

# An Audit of Documented Rehabilitees' Data at the Workers' Compensation Rehabilitation Centre (WCRC) in Bulawayo, Zimbabwe

Ngwenya Bongani\*

Faculty of Business, Solusi University, Bulawayo, Zimbabwe

\*Corresponding author: [nbongani@gmail.com](mailto:nbongani@gmail.com)

Received January 07, 2013; Revised May 27, 2013; Accepted May 28, 2013

**Abstract** The primary objective of Workers' Compensation Rehabilitation Centre is to provide clinical rehabilitation services to patients who have work related injuries. To do this, the centre requires complete rehabilitees' data to be transmitted from the referrer to the centre as well as across internal departments for the centre. This is because documentation of medical records is a fundamental tool for communication between health professionals. It informs the care provided, treatment, care planned and the outcome of that care as a continuous and contemporaneous record. However, the researcher was not aware of any clinical audit of documented rehabilitees' data with respect to compliance with this requirement. This prompted a review of rehabilitees' data for its completeness as a vital initial step towards optimisation of rehabilitees' care pathways. The research method was a non-participatory document review of quota sampled discharged rehabilitees' files using a descriptive and analytical research design. Data were captured using a structured data collection instrument designed and tested by the experts in the medical fraternity. The instrument was designed from information prescribed in internationally referred documents and refined using information prescribed in the Procedures Manual for the centre. Generally, rehabilitees' information was incomplete thereby making the referral and review of patients difficult. Clinical template forms in use at the research site had inadequate form fields and this was an important factor which modelled the level of completeness of rehabilitees' information. These inadequate form fields resulted in important facts about the rehabilitees not efficiently transmitted across departments so much that there was practically no meaningful documented dialogue on balancing benefits with the risks to patients. There is need to revise the content of the procedure manual to prescribe that all clinicians file complete discharge rehabilitees' information in one folder as part of improving documentation in line with the principle of medical care and international standards.

**Keywords:** *documented rehabilitees' data, clinical audit, workers' compensation, procedure manual, clinical rehabilitation, data completeness*

## 1. Introduction

Assessing and improving the quality of services are essential components of health care. Quality improvement must therefore be prescribed as cyclic activity in policies, procedures and guidelines of organisations. Policies, procedures and guidelines should seek to maximize patient welfare after one has taken into account the balance of gains and losses to the patient. This has become more important since evidence based practice has become the internationally prescribed clinical approach to all patient conditions [1]. To this end, an optimised rehabilitees' data management is indispensable to any patient rehabilitation organisation. An audit of patients' data management therefore provided the Zimbabwe's National Social Security Authority (NSSA) with information that is much needed for optimisation of patient care. The concept of this study was about auditing the practice against what is prescribed in the existing policies, guidelines and procedures with respect to

documented rehabilitee data. This approach also took into account international trends with respect to improvement of rehabilitees' management and quality assurance. This was important from a number of perspectives. Workers' Compensation Rehabilitation Centre (WCRC) is a public institution that is regulated under the Health Professions Council of Zimbabwe, as such clinical audit provides an opportunity to the WCRC staff to follow standard protocols, protects them from medico legal pit falls, establishes the basis for quality clinical practice and also ensures that rehabilitees were getting the quality of services in a standard manner across the board. However, in order to get quality of services in a standard manner across the board, organisational data capture template forms that represent the framework for documenting patient data must have adequate form fields that are completely and accurately filled in as an integral part of note-keeping in clinical practice [2]. Such practice allows clinicians to provide informed and justified care across departments. In this regard complete template forms comprise an essential component of clinical practice that is prerequisite for a functional rehabilitation service.

These template forms are medico-legal documents their documentation must therefore be efficient and effective. This would allow the necessary time for direct rehabilitee care and for proper justification of clinical procedures [3]. The duty of staff at the centre is to offer the most effective means of rehabilitees' care, that which maximizes the potential for speedy recovery at the same time maintaining optimal clinical practice at lowest cost as reasonably achievable. For the majority of patients, the centre is able to contemplate rehabilitation but the question of how well the whole process is articulated right up to the end is a researchable subject. This realisation is underpinned by the need to understand and appreciate that harm takes many forms which include emotional, psychological, as well as physical and varies considerably among individuals. In this regard, policies and procedure guidelines should also enshrine privacy and confidentiality as the corner stone of clinical practice. However, multi-department institutions are often faced with problems in enforcing policy issues due to the very diverse nature of departments. To this end, the WCRC manager, like all other managers, practice in an environment that makes great administrative demands upon his knowledge, ability to respond to change, social skills and ability to work in teams. Evidence must therefore be gathered to decide on areas requiring improvement with respect to optimisation of rehabilitees' care. This protocol presupposes that the organisational policies and procedure guidelines were adequately used to design data capturing template forms to produce adequate form fields. These form fields in turn must be completely filled in [4]. Documentation is also vital to sustain the integrity not only of the services but of the quality of the overall services provided.

