

# Understanding the Problems in Documenting Clinical Documentations: A Conceptual Analysis

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**DOI Link:** <http://dx.doi.org/10.6007/IJARBS/v15-i11/24261>

**Published Date:** 12 November 2025

## Abstract

Clinical documentations are at the core of every patient encounter. In order to be meaningful, the documentation must be clear, consistent, complete, precise, reliable, and legible to accurately reflect the patient's disease burden and scope of services provided. However, getting complete documentation is difficult due to various factors. Thus, this conceptual paper explores the problems that healthcare facing regarding clinical documentations and initial insight regarding improvement of the clinical documentations. A total of 17 articles and journals were reviewed. The articles discuss about the problems, factors, theories, outcomes, and the limitation facing regarding clinical documentation. These articles reveal the effects of incomplete and inaccuracy of clinical documentations, benefits of Clinical Documentation Improvement (CDI) Programme, low cost improving documentation and compliance rate of clinical documentation. The impact from the clinical documentation is the hospital reimbursement. In Malaysia, the bundle payment model is used for hospital reimbursement and getting the actual budgeting. The findings emphasize the impact of inaccurate clinical documentation and the success of CDI program. However, in the future, researchers should evaluate the impact of documentation on patient care and the burden of completing documentation by the healthcare professional.

**Keyword:** Clinical Documentation, Financial Reimbursement, Quality Care, Casemix

## Introduction

Clinical documentation is critical to health care quality and cost. The generally poor quality of such documentation has been well recognized. In addition to that, documentation must be accurate and complete, which reflects the treatment that patient receives. Not only because it represents the medico-legal issue, but it also reflects the cost received since the patient was admitted until the discharge day with whatever type of service had been received including the meal, place, emolument of the doctors, nurse, electricity used, and others.

In Malaysia, Ministry of Health (MOH) will use Casemix as a receiving budget. Currently the MOH gets the financial source using historical budget. In Casemix, one of the components of financial reimbursement is clinical documentation which contains the main

diagnosis, other diagnosis and procedures. The total cost of the resources used plus the documentation and coding will generate financial reimbursement. Thus, it is a crucial problem if the clinical documentation is inaccurate and incomplete.

This topic is significant because the problem arises when the doctors write inaccurate and incomplete documentation in daily reports. As a result, it affects the budget received later once MOH start to use Casemix as a receiving budget. All clinical doctors play important roles while discharging patients. They need to make sure clinical documentation is completed before being sent to the Medical Record Office.

The finding of this study will be beneficial not only for the healthcare practitioners who are seeking for the solution of improving the clinical documentation, however, it will help the policy makers to improve the quality of patient safety and care, giving rightful reimbursement to the hospital and distribute the actual resources to the ground. Using this conceptual paper, it offers others the ideas about the problems faced and ways that can be taken to overcome these global issues.

### **Literature Review**

A total of 17 articles and journals were reviewed. The articles discuss the problems, factors, theories, outcomes, and the limitations facing clinical documentation. These articles reveal the effects of incomplete and inaccurate of clinical documentation, the benefits of the Clinical Documentation Improvement (CDI) Programme, and the low cost of improving documentation and compliance rates of clinical documentation.

#### *Effects of Incomplete or Inaccuracy of Documentations*

Based on Asakura (2014), the physician documentations are always incomplete because of either missing information or the use of inaccurate terminology, thus making false representations of patients in the hospital. One article published in 1985, investigated the degree of incomplete documentations in United States. From 1829 medical records, 62% reported as an error. According Elkbuli et. al (2018) poor documentations not accurately reflect the actual of severity of illness including the comorbidities and other complications. It also demonstrates the Case Mix Index (CMI) and risk of mortality (ROM) of the hospital. The accuracy of the documentation and the coding of the diagnosis of the patients and all the documentations is essential from therapeutic, medicolegal, epidemiologically, and health status management perspectives.

