

Case Study:



Charges in Hand™ Solution at a Physician Group Practice

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EXECUTIVE SUMMARY

Meaningful automation of point of care work processes in physician practices, where the physician is the pivotal decision maker, have often fallen secondary to that of other business practices. Charge capture, where the physician must accurately document the care provided during the visit in order to properly bill insurance companies, is one such process with significant revenue implications for the practice. MedAptus, an information technology company deploying point of care solutions, is working with an academic family medicine group practice, to automate and streamline its charge capture process. The practice implemented the MedAptus' Charges In Hand™ mobile coding solution as the centerpiece of their strategy. The MedAptus solution uses hand held input tools, integration strategies, and operational process changes to capture charge data at the visit and seamlessly transmit the data to the practice billing system. Working with 8 of the practice faculty, a parallel charge capture project was conducted as part of the implementation, to compare data entered into the billing system using the MedAptus Charges In Hand™ solution and data entered through the existing paper based process using a charge ticket and manual data entry.

The study results indicated that 9% of total encounters documented by the physicians using the MedAptus solution were never entered into the practice's billing system using the paper based system. Recovery of these charges results in an increase of 9% in practice billings and, assuming collection rates remain at least constant, an increase of 9% in net revenues.

In addition, the study indicated that in 17% of the total encounters where charge data was entered into the practice billing system, there were significant differences in how diagnostic and procedure codes were linked. Diagnostic codes were selectively linked to procedure codes in encounters where the MedAptus solution was used, compared to all diagnostic codes linked to every procedure for the same set of encounters where the paper-based process was used. The MedAptus solution facilitates a level of accuracy that is not possible under the paper-based approach.

The study results clearly indicate that the MedAptus automated charge capture solution can significantly affect a physician practice's revenue opportunities and data quality. While it is understood that there are additional areas of potential financial gain and data quality enhancement, which will be the subject of subsequent investigation, this study supports the concept that placing superior technology in the physician's hands at the point-of-care to capture charge information, can provide a significant return.

BACKGROUND

Healthcare, while undergoing an explosion of clinical advancement in recent years with the development of life saving procedures, drugs and diagnostic modalities, has been slow to incorporate technology within many of its business practices. This tendency is abundantly evident in physician practices, where manual paper based processes, with multiple handoffs of information, are the standard rather than the exception.

A typical example, and one which has significant effects on the revenue flow for the practice, is charge capture. Charge capture refers to the process of accurately documenting and classifying clinical activities performed by physicians and other healthcare professionals, which serve as the basis for what is billed to the insurance companies. It is a complex and time-consuming process that an active physician may perform 30 times each day. The ramifications of inaccurate or incomplete charge capture are profound and significant: lost billings, denied claims, protracted reimbursement cycles, excess administrative costs and potential prosecution under Medicare fraud and abuse statutes. Although information systems are typically employed in scheduling appointments prior to a patient visit and billing the insurance companies after the patient visit, the process of capturing charges during the visit remains a paper-based process that is woefully cumbersome and error prone.

In order to move away from this paper world, physician practice operational processes need to be developed, enabled by technically sound and accessible information systems that accomplish the following:

- Capture data once, preferably in an information system, and eliminate entering data multiple times on paper forms
- Decrease the number of occurrences where data is manually entered by a physician or other practice staff
- Eliminate the physical transportation of information from one point in the process to another
- Put decision making where the work is being performed - at the point of care by the physician - providing clear and accessible controls and edit checks
- Create a physician practice design where there is a clear benefit for those who are performing the work

An initial, prime target in the effort to streamline physician practice work processes is charge capture. Boundaried on the front end by registration and scheduling information systems, and on the back end by automated billing systems, capturing charge information has remained a process relying on data entry forms, manual handoffs of information, and multiple data entry points. Any automated aids to assist with the vast array of coding regulations are part of the back end billing system, rather than with the physician decision maker, where they could do the most good.

FAMILY MEDICINE GROUP PRACTICE

MedAptus is working with an academic family medicine group practice in New England that focuses on adult and pediatric primary care as well as obstetrics. With approximately 16,000 visits billed annually, its physicians and residents were looking to both automate and streamline many of its current paper based operations. Their strategy included a plan to automate the process by which they document outpatient charges and transmit the charges to their practice billing system. MedAptus played an integral role in this process change through the implementation of the MedAptus Charges in Hand™ mobile coding solution. As part of that implementation, a parallel charge capture and data entry project was conducted with 8 of the practice faculty to look at the benefits that could be realized in moving from a paper based system to a more automated system.

Manual Operational Flow

Prior to implementation of the MedAptus solution, the practice physicians typically filled out a paper superbill at the conclusion of the patient visit. The superbill was handed to the patient, who was responsible for transporting it to the checkout desk for processing. The superbills were batched in the checkout area, and transported to charge entry where billing staff entered the charges into the practice's computerized practice management system. The charge entry staff was responsible for contacting the physician regarding any questions about the content of the superbill that could affect sending a clean claim to the insurance company. Charge entry staff had received on the job training in coding protocols but were not certified coders.