The World Health Organisation (WHO) explains that upon discharge of a patient, records pertaining to all services rendered to an individual patient should be filed [5]. This is done in the interest of the continuum of clinical care should the condition of the patient or the services rendered require further action such as for example, litigation. In this study, the issue of completeness of rehabilitees' data was approached by evaluating the documented WCRC rehabilitees' information. In order to do the evaluation, the following research question was asked:

**How does the observed completeness of the documented WCRC rehabilitees' information compare with the general standard prescribed completeness of information?**

In order to answer this question the following sub-questions were asked:

1. How does the information on the folder and documents contained in the folder compare with the general standard prescribed information?
2. How does the observed referral information compare with the general standard prescribed referral information?
3. How does the observed admission information compare with the general standard prescribed admission information?
4. How does the observed rehabilitees' discharge information compare with the general standard prescribed discharge information?
5. How does the observed information captured by the doctor compare with the general standard prescribed doctor captured information?

6. How does the observed physiotherapy and occupational therapy rehabilitees' information compare with the general standard prescribed physiotherapy and occupational therapy information?

## 2. Literature Review and Conceptual Framework

### 2.1. Clinical Audit

The concept of clinical audit was introduced in 1997 for Europe through the Council Directive 97/43/EURATOM. Consistent with ECRP [1] the WHO states that in recent years, quality of clinical data had become an important issue, not only because of its importance in promoting high standards of patient care, but also because of its impact on budgets for the maintenance of health services [5]. Providers of health care services therefore need information not only at the point of service but also at the point of decision making in a format that maximizes the decision making process. Clinical audits are therefore essential if health authorities wish to maintain health care at an optimal level. Further, literature [6], reports that despite wide spread evidence in support of clinical audits, literature has identified poor implementation of clinical audits as a major challenge to organisations. The authors further [6] explain that these challenges are in respect to resources and disseminated implementation guidelines. If this observation [6] is accepted to apply for this research site then, with the back ground information that the researcher was not able to identify evidence of clinical audit for this research site, an audit of rehabilitees' data for the research site may be of great scientific significance to the WCRC in its bid to improve quality of its services.

### 2.2. Medical Records

The WHO [5] suggests that medical records should include all forms of documentation by doctor, nurse or allied health professional (Physiotherapy, O.T., Dietician or Radiographer) recorded in a professional capacity in relation to provision of patient care. These records entail systematic documentation of pertinent facts, findings and observations about an individual's health history. This should include a single patient's medical history and care across time within one particular health care provider's jurisdiction. Medical records for this study may be defined as physical folders for patients and information found in them. Generally, patients' folders for this research site are compiled and maintained by health care professionals. These folders contain medical records that are generally confidential information. Therefore ethical and medico-legal issues are implied in their maintenance, access, appropriate storage and disposal.

#### 2.2.1. What Should be Documented in the Medical Records?

The WHO [5] explains that a patient's medical record should include the medical history which is a record of what happened to the patient and it usually gives a clue to the current disease status of the patient. The clinical care pathways are marked by discrete summation of the patient's medical information. These include the chief

complaint which brought the patient to seek medical attention, the history of the present illness including signs and symptoms, physical examinations, assessments and treatment plans detailing the expected course of action to address the problem, orders and prescriptions, progress notes which indicate clinical changes leading to current state of health. This information is entered by all members of the health care team that attended to the patient.

The WHO [5] further explains that other information like flow sheets from operations/intensive care units, consent forms, and discharge summary which is a critical communication tool between health care providers to ensure optimal continuity of care must be included in the patient's record. Other information obtained in the medical records include date and legible identity of health care professional in order to facilitate any verification or medico-legal issues that may arise with respect to the services rendered. Information documented by a clinician should demonstrate evidence that the clinician met their duty of care and that the clinician took all reasonable decisions and actions to provide the highest standard of care. It should also demonstrate evidence that the clinician met their duty of care and that any actions or omissions did not compromise the patient's safety or identified health outcomes [5].

### 2.2.2. Purpose of Documentation

The maintenance of complete and accurate medical records is a fundamental requirement of health care providers and it is usually enforced as a licensing or certification prerequisite. Documentation allows health care professionals to plan and evaluate the patient's treatment and to monitor progress over a period of time. It allows them to provide informed care. It facilitates communication and continuity of care among health care professionals involved in the patient care. Medical records serve as medico legal documents should medical malpractice be alleged and they should be able to withstand scrutiny in court [7]. They facilitate accurate and timely claims reviews and payment. Documentation of patients' diagnoses and procedures is used by hospital coders to calculate severity of illness (SOI) and risk of mortality (ROM) ratings. The SOI and ROM scores are then used for healthcare financing, coverage and payment of Medicare and Medicaid beneficiaries. Documentation can also be used for utilization review and quality of care evaluations. The presumption is that after controlling the patients' severity of illness, residual differences in mortality rates relate to differences in quality of care. Corporations such as Thompson Reuters have created a marketing tool and "status" based on this information that hospitals may strive to achieve [7]. Anonymous individual medical records may serve as a document to educate medical students/resident physicians and to provide data for medical research.

