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14. ABSTRACT

The purpose of this study is to accurately depict the relationship between a decentralized coding design within the National Naval Medical Center's Ambulatory Procedure Unit, coding completion ratings, and productivity. This retrospective analysis of data from the Military Health System's automated data systems compares a centralized coding design (CY 2003) and a decentralized coding design (CY 2004); in which a coder was integrated within the clinic. Decentralized coding resulted in increased coding completion rates, productivity, and a higher average of relative value units per ambulatory procedure visit. Recommendations include altering the current contract to support a decentralized coding design in the APU, conducting further studies in similar outpatient clinics, and ensuring timely and customized education for coders and clinic staff.

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Ambulatory Procedure Unit Coder Integration

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Abstract

The purpose of this study is to accurately depict the relationship between a decentralized coding design within the National Naval Medical Center's Ambulatory Procedure Unit, coding completion ratings, and productivity. This retrospective analysis of data from the Military Health System's automated data systems compares a centralized coding design (CY 2003) and a decentralized coding design (CY 2004); in which a coder was integrated within the clinic. Decentralized coding resulted in increased coding completion rates, productivity, and a higher average of relative value units per ambulatory procedure visit. Recommendations include altering the current contract to support a decentralized coding design in the APU, conducting further studies in similar outpatient clinics, and ensuring timely and customized education for coders and clinic staff.

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Introduction

The National Naval Medical Center in Bethesda, Maryland has the distinct honor of being the President's hospital and has been deemed a historical landmark. Mission requirements include maximizing operational readiness, maintaining a ready deployment status for all military staff members, serving as a regional resource for homeland defense to the National Capital, and providing quality primary and specialty services in a patient centered environment. The vision of the National Naval Medical Center (NNMC) is to be the United States Navy's flagship in the following four areas: force health protection and operational readiness, outstanding customer service, graduate medical education, and the delivery of world-class health care within an integrated system.

In 1938, Congress appropriated funds for the construction of a new Naval Medical Center. President Franklin D. Roosevelt selected the site after seeing a pond on the land that reminded him of the biblical healing Pool of Bethesda and he thought it would be a fitting location. Originally, the medical center was intended to house the Naval Hospital, the Naval Medical and Dental Schools, and the Naval Medical Research Institute. Over the years the medical center has grown to encompass over 880,000 square feet making it one of the largest medical treatment facilities in the country.

Currently, the command has eight tenant commands on the complex and 14 satellite branch medical clinics. As of October 2004, NNMC has over 46,000 enrollees with approximately 16,000 beneficiaries who are active duty. In fiscal year 2004, the command provided over 440,000 outpatient visits, discharged approximately 1,000 patients, had an inpatient average daily census of 119, and experienced a 19% growth rate in revised financing revenues. Since the inception of Operation Iraqi Freedom and Operation Enduring Freedom in

March of 2003, NNMC has treated over 1,200 acute level wounded service members. In addition, NNMC has the following operational platforms: USNS Comfort, USS Belleau Wood, USS Wasp, Fleet Hospital Camp Lejeune NC, Fleet Hospital Portsmouth VA, the Armed Services Blood Bank, and several United States Marine Corps and Naval Mobile Construction Battalion units.

The primary operational platform of NNMC is the hospital ship USNS Comfort. Although maintained and operated by civilian mariners, the USNS Comfort is equipped with a helicopter deck, 1,000 beds, 12 operating rooms, four intensive care units, a medical lab, an optometry lab, and a blood bank. Additionally, it has the capability to treat victims of chemical or biological attacks and is primarily staffed by NNMC personnel when activated. At full capacity, the hospital ship embarks 1,200 medical and hospital support personnel. The USNS Comfort provided disaster relief to victims of the World Trade Center terrorist attacks in support of Operation Noble Eagle, participated in a North Atlantic Trade Organization humanitarian relief, education and training exercise, and provided trauma support to multi-national combat casualties in support of Operation Iraqi Freedom/Operation Enduring Freedom. In August 2003, crewmembers from the hospital ship were authorized to wear the Humanitarian Service Medal for their efforts during the deployment to New York City in support of Operation Noble Eagle (Maurer, 2003).

Conditions That Prompted the Study

New Executive Leadership with Focus on Data Quality and Coding. In recent months, NNMC has undergone a drastic change in senior executive leadership. Approximately 75% of the Board of Directors has changed including key positions such as the Deputy Commander and Commander. While this makes continuity a challenge, this also presents a unique opportunity

for the command to examine current policies and revitalize outdated practices. Process improvement is already occurring and the environment is ready for more radical changes or business process reengineering. During the command orientation for newly reported officers, the new Commander emphasized that the mission of the National Naval Medical Center is Force Health Protection. This consists of the following four parts:

> Create a fit and ready force, care for those in uniform when they are sick, deploy with and care for those in uniform when in harms way, care for the families of those in uniform and the retirees who have served this country. (National Naval Medical Center, 2004, slide 3)

In support of this mission, shortly after his arrival the Commander convened an off-site leadership seminar with key staff members in order to foster effective and efficient communication and unity of purpose. Another area of focus for the Commander is data quality; he pays particular attention to the intricate relationship between data quality, the complexities of information systems, financial constraints, and business processes of operating a military treatment facility. As the Chief of the Medical Corps and from his own personal experience as a physician, he is intimately familiar with the challenges of documentation, coding, and continuing education that are all important factors of data quality. This priority is reflected in the Board of Directors recent selection of productivity, quality, and access as the three primary focuses of the command's annual plan.

From the enterprise perspective, the importance of coding has earned recent attention from Health Affairs, as evidenced by the June 10, 2004 release of Department of Defense Instruction 6040.42, Medical Encounter and Coding at Military Treatment Facilities. This instruction delineates the responsibilities of the entire chain of command from the Health Affairs

level down to the military treatment facility commander's level. Highlights of the commander's responsibilities include the establishment and execution of a coding compliance plan, external audit plan, ensuring the availability of current resources for coding use, and adherence to established coding standards. The coding compliance plan shall address the following topics: training for administrative, coding and clinical staff, internal audit plans, and assessing the timely provision of coded encounters to third party collections for billing.

Outsourcing Coding Services. On October 1, 2002, the Military Health System (MHS) implemented Outpatient Itemized Billing (TRICARE Management Activity, 2003). In effect, the reimbursement process for outpatient encounters changed from an established single rate per procedure to a much more complex system of itemizing charges. The increased complexity of this new method of billing was acceptable in light of the end goal of increasing accuracy of billing and thereby controlling the escalating costs of outpatient visits. This new billing methodology was necessary due to technological advances that enabled procedures that were historically categorized as inpatient, to be conducted on an outpatient basis and unfortunately at a higher cost (Data Trends, 2004).

Eventually, the introduction of Outpatient Itemized Billing led the Bureau of Medicine and Surgery (BUMED) to hire outpatient professional coders within the MHS. After consulting with several senior physicians, the Patient Administration Department (PAD) department head recommended placing new coders within select clinics that performed high value procedures or clinics that generated significant Relative Value Units (RVUs) based on high patient volumes. The outpatient-coding contract has been maintained since that time and expired on October 1, 2004. A bridge contract was implemented with the existing contracting company, Kelly Services, and expired on January 31, 2004. Recently, the command obtained a second bridge

contract with Advanta Services to extend the existing coding services until March 31, 2005. NNMC is in the process of securing a contract for all of its coding services and is expecting to spend approximately $10 million over the next five years (see Appendix A for Statement of Work Excerpt). With such a significant expenditure, it is imperative that the command determines the most effective manner in which to employ its newly acquired resources.

Statement of the Question

The question to be addressed in this study is whether integrating coders into select outpatient clinics is more effective than utilizing a centralized organization of coders within a separate department. The results of this study will assist in the determination of the most effective organizational design and implementation of outpatient professional coders within a military medical treatment facility. The scope of this study will be limited to data collected primarily from the Ambulatory Procedure Unit, which integrated a dedicated professional coder into the clinic during the last calendar year and is also considered to be representative of other specialized clinics. Future studies may consider other outpatient clinics that perform high value procedures or experience a high volume of patients, resulting in the generation of significant numbers of RVUs.

Literature Review

The Department of Defense Appendum, Professional Services and Outpatient Coding Guidelines defines coding as "the alphanumeric representation of written descriptions that allows for collecting information in a standard format" (2002, p. 1). In other words, medical coding is the process that occurs when written documentation of patient care is translated into alphanumeric codes that concisely account for the level of care provided. Medical coding can clearly depict the clinical snapshot of a patient population; however the key to ensuring the information is useful is that the coding must be accurate. Not only will this coded data be used to generate revenues for the health care organization that provides the care, but the coded data may also be used to foster population health, establish best practices, and ensure that at a minimum, the quality of care provided meets the standard of care. Medical coding data are relevant to all health care stakeholders including insurance companies, regulating bodies, providers and the patients. Despite the significant importance of accurate coding, literature is replete with studies that demonstrate consistent accurate coding is the exception to the normal coding practices (Wojcik, 2003; Neveleff, 2002 & Bhandari, 2001).

There are three types of medical coding: evaluation and management, procedural, and diagnostic. According to Smith (2004), evaluation and management (E&M) codes are "codes that describe patient encounters with healthcare professionals for assessment counseling and other routine healthcare services" (p. 225). These codes describe the degree of exam the physician conducted on the patient and account for variances in time, effort and medical knowledge that support medical decision-making. They focus on the determination and supervision of a patient's condition via patient provider interaction or counseling. Key components are patient history, examination, and medical decision-making. The E&M codes

represent what type of service the patient is receiving, in what type of facility the patient received the service, and whether the patient is new or established to the physician.

Procedural coding uses alphanumeric characters "to classify and report the medical procedures and services performed for patients" (Smith, 2004, p. 230). It is the broadest in nature and utilizes the Centers for Medicare and Medicaid Services Healthcare Common Procedure Coding System (HCPCS), which groups its codes into three levels. Level I HCPCS codes are called Current Procedural Terminology (CPT) codes and are the largest section of HCPCS. CPT codes are five digit codes used to report inpatient and outpatient services like visits, surgery, and radiological procedures. E&M codes are actually a subset of CPT codes. Level II codes are National Medicare codes that cover services, procedures, and supplies when no CPT codes are available. Level I and II codes are updated annually. Level III codes are temporary local codes used for the latest technological medical advancements and are not utilized by the Department of Defense (DoD).

Diagnosis coding is used to "classify and report diseases, conditions, and injuries" (Smith, 2004, p. 224) and identifies the reasons why a patient sought care. Currently the United States health care industry utilizes the International Classification of Diseases, 9th revision (ICD-9) to describe the clinical condition of a patient. Interestingly, a tenth revision to the list was released in 1992; however, the majority of United States medical coding systems are still based on the ninth revision (National Center for Health Statistics, 2003).

Professional Coding Certifications. With the many complexities of coding, it is not surprising that there are several certifications that may be earned by coding professionals. According to Mulaik (2002), the two primary national coding certification organizations are the American Health Information Management Association (AHIMA) and the American Academy

of Professional Coders (AAPC). AHIMA has a history that dates back to the late 1920s and represents over 50,000 health information management professionals, while AAPC supports a smaller membership of approximately 38,000 professional coders. AAPC specializes in medical coding, but both organizations were founded in an effort to elevate the standards of health information management (AHIMA, 2004 & AAPC, 2004). Between them, there are four main certifications that may be achieved by professional coders of varying experience and education. Coders with two years experience may take the AAPC exam for the Certified Professional Coder (CPC) credential that focuses on coding for outpatient encounters or the Certified Professional Coder-Hospital (CPC-H) for those desiring to specialize in inpatient encounters. Similarly, AHIMA offers coders with advanced competencies the Certified Coding Specialist (CCS) certification for hospital settings or the Certified Coding Specialist-Physician (CCS-P) certification for physician based settings.

