Final Report
Coding Audit, Military Health System
W81XWH-06-F-0591

Prepared for:

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1.0 Executive Summary

The Office of the Assistant Secretary of Defense (Health Affairs)/TRICARE Management Activity (TMA) / Office of Health Program Analysis and Evaluation (HPA&E) supports performance-based decision making through analysis, evaluation, the development of metrics and measures, and various surveys. The Directorate's goals are to provide timely, quality information and data for program evaluation, cost accounting, case management, and decision support for the Military Healthcare System (MHS).

In keeping with these goals, TMA/HPA&E requested contract support services to conduct coding audits of inpatient and outpatient medical records from Medical Treatment Facility (MTF) sites throughout the MHS and awarded the contract to Standard Technology, Inc. (STI). Standard Technology's functional and technical

experience with MHS data provides the knowledge to conduct meaningful and proper research and evaluation studies.

STI's approach to the audit process was designed to drill down on two fundamental challenges facing correct code reporting. First, by assigning a specific Reason Code (RC) to each code in every record, and quantifying the results in a composite Code Usage Analysis report, TMA can quickly target necessary coding training needs through the identification of specified gaps in correct coding practices. Second, through direct engagement of the respective Service Branches and MTF personnel in the audit process by allowing a rebuttal and discussion period, a collaborative effort formed that allowed for effective communication and problem-solving actions that uncovered or re-established systems integration issues impacting the coded data.

There have been significant changes in the way that MTFs perform their coding with the implementation of the Armed Forces Health Longitudinal Technology Application (AHLTA) electronic health record and the Coding Compliance Editor (CCE). With data moving from one repository to another, the risk of data corruption increases exponentially. As the process changes, so should the data analyses. Consequently, HPA&E required an offeror with a clear understanding of all tasks and support services to audit, from a random sample provided by the Government, clinical coding of inpatient and outpatient medical records from military treatment facility sites throughout the military health system.

Revisions and expansions to this plan will be ongoing as TMA continues to investigate complex issues in measuring, evaluating, and analyzing healthcare delivery in the MHS and endeavors to develop innovative methods for financing high quality healthcare. STI has the experience, staff, and resources to assist with this ongoing audit endeavor.

Our flexible, impartial, multidisciplinary approach to complex problems, often on a quick-response basis to satisfy client needs, allowed STI to complete the audit on time despite delays in audit activities and reporting due to extenuating circumstances. We are please to provide HPA&E with this report which outlines the goals, coding accuracy metrics, methods, and lessons learned during the audit period.

1.1 Scope and Objectives

Six (6) large MTFs with Graduate Medical Education (GME) programs were selected, based on the instructions from TMA/HPA&E. These six sites were divided equally between Services, two each from Army, Navy and Air Force. The specific sites audited were the MTFs listed below:

- Naval Hospital Portsmouth
- Naval Medical Center San Diego
- Walter Reed Army Medical Center
- Brooke Army Medical Center
- Wilford Hall Medical Center
- Wright-Patterson Medical Center

There are two likely high-level coding error sources. The first is systematic. That is, there are DoD-wide practices and embedded systems which cause common coding mistakes to be made across the entire footprint. It is reasonable, as an ingoing assumption, that these errors may be specific to the encounter type (in/out/APV) and to the third-level MEPR. This type of error is an attractive target, as systematic errors tend to be easy to diagnose and fix. The other coding error source is management related. It has to do with errors that are the result of lack of training, direction, oversight and accountability at the local level. These problems are not common across the footprint, and are quite difficult to diagnose and fix. Worse, we do not know the relative size of systematic errors to management errors. Once this is understood, a study which drills down to two or three MTFs and looks at these problems in detail could reveal common management issues which can be addressed through training or by changes in the accountability system.

The original scope, as outlined in the Performance Work Statement, called for STI to collaborate with the Task Manager to use and enhance the reporting database (in MS Access) that was developed during the previous coding contract for delivery of the study data and summary results. However, the prior reporting database was not located and could not be utilized.

STI subsequently modified their proprietary audit reporting application, which uses an MS Excel workbook format

with Visual Basic programming and allows for individual and composite analysis of the audit results. The resultant statistical analysis of audit findings displays the same data utilizing three different methodologies as explained below in the Results Reporting (Section 1.5) below. The HIPAA-compliant workbooks are delivered as part of this report. Due to their large size, they have been compressed and delivered via a secure WebDAV folder with access available to the HPA&E Task Manager and also hand-delivered on a CD-ROM.

1.2 Data Source and Sampling Methodology

The source of data was the MHS information system, M2. All SADR and SIDR files for October 2006 were requested from the TMA-designated source and subject to random sampling selection to obtain the requisite thirty (30) records in each category of Inpatient (IP), Outpatient (OP), and Ambulatory Procedure Visit (APV).

Because of record availability concerns and striving to achieve 30 records received from each MTF, a total of 36 or 37 records for each MTF in each category selected using the Office of Inspector General (OIG) random sampling software, RATSTATS.

1.3 Records Requesting Process

A total of 540 records were required - 30 records in each category from the six (6) MTFs selected for this audit, for a total of 90 records from each facility. STI coordinated the request, receipt, tracking, management, storage, and disposal of all medical records identified in the study sample and received from MTFs in its centralized location. Each MTF has at least 36 records to select from with instructions to annotate reasons for specific record unavailability and to return a copy of the pull list with the records.

Separate pull lists for each type of encounter (IP, OP, and APV) with a cover letter and detailed instructions were mailed to the Commanding Officer of each MTF requesting acknowledgement of the receipt of the request. Prepaid mailing labels were provided and copies of the requested medical records were to be received by STI within 21 days. A separate tracking database was developed and utilized by STI for weekly and summary reporting of record receipt outcomes.

Record availability, as reflected below in Section 2.1, was not 100%, even with an additional 20% selection, and negatively impacted the overall and individual MTF accuracy results as the missing records were considered errors in all categories of DRG, E&M, ICD-9-CM and CPT/HCPCS.

