Orthopedic Documentation and Coding Software Improves CPT Coding Compliance for Multi-Procedure Cases by 42% for Facility and 57% for Physician Group

ProVation® Medical, Inc.
Based on a field study by Heidi Stout, CPC, CCS-P
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EXECUTIVE SUMMARY

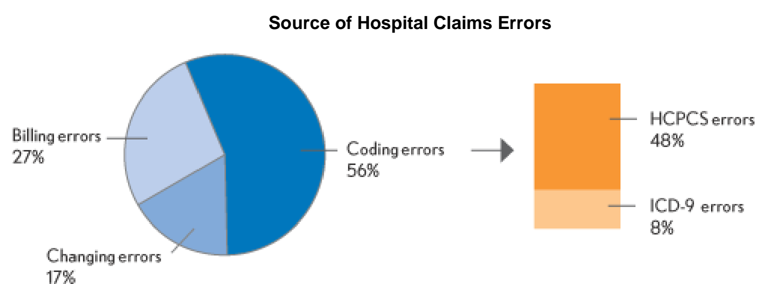
By using the ProVation® MD orthopedic documentation and coding compliance solution, an orthopedic Surgical Hospital demonstrated a 42% improvement in the documentation and coding accuracy of its multi-procedure facility claims, and a 57% improvement in the documentation and coding accuracy of its multi-procedure professional claims. It is estimated that the facility revenue lost from under-coding on an annual basis prior to implementation of ProVation was $271,920 per year for multi-procedure cases alone. The professional fee impact of under-coding is estimated to have been $225,060 per year for multi-procedure cases alone. Multi-procedure cases represent 37% of the total volume of procedures at the facility. It is assumed that a significant financial benefit would also be realized from use of ProVation with the other 63% of cases; that benefit was not measured in this study. Facility and professional codes did not match in 45% of the cases, a compliance issue and focus of the OIG in 2005. Additionally, improved coding compliance reduces the risk of audit and reimbursement of past fees to Medicare, and possibly fines. With the current compliance focus on healthcare providers, record fines of $11,000 per incident plus treble damages are being levied, resulting in total fines for some organizations in the millions.

INTRODUCTION & BACKGROUND

With changes in federal reimbursement mechanisms over the past several years and an increased focus on fraud and abuse detection, health delivery organizations have found it increasingly difficult to generate adequate documentation while maintaining a predictable revenue stream. In particular, changes in the outpatient prospective payment systems (OPPS) and in hospital outlier payments have challenged providers to understand how these changes will affect their revenue for the procedures they perform. With OPPS, for example, hospitals and physician practices must review core revenue cycle practices in order to understand how their registration, documentation, coding and billing processes will be affected by this new payment approach.

Organizations have been challenged to address these regulatory changes quickly or risk declining revenue, or worse yet – accusations of fraud. Even without these changes, understanding the impacts of documentation and coding on a practice's revenue and effectively managing the revenue cycle process is difficult. A 2002 study of one million claims from 80 hospitals demonstrated an error rate ranging from 8 to 30 percent. Coding errors alone represented 56 percent of those total errors.[1] An earlier study by the

Source of Hospital Claims Errors



Source: 3M Health Information Systems study reported in Healthcare Financial Management, July 2003

[1] *Issues in Outpatient PPS: Keys to Successful Revenue Cycle Management,* Healthcare Financial Management. July 2003.

Centers for Medicare and Medicaid Services (CMS) of fee-for-service claims nationwide found that of all of the improper Medicare benefit payments made during FY2001 (representing an estimated $12.1 billion in payments), 43 percent were due to documentation errors and 17 percent involved coding errors.[2] These studies point to one of the key issues for revenue cycle managers: the quality and accuracy of physician documentation becomes *the* major factor affecting the quality of an organization's data and therefore its revenue stream. [3]

In mid-2004, ProVation®Medical sought to evaluate the effectiveness of ProVation® MD, the organization's core product for creating comprehensive medical procedure notes that include all relevant ICD and CPT codes. ProVation's specific objective was to measure the financial impact from improved coding of procedures through use of their software. An orthopedic Surgery Hospital and current ProVation client agreed to participate in the study. ProVation solicited the support of Heidi Stout, CPC, CCS-P, an independent coding consultant, to review and validate the findings from this study. This report is based on those findings.

