

Improvement of Performance and Reimbursement Documentation through Real-Time Physician Clarification

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Current Problem

The current problem in healthcare centers around the less-than-accurate and incomplete clinical documentation process which fails to achieve appropriate reimbursement for physician and health system services. Poor documentation leads to lower reimbursement, lower Quality scores than appropriate for the clinical load (i.e. Risk Adjustment), and inefficient workflow for physicians and their supportive Coding and QA functions. The widespread implementation of the electronic health record (EHR) has not by itself improved documentation of the patient encounter.

Inefficient workflows that were present before the implementation of the EHR often stayed inefficient, or worsened, in the digital environment. Physician time, often labeled a 'soft metric', continues to consume, on average, 5 hours per month in back-and-forth communications and activities during the coding for reimbursement process.

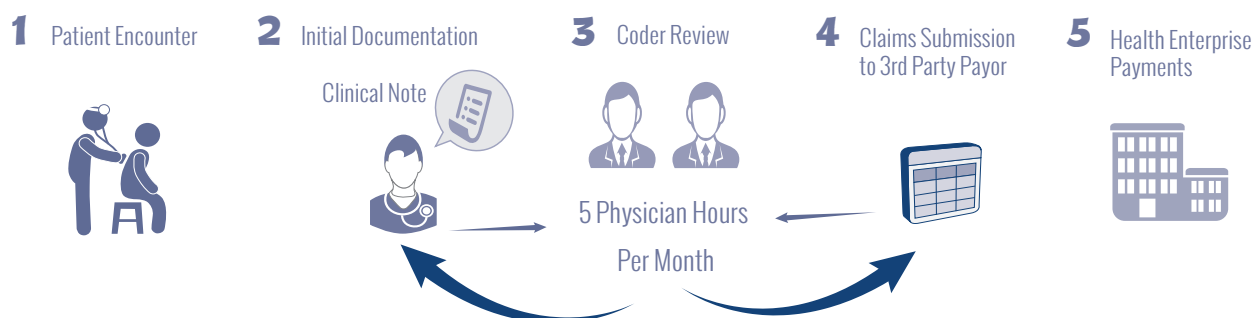
These time-intensive communications for both ambulatory E/M coding and hospital-based care include responding to queries from coding review, waiting for claims submission to create new clarifications needed in the documentation, and then finally reviewing health enterprise summaries of the amounts reimbursed.

In addition to coding review for reimbursement, the other main impact of

incomplete documentation is the failure to document core quality goals, which leads to:

- (1) Reduced quality bonuses,
- (2) Reduced patient satisfaction, and
- (3) Reduced physician satisfaction.

Added to all this are the complexities involving the new ICD10 terminology. As health systems accumulate more experience with ICD10 deadlines in October 2015, they will realize that computer-aided approaches are the only fiscally reasonable method of addressing their workflows' information and clarification needs.



Point-of-care Technology

To fully realize the potential of the EHR and improve digital documentation workflows, additional technology must be deployed at the point of care in real-time as data and documentation are entered. Natural language processing (NLP), an established technology in the informatics field for many years, has been enhanced recently by modern commercial engineering approaches

for greater accuracy and real-time processing. This makes possible for the first time dynamic guidance while the physician is entering data into the EHR at the point of care. Based upon its proprietary, modern and clinically validated NLP technology, Hitek Solutions is now releasing a suite of applications that assist the physician in accurate clinical documentation.



Improved documentation at the point of care can result in dramatic changes in the ambulatory and in-patient physician workflow, including reduced physician-coder interaction, reduced complexity of ICD10 implementation, reduced Coding Department personnel costs, better reimbursement, and improved QA compliance and reporting scores. The physician no longer needs to search for the

relevant reimbursable or QA items in their Notes or the chart, rather the algorithms related to reimbursement coding and performance improvement are entered into the computer continuously by Coding and Performance Analysts so that the computer or smartphone app solicits the clarifications needed from the physician.

Accurate Documentation

The only solution to improve reimbursement and resolve inefficient workflow is one that supports better documentation the first time it is entered into the chart. Although currently the status quo, downstream feedback loops where the physician gets notified of a documentation issue are not capable of significant or timely improvements. Upstream feedback, however, is beneficial because coders can proactively configure a real-time program with reimbursement logic so that when certain criteria are met it triggers a clarification question to the physician within the clinical chart.

Physicians face increasing demands on their time including increased computer data entry time and expanding requests from the billing/HIM department for better

documentation. Any efficiency in their workflow results in improved patient satisfaction and financial savings to the institution from increased productivity. A recent study (before-and-after) comparing ten thousand patient records processed by HitekS' platform integrated with the EHR (Epic) over a 6-month period in both inpatient and ambulatory care settings showed the following results:

1. Decreased physician-coder interaction from 5 hours per month to 20 minutes per month
2. Reduction in Coding Department hours spent coding and issuing queries by 10%
(NOTE: this is pre-ICD10, which is expected to allow existing coding functions to stay head-count neutral with the implementation of HitekS' technology)
3. Increased claims payment of 8% compared to the same 6 months in the previous year (prior to HitekS implementation)

Real-time Quality Improvement

Clarification prompts for appropriate documentation of the clinical visit at the point-of-care can reduce physician post-visit consultation time. In a test cohort examining the time spent responding to HIM Department queries to a physician's inbox or task-list, the length of time required for a physician to respond was reduced by 90%,

from an average of 24 hours prior to Salient alerts to 2.4 hours annually. The monetized value of the time saved per physician is approximately \$6,000 per year. Multiplied by a large physician workforce (>300 physician staff), this amounts to time savings of \$1.8 Million which can be used to productively see more patients or engage in documentation and quality review activities to capture even more patient history and severity assessment (e.g. to reflect appropriate HCC Risk Scores).

