

MAKERERE



UNIVERSITY

DESIGNING A RECORDS TRACKING SYSTEM AT MASINDI GENERAL HOSPITAL

GROUP F

NAME	REG. NUMBER	STUDENT NUMBER
BYATE INNOCENTINA	20/U/22252/PS	2000722252
LUCKY EJANG	19/U/11206/PS	1900711206
BRUNO AGABA ERNEST	19/U/0883	1900700883

**A PROJECT REPORT SUBMITTED TO THE EAST AFRICAN SCHOOL OF LIBRARY
AND INFORMATION SCIENCES IN PARTIAL FULLFILLMENT OF
THE REQUIREMENT FOR THE AWARD OF THE BACHELORS DEGREE
IN RECORDS AND ARCHIVES MANAGEMENT AT
MAKERERE UNIVERSITY,
KAMPALA.**

SEPTEMBER, 20

DECLARATION

This is **Group F** hereby declare that this dissertation entitled “Designing A Records Tracking System At Masindi General Hospital” is our own original work carried out in partial fulfillment of the requirements of the award of degree of Bachelor of Records and Archives Management under the guidance and supervision of Mr. Ssebulime Joseph

BYATE INNOCENTINA
20/U/22252/PS

Signature

.....

Date

..7./10./2022

LUCKY EJANG
19/U/11206/PS

.....

..7./10./2022

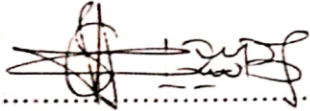
AGABA BRUNO ERNEST
19/U/0883

.....

..7./10./2022

APPROVAL

This report has been submitted following a comprehensive and holistic assessment as a true copy of consideration by the university supervisor.



SSEBULIME JOSEPH.
(SUPERVISOR)

07-OCT-2022

DATE

DEDICATION

We dedicate this research to the students fraternity and staff of the East African School of Library and Information Science and also to our dear parents for the unending support rendered throughout our education.

ACKNOWLEDGEMENT

This whole work would not have been possible without the group's efforts and Gods guidance amidst us. We are indebted to our supervisor Mr. Joseph Ssebulime, from the Department of Records and Archives Management at the East African School of Library and Information Sciences, Makerere University for the unending guidance he accorded to us during the development of this research report.

TABLE OF CONTENT

DECLARATION AND APPROVAL	i
DEDICATION	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENT	v
ABSTRACT	xii
CHAPTER ONE	1
INTRODUCTION	1
1.0 Introduction.....	1
1.1 Background of the study	1
1.2 Background of Masindi General Hospital	2
1.2.1 Location of Masindi General hospital.....	3
1.2.2 Vision.....	3
1.2.3 Mission Statement.....	3
1.2.4 Objectives of the hospital.....	4
1.3 Problem Statement	4
1.4 Aim of the study.....	4
1.5 Specific Objectives	5
1.6 Research questions.....	5
1.7 Conceptual scope	5
1.7.2 Geographical scope.....	5
1.8 Significance of the study.....	5
CHAPTER TWO	7
LITERATURE REVIEW	7

2.0 Introduction.....	7
2.1 Definition of key Terms.....	7
2.2 Types of common medical records.....	8
2.2.1 Lab Request Form.....	8
2.2.2 Medical History Report.....	8
2.2.3 prescription form.....	8
2.2.4 Patient's Data.....	8
2.2.5 physical Examination forms	8
2.2.6 Consent forms	9
2.2.7 physicians's Orders	9
2.2.8 Informed Consent forms	9
2.2.9 Nurse's Notes	9
2.2.10 Test results reports	9
2.2.11 Other Information	10
2.3 Methods used in the management of medical records	10
2.3.1 Digital official records	10
2.3.2 Record keeping metadata.....	11
2.3.3 Centralized System	11
2.3.4 Decentralized system	12
2.3.5 Information Systems	13
2.3.6 Database Systems.....	13
2.4 Current record tracking Systems.....	13
2.4.1 Indexing Files.....	14
2.4.2 Physical file tracking.....	Error! Bookmark not defined.
2.4.3 Coding Documents.....	15

