

## ASSESSMENT OF DATA QUALITY

Improving data quality will remain a high priority for VA. Our stakeholders have spoken clearly about our data quality—it is not very good and they want it improved. We take their message seriously and will continue to work hard to turn this around.

During the past several years, we have made significant progress in improving the quality of our most important performance measures, the ones we consider our key measures. Our efforts have taken many forms: each Administration initiated specific improvement actions; the Office of the Inspector General (OIG) conducted a series of audits to determine the accuracy of our data; we established a Department-level Chief Actuary to assist program officials in assessing the validity and accuracy of performance data; and the Office of Management worked with program officials to prepare an assessment of each key measure.

As we identified specific deficiencies, we took corrective action. For example, when the current Under Secretary for Benefits assumed office, he put senior executives on notice that he would not tolerate manipulation of performance data. What appeared to be an immediate worsening of timeliness and accuracy of claims processing turned out to be a dramatic improvement in the reliability of the reported information. When the OIG found that timeliness of claims processing was misreported by a significant amount, the Compensation and Pension Program Director instituted a review process to identify potential problem cases and ensure accurate reporting.

During its audits, the OIG frequently found that underlying data were in error or that documentation was missing. In every case, responsible program officials have taken necessary steps to prevent recurrence of the problem. For example, the OIG determined that

the number of unique patients treated in VA health care facilities was overstated because of input errors and incorrect social security numbers. The Under Secretary for Health initiated an acceptable implementation plan to establish system edits to prevent future errors.

For each of our programs, the Department collects a great deal of information from veterans and other users through customer satisfaction surveys. Generally, these surveys are conducted using appropriate survey research methods. We are continually improving our survey processes and standards. For example, NCA is developing a new instrument to conduct a nationwide mail-out survey to measure the public's perception of the appearance of national cemeteries and the quality of service provided. This new survey instrument will enhance the validity of NCA survey data.

Our data quality is not yet where we want it to be, but we are confident that it is much better than it was before we started this effort over 7 years ago with enactment of the Government Performance and Results Act. The improvement process is a long-term project that VA will continue to address. The following discussion describes in specific detail the actions of each VA Administration to improve its data quality.

### ***Veterans Health Administration***

The principles of data reliability, accuracy, and consistency are recognized as integral to VHA's efforts to provide excellence in health care. In 1998, the Under Secretary for Health convened a Data Quality Summit and directed the Chief Information Officer to lead VHA's effort to address data quality issues. Outcomes and ongoing initiatives of the Summit workgroups and the Office of Information (OI) staff are described on the following page.

Major reporting entities within VHA formed the Data Consortium in FY 2000 to address organizational issues and basic data quality assumptions. The Data Consortium works collaboratively to improve information reliability and customer access for the purposes of quality measurement, planning, policy analyses, and financial management. The ongoing initiatives and strategies focus on data quality infrastructure, training and education, personnel, policy guidance, and data systems.

In July 2000, VHA hired a full-time Data Quality Coordinator. The Coordinator, along with data quality workgroups, provides guidance on data quality policies and practices.

Initiatives that support the integrity and data quality of coding currently in progress include:

- Development of strategies and standard approaches to enable field staff to understand the data content and meaning of specific data elements in VHA databases.
- Development of coding resources for the field, which includes the purchase of knowledge-based files/edits from Ingenix for use within the Veterans Health Information Systems and Technology Architecture (VistA). VistA supports the use of national code sets, Current Procedural Terminology, 4th Edition (CPT-4), and Health Care Financing Procedural Coding System (HCPCS) Level II. The availability of these code sets will enable VHA to describe accurately the outpatient and other professional services provided to our patients.
- Complete revision of VistA software to accommodate the use of national code set modifiers, giving providers the ability to document care more completely and accurately.

To support the need for guidance in medical coding, VHA established the Health Information Management (HIM) Coding Council. Comprised of a panel of credentialed expert coders, with support from VHA HIM Headquarters' staff, the Council researches and responds within 24 hours to coding questions, citing official references. The Council also updates the national Coding Handbook, which provides expert guidance to the field facilities. This handbook standardizes guidelines for complete and accurate coding within VHA codes.

VHA's OI sponsors two newsletters: *Close Encounters*, which provides expert guidance to the field facilities on encounter forms, insurance billing, coding, and Medicare compliance; and *Data Quality Highlights*, which provides data quality facts and tips.

Training and education opportunities are provided to support data quality initiatives and compliance, such as the airing of national satellite broadcasts on data quality issues. Currently, the satellite broadcasts are scheduled through September 2001. Future topics include external impacts to data reliability, Health Care Financing Administration guidance, national standards issuance, and internal data requirements of the Veterans Equitable Resource Allocation funding model.