### 2.3. Completeness of Clinical Data

Audit of ethical adherence is indispensable for all clinical departments. To this end, the ability to provide optimal patient care depends on how rehabilitees' data is documented. In Australia, for example, there is a sense that the demand for clinical information is increasing in line with requirements for funding agencies [3]. Complete

and accurate documentation allows for effective communication of clinical information among health care professionals. Managers and clinicians should prioritize complete and accurate rehabilitees' data as an integral part of note keeping. This should see health care systems focus on outcome and greater accountability for patient care through comprehensive documentation. There is also a need to provide a legal record across a continuum of care that meets the expectations of the health care system, clinicians and consumers. Documentation is also vital to sustain the integrity of the services and the quality of the services provided. Therefore where there is incomplete documentation the situation is one in which communication among clinicians is incomplete and unsuccessful so much that important facts about the patient are not effectively transmitted to those who need to know them [8]. In such a situation there is practically no meaningful dialogue in balancing the benefits with the risks to patients and may have lethal effects.

It is evident from a few previous studies that much focus has been placed on the referral forms as compared to proper transmission of clinical information [9]. Quality of clinical services is greatly determined by the level of information given on referrals [9]. This is not surprising because as early as 1995, a prospective documentation review of referral forms to highlight common faults was conducted by researchers [10]. The aim was to find ways to improve transmission of clinical information. The study was carried out in Ghana, Sierra Leone and Nigeria and the sample was taken across the three countries and data was captured using a questionnaire. The study reported significant inadequacies ranging from absence of clinical information, illegible entries and unconventional abbreviations. The recommendations of the study were continued professional development for all referrers in order to reduce shortcomings of inadequate information.

A documentation review of clinical forms in order to assess availability of clinical information and demographic data in 600 radiological request forms was conducted in South-West Nigeria [11]. They conclude that only 4.8% of the forms were completely filled. They further state that patterns were seen in all the centres and were found to be statistically significant so much that they could not be attributed to chance variation. The researchers recommend that the department must provide orientation programmes for referrers to appraise them on the importance of request data.

Another study was conducted to identify with [2] a document review of clinical information in order to assess the adequacy of referral information from two hospitals in Yorkshire. Two hundred clinical forms were randomly sampled from each research site giving a total sample of 400 forms. They report that a number of inadequacies were observed that may have medico-legal implications and serious consequences on overall service provided by the department. One year later, a study [13] to assess the adequacy of completion of clinical forms in a tertiary health institution followed. This study was motivated by the realisation of the importance of complete examination request data. The conclusions were that abbreviations that are not universally accepted were observed in all forms. The results of this study concurred with those of the previous study which indicated that forms were often inadequately completed [2]. Continued professional

development for all referrers in order to give value to the completion of clinical forms was recommended.

## 2.4. Documentation Audit

Documentation review is often used to evaluate professional practice as part of quality assurance mechanisms such as performance review audits, accreditation processes, legislated inspections and clinical incident reviews. Consequently clinical audit process is one component of appropriate risk management. An audit process plays an important role in monitoring quality (standard of care) and the ability to produce accurate and complete coded data from available documented records. It is important that organisations develop and implement cyclic clinical audits [5].

In his lecture notes Sibanda [12] describes cyclic clinical audit of a system as comprising three stages. He maintains that the first stage is to observe practice and ask 'What are we doing?' The second is to compare this observed practice with what is believed to be effective and safe and its relationship to cost, and then ask 'Is this reasonable?' The lecturer further explains that if it seems what is done does not make scientific sense so much that it might not be as effective and as safe as thought, or the cost/benefit ratio achieved may seem too high, then a decision must be made as to whether change is necessary. If change is approved, what specifically should be changed and how must this change be implemented?

It is further emphasised in the lecture notes that, the third stage requires that the loop of the evaluation cycle be closed by ensuring that the information that comprised first and second stages is put to good effect. With this information in mind, it is important for the WCRC to consider whether captured rehabilitees' data has an impact on rehabilitees' care and if further steps need to be taken to improve the current situation. With this conceptual understanding, it is therefore important now to look at literature that relates to specific areas of this study.

## 2.5. Rehabilitation and Zimbabwe's National Health Strategy

Rehabilitation of injured workers is an indispensable part of national social security. The Zimbabwe Ministry of Health through its National Health Strategy 2009-2013, reports that injuries are among the top ten causes of outpatient visits and account for 50% of all newly reported

disabilities. It further reports that of particular concern are injuries resulting from road traffic, domestic and work related accidents, which constitute 10-15% of all registered deaths in the population. According to the 2008 Annual Statistics Report for NSSA [13], 1046483 workers were insured under the accident prevention and workers compensation scheme as at 31<sup>st</sup> December 2008. Out of these workers 3370 injuries occurred in 2008. This observation is of interest to NSSA and particularly to the WCRC in a number of ways which are explained henceforth.