Product Overview

ProVation MD is a multi-specialty documentation and coding compliance solution that facilitates physician creation of comprehensive procedural notes, eliminating dictation along with transcription costs. The application automatically generates an accurate billing record with CPT and ICD codes based on the physician's documentation – plus it incorporates CCI edits. ProVation MD can be interfaced with other software and hardware systems such that patient demographics, scheduling information, images and other clinical data automatically feed the system. Additionally, outbound charges and a comprehensive billing record can be exported to a practice management/billing system. At the same time, procedure reports can be sent to an interfaced electronic medical record if available. The ProVation system can also generate specialty reports such as consultation letters for patients and referring physicians, patient recall letters and patient instructions. So far, the product includes detailed medical content and coding for gastroenterology, orthopedics, pain management, pulmonology, urology, cath lab, echocardiography, and nuclear medicine. ProVation RN, a companion product, generates nursing documentation in a similar way.

ProVation Medical's products are currently in use at 250 hospitals and ambulatory surgery centers across the United States.

Participating Site

The participating site is a 31-bed surgery hospital located in the Southwestern United States, specializing in orthopedic, joint replacement and spine surgeries. This hospital performs approximately 8,000 procedures annually, including orthopedics and spine surgery, and pain management. The hospital asked to remain anonymous for purposes of confidentiality.

Use of ProVation MD at the Study Site

The study site has been using the ProVation MD product for 9 months to complete documentation outside the exam room after performing a procedure. Physicians also use the built-in coding module to code their procedures. Coders manually review the resulting documentation and codes, confirming the codes before they are sent to the billing office for processing.

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[2] "Improper Fiscal Year 2001 Medicare Fee-for-Service Payments," a Department of Health and Human Services memorandum from Janet Rehnquist, Inspector General, to Thomas Scully, Administrator, February 15, 2002.
[3] *Best Practices for Preempting Payment Denials,* Healthcare Financial Management. April 2003.

Prior to the use of ProVation MD, the study site relied solely on physicians using charge tickets to document charges based on the procedures performed, with coders checking their work by reviewing dictated notes.

Overall Study Approach and Data Gathering

In order to study the financial impacts of the product on an organization's documentation and coding of medical procedures, ProVation developed an initial research project approach. After reviewing the approach with the participating organization, the project approach and research methodology were finalized. The approach consisted of five steps:

1) *Initial Client Interviews* during which ProVation spoke with the site's representatives to review the basic project approach and timing; discuss how the software is being used; and confirm specific next steps;
2) *Data Gathering* of client information from hospital visits, including compilation of findings into summary worksheets;
3) *Client Interviews* with key staff, including clinical, health information management, and financial representatives, to review the site's data and understand the organization's coding/billing workflow;
4) Off-site *Data Analysis* by Heidi Stout to independently review and confirm results
5) *Final Report Preparation* by ProVation Medical based on Heidi Stout's findings.

For the pre-ProVation sample, 50 multi-procedure records with facility codes and 53 multi-procedure records with professional codes were randomly selected from a group of outpatient records.

For the Post-ProVation sample, 50 multi-procedure facility and professional records from the time period three months after implementation of the ProVation MD product were randomly selected. Nine records were inpatient and not included in the study.

The following table lists the number of patients initially pulled for the study site:

	Pre-Install	Post-Install
Facility	50	41
Professional	53	41

Once patients were randomly selected, specific reports and data were gathered to capture the details of the procedures that were performed as well as the claims-based information that was generated at the end of each procedure – either through the use of ProVation MD or using mechanisms prior to implementation of the product. All reports were blinded of patient-identifying information at the study site.

Reports and data elements for each of the pre- and post-install patients were collected. These included the following:

1) UB92 and HCFA 1500 forms;
2) Procedure notes and
3) Coding reports generated from ProVation.

Data Analysis

Once the required information was collected at the site, it was shipped to Heidi Stout for analysis. Heidi Stout reviewed each claim for accuracy and reimburseability. The claims were also reviewed in total and compared pre- and post-use of the ProVation product. Heidi Stout reviewed the claims by payer for each of the following data components:

1) CPT appropriateness for facility claims;
2) CPT appropriateness for profesional claims;
3) ICD-9 appropriateness for facility claims; and
4) ICD-9 appopriateness for professional claims.

SUMMARY FINDINGS

Study Results

The results of the study showed that coding accuracy for the facility improved by 42 percent when claims documented and coded without ProVation MD were compared to claims documented and coded using the system. An improvement of 57% was measured for professional claims. The improvement was calculated by identifying claims pre-implementation that were incorrectly coded, then determining the level of improvement made in the correctness of coding in claims reviewed post-implementation.

Based on improved documentation and coding demonstrated for the claims that were reviewed, we project that additional revenue generated from those claims that were under-coded would likely be $271,920 for the facility, and $225,060 for the professional organization in the first full year of operation, for multi-procedure cases alone. There is also a presumed financial benefit for use with other cases at this facility, but this benefit was not measured in this study. This increase is due to improved coding specificity, correction of incorrect codes, and better identification of performed procedures.