Upon receipt of the photocopied medical record, it was scanned into STI proprietary software, indexed by a randomly selected identifying number and assigned to the designated auditor.

1.4 Auditing Approach

Auditors reviewed every record and documented the codes they felt were most appropriate. An explanation code was assigned to explain the re-coding rationale and to categorize differences.

As each encounter was examined, the auditor identified coding inaccuracies at a detailed level by assigning an Reason Code specific to the coding or documentation violation. This allowed STI to identify specific areas that require additional training to improve accuracy as well as identify system-wide issues impacting the data.
The auditor also annotated documentation deficiencies that can contribute to coding inaccuracies and impact overall medical record integrity. This included elements such as provider signature and stamp, accurate and complete patient identifying and demographic information, missing documentation, complete dates, use of unapproved acronyms, illegible handwriting, and other specified or identified deficiencies.

Comments and references to MHS and official coding guidance were provided. Summary measures are calculated for:

- The percent agreement of the Diagnosis Related Group (DRG) assignment for SIDR records
- The percent agreement of E/M codes
- The percent agreement of ICD-9-CM diagnosis codes
- The percent agreement of ICD-9-CM Volume 3 procedure codes (for IP)
- The percent agreement of CPT/HCPCS codes
- The percent of records with no errors noted

1.5 Coding References

For outpatient and APV coding, general guidelines and those specific to the DoD are found in the DoD's Professional Services and Outpatient Coding Guidelines and was used as a first-line reference for general coding conventions and military-specific guidance. At the time of the audit, the Jul 06 version of the DoD guidance was used. Coding and documentation guidelines used for the audit were the 1997 Documentation Guidelines developed jointly by the American Medical Association (AMA) and the Center for Medicare & Medicaid Services (CMS). We also used E&M auditing software called Intelicode to cross check the codes to remove as much subjectivity as possible. Other official coding resources utilized included ICD-9-CM, CPT and HCPCS coding guidelines as set forth by the various official governing agencies. Online resources referenced were the American Hospital Association Coding Clinic (AHA-CC) for ICD-9-CM and HCPCS, American Medical Association (AMA) CPT Assistant, CMS Anesthesia Crosswalk, and the CMS website. The inpatient coding guidelines were not readily available and a soft copy could not be located for this audit. For inpatient DRG classification, we used the online TRICARE DRG grouper, and industry-standard encoder/grouper software which was referenced for double validation as well as the DRG Desk Reference by Ingenix. The DoD requires the use of national coding and documentation guidelines along with the Correct Coding Initiative (CCI) guidelines published by the CMS.

1.6 Results Reporting

Results were reported in the Audit Result workbooks displaying three statistical models to determine accuracy. Each model has advantages and disadvantages, and can be dependent on previous methodology for comparison purposes. Using the "TMA Methodology", the number of 100% correctly coded records in all categories (DRG, E&M, ICD-9-CM and CPT/HCPCS) uses the number of records examined as the denominator. The second scoring methodology reports overall accuracy based on percent of correct coding in each category, averaged by the number of records reviewed, to obtain a multipart average. The third method is the code method, often used when conducting quality assurance studies, and compares the total number of codes reported in the original data by the total number of possible codes that should have been coded, as determined by the auditor. The advantages of the code method permits better diagnostic results in terms of the kinds of errors occurring in the code set.

The Code Usage Analysis page of the composite and individual MTF audit workbooks provided with this report uses the "code" methodology and allows the examiner to identify specific coding errors. It also identifies three primary corrective actions and their impact on correct coding:

- Education and targeting training for the coding staff and other professionals involved with coding
- Information for the clinical staff to improve documentation
- System errors and integration issues

During the data entry process when compiling the Audit Result workbook data, we highlighted in red text the specific codes and Reason Codes that were changed as a result of the feedback rebuttals and discussions. This data can be found on the Input sheet in the Audit Results workbook. The original comments were not modified to reflect the discussions since each MTF received their completed Feedback workbooks with the final decision logic (i.e., agree with auditor, agree with MTF, and why) in the comments fields of the Feedback workbook.

1.7 Staff Experience

For this task, we assembled a strong team of personnel who together bring a proven track record of professional skills across all types of coding within the MHS as well as extensive experience in a variety of civilian healthcare settings.

Highlights of staff experience are summarized in the table below. There was no turnover in the staff from start to completion of this audit.

Table 1-1, Summary of Audit Team Experience and Credentials

Billet	Assigned	Credentials	Notes

Billet	Assigned	Credentials	Notes
Program Director	Michael Jablin	Not required	▪ 30 years of analytical experience within the TMA and the MHS
Task Manager Quality Assurance	Anne Burns	CPC	▪ Extensive MHS Coding/Auditing experience ▪ Revenue cycle management-MHS and civilian settings ▪ AAPC approved coding curriculum instructor (PMCC)
Expert Analyst Quality Assurance	Nancy Flowers	CPC, and CCS-P	▪ Extensive MHS Coding/Auditing experience ▪ Health Information Management consultant supporting 20+ MTFs with staff of 60+ coders/auditors ▪ Speaker/trainer at UBO/UBU Conferences
Auditor – Inpatient	Kelley Hettig	CPC	▪ Extensive MHS inpatient/outpatient experience ▪ Audits DRG assignment in civilian hospitals on behalf of payers
Auditor – APV/Outpatient	Jenn Bjurman-Birr	CPC	▪ Extensive APV/inpatient experience in AF ▪ MBA in Healthcare Administration ▪ AAPC approved coding curriculum instructor (PMCC)
Technical Support	Howard Epstein	Not required.	▪ 25 years of experience in building databases that support analytical efforts.

1.8 Quality Assurance

Quality is an inherent element of all services and products provided by the STI Team. STI's technical approach emphasizes accurate and predictable auditing and coding processes in order to draw effective and correct conclusions concerning the state of coding within the MHS. Because STI examines provider- and production-based coded encounters, the results of our audit have to be accurate and consistent, e.g., they must reflect commercial best coding practices and military requirements. Multiple auditors should agree upon the final results. By emphasizing accurate and consistent audit results, STI's Quality Assurance process serves to provide a high level of confidence that data from multiple MTFs was accurately and methodologically reviewed and scored.