2.5 The challenges associated with records tracking system.....	16
2.5.1 Security	16
2.5.2 Equipment Costs and potential for absolence	16
2.5.3 Data Retrieval Sharing	16
2.5.4 Electronic Systems and people Issue	16
2.6 Research Gap	17
CHAPTER THREE	18
METHODOLOGY	18
3.0 Introduction.....	18
3.1 Research Design.....	18
3.2 Study Population.....	19
3.3 Sampling	19
3.3.1 Sampling Technique	19
3.3.2 Sample Size.....	20
3.4 Data collection Methods	20
3.5 Data collection Instruments	Error! Bookmark not defined.
3.5.1 Interview Guide	20
3.5.2 Observation Guide	21
3.6 Data analysis and presentation.....	21
3.6.1 Data Analysis	21
3.6.2 Data presentation	21
3.7 Ethical Considerations	22
CHAPTER FOUR.....	24

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS24

4.0 Introduction.....24

4.1 General Characteristic of the Respondents **Error! Bookmark not defined.**

4.1.1 Age of Respondents at Masindi General Hospital..... **Error! Bookmark not defined.**

4.1.2 Sex of Respondents at Masindi General Hospital..... **Error! Bookmark not defined.**

4.1.3 Professional Level of Respondents at Masindi General Hospital **Error! Bookmark not defined.**

4.1.4 Work Experience of Respondents at Masindi General Hospital **Error! Bookmark not defined.**

4.1.5 Work Position (Job title) of Respondents at Masindi General Hospital **Error! Bookmark not defined.**

4.2 Types of records stored and managed at Masindi general hospital31

4.3 To identify the methods in tracking of medical records at Masindi General Hospital.36

4.4 Challenges encountered in tracking medical records at Masindi General Hospital.40

4.5 To develop a records tracking tool at Masindi General Hospital.43

4.5.1 Requirements for an Electronic records tracking system45

CHAPTER FIVE: DEVELOPING AND IMPLEMENTATION OF A RECORDS TRACKING SYSTEM FOR MASINDI GENERAL HOSPITAL48

5.0 Introduction.....48

5.1 Description of the current system48

5.1.1 Weakness of the current system.....48

5.1.2 Strength of the new system49

5.2 System Requirements.....50

5.2.1 General Requirements.....50

5.2.2 User Management Requirements.....50

5.2.3 Functional Requirements	51
5.2.4 Non-Functional Requirements	51
5.2.5 Hardware Requirement	52
5.2.6 Software Requirements	52
5.3 Description of the new system	52
5.4 Design Standard	53
5.4.1 Input Specification	53
5.4.2 Output Specification	53
5.5 Implementation and Testing	57
5.5.1 Implementation	57
5.5.2 Testing.....	58
5.5.3 Unit Test.....	59
5.5.4 Integration Test	59
5.5.5 System Test.....	59
5.5.6 User Acceptance Test	59
5.6 System Documentations.....	59
CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS	61
6.0 Introduction.....	61
6.1 Conclusion	61
6.2 Summary of the findings.....	61
6.2 Recommendations.....	Error! Bookmark not defined.
REFERENCES	66
APPENDICES	70

LIST OF FIGURES

Figure 1: Showing Sex of Respondents at Masindi General Hospital	Error! Bookmark not defined.
Figure 2: Showing Professional Level of Respondents at Masindi General Hospital.....	Error! Bookmark not defined.
Figure 3: Work Experience of Respondents at Masindi General Hospital	Error! Bookmark not defined.
Figure 4: Showing Working Position of Respondents at Masindi general hospital	30
Figure 5: Showing the The sample of the location card used at Masindi General Hospital.....	38
Figure 6: Showing the sample of the file transfer slip used at Masindi General Hospital	39
Figure 7: Showing the sample of record audit/ consensus form.....	40
Figure 8: Respondents knowledge about the electronic records tracking system	44
Figure 9: Showing the pecentage of respondents view on implementing the new system.....	46
Figure 10: Showing the Welcome form of the new system.....	54
Figure 11: Showing the Login form of the new system.....	55
Figure 12: Showing the New User registration form.....	56
Figure 13: Showing the system implementtion process	58

LIST OF TABLES

Table 1: Showing Age of Respondents at Masindi General Hospital Error! Bookmark not defined.	
Table 2: Respondents knowledge about the electronic records tracking system.....	44

ABSTRACT

Records tracking today are an important aspect of information management in organizations. Records require proper management to support core functions of the organization, provide evidence of business transactions, ensure continuity of business activities, and pass on information to the future generations. The aim of the study was to design and implement a records tracking system at Masindi General Hospital with a view of suggesting solutions to problems affecting tracking system at the organization. The objectives of the study were to identify the different types of medical records generated at MGH; To identify the methods in tracking of medical records at Masindi General Hospital; To identify the challenges encountered in tracking medical records at Masindi General Hospital and To develop a records tracking tool at Masindi General Hospital.

