

**Driving ROI**

The Business Case for a Comprehensive CDI Management Solution

Clinical documentation improvement (CDI) teams are continually challenged with making the CDI process as efficient as possible, while also ensuring all queries are compliant and medical records are complete and accurate. When many of the steps in the process are still managed manually, or using systems not purpose built for CDI, this can be difficult to do. The time required to: manage the daily census and organize the day’s reviews; create, send out, and track queries; review and re-review charts; and generate reports, can be extensive. Not only can this result in an inefficient use of staff time, it can also result in errors and incomplete charts, or limit the number of charts that can be reviewed, which can impact revenues. More manual approaches can affect the data available for analysis as well, potentially limiting the timeliness of data, the breadth of data available to report on, and the ability to pro-actively leverage data to impact areas such as quality measures while patients are still in the facility.

Hobson & Company, a research firm focused on Return on Investment (ROI) and Total Cost of Ownership (TCO) studies, worked with ChartWise to explore these challenges. The goal of this white paper is to highlight examples of operational and business benefits that can be realized with a comprehensive CDI management solution. Research consisting of in-depth interviews with eight existing customers found that the ChartWise 2.0 solution addressed customer challenges and delivered measurable results and a compelling return on investment.

**CDI Management Challenges**

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|  | **Decreasing the manual effort involved in managing chart reviews**  Organizing the day’s reviews to ensure the work is balanced across Clinical Documentation Specialists (CDSs), and ensuring a maximum number of charts can be reviewed and re-reviewed as needed, are key to an effective workflow. However, when the steps involved in these processes were still handled manually this could result in more staff time being needed, as well as fewer charts being reviewed. Customers reported that it took an average of 30-45 minutes every morning just to organize the day’s reviews, and most customers were only reviewing a portion of their total charts.    **Increasing efficiency with which queries are created and tracked**  Queries are an essential part of COI workflow, but the work to create and send out queries is time consuming when handled manually. Customers noted that they could be sending out over 100 queries per month and that each of these would take 10-20 minutes to complete. Additional time would be spent following up with doctors to get query responses. They also commented that the time required to create a new query template when needed could take days or weeks, and they always had to work to ensure each new template was also AHIMA compliant. |
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|  | **Ensuring charts are complete and correct**  The financial implications of not having complete and accurate medical records could be significant. Without an automated CDI workflow with built-in suggestions for codes and queries, as well as an extensive AHIMA conformant query library and real-time reporting, it could be very difficult to ensure that revenues were being optimized. Customers interviewed consistently reported that they had seen increases to their case mix indexes (CMIs) since moving to ChartWise, resulting in anywhere from $500K+ to $15M+ in added revenues, depending on the size of their facilities. |
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|  | **Improving performance on key quality measures**  The data generated in ChartWise by the CDI team, as a result of ensuring a complete and accurate record, also has the potential to help other teams pro-actively manage key quality measures. For example, understanding the expected length of stay associated with a given DRG code can help Care Managers ensure that patients are not exceeding these lengths of stay, and over-utilizing resources, adding significant cost to the facility. However, when CDI is managed manually, with no central repository for all the patient data, it could be difficult to create the reports needed to send to the care teams, and especially to do so in a timely manner. Customers noted that previously this type of data was often not available until after a patient had been discharged. |

Customers identified benefits of a comprehensive CDI management solution from ChartWise in three areas: increasing operational efficiencies, reducing costs / mitigating risk, and optimizing revenues.