This audit, because it was the first for TMA, involved an in-depth and concurrent review of the code assignments and consistent error/reason code assignment by the Task Manager and Quality Assurance analyst. The rebuttal process provided an additional opportunity for quality control based on the feedback from a wide selection of MTF-based coders as they reviewed our findings. With the pre-feedback accuracy statistical average of 48.15%, rebuttals and discussions changed the average overall statistical average to 52.59%, a difference of 4.45%. Considering that at least one half of the changes were due to reversal decisions after MTF explanations of situations beyond coding/coder influence, the Quality Assurance rating is calculated at 97.8% for the TMA audit team based on records reviewed.

2.0 Summary Statistics

2.1 Composite Record Availability and Integrity

Of the 540 records requested, STI received 522 records, representing a 96.67 overall receipt rate. However, necessary supporting documentation (e.g., operative report) was missing in many of the documents and copy integrity was poor with some pages illegible or skewed on the page. Comments annotating observed integrity and availability issues accompany the individual MTF metrics.

Table 2-1, Composite Record Availability by Service

COMPOSITE RECORD AVAILABILITY BY SERVICE							
60 Records Required in Each Category by Service	# Records Received	% Received	# Records Received	% Received	# Records Received	% Received	Overall Availability
	NAVY	NAVY	ARMY	ARMY	AIR FORCE	AIR FORCE	ALL SERVICES
IP	60	100.00%	60	100.00%	60	100.00%	100.00%
OP	56	93.33%	54	90.00%	53	88.33%	90.56%
APV	59	98.33%	60	100.00%	60	100.00%	99.44%

2.2 Composite Accuracy by Service Branch

Table 2-2, Composite Accuracy - by Service

COMPOSITE ACCURACY BY SERVICE							
# Records Each Category =30 x 2 MTFs (60)	# Records Correct	Average Accuracy	# 100% Correct	Average Accuracy	# 100% Correct	Average Accuracy	Overall Accuracy
	NAVY	NAVY	ARMY	ARMY	AIR FORCE	AIR FORCE	ALL SERVICES
IP	53	88.33%	49	81.67%	52	86.67%	85.56%
OP	15	25.00%	12	20.00%	21	35.00%	26.67%
APV	21	35.00%	30	50.00%	30	35.00%	45.00%

2.3 < 24 Hour Stay Hospital Admissions

We were asked to report the number of inpatient stays that were less than 24 hours. Coding and auditing decisions based on determining if appropriate admission criteria have been met is beyond the scope of the role coding and auditing staff hold in the MHS business environment. These decisions are best left to leadership and clinical review.

Table 2-3, < 24 Hour Admissions

< 24 Hr Admissions:	
San Diego	4
Portsmouth	1
Walter Reed	3
Brooke	4
Wilford Hall	8
Wright-Patterson	0

3.0 Individual Military Treatment Facility Statistics

3.1 Naval Medical Center San Diego

3.1.1 Record Availability and Integrity

- Complete and legible documentation received within the required timeframe

Table 3-4, Record Availability-Naval Medical Center San Diego

RECORD AVAILABILITY- San Diego			
	# Requested	# Received	% Available
IP	30	30	100%
OP	30	30	100%
APV	30	30	100%
Pull list provided 36-37 encounters to send requisite 30			

3.1.2 Coding Accuracy Statistics

Preliminary audit results were distributed to the respective MTFs in the form of audit "Feedback Workbooks" with instructions to review and return, if desired, MTF rebuttal comments within 5 days of receipt. Based on written and verbal teleconferences, in some cases the audit findings were reversed as a result of coding discussion and agreement with the MTF (coding is not black/white), or explanations occurred where is was determined that MTF policies and procedures impacted the coding outcome when pertinent information was not available to the coder (e.g., pathology reports). The pre- and post-feedback metrics below indicate the preliminary and final audit statistics.

- IP: Documentation in the inpatient record was vague enough that it was not clear to the auditor that surgical procedures documented in the record had been performed in an APV setting and coded via a SADR. Documentation did not clearly support admissions for post-operative complications.
- APV: Significant number of code sets on SADRs had been re-sequenced during "travels" through various information systems. We kept this as an error to indicate in the final audit report that there are systems issues impacting coding quality.

Table 3-5, Individual MTF Accuracy-Naval Medical Center San Diego

PRE & POST-FEEDBACK METRICS				
	San Diego			
# Records 30	Pre-Feedback # Records Correct	% Correct	Post-Feedback # Records Correct	% Correct
IP	24	80.00%	28	93.33%
OP	8	26.67%	11	36.67%
APV	9	30.00%	10	33.33%

3.2 Naval Medical Center Portsmouth

3.2.1 Record Availability and Integrity

- Some records received late but Audit Team was able to process and audit within timeframe
- Missing 4 records for OP; missing 1 record for APV
- 4 APV records missing operative reports with statement indicating that coding occurred without the operative report

Table 3-6, Record Availability-Naval Medical Center Portsmouth

RECORD AVAILABILITY- Portsmouth			
	# Requested	# Received	% Available
IP	30	30	100%
OP	30	26	87%
APV	30	29	97%
Pull list provided 36-37 encounters to send requisite 30			

3.2.2 Coding Accuracy Statistics

Preliminary audit results were distributed to the respective MTFs in the form of audit "Feedback Workbooks" with instructions to review and return, if desired, MTF rebuttal comments within 5 days of receipt. Based on written and verbal teleconferences, in some cases the audit findings were reversed as a result of coding discussion and agreement with the MTF (coding is not black/white), or explanations occurred where is was determined that MTF policies and procedures impacted the coding outcome when pertinent information was not available to the coder (e.g., pathology reports). The pre- and post-feedback metrics below indicate the preliminary and final audit statistics.