Besides that, inaccurate documentations also reflect the severity of illness and lead to underbilling, affecting the budgeting of the hospital based on the completeness and accuracy of the documentations (Asakura, 2014; Garcia, 2017). The severity of illness measures the intensity of the complicated diagnosis. The highest severity of illness generates the highest reimbursement for the hospital. Thus, the study suggests the hospital has significant costs in revenue due to inaccurate documentation by the doctors. Besides, the clinical documentation, the coding when the doctors write the diagnosis also gives the value of the budgeting. This coding should follow the ICD 10 Book depending on the country because different countries use different versions. According to Suryandari (2019), when there is an error regarding the coding of the diagnosis, the costing of the patient is also different because every coding is dependent on the diagnosis written, and each of the

diagnoses has its own weight of severity to measure the reimbursement. The study in the article shows that the relationship between accuracy and specificity when writing the diagnosis and the main diagnostic code with the costing claim in the cases of Diabetes Mellitus (DM) in the Wediodiningrat Lawang Hospital. The result of the study is that risk is 1.6 times greater, impacting the inaccuracy of the main diagnosis code of DM disease, and 1.8 times greater, resulting in the claims for financing treatment not being accordingly.

#### *Benefits of Clinical Documentations Improvement (CDI) Program*

Clinical Documentations Improvement (CDI) Program is a program utilized for optimizing clinical documentation. This program gives benefits to the healthcare in terms of value-based care, improves documentation, which will lead to the improvement of the quality of patient care, lessening of the risk of care management to the patient, and finally raises the financial reimbursement. CDI programs cover all the documentation from all aspects, including hospital outpatient services, inpatient services, day care services, physician practices, and emergency services.

The diagnosed patients have a diagnostic-related group (DRG). Each of the DRGs has its own weight. It estimates and reflects the resources involved in the treatment of the patients. Thus, the accurate bill will be priced and increased the reimbursement. With a physician CDI, the case manager has clearer, and more complete information about the patient's medical condition, complications, or other chronic conditions. The physicians acknowledge any abnormal test findings which lead to the treatment plan (Courtright, 2004; Hay, 2020).

Katelyn (2021) estimates the impact of the CDI program on perceived complexity using the severity of illness stratification and observe the ratio of mortality and the casemix index. The result shows the increasing of 15.7% in the patient who has the highest level of severity of illness. The Casemix Index also increases to 25% for the 6 years study. According to Redmon (2013), the Clinical Documentation Quality (CDQ) training for the healthcare provider had a significantly greater impact on improving CDQ.

Sparks (2015) stated that a pocket card for the CDI programme is used as a reminder. It optimizes the doctor's documentation when doing the clinical documentation. CDI program helps to trace all the comorbidities, diagnosis and procedures. It reduces repeated documentations and decreases the queries regarding documentations. From the research, it improves the documentation and uses it in documenting the high comorbidities during the admission.

According to Anyika (2015), the role of CDI programs continues to evolve, driven mainly by a focus on improving quality care, reimbursement, and reporting. CDI is the consistent improvement not only in the document but also in the information processing and management processes in a clinical situation. CDI programs require all healthcare level, including doctors, staff nurses, specialists, and other medical staff, to work together because CDI includes various care processes such as medical procedures, nursing care, laboratory, and rehabilitation.

*Low Cost Improving Documentations*

The focus in improving documentation is more towards the value-based care, attention to the quality of care and a costing. Ali (2021) shares the experience in improving the quality of the documentations. His study demonstrates a minor adjustment, which is low-cost but high- yield intervention that can improve the comorbid complication /comorbid major complication (CC/MCC) to clinical documentation. In this study, the “system-based” progress note template was changed to a “problem-based” progress note template. The result surprisingly shows the CC/MCC service line increase from 62% to 74% in a 3-month study.

*Successful of the Documentations*

The accuracy and completeness of the documentation is the most important, especially when it involves healthcare, because all the medico-legal are depending on the documentation. Thus, it needs to be kept for a certain year and certain type of patient; for example, psychiatry is for the whole life. To make the documentation useful, it needs to be accurate, relevant, complete, and confidential. The study by Almidani (2018) demonstrates the effect of collaborative work in the department of Paediatrics on improving the quality of inpatient care over 5 years. Thus, the collaboration of multiple departments are involved in terms of monitoring and motivation, quality of team, sending reminders to the consultant and others. The study shows a significant improvement for all inpatients from 50% to 80% of clinical documentation compliance rate. As a result, this documentation can be improved when all stakeholders share the same goal to achieve.