The Registered Health Information Technician (RHIT) and Registered Health Information Administrator (RHIA) are credentials that are combined with formal educational programs. The RHIT credential is often combined with a bachelor degree but requires at least an associate degree and is intended for supervisory positions. Proficiency in interpretation and analysis of patient data, information technology, and information systems are required to earn this credential. The RHIA credential is often combined with a masters degree but requires at least a bachelor degree and infers an in depth knowledge of data security, quality assurance, business processes, and managerial skills (Mulaik, 2002). It is important to note that although there are several types of certifications available for professional coders, currently there is no requirement for coders to be certified. Until certification becomes mandatory, accredited

certification simply remains a quality indicator for dedicated professionals desiring to distinguish themselves and remain competitive within the coding industry.

Interestingly, the majority of participants in the AAPC's 2004 Academy Salary Survey felt certification was a requirement for employment despite the lack of federal mandate for certification. The survey revealed that when considering practice size and regional differences, the average difference in pay between a certified and non-certified coder is approximately $2,000 to $3,000. Maryland is grouped in the Southeast region where the average salary for a non-certified coder is approximately $33,000 compared to $36,500 for a certified coder. None of the survey data accounted for benefit packages. Two additional factors in the determination of coder salaries identified by the survey were formal education and experience (AAPC Certification Wins, 2004).

AHIMA incorporated a 2002 AHIMA work force member survey with 2004 member profile data to produce a similar salary study that focused on additional factors as forces driving health information management salaries. The survey demonstrated a direct correlation between higher salaries and higher education, reporting a $10,500 increase in salary for those members with a master's degree or higher education level compared to a member with only a bachelor's degree. Another driving force identified by the study was work setting. Members working in the consulting/vendor and integrated delivery system work settings earn higher average salaries than those working in the ambulatory care, hospital, long-term care, or physician office work settings. Lastly, the study verified that job title influences salary, stating executive level positions make between $18,000 and $30,000 more annually and that members who supervise at least 40 personnel make $15,000 more annually than those members who supervise four or fewer

personnel (AHIMA Forces, 2004). Both the AAPC survey and AHIMA study identified similar regional variances in salaries.

Coding Industry Trends. Literature reveals an increasing number of references to a shortage of coders. Given the complexity of medical coding in a prospective payment system, government initiatives to combat fraud, and the constantly changing nature of the health care industry, it is easy to understand the high demand for medical coders. A 2001 American Hospital Association study reported the national vacancy rate for billing and coding personnel is almost 20% (Benavidez & Friedman, 2003). Mulaik (2002), reports that 31% of hospitals employ coders without credentials because of the medical coder shortage and warns that recruiting and retaining coders is one of the biggest issues facing the health care industry. One contract coding firm Chief Executive Officer states that "incalculable billions of dollars are being lost in hospitals across the country" due to the coding shortage and use of inexperienced coders (Haugh, 2002, p. 6).

Costello (2003) mentions an increasing demand for coders, the potential adverse effects that a hospital may endure due to a shortage of coding professionals, and the implementation of an AHIMA approved coding certificate program by Baylor Health Care System as one strategy to manage the coding shortage. In January of 2004, Meyers commented that the coder shortage has grown to critical levels in some areas and stressed the importance of coders in the revenue management process as well their role in avoiding costly regulation compliance problems. The President of Provider Health Net Services Health Information Management, Inc states "it is not uncommon to see more than $1 million to $2 million worth of charts that have been untouched for weeks or months due to missed claim-filing deadlines and resulting in lost revenues" (Meyers, 2004, p. 31).

Another recent trend in the coding industry is the increase use of remote coding. Whether the coding occurs offsite in another workplace or in an individual coder's personal home, remote coding is being embraced by facilities looking for experienced coders and desiring to increase productivity while decreasing costs. Seton Healthcare Network in Texas, Saint John's Medical Center in California, Sisters of Charity of Leavenworth Healthcare System in Kansas, and Sentara Healthcare in Virginia are just a few of the organizations that have implemented remote coding with success (Benavidez & Friedman, 2003; Keough, 2004; Pace, 2003; & Rogoski, 2004).

The popularity of this trend can be attributed to information technology developments that have enabled the secure transmission of sensitive personal health information. Keough (2004), details how health care systems are finding that despite Health Insurance Portability and Accountability Act concerns, remote coding is possible through the implementation of security measures taken for administrative procedures, physical safeguards, and technical security services and mechanisms. Examples of security measures implemented include: dedicated and secure workplaces and no print ability for home coders, vendor physical security of servers and redundant data storage, controlled access to records by hospital personnel and password and menu restrictions. End results of remote coding include reduced contract labor costs, increased office space within healthcare facilities, and cost savings in accounts receivable due to decreased time required to complete the final bill (Benavidez & Friedman, 2003).

Civilian Ambulatory Procedures Classifications. The Centers for Medicare and Medicaid Services (CMS) Hospital Outpatient Prospective Payment System website (2004a) reports that on August 1, 2000 CMS implemented the Outpatient Prospective Payment System under the authority granted by the Balanced Budget Act of 1997. This system simplified the

earlier cost based reimbursement policy of CMS by grouping outpatient services into Ambulatory Procedure Classifications (APCs). The classifications are based on the similarity of clinical conditions and respective resource consumption for patient care. Therefore hospitals have an incentive to use these bundled services efficiently. Unfortunately, goal displacement can occur and hospitals may be more likely to withhold some treatments since CMS will only reimburse the hospital for the APC (Grimaldi, 2002). Each APC has a predetermined payment rate that is based on historical data adjusted for inflation, case-mix and geographic wage variations. The APC groups are derived from the Health Care Finance Administration's Common Procedure Coding System (HCPCS) but unlike CMS's inpatient prospective payment system that assigns only one diagnosis related group per encounter, a single patient encounter may generate more than one APC. In addition, coinsurance rates are determined based on a percentage of the national median charges for the APC. The list of APCs is updated quarterly and as of September 17, 2004 there were nearly 700 classifications listed in the Federal Register for Medicare's Calendar Year 2004 Payment Rates (CMS, 2004b).

Department of Defense Ambulatory Procedure Visits. Department of Defense Instruction 6025.8 dated September 23, 1996 established an Ambulatory Procedure Visit (APV) system that "eliminates the requirements for admission and inpatient care for certain healthcare services. In addition, the APV system will allow better comparability of utilization and cost data between military and civilian sources of care" (p.1). An ambulatory procedure visit is defined as immediate pre and post procedure care that is provided within a facility and requires an unusual degree of intensity that lasts no longer than 24 hours in duration (DoD, 1996). The BUMED Instruction 6320.86 further defines an APV as a "medical intervention or episode of medical care rendered in an ambulatory setting" and is used synonymously with the term same day surgery

(1996, p. 1). The 24 hours time limit is measured from the time of the first nursing note to the time of discharge. If this timeline is met or exceeded, the patient must be admitted as an inpatient and processed as such. Patients are selected for an APV when their needs for intense short-term medical care cannot be provided solely in an outpatient clinic.

The DoD Instruction 6025.8 specifically tasks military treatment facility commanders with developing a facility-specific approved list of ambulatory procedures in accordance with current diagnosis and procedure coding guidance. Commanders must also create and maintain a medical record of the ambulatory procedure visit in accordance with the Joint Commission on the Accreditation of Health Care Organizations (JCAHO) guidance (1996). An Ambulatory Procedure Unit (APU) is defined as a location within a military treatment facility that is structured to provide the intense degree of care associated with ambulatory procedure visits (DoD, 1996).

Furthermore, BUMED Instruction 6320.86 (1996) dictates that APV records will be developed in accordance with JCAHO and CMS standards for a short-term stay and maintained on site for two years prior to being retired to the National Personnel Records Center. APV medical records must be stored separately from inpatient and outpatient records. Standard Forms (SFs) such as the Abbreviated Medical Record (SF 539), Request for Administration of Anesthesia and for Performance of Operations and Other Procedures (SF 522), and Clinical Record, Anesthesia (SF 517) are to be utilized in APV medical records. However, forms may be developed locally and utilized if approved by the hospital's medical records committee. Providers are assigned the responsibility for selecting diagnosis (ICD-9) and procedural (CPT) codes, but trained individuals shall complete final coding.

Purpose and Utility of Results

The purpose of this study is to accurately depict the relationship between decentralized coding for the Ambulatory Procedure Unit, coding completion ratings, and productivity. The hypothesis of this research is that integrating a professional coder within the Ambulatory Procedure Unit has a positive effect on completion ratings and productivity. Integrating a professional coder within the APU will increase communication between the provider and coder and improve the accuracy of the coding process. The end result will be increased provider education, improved documentation, better completion ratings, and increased productivity. The null hypothesis is that integrating a professional coder within the APU has no effect on completion ratings and productivity. The utility of the research applies to organizational leadership, cost effective contract management, and improving patient care. By understanding the dynamics of a closer working relationship between the providers and coders, initiatives can be implemented to increase the accuracy of the coding process and maximize productivity.

Methods and Procedures

The setting for this study was the National Naval Medical Center, specifically the Ambulatory Procedure Unit and the coding section within the Patient Administration Department. The non-probability sample included all APVs for calendar year (CY) 2002 to 2004 maintained in the Composite Health Care System (CHCS) and the MHS Management and Analysis Reporting Tool (M2). CHCS is the DoD's primary automated medical information system and supports 8.9 million MHS beneficiaries in over 700 healthcare facilities worldwide (CITPO, 2004). M2 is an executive level system that is used as a powerful ad-hoc query tool to access MHS data to provide decision-making support on clinical, financial, and population matters (EI/DS, 2004). However, due to system design limitations, different reporting timelines, and non-standardized data entry processes; similar data elements pulled from CHCS and M2 may not be identical. Data are presented through the use of descriptive statistics and a qualitative analysis of coding processes.

Variables

The variable of interest, or dependent variable, is the organizational design of coders utilized for coding APVs. This variable is dichotomous in nature and is operationally defined as decentralized or centralized. A decentralized approach refers to a design in which the coder is integrated into the clinic and is located physically closer to both the provider and point of care. This design also allows for direct communication between the APV coder, analyst, and clinic staff to include providers. Although the coder is dedicated to the APU she does not code all of the APVs for the entire command. Other clinics, such as Gastroenterology and Urology, will generate APVs that are generally not processed or coded through the APU. These APVs may be coded by the originating clinic or by the coders in the PAD. A centralized approach refers to a

design in which the coder is part of a larger group of coders that are pooled together in a separate department and is physically located further away from the provider and point of care. This design does not facilitate direct communication between the coders, analysts, and providers.

Two outcomes, or independent variables, were measured. The first outcome is coding completion ratings, as reported in the Standard Ambulatory Data Record (SADR) module of CHCS. The second outcome is productivity, which is measured in relative value units for APVs.

The study is longitudinal in design in order to account for changes over time. Data from CY 2002 established a baseline of performance and indicates the need for coding process improvement initiatives. CY 2003 data demonstrated the results of command efforts to improve coding processes while utilizing a centralized design; in which coding for APVs is conducted by coders located within the PAD. CY 2004 data reflected the influence of a decentralized approach to coding, in which a dedicated outpatient coder is relocated within the APU and becomes a dedicated APV coder. It is important to note that both coding designs are represented in CY 2004; the APU utilized a decentralized design while the PAD utilized a centralized design. Data Quality Commander's Statements are utilized to partially explain any variations in compliance that may be attributed to other external factors.

Data Collection

A retrospective study of NNMC's automated data system records and Data Quality Commander's Statements was conducted to determine the effectiveness of coder integration within the APU. The first step of the data collection process involved querying the CHCS for coding completion data for APVs from CY 2002 to 2004. The SADR separates records into four classifications: complete, pending, error, and none. Very few records have an error status, resulting from improper patient data entry or an information system incompatibility, and

therefore were combined with records with a pending status. For the purposes of this study, the records were sorted into the following three mutually exclusive categorically exhaustive groups: complete, pending, and none. Those records in the complete category included those records that had codes assigned and coding data entry completed into the coding module of CHCS, Ambulatory Data Module (ADM). Records in the pending category represent those that were coded and opened in the ADM module for data entry, but for various reasons have not been completed or finalized. Records that have inaccurate data entered in CHCS, no data entered in CHCS for the encounter, or missing records are some of the records included in the pending status. The third category, none, consists of records that may or may not have been coded but were never accessed in the ADM module for coding data entry purposes.