The study was carried out at Masindi General Hospital located in Masindi with sample of 15 comprising of Records staff who included Records managers, Data officers, IT officers and Administrators. The study used a qualitative research approaches with case study research design that is the reason why interviews and observations were used as data collection tools.

The major findings of the study were that The different types of records managed at Masindi General Hospital includes: Patient Casenotes, X-rays, Pathological Specimens and Preparations, Patient Indexes and Registers as well as Drug Records. Some of the challenges experienced as identified include; Inconsistency in data entry, room for errors, miskeying information, Large ongoing staff training cost, System is dependent on good individuals, Reduction in sharing information and client services, Time consuming and costly to produce reports, Lack of security and Duplication of data entry.

An Electronic Records tracking system was developed using Microsoft Access, the developed system comes with various features like Audit trail capture, metadata capture, search, retrieval of required information.

The study recommended an Electronic Records tracking system to improve the way records are tracked and how user's access records from the storage facilities should be thought of in an attempt to eradicate the manual procedural process of accessing and tracking records.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter summaries the research project and the study. This defines the background of both the study and the organization studied.

1.1 Background of the study

Medical Records are documents that explain all the details about the patient's history, they also explain clinical findings, diagnostic test results, pre and postoperative care, patient's progress and their medication. If written well and correctly, notes will support the doctors about the correctness of the treatment.

In USA, Electronic health medical records system are being used for extracting patient's information instantly and remotely, this helps to keep track of patient's due dates for checkups, immunization and also monitor health performance. Usually, this re-identification is performed manually, which needs a lot of labor and its time captivating exertion which sometimes lead to misplacement of patient's medical records. Various techniques have been proposed for the automatic extraction of useful information, and accurate diagnosis of the different diseases.

In Ghana, manual, manual Records tracking systems are still being used. A case study at Ridge hospital in Ghana shows that the manual medical records tracking has immensely contributed to the problem of missing of patient's medical records, hence leading to delays along que at patient's endurance before finally receiving medical treatment. Ridge hospital has developed an automated medical records tracking system which not only tracks records faster and more efficiently than the Manual system but can also perform other management functions such as generating reports among others.

In Uganda, most hospitals notably have invested in accounting systems for income management at the expense of medical error tracking and related system. This has led to common preventable medical errors such as doctors wrongly prescribing medicine, error due to misidentification of

patients and errors resulting from pharmacist's failure to read hand written prescribed information. A computer based medical information system was developed and this system greatly helps to improve medical research by providing complete medical records of millions of patients.

In Masindi General Hospital, the tracking of Medical Records is still being done manually, where Records Officers follow the records using an Outpatient Department (OPD) register and file transfer books. Tracking of medical records manually is associated with different challenges and these are; misplacement of patients medical records, delayed retrieval of medical records, there is limited space and also authorized access to medical records. It is on this background that the researchers recommended a Development of a Tracking System for Masindi General Hospital.

The system will help track the movements of medical records from the Doctor's office to the other offices, the system will also quicken the retrieval of all medical records whenever it is being needed, the system also minimizes the congestion of medical records in the records office and also enables control of misplacement of medical records from Masindi General hospital.

1.2 Background of Masindi General Hospital

Masindi District Hospital has been serving the people of Masindi and beyond for the last 192 years. It started in 1922 as a health unit for the workers of EARH (East African Railway and Harbors), however it was later taken over by the colonial government in 1926 to cater for the health needs of the people of the area in addition to the railway workers. The hospital was growing slowly and by independence time, the unit only had 70 beds within an OPD, a small theatre, a general ward of 36 beds, the maternity ward with 26 beds and isolation ward of 8 beds.

Currently the hospital has 160+ beds. Apparently of these, central government funding is up to the level of 100 beds only. This gives a dilemma to the hospital management and the district leadership of who to fund the balance of 60- plus beds. With the general increase in disease burden in Masindi/ Uganda at large, the OPD and ANC attendance is high, ranges of activities in the hospital have increased plus the increased cost of living where by the available funds are too small to run the operations.

