

ASSESSMENT OF DATA QUALITY

The quality of VA data has continued to improve; it supports business planning and day-to-day decision-making activities. Each program office has initiated specific improvement actions. In addition, the Office of the Inspector General (OIG) has conducted audits to determine the accuracy of our data. We consider OIG reviews to be independent and objective. The following discussion describes in detail the actions each VA administration has taken to improve its data quality.

Veterans Health Administration

Data reliability, accuracy, and consistency have been a targeted focus of VHA for the past several years. The principles of data quality are integral to VHA's efforts to provide excellence in health care. In 2001, the Under Secretary for Health commissioned a new high-level cross-cutting task force on data quality and standardization whose membership includes the chief officers from VHA's Office of Quality and Performance, Office of Policy and Planning, Chief Network Office, and the Office of Information. This task force has focused on strategic planning to provide consistent definitions of clinical and business data for more effective clinical and organizational decision support. The members will seek collaboration with other parties including DoD, Indian Health Service, private sector health care providers, and standards organizations.

VHA's commitment to quality data was confirmed by the results of a recent draft report of an OIG audit of the validity of data collection of the quality measures that VHA tracks, CDCI II and PI II. The draft report indicates a high degree of accuracy and that there will most likely be no recommendations.

VHA has long been recognized as a leader in documenting credentials and privileges of VA health care professionals. In 2001, VHA implemented a new electronic data bank, VetPro, on health care professionals' credentialing,

in partnership with the Department of Health and Human Services. VetPro promotes and demonstrates to other federal and private agencies the value of a secure, easily accessible, valid data bank of health professionals' credentials.

VetPro improves the process of ensuring that health care professionals have the appropriate credentials for their clinical roles. It also helps VHA verify that practitioners have a good and desirable track record, consistent with high-quality and safe patient care. When a doctor or dentist is credentialed using VetPro, a permanent electronic file is created that will be accessible across the VA system and other federal health care programs. The process of updating credentials is streamlined because files are not redone from scratch. As providers add information, the credentialers who create the permanent record verify it. The Joint Commission on Accreditation of Health Care Organizations reviewed VetPro and stated, "The program appears, if used as designed, to be consistent within considerable detail with the current Joint Commission Standards..." As evidence of the effectiveness of this system, VetPro was awarded a Trailblazer Award at the 2002 e-Gov conference.

The VHA Data Consortium addresses organizational issues and basic data quality assumptions. The 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 address data quality infrastructure, training and education, personnel, policy guidance, and data systems.

The VHA data quality coordinator, along with data quality workgroups, provides guidance on data quality policies and practices. Several ongoing initiatives that support the integrity and data quality of coding include:

- Development of strategies and standard approaches to help field staff understand the data content and meaning of specific data elements in VHA databases;
- Development of coding resources for field facilities, to include negotiating the purchase of knowledge-based files/edits from Ingenix™ for use within the Veterans Health Information Systems and Technology Architecture (VistA). This supports the use of national code sets, Current Procedural Terminology, 4th Edition (CPT-4), and Health Care Financing Procedural Coding System (HCPCS) Level II.
- Complete revision of VistA software to accommodate the requirement of versioning for national code sets to comply with the Health Insurance Portability Accountability Act for use of those code sets involving health care claims.

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

VHA's Office of Information sponsors the "Close Encounters" newsletter, which provides expert guidance to field facilities on encounter forms, insurance billing, coding, and Centers for Medicare and Medicaid compliance. It also sponsors a data quality newsletter, "Data Quality Highlights," which provides data quality facts and tips.

Training and education opportunities that support data quality initiatives and compliance (such as the airing of national satellite broadcasts on data quality issues) are provided to staff. Recent topics included external impacts on data reliability, inpatient professional services, national standard code set updates, and internal data requirements of the Veterans Equitable Resource Allocation (VERA) funding model.

The VHA Revenue Cycle Improvement Plan (September 2001) recognized medical record documentation as a vital part of the revenue cycle and recommended development and implementation of nationally standardized documentation templates and electronic encounter forms for use in VHA facilities. Documentation templates have been developed for primary care, mental health, eye care, acute and extended care "history and physicals," attending notes, physical, medical and rehabilitation, and surgery as appropriate, to support quality documentation and billing. These templates will be announced via a Computerized Patient Record System (CPRS) mailgroup and posted on the HIM Web site within the VHA Intranet. The Mental Health templates are currently posted.

