



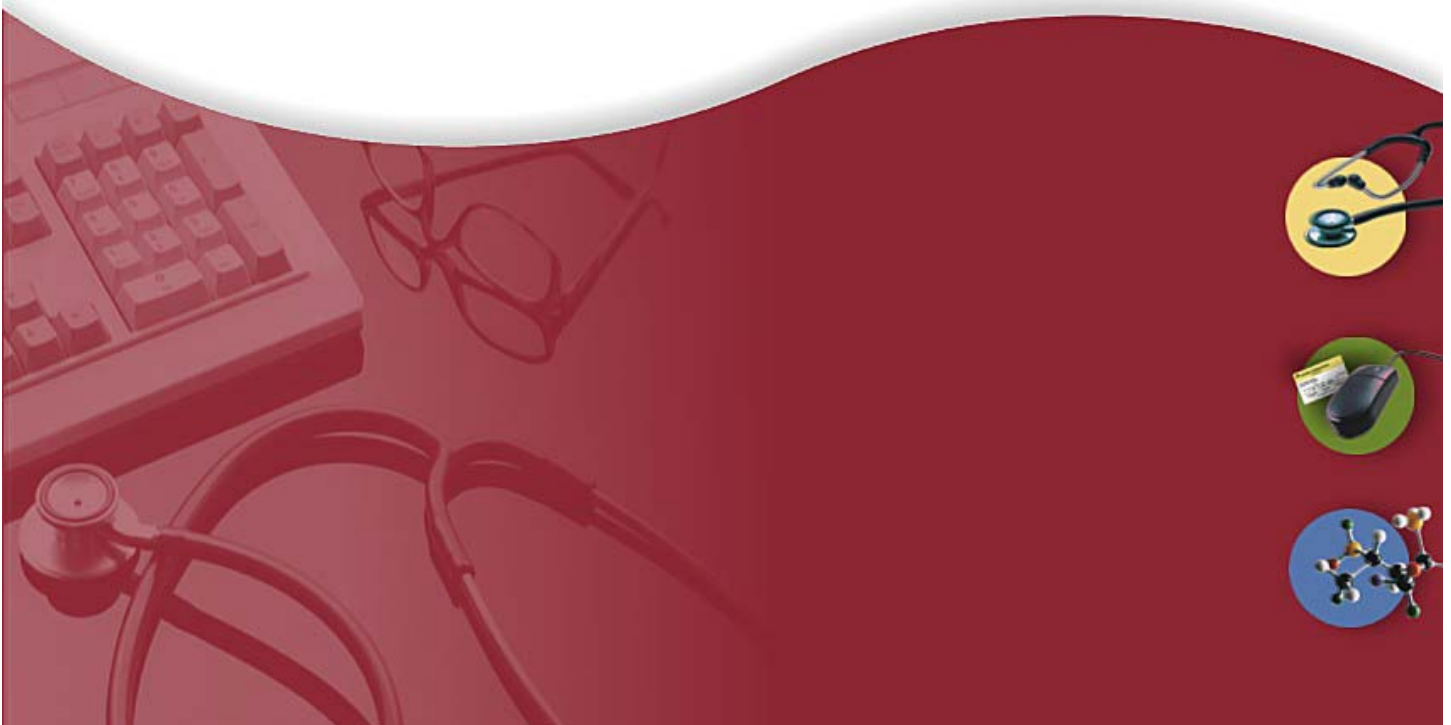
# **MULTI-SPECIALTY DOCUMENTATION AND CODING PRODUCT IMPROVES CPT CODING ACCURACY BY 50 PERCENT AND REVENUE BY 15 PERCENT IN DEPARTMENTS WHERE IT IS IMPLEMENTED**

## **A FIELD STUDY**

*Prepared by First Consulting Group for*

*ProVation Medical*

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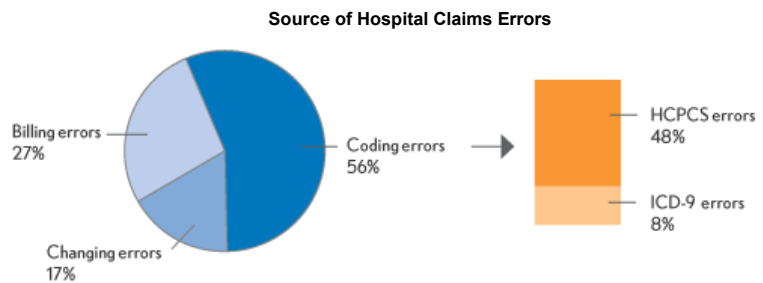
## EXECUTIVE SUMMARY