The second step in the data collection process involved accessing the M2 in order to retrieve the Relative Value Units (RVUs) for ambulatory procedure visits for CY 2002 to 2004. When compared with the total number of encounters recorded this data provides the average RVUs/APV generated. This data is compared between CY 2003 and 2004 as well as between the PAD and APU during CY 2004, which clearly depicts the affects of a decentralized versus centralized coding organizational design.

Step three included an analysis of Data Quality Commander's Statements. These are monthly statements prepared by the Data Quality Manager, signed by the Commanding Officer, and summarize compliance with the completion standards for financial and clinical workload data reported by the military treatment facility. The reports contain data from two months prior, so a January report would have data for the month of November the previous year. The Data Quality Commander's Statements did not include a section for APVs until December 2003, and data were not available to populate the field until the August 2004 report that reflected data for

June 2004. However, the reports still provide valuable insight into general coding trends at the command and will be briefly summarized. Outpatient records accountability, coding accuracy of diagnosis and procedural coding for outpatient records, and the ratio of SADR/WWR (World Wide Report) will be presented. The value of the SADR/WWR ratio should be greater than one due to the reporting timelines required for each data system and the ratio is an indication of timely completion of records for coding purposes. Analysis of coding accuracy of E&M codes is not included because 99499 is the standard E&M code utilized by NNMC for all APVs.

Step four consisted of a qualitative coding process analysis. Several interviews with key personnel in the PAD and APU established the differences in the coding processes due to organizational designs and identified additional factors that partially explain variations in the data examined. Interviews with the Data Quality Manager, Coding Consultant, and BUMED personnel were also conducted. Information gathered included historical practices, decision-making processes, audit results, and future initiatives.

Reliability and Validity

Data were gathered in aggregate form and therefore did not contain any unique personal identifiers, so there was no risk of violating patient privacy. Results are assumed valid because of built-in controls, edits, and the acceptance of data from these systems in state and federal court systems for claims settlements (R. M. Sabo, personal communication, January 05, 2005). Reliability of results was ensured through the use of two separate data systems and a longitudinal design in the analysis of data from three consecutive calendar years. All personnel with access to protected health information took appropriate ethical considerations throughout the data collection process in accordance with the Health Insurance Portability and Accountability Act of 1996.

Results

A review of CY 2002 data demonstrated that of 16,246 APVs, 42% of records were completed, 13% of records were pending, and 45% of records in CHCS were never accessed for coding purposes (see Appendix B for CY 2002 CHCS Data Summary). Combining the pending and none categories shows that 9,450 APV records in CY 2002 were never processed for coding or workload purposes. M2 data revealed that 47,157 RVUs were generated for a total of 7,660 APVs, resulting in an annual average of 6.16 RVUs/APV (see Appendix C for CY 2002 M2 Data Summary). The average monthly RVUs/APV ranged from a low of 5.43 in August to a high of 6.94 in September. When the 9,450 incomplete records are multiplied by the 6.16 average rate of RVUs generated per completed APV, an estimated 58,212 RVUs were lost due to incomplete records processing.

The Data Quality Commander's Statements for CY 2002 reflect an average of 68% record accountability, a wide range of coding accuracy, an average of 84% consistency between SADR and WWR numbers, and overall a significant variance in data from month to month (see *Figure 1*). Comments from these statements explain that a command team was assigned to investigate the poor accountability of outpatient records, a basic coding course was offered to providers to improve accuracy of coding, and several issues regarding SADR and WWR compliance were identified. In response to the 42% records accountability reported in June 2002, NNMC implemented Operation Recapture throughout the facility to improve the availability of outpatient medical records. Additionally, coding requirements were included as part of the command orientation to new staff, individual clinics with poor SADR/WWR ratios were identified, and training was conducted on ambulatory data module processing.

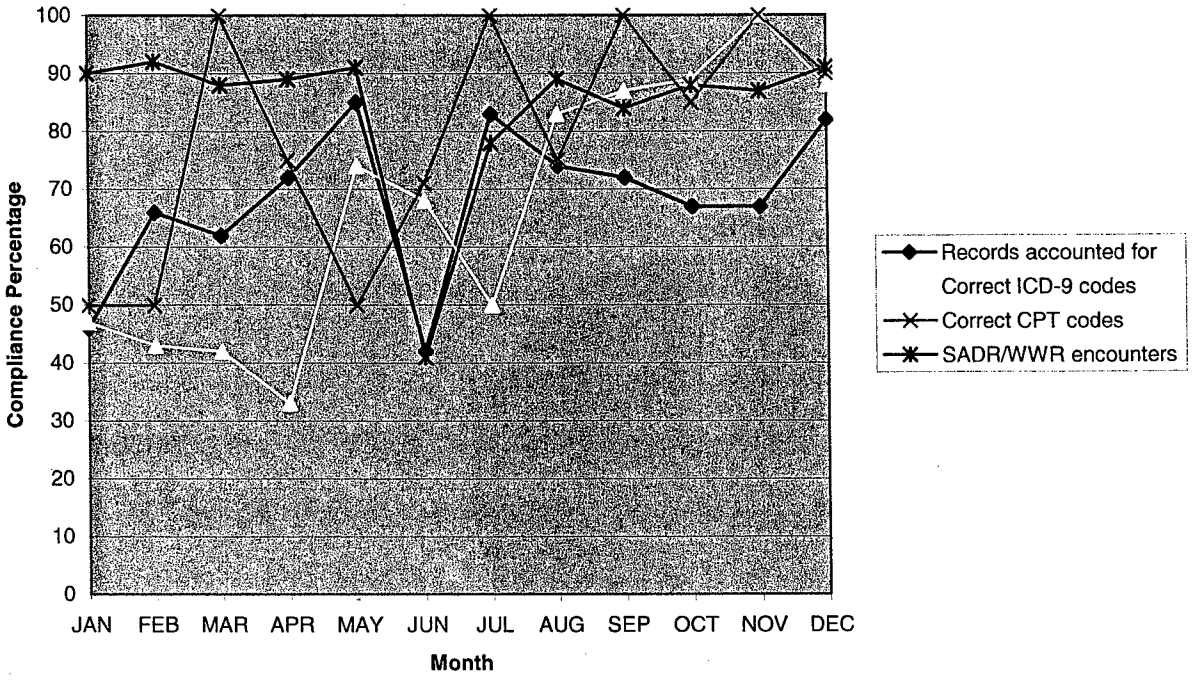

Figure 1. CY 2002 Data Quality Measures for Outpatient Records

Calendar Year 2003 Centralized Coding Design

In CY 2003 a centralized coding design was utilized and CHCS reported a total of 9,696 APVs (see Appendix D for CY 2003 CHCS Data Summary). Of which, 91% were completed, 5% were pending, and 4% were never accessed for coding purposes as shown in *Figure 2*. Combining the records in the pending and none category shows that 903 APV records in CY 2003 were never processed for coding and workload purposes. M2 data revealed that 51,675 RVUs were generated for a total of 9,116 APVs, resulting in an average of 5.67 RVUs/APV (see Appendix E for CY 2003 M2 Data Summary). The average monthly RVUs/APV ranged from a low of 5.14 in March to a high of 6.06 in August. When the 903 incomplete APVs are multiplied by the 5.67 average rate of RVUs generated per completed APV and $80.05 dollar conversion factor, an estimated $409,857 prospective payment system market value was lost due to

incomplete records processing. The dollar conversion factor is the average prospective payment system market value per RVU as calculated by M2 for NNMC during fiscal year 2003.

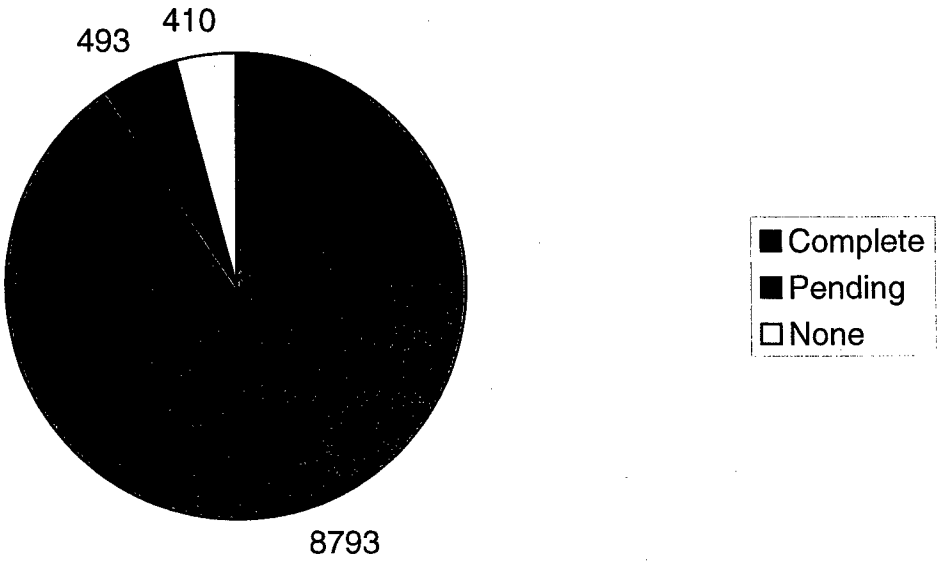

Figure 2. CY 2003 Standard Ambulatory Data Record Status for APVs.

As shown in *Figure 3,* there is significantly less variation in CY 2003 data quality measures and an overall improving trend from CY 2002. The average records accountability increased to 82%, coding accuracy of ICD-9 and CPT coding became more stable and averaged 92%, and there was a slight increase in consistency between SADR and WWR numbers. Comments from the Data Quality Commander's Statements attribute these improvements to a few key changes. The cumulative effect of Operation Recapture continued and record accountability steadily increased. In January 2003, 6 professional coders were hired for outpatient clinics and in April 2003, coding training changed from an open forum to being taught in individual clinics based on coding audit findings. Data support that this more customized method of training was more successful than earlier attempts at general coding training available

to all clinics and staff. No new initiatives were implemented for SADR to WWR ratios, but poor performing clinics were still identified and trained.

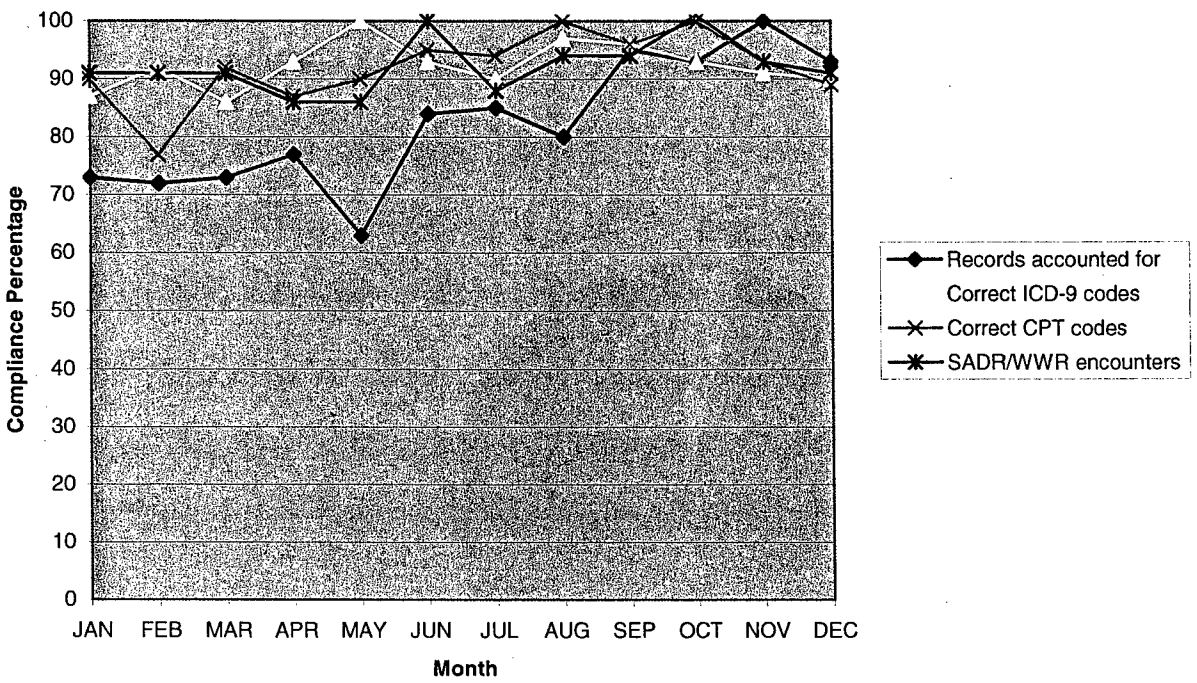

Figure 3. CY 2003 Data Quality Measures for Outpatient Records.