Before independence time, the hospital has a small disease burden but after independence time, it has a most population, improved level of development, an increase in disease burden, improved economy with many activities. It was certainly clear that the facility was not enough for the region.

In 1987, the need to have children's ward., Maternal and child health (MCH) sections in the hospital was conceived by the community of Buruli and Bujenje countries through the political leaders by then. So they started to construct, as a community a building to accommodate the children's ward, and MCH sections. Government came in later and helped to finalize the project and by 1988 the building was finished and put into use.

Between 2005 and 2007 there was another need for a ward special for women because the general ward in the hospital by then was too small for both females and males. The district leadership then contracted BAT who assisted and constructed a building which was complete and operational in 2008 and now houses the female ward of 54 beds. With this in place, the hospital is now having 160+ beds with all units expected of a general hospital in place.

1.2.1 Location of Masindi General hospital

Masindi hospital is located in central division, Masindi municipality in Masindi District P.O.Box 29. Masindi District is located in one of the 122 districts in Uganda borders by Kiryandongo in the north, Kiboga in the south, Hoima in the Southwest, Kyankwanzi in the Southeast and Biisa in the west.

1.2.2 Vision

To make Masindi hospital the best general hospital in Uganda.

1.2.3 Mission Statement

The mission statement of stakeholders is " to make Masindi Hospital the best hospital in the district and Uganda as a whole by making optimum use of the available financial, human and maternal resources to mutual details of the patients, employees and the community at large.

1.2.4 Objectives of the hospital

- To set high standards of medical care at Masindi General hospital achieving performance which will promote pride in the community.
- To promote community participation through community mobilization.
- To increase on the level of education and literacy staffs in the hospital.
- To raise donation interns of paying for services and utilities.
- To put up infrastructure in the hospital vital to smooth operations.
- To increase material goods that is of use in the hospital budget.

1.3 Problem Statement

The absence of a records tracking system in the hospital is responsible for the delayed retrieval of records and has become a serious problem to the staff and key stakeholders like making policies and finding necessary information. Most of the retrieved records are not returned in their respective storage places making it more difficult to track patient's due dates for example those for immunization among others.. There is a tendency of misplacement of Medical Records which sometimes leads to temporary opening of other new files on the same subject which ends up distorting the logical filing system and as a result of that the Administration and doctors hardly make informed decisions due to the inability in tracking the available medical records that could be under use across the entire hospital. Many hospitals have faced the same challenges.

Failure to track the movements of Medical Records has impacted the hospital administration in timely decision making, misplacement of files and also failure to know the exact number of patients who visit the hospital. Therefore, it's the researcher's wish to design a tracking system which will enable the administrators and users to maintain a consistent watch over the movements of various medical records in the process of treating the patient's.

1.4 Aim of the study

The main aim of the study was to develop and implement a records tracking system for Masindi General Hospital.

1.5 Specific Objectives

The main objectives of undertaking this project brief are to:

1. To identify the different types of medical records generated at MGH
2. To identify the methods in tracking of medical records at Masindi General Hospital.
3. To identify the challenges encountered in tracking medical records at Masindi General Hospital.
4. To develop a records tracking tool at Masindi General Hospital.

1.6 Research questions

1. What are the different types of medical records generated by the hospital on a daily basis.
2. What challenges does Masindi General Hospital face in the management of medical records?
3. What are the suspected causes to the above challenges?
4. What solutions should be put in place to solve the above challenges?

1.7 Conceptual scope

The project covered all medical records at Masindi General Hospital from the receiving stage, distribution, maintenance and use up their disposition stage and tracking of these records.

1.7.2 Geographical scope

The study was conducted at Masindi General Hospital medical records in particular in Masindi District.

1.8 Significance of the study

The development and implementation of the records tracking system at Masindi General Hospital the following will be gained.

The staff m, especially people dealing with the medical records will be able to learn and gain more skills on how to track records electronically.

Students will be able to learn more skills, knowledge outside class about records tracking and what it involves.