*By using the ProVation MD multi-specialty documentation and coding compliance solution, two health delivery organizations demonstrated a 50 percent improvement in the coding accuracy of their professional and facility claims. Based on the types of services reflected in those claims, FCG projects that this improved coding would be associated with increased reimbursement of 15 percent or more for the departments in which the tool is used. Depending on the payer mix, this 15 percent improvement in net revenue could improve an organization's overall profitability by 1 to 2 percent. In addition, because more specific codes were generated by the application, the participating organizations are also likely to achieve additional cost savings from improved coding compliance. 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.*

- **50% average improvement in coding accuracy of facility and professional claims**
- **15% increase in projected revenue**
- **1% - 2% improvement in projected profitability**

## 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



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

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.<sup>1</sup> An earlier study by the 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.<sup>2</sup> 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.<sup>3</sup>

In early 2003, 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. ProVation signed up two health delivery organizations to use the product at their sites and solicited the support of First Consulting Group (FCG) to review and validate the findings from these short studies. This report highlights those findings.

### Product Overview

ProVation MD is a multi-specialty documentation and coding compliance solution that facilitates physician creation of comprehensive procedural notes. 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 are 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 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, and urology. A cardiology module is also in development. ProVation RN, a companion product, generates nursing documentation in a similar way.

ProVation Medical's products are currently in use at 210 hospitals and ambulatory surgery centers across the United States.

### Participating Organizations

Brief descriptions of the organizations that participated in this research study are included below.

**First Site.** This site is a hospital located in the east, with a large outpatient facility, and a 100-bed hospital facility along with more than 75 research programs and a range of specialty-based clinical programs. The ProVation MD product has been used in this site's Endoscopy suite since November 2002. Three site-employed gastrointestinal physicians perform 180 procedures per month in the three procedure rooms of the suite. The ProVation MD product is currently interfaced with this site's homegrown health information management system.

**Second Site.** This site, located in the south is one of the largest rural hospital system in the United States. The organization is comprised of small and large acute and sub-acute care hospitals, rehabilitation facilities, nursing homes, home health agencies, diagnostic testing facilities and wellness centers plus 35 ambulatory medical clinics. This site has an endoscopy center on its main campus where seven physicians perform 1,600 general gastrointestinal procedures per month in five procedure rooms. The ProVation MD product has been used at this site's endoscopy center since November 2002, with several interfaces to other systems.

### Use of ProVation MD at the Study Sites

Each of the study sites has been using the ProVation MD product in different ways. At one study site, physicians use ProVation MD to complete documentation outside the exam room after performing a procedure. Physicians also use the built-in coding module to code their procedures which then get incorporated into a report that the coders review for completeness. Coders manually review the resulting documentation and codes, referring to paper-based coding manuals to confirm the codes as necessary before they get sent to the billing office for processing.

At the second study site, coders compare the text reports generated by the physician from ProVation MD with the manual billing sheets filled out by the nurses and enter ICD9 and CPT codes directly into the billing system. Coders at this site continue to use automated coding tools to assist them.

Prior to their use of ProVation MD, each of the study sites 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 coding of medical procedures, ProVation developed an initial research project approach. After reviewing the approach with FCG and the participating organizations, the project approach and research methodology were finalized in February 2003. The approach consisted of five steps:

- 1) *Initial Client Interviews* during which ProVation spoke with each site's project manager 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 and clinic 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 FCG to review and confirm the results that each site reported; and
- 5) *Final Report Preparation* by FCG.

The study efforts at the client sites were undertaken during March and April of 2003. Data gathering and summary analysis were

completed by ProVation during May and June 2003. FCG completed its analysis in July 2003.

At each study site, a consecutive string of 100 patients was randomly selected from among all those seen on the specified units during a specific random time period approximately three months before and three months after implementation of the ProVation MD product.

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

	Pre-Install	Post-Install
First Site	98	100
Second Site	75	91

Once patients were randomly selected, specific reports and data were gathered at each participating site 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 pathology reports where possible; and
- 3) Coding reports generated from ProVation MD.

A number of pre- and post-implementation reports were initially deemed useful to the study but were not available at each site. These included:

- 1) Billing reports by CPT code for a three-month period;
- 2) Claims rejection reports;
- 3) Accounts receivable reports; and
- 4) Actual reimbursement by payers.

