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Council of Health Insurance

CHI Clinical Documentation Improvement (CDI) Initiative

Clinical Documentation Improvement for the Saudi Private Sector: White Paper

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Table of Contents

Glossary

ACDIS	Association of Clinical Documentation Integrity Specialists
AI	Artificial Intelligence
ALOS	Average Length of Stay
AMA	American Medical Association
AR-DRG	Australian Refined-Diagnosis Related Group
CAPD	Computer-Assisted Physician Documentation
CBAHI	Saudi Central Board for Accreditation of Healthcare Institutions
CMI	Case Mix Index
CHF	Congestive Heart Failure
CHI	Council for Health Insurance
CDI	Clinical Documentation Improvement
CMO	Chief Medical Officer
CNHI	Center for National Health Insurance
COF	Condition Onset Flag
DNFB	Discharged Not Final Billed
DRG	Diagnostic Related Groups
ECCS	Episode Clinical Complexity Score
EMR	Electronic Medical Record
HIM	Health Information Management
HIS	Health Information System
ICD-10-AM	International Classification of Diseases, Tenth revision, Australian Modification
ICD-10-CM	International Classification of Diseases, Tenth Revision, Clinical Modification
JCIA	Joint Commission International Accreditation
KSA	Kingdom of Saudi Arabia
IT	Information technology
MOH	Ministry of Health
P2P	Provider to provider
RCM	Revenue cycle management
RW	Relative weight

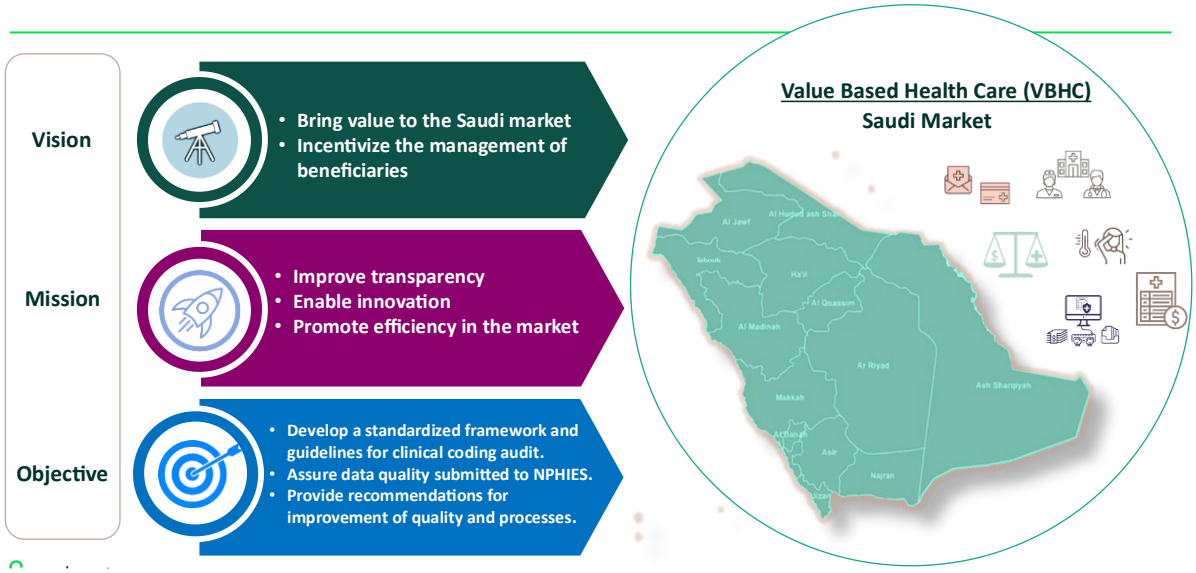
SBS	SAUDI BILLING SYSTEM
SOAP	SUBJECTIVE, OBJECTIVE, ASSESSMENT AND PLAN
VBHC	VALUE BASED HEALTHCARE

Table of Figures

Introduction

This white paper outlines the significance of Clinical Documentation Improvement (CDI) programs in the private healthcare sector of the Kingdom of Saudi Arabia (KSA). As the healthcare sector transitions from a Fee-For-Service (FFS) to a Diagnosis-Related Groups (DRG) payment model, it will be crucial to establish standards, implement regulatory changes, identify stakeholders, assess current performance and identify areas for improvement to better support KSA Value Based Care initiatives.

CHI Vision Mission and Objectives



Executive Summary

The Clinical Documentation Improvement (CDI) white paper explores the vital role of CDI programs in enhancing the Kingdom of Saudi Arabia (KSA) Private Healthcare sector as it transitions to a Diagnosis-Related Group (DRG) payment model. The report underscores the necessity for accurate and timely documentation to ensure that a patient's clinical status is accurately reflected in their medical record. Effective CDI programs improve coding processes, reduce retrospective queries, and minimize the Discharged Not Final Billed (DNFB) queue, thereby enhancing patient satisfaction and safety indicators.

The current state of clinical documentation in the KSA private sector reveals that initiatives are still in their nascent phases. A CDI survey across five pilot sites in Riyadh and Jeddah identified several challenges impeding documentation improvement efforts, including deficiencies in structured concurrent processes and physician documentation.

Key findings indicate that enhancing data accuracy through CDI programs is crucial for representing patient complexity and severity, facilitating appropriate reimbursement, and ensuring accurate measurement of patient quality and outcomes. Recommendations are provided to support the implementation of the Australian Refined-DRG (AR-DRG) methodology and address internal coding and regulatory governance policies.

This report emphasizes the importance of establishing standards, implementing regulatory changes, and engaging stakeholders in supporting KSA Value Based Care initiatives.

Clinical Documentation Improvement Overview

Accurate and timely physician documentation is essential for the success of a Clinical Documentation Improvement (CDI) program. These programs ensure that a patient's clinical status and the care they receive are precisely represented in the medical record, subsequently converting this information into coded data. The effectiveness of a CDI program relies on the implementation of a concurrent review process executed by dedicated CDI specialists and the establishment of clear organizational strategic goals aimed at enhancing patient satisfaction and safety indicators. Efficient CDI programs positively impact the coding process by reducing retrospective queries and decreasing the Discharged Not Final Billed (DNFB) queue. Furthermore, they address inaccurate documentation that can lead to reporting surgical complications, improve the percentage of specified codes, and generally reduce denial rates.

CDI programs are designed to ensure that the documentation of patient care is comprehensive. By enhancing data accuracy, CDI programs facilitate the proper representation of a patient's complexity and severity. They also enable appropriate payment or reimbursement for services rendered and ensure accurate measurement of patient quality and outcomes.

The CDI process is designed to capture:	It will also serve as a source for:	This goal will be accomplished through:
• Intensity of service/resource consumption • Length of stay • Treatment complexity • ICD-10-AM/SBS coding • DRG assignment • Quality of care	• Data collection • Data quality • Outcome measurement • Appropriate reimbursement • Policy & procedure recommendations	• A thorough concurrent review of all DRG-based medical records • Communication with the physician and other clinical staff regarding clarification of documentation to allow for proper assignment of ICD-10-AM/SBS codes and consequent DRG assignment • Interpretation and application of CBAHI rules, regulations and guidelines

Figure 1: Key Components and Objectives of a CDI Program

It is important to recognize that clinical documentation initiatives should not be confined to the inpatient setting alone. Over time, inpatient CDI programs have become an integral component of the Revenue Cycle. Consequently, organizations have started investigating options for expanding documentation improvement efforts into ambulatory settings, such as emergency departments, observation units, clinics, and physician offices. Emphasizing the ambulatory setting allows for the measurement of global resource consumption as opposed to episodic-based costs of care.

The recent expansion of Clinical Documentation Improvement (CDI) into other countries is now encompassing inpatient rehabilitation and psychiatric units. This development is driven by a focus on Population Health Management and Value-Based Healthcare, alongside the recognition that documentation in these settings can similarly benefit from enhancements.

Current State of Clinical Documentation in KSA

Clinical documentation initiatives are currently in their early stages within the KSA private sector. Although some pilot sites have begun documentation improvement efforts, these initiatives are neither fully implemented nor well-vetted structured concurrent processes. A CDI survey was conducted across five (5) pilot sites in Riyadh and Jeddah to evaluate the current state of clinical documentation. The survey aimed to identify challenges that hinder documentation improvement efforts, review physician documentation via chart audits using the AR-DRG methodology, analyze staffing requirements for supporting a CDI program, assess current technology utilization, gather customer feedback, and provide recommendations to support the implementation of the AR-DRG.