The report demonstrates that a significant population of the workforce is affected by work related injuries. These injuries can cause a lot of emotional distress to the rehabilitee notwithstanding the socio economic harm. It is noted again that the subsequent impact of the injury to the rehabilitee depends to a great extent on patient care at the WCRC. Optimisation of patient care pathways dictate that the WCRC practice should ensure that rehabilitees are not subjected to emotional harm at the centre. This is in accordance with internationally prescribed good practice which requires that staff must follow nuanced and disseminated good practice guidelines. Therefore documentation review of rehabilitees' data is underpinned in patient care management.

## 2.6. Disability and Rehabilitation-Trends and Current Practice

The WCRC Rehabilitation Program seeks to improve the quality of life for work related injured rehabilitees by promoting healthy living, prevention of aggravation of condition, management of disabilities and injuries, through a process of rehabilitation empowerment and re-integration into the work environment and into society. In this regard the WCRC plays a crucial role in the continuum of care in line with the Public Health Care (PHC) approach [14].

The Zimbabwe Population Census of 2002, reports that approximately 350 000 People with Disabilities (PWDs) were identified and this represents 2.9% of national population. Poverty Assessment Study Survey (PASS) of 2003 ascents to this observation by noting that nationally, 3% of people were disabled. In this PASS report, rural areas had a slightly higher prevalence of persons with disability than urban areas. Figure 2.1. illustrate these documented statistical data on disability by type [14].

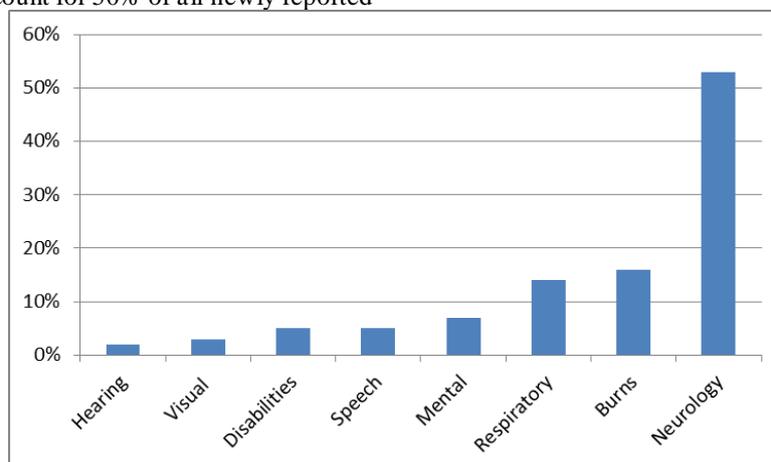


Figure 2.1. Disability by type-2004 ZMHCW (2009)

Furthermore, Figure 2.2. illustrates documented statistical data on disability by cause (ZMHCW, 2009: 76).

These statistics explain the relevance of the WCRC in the continuum of care in line with the PHC approach [14]. This centre handles a significant population of Zimbabwe; as such evaluation of the practice may be of great benefit to the population. The level of information given by

referrers should be standard and, consistent with [19] findings of some studies that the quality of clinical services is greatly determined by the level of clinical information; completeness levels of referral information that supports the continuum of clinical care from the referrer to the admitting clinician to avoid major setback on the services provided.

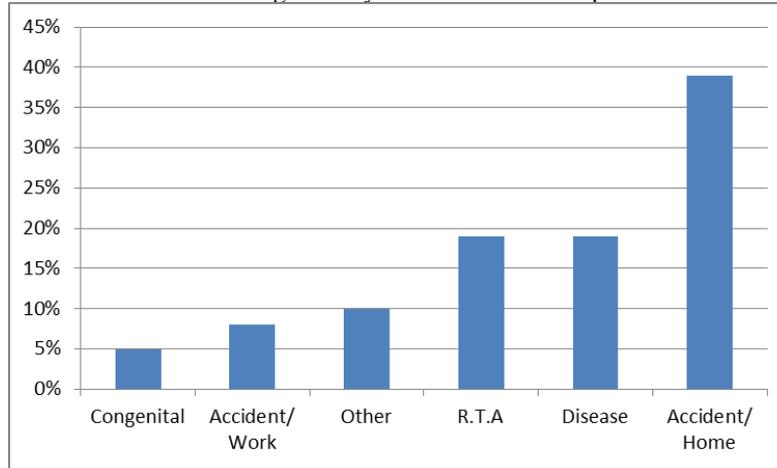


Figure 2.2. Disabilities by Cause 2004 (ZMHCW, 2009)

**2.7. National Social Security Authority (NSSA)**

National Social Security Authority was constituted and established in terms of the NSSA Act of 1989, Chapter 17: 04. It is a statutory corporate body tasked by the government to provide social security. The primary objective of the WCRC is to provide clinical services to patients who have work related injuries [15]. The centre comprises a number of departments located in the same campus and sharing a common administration department. These are: occupational therapy, physiotherapy, clinic, paraplegic unit, maintenance, laundry, registry, stores, accounts, vocational training, social work and kitchen.