Calendar Year 2004 Decentralized Coding Design

During CY 2004 a decentralized coding design was utilized in the APU. However, the PAD still utilized a centralized design for the APVs that were generated in non-APU clinics. Of the 12,538 APVs that were reported in CHCS, 92% were completed, 4% were pending, and 4% were never accessed for coding purposes as shown in *Figure 4* (see Appendices F and G for CY 2004 CHCS Data). Combining the pending and none categories shows that a total of 1006 APV records in CY 2004 were never processed for coding and workload purposes. M2 data revealed that 58,822 RVUs were generated for a total of 11,515 APVs, resulting in an average of 5.05 RVUs/APV (see Appendix H for CY 2004 M2 Data Summary). The average monthly RVUs/APV ranged from a low of 4.62 in August to a high of 5.84 in November. When the 1006

incomplete APVs are multiplied by the average rate of 5.05 RVUs generated per completed APV and $71.04 dollar conversion factor, an estimated $360,905 of prospective payment system market value was lost due to incomplete records processing. The dollar conversion factor is calculated by M2 using the same methodology, but adjusts for fiscal year 2004 data.

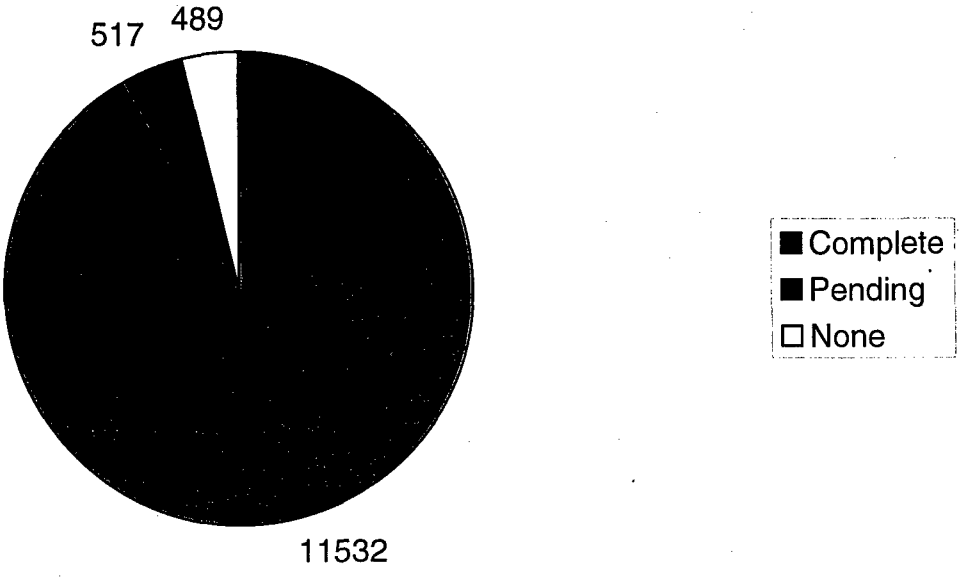

Figure 4. CY 2004 Standard Ambulatory Data Record Status for APVs.

However, due to the use of both a decentralized and centralized coding design it is possible to analyze the data in greater detail as shown in Table 1. Of the 6,545 records that were coded by the APU, 93% were completed, 7% were pending, and less than 1% were never accessed for coding purposes. Of the total 5,993 APVs that were coded by the PAD, 91% were completed, 1% was pending, and 8% were never accessed for coding purposes. While completion rates were close, there was a significant difference in the number of records in the pending and none categories. The majority of the incomplete records from the APU were pending, with only 6% in the none category. This means that approximately 99.6% of the

records that were supposed to be coded in the APU were actually coded (includes completed and pending records). Whereas, of the incomplete records from PAD only 7% were pending, and the remaining 93% were in the none category. This translates to approximately 92.3% of the records that were supposed to be coded in the PAD were actually coded (includes completed and pending records).

Table 1

CY 2004 Standard Data Ambulatory Record Status by Coding Design

Coding Design	Complete	Pending	None	Total
Decentralized (APU)	6,072	445	28	6,545
Centralized (PAD)	5,460	72	461	5,993
Total	11,532	517	489	12,538

A closer examination of M2 data revealed that the APVs coded by the APU averaged 6.28 RVUs/APV while those coded by the PAD averaged 3.81 RVUs/APV. When multiplied by the respective incomplete records and the $71.04 dollar conversion factor, this translates to an estimated $211,020 in lost revenues using the decentralized design and $144,263 in lost revenues using the centralized coding design. While it appears that the decentralized coding design is losing more revenue, it is important to realize this number is greater due to an average RVUs/APV that is almost twice that of the average for the PAD. Additionally, if corrective actions had been taken to eliminate the records in the pending category the estimated lost revenues could have been reduced to $12,492 by the APU and $124,775 by the PAD. Table 2 demonstrates the actual prospective payment system market values for CY 2004 as compared with the potential values had either a completely decentralized or centralized coding process been utilized.

Table 2

CY 2004 Potential and Actual Prospective Payment System Market Values for 12,538 APVs

Coding Design	Completed Records	Average RVUs/APV	Conversion Factor ($/RVU)	PPS Market Value ($)
Decentralized (APU)	11,632	6.28	71.04	5,189,398
Centralized (PAD)	11,423	3.81	71.04	3,091,777
Actual (APU & PAD)	11,532	5.10	71.04	4,178,090

Overall, *Figure 5* indicates a significant reduction in variance of data quality measures when compared with the CY 2003 measures shown in *Figure 3*. Records accountability averaged 95%, there was a slight decrease in coding accuracy for ICD-9 and CPT codes, and the consistency between SADR and WWR remained at 92%. October 2004 was identified as an outlier for coding accuracy and is partially explained by the September 2004 implementation of manual coding audits by a coding contractor. Of significant importance are the introduction of APV coding compliance with the Health Affairs guidance supporting the CMS 15 day standard in June 2004, as depicted in *Figure 6* and the new APV section on the Data Quality Commander's Statement in October 2004 (see Appendix I). The metrics used to measure APVs are the same ones utilized for outpatient records and will more accurately reflect coding practices for APVs. Now that APVs are receiving more visibility from the executive leadership levels, compliance with the Health Affairs coding requirement is expected to increase and stabilize.

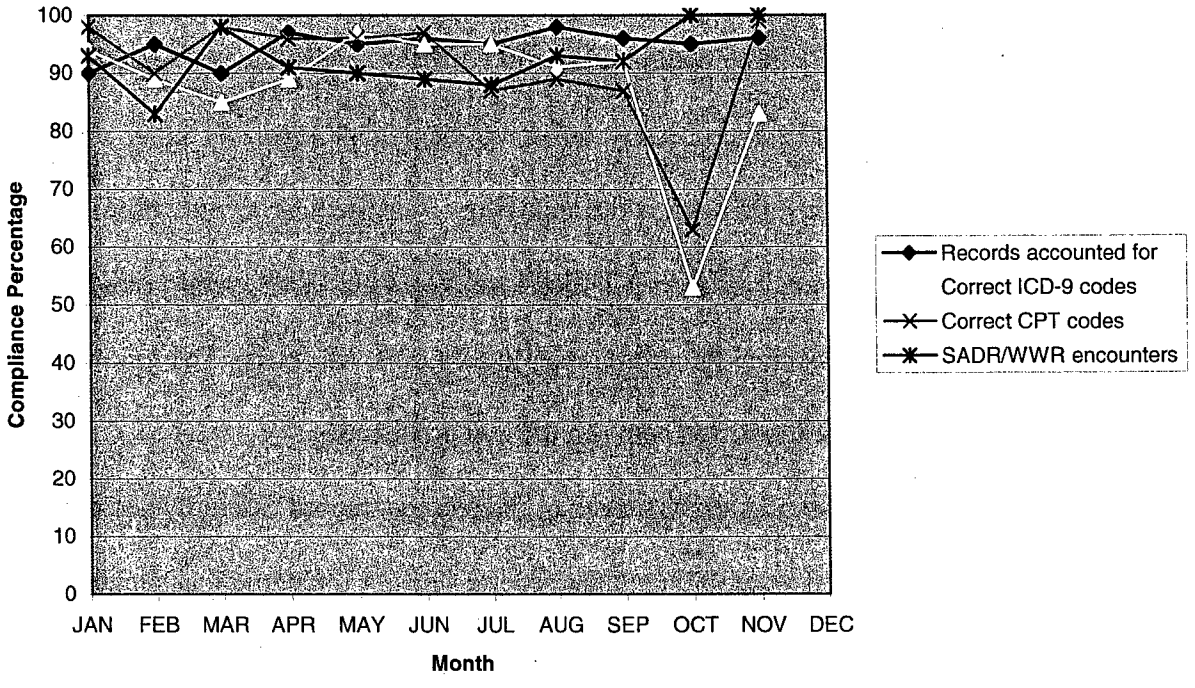

Figure 5. CY 2004 Data Quality Measures for Outpatient Records.

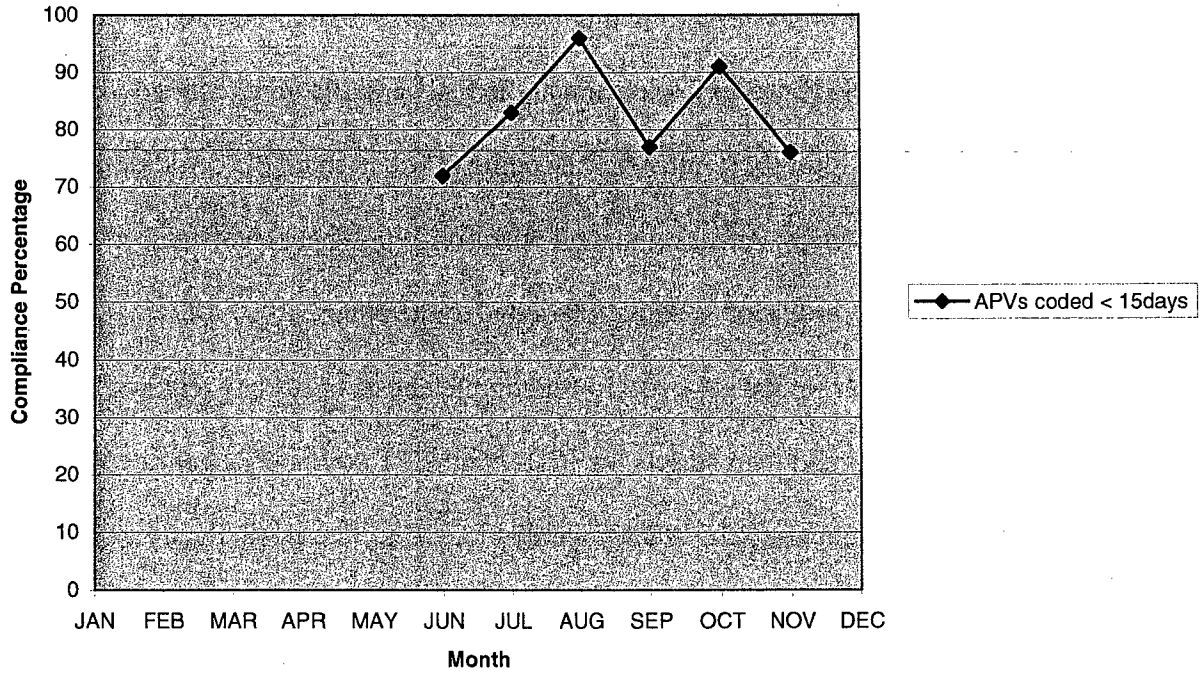

Figure 6. CY 2004 Ambulatory Procedure Visit Coding Compliance.