Pilot Sites Chart Audit Findings

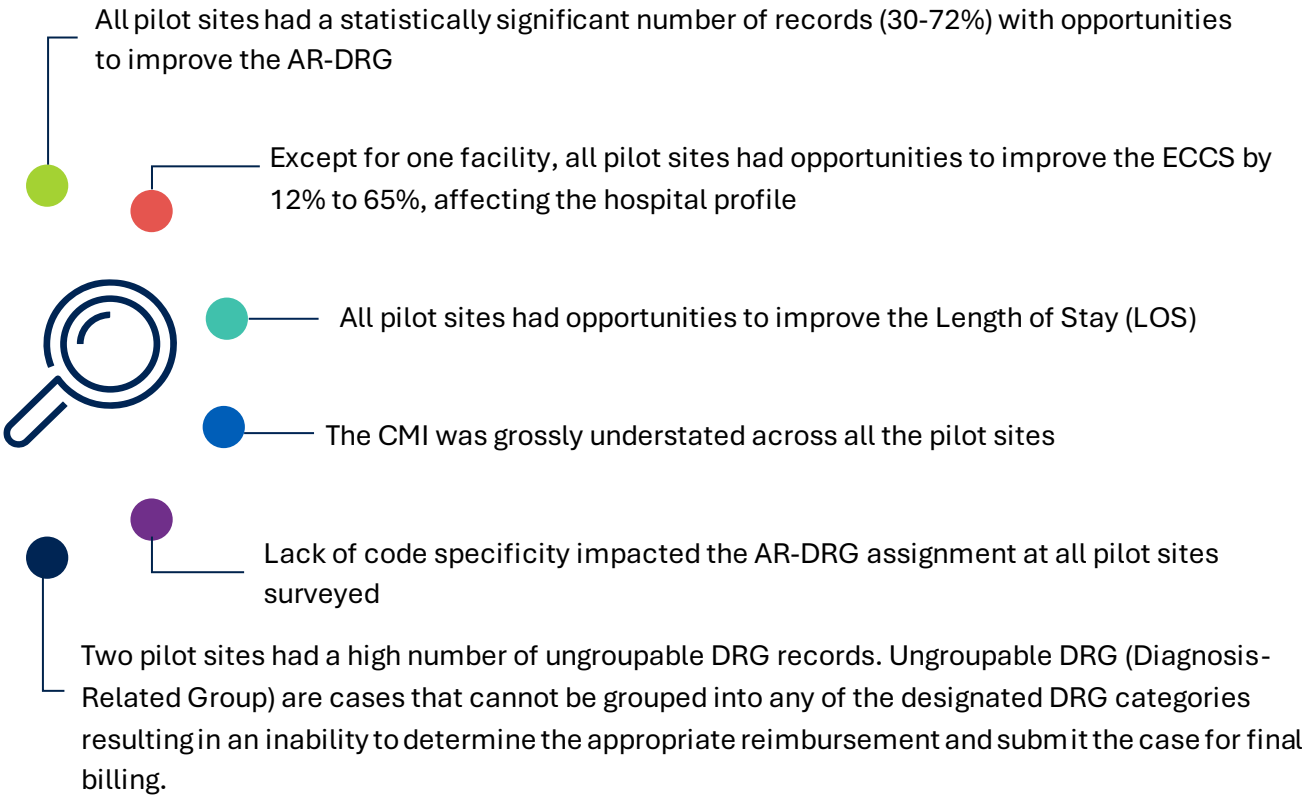


Figure 2: Summary of Pilot Sites Chart Audit Findings

Pilot Sites Overall Survey Findings

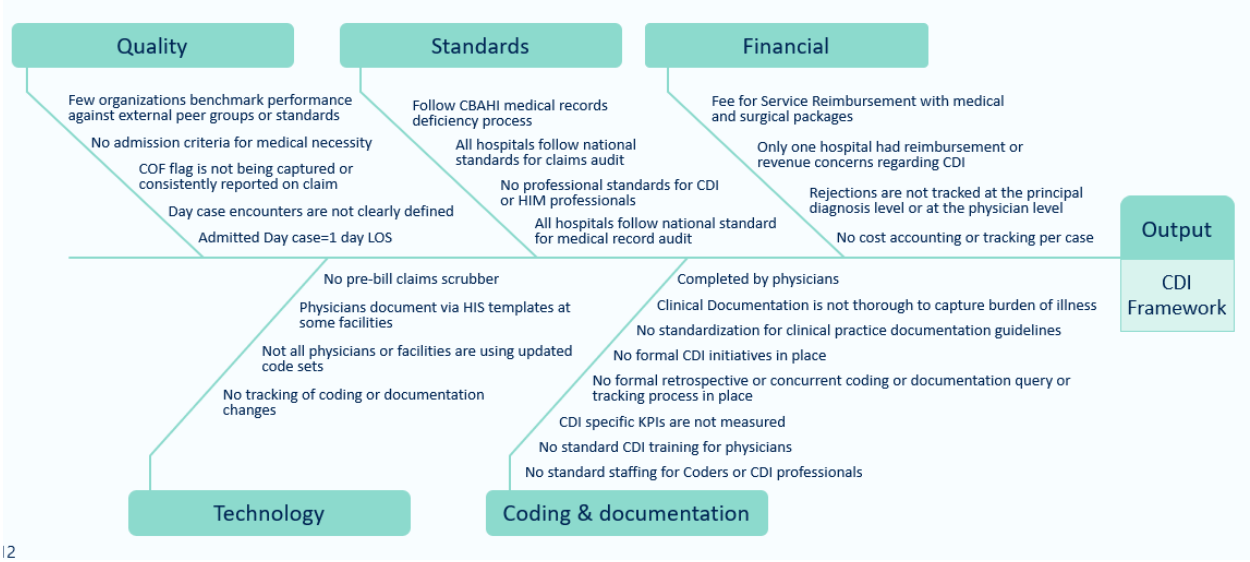


Figure 3: Pilot Sites Overall Survey Findings on the State of Clinical Documentation in KSA

CHI Coding and Regulatory Governance Policies

CHI developed an audit methodology that outlines the process for internal coding audits conducted by healthcare providers, ensuring compliance with CHI's accreditation standards [1]. This methodology is aligned with standard "HI.4" from CHI Providers Accreditation and Classification Program [2]; which mandates accurate clinical coding as a foundation for correct medical claims and fair reimbursement. The standard requires healthcare organizations to maintain their coding certification with the Saudi Health Council and ensures that certified coders perform timely coding for all beneficiary episodes.

To improve the coding quality, a senior coder must conduct monthly audits, with findings incorporated into the quarterly risk management report with corrective actions as needed. Senior coders are expected to audit a sample of 5% of medical records, with organizations setting an acceptance threshold based on coder experience, ideally at 95% [2]. In addition, CHI will update the Classification Standards, mandating an External Coding Audit on an annual basis.

Recognizing the critical role of clinical documentation in coding accuracy, CHI has extended this framework to include Clinical Documentation Improvement (CDI) under "HI.4.5," which requires providers to implement a CDI program led by a certified CDI specialist. Evidence of compliance with this requirement is demonstrated through

measurable CDI program outcomes, ensuring continuous documentation quality improvement and adherence to coding and documentation policies [2].

Global CDI Best Practices

Healthcare systems benchmarking is a critical process that involves comparing the performance of healthcare organizations against established standards or best practices. This process is essential for identifying areas of improvement, enhancing patient care, and ensuring efficient use of resources. By benchmarking, healthcare providers can measure their performance in various domains such as clinical outcomes, patient experience, operational efficiency, and financial management. For benchmarks to be meaningful, they must be specific, accurate, timely, extensive and appropriately reflect comprehensive data aggregation.

Benchmarking in healthcare systems serves several key purposes:

Establishing Standards

It assists in setting internal or external standards to measure against, fostering a culture of continuous improvement.

Identifying Best Practices

By comparing with top-performing organizations, healthcare providers can learn and adopt best practices that lead to better patient outcomes and operational efficiency.

Enhancing Quality of Care

Benchmarking provides insights into areas for improvement, enabling healthcare providers to enhance the quality of care rendered.

Improving Financial Performance

Benchmarking helps identify inefficiencies and areas where cost savings can be achieved, thereby improving the financial performance of healthcare organizations

Figure 4: Key Purposes of Benchmarking in Healthcare Systems Based on Global CDI Best Practices

As the Saudi healthcare sector payment model transitions from fee-for-service to a DRG payment model, there will be increased visibility on accurate financial reimbursement and quality metrics, placing an emphasis on the need to establish appropriate and actionable

Key Performance Indicators (KPIs) specific to a concurrent clinical documentation improvement process. Access to benchmark data gives providers an overview of their performance over time to gauge improvement or stagnation within the CDI process or physician engagement. It will be important for CHI to assist with developing meaningful benchmarks to better assist providers drive internal initiatives and remain competitive within the healthcare sector with a laser focus on quality improvements. In addition to external comparative benchmarks, internal benchmarks should also be implemented to track and monitor historical trends.