The centre serves as a referral centre for patients derived from the whole country. It is located next to Mpilo Central Hospital and has a capacity of 200 at any given time with 80 of them being in-patients. The total staff complement of the centre is about 60. The mission statement clearly states that the centre aims at providing comprehensive clinical treatment, which includes therapeutic and skills training for injured workers to enable them speedy re-integration back into society and work situations.

Following is the conceptual framework depicted on Figure 3 below and hypotheses derived from literature reviewed above.

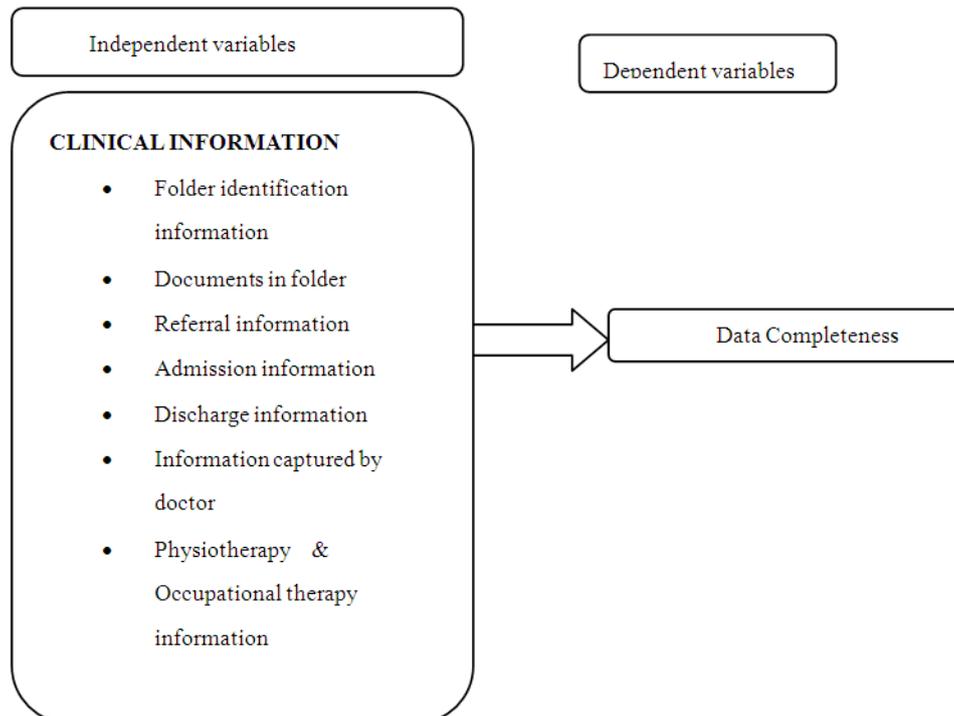


Figure 3. Conceptual framework

### Hypotheses

**H<sub>1</sub>** The observed folder information procedure will be significantly different from the prescribed general information standard procedure.

**H<sub>2</sub>** The observed referral information will be significantly less complete than the prescribed general standard.

**H<sub>3</sub>** The observed admission information will be significantly different from the prescribed general admission information standard.

**H<sub>4</sub>** The observed rehabilitees' discharge information will be significantly different from prescribed general rehabilitees' standard information.

**H<sub>5</sub>** The observed doctor captured information will be significantly different from the general standard prescribed doctor captured information.

**H<sub>6</sub>** The observed physiotherapy and occupational therapy rehabilitees' information will be significantly different from the general standard prescribed physiotherapy and occupational therapy information.

## 3. Research Methodology

The researcher employed a positivist research philosophy in this study. The nature of the study was an audit of a specific Workers' Compensation Rehabilitation Centre in Bulawayo, Zimbabwe. The results of this study are not expected to be generalised to other centres in the country. Data were collected from patients' files using a document review method. The advantages of the document review method were that the data sources were available at one place thus making the data collection inexpensive, convenient and efficient. The data sources (Rehabilitees' files) were medico legal documents kept at the research site as an integral part of note keeping in clinical practice. It was therefore possible for the researcher to verify from existing documents where there was need to clarify any data entries thereby enhancing the reliability and validity of the study. Furthermore, the data collection process did not interrupt the routine organizational process of the research site as the researcher operated as a non-participant observer.

The researcher further listed form fields contained in each template form against minimum content prescribed in the standard data collection schedule. The purpose was to determine how the researcher would handle the variance in nomenclature from one form to the other and improve one's analysis skills ready for the conclusion of the study. In taking these measurements, the existence of each criterion would score positive while the non-existent would give a negative score. The frequency counts determined from the sample (101 rehabilitees' folders) was then used to determine whether the nomenclature used was in tandem with that used in existing forms and therefore to determine whether there was any significant variance from the general standard prescribed practice.