The goal of the nationally developed templates is to produce a final product that supports quality documentation, supports coding, is user friendly and efficient, and meets compliance criteria. In addition, these templates avoid "cloning" of documentation, incorporate instructional text to avoid omission of appropriate information, take advantage of the newest CPRS graphical user interface (GUI) template functionality, and eliminate the duplication of manpower required to create templates at each facility. These templates also prompt providers to document the essential elements of the encounter. An important secondary goal is to assist sites in supporting all aspects of implementing and customizing CPRS GUI. Minimum template data elements were used in development and are recommended to be adapted locally to meet the needs of clinical staff.

Seventeen standardized, electronic encounter forms that capture coded data for an outpatient encounter were developed for use in CPRS and are being distributed nationally via software patches to the VistA Integrated Billing software. Use of the electronic forms will improve the accuracy of data capture for patient encounters, updating and populating the patient-specific problem list by reducing errors that arise from reliance on paper encounter forms and manual data entry. Standardization will also ensure that the national

code sets and code descriptions meet VHA guidelines and will reduce the initial need for 100 percent validation of each encounter form by sites. These “multi-page” encounter forms greatly expand the choices and specificity of diagnostic information available to the provider. Additionally, they will diminish the number of write-in diagnoses and improve the specificity of data capture.

The Patient Financial Service System (PFSS) project is the pilot implementation of a commercial billing and accounts receivable system in VHA. The PFSS is consistent with the current VHA strategy to improve the revenue program and will help determine the future revenue cycle business model to be implemented across VHA. This system will move VHA health care in the direction of industry standards. This project is being designed to incorporate business process improvements and commercial information systems that are proven in the private sector. In addition, the project will introduce commercial business practices and technology into VA. The VISN pilot project will comprise a combination of VA best practices and commercial best practices. The objectives of the pilot are to implement a commercial product, and study the effects on collections, improvements to the business process, and on information systems in a single test environment. Ultimately, the long-term strategy is to develop a scalable solution, which includes both a commercial solution and VA applications that can be implemented in all networks.

In addition to guidance, training, and education, the Office of Information is involved in several key projects that are targeted to improve data quality and system reliance. These include VHA’s Registration Enrollment Eligibility Maintenance and Enhancements project, which in part begins the process of standardizing data elements across the enterprise. The main focus of the project is to deploy an incremental solution that supports the *OneVA* registration/eligibility solution, allows a veteran to provide necessary information to VHA only once, and enables VAMCs to securely share complete administrative data. This project begins the process of identifying authoritative sources for

specific data and the specifications of those data elements from a business and technical perspective.

The Office of Information recently negotiated an agreement with the Environmental Protection Agency (EPA) to collaborate directly with them on development of a Meta Data Repository (MDR), which leverages work the EPA has already completed for the development of an MDR. An MDR is a system repository of data elements and database information that describes the data gathered within a system for business and technical purposes. This system serves as a tool to support data standardization within an organizational entity.

VHA also completed the implementation of a national Master Patient Index (MPI) in 2001. The MPI provides the ability to view clinical data from various VA medical facilities via the remote data view functionality within CPRS. The MPI provides the mechanism for linking patient information from multiple clinical, administrative, and financial records across VHA health care facilities, enabling an enterprise-wide view of individual and aggregate patient information. Responsibility for MPI data integrity exists on both corporate and facility levels. Software changes are underway to centralize data quality functions and resolution tools within this system to support quality care of our veterans.

Future Efforts

VHA has examined its current health information processing environment in order to plan how to best implement improvements over the next 5 years. This assessment included the following:

- What a high-performance automated health system needs to provide;
- What the ideal health and information system would look like;
- What the advantages and disadvantages of our current system are;
- How best to use a phased approach for moving from the current to the ideal environment.

VHA is pursuing a move towards an ideal health and information system. This system would

promote the sharing of information any time, any place, by any authorized provider, and in real-time, while ensuring that stringent privacy and security regimes are maintained. It would maximize use of the best available technology to allow users to effectively manage across programs, time, and distance, and within budget constraints, while balancing the resource needs of health and information. This ideal health and information system will provide a high-performance platform that maximizes patient health.

In the near term, VHA continues to enhance the current *VistA* platform by completing the Decision Support System and implementing *VistA* Imaging. Based on the availability of funds, mid/long-term efforts will include the development of a health database accessible across all levels of care, times, locations, and providers; the enhancement of eligibility/enrollment processing to meet *OneVA* goals; the reengineering of the *VistA* Scheduling package; and enhancement or replacement of the billing and fee basis systems.