Regulatory KPIs Best Practices

In addition to provider-level KPIs, regulatory-level KPIs are recommended. These KPIs include cost per claim, average cost per day, claims denial rates, compliance with minimum data set requirements, and utilization appropriateness of admission/placement. By using these KPIs for data-driven decisions, CHI can manage provider-payer relations, assess compliance with regulatory requirements, promote transparency and accountability, identify potential risks, and improve overall performance.

Regulatory KPIs Recommendations Include:

- Cost per claim
- Average cost per day
- CMI
- Severity of Illness (Episode Clinical Complexity Score)
- Claims denial rates (Payer rejections rates and type)
- Compliance with minimum data set requirements
- Discharge disposition (home, transfer to another facility, expired, AMA – left against medical advice)
- Condition onset flag (conditions present on admission)
- Length of stay (actual, expected, exceeded) by AR-DRG
- All cause readmissions within 30 days of discharge
- Readmissions within 30 days following interventional procedures (infections, revisions, etc.)
- Interventional (surgical complications)
- Utilization – appropriateness of admission/placement

Figure 5: Recommended Regulatory KPIs for Clinical and Financial Performance Monitoring

A review of U.S. CDI Programs shows CDI KPIs have evolved over time, with more emphasis on improving patient safety, KPIs shifted from a focus on revenue to incorporating quality metrics. Quality specific KPIs include tracking mortality rates (observed to expected or actual to expected), severity of illness and length of stay. Advanced CDI programs have incorporated denial rates, readmissions and complication rates as well as other complications such as Patient Safety Indicators (PSIs) [3].

Outcomes measures and metrics are the foundation for effective enterprise planning and outcomes management. CDI KPIs should be tracked at least monthly. However, specific KPIs require daily and weekly monitoring, while others can be tracked monthly and quarterly. Measuring certain KPIs too frequently can skew data. Creation of management and enterprise-wide CDI dashboards is recommended for sharing with key stakeholders which includes members from the Executive team, CDI Steering Committee, Quality, Health Information Management (HIM) and CDI management team.

Tracking CDI KPIs

Figure 6: CDI KPI Monitoring Across Time Intervals

Overall, regulatory benchmarking is a powerful tool that drives innovation and competition in the healthcare sector, ultimately leading to better patient care and more efficient healthcare delivery.

In summary, benchmarking remains a critical component in ensuring the success and sustainability of Clinical Documentation Improvement (CDI) programs. It helps in setting standards, measuring performance, and identifying areas for improvement. By leveraging benchmarking data, healthcare providers can drive continuous improvement and innovation, ultimately leading to better patient care and more efficient healthcare delivery. Benchmarking offers a comprehensive assessment of clinical documentation, highlighting areas requiring enhancement and addressing population-care gaps. It sets strategic objectives and pinpoints specific opportunities for improvement. Additionally, this process disseminates knowledge on prevalent issues and demonstrates how excellence is attained in comparable domains.

Documentation Standards Impact on Cost, Quality and Operations

Health records serve as evidence of the care provided to patients. With the increasing complexity of medical care, enhanced documentation standards have been implemented for proper documentation and maintenance. These standards and regulations significantly influence the content recorded in health records.

In view of CHI's transition to AR DRG as its admitted care payment model, it is essential for hospitals to ensure that patient health record documentation accurately reflects the appropriate DRG diagnosis-related group to secure proper reimbursement. Adhering to documentation standards helps prevent financial losses from claim denials and reduces administrative burdens and regulatory penalties due to noncompliant documentation. The quality of patient care is closely linked to the accuracy and completeness of clinical documentation. Proper documentation practices contribute to enhanced patient safety, improved patient outcomes, and reliable data for quality measurements and reporting. Standards established by governing bodies and hospitals promote operational efficiency by lessening the administrative burden on physicians, ensuring accurate clinical coding, and facilitating better decision-making and interoperability across healthcare institutions.

The Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) is the official agency authorized to grant healthcare accreditation to all governmental and private healthcare facilities operating today in the Kingdom of Saudi Arabia. During the survey of the five pilot sites, an analysis of documentation standards was evaluated through the process of interviews, shadowing sessions and a chart audit. The chart audit focused on the completeness of key patient record documents including the History & Physical, Progress notes, Operative report, Physician orders, Consultant notes, and Discharge summary. Additionally, other aspects like identification of Principal diagnosis in discharge summary, Condition Onset Flag, consistency of diagnosis across the patient record, and specificity of diagnosis were also assessed.

The interviews conducted with Physician leadership focused on identifying physician involvement in the clinical documentation efforts, adherence to standards, their concerns related to coding, denials management and the hospital's quality initiatives affecting physicians. Physician education needs and understanding on the above aspects were assessed by shadowing and interviewing representatives from high-volume specialties like Cardiology, Internal/Family Medicine, General Surgery, Pulmonology, and Obstetrics and Gynecology.

The pilot hospitals followed the documentation standards in the **National Hospital Standards** published by CBAHI. Some of the participating sites also followed the standards determined by other accreditation agencies, such as **JCIA Joint Commission International Accreditation**.

Chart Audit Findings

History & Physical	• Lack of detail, missing critical information on onset, duration, severity, progression, and treatment plans • Contradicting information between H&P and other documents
Progress Notes	• Often missing, with treatment orders substituted in place of notes Do not reflect patient's progress or treatment plan adequately
Discharge Summary	• Discharge summaries lack detail on care rendered and the hospital course • Principal and additional diagnoses are not documented, often resulting in incomplete or inaccurate final DRG
Operative Notes	• Operative notes lack details, resulting in inaccurate or incomplete coding. • Obstetric procedures are consistently missed • Missing operative notes resulting in non-reporting of procedures and incorrect DRG assignment
Other Aspects	• Non-adherence to documentation standards mandated in the National hospital Standards by CBAHI • Condition Onset Flag not reported • Discrepancy in discharge disposition, newborn birthweight across patient records • Principal diagnosis not well-defined • Diagnoses are often missing specificity (e.g., CHF vs. acute congestive heart failure)

Audit Recommendations

Standardize Documentation	• Establish minimum documentation standards for history and physical (H&P), daily progress notes, discharge summaries, and operative reports, ensuring alignment with accreditation bodies such as CBAHI, JCIA, and CHI. • Implement structured HIS templates (e.g., SOAP format) to promote consistency and completeness in documentation. • Enforce timely and detailed documentation for every patient encounter to enhance accuracy and continuity of care. • Conduct routine audits to assess compliance, provide feedback, and support continuous improvement among physicians and medical staff leadership.
Improve Physician Training & Accountability	• Train physicians on comprehensive documentation, resolving inconsistencies and DRG coding requirements. • Set up a DRG committee including coders and CDI specialists and provide continuous training to better prepare for DRG adoption.
Reduce administrative burden through collaboration	• Shift all coding responsibilities from physicians to professional coders, adhering to ICD-10-AM compliance guidelines. • Establish a multidisciplinary team to address documentation issues. • Empower a physician liaison officer to assist physicians resolve documentation and compliance errors. • RCM team to collaborate with physicians in denial and rejection management .
Leverage technology	• Transfer to EMR and implement predefined templates based on specialties. • Consider speech recognition and dictation systems to ease documentation. • Use AI driven Computer-Assisted Physician Documentation (CAPD) tools to ensure accuracy and compliance with coding and quality requirements.

The survey identifies notable inconsistencies in physician documentation practices, particularly in relation to established standards. These discrepancies may impede CHI's progress towards adopting AR-DRG as a payment methodology, potentially affecting provider revenue adversely. To overcome these issues, CHI should enforce and ensure strict adherence to documentation guidelines standards and promote education on DRGs. These initiatives will facilitate hospital preparedness for DRG-based reimbursement, enhance data accuracy, and improve overall healthcare delivery.

Please refer to Appendix 1 Basic Documentation Standards for the Inpatient Medical Record with reference to CBAHI accreditation standards. [6]

Role of Quality Indicators on Provider's Reimbursement

Currently the payment system in KSA is transactional (activity based) versus Episode-based. Episode-based is defined by the care delivered from the time of admission through discharge. Assisting providers understand the difference between a transactional and an episode-based payment methodology will help facilitate the transition to a DRG system; this is why other countries chose to localize their version of the DRGs.