### Ethical Issues

Clinical practice in Zimbabwe follows a professional code of conduct which is regulated by the Health Professions Council of Zimbabwe. This code of conduct is aimed, among other things, at protecting patients from harm that can be directly attributed to their participation in research or their clinical data used for research purposes.

In this study, data collection did not involve biographic details of patients and the researcher did not have any direct patient contact. The method of this study did not interfere with the medical management of patients nor did it affect the day to day running of the department. The researcher maintained confidentiality of source documents throughout the study. The research design for this study involved gathering of information through document reviews and was therefore not invasive. The data coding employed did not identify the data with institutions. In so doing once the rehabilitee folder had passed the hands of the researcher it was not possible to identify it with the research data collected but only by use of the pass worded master link list. This master link list was generated for the purpose of data verification only.

## 4. Data Analysis and Results

This section reports on the review of rehabilitees' folders for completeness of documented information. For each research question, a descriptive and an analytical report are given and results highlighted. Descriptive statistics was used to identify the central tendency for the research site and the distribution of the data. Measures of variation described the range of the distribution of data for each attribute relative to the measures of central tendency. For each category of measurement (each independent variable) a one sample t-test was used to compare the sample mean with a test value (Hypothesised value) in order to make inferences from the data. The report on the data is organized according to the sub-research questions and hypotheses in order to draw conclusions and provide explicit answers to the phenomenon under study. In the total sample (101) of rehabilitees' folders, none of them contained complete information prescribed in the research schedule.

### **Research Question 1: How does the information on the folder and documents contained in the folder compare with the general standard prescribed information?**

Results presented in this sub-section pertain to folder identification information and list of documents in the folder as prescribed in the general standard prescribed information completeness manual. With respect to information on the folder, the possible and expected scores were 4(100%). Similarly, with respect to documents in the folders, the possible and expected score were 6(100%).

The statistics demonstrated that all 101 folders were included in the calculation of central tendency (mode score) for the research site. The central tendency demonstrated in this research site was that generally clinicians would file 83.33% of required documents in rehabilitees' folders. It was observed that only inpatients were required to sign rules for the centre.

### **Research Question 2: How does the observed referral information compare with the general standard prescribed referral information?**

The review of rehabilitees' folders for the existence of referral information is given with the possible score of 30(100%) and the expected score of 21(70%). The maximum and minimum scores for referral information were 70% and 20% respectively thus giving a range of

50%. The referrers for this research site tended to provide 52.7% of referral information leaving 47.3% of the information that was supposed to be communicated to other clinicians concerning the patient not communicated. This is evidenced by the mean for the sample of (52.7+/- 0.8%).

There was significant effect for average referral information data collected from the research site being less than the expected standard,  $t(52.7) = 2.7$ ,  $p(0.00) < 0.05$ , indicating a significant difference between the observed sample mean and the hypothesised population mean of 70%.

**Research Question 3: How does the observed admission information compare with the general standard prescribed admission information?**

The review of rehabilitees' folders for the existence of admission information is given with the possible score of 26(100%) and the expected score of 20(76.9%). The maximum and minimum scores for admission information were 57.69% and 7.69% thus giving a range of 50%. The mean for the sample is 39+/- 2%, meaning that the tendency demonstrated for this research site is that admission information was documented 39% and leaving 61% undocumented.

There was significant effect for the documentation of admission information from the research site being less satisfactory than expected standard,  $t(76.9) = 7.69$ ,  $p(0.00) < 0.05$ , indicating a significant difference between the observed sample mean and the hypothesised population mean of 79.9%. This confirms that consistent with data observed for referral information, there was no standard documentation of admission information for this research site.

**Research Question 4: How does the observed rehabilitees' discharge information compare with the general standard prescribed discharge information?**

The review of rehabilitees' folders for the existence of discharge information is given with the possible score of 58(100%) and the expected score of 37(63.8%). The maximum and minimum scores for discharge information were 66.67% and 28.07% thus giving a range of 38.6%. The mean for the sample is 53.5+/- 0.6%, meaning that the central tendency observed for this research site was to provide 53.5% discharge information leaving 46.5% required discharge information undocumented.

There was significant effect for the discharge information from the research site being less adequate than expected standard,  $t(53.5) = 3.50$ ,  $p(0.00) < 0.05$ , indicating a significant difference between the observed sample mean and the hypothesised population mean of 63.8%. This confirms that there was no standard documentation of discharge information for this research site.

**Research Question 5: How does the observed information captured by the doctor compare with the general standard prescribed doctor captured information?**

The review of rehabilitees' folders for the existence of information compiled by the doctor is given with the possible score of 60(100%) and the expected score was 38(63.3%). The maximum and minimum scores were 23.33% and 20% thus giving a range of 3.33%. The mean for the sample is 21.7+/- 0.2%, meaning that the information compiled by the doctor was generally well

below expectation. In fact it was observed that generally, clinical history, procedures done by the doctor and issued drugs documentation was missing in all reviewed folders obtained from the registry.