- APV: Auditor miscalculated RVU weight of multiple procedures and misapplied a sequencing reason codes as a result. Although the auditor allowed a radiological code (75710), during a cardiac catheterization, with rebuttal discussion involving appropriate capture of this code as the documentation conflicted between the radiological report and the automated endoscopy documentation log that sequences the steps of the procedure.

Table 3-7, Individual MTF Accuracy-Naval Medical Center Portsmouth

PRE & POST-FEEDBACK METRICS				
	Portsmouth			
# Records 30	Pre-Feedback # Records Correct	% Correct	Post-Feedback # Records Correct	% Correct
IP	25	83.33%	25	83.33%
OP	3	10.00%	4	13.33%

APV	**9**	**30.00%**	**11**	**36.67%**

3.3 Walter Reed Army Medical Center

3.3.1 Record Availability and Integrity

- Some records received late but Audit Team able to process and audit within timeframe
- OP: Documentation sent but either wrong clinic and/or wrong date of service for 6 records
- APV: Missing 2 operative reports, 2 operative reports missing 2nd page, missing 1 anesthesia report

Table 3-8, Record Availability-Walter Reed Army Medical Center

RECORD AVAILABILITY- Walter Reed			
	# Requested	# Received	% Available
IP	**30**	**30**	**100%**
OP	**30**	**24**	**80%**
APV	**30**	**30**	**100%**
Pull list provided 36-37 encounters to send requisite 30			

3.3.2 Coding Accuracy Statistics

Preliminary audit results were distributed to the respective MTFs in the form of audit "Feedback Workbooks" with instructions to review and return, if desired, MTF rebuttal comments within 5 days of receipt. Based on written and verbal teleconferences, in some cases the audit findings were reversed as a result of coding discussion and agreement with the MTF (coding is not black/white), or explanations occurred where is was determined that MTF policies and procedures impacted the coding outcome when pertinent information was not available to the coder (e.g., pathology reports). There was no feedback form or teleconference request received in the timeframe required.

Table 3-9, Individual MTF Accuracy-Walter Reed Army Medical Center

PRE & POST-FEEDBACK METRICS				
	Walter Reed			
# Records 30	Pre-Feedback # Records Correct	% Correct	Post-Feedback # Records Correct	% Correct
IP	**26**	**86.67%**	**26**	**86.67%**
OP	**6**	**20.00%**	**6**	**20.00%**

APV	**10**	**33.33%**	**10**	**33.33%**

3.4 Brooke Army Medical Center

3.4.1 Record Availability and Integrity

- OP: Missing supporting documentation, mostly procedure and EKG reports
- APV: Missing 5 operative reports, missing 1 anesthesia report
- Records received within requested timeframe

Table 3-10, Record Availability-Brooke Army Medical Center

RECORD AVAILABILITY- Brooke AMC			
	# Requested	# Received	% Available
IP	**30**	**30**	**100%**
OP	**30**	**30**	**100%**
APV	**30**	**30**	**100%**
Pull list provided 36-37 encounters to send requisite 30			

3.4.2 Coding Accuracy Statistics

Preliminary audit results were distributed to the respective MTFs in the form of audit "Feedback Workbooks" with instructions to review and return, if desired, MTF rebuttal comments within 5 days of receipt. Based on written and verbal teleconferences, in some cases the audit findings were reversed as a result of coding discussion and agreement with the MTF (coding is not black/white), or explanations occurred where is was determined that MTF policies and procedures impacted the coding outcome when pertinent information was not available to the coder (e.g., pathology reports). There was no feedback form or teleconference request received in the timeframe required. Rebuttal form for Inpatient coding was returned too late and to the wrong POC to respond.

Table 3-11, Individual MTF Accuracy- Brooke Army Medical Center

PRE & POST-FEEDBACK METRICS				
	Brooke AMC			
# Records 30	Pre-Feedback # Records Correct	% Correct	Post-Feedback # Records Correct	% Correct
IP	**23**	**76.67%**	**23**	**76.67%**
OP	**6**	**20.00%**	**6**	**20.00%**
APV	**20**	**66.67%**	**20**	**66.67%**

3.5 Wilford Hall Medical Center

3.5.1 Record Availability and Integrity

- OP: Missing 7 records
- Other documentation received within requested timeframe

Table 3-12, Record Availability-Wilford Hall Medical Center

RECORD AVAILABILITY- Wilford Hall			
	# Requested	# Received	% Available
IP	30	30	100%
OP	30	23	77%
APV	30	30	100%
Pull list provided 36-37 encounters to send requisite 30			

3.5.2 Coding Accuracy Statistics

Preliminary audit results were distributed to the respective MTFs in the form of audit "Feedback Workbooks" with instructions to review and return, if desired, MTF rebuttal comments within 5 days of receipt. Based on written and verbal teleconferences, in some cases the audit findings were reversed as a result of coding discussion and agreement with the MTF (coding is not black/white), or explanations occurred where is was determined that MTF policies and procedures impacted the coding outcome when pertinent information was not available to the coder (e.g., pathology reports). The pre- and post-feedback metrics below indicate the preliminary and final audit statistics.

- OP: Lack of sequencing in OP clinic as provider has no easy way to know the relative value of codes when selecting in AHLTA. RVU sequencing is specific to MHS GL but not available to staff at MTFs to use. This is a finding not reflective of coding quality but a system and/or informational gap issue.
- APV: Reversed several preliminary audit findings regarding not picking up anesthesia on the surgeon's record. This MTF follows AF guidance to code on a separate SADR.
- Re-sequencing of codes occurring between MTF and M2 as code set order in M2 is different than what is displayed in the legacy CHCS program.