In an effort to improve the reliability of the Decision Support System data, VHA issued a directive on standardization, which was sent to all VA medical facilities. The directive provides guidance for the basic model for standardization that facilities will use for managerial accounting and clinical information to assess the delivery of medical care.

In addition to guidance, training, and education, OI is involved in several key projects targeted to improve data quality and system reliance. These

include the Meta Data Registry (MDR) and the Master Patient Index (MPI).

MDR is in progress with data from 49 VHA databases. This registry contains definitions, business rules, names of database stewards, and descriptive information about the data elements contained in VistA databases. Scheduled for release in FY 2001, MDR will provide a single source of data element description to users and technical staff. It will also help eliminate data redundancies and improve standardization.

VHA will complete the implementation of a national MPI by March 2001. The MPI provides the access point mechanism for linking patients' information from multiple clinical, administrative, and financial records across VHA health care facilities to enable an enterprise-wide view of individual and aggregate patient information. Responsibility for MPI data integrity exists on both corporate and facility levels. This effort will be accomplished through the use of software reporting tools and interaction between sites of care and external authoritative sources. The MPI provides the ability to view clinical data from various VA medical facilities via the remote data view functionality within the Computerized Patient Record System.

### **Veterans Benefits Administration**

The Under Secretary for Benefits has consistently focused VBA's efforts toward improving its data systems and the integrity of the data contained within these systems. This focus was succinctly stated in the document describing VBA's strategic direction, *Roadmap for Excellence*: "VBA's data systems will be reliable, timely, accurate, integrated, honest, and flexible." In 1998, the Data Management Office (DMO) was established to ensure that VBA incorporates this theme into its business lines and field operations and to focus on data integrity and quality matters.

The DMO reflects VBA's efforts to facilitate the availability and use of quality information to support current and future business needs and improved service delivery. The DMO has established organizational components to focus specifically on VBA business line information and veterans' information, as well as improving delivery of all types of information through better information systems. Since its establishment, the DMO has worked with the VBA organizational elements to identify strategies and initiatives to address the collection, processing, and storage of quality data. Several of these initiatives are described below:

- A Data Integrity Task Force was formed to help assess the quality of existing key business indicators and to identify any missing information relevant to the management of VBA's core business processes. In February 1999, the group presented its findings and recommendations. As a result, the Under Secretary directed the program services and the Office of Field Operations to develop action plans. The DMO is responsible for monitoring progress until all milestones have been completed. The status of each recommendation is documented in the Data Integrity Matrix, accessible to employees through the VBA Intranet.
- In an effort to create a single, consistent, accurate, and accessible source of information about veterans, VBA is developing the Veterans Information Solution (VIS). The current prototype displays veteran data customized to meet the information needs of multiple benefit programs, or business lines. This Web-based solution, once fully developed, will be accessible to all VA organizations. The prototype display screens presently include veteran profile information, military history, compensation

and pension utilization, and hospital enrollment information.

- To assist in addressing VBA's known data integrity issues, VBA has begun constructing an enterprise Data Warehouse. This initiative focuses on the areas of workload management, performance measurement, cost analyses, business line/program area management analyses, and customer (veteran) profiling.
- The Data Warehouse and its various modules have already improved the delivery of vital business information to VBA business analysts, managers, and executives. Key reports and analyses, previously unavailable, have been automated and are readily accessible to end-users. Procedures that once involved weeks of effort to collect and consolidate data can now be completed in a timely and inexpensive manner through on-line analytical and ad-hoc capabilities over the VBA Intranet.
- VBA initiated a comprehensive inventory process to restore confidence in the integrity of reports and data. During Phase I of implementation, report sponsors will complete report templates to ensure the reports add value and are necessary. The template provides information about the report, such as description, purpose, decisions supported, data vulnerability issues, procedural reference materials, external and internal users, report frequency, reporting system, source system, and report identification numbers. This review exercise will also help users identify redundant and obsolete reports, and adhere to VA's reports management procedures. In addition, a significant portion of this effort includes the construction of a fully automated on-line system that will be accessible via the VBA Intranet.
- Several initiatives focus on the validation and verification of social security numbers (SSNs) used in VBA systems and benefits delivery. Currently, efforts are underway to identify and reduce the number of duplicate SSNs in VBA's Corporate Database. When VBA resolves all of the duplicates for each category, program logic will be installed to eliminate future duplication. In addition, a memorandum of agreement permits VBA to use a read-only, case-specific, real-time query to read limited data elements contained in certain Social Security Administration Privacy Act Systems of Records. VBA will use the read-only information to verify SSNs and income information submitted by beneficiaries.
- To ensure proper management and oversight of information security and infrastructure protection, VBA created the Security Infrastructure Protection Office. A contractor is assessing the current security risks, threats, policies, and program goals. In addition, a master security plan is being developed.
- The Veterans Service Network (VETSNET) Phase I implementation project will replace the existing compensation and pension payment system. Currently, efforts are underway to replace the finance and accounting code in the Benefits Delivery Network with a standardized, on-line accounting and payment system that will interface with VA's Financial Management System.

