) Chief Surgical Consultant (VCSC) and VISN Lead Surgical Nurse (VLSN) at each of the 21 VISNs.

VISN Surgical Workgroups within the VISN
  Meet monthly - surgical outcomes, quality improvement, best practice
  Includes Facility Surgical Workgroups within the VISN

16 Surgical Advisory Boards (SABs) within the NSO representing a specialty
  Each has a chair and 4-6 members
  A resource for the NSO and field
  Site visits, new program development & assessment, best practice recommendations

Facility Surgical Workgroup
  At each VA medical center
  Chief of Staff, Chief of Surgery, Operating Room Nurse Manager, Surgical Quality Nurse (SQN)
VASQIP Process

VASQIP uses logistic regression analysis to calculate probability of death or complication for each patient in DB based on preoperative risk factors.

Probabilities summed for all surgical procedures performed by VHA surgical programs to arrive at expected number of events for all operations by 9 specialties including neurosurgery.

Observed number of events to Expected number of events (E) ratio and actual (unadjusted) M&M for major surgical procedures for each VA monitored by NSO and reported.

Statistically high O/E ratio prompts an analysis and review of the VA medical center structure and process.
Trickle down effect - VHA Directives 2006-2018

Prevention of Retained Surgical Items

Attachment A Methodical Wound Exploration
Attachment B Counting Surgical Items
Attachment C Using Radiography and related techniques to find retained objects
Attachment C Other Ideas to Consider implementing to prevent retained surgical items based on inputs from root cause analyses performed by department of VA Medical centers and submitted to National Center for Patient Safety (NCPS)
The Framework Directive

The Caregivers and Veterans Omnibus Health Services Act of 2010, Public Law 111-163, Title V, Section 505, enacted in May 2010

Foster culture that is vigilant, mindful, pro-actively risk aware, highly reliable, predictable, seeks continuous improvement

From other organizations, industry-standard approaches
  - High reliability organizations
  - Learning organizations
  - Enterprise risk management concepts
  - Baldrige Framework for Excellence
VHA Enterprise Framework for Quality, Safety, and Value

Outlines redefined leadership roles at national, network, and facility levels for oversight of quality and safety of patient care.

Leaders are directly accountable for program integration and communication with their level

VHA directive establishes authority and policy to design and implement deployment of enterprise-wide, integrated framework for VHA to become the most trusted choice of Veterans for high quality, and safe and reliable care
Framework - VHA Directive 1026

Under Secretary for Health
Principal Deputy Under Secretary for Health
Assistant Deputy Under Secretary for Health for Quality, Safety and Value
Deputy Under Secretary for Health for Operations and Management (NSO)
Deputy Under Secretary for Health for Policy and Services
VHA Chief Officers and Program Directors
VHA Health Care Quality and Value Committee of the National Leadership Council (HCOVC)
VISN Director
Medical Facility Director
National Surgery Office

Operational oversight and policy establishment for surgical services in the VHA Surgical Programs

Ensures optimal delivery of surgical service to generally accepted standards of medical practice through an established quality improvement program

Provides stewardship for outcomes data for research and fiduciary oversight of selected special purpose funds (transplants and related services)

Currently NSO is aligned under the Office of the Assistant Deputy Under Secretary for Health for Operations and Management for Clinical Operations (10NC)
NSO Reports

Health care delivery oversight and evaluation, effective management, productivity, patient access, VISN Surgical Work Group and Facility surgical work group activity, policies to improve quality

Provide validated clinical data, long-term trends, national comparisons

Data elements: surgical M&M from VASQIP, critical surgical safety events, volume, volume by complexity, compliance with surgical complexity program designation, indicators of access, efficiency, productivity and utilizations
NSO VHA Central Office Structure

National Director of Surgery

Surgical Advisory Boards
   Provides NSA and VHA leadership with experts- Neurological surgery
   Site visits for sub-specialty review
   Review Procedure Infrastructure Matrix (PIM) and Operative Complexity Matrix (OCM) assignments
   Field Advisory Committees

Veterans Affairs Surgical Quality Improvement Program (VASQIP) Executive Board
   Ongoing review of surgical outcomes data and oversight of site visits for VASQIP

Surgical Quality Data Use Group (SQDUG)
NSO site visits

Level of Concern site visits

Consultative site visits

Surgical program restructuring site visits
Surgical Quality Data Use Group (SQDUG)

Subject matter experts on data repositories in VHA Research & Surgical outcomes

VASQQIP Medical Director, NSO Chief Biostatistician + another statistician

Data use agreements, dictionary, protocols from research utilizing aggregated VHA surgical outcomes data (multiple facilities or national), ensure IRB approvals, documentations, employment status

Ensure abstracts and manuscripts with approved protocols reviewed and approved by SQDUG, destruction or removal of data, access permissions
VISN Chief Surgical consultant

Facilitate development and implementation of strategic plan

Oversee clinical outcomes, standards of care, and best practices of VISN

Assess needs, lead VISN Surgical Work Group, ensure facility compliance

Immediate evaluation of critical surgical events (wrong site surgeries, retained surgical items, OR deaths, deaths from hemorrhages within 24 hr, OR fires)

Ensure ongoing surgical education initiatives, support GME, relationship with academics, support research activities

Reviews

Do site visits
What types of reviews?

- Inpatient Evaluation Center (IPEC) reports
- External peer review program results (EPRP)
- Performance measures
- Tort claims
- Peer reviews (levels 2 and 3)
- Learner’s perception survey
- Patient satisfaction survey
- Employee satisfaction survey
- Joint commission survey reports
- Office of Inspector General (OIG) reports
- Veteran Service Organization (VSO) and Patient Advocate reports
Facility Surgical Work Group

Chief of Surgery, Chief of Staff, VHA facility surgical quality Nurse or OR nurse managers

Strategic planning, oversee M and M, analyze efficiency and utilization metrics, implement and monitor surgery performance improvement, oversee compliance, review quality reports, outcome date, infrastructures, critical surgical events
Continuing Processes

Internal clinical peer review program in each hospital

External Peer Review Program (EPRP) - extracts data from patient care records and compares to evidence-based performance criteria

Inpatient Evaluation Center (IPEC) designed to improve outcomes in acute care hospital settings

Quality Enhancement Research Initiative (QUERI) aims to put clinical research findings and evidence-based recommendations into clinical practice

Evidence-based Synthesis Program (ESP) systematically reviews published research of particular importance to the VHA population
Thank you
Facility Infrastructure Requirements to perform standard, intermediate or complex surgical procedures

Appendix B Surgical Complexity Matrix

Neurosurgery complex - twist drill or burr hole for SDH, EDH, CSF shunts; craniectomy or craniotomy for decompression, biopsy excision, skull based surgery, twist drill or burr hole for ventricular access or device implantation or biopsy; hypophysectomy, craniectomy or transnasal/septal.; aneurysm or avm or vascular disease, stereotactic surgery, neurostimulator implantation, neuroendoscopy