Therefore the data demonstrates that compliance with respect to information compiled by the doctor was very low contrary to the requirement to fully document care rendered to the patients in order to balance risks and benefits to the patients,  $t(21.7) = 1.7$ ,  $p(0, 00) < 0.05$ , indicating a significant difference between the observed sample mean and the hypothesised population mean of 63.3%.

**Research Question 6: How does the observed physiotherapy and occupational therapy rehabilitees' information compare with the general standard prescribed physiotherapy and occupational therapy information?**

The review of rehabilitees' folders for the existence of physiotherapy and occupational therapy information is given with the possible score of 27(100%) and the expected score was 22(81.5%). The maximum and minimum scores were 62.96% and 22.22% thus giving a range of 40.74%. The mean for the sample is 56.1+/- 0.5%, meaning that 43.9% of physiotherapy and occupational therapy information was not documented. This means that in some cases up to 77.8% information was not documented in this category of measurement.

There was significant effect for the existence of physiotherapy and occupational therapy information being inadequately documented than expected standard,  $t(56.1) = 6.10$ ,  $p(0.00) < 0.05$ , indicating that there was a significant difference between the observed sample mean and the hypothesised population mean of 81.5%. These levels of inadequacies demonstrate that generally there was inadequate documentation of services rendered to the patients.

## 5. Conclusion

This study falls under a quality improvement study, rather than a research whose findings can possibly be generalised to other centres. The exercise conducted was an audit of a specific Workers' Compensation Rehabilitation Centre in Bulawayo. Therefore it may not be academic sound to generalise the finds or results of the study to other centres elsewhere in the country. Generally, rehabilitees' information was incomplete thereby making the referral and review of patients difficult. Incompleteness levels observed in this study have medico-legal implications and setbacks on the quality of overall service provided by the rehabilitation centre. Furthermore, the researcher concludes that the observed inadequacies in the number of prescribed form fields in the existing template forms were an important factor which modelled the level of completeness of rehabilitees' information. These inadequate form fields resulted in important facts about the examinations not efficiently transmitted across departments so much that there was practically no meaningful documented dialogue on balancing benefits with the risks to patients. This was compounded by lack of cyclic clinical audits for the research site. There was enough statistical evidence to accept hypothesis number 1. This means that the observed referral information was

well below expectation which means that the baseline information required to admit and treat the patients was not adequately provided. In such a situation the WCRC clinician would not be able to give adequate comparative comment on the condition of the patient upon discharge. Therefore, there was sufficient evidence to conclude that the observed completeness values of admission information were significantly below the expected completeness level and the observed admission information was not consistent with what was prescribed in the procedure manual for the research site and what was prescribed internationally.

The purpose of admission information is to detail presenting clinical features of a patient thereby providing baseline data required for the evaluation of a treatment effect upon discharge. It must be mentioned at this point that upon evaluation of form 139A used at the research site to collect admission data it was noted that some sections of this form had nothing to do with the current patient population seen at the research site. Consequently, these form fields were invariably left blank in all folders. This means that information that summarises the condition in which the patient was discharged was not documented. There was sufficient statistical evidence to conclude that the observed completeness values of documented discharged rehabilitees' information were significantly below the expected completeness level and therefore the hypothesis number 2 was accepted. This was in contrast to the assertion that discharge information is critical in ensuring optimal continuity of care to the patient. Therefore there was also sufficient statistical evidence to conclude that the observed completeness values of doctor compiled information were significantly below the expected completeness level and hypothesis number 3 accepted.

It was observed that the procedure manual specifies that under nursing care full history and all procedures done by the doctor or nursing officer should be recorded in the relevant book, that all issued drugs are recorded and that all medical reports are kept in the relevant book for future reference. However, it does not specify what this relevant book is and this may hold clues as to why this information was not included in the discharged patients' folders in the registry. This observation was also noted under Social Work in which the manual did not specify that resettlement and job placement reports should be filed. Contrary to these observations, under Physiotherapy, Occupational Therapy and Orthopaedic departments the Procedure Manual is very clear on how and where this information ought to be filed. Consequently this led to incomplete documentation of discharged rehabilitees' information. In this light, there was sufficient evidence to conclude that the observed completeness values were significantly below the expected completeness level and therefore the hypotheses number 4, 5 and 6 were accepted. This means that documented information was less than expected. Although information concerning assessment and treatment of rehabilitees was documented there was missing information on progress reports, discharge summary and complete identification of officers rendering the services. The implications were that should queries arise against the services provided the documented information would not help the situation.

**Table 1** below summarizes the possible score and expected scores per the category of information based on the audit instrument used in this study. The expected scores represented the number of form fields found in the template form expressed as a percentage of number of form fields that embraced those form fields implied in the policies and procedures manual and the international perspective (standards). While the possible score represent the total number of form fields per category and also represents the denominator in the relationship of the variables.