Coding Process Analysis

Figures 7 and *8* depict the basic coding processing of APV medical records in the PAD and APU. The starting point for both processes consists of the patient actions at either an outpatient clinic or the APU. The end point is the archiving of the medical record within the PAD, this is the point when the medical record is filed locally and held for several years before being retired to the National Personnel Records Center in St. Louis, Missouri. The following differences and similarities were identified between the two processes.

Once the PAD or APU coding analyst receives the records, record assembly and analysis for completeness occurs. Record assembly includes several steps. First numerical stickers are placed on the chart indicating the current year and the patient's last four digits of their social security number. Second, a CHCS record label with bar code containing patient information and the name of the custodial facility is generated and applied to the record. Third, any necessary dictation and transcription is completed and filed into the medical record. It is important to note that all dictation and transcription processing occurs in the PAD and the time required to complete this process is not within the control of the coding office in the APU. Additionally, the record is analyzed for completeness, ensuring that all operative reports are received, sorted, filed and organized neatly in the record prior to being forwarded to the coder.

Subsequently, the coder reviews the record for completeness, prints any required pathology or radiology reports and then selects the ICD-9 and CPT codes. The next step in the process is to enter the coding data into the ADM module of CHCS. Occasionally, a record will be missing or inaccurately entered into CHCS. The process in the PAD simply separates and accumulates these records without correcting the identified deficiencies and the coded record never gets entered into CHCS. However, the process in the APU forwards these records to the

APU medical records technician who is usually successful in correcting the deficiencies and returning the record to the coder for data entry into CHCS.

Once coding data entry is complete the medical record is returned to either the PAD physician lounge manager or the APU coding analyst in order to obtain the approval signature from the physician and to conduct the final analysis for completeness. The physician lounge manager maintains the records and waits for physicians to sign their records before conducting the final analysis. The APU coding analyst utilizes two additional methods of obtaining signatures before conducting the final record analysis. Once the final analysis is complete, records are archived in PAD.

While there were many minute differences identified, the two most significant differences occurred in the APU increase in informal communication between physicians and coders and the implementation of a proactive method of obtaining physician signatures. As a result of this change, in process communication has increased between the coder, coding analyst, and physicians. In PAD the previous medical records administrator, who also served as the coding supervisor, had maintained a policy of no communication between coders and physicians. Coders were to code records without seeking any clarification from physicians and physicians were to speak with the physician lounge manager and medical records administrator if they disagreed with the coding of their records. In the APU process, the coder would often speak directly with the physicians as they visited the office and leave notes for the coding analyst to clarify with the physicians. Additionally, during CY 2004 the APU coder conducted one formal training session on documentation with the physicians from the Ophthalmology clinic.

The other significant process difference occurred in the APU coding analyst's proactive method of obtaining physician signatures. The PAD physician lounge manager collects and

organizes the medical records that have been coded in the physician lounge. Records accumulate until physicians come to the physician lounge to sign their records. The physician lounge manager works with the PAD chain of command in an attempt to ensure records are signed in a timely fashion. Record inventory occurs twice a month and a delinquency email is sent to clinic department heads, Chief of the Medical Staff, Service Line Director, and the Associate Director for Administration identifying which physicians have records that have been in the physician's lounge for greater than three weeks. Currently, notices are not sent directly to individual physicians although historically when staffing levels were higher, daily inventories were conducted and physicians were notified if they had any records waiting for their signature.

In contrast, the APU coding analyst proactively obtains physician signatures by offering physicians and clinics three separate methods to choose from. The physician's first choice is to visit the APU coding office where the process is similar to that of the physician's lounge located in the PAD. However, there is one small difference, the APU coding analyst generates and maintains a current APU record reminder. This is a bi-weekly email sent directly to individual physicians that indicates the number of records that have accumulated in the APU coding office. The physician's second option is to sign their records at weekly clinic meetings, where the APU coding analyst takes the records. Clinics that have elected to have their records brought to their weekly meetings include Ophthalmology, Orthopedic, and General Surgery. The third and final choice for the physician is to have the records delivered to their office for signature, if the clinic elects to pick-up or have the records delivered. Only the Cardiology and Oral/Maxillofacial clinics have elected this option.

Another difference noted is that the APU coder utilizes the medical records technician in instances where coding data entry is not possible due to missing or inaccurate records in CHCS.

The medical records technician accesses CHCS and either corrects the inaccuracy or walks-in the missing records. On rare occasions, the medical records technician is unable to access records generated in certain clinics and coding data is not entered into CHCS for those encounters resulting in lost workload and RVUs. According to the APU coder, approximately 20 coded medical records were not entered into CHCS during CY 2004. Gaining the appropriate access keys has been difficult for a number of clinics including: Pulmonary, Hematology, Dermatology, and Endocrinology. In CY 2002 and 2003, when the APU coder was located in PAD, there was no medical records technician available to reconcile missing or inaccurate records in CHCS. The encounters that were inaccurate would have an incomplete status in the SADR and could be tracked for workload purposes, but the encounters that were missing from CHCS would not be accounted for in any system and would represent lost workload and potential revenues.

An additional distinction in the APU process is the implementation of a tracking system to monitor the status and location of records. The coding analyst copies the minutes of service sheet from the APU nursing station and utilizes it as a manual log for all APU records. The minutes of the service log is updated to reflect the following: receipt by coding analyst, status of dictation, transcription, operative reports, coding, data entry into ADM, physician/clinic custody, and completion. No such tracking system exists in the PAD coding process primarily because the medical records never leave the custody of PAD once they take possession.

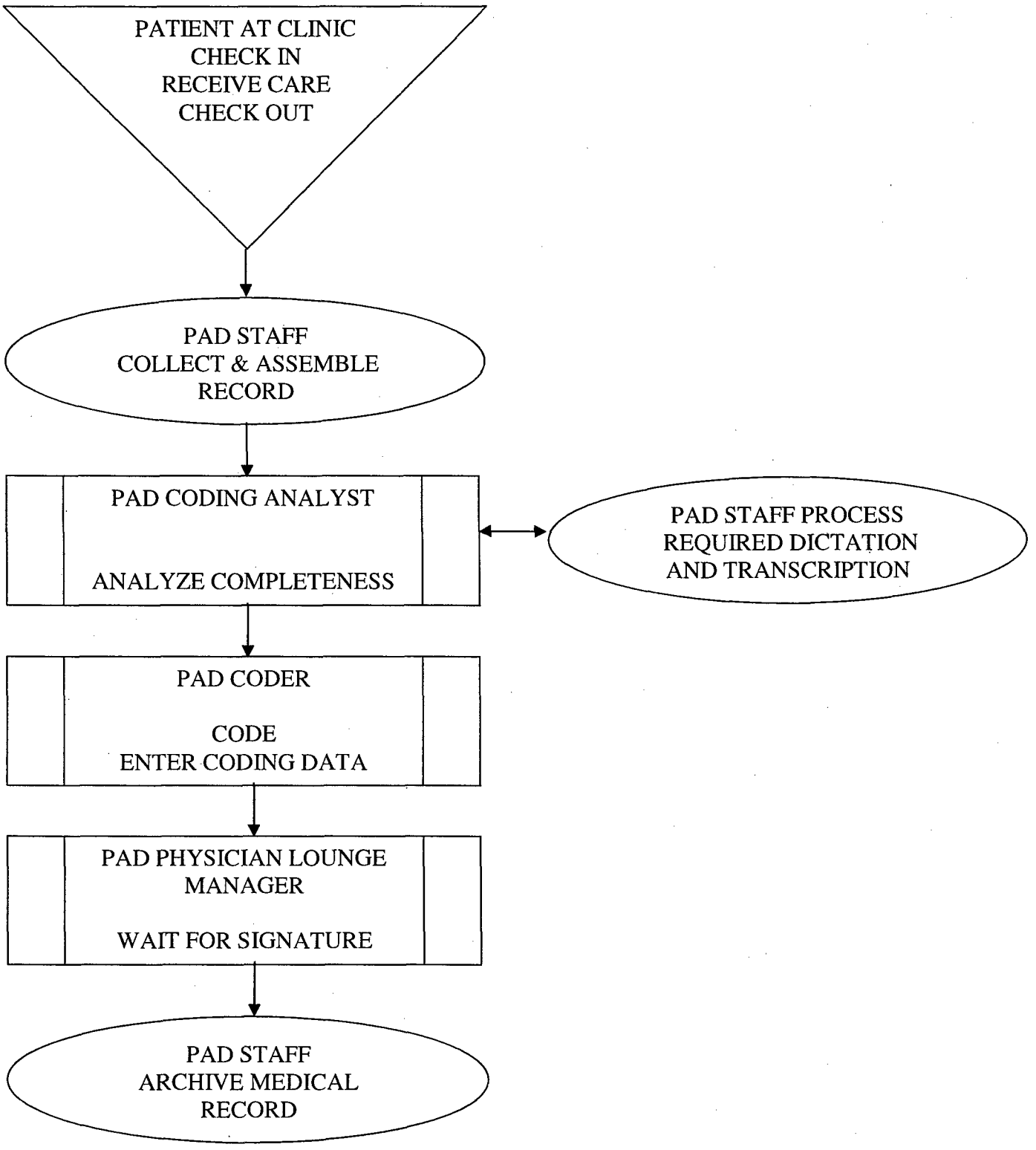

Figure 7. Patient Administration Department Outpatient Medical Record Process.