According to Callen (2016), Continuous Quality Improvement (CQI) is a powerful method that can be used to ensure that the coding output of clinical coders is of sufficient quality to justify and support the funding received. From her review of the articles, there are a few factors that contribute to the failure of the documentations which include, medical staff failing to complete the documentation adequately, lack of training among coders and need of quality coding among coders. Thus, as CQI has been effective in increasing quality outcome, the responsible person needs to act and apply the proven method to clinical documentation and coding.

*Clinical Documentation Compliance Rate*

An audit is to be carried out to determine the quality of clinical documentation. According to Kamanzi (2015) an audit tool can enhance the completion rate of audit reporting. The study done shows the department completion rate audit increase to 39% and the hospital- wide average compliance rate increase from 27% to 60%. These data can be used for the accreditation standard as evidence-based decision-making.

The clinical documentation promotes effective communication. The complete and accurate clinical documentation determines the standard of care in healthcare system. Poor clinical documentation affects the patient management and evidence-based decision making during the services and restricts the communication among the healthcare staffs. According to Sisay (2022), the pooled odds of good documentation practices among healthcare professionals who had good knowledge of clinical documentation were increased by 2.82 times compared those who had poor knowledge of clinical documentation. This finding is consistent with a study finding conducted in Ethiopia. Knowledge regarding how to do clinical

documentation plays a great role in initiating healthcare providers in documenting their care during service provision. Accuracy of clinical documentation helps in continuity of patient care and evidence-based decision-making (Sisay, 2022).

Research in Ethiopia showed that clinical documentation level still relatively low. For good clinical documentation, it needs good knowledge, good behavior toward documentation, undergo training, and have documentation guidelines for documentation practices. The training raises the level of knowledge, increases the behavior and raises the availability of documentation guidelines in healthcare. It increases the culture of good clinical documentation practices among the healthcare (Sisay Yitayih Kassie, 2022).

## **Discussion**

The quality of health service depends on the clinical documentation, either accurate, detailed, or comprehensive documentation of the injuries on the body of patients. Appropriate therapeutic planning and treatment can only be adequately performed if the injuries or any diagnosis discovered are well. Medico-legal is one of the implications if inaccurate documentations are applied. Besides that, good documentation allows medico-legal experts to evaluate initial injuries and their evolution over time. In case of a deleterious outcome leading to a trauma fatality, it allows for relevant assessment of the exact cause of death, as well as contribution from pre-existing co-morbid conditions with important legal implications. Therefore, accurate and meticulous coding and documentation of surgical lesions and traumatic injuries is essential from therapeutic, medico-legal, epidemiological, and health system management perspectives (Elkbulia, 2018).

According to Patricia (2020), Cheng et al. (2009) explored the poor-quality documentation on hospital funding in Melbourne. The duration of research is about 6 months for 1 year since 2004, and the sample is 752 inpatients from the surgical unit that was audited for accuracy of the clinical coding. However, 57% had missing documentation. Cheng et al. (2009: 43) summarized that it is important to do a continuous improvement about the quality of coding and DRG data output, and routine audit for the clinical coding is also needed.

There is research regarding inaccurate clinical documentation and coding error by Saizan (2021). The sample used was 226 sets of coded cases from two different hospitals. The results show inaccurate documentation is higher, which is 61.9%, but the coding error is lower, only 25.2%. From the audit, they found that most of the doctors do not document the complete diagnosis with the patient's complications and comorbidities. This condition also happened in the United States by McNutt et al., which did not include hospital-acquired conditions. In the Malaysian DRG Casemix System, if the doctors do not include the comorbidities or complications, it will automatically derive a DRG severity of illness I even though actually the patient supposedly has a severity of illness III. As a result, the data will produce patient severity I, which is a longer hospital stay. The finding from the research is that 64% of cases changed the DRG when the auditors included the clinical documentations with comorbidities and complications during the hospital stay and the severity of illness changed from I to II/III. The figure shows the accurate documentation is lower compared to the inaccurate data.