**Table 1. Possible and Expected Score per Category of Information**

Category of Information	Possible Score	Expected Score	Out Come
Information in Folder	4(100%)	4(100%)	Satisfactory
Document in Folder	6(100%)	6(100%)	Satisfactory
Referral Information	30(100%)	21(70%)	Unsatisfactory
Admission Information	26(100%)	20(76.9%)	Unsatisfactory
Discharge Information	58(100%)	37(63.8%)	Unsatisfactory
Information Compiled by Doctor	60(100%)	38(63.3%)	Unsatisfactory
Physio & Occupational Therapy	27(100%)	22(81.5%)	Unsatisfactory

## Recommendations

To avoid setbacks with respect to the quality of rehabilitation patient care, the researcher recommends a review of template forms that are used for documenting rehabilitees' data. The reviewed template forms should have adequate form fields with respect to referral information and services rendered at the centre. It is further recommended that the centre bench marks with the regional (SADC) practices to ensure strict adherence to the provisions and guide lines by WHO. This will ensure that clinicians base their treatment plan on information captured by a professional rather than rely on information given by the patient at that time. This will also enable standard documented clinical information such as patient information, examination information, referrer information and discharge information. In this review the centre must evaluate its template forms- add some relevant form fields and remove those that are no longer required by the centre. The observed proportion of incomplete form fields point towards a need for all staff to undergo continued professional development with respect to medico legal issues associated with incomplete clinical data. It is also important for the centre to introduce cyclic clinical audits to ensure continued improvement of rehabilitees' care. There is need to revise the content of the procedure manual to prescribe that all clinicians file complete discharged rehabilitees' information in one folder as part of improving documentation in line with the principle of continuum of medical care. The revised procedure manual should explicitly state where discharged rehabilitees' documents must be filed (one place) in order to allow easy access to those who are entitled to use it, while at the same time maintaining confidentiality of patient information. The revised procedure manual should explicitly state who should capture admission details so that this information could be available across the departments.

## Reference

- [1] ECRP, "European commission Radiation Protection No. 159", *Directorate-General for Energy and Transport*, 2009.
- [2] Oswal, D. S, "A study of completion of radiology request forms", *Radiography*, 209-213, 2009.
- [3] Pelletier, D. D, "Documentation and the Transfer of Clinical Information in two Aged Care Settings," *Australian Journal of Advanced Nursin*, Volume 22(4), 40-45, 2005.
- [4] Triantopoulous, C. T, "Analysis of radiological examination request forms in conjunction with justification of x-ray exposures", *European Journal of Radiology*, 306-309, 2005.
- [5] WHO, "Guidelines for Medical Record and Clinical Documentation: WHO-SEARO Coding Workshop September 2007", Geneva: *The World Health Report*, 2007.
- [6] Soimakallio S, Järvinen H, and Kortelainen K., "Proceedings of the International Symposium on Practical Implementation of Clinical audit for Exposure to Radiation in Medical Practices", *Tampere*, 24-27, 2003.
- [7] Spurgeon, A. H, "Does Improving Medical Record Documentation Better Reflect Severity of Illness in Neurosurgical Patients?" Retrieved March 05, 2012, from *Clinical Neurosurgery*, Volume 58, 2011.
- [8] IAEA-HHS4, "Human health series no. 4. Comprehensive clinical audits of diagnostic radiology practices: A tool for quality improvement", Vienna: IAEA, 2010.
- [9] NSSA, "Annual statistical report for NSSA", *Research schemes planning department*, Annals of NSSA, 2008.
- [10] Jumah, K. B. H, "Common faults in filling of radiological request forms", *East Afr Med J*, Volume 72, 744-745, 1995.
- [11] Adebayo, S. B, "Multicentre assessment of radiology request form completion in sout west Nigeria", Retrieved March 02, 2012, from, *Nigerian Hospital Practice* ISSN, 1597-7889. 2009.
- [12] Sibanda, L, "Quality assurance for clinical practice" *Unpublished lecture notes for part iv radiography*, NUST, 2009.
- [13] IAEA, "Justification of diagnostic medical exposures, some practical issues", *Report of an Intemational Atomic Energy Agency (IAEA) Consultation*, Vienna, 10-14 Nov. 2008, Vienna: IAEA, 2008.
- [14] Akinola, R. A, "Radiological request forms: are they adequeately filled by clinicians? Retrieved 07 24, 2011, from, *The Intemet Journal of Radiology*: 2010.
- [15] ZMHCW, "Zimbabwe's National Health Strategy 2009-2013", ZMHCW, 2009.
- [16] Smith, P. H, "Research Mindness for Practice", Churchill Livingstone, 1997.
- [17] Decoursey, W. J, "Statistics and probability for engineering applications", *Wobum: Elsevier science*, 2003.
- [18] Buchan, J and Dal Poz, M. R, "Skill mix in the health care workforce: reviewing the evidence", Retrieved March 02, 2012, from, *Bulletin of the World Health Organisation*, 2002.
- [19] Bowling, A, "Research Methods in Health: Investigating health and health services". New York: 3rd ed. McGraw.Hill. 2009.