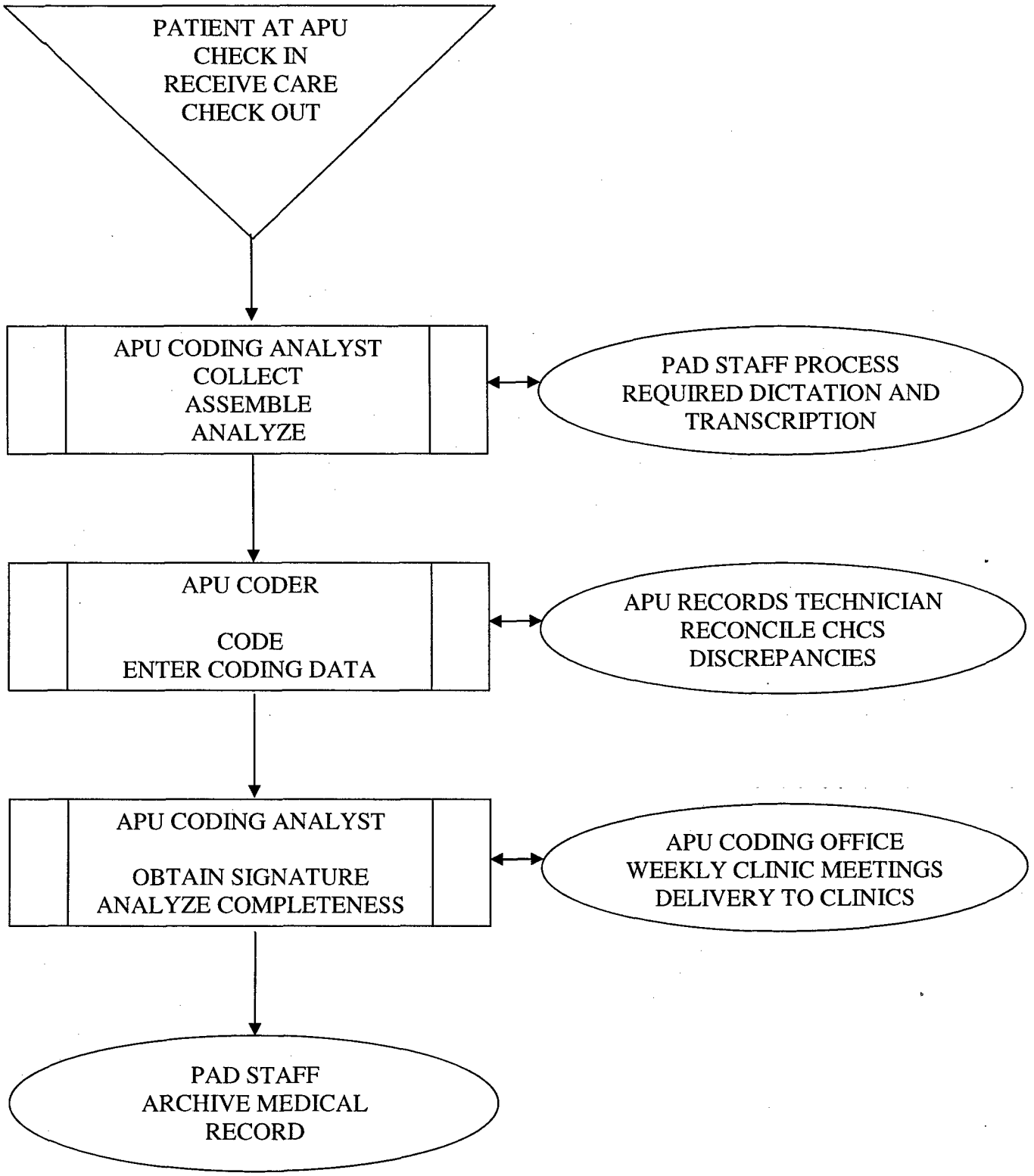

Figure 8. Ambulatory Procedure Unit Medical Record Process.

Discussion

CY 2002 data was representative of coding performance prior to the MHS implementation of Outpatient Itemized Billing in October of 2002 and the subsequent focus of BUMED on improving coding performance. Despite the fact that coding was based on a predetermined rate per procedure, completion ratings were dismal considering that there were more records that were never accessed for coding purposes than there were completed in CY 2002. While it is not possible to translate the 58,212 RVUs lost into dollars without a labor-intensive review of the procedures conducted and their associated reimbursement rates, this type of poor performance needed to be addressed by senior leadership. The data also identified a serious issue with records accountability, inconsistent coding accuracy, and poor timeliness and completeness of workload accountability. Command leadership took note of these issues and began to emphasize the importance of record accountability and end of day processing in order to audit coding accuracy, record workload, measure productivity, and generate revenue.

With the introduction of professional outpatient coders in CY 2003, the anticipated reduction in reimbursements due to the introduction of Outpatient Itemized Billing was minimized, there was a significant improvement in SADR completion rates, and coding accuracy stabilized at a much higher average than in CY 2002. The average RVUs/APV decreased by 10%; however, this effect was offset by the 50% increase in completion ratings from CY 2002. Unfortunately, using this centralized coding design still resulted in 410 records that may or may not have been coded, but were never accessed for coding data entry purposes.

The implementation of a decentralized coding design in the APU resulted in the coding of 9% more APV records at a 2% higher completion rating, 7% fewer records in the none category, and a 65% higher average RVUs/APV rate when compared with the centralized coding design in

the PAD. These results are attributable to two key differences in the coding process. First the increased communication between the coder, analyst, and clinic staff is an issue. This informal communication effectively allowed for on the spot corrections to general or vague documentation, thereby allowing for more specific and accurate coding. Second, the issue lies in the proactive methods of obtaining physician signatures. By offering several methods in which a physician may select to sign their records, the process becomes more convenient and signatures are obtained in a more timely fashion, thereby expediting the coding process and reducing the number of records that are never accessed for coding purposes.

The coding contract being considered utilizes remote coding which is similar to a centralized coding design in which the coders are located off-site and do not integrate the clinic staff as in a decentralized design. It is vital that the remote coding contract's quality control program ensures not only coding accuracy, but also the informal communication that occurs in a decentralized design. If this informal communication does not take place, physician documentation will not improve and the coding accuracy will only be as good as the documentation provided. In other words, the contract may only improve the coding accuracy of what was documented versus improving documentation that allows for coding to a greater degree of specificity, reflecting more accurately what occurred during the patient encounter. The remote coding contract statement of work also requires the contractor to provide coding auditors and specialty trainers on-site. This task is essential to provide prompt feedback to physicians and will aide in the effort to improve documentation in order to better support the collection of accurate population health data, cost effective resource allocations, and third party collections.

Recommendations

Three key recommendations have been identified from this study. The primary recommendation is to alter the remote coding contract statement of work in order to support a decentralized coding design within the APU. This would result in beginning the contracting process all over again and would take considerable command support. However, if the contract statement of work can not be significantly modified at this point, the remote contractor's performance in the APU should be observed for the first option period and compared with the results of the decentralized coding design utilized in CY 2004. This comparison will provide support for the decision of altering the contract for the second period in support of a decentralized coding design. This action would require less change and it would be easier to gain board of director approval for. In addition to coding completion rates within CMS guidelines and coding accuracy, special attention should be paid to the average RVUs/APV and communications between coding auditors and physicians.

The second recommendation is that the statement of work is altered to allow for future changes in the contract that would allow for decentralized coding in other clinics. This would only take a small language change in the contract, but would allow significant flexibility for the command in later option years. Once the contract is modified, further studies on the suitability of a decentralized coding design for outpatient clinics should be conducted. The process utilized in this study can be used as a model to determine potential RVU recapture based on completion rates and average relative value units per encounter. Clinics that perform complex procedures or experience a high volume of procedures should be considered for study. With the current transition of the MHS to a performance based funding system, it is imperative that each command is a good steward of the scarce resources it is provided with. As evidenced by this

study, utilizing a decentralized coding design has direct positive affects on coding accuracy and the revenue cycle.

The third and final recommendation is to ensure timely and customized education for administrators, physicians, coders, and clinic staff. This will require a significant change in perspective for clinic personnel, involve evaluating priorities, and would require complete support by command leadership as additional training requirements could temporarily influence productivity numbers. The contractor is required to provide certified coders, so providing a continuing educational program will be its responsibility as well; however it is important that the coding auditors conduct frequent training with the physicians based on the clinic's audit results. Training should include specific examples of how physician documentation translates into procedural and evaluation and management codes and how slight variances to that documentation can influence the code assigned. Additionally, NNMC should continue to stress the importance of end of day processing and correct data entry in and use of CHCS for all patient encounters. Particular attention should be paid to reducing and eventually, eliminating the amount of records in the pending category in CHCS. The limitations of this study demonstrate the severity of this issue.

Limitations

Limitations to the study included an inability to control for confounding factors, accounting for seasonal differences in utilization rates, and due to the unique nature of the APU, inability to generalize results to all outpatient clinics. Potential confounding factors included the MHS implementation of Outpatient Itemized Billing in 2002, changes to supporting information systems, and high turnover rate of NNMC staff. Table 3 presents another limitation to this study; the significant discrepancy in the total number of completed APVs reported for each year by system. CY 2002 data represented 18 Medical Expense and Performance Reporting System (MEPRS) codes, CY 2003 represented 14 MEPRS codes, and CY 2004 represented 12 MEPRS codes. Personnel from the Data Quality Department and the Business Decision Support office identified the improper use of MEPRS codes, the generation of incorrect encounters in CHCS generated by the prescreen process, and an error in the appointing process as possible explanations. When discrepancies exist, M2 is utilized as the official source of data.

Table 3

Yearly Total of Completed Ambulatory Procedure Visits Reported by System

	CHCS	M2
CY 2002	6,976	7,660
CY 2003	8,793	9,116
CY 2004	11,532	11,515

Conclusion

In conclusion, this study has demonstrated that integrating a coder into the APU is significantly more effective than utilizing a centralized organization of coders in terms of completion ratings and productivity. Advantages to a decentralized coding design include improved physician documentation, increased coding accuracy and specificity, enhanced revenue opportunities, and most importantly, better population health data which directly relates to patient care. The key contributor to these findings is the increased communication that occurs between the coder, coding analyst, physician, and clinic staff that resulted in better documentation and a more efficient processing of records. The unique nature of the APU does not allow results to be generalized directly to all outpatient clinics; however, the results do indicate that findings of further studies on other outpatient clinics that generate high RVUs may be similar.

With the future implementation of the Industry Based Workload and Assignment program, CHCSII, and the Coding Compliance Editor in the near future, the role of the coder within the MTF will change. The role of the coder will no longer be confined to only coding, but rather will encompass more of a training and auditor role. The role of the coder must help bridge the transition to CHCSII, assist in the implementation of industry best practices in order to maximize the efficiencies, and utilize their health information management expertise to develop sustainable skills within the organization. It is essential that the coding process is as smooth as possible in order for these enterprise level changes to succeed. The encouraging fact is that the industry wide focus on physician documentation, coding accuracy, data quality, and overall more efficient management of resources will produce incremental improvements that will cumulatively result in improving patient care.

Appendix A Statement of Work Excerpt for Coding Contract

REMOTE MEDICAL ANALYZING AND CODING SERVICES PERFORMANCE WORK STATEMENT

A. BACKGROUND

National Naval Medical Center (NNMC) Bethesda, Maryland is seeking assistance in improving its Health Information Management (HIM) and overall revenue cycle management processes and performance, including acceleration of reimbursement enhancement, cost saving initiatives and implementation of comprehensive, commercial best practices based systems. As a result, NNMC requires coding services to be provided in support of this new Health Information Management Revenue Cycle Management program. This re-engineering initiative is expected to recover internal space and reduce on-site support staffing costs through maximizing the most currently available, remotely supported contractor services.

The contractor must be capable of providing per record usage, onsite and off-site coding; physician training and auditing.

NNMC requires a contractor to provide the following systems and services addressed in this statement of work. The contractor must offer the following experience:

1. Certified and authorized users of software chosen to send Protected Health Information (PHI) to off-site locations.

2. Knowledge of the Composite Health Care System (CHCS) and DoD third party collection processes and systems (TPOCS), and able to provide the systems and services experience as part of the HIM and consolidated revenue cycle management requirements.

3. Federal and commercial healthcare remote and on-site coding services and consulting experience related to these tasks.

B. DISCUSSION

To appropriately support the HIM re-engineering initiative for NNMC, the contractor will provide the necessary services to achieve the following outcomes:

1. Enhance the prompt availability of patient information for providers, as well as accelerating the coding and third party collections process.
2. Reduce on-site revenue cycle management related operating expenses.
3. Improve data quality and coding quality through state-of-the-art systems and best practices implementation.
4. Implementation of productivity based support services (piece rate vs. hourly) for cost effective operations and improved revenue cycle financial operations efficiency and productivity.
5. Improved systems and workflow management processes.

6. Improve Quality Assurance and centralized reporting capabilities obtained through a software system with at least a 128 bit encrypted (secure, HIPAA compliant) system.
7. Reduce human resource and personnel security management issues through access to remote, highly skilled, nationally certified (US citizens for security purposes) medical certified coders.
8. Implementation of state-of-the-art, centralized, secure systems (coding), that allows for centralized data collection and reporting capabilities, Quality Assurance and Workflow Management.
9. Implementation of systems supported services solution that re-engineers the current government revenue cycle process to accelerate records completion, and the entire coding and billing process through implementation of industry best practices.