Table 3-13, Individual MTF Accuracy-Wilford Hall Medical Center

PRE & POST-FEEDBACK METRICS				
	Wilford Hall			
# Records 30	Pre-Feedback # Records Correct	% Correct	Post-Feedback # Records Correct	% Correct
IP	28	93.33%	28	93.33%
OP	7	23.33%	9	30.00%
APV	9	30.00%	17	56.67%

3.6 Wright-Patterson Medical Center

3.6.1 Record Availability and Integrity

- OP: Missing supporting documentation within records sent; mainly EKG and procedure documentation
- APV: Poor copy quality of some records, missing 3 operative reports

Table 3-14, Record Availability-Wright-Patterson Medical Center

RECORD AVAILABILITY- Wright Patterson			
	# Requested	# Received	% Available
IP	30	30	100%
OP	30	30	100%
APV	30	30	100%
Pull list provided 36-37 encounters to send requisite 30			

3.6.2 Coding Accuracy Statistics

Preliminary audit results were distributed to the respective MTFs in the form of audit "Feedback Workbooks" with instructions to review and return, if desired, MTF rebuttal comments within 5 days of receipt. Based on written and verbal teleconferences, in some cases the audit findings were reversed as a result of coding discussion and agreement with the MTF (coding is not black/white), or explanations occurred where is was determined that MTF policies and procedures impacted the coding outcome when pertinent information was not available to the coder (e.g., pathology reports). The pre- and post-feedback metrics below indicate the preliminary and final audit statistics.

- OP: Rebuttal in favor of MTF on two E&M levels
- APV: Unable to schedule due to unavailability of MTF staff
- IP: Brief discussion regarding findings and MTF rebuttals attempted for reschedule as MTF staff had not seen the auditor rebuttal rationales prior to the scheduled teleconference. Scheduling conflicts at the MTF prevented another discussion before final reporting.

Table 3-15, Individual MTF Accuracy-Wright-Patterson Medical Center

PRE & POST-FEEDBACK METRICS				
	Wright Patterson			
# Records 30	Pre-Feedback # Records Correct	% Correct	Post-Feedback # Records Correct	% Correct
IP	24	80.00%	24	80.00%
OP	10	33.33%	12	40.00%
APV	13	43.33%	14	46.67%

4.0 Overview of Findings

4.1 Inpatient Coding

- Deficiencies noted with the correct selection of the Principle Diagnosis (PD), sequence severity codes for diagnoses and procedures, and assignment of Complications and Comorbidities (CC) that impact the hospital stay through increased facility resource consumption. Select codes as defined by the UHDDS (Universal Health Data Definition Set) and ICD-9-CM Official Guidelines for Coding and Reporting and published and accessible (if available) DOD Inpatient coding guidance. This often impacted correct DRG assignment.
- Inpatient record documentation was unclear as to the reason for admission; the auditor originally determined that the procedures described in the record had not been coded. Feedback from the MTF coders revealed that the surgical procedures had been captured in the APV setting although some of the procedures performed were usually performed in an inpatient setting.
- The provider query process was often cited as inconsistent and without clearly established communication methods. In both inpatient and ambulatory surgery coding, provider and coder communications is crucial to compliant and correct coding and improved documentation inclusion or clarity. Resistance from providers and delays or lack of response to queries, with weak recourse or enforcement oversight, was a significant contributing factor to coding deficiencies and potentially incorrect DRG assignment due to lack of provider documentation clarity and effective interaction between coders and providers.
- There were inconsistencies across facilities in determining whether to code Miscellaneous Diagnostic and Therapeutic Procedures (ICD-9-CM Volume 3 procedure code range 88-99) when MHS data capture and analysis systems may already be accounting for the procedures via other methods. Civilian facilities often pick these procedures up on their Charge Master.
- Burn injuries were incorrectly calculated when coding degree of the burns and total body areas affected for correct code assignment. This negatively impacted the correct DRG assignment. Improve provider query process if documentation conflicts or does not clearly indicate the extent and degree of the burn areas.
- Coding from radiology and laboratory reports: When to query when findings indicate a possible CC condition or diagnosis impacting care but not clearly validated or addressed in the provider documentation. If validated and the documentation is amended by the provider, correct coding that identifies any conditions that cause higher facility resource use and, therefore, translates to appropriate RWP earnings. The medical record must include physician documentation confirming the presence of the condition. Clinical evidence must support principal and subsequent diagnosis before they can be reported.
- Teaching physician guidance: Questions arose as to when to reference resident documentation when teaching physician acknowledgement of the documentation as specified in DoD Coding Guidance for Outpatient services is the only specific MHS guidance and may not apply to the inpatient setting.
- There were several records where coders did not pick up the presence of post operative complications which caused an incorrect DRG code assignment.
- We found instances, in which codes were being applied, for example, for history of chemotherapy and radiotherapy when these conditions did not impact the current hospital stay. The response was “It is our practice to code...” Although these codes do not impact the DRG assignment, we decided to determine this as a coding error in the absence of MHS guidance stating otherwise. The UHDDS is a minimum data set that hospitals are required to follow. Any internal guidelines developed by the facility must be consistent with *AHA Coding Clinic for ICD-9-CM* advice

4.1.1 Systems Integration Errors

- In one case discussed with Wilford Hall, we uncovered a situation where the DRG in M2 was reported correctly but in order to qualify for the assignment, the procedure needed to be coded. The procedure

field was blank in M2 and was not available to the auditor. As a result, the auditor determined the code was not picked up by the coder and counted this as an error, explaining the reason for the error. The MTF reviewed the system trail and determined that the coding was correct in CCE but the procedure code only did not cross over to the SIDR and hence, to M2. The code did not print out on the coding cover sheet from CHCS.