VBA will continue working toward improving the delivery of all types of information through better information systems and data quality. Recent efforts to form strategic alliances and partnerships with external organizations have resulted in access to more timely and accurate data.

### **National Cemetery Administration**

NCA workload data are collected monthly through field station input to the Management and Decision Support System, the Burial Operations Support System (BOSS), and the Automated Monument Application System-Redesign (AMAS-R). After reviewing the data for general conformance with previous report periods, headquarters staff validates any irregularities through contact with the reporting station.

NCA began implementing a reorganization from three geographic National Cemetery Area Offices to five Memorial Service Networks (MSNs). The new structure will strengthen oversight and accountability of cemetery operations, provide a more balanced workload among the MSNs, and centralize selected administrative activities.

During FY 2000, NCA conducted a project to review and improve the codes used for ordering replacement headstones or markers. When headstones or markers are lost or damaged, it is important to determine both the cause and the party responsible for the expense of a replacement. NCA developed codes and published a users' guide with definitions for the codes, including the replacement reasons. Use of these new codes will enhance the BOSS and AMAS-R databases so that they produce reliable and accurate data on replacement actions, and provide management with an effective tool for improving the overall process.

Efforts continue in expanding the use of information technology to collect performance data for recently developed performance measures. The NCA Data Validation Team is working to ensure that performance data collected and reported for timeliness of scheduling interments and marking graves at national cemeteries are accurate, valid, and verifiable. The team's major tasks include defining performance measurement terms to ensure standard

interpretation and application throughout NCA; identifying training needs to ensure accuracy of data and consistent data entry processes; and recommending necessary changes to BOSS to ensure accurate data entry. NCA developed and implemented additional computer edits as a result of the team's recommendations.

### **Role of the Actuary**

During FY 2000, the Chief Actuary within the Office of Policy and Planning assisted the staff from the Office of Management to initiate a Department-wide data validation and verification process, with the Administrations acting as full partners. Each Administration prepared a "Validation of Data Used in Performance Measures" worksheet for each of its key performance measures. While these worksheets have not been finalized, they provide a great deal of information about our measures and data, including possible areas for improvement. The key elements are:

- Qualitative definition
- Functional definition describing sources of data and frequency of collection
- Formula for the performance measure
- Baseline data
- Data system information
- Methods used to determine accuracy, validity, and reliability of data
- Improvement plan
- Responsible official

For the most part, responsible officials recognize our data have significant quality shortcomings that they are working to eliminate. A review of the initial worksheets indicates that efforts have been, and are continuing to be, made to improve the data underlying most of the key performance measures.

**Office of Inspector General (OIG)  
Performance Audits**

The OIG continued its assessment to validate the accuracy and reliability of VA's key performance measures in accordance with the Government Performance and Results Act. During FY 2000, the OIG assessed the accuracy of data used to calculate the Foreclosure Avoidance Through Servicing (FATS) ratio, and completed an initial audit of the Chronic Disease Care Index (CDCI) and Prevention Index (PI).

To assess the accuracy of VA's computation of the FATS ratio, the OIG attempted to verify each of the five components: refundings, voluntary conveyances, compromises, foreclosures, and successful interventions. Records in four of the five components were categorized correctly, but records categorized as successful interventions could not be verified because supporting documentation was not available. Evidence of defaults, intervention efforts, and successes was not generally retained in loan folders, but was recorded in electronic notes in the Liquidation and Claims System. Unfortunately, the system did not retain the notes. Therefore, with neither supporting documentation in the loan folders nor electronic notes, the OIG could not determine whether the successful interventions recorded actually occurred, and could not attest to the accuracy of the FATS ratio reported. During the

audit, VA activated a new computer system for its loan servicing activities that does retain the electronic notes to document successful interventions. The OIG considered the issue resolved and offered no recommendations in the audit report.

The OIG assessed the validity of VHA's CDCI and PI performance measures to determine the accuracy of the data reported in VA's 1999 Annual Accountability Report. Audit results demonstrated that the procedures used by VHA to compute the CDCI and PI indices were adequate, but review of the source documents to determine the validity of data used in computing the CDCI and PI was not included. As a result, the OIG will re-evaluate these measures during FY 2001. OIG audit results also showed inconsistencies in VHA's reported periods for both measures. VHA agreed to report on a 12-month period instead of an 11-month period.

To date, the OIG has conducted eight audits encompassing six key measures, with several others on the agenda for the near-term. These include the vocational rehabilitation and employment rehabilitation rate; percent of patients who rate VA health care service as "very good" or "excellent"; national accuracy rate for core rating work; appeals resolution time; and percent of compensation and pension claimants who are satisfied with the handling of their claims.