**Table 1: Results Audit Documentation and Coding for two selected hospitals (n= 226)**

| Variable               |            | <i>n (%)</i> |
|------------------------|------------|--------------|
| Clinical Documentation | Accurate   | 86 (38.1)    |
|                        | Inaccurate | 140 (61.9)   |
| Coding Error           | No         | 169 (74.8)   |
|                        | Yes        | 57 (25.2)    |

Figure 1: Finding of Accurate and Inaccurate Documentations (Saizan, 2021)

Table 1

*Implication of Documentation of Diagnosis (Sanderson, 2020)***TABLE 1. Studies Evaluating the Impact of Documentation of Diagnoses in the Medical Record**

| Impact <sup>a</sup>                            | Specific Findings                                                                                                                          | References                                                                                                                             |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Patient care                                   |                                                                                                                                            |                                                                                                                                        |
| Benefit                                        | Improved survival correlated to diagnosis documentation                                                                                    | Wilson et al (9)                                                                                                                       |
| Some benefit                                   | Better monitoring of chronic kidney disease but not better blood pressure control due to diagnosis documentation                           | Samal et al (10)                                                                                                                       |
| No benefit                                     | No correlation of diagnosis severity documentation with appropriate therapy                                                                | Braganza et al (11)                                                                                                                    |
| Potential for harm                             | Inaccurate/missing diagnoses in discharge summaries leading to potential gaps in communication between inpatient and outpatient clinicians | Evans et al (12), Tsopra et al (13), Bates et al (14), Carmody et al (15), Brady et al (4)                                             |
| Quality metrics                                |                                                                                                                                            |                                                                                                                                        |
| Inaccurate reflection of quality of care       | Low validity of quality metrics due, in part, to inadequate documentation of diagnoses                                                     | Nguyen et al (16), Fox et al (5), Abernethy et al (17)                                                                                 |
| More accurate reflection of quality of care    | Improvement in quality metric results due to documentation of diagnoses                                                                    | Loftus et al (18)                                                                                                                      |
| Administrative databases                       |                                                                                                                                            |                                                                                                                                        |
| Inaccurate data                                | Database inaccuracy due, in part, to unclear/imprecise documentation of diagnoses                                                          | Harris et al (19), Gologorsky et al (20), Patrick et al (21), Gorelick et al (22), Katznelson et al (23)                               |
| Hospital reimbursement                         |                                                                                                                                            |                                                                                                                                        |
| Direct benefit                                 | Increased revenue                                                                                                                          | Fox et al (5), Reyes et al (24), Zalatimo et al (25), Kittinger et al (7)                                                              |
| Perceived patient complexity                   |                                                                                                                                            |                                                                                                                                        |
| More accurate reflection of patient complexity | Increased case mix index, severity of illness, risk of mortality                                                                           | Fox et al (5), Reyes et al (24), Spellberg et al (26), Zalatimo et al (25), Morrison et al (27), Kittinger et al (7), Momin et al (28) |

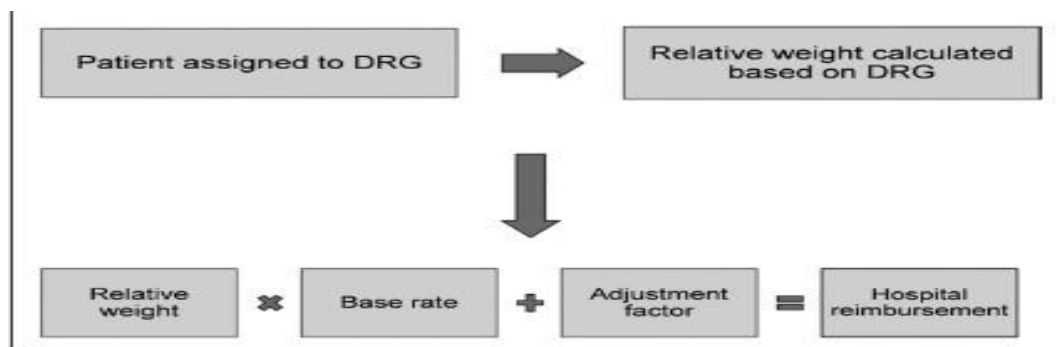
<sup>a</sup>Unable to locate any studies evaluating the specific impact of diagnosis documentation in the areas of medical malpractice and physician reimbursement.