These estimates were calculated by multiplying the annual multi-procedure volume of 3,000 (out of a total of 8,000 annual cases) by the error rate, then multiplying that error rate by the average dollar value of each error. The facility had a 12% undercoding rate, with an estimated dollar value of $824[4] per under-coded claim. This calculates to: 3,000 X .12 X 824 = $271,920. The professional organization had a 32% under-coding rate, with a dollar value of $242[5] per under-coded claim. This calculates to: 3,000 X .31 X 242 = $225,060.

The financial impact of compliance issues identified by incorrect coding was not quantified in this study. However the compliance risk to an organization from incorrect coding can be significant. Audits typically require facilities to reimburse Medicare fees based on historical billing going back three years, creating a substantial financial liability.

Specific findings are highlighted below*:*

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[4] $824 is the average value of the under-coded facility claims in this study, based on the 2004 APC payment schedule.
[5] $242 is the average value of the under-coded professional claims in this study, based on the 2004 National Physician Fee Schedule Relative Value File.

Improvement in the CPT-coding accuracy for both facility and professional outpatient claims at this site was as follows:

- Facility-based claims coding improved by 42 percent;
- Professional claims coding increased by 57 percent.

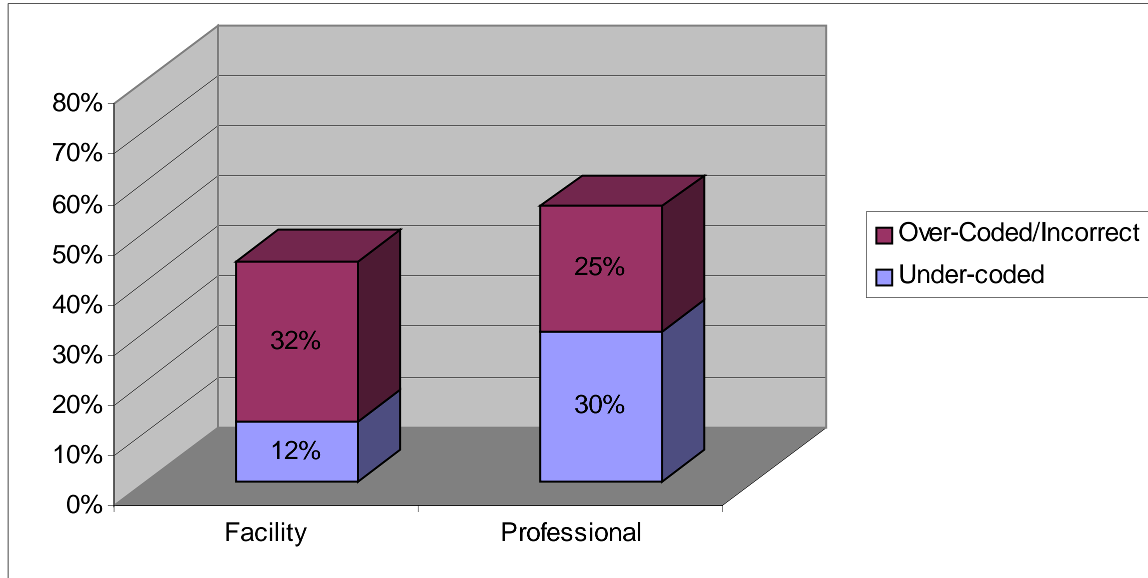
While there was demonstrated improvement in the accuracy and specificity of the ICD-9 coding that was reviewed, ICD-9 coding was not the core focus of this study since it has less impact on an organization's overall revenue.

The following table and chart highlight the levels of improved coding the participating site achieved during the study period.

Table 1: Detailed Study Data

	Pre-Install	Error Rate	Post-Install	Error Rate
Facility Claims				
Total claims included in facility study	50		41	
Claims coded incorrectly – billed less than appropriate	6	12%	0	0%
Claims coded incorrectly – compliance/over-coding	15	30%	0	0%
Total Error Rate		42%		0%
Professional Claims				
Total claims included in physician study	53		41	
Claims coded incorrectly – billed less than appropriate	17	32%	0	0%
Claims coded incorrectly – compliance/over-coding	13	25%	0	0%
Total Error Rate		57%		0%
Claims Miss-matching				
Claims that do not match Physician coding	24	45%	0	0%

Figure 1: Coding Improvements for Case Study Site Using ProVation MD



At the facility, the improvement in claims coding and documentation can also directly support the prevention of billing rejections for invalid codes. More specific billing codes and the reduction of billing errors for the organization will directly translate to lower risk of coming under violation of both federal and contractual payer compliance rules.

With the recent trend towards reimbursement moving from revenue codes towards CPT-based payment, improved CPT and ICD coding will certainly benefit facilities. The actual impact an organization experiences will vary based on payer mix and contract types. In the case of this organization, the overall improvement was seen to be significant.

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