- In one case, working jointly with Wilford Hall, we uncovered a table update issue that needs further investigation to drill down on the root cause. The DRG in M2 was assigned as 574 based on the diagnosis code set. These codes were re-designated to DRG 574 effective 1 Oct 06. However, the coding cover sheet in the medical record shows DRG 398 which was incorrect for the admission date in mid-October 2006. As a result, additional analysis and notification through established error reporting chains can occur if the level of impact on reporting systems and eventual correct DRG assignment. Procedures at the Health Information Management (HIM) level to detect misreported DRGs can be implemented but would be labor intensive.
- At Wilford Hall, DRG 335 was assigned due to the fact that 60.4 was coded in CCE. Because of systems interface issues, the coded procedure did not properly interface with CHCS, hence it was not listed on the coding cover sheet and resulted in a coding error assigned by the auditor which was reversed during the rebuttal process as it was correctly coded.
- One case at Wilford Hall revealed a coding table update issue where the incorrect DRG or code was selected because one system (CCE) was current, but CHCS had not been updated. The timeframe of updates can span weeks or even months and when this happens, records can be miscoded, potentially affecting the Relative Weight (RW) in all MTF settings.

4.2 Outpatient Coding

- Missing supporting documentation, much of it procedure documentation and EKG reports, accounted for 39 errors and contributed to a 23.08% decrease in accuracy. Many providers are not appropriately documenting procedures, perhaps thinking that by selecting the procedure code and listing the description is a substitute for proper clinical documentation to support services rendered.
- MHS coding guidance defines the documentation necessary to determine if a patient is considered new or established to a particular clinic specialty. It also states that personnel can query ADM for patient appointment history to make the determination. However, when records were received, there was no annotation on the specific encounter documentation and the supporting documentation was not received. This created quite a protest during the rebuttal process as this was considered a coding error in the audit. The definition of a new patient is very often misunderstood by providers, not realizing that a new patient is new to the CLINIC specialty and not to them specifically. Since many of the encounters were coded by providers and not validated by professional coders due to the large size MTF, we could not comfortably agree with the patient status without supporting documentation (e.g., intake question “Have you been seen in this clinic in the last 3 years?”)can be formatted on the clinic template to resolve the issue. An external auditor cannot make assumptions in the absence of clear documentation. This is reflected in 16 errors found (8.89% of all E*M errors) during the audit where credit for new versus established was not given.
- Telephone consultations are being coded when documentation does not support direct interaction between provider and patient (allied health professional acts as proxy but credit given to provider). In addition, calling an leaving a message on the answering machine or calling to give results of testing that doesn’t appear in the documentation to create additional clinical considerations by the provider. There were many 12 telephone consultations that did not meet the criteria for a visit; many were administrative in nature.
- When multiple procedures are performed, MHS coding guidance directs (Section 5.1) that the procedure with the highest RVU be sequenced first. There were 19 instances when RVU sequencing (Reason Code 312) created a coding error. There is not an accessible RVU table readily available to coding and clinic staff to assist with sequencing properly. AHLTA does not have the capability to sequence either.

- There were instances where E&M codes were used in conjunction with CPT post-operative procedure codes (99024), causing double RVU credit. This is considered "unbundling".
- Consultation codes and the criteria to determine satisfaction of all three components of the consultation "loop" was not applied appropriately in some encounters. Some providers think that every referral from another physician is always a consultation because of their specialty.
- An E&M code was selected inappropriately, in most instances when planned procedures occurred in which a separate E&M is not justified. This is considered "unbundling".
- Diagnosis codes were assigned 42 times when documentation did not support the code selection.
- Diagnosis codes were not assigned 12 times although documentation supported the need to code.
- There were 9 instances where the reason for the visit was not assigned as the primary diagnosis in accordance with Outpatient ICD-9-CM Official Coding Guidelines and echoed in MHS guidance.

4.2.1 AHLTA Impact

- Inappropriate use of computer-assisted coding module in AHLTA by using face-to-face time dominated by counseling and/or coordination of care allows AHLTA users to select a level based on these two criteria only. This will override the structured data element scoring process running behind the scene when documenting. The extent of counseling also needs to be documented and was not. The time spent counseling becomes the dominant factor and the longer the time spent, the higher the RVU. Therefore, the extent of documentation increases based on the length of time spent with the patient to justify using this method to select E/M levels. Using time as the key element to select an E/M code is the exception and not the rule.
- The audit team used a commercial E&M audit tool to crosscheck the leveling that is being reached using AHLTA computer-assisted-coding module. A pattern, although not confirmed until AHLTA is tested, appeared where AHLTA may be giving credit in the Medical Decision Making (MDM) section for prescription drug management only and applying a Moderate level when CMS Documentation Guidelines, echoed in MHS coding guidance, require two out of three criteria (Number of Diagnoses and Management Options, Amount and Complexity of Data, and Overall Risk) is required at the same level (Straightfoward, Low Complexity, Moderate Complexity, High Complexity) to qualify for overall MDM assignment. As a result, there were a number of encounters (14) that were considered over-coded, not necessarily all due to this reason, but enough to detect a pattern as determined by the auditor.
- There were 7 encounters in which the use of free text data entry in AHLTA resulted in a lower code assignment since the coding module does not "count" and give credit for this documentation.

4.3 Ambulatory Procedure Visit Coding

- There is a lack of uniformity and understanding from a coding perspective when determining the most specific final diagnoses for surgery coding. Many instances revealed a more specific and confirming diagnosis from the pathology report than what the provider indicated on the operative report. However, some coders were only abstracting from the operative report and/or provider attestation on the record face sheet. Some of the original auditing decisions were reversed after feedback when it was determined that coders never had access to pathology reports at the time of coding but were sent when the record was audited. This should not reflect back on coder accuracy but remained an error, (especially when the reporting systems re-sequenced the code order), in order to capture situations that impact, or do harm, to correct coding and reporting.
- RVU sequencing: A surprising discovery during the feedback sessions was the "highest RVU sequencing" requirement as annotated in Section 5.1 of the DoD Coding Guidelines*: "The CPT/HCPCS code with the highest RVU value should be sequenced first."* Two separate issues were identified. One may be currently impacting data integrity and affecting proper RVU credit and the other may impact RVUs in the future as the planned Prospective Payment System (PPS) accounting and Charge Master

Based Billing (CMBB) systems are implemented.