CDI for Reimbursement

Our study also analyzed the ICD10 impact on physician time spent answering HIM queries. We anticipate that ICD10 once it goes into production as a reporting requirement, will increase the amount of queries from what is currently, on average, 20% of patient charts having at least 1 query to over 80%. This quadrupling of queries means that a more

efficient workflow-based solution will be needed to answer queries more efficiently and also reduce queries by bringing real-time guidance to the physician for appropriate medical necessity documentation to reduce the total query burden. The EHR works closely with Revenue Cycle management (RCM) systems which rely on the documentation within the EHR to justify claims codes produced and sent to payers. The seamless integration of a Real-time NLP and Analytics layer optimizes the EHR's ability to document appropriate terms and facilitates easier communication between the RCM and the EHR interface due to the linking of queries directly to the documentation, in real-time. Direct return-on-investment in revenues have also been measured at a large health system using Hiteks' solutions. The 5 areas for improved revenues were as follows:

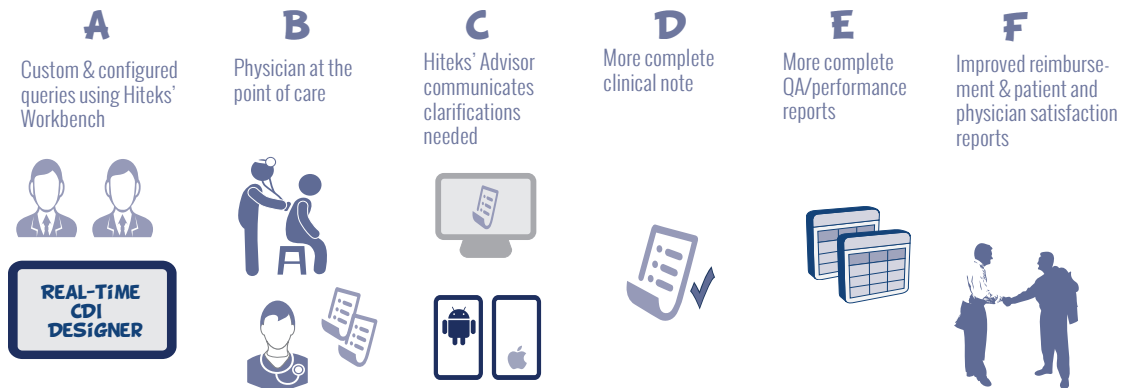
Financial Area Measured	Description of the Revenues	Revenue Amounts
Physician Services Claims Capture	10% reduction in claims rejection, where average annual claims value per physician is \$450,000	\$45,000 per physician per year
Meaningful Use and Core Measure Reporting Compliance	Automatic fulfillment of MU requirement for maintenance of Problem List, Medication and Allergies prevents penalty of 6% in Medicare reimbursement (annual Medicare reimbursement of \$100,000 per physician), plus additional PQRS reporting compliance improvement of \$2,000 on average annually per physician	\$8,000 per physician per year
Medicare Case Risk Scoring	More accurate data for risk score results in higher Medicare payment of 5% maximum per physician	\$5000 per physician per year
Institutional Claims Capture	Institutional claims capture of 10% improvement with an average institutional inpatient charge of \$250,000	\$25,000 per inpatient stay
Patient Safety, Quality and Performance Improvement	Outcomes-based measures and Prioritized Patient Safety Indicators (PSIs), such as prevention of CLABSI, VTE, Accidental Lacerations	\$25,000 on average per occurrence saved



Improved Performance Measures

Hiteks' solution for improved documentation of Core Values leads to greater quality of care and/or complete documentation for quality

initiatives resulting in higher quality bonus and greater patient and physician satisfaction, as shown in this schematic:



Six month results of our study have found that when computer-assisted physician documentation clarifications are turned on for physicians, the following improvements are seen:

- 1) 30% increased compliance for anticoagulation in pre-op patients
- 2) 3% increased Quality bonus for Medicare Fee-For-Service, with all 16 Core Values measured
- 3) Increased patient and physician satisfaction scores from 78% to 85%, on average

In conclusion, NLP technology applied in real-time care settings through integration with the EHR can save significant time for physicians and coders. The resource and workflow implications of these findings that should be considered when deciding on whether to implement a computer-assisted solution to the workflow are as follows:

- Physician - coder interaction: 5 hours to 20 minutes per month
- Physician review and response to documentation clarification: 24 hours to 2.4 hours annually
- Coding function time reduction of coding and query generation by 10%

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