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| **INCREASE OPERATIONAL EFFICIENCIES** | | | |
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| **Reduce time managing the daily census/organizing reviews**  ChartWise automatically imports the admission, discharge, and transfer (ADT) data to help reduce the time spent identifying and assigning new patients. With automatic assignment of units or floors to specific CDI staff, employees will log in and see their patient list and can track them until the chart is finalized. | | | *“The 30-45 minutes that used to be spent each morning organizing the day is now essentially 100% eliminated.”*  - CDI Manager |
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| **Customers interviewed reported the potential for:** | | | |
| |  |  | | --- | --- | |  |  **90%** | | **REDUCTION** in time spent managing the daily census/organizing reviews | |  | | |
| **Reduce time spent creating and tracking queries**  ChartWise contains a complete library of AHIMA-conformant queries to provide compliance and consistency. Built-in expertise offers suggestions on areas to query based on the information provided, helping the CDS focus on the important areas during the chart review. Queries can be integrated into the EHR, sent via email, or printed for a paper chart, and can easily be managed through the CDS dashboards and via reporting. Physicians’ electronic responses are automatically captured in ChartWise with minimal disruption. | | | *“Daily queries down from 15-20 minutes each to 5 minutes each, a 65-75% reduction in the time needed per query.”*  - Documentation Director |
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| **Customers interviewed reported the potential for:** | | | |
| |  |  | | --- | --- | |  | **60%** | | **REDUCTION** in time creating queries | |  | | |
| **Reduce time spent on reporting**  ChartWise On Demand reporting and real-time reporting provide not only up-to-the-minute, on-demand reports and dashboards, but can also send out notifications to other care providers when targeted diagnoses are admitted. | | | *“Can now get reports on areas like length of stay and other quality measures on demand, before the patient leaves the facility.”*  - Clinical Document Specialist |
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| **Customers interviewed reported the potential for:** | | | |
| |  |  | | --- | --- | |  | **80%** | | **REDUCTION** in time spent on reporting | |  | | |
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| **REDUCE COSTS / MITIGATE RISK** | | | |
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| **Mitigate the risk of audit(s) take-backs**  ChartWise stores AHIMA-conformant queries, and physician responses, for easy retrieval at any time. Documentation gathered in the application provides the medical evidence needed to support final coding, and the proper substantiation during an audit. | | *“The query library is a distinct advantage for ChartWise, definitely helping to reduce AHIMA compliance risks.”*  - Director, CDI | |
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| **Customers interviewed reported the potential for:** | | | |
| |  |  | | --- | --- | |  | **50%** | | **REDUCTION** in take-backs as a result of audits | | |  | |
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| **Help reduce length of stay in higher risk patients**  ChartWise reporting tools and real-time reporting help identify patients at risk to exceed expected length of stay (LOS). Early notification to the case management/quality care teams is beneficial in managing length of stay through discharge planning. Finding these patients earlier in their admission helps mobilize resources needed to be able to discharge sooner. | | *“Using the CDI data from ChartWise could potentially shorten lengths of stay for up to 30% of patients.”*  - CDI Coordinator | |
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| **Customers interviewed reported the potential for:** | | | |
| |  |  | | --- | --- | |  | **20%** | | **REDUCTION** in the number of patients that exceed expected length of stay | | |  | |
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| **Reduce IT time needed to support the CDI solution**  ChartWise requires very little internal IT time. The application is web-based so there is no software to install or upgrade, no backing up of data to be done, or security monitoring, and the support department at ChartWise will handle all concerns. | | *“We saw a real reduction in internal IT support needed in moving to ChartWise, as we now rely primarily on their support.”*  - Coding / CDI Manager | |
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| **Customers interviewed reported the potential for:** | | | |
| |  |  | | --- | --- | |  | **95%** | | **REDUCTION** in internal IT needed to support the CDI solution | | |  | |
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| **OPTIMIZE REVENUES** | |
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| **Ensure complete and correct billing codes**  ChartWise’s automated workflow, in conjunction with its proprietary built-in intelligence, guides the CDS to ensure a complete diagnostic picture, helping to find procedures, complications and additional diagnoses that may not have been recorded in the provider's documentation. | *“CMI increased an average of about 15% from baseline to billed post-ChartWise.”*  - Director, HIM |
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| **Customers interviewed reported the potential for:** | |
| |  |  | | --- | --- | |  | **🡹****3.0%** | | **INCREASE** in average case mix index | |  |
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| **Reduce the time required to review and re-review each chart**  ChartWise can increase the number of admissions reviewed by making the process more efficient; with easy uploads of patient data, automated worklists, query creation, query tracking, and response capture. It is a complete electronic query process including physician receipt and response to queries. | *“From 50% of charts being reviewed to almost 70% now, a 35% increase with the same number of staff.”*  - Manager, Care Coordination & CDI |
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| **Customers interviewed reported the potential for:** | |
| |  |  | | --- | --- | |  | **40%** | | **REDUCTION** in the time required to review each chart | |  |
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| **KEY ROI FINDINGS** |
| The value of a comprehensive CDI management solution is immediate and demonstrable. The following case study illustrates this potential value based on a sample 150 bed hospital with the following inputs:   * An average of 300 admissions per month * 45 minutes spent each day on the daily census / organizing the day’s reviews * An average of 100 queries sent out per month, taking 15 minutes each to prepare and send out * 30% of patients on average who exceed their expected length of stay * An average case mix index (across DRGs) of 1.3, and a reimbursement factor of $5,000 * 60% of all cases reviewed per month, needing an average of 45 minutes each   For this organization the annual benefits could be as much as $503K from reducing costs and mitigating risk alone. With increased operational efficiencies and optimized revenue, annual benefits could be as much as $1.1M.  The three year investment totaling $770K generates a positive return in 4.6 months. The annual benefits and return on investment (ROI) are strong at $1.1M and 260%, respectively. The key financial metrics for the sample organization were calculated by standard methods and are shown below. |
| |  |  | | --- | --- | | **FINANCIAL METRIC** | **3-YEAR VALUE** | | **Payback** | 4.6 months | | **Annual Benefits** | $1,086,615 | | **ROI** | 260% |   FIGURE 1: TABULAR DISPLAY OF KEY FINANCIAL METRICS |

The chart below shows the extent to which each value driver contributes to the total value of a comprehensive CDI management solution. For the sample organization, reducing costs / mitigating risk and optimizing revenue represent the majority of the value.



FIGURE 2: PIE CHART DISPLAY OF VALUE DRIVERS



About ChartWise

ChartWise Medical Systems, Inc., based in Wakefield, RI, is a medical software firm specializing in Clinical Documentation Improvement. ChartWise was recognized on the 2016 and 2017 Inc. 5000 List as one of America’s fastest-growing private companies, placing first among all Rhode Island-based businesses on the list each year. ChartWise was also selected as the 2015/2016, 2017 and 2018 KLAS Award Winner for the CDI Software category, and as a 2015 Red Herring Top 100 North America and Global 100 Winner. For more information, please visit www.chartwisemed.com.

About Hobson & Company

Hobson & Company helps technology vendors and purchasers uncover, quantify and validate the key sources of value driving the adoption of new and emerging technologies. Our focus on robust validation has helped many technology purchasers more objectively evaluate the underlying business case of a new technology, while better understanding which vendors best deliver against the key value drivers. Our well researched, yet easy to use ROI and TCO tools have also helped many technology companies better position and justify their unique value proposition. For more information, please visit www.hobsonco.com.

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