When Australian Refined DRGs (AR-DRGs) are mandated for payment in KSA, CDI will also have a profound impact on payment, cost and eventually downstream measurement of clinical quality. Other countries that have localized and adopted a DRG based payment system have incorporated clinical risk adjustment methodologies to benchmark across the healthcare sector as well as internationally.

There are key risk adjusted methodologies needed to capture CDI KPIs including measuring case mix index (CMI), severity of illness and risk of mortality. For the AR-DRGs, severity of illness is risk adjusted using the Episode Clinical Complexity Score (ECCS).

Another component of risk adjustment is the ability to measure the admission severity of illness and expected mortality using the admission DRG as well as capturing the Condition Onset Flag (COF) status of diagnoses. The COF, used in AR-DRG classification helps to establish if a patient was admitted with a condition (COF = 2 present on admission) or if the patient developed the condition during the inpatient stay (COF = 1 not present on admission). Some conditions could be considered Hospital Acquired Conditions (HACs), which are primarily used to measure inpatient safety and clinical outcomes. Risk of Mortality is a separate adjustor that computes the actual to expected inpatient mortality. The discharge DRG takes into account all documented conditions, including those not present on admission, which hinders the ability to do a retrospective review of the quality

of care during the hospital encounter. Logic needs to be much more sophisticated than eliminating diagnoses not coded with a COF = 1 (Conditions not present on admission).

In summary the AR-DRG payment methodology currently does not include the concept of additional risk adjustment for an admission DRG or admission severity. Additionally, AR-DRG does not have a distinct risk of mortality measurement. As part of the CDI workflow process, it is advisable to assign the admission DRG, a working DRG, and a final DRG for future quality analysis (measuring the difference between the admission and discharged DRGs) to analyze quality of care such as hospital acquired complications during an episode of care. CHI will need to consider adopting technology that allows for risk stratification to effectively measure outcomes inclusive of risk of mortality.

Medical Culture Adaptability Policy and Process Implementation

Introducing a CDI program requires a shift in medical culture, emphasizing the importance of accurate documentation in driving healthcare quality, reimbursement accuracy, and operational efficiency. This transition involves multiple stakeholders, including physicians, medical coders, CDI specialists, and hospital administrators. The following key areas highlight the necessary changes and strategies for effective CDI implementation.

Redefining Coding Responsibilities

In the current practice within the private healthcare market, physicians are primarily responsible for both clinical documentation and coding. This dual responsibility can lead to inefficiencies, increased workload, and potential inaccuracies in coding as we have observed from the pilot sites. To enhance the effectiveness of CDI implementation, it is essential to shift the coding responsibilities fully to the coding team while allowing physicians to focus exclusively on clinical documentation. This transition requires significant adaptability within the medical culture.

Shifting Focus to Clinical Documentation

Clinical documentation is more than an administrative task; it directly affects patient safety, hospital performance, and reimbursement. Physicians must be encouraged to embrace this mindset shift through CDI training and education sessions. Additionally, their role should transition from coding to a documentation-focused approach, ensuring accuracy while allowing coders to handle coding tasks. This reduces administrative burden, improves efficiency, and aligns with global best practices.

Empowering Medical Coders

The coding team must take full ownership of coding tasks to ensure accuracy and compliance. To support this transition, coders should receive continuous training on evolving coding standards and regulatory updates. Strengthening collaboration between coders and physicians through structured query processes will help clarify documentation gaps without requiring physicians to engage in coding. Clear communication channels and defined recommended workflows will foster effective engagement.

Addressing Resistance to Change

Shifting coding responsibilities to coders may face resistance from physicians accustomed to handling these tasks. To ease concerns, clear communication about the benefits, highlighting advantages such as reduced administrative workload, improved coding accuracy, and enhanced hospital performance can improve acceptance of change. Providing structured training, engaging physician advisors, and implementing feedback mechanisms will help address any apprehensions and facilitate a smoother adaptation process. A gradual transition with continuous support will ensure long-term cultural adaptation and successful CDI implementation.

Physician Leadership Roles in A CDI Program

The Chief Medical Officer (CMO) serves as an executive sponsor and participates in the Clinical Documentation Improvement (CDI) steering committee. In some facilities, the CMO may also take on the role of Physician Advisor or Champion. The CMO is responsible for overseeing physician education and training efforts. This includes leading internal physician training and education communication plans, setting expectations for physician participation, and identifying the requirements for physician education sessions. The CMO also provides recommendations for planning departmental and one-on-one education sessions and determining appropriate timing.

Medical and Surgical Department Chairs collaborate with the Physician Advisor and CDI and HIM Managers/Directors to organize educational sessions and provide feedback on specialty (e.g., Cardiology) performance.

A Physician Advisor serves as a bridge between CDI specialists, coding teams, and clinical staff. Their role is critical in promoting documentation best practices, resolving physician queries, and ensuring compliance with CDI policies. Physician advisors play a key role as advocates for CDI initiatives, educating their peers about documentation standards, coding practices, and regulatory requirements. By providing training sessions and resources, they empower physicians to adapt to new policies and processes, ensuring a smooth transition to improved documentation practices. This educational support helps

build confidence among physicians and encourages their active participation in CDI efforts.

Physician Advisors/Champions key roles include the following:

- Support data integrity – this includes but is not limited to providing input and feedback to the CDI and Coding team in the development of query templates and helping to craft internal practice guidelines for diagnoses definitions based on approved national standards
- Assist with creating CDI Policies and Procedures
- Identify documentation opportunities for the medical staff by participating in internal audits
- Educate the medical staff by increasing knowledge regarding the impact of clinical documentation on quality metrics and reimbursement.
- Help to enhance competency related to documentation requirements to support medical necessity, length of stay, management of chronic conditions and complications that occur during the inpatient episode of care, readmissions and denials management
- Establish ongoing medical staff education on coding and documentation concepts as well as changes in reimbursement and quality reporting guidelines and/or regulations
- Collaborate with various teams including but not limited to the CDI and Coding teams, Physicians, Executive leadership, Quality and Nursing departments
- Facilitate improvement of the quality of the medical record
- Assist with the claim denials process

Physician Role in Clinical Documentation Improvement

Physicians are required to adhere to internal bylaws and national standards for documentation. Their role within a Clinical Documentation Improvement (CDI) Program involves understanding the significance of their documentation, recognizing the distinction between clinical language and the requirements for coding and reporting. Physicians should be acquainted with the objectives of the CDI Program, the query process, and proper methods for responding to queries. Additionally, they should be aware of all available resources designed to assist them in addressing any questions or concerns. These resources include access to the CDI and Coding teams, technology, education, and training.

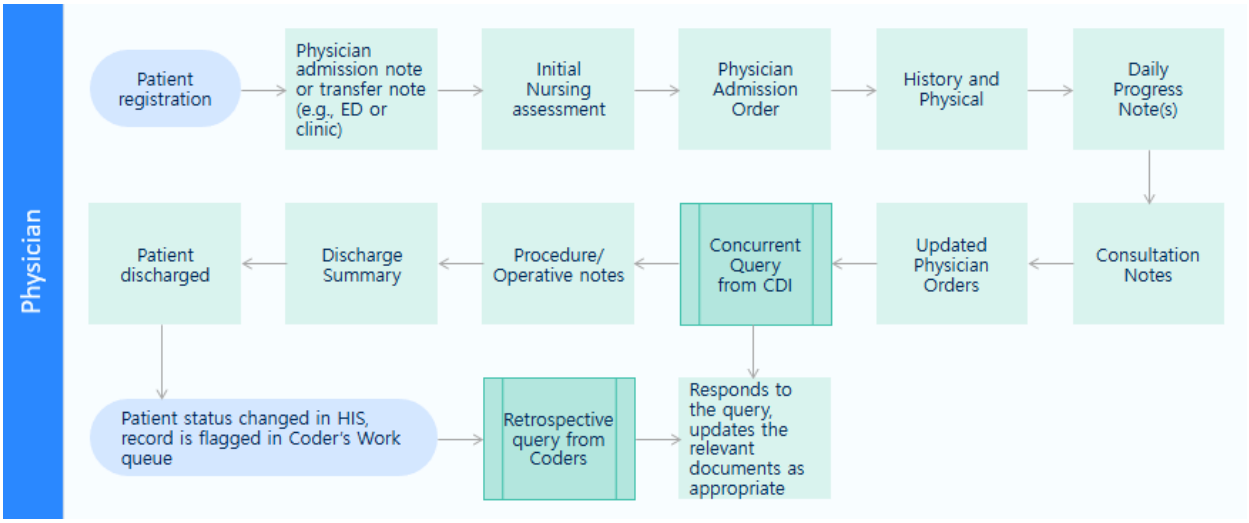


Figure 7: Physician Workflow and Responsibility in Clinical Documentation Improvement

A significant cultural challenge in the implementation of Clinical Documentation Improvement (CDI) is ensuring that clinical documentation complies with coding and reporting requirements. It is imperative for physicians to understand that their clinical notes not only fulfill a patient-care function but also influence reimbursement, hospital quality metrics, and regulatory compliance. Educating and training physicians on CDI principles enables them to adapt to these dual purposes, thereby enhancing both clinical and administrative efficiency.