C. REMOTE AND ONSITE MEDICAL CODING SERVICES AND SOLUTION REQUIREMENTS

Contractor Task Responsibilities:

a. Provide industry leading, best practices based services expertise.
b. Provide remote and onsite coding staffing services utilizing only nationally certified, US citizen, medical coding staff with expertise in medical coding. National certification can include credentials from AAPC or AHIMA (ie CPC, RHIT, RHIA, etc.).
c. Use only the most current coding manuals and codes. Government will provide contractor with DoD coding guidelines. Contractor will correct any errors not accepted by the Government.
d. Provide on-site and remote medical coding auditors and 'physician shadowing' as well as specialty trainers on-site.
e. Provide the government access to software system for reports collection, QA auditing, etc.
f. Provide on-site administrative technical support services for indexing and scanning medical records, as well as providing encrypted medical scanners as required for designated areas in hospital. Provide on-site administrative staff to abstract the coded records into CHCS. Provide on-site program manager.
g. System implementation program management and engineering support services for the installation of the hardware and software solution proposed as part of the technical solution.
h. System training for government program staff as required on program management QA over-site, and reporting capabilities offered by the software.
i. Present a Project Management Plan within two weeks of contract award and weekly status reports during the system and services implementation phase of the project, with a transition to monthly status reports once full system implementation and training has been accomplished.
j. Concurrently code professional services for inpatient stays.
k. Enter coded encounters into CHCS within 48 hours of receipt of record/encounter.
l. Contractor will provide all scanners and computers needed to do off-site coding.

Government Furnished Information:

a. The government will provide the contractor with encoder access, as well as any site-specific policies and procedures that are required for completion of the task.
b. Primary and alternate point of contact for Contractor.
c. Government will provide access to CHCS and space for on-site staff and equipment.

D. QUALITY LEVELS

Provide a minimum of 95% accuracy rate on all medical records coded. Code all medical records within 48 hours of receipt. Conduct and provide a minimum of 10% QA review on remote coders records monthly, to be submitted by the 15th the following month for the previous month with the monthly status report.

The contractor will ensure sufficient numbers of certified coders are available to meet the contract requirements including periodic workload fluctuations. They must be US Citizens and qualified to meet the quality standards of this contract for a minimum of a 95% accuracy rate.

Contract shall respond to phone and email inquiries during the same working day, unless initiated after working hours. A phone answering service or machine utilized by the contractor during normal working hours will not constitute an answer to the DoD and will require a timely individual response, including provision of cell phone numbers of management staff.

E. INFORMATION PRIVACY AND CONFIDENTIALITY

a. The medical reports described in this solicitation are irreplaceable medical information and must be safeguarded at all times. The software system must be a 128 bit encrypted system that provides secure, redundant storage of patient information, meeting HIPAA.
b. The contractor must understand and agree, that as a contracting agency for coding work for the government that the medical records of a patient and material coded are strictly confidential. The contractor will not maintain, in any form, any sensitive or patient identifying data and shall comply with Public Law 93-578, Privacy Act of 1974, The Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1972, the Drug Abuse Office and Treatment Act of 1972, as well as other statutes regarding confidentiality of patient information.
c. Through use of the software system, no patient information can be downloaded or printed or retained in any manner by remote coders helping insure patient information privacy and confidentiality. Contractor employees are subject to the provision of Public Law 93-579, Privacy Act of 1974, 52.224-1 Privacy Act Notification and Privacy Act. Contractor and remote coders may not email PHI without approval by NNMC IT department. Information must be on a 128 bit encrypted system or de-identified prior to being emailed.
d. The Contractor employees must acknowledge understanding that this contract is subject to the provisions of the Health Insurance Portability and Accountability Act (HIPAA) of 1996. The contractor will certify compliance with the act by each coder signing a Business Associate Agreement (BAA).

F. PROJECT MANAGEMENT AND PERFORMANCE TIMELINE

a. The contractor will perform all work in accordance with all applicable government regulations and directives. An experienced Task Manager/Program Director familiar with government requirements will be provided to coordinate all ongoing project task efforts and act as a single point of contract for customer communications. This individual will assist in addressing government requirements; provide project over-site support and QU support.
b. Timeline. The contractor will be expected to begin system implementation and integration services by date of award. Full contract implementation will occur 30 days after contract award.

ESTIMATED RECORD COUNT

Inpatient Record	900/month
Same Day Surgery	1000/month
Outpatient Encounter	40,000/month
ER Encounter	1000/month

G. QUALITY CONTROL PROGRAM

After contract award and not later than 30 days prior to the commencement of services, the Contractor shall submit his/her Quality Control Program to ensure the requirements of the contract are met, as specified herein. The Contractor shall submit his/her Quality Control Program to the COR for approval. The Quality Control Program shall, at a minimum, include:

1. The method for monitoring and maintaining a minimum of 95% accuracy rate on all medical records coded.

2. The method for providing and ensuring that all medical records are coded within 48 hours of receipt.

Upon receipt of the Contractor's Quality Control Program, the COR will have 30 working days to review, comment, approve/disapprove. If the COR finds deficiencies in any portion or portions of the proposed Program, the Contractor shall have 10 working days to correct the deficiencies. This review and correction process will continue until the entire proposed Program is approved in writing by the MTF.

Appendix B CY 2002 CHCS Data Summary

STATUS	(All)
EM1	(All)

Count of SADRST	SADRST				
MEPRS	COMPLETE	ERROR	NONE	PENDING	Grand Total
BAC5	80		108	117	305
BAG5	1387	2	137	216	1742
BAJ5			8		8
BAK5	1		27	3	31
BAN5	36		53	45	134
BAZ5			6		6
BBA5	1420		1356	540	3316
BBB5			1		1
BBC5	165		346	96	607
BBD5	560	2	857	134	1553
BBF5	535		1047	145	1727
BBG5	253		385	83	721
BBH5	402		8	19	429
BBI5	849	1	568	85	1503
BCC5	200		550	144	894
BCD5	43		63	56	162
BEA5	928		1581	384	2893
CAA5	117		228	49	394
Grand Total	6976	5	7329	2116	16426
Percent	42%		45%	13%	100%

Appendix C CY 2002 M2 Data Summary

CY	2002		
CM	Data	Total	Mo Ave
1	Sum of Simple RVU, Raw	3408.14	6.01
	Sum of Encounters, Raw	567	
2	Sum of Simple RVU, Raw	4320.71	6.65
	Sum of Encounters, Raw	650	
3	Sum of Simple RVU, Raw	3500.03	6.60
	Sum of Encounters, Raw	530	
4	Sum of Simple RVU, Raw	4924.61	6.67
	Sum of Encounters, Raw	738	
5	Sum of Simple RVU, Raw	4018.83	6.40
	Sum of Encounters, Raw	628	
6	Sum of Simple RVU, Raw	4181.42	6.54
	Sum of Encounters, Raw	639	
7	Sum of Simple RVU, Raw	3877.14	5.94
	Sum of Encounters, Raw	653	
8	Sum of Simple RVU, Raw	2528.66	5.43
	Sum of Encounters, Raw	466	
9	Sum of Simple RVU, Raw	4413.57	6.94
	Sum of Encounters, Raw	636	
10	Sum of Simple RVU, Raw	4712.46	5.75
	Sum of Encounters, Raw	820	
11	Sum of Simple RVU, Raw	3898.23	5.46
	Sum of Encounters, Raw	714	
12	Sum of Simple RVU, Raw	3373.18	5.45
	Sum of Encounters, Raw	619	
Total Sum of Simple RVU, Raw		47156.98	6.16
Total Sum of Encounters, Raw		7660	

Appendix D CY 2003 CHCS Data Summary

status	(All)
em1	(All)

Count of sadrst	sadrst			
meprs	COMPLETE	NONE	PENDING	Grand Total
BAC5	367	3	80	450
BAG5	1671	176	5	1852
BAN5	54	7		61
BBA5	1878	90	105	2073
BBC5	228	4	41	273
BBD5	668	1	33	702
BBF5	582	6	44	632
BBG5	232	1	19	252
BBH5	313	62		375
BBI5	1097	29	27	1153
BCB5	78		11	89
BCC5	222	2	26	250
BEA5	1212	28	85	1325
CAA5	191	1	17	209
Grand Total	8793	410	493	9696
Percent	91%	4%	5%	100%

Appendix E CY 2003 M2 Data Summary

CY	2003		
CM	Data	Total	Mo AVE
1	Sum of Simple RVU, Raw	5016.92	5.71
	Sum of Encounters, Raw	878	
2	Sum of Simple RVU, Raw	4017.51	5.81
	Sum of Encounters, Raw	691	
3	Sum of Simple RVU, Raw	2417.16	5.14
	Sum of Encounters, Raw	470	
4	Sum of Simple RVU, Raw	4165.11	5.66
	Sum of Encounters, Raw	736	
5	Sum of Simple RVU, Raw	4316.64	5.56
	Sum of Encounters, Raw	777	
6	Sum of Simple RVU, Raw	4797.01	5.79
	Sum of Encounters, Raw	828	
7	Sum of Simple RVU, Raw	5066.01	5.76
	Sum of Encounters, Raw	880	
8	Sum of Simple RVU, Raw	4662.27	6.06
	Sum of Encounters, Raw	769	
9	Sum of Simple RVU, Raw	4141.49	5.71
	Sum of Encounters, Raw	725	
10	Sum of Simple RVU, Raw	4765.63	5.62
	Sum of Encounters, Raw	848	
11	Sum of Simple RVU, Raw	4165.8	5.60
	Sum of Encounters, Raw	744	
12	Sum of Simple RVU, Raw	4143.42	5.38
	Sum of Encounters, Raw	770	
Total Sum of Simple RVU, Raw		51674.97	5.67
Total Sum of Encounters, Raw		9116	

Appendix F CY 2004 CHCS Data Summary

CY	2004

Sum of Encounters, Raw	sadrst				
APU	COMPLETE	ERROR	NONE	PENDING	Grand Total
PAD	5460	33	461	39	5993
APU	6072	1	28	444	6545
Grand Total	11532	34	489	483	12538
Percentage	92%		4%	4%	100%
PAD	91%		8%	1%	100%
APU	93%		0%	7%	100%

CY	2004

Sum of Encounters, Raw		sadrst				
APU	meprs	COMPLETE	ERROR	NONE	PENDING	Grand Total
PAD	BAC5	2		2		4
	BAG5	2391	20	255	5	2671
	BBA5	728	9	84		821
	BBF5	2				2
	BBH5	309	3	68	1	381
	BBI5	1661	1	46		1708
	BCB5	367		2	33	402
	BEA5			4		4
PAD Total		5460	33	461	39	5993
APU	BAC5	590		2	65	657
	BAG5	32		1	8	41
	BBA5	1277		13	113	1403
	BBC5	202		2	22	226
	BBD5	680			21	701
	BBF5	953	1	5	54	1013
	BBG5	245			14	259
	BBI5	284		2	38	324
	BEA5	1499		2	92	1593
	CAA5	310		1	17	328
APU Total		6072	1	28	444	6545
Grand Total		11532	34	489	483	12538

Appendix G CY 2004 CHCS Data Summary by Calendar Month

CY	2004

Sum of Encounters, Raw		sadrst				
APU	CM	COMPLETE	ERROR	NONE	PENDING	Grand Total
PAD	1	457	6	47	1	511
	2	474	4	48	4	530
	3	532	4	53		589
	4	542	3	34	3	582
	5	505	6	25	5	541
	6	516	2	25	3	546
	7	469	3	22	1	495
	8	461	1	25	5	492
	9	385	3	30	7	425
	10	403		15		418
	11	402		29	6	437
	12	314	1	108	4	427
PAD Total		5460	33	461	39	5993
APU	1	531		1	28	560
	2	588			28	616
	3	630		1	36	667
	4	628	1	1	37	667
	5	534		1	38	573
	6	579		1	38	618
	7	432		1	33	466
	8	499			28	527
	9	459		1	29	489
	10	508		1	27	536
	11	379		5	55	439
	12	305		15	67	387
APU Total		6072	1	28	444	6545
Grand Total		11532	34	489	483	12538