The following is a list of VHA participation in data standards initiatives:

- VHA is a member of the newly formed Consolidated Health Informatics (CHI). CHI is a committee comprised of Federal agencies with a common goal to identify, adopt and promote standards in health care. CHI broadens the existing DoD and VHA collaboration on standardization. This group recently endorsed the DoD agreement to adopt communication and data standards, which included Health Level 7 (HL7) 2.4 or higher XML encoded, LOINC for laboratory communication and X12N for the communication of health claims.
- VHA is a participant on the public-private initiative, Connecting for Health, sponsored by the Markle Foundation. This initiative is an effort to promote existing health standards and those that are in progress.
- VHA has active membership on numerous national standards development organizations

including HL7, X12, and the American National Standard Institute (ANSI). VHA is committed to adopting standards that enable interoperability of health care information to facilitate the communication of information to improve patient care.

Veterans Benefits Administration

VBA is committed to an ongoing effort to ensure that the data utilized in its databases are available, verifiable, and reliable. The continued use of data quality methods and strategies is planned to cross all business lines and will affect all aspects of VBA's workflow process.

Some of the efforts VBA continues to undertake relate to human capital. The task force convened by the Under Secretary to review C&P claims processing presented many findings. Among the task force's conclusions was an assessment of employee error types and rates. Errors not only delay veterans from receiving the benefits for which they are eligible, they contribute to diminishment of the quality of our data.

C&P's work processes, the data generated by these processes, and the subsequent interchanges and reliance on these data demand high standards of data quality. To accomplish this, C&P will continue to move from a case management to a specialization approach. This specialization will allow for greater workload control, development of expertise by the staff, more accurate and consistent decisions, and more efficient and timely processing. These strategies, coupled with a significant reliance on information technology, will improve claims processing and the quality of data.

Further crossing-cutting efforts have been undertaken to achieve improvements in the quality of the data used by VBA stakeholders. Foremost was the establishment of the Office of Performance Analysis and Integrity (PAI). PAI will consolidate data quality functions of other offices whose responsibilities were geared to improving the value and quality of data collected by VBA.

Some of the accomplishments of PAI during the past fiscal year include:

- Expanded use of data mining technologies as a tool to identify and deter potential fraud, waste, and abuse. Data mining also highlights questionable data and system failures or anomalies. Examples include identifying questionable beneficiaries over 100 years old, non-suspended accounts with multiple returned payments, and discrepant data between various systems.
- Continuation of the Large Payment Verification Review, which began in October 2001. Lists of C&P payments over \$25,000 are provided to field stations for review and certification at the director level. As of October 2002, approximately 17,000 cases (valued at over \$800 million) have been reviewed, which led to an estimated \$2 million in recoveries from erroneous payments. The Program Integrity and Internal Controls staff works closely with C&P Service to facilitate and track this function to enhance program integrity and VBA fraud detection efforts.
- Creation of consolidated ‘non-essential’ returned mail centers as part of address correction efforts. With the wide use of electronic funds transfer (EFT), many beneficiary addresses have become out of date. To correct this problem, PAI in cooperation with C&P Service tested various options to identify correct address information for veterans regarding non-essential returned mail. Several vendor products are being tested and results are under evaluation, with the goal of deploying a nationwide contract to provide this online address capability to all VBA field offices.

One of VBA’s most significant accomplishments in seeking better information has been the creation of the Data Warehouse and Operational Data Store. These technologies are facilitating VBA in moving towards its goal of having reliable, timely, accurate, and integrated data across the organization. These

systems, however, are not involved directly in work processes and rely on the accuracy of the data created in the legacy systems. Nevertheless, data systems provide VBA managers and stakeholders with substantive analytical reports. Data quality improvement is achieved through cleansing, data validation, and other rules applied to the data prior to being stored in these environments.

Following are examples of some report modules brought online in the past year:

- The Human Resources Operations (HR Ops) Center, in its current form, allows authorized individuals to see information about VBA’s workforce through online PC access. This information can be used to determine trends such as the number, type, grade, and gender of our employees. HR personnel can work with the business lines to determine whether there are a sufficient number of people in the right job to do the work of a given office. As these data come directly from VA’s PAID system, it is as reliable as the data entered at the source. This system can, therefore, also be used to determine instances where the data in the source system is not as reliable/accurate as it should be. Should HR choose to continue the development activities for the HR Ops Center, even more useful data can be made available (e.g., retirement trends/predictions for succession planning and detailed employee information for ad hoc requests).
- The Shipboard Hazard and Defense (SHAD) database provides information on a specific category of veterans that could not be obtained elsewhere. The utility of this data is unmatched in that it provides VBA a way to contact veterans who were potentially exposed to hazardous conditions aboard U.S. naval vessels, and to monitor their compensation and pension benefits usage.
- Ad hoc requests ask for data from a single VBA source system or from multiple VBA source systems. Using established business rules (definitions of what the data

represent), consistent, useful, timely, and accurate information reports are provided to the requester. VBA business lines, external stakeholders, and interested parties (such as the Congressional Budget Office, General Accounting Office, and veterans service organizations), regularly request information on various cohorts of veterans concerning their compensation and pension benefits usage.