To reinforce the importance of documentation, hospitals must be encouraged to incorporate CDI compliance into physician performance evaluations. Physician Profile metrics can include:

- Length of stay
- Query rate
- Physician response rate
- Agreement rate
- Denials rate
- Mortality
- Physician documentation deficiency rate

Including these factors in periodic reviews encourages accountability and ensures CDI is viewed as a core responsibility rather than an administrative burden.

Impact on Future Hospital and Physician Profile as it Relates to Quality

Clinical documentation directly impacts hospital and physician profiles, influencing quality metrics, reimbursement, and national benchmarking. Incomplete or inaccurate documentation can lower quality scores, affect hospital rankings, and misrepresent physician performance. Key metrics such as CMI, ECCS, Mortality rates, ALOS, complication rates and denial rates rely on accurate and complete documentation.

A higher CMI indicates that a hospital treats more complex cases, utilizing more resources, improving its profile in benchmarking and aids provider-payer price negotiations.

Mortality rates are closely monitored as an indicator of hospital quality. Proper documentation helps classify patient conditions accurately, ensuring expected mortality rates align with actual outcomes. If documentation fails to capture a patient's true severity, the hospital may appear to have an inflated mortality rate, negatively affecting its public profile and accreditation status.

ALOS (Average Length of Stay) is a critical efficiency metric that reflects how well a hospital manages patient care and resource allocation. Each DRG will have an expected length of stay (ELOS), which varies by clinical complexity, patient demographics and hospital or admission type. Incomplete documentation can lead to misclassified patient conditions, incorrect DRGs assignment, and thus inaccurate ELOS reporting with prolonged or inaccurate length of stays, hindering delivery organizations' ability to manage resource allocation.

Accurate documentation ensures proper DRG classification, aligning hospital performance with national benchmarks. DRG accuracy is essential for Relative Weight (RW) recalibration, directly impacting market-wide reimbursement.

Physician Role in Query Process

The query process is a crucial component of CDI, allowing physicians to clarify or add missing details to documentation before coding and billing. To streamline this process hospitals should include the following:

- Implement structured query templates within the medical records to standardize physician responses
- Develop policies that integrate CDI queries into clinical workflows, minimizing disruption to physicians' schedules
- Monitor physician response rates, identifying areas where additional training or engagement may be required, tailor support and resources to enhance physician participation

- Foster a positive query culture where queries are viewed as opportunities to improve documentation rather than as burdens, emphasizing the value of accurate documentation in supporting quality patient care

Denials Management

Effective denials management involves analyzing denial trends to identify patterns and root causes. When claims are denied due to documentation issues, it is essential to notify physicians promptly to facilitate corrective actions and prevent repetitive denials.

Establishing a continuous feedback loop between the denials management team and clinical staff is crucial. Regularly sharing individual or departmental denial reports, insights about denial reasons and trends with physicians fosters a culture of continuous improvement. This collaboration encourages physicians to adapt their documentation practices based on real-time data about what leads to denials.

Denials management provides an opportunity for ongoing education and training. By informing physicians about common denial reasons related to their documentation and coding practices, organizations can tailor training programs to address these gaps. This adaptability ensures that clinical staff are equipped with the knowledge needed to prevent future denials.

Incorporating denials management metrics into physician performance evaluations can promote accountability. By linking physician documentation quality to denial rates, hospitals encourage physicians to take ownership of their documentation practices. This cultural shift fosters an environment where documentation accuracy is prioritized to reduce denials.

Denials management can inform the refinement of documentation processes. By understanding how certain documentation practices lead to denials, templates and workflows can be revised to ensure compliance. Streamlining these processes minimizes the administrative burden on physicians, enhancing their ability to provide quality care.

Implementing CDI Workflow Technology

A tool for collecting and reporting on patient record documentation and communication detail is required for a CDI program workflow process. Tracking tools can be used in conjunction with the HIS system and Coding software. The primary goal is to measure the efforts of the medical record documentation team members as they perform concurrent reviews and assign the most appropriate working AR-DRG.

All communication between the reviewers and the physician should be recorded and stored in the CDI System, where it is later analyzed using a comprehensive set of reports. The analysis includes details such as the working DRGs concurrently assigned to the medical record, the query volume, the financial impact of answered and unanswered queries, and the physician query response rate.

CHI as a Thought Leader

Clinical coding and documentation improvement are widely recognized as essential components in the transition toward Value-Based Care and advancing healthcare transformation goals in the Kingdom. Over the past few years, several coding and documentation improvement initiatives have been launched within the health clusters (Accountable Care Organizations) and public hospitals under the Center for National Health Insurance (CNHI).

CHI now has a CDI Framework, and with the results of the CDI Audit, now is the time for CHI to engage not only more private sector providers in CDI initiatives, but also the entire KSA market and become thought leaders in coding and documentation improvement.

Currently, CHI endorses training and educational programs for medical coders and HIM professionals in KSA. To further strengthen CDI efforts, CHI should extend these activities to include a professional CDI training program. To support these efforts, CHI can leverage the Training and Education Specialist role, along with the recommended CDI specialist role from the HIM Redesign project.

Additionally, CHI should take a leadership role in national discussions around international CDI guidelines and standards. These conversations will establish CHI as a thought leader in CDI and help educate the market to help KSA adopt the global best practices, including policies, guidelines, and regulatory frameworks to suit the local needs and facilitate CDI implementation going forward. CHI can lead these discussions through dedicated events, webinars, and by leveraging its existing presence in interdisciplinary committees alongside stakeholders such as CNHI, the Health Holding Company, and the Ministry of Health. Participation in conferences such as Arab Health and Global Health can also reinforce CHI's position as a national leader in this space.

Stakeholders Role

Stakeholders play a crucial role in ensuring the successful implementation and organizational transformation of coding and documentation improvement practices. Healthcare leadership must provide strategic direction, secure funding or resourcing, and drive organizational commitment.

HIM professionals ensure accurate coding and documentation practices, compliance with regulations, and seamless integration with existing workflows. IT teams are responsible for system implementation, cybersecurity, and technical support, ensuring the tool functions effectively within the healthcare ecosystem. Clinicians, coders, and CDI professionals must be actively engaged in training and adoption to ensure proper documentation and accurate coding. Compliance and regulatory bodies oversee adherence to standards, ensuring data integrity and legal compliance.

Finally, patients and external payers indirectly influence the system's effectiveness by requiring transparency, accuracy, and efficiency in billing and claims processing. Collaboration among all stakeholders is essential to drive smooth implementation, minimize resistance to change, and optimize the system's long-term benefits.

CHI Stakeholders Role

CHI will play a critical role in ensuring the accuracy, consistency, and compliance of coding and documentation not only within the private sector, but also within KSA. CHI responsibilities include:

1. **Setting Standards and Guidelines**: Continue to establish, maintain and mature national coding standards, such as Saudi Billing System (SBS), ICD-10-AM and AR-DRG in Australia, ensuring uniform documentation and coding practices across healthcare providers in the private market.
2. **Compliance Monitoring and Audits**: Conduct audits to assess coding accuracy, documentation completeness, and adherence to clinical coding rules, identifying potential fraud, errors, or inefficiencies. CHI can add these CDI audits to existing regulatory onsite visits.
3. **Performance Monitoring**: At minimum, on an annual basis, CHI should conduct performance reviews of all CDI outcomes across the private sector and communicate results and expectations back to the market. This can be aligned with CHI regulatory cycle market activities.

4. **Data Governance and Quality Assurance**: enforce policies to ensure that coded data is reliable, consistent, and useful for decision-making in funding, research, and policy development.
5. **Training and Capacity Building:** Expand and continue to support the education of health information professionals by providing and endorsing training programs, certification requirements, and updates on evolving coding/DRG systems and regulations.

By enforcing CDI best practices and ensuring compliance, CHI will ensure and improve coding and documentation accuracy, optimize healthcare resource utilization, and enhance overall healthcare quality and efficiency.