As a result, it was not possible to calculate the actual revenue gains these organizations achieved through improved coding and documentation with the use of ProVation MD.

In addition, information was requested from each study site to establish whether or not the billing cycle was shortened by implementing ProVation MD. Neither site could produce those data, though FCG believes that the application offers the opportunity to shorten the overall billing cycle.

### **Data Analysis**

Once the required information was collected at each site, it was shipped to FCG for analysis. FCG reviewed each claim for accuracy and reimburseability. The claims were also reviewed

in total and compared pre- and post-use of the ProVation product. FCG reviewed the claims by payer for each of the following data components:

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

Each of these categories was compared to the code sets and payer manual (UB and 1500 Requirements by Payer) for correctness and reimburseability to determine if codes were valid and appropriate.

## SUMMARY FINDINGS

### Study Results

The results of the study showed that coding correctness improved by more than 50 percent when claims coded without ProVation MD were compared to claims coded using the system. The improvement was calculated by identifying claims pre-implementation that were under-coded or incorrectly coding, then determining the level of improvement made in the correctness of coding in claims reviewed post-implementation. The system not only improved the coding for services but also helped the facility in meeting the Federal government's compliance program. Because specific payer and reimbursement information was not available for the study sites, FCG was not able to calculate the actual increase in reimbursement achieved through use of the ProVation MD product. However, based on improved coding demonstrated for the types of services reflected on the claims that were reviewed, FCG projects that reimbursement would likely increase *at least* 15 percent in the implemented departments. This increase is due to improved coding specificity, correction of wrong codes, and better identification of performed procedures. An organization's actual results will depend on the types of payers and the specific contractual arrangements. A 15 percent improvement in net revenue for areas using the ProVation MD application could translate to an improved profitability of a facility by 1 to 2

percent for overall outpatient performance depending on the organization's payer mix, the payer penetration, the revenue streams of the implemented departments and the total outpatient impact of the increased revenue for the facility.

Specific findings from the organizations that participated in this study are highlighted below.

**Study Site #1.** Improvement in the CPT-4 coding accuracy for both facility and professional claims at this first site was as follows:

- Facility-based claims coding improved by 47 percent;
- Professional claims coding increased by 46 percent.