The study will help Masindi General Hospital to enhance efficiently and effectively in managing their records for the improved service delivery.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviewed documented and related research in order to define the frontiers of knowledge in line with the topic under study. According to Sara (2019) literature review is a systematic examination of the scholarly literature about one's topic.. Oliver (2013) states that word "review" in literature review means that one should summarize the broad content of research study and also indicate clear ties of other studies in the field. A literature review is therefore an account of what has been published on a topic by accredited scholars and researchers. It is a critical look at the existing research that is significant to the work that the researcher will be carrying out. It involves examination documents such as books, magazines, journals and dissertations that have a bearing on the study being.

2.1 Definition of key Terms

Records. A record is any information regardless of form, medium created and received and maintained and used by an organization or an individual in pursuance of legal obligations or in the transactions of the business, of which it provides evidence.

Filing: is the process of organizing the correspondence and records in a proper sequence so that they can be easily located. The term filing may be as the process of arranging and storing original or copies of them, that they can be readily located when required.

Filing system: filing is the best way of retrieval process within an organization which should be done on a daily routine and many scholars are in support of it.(Fulton, 2008).

Tracking System: records tracking system is the component of a records management system that ensures that you can locate records when you need to use them.

Medical Records: these are records containing sufficient data written in a sequence of events to justify the diagnosis, and warrant the treatment given and the end results.

Records Management: is responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of the records.

2.2 Types of common medical records

2.2.1 Lab Request Form

A lab form is a document in which it is to be filled in with personal and basic medical information of the patient as well as the laboratory tests needed to be done. Details on this form are important as they can influence the outcome of the laboratory test results.

2.2.2 Medical History Report

A patient's medical history may include details about past disease, illnesses running on the family, previous diagnosis, medical abstract, therapies, allergies, and medication.

Yes, this is not the whole picture but with the help of a detailed medical history, doctors can see health patterns of patients over time at a glance.

2.2.3 prescription form

Prescription Request Form is a document or tool that is used by the patient to request a new or repeat prescription for medicines. It is important that this document be accurate because the wrong medicine can cause serious problems for the patient .

2.2.4 Patient's Data

Patient Data is Information about an individual patient, which may be relevant to decisions about current or future health or illness. Patients data should be collected using methods that minimize systematic and random error.

2.2.5 physical Examination forms

A physical examination is a tool that helps in the process by which a medical practitioner examines the body of a patient for any possible signs or symptoms of a medical condition.

2.2.6 Consent forms

The consent form is a document that provides research subjects sufficient written information to decide whether to participate in a research study or not based on an explanation of a proposed research and nature of the participation that is requested of them, it should be descriptive and not overly technical.

2.2.7 physicians's Orders

The physician may write the order in person, or a nurse may enter it in the chart at the physician's direction. Formal orders are valuable for clarifying the delegation of authority in the setting though they are less commonly used in private offices. Standing orders, which include protocols.

2.2.8 Informed Consent forms

An informed consent form is used to protect doctors and other professionals from being held liable in the event something goes wrong. Each facility or entity may design its own forms, though there are certain elements that should be included in the forms to ensure its effectiveness should be referred to later.

2.2.9 Nurse's Notes

A nursing note is a medical or health record that is made by a nurse that shows accurate documentation of nursing assessment, changes in patient's conditions, care provided, and related information to support the clinical team to deliver excellent care.

2.2.10 Test results reports

Test results is a document issued to the patient after the test has taken place and they contain the result of what the test was conducted on. They include blood tests, medical examinations, specialized testing among others.

2.2.11 Other Information

Many other items are kept in the medical records. Digital images of patients, flowsheets from operations, forms, outputs from medical devices protocols, and numerous other important pieces of information from part of medical records among other.

2.3 Methods used in the management of medical records

Hospitals typically deal with the life and health of their patients. Good medical care relies on well-trained health workers such as doctors and nurses and also on a high- quality facilities and equipment. Good medical care also relies on a good record keeping (Bali *et al.*, 2011). Without error-free, comprehensive, up- to date and convenient patient records, medical personnel may not offer the best treatment or may in fact misdiagnose a health condition, which can have serious consequences. Associated medical records, such as X-rays, Specimens, drug records and patient registers, must also be well cared for the patient is to be protected.

Birak & Chang (2018) also argue that good records management Also ensures that hospital's administration runs smoothly: unneeded records are transferred or destroyed regularly, keeping storage areas clear and accessible; and key records can be found quickly, Saving time and resources. Records also provide evidence of the hospital's accountability for it's actions and they form abkey source of data for medical research, statistical reports and health information systems.