Payer Stakeholders Role

Payers play an important role in documentation improvement and should be integral and support the CDI process. CDI programs are crucial for promoting enhanced quality of care. Collaborating with healthcare providers and regulators aids in predicting and managing anticipated healthcare costs, fosters a culture of quality care, and helps prevent inflated premiums for patients. Nonetheless, the relationship between insurance companies, providers, and regulators can sometimes be misaligned or perceived as conflicting, with payers striving to reduce payments and providers seeking appropriate reimbursement for their services. Navigating this complex relationship is essential for ensuring compliance, patient satisfaction, and operational efficiency. A study conducted by Guidehouse [5] exams opportunities for healthcare providers and payers to become more aligned and integrated with health plans using a payvider model. The payvider model serves as a joint ownership contractual relationship between payers and providers. According to the Guidehouse study, the payvider models are widely becoming the preferred incentivized model for payers and providers with a focus on improving outcomes while lowering cost for members.

Challenges with insurance denials were extensively expressed across all private sector pilot sites during survey interviews. With the implementation of AR-DRGs, denials will have a significant impact on provider reimbursement, the patient's experience and satisfaction; this potential increased risk must be addressed and mitigated by the payer market.

Providers Stakeholders Role

Providers play a crucial role in successfully implementing a Clinical Documentation Improvement (CDI) program by ensuring standardized documentation practices, staff training, and compliance with regulatory requirements. Their commitment to CDI improves coding accuracy, optimizes reimbursement, improves patient care quality, and facilitates efficient hospital operations.

Organizational accountability

- **Establish a Steering Committee:** Forming a CDI steering committee offers an executive-level forum to oversee the program's progress and activities, ensuring alignment with organizational objectives. The steering committee ensures there are sufficient resources to support the CDI program. Committee members are responsible for tracking and reviewing KPIs, developing action items as needed, monitoring physician engagement, addressing resistance to change, and helping to foster relationships across multifunctional teams.
- **CDI KPIs:** Organizations must regularly measure established Key Performance Indicators (KPIs). CDI Programs influence crucial performance metrics by evaluating the effectiveness and efficiency of healthcare organizations. Consistent monitoring of CDI KPIs aids in identifying operational opportunities, expanding educational initiatives, and informing future strategic decision-making.

Leadership Commitment

- **Prioritize CDI as a strategic initiative:** Derive establishing CDI department, allocating resources such as hiring of CDI specialists, establishing CDI policies and procedures, and setting goals.
- **Ensure physicians adhere to documentation standards**. Leadership should reinforce the importance of accurate documentation by incorporating CDI compliance into physician performance evaluation and ensure adherence to documentation guidelines.
- **Continuous monitoring of the CDI initiative.** The performance of the CDI initiative, along with its financial and quality impact, should be continuously monitored. To support informed decision-making, detailed reports should be generated periodically and shared with C-suite executives at the provider level. These reports will provide key insights into documentation trends, coding accuracy, reimbursement outcomes, and quality improvements, enabling leadership to take strategic actions that enhance overall hospital performance.

CDI Audits

- Routine auditing of the CDI program is essential to ensure regulatory compliance. Internal audits should be conducted frequently, ideally monthly, but at least quarterly. External audits can be carried out annually. CDI audits should focus on cases that are final billed and have undergone concurrent review by a CDI specialist. The assigned working DRG should be compared against the final coded DRG, missed query opportunities and query compliance should be assessed. The appropriateness of the selected principal diagnosis should be analyzed. Additionally, the proper assignment of COF, documented surgical procedures, and identification of ongoing educational opportunities for Coders, CDI Specialists, and Physicians should be reviewed.

Coding Audits

- Internal and external coding audits are crucial for compliance with coding requirements and regulatory standards, in addition to focused audits for the CDI team. Alongside CHI's recommended audit methodology that outlines the process for conducting internal coding audits by a senior coder [1], Providers should form a dedicated internal coding audit team to regularly audit the medical record. Although internal coding audits are time-consuming, routine audits help the audit team improve proficiency in their approach and further enhance their methodology. These audits focus on a sample of the final bill discharged medical records monthly, quarterly, and at least semi-annually. It is recommended to include cases that are service line level specific to build a cohesive relationship with physicians and their leadership teams; de-identified cases can be used as examples to educate physicians. Trends from the audit findings can be shared with the coding and CDI teams to enhance their knowledge.
- External coding audits should be conducted on an annual basis. These audits are carried out by highly trained professional consultants with extensive knowledge of coding and industry standards. Auditors offer an objective perspective to help hospitals address coding issues that may be missed during internal audits, educate the coding team on regulatory changes, and provide executive summary reports detailing their findings and recommendations. Assessing coding KPIs are also required as part of the audit process, these include but are not limited to coding accuracy rates.

CDI Education & Training

- **Structured CDI training programs** that cover documentation best practices, coding guidelines, and query compliance
- **Workshops and case-based learning** to help physicians understand real-world CDI scenarios and improve clinical documentation habits
- **Mandatory onboarding sessions** for new physicians to ensure CDI principles are ingrained from the start
- **Regular refresher courses and CDI scorecards** to provide feedback on individual and department-wide documentation performance
- **P2P Education:** Physician to Physician education on a more frequently an annal basis is a best practice to maintain coding and documentation performance

Advanced Documentation Tools

- **Complete digitization of medical records** to enhance CDI efficiency, accuracy, and integration between clinical and administrative processes. This includes structured documentation templates, automated CDI alerts, and seamless query workflows.
- **Automated query process** that streamlines physician responses, ensures efficient resolution of documentation gaps and reduces missed query opportunities
- **Dashboards and analytics** that track documentation trends, CDI KPIs, hospital performance, quality measures and areas needing improvement
- **AI-driven CDI tools** with computer assisted coding and computer assisted CDI, and computer-assisted physician documentation