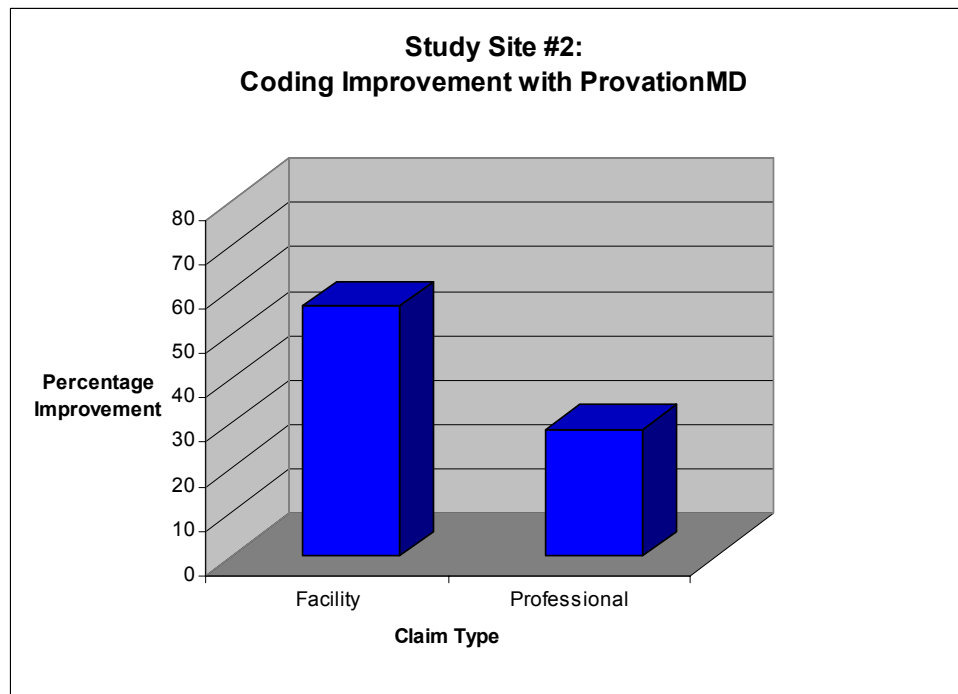
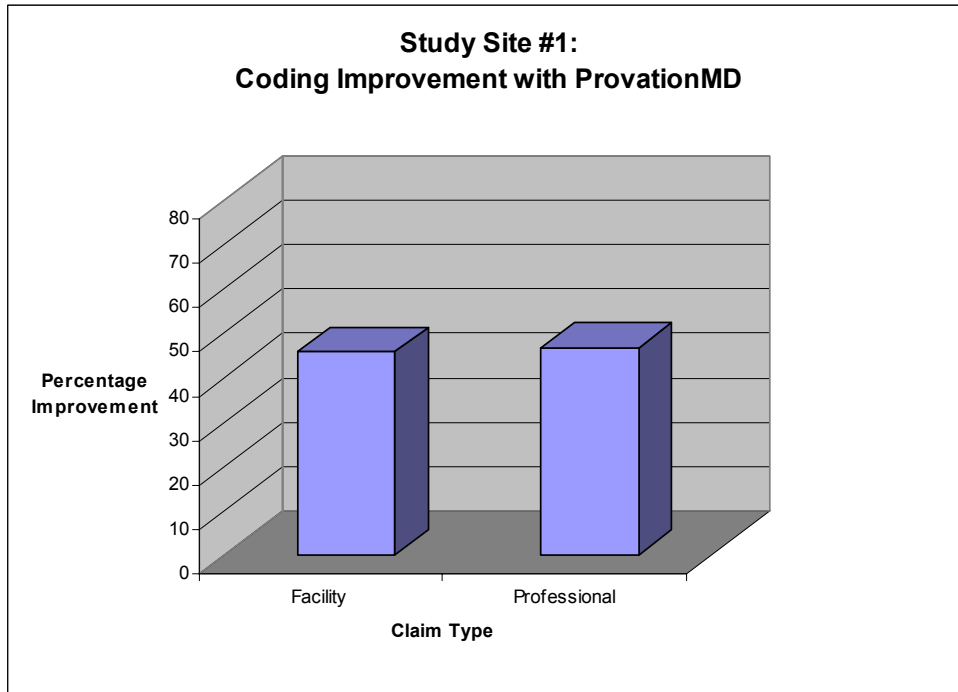
**Study Site #2.** Improvement in the CPT-4 coding accuracy for claims at this second site was as follows:

- Facility coding improved by 56 percent;
- Professional coding improved by 29 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 of an impact on an organization's overall revenue.

The charts on the following page highlight the levels of improved coding the two participating organizations achieved during the study period.

**Figures 1 and 2: Coding Improvements for Case Study Sites Using ProVation MD**



At both facilities, 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 these organizations will directly translate to lower risk of coming under violation of both federal and contractual payer compliance rules.

FCG has estimated that the improved coding on these claims would be associated with an increase of 15 percent because of the nature of payer contracts and the recent trend towards CPT4-based payments. With reimbursement moving from revenue codes towards CPT-based payment, improved CPT and ICD coding will certainly benefit hospital organizations. The actual impact that organizations experience will vary based on payer mix and contract types. In the case of these two organizations, the overall improvement was seen to be significant.

## ACKNOWLEDGMENTS

This report was prepared by Keith MacDonald, Senior Research Manager in the Emerging Practices research group, and Bruce Hallowell, Director in the Revenue Cycle practice at First Consulting Group.

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## ABOUT FIRST CONSULTING GROUP

First Consulting Group (FCG) is a leading provider of consulting, technology, applied research and outsourcing services for healthcare, pharmaceutical, and other life sciences organizations in North America, Europe and Asia.

Founded in 1980, FCG has compiled an unsurpassed track record of client service and has grown to a firm with more than 2,000 associates in 19 offices. FCG's clients include the leaders in every major segment of the healthcare and pharmaceutical industries. FCG has served 17 of the top 20 integrated delivery networks, 17 of the top 20 managed care firms, all of the leading pharmaceutical and life sciences companies as listed in Fortune's Global 500, and the 2 largest government healthcare integrated delivery systems over the past few years.

More information about FCG is available at [www.fcg.com](http://www.fcg.com).

## ENDNOTES

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<sup>1</sup> *Issues in Outpatient PPS: Keys to Successful Revenue Cycle Management*, Healthcare Financial Management. July 2003.

<sup>2</sup> "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.

<sup>3</sup> *Best Practices for Preempting Payment Denials*, Healthcare Financial Management. April 2003.