- Since the mid-1990's, VBA has conducted customer satisfaction surveys for all of its major business lines. In 2002, information on the quality of service delivery was obtained from compensation and pension claimants, persons receiving education benefits, homeowners with a VA loan, and veterans in (or having completed) the vocational rehabilitation program. (The insurance service conducts its own surveys of policyholders on a monthly basis). These surveys produce statistically valid performance data at the national, administrative, and local RO levels. In order to enhance the use of this information, all survey reports are posted on VBA's Intranet Web site. In addition, special analyses showing key drivers of customer satisfaction and comparisons of performance among ROs help focus service improvements. The surveys were designed to measure all aspects of the business process as experienced by the veteran or family member. The annual mail surveys follow the industry standard for pre-notification and follow-up reminders, resulting in high response rates. In 2002, there were at least 2 and as many as 5 years of comparable data within each business line, facilitating trend analyses. The Surveys and Research Staff in VBA's PAI office oversees the administration of these surveys and produces detailed analyses of customer satisfaction.

Initiatives:

Many business line initiatives are being proposed that are expected to improve VBA work processes and are designed to ensure that data are reliable. Initiatives include:

- TPSS (*Training and Performance Support System*) is an initiative that develops four comprehensive training and performance support systems for the core service delivery positions of the reengineered environment. The four systems are for basic rating, veterans service representatives, journey level rating specialists to include the Decision Review officers, and field examiners.
- EPSS (*Electronic Performance Support System*) is a comprehensive automated training program to employees responsible for processing claims.
- CAPER (*Compensation and Pension Evaluation Redesign*) tools assist in claims processing including development, evidence gathering, evidence assessment, and rating of disabilities.
- Virtual VA is an effort to replace paper folders by using computer databases.
- Thin Client is a consolidation of four separate databases storing data from TIMS (*The Imaging Management System*).
- The Education Expert System (TEES) is a redesign of an existing legacy system and further automation of work processes of the Montgomery GI Bill education program.

National Cemetery Administration

Data on NCA workload and timeliness of marking graves are collected monthly through 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 determines the percent of veterans served by existing national and state veterans cemeteries within a reasonable distance of their residence by analyzing census data on the veteran population. Since 2000, actual performance has been based

on the VetPop2000 model developed by the VA's Office of the Actuary. VetPop2000 is the authoritative VA estimate and projection of the number and characteristics of veterans. It was the first revision of official estimates and projections since 1993. The VetPop2000 methodology resulted in significant changes in the nationwide estimate and projection of the demographic characteristics of the veteran population. These changes affected the individual county veteran populations from which NCA determines the percentage of veterans served.

Since 2001, NCA has used an annual nationwide mail survey to measure the quality of service provided by national cemeteries as well as their appearance. The survey provides statistically valid performance information at the national and Memorial Service Network (MSN) levels and at the cemetery level for cemeteries having at least 400 interments per year. The survey collects data annually from family members and funeral directors who received recent services from a national cemetery. To ensure sensitivity to the grieving process, NCA allows a minimum of 3 months after an interment before including a respondent in the sample population. VA headquarters staff oversees the data collection process and provides an annual report at the national level.

The number of headstones and markers provided includes markers ordered by the NCA Centralized

Contracting Division. The total number of Presidential Memorial Certificates issued, which includes those issued to correct inaccuracies, is reported monthly. Headquarters staff reviews the data for general conformance with previous report periods, and any irregularities are validated through contact with the reporting station.

When headstones or markers are lost, damaged, or incorrectly inscribed, it is important to determine both the cause and the party responsible for the expense of a replacement in order to improve performance. NCA developed new codes for ordering replacement headstones or markers and published a users guide showing definitions for all codes, including the replacement reasons. Use of these new codes has enhanced the BOSS and AMAS-R databases by producing reliable and accurate data on replacement actions and providing management with an effective tool for improving the overall business process.

Office of Inspector General (OIG) Performance Audits

The OIG made an assessment of the Department's data quality in the Major Management Challenges section. This information is shown on pages 203 to 205.