CDI Program Milestones Recommendations for Providers

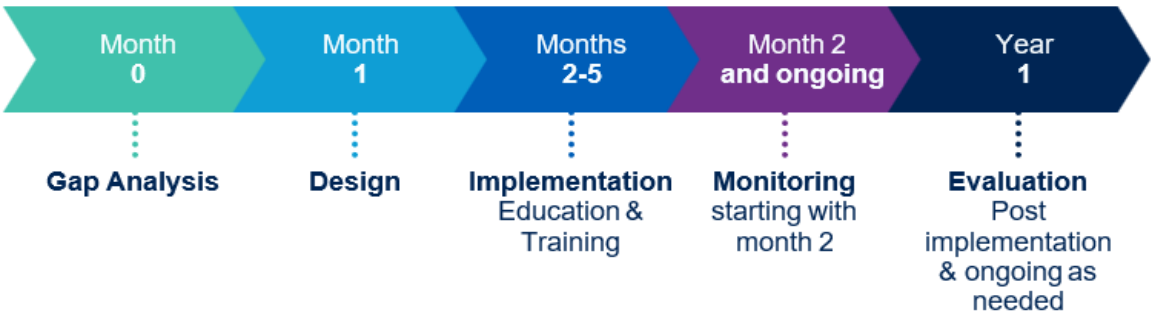


Figure 8: CDI Program Milestones Recommendations for Providers

CDI Program - Providers Roadmap

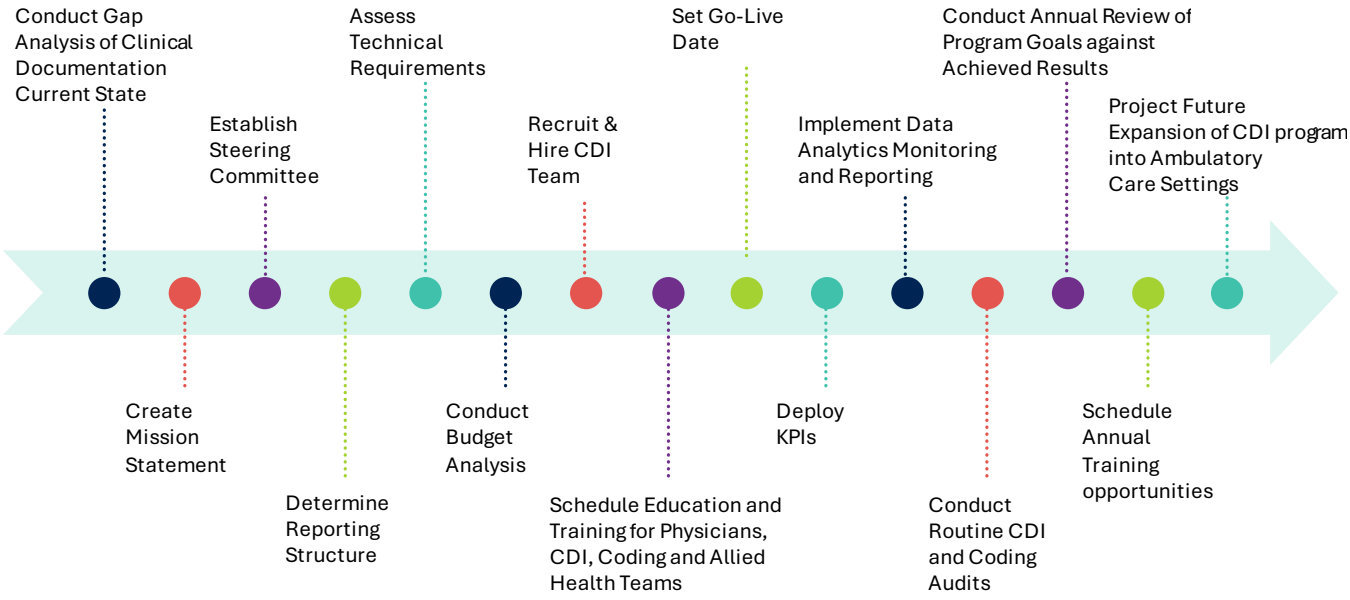


Figure 9: CDI Program Providers Roadmap

1. **Conduct an Assessment** to evaluate the current state of clinical documentation. Begin with a gap analysis that includes a comprehensive audit focused on physician documentation. This should consider the challenges between coding requirements and clinical language, as well as common trends in denial rates. Conducting an audit establishes a baseline for implementing a Clinical Documentation Improvement (CDI) initiative by identifying whether documentation issues are related to coding, specific physicians or service lines, or are prevalent across the inpatient setting.
2. **Create a Mission statement** that incorporates a commitment to continuously improve the standards of care, addresses overall goals, follows best practices and allows for accountability and integrity.
3. **Implement a Steering Committee** and appoint a physician advisor to serve as a liaison between the CDI, coding and medical staff teams. Begin the establishment of policy, implementing standards for capturing data and documentation.
4. **Choose a reporting structure** that aligns with the organization's strategic goals. The right reporting structure ensures program success. Most CDI programs report to the revenue Cycle Management (RCM) or Quality departments.
5. **Assess technical requirements** to support the CDI program query deployment and CDI workflows; these should be automated rather than a paper-based method for tracking CDI reviews and communication between the CDI reviewer, Coder and Physicians.

6. **Conduct an initial budget analysis** to assess current CDI Specialists annual salaries across the industry, for education and training materials, technology to support CDI workflow and the level of effort from the IT team to support technology integration. Annual budget considerations are required for continued support of the CDI program, these include vendor software license renewals, external CDI and coding audit support, annual certification requirements along with reimbursement for continuing education and conferences.
7. **Recruit and hire** the required personnel to support the CDI program. Due to current nursing staffing shortages in KSA, internally recruiting nurses and qualified allied health professionals for the CDI Specialists position will reduce time and effort spent during the hiring process and create opportunities for career advancement. Internal candidates have vested interests within their organization and contribute to new initiatives in ways external candidates may not because they are familiar with organization values. Appropriately staffing a CDI team is directly tied to the success of the program to ensure appropriate coverage of the patient population for the initial review and re-reviews.

   Insufficient staffing may lead to a quantity over a quality concurrent process. To determine the number of FTEs (Full-time employees) required to for a CDI program, the following should be taken into consideration:

   - Total work hours per year, excluding vacation and national holidays
   - Total discharge volume of the inpatient patient population
   - Average LOS for the patient population
   - HIS system (Paper vs. EMR)
   - Reconciliation duties
   - Other possible duties
   - For healthcare groups expectation to assist with coverage at other facilities

   A contingency plan to cover unexpected leave, vacation and holidays should be considered.

8. **Schedule training and education** requiring detailed coordination to conduct tandem training for the CDI, coding, physicians and allied health teams. Training for physicians needs should be reviewed and approved by the appointed physician advisor and the Chief Medical Officer (CMO). Education for CDI specialists, coders and other allied health teams may be done in a variety of ways including but not limited to online high-paced Bootcamps, self-paced online CDI modules, onsite customized facility level training lasting two to four weeks depending on the facility training needs and centralized training for multiple facilities within a health system.
9. **Set a Go-Live date for implementation** approved by the steering committee leadership since this requires not only establishing the start of the program, but it also determines the baseline monitoring period for performance comparison.
10. **Deploy key performance Indicators** based on recommended industry standards and CHI mandates. Minimum KPIs should include the CDI coverage rate, days between initial review rate, query rate, physician response and agreement rates.
11. **Implement data analytics monitoring and reporting** after 30 days post the go-live date, this allows for sufficient final coded data collection within the EHR, coding and billing systems.
12. **Schedule CDI audit** by the internal audit team to commence 30-45 days following the Go-Live date to assess proper implementation of policies and procedures to ensure compliance and provide feedback to the CDI, Coders and Physicians.
13. **Conduct annual review** of Program Goals against achieved results.
14. **Schedule annual training opportunities** for CDI reviewers, coders and physicians. It is also recommended to incorporate skills assessment into the CDI Specialists annual evaluation process.
15. **Project future expansion of CDI program** into the Ambulatory care setting, based on assessed needs, Value-based care initiatives and industry standards.

Leverage the Coding Audit Methodology project that CHI is currently implementing, and integrate CDI recommendations into the current execution plan.

Conclusion

In conclusion, implementation of CDI Programs across the private section within the Kingdom of Saudi Arabia to support the transition to a DRG payment methodology requires the integration of physician-to-physician education, advanced documentation tools, and AI-driven CDI processes; these strategies hold immense potential for transforming clinical documentation practices. By implementing structured templates, automated CDI alerts, AI-assisted coding, and comprehensive dashboards, healthcare facilities can significantly enhance the accuracy and efficiency of their documentation. Establishing robust policies, standards, and educational frameworks is essential for sustaining these improvements, fostering a culture of continuous enhancement in clinical documentation. Leveraging the Coding and CDI Audit Framework and incorporating CDI recommendations into current execution plans will ensure ongoing sustainability and optimal performance in healthcare documentation.

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Appendix 1 Basic Documentation Standards for the Inpatient Medical Record

Standards for Medical Record Documentation

Hospitals today operate in an increasingly complex healthcare environment where adherence to internal policies and external standards is essential, not only for patient safety but also for operational excellence. Ensuring that medical records documentation is accurate, timely, and aligned with recognized standards is not just a clinical necessity; it's a foundational requirement for meeting accreditation criteria, complying with national and international benchmarks, and supporting the accurate coding, reimbursement and calculation of Diagnosis-Related Groups (DRGs).

Internal policies provide structure and consistency based on the type of facility and the services provided, such as acute care, long-term care, etc. At the same time, external standards from health authorities, accreditation bodies, and international organizations offer guidance and expectations that hospitals must meet. Failure in meeting these expectations can lead to documentation gaps, inaccurate DRG assignments, financial losses, and even jeopardized accreditation status.

CBAHI

The Central Board for Accreditation of Healthcare Institutions (CBAHI) [7] is Saudi Arabia's national accrediting body responsible for ensuring healthcare quality and patient safety across the Kingdom. Established by ministerial order in 2005 and later mandated by the Cabinet in 2013, CBAHI sets and monitors performance standards for all public and private healthcare facilities. Its accreditation standards cover many domains, including patient care, medication management, infection control, documentation practices, safety protocols, and healthcare governance. Accreditation by CBAHI is mandatory, making it a cornerstone for quality improvement efforts within the Saudi healthcare system

JCIA Accreditation Standards

Joint Commission International (JCI) [8] is a leading global authority in healthcare accreditation, dedicated to advancing patient safety and care quality across international healthcare systems. As the international arm of The Joint Commission in the United States, JCI provides accreditation and certification services to hospitals and healthcare organizations in over 70 countries. Its standards cover a broad spectrum of essential healthcare functions, including patient-centered care, medication safety, infection prevention, clinical documentation, facility management, and leadership practices.

Earning JCI accreditation signals a healthcare organization's commitment to continuous improvement and alignment with globally recognized best practices.

Internal Standards

Medical staff bylaws: In addition to the documentation standards mandated by KSA accreditation organizations, it is vital to maintain the hospital's medical staff bylaws. Bylaws outline the content of the patient record, identify the exact personnel who can document it, and set the time limits for completing patient health records. CBAHI mandates having bylaws that explain the functions and responsibilities of medical staff and its dissemination to all the medical staff members.