There is various impact from incomplete and inaccurate clinical documentation. From the study, it gives impact to patient care, quality metrics, administration databases, hospital reimbursement, and perceived patient complexity (Sanderson, 2020).

**Conceptual Framework**

Bundle payment model is used in Diagnosis-Related Group (DRGs) system. Each DRG is categorized by the comorbidities and complications (CC). There are three types of severity, namely severity of illness one is a diagnosis with no complications or no comorbidities (W/OCC), severity of illness two is a diagnosis with complications and comorbidities (W/CC) while severity of illness three is a diagnosis with major complications and comorbidities

(W/MCC) which represent the most complexity and highest level of severity (Sanderson, 2020). Relative weight (RW) is value used to assign in DRG, when the RW is higher, the higher the severity of illness of the patient and higher the resources expected to be consumed. The Casemix Index (CMI) is the average of RW hospitals. CMI is one of the ways to compare each of the institutions and will affect the payment (Sanderson, 2020). Figure 2 below shows the general reimbursement process.



**Figure 1.** Reimbursement process for diagnosis-related group (DRG) payment methodology. The base rate is determined by factors that may include the wage index of the area where the hospital is located and cost of living. The hospital may receive an add-on payment (adjustment factor) if it treats a high number of low-income patients, if it is an approved teaching hospital, or for unusually expensive cases.

Figure 2: Reimbursement Process (Sanderson, 2020)

According to Sanderson (2020), the other model is the Capitation Model. By using this model, the hospital receives a fixed amount of budgeting regardless of the services provided or the cost of the services. Even the patients with chronic illnesses, this method does not calculate the complexity of the patients who spend high medical costs. Thus, the risk-adjusted model used to depend on the severity of illness. Therefore, lack of documentations precise diagnosis gives a negative impact to the hospital reimbursement.

According to Saizan (2021), till the date, Malaysia's MOH hospital is still using historical budgeting, which reviews the previous year's budgeting. The data generated by the Casemix System is a better alternative compared to historical budgeting. In the Casemix System, it calculates all the workload to treat the patients; however, in historical budgeting, it only reviews how much the budgeting was used in previous year. The information such as clinical coding data, patient admissions, surgical procedures, are useful in estimating health services provision and gives more accurate funding.

## Conclusion

The paper provides a comprehensive exploration of the problems facing clinical documentation, factors affecting it, implications and solutions to the problems. The review of 17 articles reveals the effects of incomplete and inaccurate of clinical documentation, the benefits of the Clinical Documentation Improvement (CDI) Programme, and the low cost of improving documentation and compliance rates of clinical documentation.

Education and training are the most realistic techniques to make sure of the accuracy and completeness of clinical documentation as the documentation process is becoming more complex and physicians lack of knowledge regarding this education. Moreover, ICD codes become more detailed, but the clinicians are still using nonspecific terminology because they

do not realize the implications of the clinical documentations. Clinicians may not know the specific codes that need to be used for specific diagnoses (Sanderson, 2020). Based on the study, clinical documentation and coding of cases need to be improved to produce accurate data that is more meaningful. However, this goal requires acceptance from health professionals working in the hospitals. Hospital directors, specialists, and clinicians must be made aware of the importance of the MalaysianDRG casemix system, embrace it, and lend their cooperation towards improving this initiative.

From all the articles, we can learn and implement in our society what the next step is to improve the clinical documentation. Moreover, clinical documentation is a very important and crucial issue, due to medico-legal issues and it contributes to the billing of the patient. When the accuracy and completeness of the documentation are good, it contributes to the good quality of documentation.

### **Future Studies**

Future research should focus on several areas to deepen understanding of problems and solutions of inaccurate and incomplete documentation, especially in the current technology era. Thus, it helps in healthcare policy changes and service improvement. The only way to get the actual budgeting is to depend on the accuracy and completeness of clinical documentation. However, it increases the burden to professional healthcare. Thus, the researcher needs to explore other techniques in completing clinical documentation. Secondly, the researcher may explore the implication of coding by healthcare doctors and other healthcare workers without a medical basis. This difference may lead to different financial reimbursement due to missed or wrong coding.

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