Superbill Structure and Data Input

The superbill played a significant role in the pre-MedAptus operational process. It was the primary communication mechanism between the physician and charge entry staff. In addition, the structure of the superbill played a role in how the clinician documented the visit data. The form contained the diagnostic and procedure codes most often used by the physicians in the practice. Space was allowed to document and order up to four diagnoses. However, the superbill did not afford any mechanism to encourage or facilitate physicians linking each procedure code to a specific diagnosis. A medically justifiable primary diagnosis, and a clear linkage between a procedure and a diagnosis are requirements for a claim to be paid. The manual, paper form could have an impact on claims submission, but the very structure of the superbill could also affect the accuracy of the coded information submitted.

THE MEDAPTUS SOLUTION

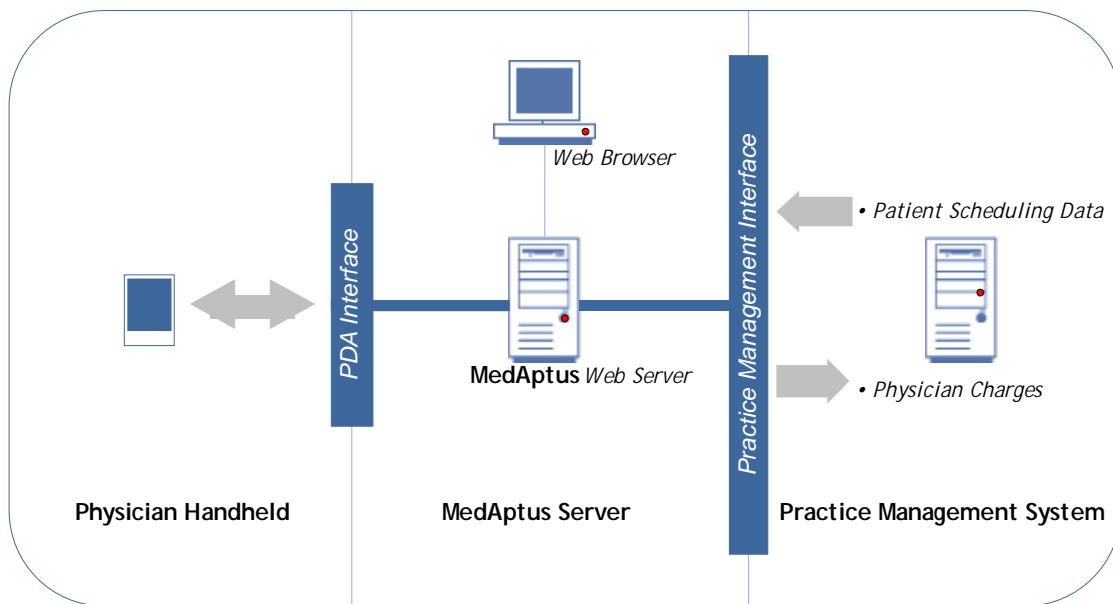
MedAptus, Inc. is a healthcare information technology company that deploys a variety of point of care solutions, bridging the gap between where the care is being delivered and where the information resides. Recognizing the potential loss of data and the significant role the clinician

needs to play in the process, MedAptus has focused its initial point of care solution on the charge capture process by developing its Charges In Hand™ mobile coding solution.

Charges In Hand™ Mobile Coding Solution

The Charges In Hand™ mobile coding solution is a software solution housed on a handheld computer device that can be used by clinicians to enter coded charge data at the point of patient service, the visit. As depicted in Diagram 1, the system consists of a handheld computer and application server, connected by a wireless network, which work together to eliminate traditional paper transfers of data. The solution includes data integration with registration and scheduling systems so that patient specific demographic and schedule information is available at the time of visit, and with billing systems to transfer coded charge data at the completion of the visit.

Diagram 1: MedAptus System Integration



Charges In Hand™ Enterprise Edition

As a software solution, it is designed to enable a sound operational work process by enhancing the provider workflow and contributing to the revenue workflow. The physician synchronizes the handheld device to obtain patient census and scheduling data. At the close of the visit, with the visit results fresh in his/her mind, the physician documents the results using standard diagnostic and procedure codes. The power of the software assists the clinician by providing him/her with a complete set of codes from which to choose, an E&M coding wizard to step the clinician through a decision making process, and a complete set of Medicare rules (see Table 1 below). Charges entered by physicians are edited for appropriateness against these rule sets and immediately flagged for review and modification. Completed encounter data is wirelessly transmitted to the application server where it can be reviewed/edited before being transmitted to the billing system.