Appendix H CY 2004 M2 Data Summary

sadrst	COMPLETE		
APU	Data	Total	Ave
PAD	Sum of Simple RVU, Raw	20789.41	
	Count of Encounters, Raw	5455	3.81
APU	Sum of Simple RVU, Raw	38032.58	
	Count of Encounters, Raw	6060	6.28
Total Sum of Simple RVU, Raw		58821.99	
Total Count of Encounters, Raw		11515	5.1

sadrst	COMPLETE			
APU	CM	Data	Total	Mo Ave
PAD	1	Sum of Simple RVU, Raw	1487.36	3.25
		Count of Encounters, Raw	457	
	2	Sum of Simple RVU, Raw	1634.44	3.45
		Count of Encounters, Raw	474	
	3	Sum of Simple RVU, Raw	1852.44	3.48
		Count of Encounters, Raw	532	
	4	Sum of Simple RVU, Raw	1983.09	3.67
		Count of Encounters, Raw	541	
	5	Sum of Simple RVU, Raw	1785.83	3.54
		Count of Encounters, Raw	504	
	6	Sum of Simple RVU, Raw	1933.95	3.76
		Count of Encounters, Raw	515	
	7	Sum of Simple RVU, Raw	1917.28	4.09
		Count of Encounters, Raw	469	
	8	Sum of Simple RVU, Raw	1581.75	3.44
		Count of Encounters, Raw	460	
	9	Sum of Simple RVU,	1711.27	4.46

		Raw Count of Encounters, Raw	384	
	10	Sum of Simple RVU, Raw Count of Encounters, Raw	1743.24 403	4.33
	11	Sum of Simple RVU, Raw Count of Encounters, Raw	1953.51 402	4.86
	12	Sum of Simple RVU, Raw Count of Encounters, Raw	1205.25 314	3.84
PAD Sum of Simple RVU, Raw			20789.41	3.81
PAD Count of Encounters, Raw			5455	
APU	1	Sum of Simple RVU, Raw Count of Encounters, Raw	3552.77 531	6.69
	2	Sum of Simple RVU, Raw Count of Encounters, Raw	3901.34 588	6.63
	3	Sum of Simple RVU, Raw Count of Encounters, Raw	3832.12 630	6.08
	4	Sum of Simple RVU, Raw Count of Encounters, Raw	3759.7 628	5.99
	5	Sum of Simple RVU, Raw Count of Encounters, Raw	3382.32 534	6.33
	6	Sum of Simple RVU, Raw Count of Encounters, Raw	3561.32 578	6.16
	7	Sum of Simple RVU, Raw Count of Encounters, Raw	2817.76 429	6.57
	8	Sum of Simple RVU, Raw Count of Encounters, Raw	2869.87 495	5.80
	9	Sum of Simple RVU, Raw Count of Encounters, Raw	2780.27 455	6.11

	10	Sum of Simple RVU, Raw Count of Encounters, Raw	3038.51 508	5.98
	11	Sum of Simple RVU, Raw Count of Encounters, Raw	2583.2 379	6.82
	12	Sum of Simple RVU, Raw Count of Encounters, Raw	1953.4 305	6.40
APU Sum of Simple RVU, Raw			38032.58	6.28
APU Count of Encounters, Raw			6060	
Total Sum of Simple RVU, Raw			58821.99	5.11
Total Count of Encounters, Raw			11515	

Appendix I Data Quality Commander's Statement for November 2004 Data

DATA QUALITY COMMANDER'S STATEMENT

DATE: 24 January 2005
MTF: NNMC
DMIS ID: 0067

MEMORANDUM FOR DHP RESOURCE MANAGEMENT STEERING COMMITTEE

THROUGH: (1) SERVICE DATA QUALITY MANAGER
(2) TMA MANAGEMENT CONTROL PROGRAM MANAGER

SUBJECT: Data Quality Statement for January 2005

I acknowledge responsibility for the financial and clinical workload data reported from my Military Treatment Facility (MTF). I am working with the MTF's Data Quality (DQ) Manager and have reviewed this month's DQ Management Control (DQMC) Review List to ensure complete, accurate, and timely data from my facility. I am aware the DQ Manager will forward the monthly Data Quality Statement to my Service's designated DQ Manager and that higher headquarters are also tracking metrics at the corporate level. The following is information from this month's DQMC Review List.

	Month Reviewed	**Compliance**
1. In the reporting month: a) What percentage of clinics have complied with "End of Day" processing requirements, "Every clinic - Every day?" **(B.5).** b) What percentage of appointments were closed in meeting your "End of Day" processing requirements, "Every appointment - Every day?" **(B.5).**	a) November 04 b) November 04	a) **91.12%** b) 98.90%
2. In accordance with legal and medical coding practices have all of the following occurred: a) What percentage of Outpatient Encounters, other than APVs, have been coded within 3 business days of the encounter? **(B.6.(a))** b) What percentage of APVs have been coded within 15 days of the Encounter? **(B.6.(b))** c) What percentage of Inpatient records have been coded within 30 days after discharge? **(B.6.(c))**	a) November 04 b) November 04 c) November 04	a) **85.53%** b) ***75.93%*** c) **42.00%**

	Month Reviewed	Compliance
3. In accordance with TMA policy, "*Implementation of EAS/MEPRS Data Validation and Reconciliation,*" dated 21 Dec 99 and "MEPRS Early Warning and Control System," dated 28 May 02, along with the most current Service-Level Guidance: **(C.1).**		Yes/No
a) Was monthly MEPRS/EAS financial reconciliation process completed?	a) November 04	a) **No***
b) Were monthly Inpatient and Outpatient workload reconciliation processes completed?	b) November 04	b) **No***
c) Were the data load status, outlier/variance, WWR-EAS IV, and allocation tabs in the current MEWACS document reviewed and explanations provided for flagged data anomalies?	c) November 04	c) Yes
4. Compliance with TMA or Service-Level guidance for timely submission of data **(C.3).**		Yes/No
a) MEPRS/EAS - 45 days	a) November 04	a) **No***
b) SIDR/CHCS - 5th duty day of the month	b) November 04	b) Yes
c) WWR/CHCS - 10th calendar day of the month	c) November 04	c) Yes
d) SADR/ADM – Daily	November	100%
5. Outcome of monthly inpatient coding audit: **(C.5.c)**	November 04	100%
Inpatient Records (DRG) # Records Reviewed: 30		*MTF Rate*
6. Outpatient Records. **(C.6.a,b,c,d,e)**		
a) Percentage of outpatient medical records on-hand containing the documentation and/or the loose documentation of the encounter selected to be audited or documented as checked out? (Denominator equals sample size.)	a) November 04	a) 96 %
b) What is the percentage of E & M codes deemed correct? (E & M code must comply with current DoD guidance.)	b) November 04	b) **46 %**
c) What is the percentage of ICD-9 codes deemed correct?		
d) What is the percentage of CPT codes deemed correct? (CPT code must comply with current DoD guidance.)	c) November 04	c) **83 %**
e) What percentage of completed & current DD Form 2569s are maintained in the record (non-active duty)?	d) November 04	d) 99 %
	e) November 04	e) **40 %**

		Month Reviewed	Compliance
7. Ambulatory Procedure Visits (APV) **(C.7.a, b,c,d,e)** a) Percentage of outpatient medical records on-hand containing the documentation and/or the loose documentation of the encounter selected to be audited or documented as checked out (Denominator equals sample size.) b) What is the percentage of E & M codes deemed correct? (E & M code must comply with current DoD guidance.) c) What is the percentage of ICD-9 codes deemed correct? d) What is the percentage of CPT codes deemed correct? (CPT code must comply with current DoD guidance.) e) What percentage of completed & current DD Form 2569s are maintained in the outpatient medical record (non-active duty)?		a) November 04 b) November 04 c) November 04 d) November 04 e) November 04	*MTF Rate* a) 100 % b) 100% c) 100% d) 100% e) **40%**
8. Comparison of reported workload data **(C.9.).** a) # SADR encounters / # WWR visits b) # SIDR dispositions / # WWR dispositions c) # EAS visits / # WWR visits d) # EAS dispositions / # WWR dispositions e) # of IBWA SADR encounters (FCC=A***) / # SUM WWR Bed days Note: FY05 data collection only, FY06 Goal 80%		November a)49,704/49,715 b) 740/740. c) **N/A**/49,715 d) **N/A**/740. e) 96/3470	a) 100% b) 100% c) **N/A** d) **N/A** 2.77%
9. I am aware of data quality issues identified by the DQMC Review List and when needed, have taken action to improve the data from my facility.		November 04	Yes

1a: Slight increase from last months compliance rate. Clinics completing EOD by midnight continues to be the focal point for all clinic managers via NNMC Commanders Daily Report. Completion rate continues to increase since implementation of Commander's Daily Report.

2a: Have increased by approximately 9% since last reporting month. Clinic managers continue to target their respective ADM Compliance Reports for all incomplete ADMs.

2b: Shows a decreased by 15% due to the loss of the APV coder. Patient Administration is working on replacing this FTE along with additional inpatient coders.

2c: Since the lost of three contract inpatient coders, SIDR backlogs are accumulating. One part-time analyzer was hired to complete analyzing backlog. Also noted is a wide rage of post- Iraqis discharges with 3-4 volumes of dispositions. These records are very time consuming to complete because of the many volumes. This downward trend may continue until more inpatient coders and analyzes are hired. Situation is being evaluated by Patient Administration Department.

6b: (46%), **6c:** (83%), 6d: (up 99 %), coding accuracy. These are manual outpatient coding audits conducted by one of our contract coders. Records are audited and codes are compared against ADM entries. DQ manager continues ongoing monthly coding classes and one-on-one training with providers.

6e: (20%), of 30 audited records had a DD Form 2569. Outpatient clinics front desk personnel are responsible for ensuring that every non-active duty patient has a completed and updated DD2569 enclosed in the medical record. The Medical Accounts Department will increase the training of all front desk personnel. Because of the very low compliance rate and high volume of Prime patients, it will take several months to monitor process in place.

8e: This is a new metric that shows IBWA RNDS vs. WWR Bed days. Command currently has a pilot program in place to complete IBWA encounters. Patient Administration is monitoring progress.

Note: As per TMA guidelines, #'s: 3a, 3b, 4a, 8c & 8d should read: "**Unable to complete due to TMA late release for FY05 EAS IV tables update software.**"

_____

Signature
Commanding Officer/Officer in Charge

Appendix J List of Acronyms

Ambulatory Data Module (ADM)

Ambulatory Procedure Classification (APC)

Ambulatory Procedure Unit (APU)

Ambulatory Procedure Visit (APV)

American Academy of Professional Coders (AAPC)

American Health Information Management Association (AHIMA)

Center for Medicare and Medicaid Services (CMS)

Common Procedure Terminology (CPT)

Composite Health Care System (CHCS)

Evaluation and Management codes (E&M)

Healthcare Common Procedure Coding System (HCPCS)

International Classification of Diseases, 9th revision (ICD-9)

Joint Commission on the Accreditation of Health Care Organizations (JCAHO)

Medical Expense and Performance Reporting System (MEPRS)

MHS Management and Analysis Reporting Tool (M2)

Military Health System (MHS)

National Naval Medical Center (NNMC)

Patient Administration Department (PAD)

Prospective Payment System (PPS)

Bureau of Medicine and Surgery (BUMED)

Registered Health Information Administrator (RHIA)

Registered Health Information Technician (RHIT)

Relative Value Units (RVU)

Standard Ambulatory Data Record (SADR)

World Wide Report (WWR)

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