- There were 54 instances, representing 10.17% of the coding errors in the APV SADRS where the auditor determined that the coder was not sequencing the procedures in accordance with MHS coding guidance. Reason Code 312 referenced on the Code Usage Analysis worksheet in the Composite APV TMA Audit Results workbook was used to cite instances of RVU sequencing errors. It was determined that the code order received from the M2 was not sequenced the same as reflected in CHCS and CCE at the MTF. Most of the coders did not have the MHS RVU reference table available to them to assist with RVU sequencing, citing proprietary American Medical Association (AMA) copyrights restrictions. If new accounting methodology and billing software is depending on sequencing, then dissemination of this information is recommended.
- Out brief discussions and feedback teleconferences confirmed that coders are sometimes engaging in "assumptive coding" when faced with timely APV coding requirements (15 days from surgical date) and record assembly delays that had them assigning codes without the required documentation (i.e., operative report) available. Due to administrative delays (such as transcription), the coders made annotations on the APV documentation indicating that coding was performed without the operative report. When the record was received by the audit team, the operative report, in most cases, was not available after more than six months post procedure and resulted in a decreased accuracy score.
- Documentation conflicts were noted between automated endoscopy and cardiovascular procedure documentation software programs and physician-dictated operative and procedure reports. These findings resulted in conflicting and/or unclear documentation that put coders at risk of assigning codes inappropriately and resulted in error assignments by the auditors.
- The provider query process was often cited as inconsistent and without clearly established communication methods. In both inpatient and ambulatory surgery coding, provider and coder communications is crucial to compliant and correct coding and improved documentation inclusion or clarity. Resistance from providers and delays or lack of response to queries, with weak recourse or enforcement oversight, was a significant contributing factor to coding deficiencies.

4.3.1 Systems Integration Errors

- Feedback teleconferences revealed that in most instances, correct coding was performed at the MTF when sequencing the highest RVU first. It appears that the M2 data repository is either receiving the codes incorrectly or re-sequencing them upon receipt. These auditing errors were not reversed so that a measure of impact could be established to estimate the scope and possible "harm" this possible data integrity issue is causing. Details of specific SADRS are available for further investigation if needed.

5.0 Recommendations

The primary objective of this study was to quantify coding agreement between medical records from the Standardized Inpatient Data Record (SIDR) and the Standardized Ambulatory Data Record (SADR) and to identify any system issues or other factors that influence data integrity.

Out briefs were conducted with five of the six MTFs and follow-on teleconferences were held with four of the six MTFs, as time and schedules permitted, to review and discuss individual coding cases. MTF coding staff and service-level experts participated and the discussions proved to be very valuable. The response from the MTFs was overwhelmingly favorable to the opportunity and a number of systems integration issues were discovered, or confirmed, as a result.

A very successful and key element to this audit was the inclusion of the auditing and coding staff at each MTF as well as the Service POCs, to review preliminary audit results prior to final outcome reporting to TMA. Each MTF, via their respective Service POC, received an "MTF Feedback" spreadsheet of findings and an opportunity to review and respond to any coding disagreements prior to final results reporting.

Update MHS Outpatient coding guidance to reflect documentation criteria necessary on an individual encounter

to determine new vs. established patient status when sending records to an external auditor. Also, with many providers not understanding the criteria, having this question entered on the clinic template and a concerted education effort of the providers may decrease the frequency of this coding issue.

Ongoing education to improve documentation of physicians, nurses, residents, students, and other healthcare professionals can be guided by an analysis of the Code Usage Analysis worksheet supplied with this report for each patient setting, This audit identified key areas that would benefit from organized training efforts.

We encountered situation where the coders were applying coding logic in accordance with established coding policies at a local level that was not defined in either MHS coding guidance or official coding guidance. Indeed, the practice of developing isolated coding policies could: a) potentially alter DRG assignment through improper sequencing of severity, and b) selecting codes that fall into specific population health categories at the expense of correct coding principles can potentially disallow appropriate codes and CCs that affect correct DRG assignment from being reported. The current DOD inpatient guidelines have not been officially updated in approximately 15 years and are currently in the process of updating. Until new guidance is published, the practice of creating MTF policies that deviate from correct coding principles is not recommended.

We recommend a re-publication of the Inpatient coding guidance with widespread dissemination. Or, if this is not feasible, an interim publication instructing coders on what guidance to reference to assist in consistent coding application would be helpful. Informational and educational teleconferences and upcoming UBU Conference workshops can improve uniformity and correct DRG assignment.

All healthcare providers, and indeed, anyone involved in coding and documentation would gain a better understanding through awareness of and adherence to a well worn Facility Compliance Plan outlining coding principles and documentation clarity that coders need to ensure correct coding and maintain their compliance with the professional credentials and code of ethics mandated by their respective credentialing organization.

The process of converting the enclosed conclusions and recommendations into more accurate coding and documentation practices is one in which healthcare providers and administrators should have a great interest in. Inattention to the consistent application of coding guidelines erodes the quality of aggregate healthcare data, financial accountability, and ultimately, patient care.

Appendix A: List of Acronyms

AAPC	American Academy of Professional Coders
ADM	Ambulatory Data Module
AHA CC	American Hospital Association's *Coding Clinic* for ICD-9-CM
AHIMA	American Health Information Management Association
AHLTA	Armed Forces Health Care Longitudinal Technology Application
APV	Ambulatory Procedure Visit
CC	Co-morbidities and Complications
CCE	Coding Compliance Editor
CCS-P	Certified Coding Specialist-Physician

CHCS	Composite Health Care System
CMS	Center for Medicare and Medicaid Services
CPC	Certified Professional Coder
CPT	Current Procedural Terminology
DRG	Diagnosis-Related Group
HCPCS	Healthcare Common Procedure Coding System
HPA&E	Health Programs Analysis and Evaluation Program Office
ICD-9-CM	International Classification of Disease, 9th Revision Clinical Modification
IP	Inpatient
MDC	Major Diagnostic Category
MHS	Military Health System
MTF	Military Treatment Facility
OIG	Office of the Inspector General
OP	Outpatient
PD	Principal Diagnosis
PPS	Prospective Payment System
RVU	Relative Value Units
RW	Relative Weight
RWP	Relative Weighted Product
SADR	Standard Ambulatory Data Record
SIDR	Standard Inpatient Data Record
TMA	TRICARE Management Activity
UHDDS	Uniform Hospital Discharge Data Set