Table 1. Types of Edits on Handheld

Correct Coding Initiative (CCI) Edits	Local Medical Review Policies (LMRP)	Medicare Edits
Allowable combinations of CPT-4 (procedure) codes	LMRPs relate to linked CPT-4 and ICD-9 (diagnosis) codes	General and Relational edits
Flags for unbundling of comprehensive, component and mutually exclusive codes	Flags when diagnosis code does not medically justify procedure code	Examples include sex and age specific procedures
Over 193,000 unique CCI edits	Average of 500,000 per carrier	Over 50,000 Medicare Edits

Process Changes With Use of MedAptus

The operational process has been changed to eliminate handoffs of paper patient census and scheduling lists to the clinician, and encounter forms to the patient or practice clerical staff and eliminates the potential for incorrect data or lost paper forms. Data entry is done once - by the clinician - rather than by both the clinician and the billing clerk, thereby potentially decreasing data entry errors. The decision-making is performed by the clinician at the point-of-care, when the patient encounter information is most accessible. The software provides the physician with the controls, tools and rules that facilitate more accurate coding, ordering of codes, and code linkage. The solution has created a design where there is a clear benefit to those performing the work:

- Physicians: powerful software to enable the decision making process at the point of care by those empowered to make the decisions and use the information
- Practice Managers: decreased paper transfers and handoffs involving practice clerical staff
- Billing Staff: eliminated data input with the potential for more accurate data and clean claims sent to third party payers.

STUDY BACKGROUND

The study was conducted for a two-week period, and included those visits documented by faculty physicians. During the study, the physician continued to complete the superbill and hand it to the patient for transport to the checkout desk. After the completion of the superbill, the physician also entered the visit diagnostic and procedure codes into a hand held device employing the MedAptus Charges in Hand™ software. The superbill manual flow remained the same -- forms were brought to the patient checkout area, batched and transferred to the billing area for data input. Charge data entered into MedAptus was wirelessly downloaded to an application server, reviewed and/approved, at which point they could be integrated into the practice billing system. The results of the study are a comparison of the data entered into MedAptus, the data as written on the superbill, and the data entered into the practice’s billing application by the charge entry staff.

BENEFITS REALIZATION

The study examined the impact of the MedAptus solution in preventing lost charges and improving coding accuracy. It is understood that there are additional areas of potential financial gains such as physician time savings, reduced claims denials and/or edits, filing limit write offs due to billing delays, and administrative costs reductions related to claim denial processing and manual charge entry. All of these issues will be examined in subsequent studies.

Recovery of Lost Charges

The study found that 9% of the total encounters documented by the physicians using the MedAptus Charges in Hand™ solution, were not documented in the practice's billing system. Recovery of these charges results in an increase of 9% in practice billings and, assuming collection rates remain at least constant, an increase of 9% in net revenues.

Charges may be lost under the manual process for reasons including physicians not completing a superbill, patients walking out of the practice with superbills, loss of superbills in the transfer to the billing area, or incomplete/inaccurate superbills sent back for physician completion which remained incomplete. Regardless of the reasons, the loss of charges has a significant cumulative and negative effect over time. The study indicates that the MedAptus solution clearly can effect a positive change by capturing data at the point of service. Wireless data transfer eliminates manual handoffs of a paper form, thereby decreasing the possibility of lost superbills. The easy to use software allows physicians to enter data quickly while the visit information is fresh in their minds, eliminating delays. The robust functionality, including the E&M wizard, coding rules, real time edit flags and customizable physician coding profiles increase the likelihood for complete charge entry at the point of service, eliminating send backs for incomplete information.

Coding Accuracy

In 17% of the total encounters where charge data was entered into the billing system, there were significant differences in how diagnostic and procedure codes were linked. In both systems, each procedure code was linked to a diagnostic code. However, in the billing system, all diagnostic codes were linked to every procedure. For the same set of encounters using the MedAptus solution, diagnostic codes were selectively linked to specific procedures. The MedAptus solution facilitates a level of accuracy that is not possible under the paper-based approach.

Earlier it was noted that the structure of the paper superbill did not facilitate diagnosis and procedure code linking. Using the encounter form as the basis for entry of charge data, the data entry clerks lacked the information to determine which diagnostic code(s) applied to each of the procedure codes. They therefore linked all diagnosis codes to all procedure codes. While this may satisfy billing requirements, it may not satisfy medical necessity and compliance guidelines. The financial ramifications to code linkage cannot be measured without further study. However, such code linkage does not provide a true medical picture of the care rendered during the visit. The MedAptus Charges In Hand™ solution, with a combination of coding guidelines, coding wizards, and coding rules/edits assists the clinicians in not only choosing the most accurate

code, but deliberately reconciling the diagnoses with procedures to provide a comprehensive picture of patient care provided during the encounter.

CONCLUSION

The MedAptus Charges In Hand™ solution implemented in this family practice has been shown to be a significant improvement over the practice's paper based charge ticket and manual data entry process. The practice saw revenue improvements by entering data at the point of care and integrating that data directly to the billing system, eliminating the possibility of lost paper charges and data entry errors. Providing the physician with powerful tools to more specifically link diagnostic and procedure code data enhanced data quality. The charge ticket was shown to be an inadequate mechanism to encourage physician compliance to specifically link a diagnosis to a procedure.