Medical record department/ HIM policies: The hospital's medical record department/ HIM policies can ensure that physician documentation is thorough, reliable, and compliant with regulatory requirements. The policies should contain provisions for the timely completion of patient records.

Medical record review committee standards: The Central Board for Accreditation of Healthcare Institutions (CBAHI) in Saudi Arabia outlines specific standards for forming and operating a medical record review committee (MRRC) within healthcare facilities. This committee oversees the quality and accuracy of medical records documentation. CBAHI standards emphasize the need for regular review of medical records, documentation quality monitoring, and corrective actions, all of which fall under the scope of the medical records review committee. CBAHI standard MS.13 mandates the establishment of a medical records review committee in hospitals.

Format of Health Record

Patient records are organized in many formats across healthcare facilities. The formats followed may depend on whether it is a paper-based record, electronic medical record, or hybrid and often based on the service they provide (e.g., day-care centers, maternity hospitals, etc.)

In a **source-oriented format**, a health record is organized based on the source of the originating department that rendered the service. This conventional method is followed in many hospitals with paper-based records.[6]

In a **POMR or Problem-Oriented Medical Record format**, the record is organized as a problem list, database (admission note/H&P, initial labs) treatment plans, and progress notes so that the healthcare providers can easily follow the course of patient treatment. The most critical aspect of POMR is documenting progress notes in SOAP format and maintaining a problem list. During the clinical documentation audit conducted based on

CHI's CDI initiatives it was observed that most facilities follow the SOAP method or an adaptation of it. However, it was also observed that in some facilities, progress notes were either completely missing or lacked sufficient details about the care rendered.

Medical Record Content

Administrative Information

- **Demographic Information:** Information provides data that identify the patient and data related to payment and reimbursement and other operational needs after hospital. This information is collected and entered manually or electronically into the system by administrative staff when the patient presents for care. According to CBAHI standards MR.3.2.1, the patient demographic information (identification information) includes medical record number, patient's full name, date of birth, sex, marital status, address, national identification number, next of kin (and his contacts) and/or a person that the patient wishes to be contacted in an emergency, or authorized representative/designee.
- **Consents:** A general consent form is part of the admission process. If there is a high-risk procedure, the patient should complete and sign an informed consent form. Informed consent is obtained prior to high-risk treatments, procedures and blood transfusions. The CBAHI Standards mandate that hospitals should have policies that address patients who refuse or discontinue treatment (PFR.11).

Clinical Information

- **History & Physical (H&P):** The history portion of an H&P is the summary of the patient's illness from his or her point of view. The patient or an authorized representative can provide this information. The history should include the main complaint, history of present illness (HPI), medical, social, and family history, and review of systems (ROM). The physical examination portion is a comprehensive physical assessment of the patient's current condition through the examination and inspection of the patient's body by the treating physician. After obtaining the history and conducting the physical examination, the physicians document their impression, which is a list of either the definitive or provisional diagnosis. An H&P is the base on which physicians develop an initial plan of care. Hospitals should have clear policies establishing required elements of the H&P as well as establishing the timeframe for completion. The best practice is within 24 hours of admission.
- **Orders:** Physician orders address interventions or care such as treatments, medical services, tests, procedures, medications, devices, restraints, or isolation. Physicians should ensure that the orders demonstrate the medical necessity of

these interventions to avoid denials. According to CBAHI PC.21, the physician orders are to be written in the physician's order form, dated and timed and acknowledged by the nurse in charge of the patient. The hospitals are required to have a policy on verbal or telephone orders as well (CBAHI QM.25)

- **Progress Notes:** Progress notes are chronological statements about the patient's response to treatment during his/her stay in the hospital. They may be documented by a physician, nurse, or allied health professionals, each contributing within their scope of practice. The hospital's bylaws and policies must clearly delineate what categories of personnel are allowed to document in the progress note. Each progress note should contain changes in the patient's condition, new findings, treatment response, and further management. It should be authenticated and dated by the physician. The most responsible physician or a member of the treating team is accountable for completing a daily progress note. Hospital policies should note the minimum information to be included within a physician progress note. Accurate, timely, and detailed documentation of progress notes is essential to meet regulatory and accreditation standards. Implementing structured progress note templates (e.g., SOAP format) will promote consistency and completeness in documentation. For hospitals, maintaining detailed progress note documentation is essential to capture all relevant secondary diagnoses, which can enhance the ECCS score, ensure accurate DRG assignment, and support medical necessity by justifying admissions and treatments; ultimately helping to prevent denials or delays in reimbursement.
- **Consultation Notes**: Are the opinions of specialist physicians. These notes should contain evidence of the consultants' review of the medical record, examination of the patient and any pertinent findings, opinions, and recommendations.
- **Nursing Notes:** Nursing notes start with a comprehensive nursing assessment followed by multiple updates on the patient's daily progress. Typically, nursing notes include vital signs, physicians' orders completed, medication and treatment administered, patient's response to treatment, and outcome of care. Nurses enter their notes as detailed narratives. All nursing notes must be signed by the nurse providing the service. Nursing notes are a valuable source of information for coders and CDI personnel. Their detailed notes serve as clinical indicators supporting a CDI or coding query to establish a secondary diagnosis or complication. Since nursing notes are much more frequent, a CDI specialist can identify documentation gaps and potential query opportunities much earlier in the patient's stay. Nursing progress notes complement physician notes and complete the patient's clinical picture, which is essential for accurate DRG assignment and CDI efforts.

- **Medication Administration Reports (MAR):** Medication administration reports are maintained by nurses and include medications given, time, form of administration, dosage, and strength. Adverse drug reactions and medications given in error must be clearly documented. According to CBAHI standards MM.20 & MM. 21, *all medications are accurately transcribed into the medication administration record (MAR) after being verified against the original physician order or prescription completion*.
- **Operative & Anesthesia Notes:** The operative note must be documented either in writing or dictated by the surgeon immediately after surgery and must include the names of the surgeon and assistant, the name of the procedure performed, a description of the procedural findings, procedure performed, any tissue or fluid specimen removed, any estimated blood loss, device insertion or removal, complications and the postoperative diagnosis. The CBAHI documentation standard OR.9 dictates the documentation requirements related to an operative note. A detailed operative note facilitates the accurate coding of operative procedures and assignment to the correct DRG.
- **Anesthesia Notes:** Documentation related to anesthesia administration, monitoring and post-operative evaluation must be documented in the pre-anesthesia sheet, intraoperative anesthesia report, and post-operative anesthesia evaluation forms, respectively. The CBAHI documentation standards AN.5 to AN.12 outlines the required elements for documenting anesthesia notes. Standards AN.13 to AN.19 states the requirements when moderate or deep sedation is administered. During the survey of the pilot facilities, it was noted that the ASA score was not consistently documented in the anesthesia notes. This omission may affect the accuracy of ACHI code assignment and overall data integrity.
- **Obstetrical Services:** In obstetrical cases, the patient's medical record should comprehensively document the antepartum, labor and delivery, and postpartum periods. The CBAHI documentation standard L&D.9 outlines the required elements to be completed before the patient is discharged from the delivery room.

  The antepartum record should summarize the patient's current health status, past obstetric history, known drug allergies or sensitivities, blood transfusion history, and any significant gynecological findings.

  The labor and delivery record must include detailed observations such as the frequency and intensity of contractions, status of membranes, presence of abnormal bleeding or fluid leakage, fetal position and presentation, fetal heart rate, use of delivery instruments, estimated blood loss, description of the placenta and

umbilical cord, performance of an episiotomy, and use of medications or anesthesia.

The postpartum record documents the mother's condition following delivery and throughout the recovery phase.

Newborns are assigned a separate medical record number. The newborn record should include key delivery information such as the date and time of birth, birth weight, length, head circumference, and any observed anomalies, along with a summary of relevant maternal and delivery details.

- **Discharge Summary:** The discharge summary provides details about the patient's stay during the hospital stay and is the foundation for future treatment. It is prepared when the attending physician deems the patient is ready for discharge, transferred, or expires. It provides a summation of the reason for hospitalization, treatment rendered, relevant diagnostic orders for labs & radiology, request for consultation, other significant findings, and patients' response to treatment. Discharge summaries include post hospitalization instructions given to the patient or family for future care, discharge medications, diet, and follow-up visits. The discharge summary must be authenticated and dated by the most responsible physician. CBAHI standards PC.41, PC.42 & MR.7 outline the required elements for documenting a discharge summary.