Appendix B: Copies of MTF Notification Letters and Instruction Letter – each Service

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MAR 23 2007

TRICARE
MANAGEMENT
ACTIVITY

MEMORANDUM FOR DEPUTY SURGEON GENERAL OF THE AIR FORCE

SUBJECT: Military Health System (MHS) Military Treatment Facilities Coding Audit

The Office of the Assistant Secretary of Defense (Health Affairs), TRICARE Management Activity, Health Program Analysis and Evaluation (HPA&E) Division is conducting an ongoing coding audit program for professional services in clinic settings, ambulatory patient visits, and inpatient services. The methodology for this audit has been developed with the support of the coding community and is intended to provide data that will be used to evaluate the accuracy of medical record coding and help to determine where further education and training maybe required. Standard Technology, Inc. is under contract to HPA&E to perform this audit. As with previous audits, the service specific results will be reported to you.

Six major medical treatment facilities, two each from Army, Navy, and Air Force have been selected and will be audited monthly for three consecutive months. The Air Force sites are Wilford Hall Medical Center and Wright-Patterson Air Force Base. Audits will begin shortly after MTF commanders are notified of the audit. We anticipate results will be available late summer.

If you have any questions or comments, my point of contact is LTC Lorraine Babeu who may be reached at (703) 681-3636. Your assistance with this audit is greatly appreciated.

Elder Granger
Major General, MC, USA
Deputy Director

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MAR 23 2007

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MANAGEMENT
ACTIVITY

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Six major medical treatment facilities, two each from Army, Navy, and Air Force have been selected and will be audited monthly for three consecutive months. The Navy sites are NMC Portsmouth and NMC San Diego-Balboa. Audits will begin shortly after MTF commanders are notified of the audit. We anticipate results will be available late summer.

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TRICARE
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MAR 23 2007

MEMORANDUM FOR DEPUTY SURGEON GENERAL OF THE ARMY

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Six major medical treatment facilities, two each from Army, Navy, and Air Force have been selected and will be audited monthly for three consecutive months. The Army sites are Walter Reed Army Medical Center and Brooke Army Medical Center. Audits will begin shortly after MTF commanders are notified of the audit. We anticipate results will be available late summer.

If you have any questions or comments, my point of contact is LTC Lorraine Babeu, who may be reached at (703) 681-3636. Your assistance with this audit is greatly appreciated.

Elder Granger
Major General, MC, USA
Deputy Director

Standard Technology, Inc.

P.O Box 3647

Fairfax, Virginia 22038-3647

- Include a copy of your facility's list of privileged providers for the date of service covered by the current audit
- Include any site specific approved abbreviations
- Please make sure that all copies are complete, legible and contain both sides of each page when applicable.
- Copies should include all documentation relative to the encounter and **any documentation referenced during the encounter** in the record whether electronic or paper.
- It is not necessary to black out any identifying information
- Bundle together like encounters such as Outpatient, APVs and Inpatient.
- Package all documents and mail using the prepaid labels as provided.

Complete copies of charts may include the following documents:

1. Summary Sheet (face sheet or cover sheet)
2. Discharge summary
3. Operative reports and reports of all other procedures
4. Pathology reports
5. Results of laboratory and special procedures tests such as EKG, MRI
6. Consultation reports
7. Admission Notes including History and Physical
8. Any Privileged Provider progress notes
9. Emergency Department and outpatient visit documentation if the admission resulted from the Emergency Department or outpatient clinic visit. This would include ambulance records, information from a transferring hospital, etc.
10. Physicians orders
11. Medication records

Detailed instructions and suggestions are below:

- The deadline for return of all required documentation to STI is **21 work days** from the date you receive this request.
- Please email Anne Burns, CPC at burnsa@stic2.com upon receipt of this request so that we may track receipt of this package, and obtain your contact information (name, title, phone and fax numbers) for communication purposes
- Please call Anne Burns, CPC at 703/385-9240, cell: 571/243-8436 if you have any questions.
- Provide a copy of the associated pull list(s) with each mailed package
- Keep a copy of the original of each pull list.
- It is recommended you make a copy of at least the OP encounters to keep for reference. When audit results are reported back, communication regarding the results, if there is disagreement with the audit findings, is more streamlined when documentation is readily available.

Appendix C: Composite and Individual Audit Result Workbooks

The Individual and Composite (All MTFs) TMA Audit Results Workbooks for Inpatient, Outpatient, and APV services are too large in size to email directly. The workbooks were placed on a secure WebDAV folder with password protected access given to LTC Babeu, Task Manager for this audit, with the Office of the Assistant

Secretary of Defense (Health Affairs)/TRICARE Management Activity (TMA) / Office of Health Program Analysis and Evaluation (HPA&E).

Instructions for accessing a WebDAV folder:

Use Internet Explorer 6.0 or higher.
Click File -> Open .
Type the URL of the WebDAV in the space provided.
Check in the "Open as web folder" box.
Click OK.
You will be prompted to login. Use your user ID and password.
You will receive a warning that the certificate is not from a trusted certifying authority. Proceed.

The site will open as a Windows folder. You may drag-and-drop files from your PC into this folder and from the folder to your PC. The connection is encrypted and the folder has a restricted user access list. Note that copying large files to and from a WebDAV can take a while, depending on the speed of your Internet connection.

Once you have opened a WebDAV for the first time, it will appear in your Network Places. You can just double-click on it there and login.

Sometimes, depending on the speed of your Internet connection, you will be prompted twice to login. And sometimes the first or second login prompt will be hidden by the Internet Explorer window. If you see the "flashlight" icon scanning back and forth over the WebDAV window for more than ten seconds, move it and the Internet Explorer window out of the way to access the login panel.