According to Amim *et al.*,(2020), a good medical record serves the interest of the medical practitioner as well as his patients. It is very vital for the treating doctor to properly document the management of the patient under his care, medical record keeping has evolved into a science. Kanakulya *et al.*,(2018) also suggests that the key to dispensability of most medical negligence claims rests with the quality of the medical records and the record mantainance is the only way for the doctor to prove that the treatment was carried out properly. Medical records are often the only source of the truth.

2.3.1 Digital official records

According to Cox (2014), records managers to be successful in the electronic information age must learn both hoe to implement the New technologies in their workplace and how to indentify

opportunities for implementation. Many agencies are currently digitizing official records by scanning or imaging technologies. Typically the records created and captured by imaging are managed using database or an electronic document Records Management System (EDRMS) it does not currently relate to other forms of conversations or migration of official records born electronically, it is aimed at minimizing the risks to government (both state and local) in terms of longer term temporary or permanent value being lost or destroyed without limiting the application of digitization technologies for efficient office administration or other purpose.

2.3.2 Record keeping metadata

According to Tough and Moses (2006), one of the key areas to be designed when implementing a records system is the definition of metadata to be used across all aspects of the management of the records. Metadata can be defined simply as data structured information. Database managers, librarians, archivists, records managers, webmasters and others in the information management business have collected and used metadata for consistency and a standard approach to metadata is much greater.

Kameno (2009) defines records keeping metadata as data describing context, content and structure of records and their management through time. Also metadata is defined as structured information of records and their management through time. Also metadata is defined as a structured information that describes, explains, locates or otherwise makes it easier to retrieve, use or manage records. It is often called data about data or information about information. Metadata is a key in ensuring that records will survive and continue to be accessible in the future. It facilitates interoperability and legacy resources to organize records integration, provides digital identification and supports archiving and also preservation.

2.3.3 Centralized System

A centralized records according to Catherine Hare, J.M. (2003) A centralized System is one in which the records for several people or units are located under one central control.

According to Bates (2012), a centralized System is one in which the records for several people or units are located in one central location and generally under the control of the records staff person or in the case of large centralized filing systems and several people.

Advantages include;

- Responsibility is easily placed,
- Effective use of equipment, supplies and space, all related data kept together, reduces duplication,
- Uniform service provided to all users,
- Improved security among others.

Disadvantages are;

- The records may be too distant from staff for adequate services, can result in increased personal filing system
- Require full time staffing.
- May also require investment in more efficient records equipment and /or automation.

2.3.4 Decentralized system

A decentralized records system is one in which the records are located throughout the office, generally at individual work stations; and usually controlled by the person who creates and or receives them.

Advantages are:

- the records located near staff creating and using them easily,
- does not require extra space needed for centralized files, does not require full-time staffing and staff feels more comfortable knowing they are in full control of their own filing and retrieving.

Disadvantages include;

- Confusion as to where information can be found, especially if a staff member is absent, this can result into fragmented documentation information related to some topic or subject field multiple places,
- Individual staff members may not know how to properly maintain their files and lack of uniformity or consistency (Bates, 2012).

2.3.5 Information Systems

An information system is composed of sub systems designed to address the needs of each functional unit. It includes both management Information Systems (MIS) and Decision Support Systems (DSS), and is used when referring to both types of systems (Wojtkwski, 2006).

An information system is a set of interrelated components that collect, store, process and distribute information to support decision making, coordination and control in the organization

Generally, information systems are automated or manual, it comprises people, machines, and methods organizes to collect, process, transmit and disseminate data that presents used information.

2.3.6 Database Systems

These are systems designed to manage large bodies of information (Beri,2019). It is fair to say that databases play a critical role in almost all areas where computers are used that is to say, business, electro commerce and madicine among others (Qureshi, 2019).

Today more than an previous time, the success of an organization depends on it's ability to aquire accurate and timely data about it's operations, to manage it's data effectively and to use it to analyze and guide it's activities.

Inability to manage this vast amount of data, quickly find information relevant to a given situation as the amount of information increases tends to become a distraction and a liability other than the need for a database system.(Beri, 2019).

2.4 Current record tracking Systems

According to Houston and Horvit(2021), Determining which records tracking system is most suitable is a decision which needs to be based on the requirements of the operational area(s) concerned. Where the number of file movements is less than 400 per week, manual systems such as location cards,index cards, docket books, diary cards and transfer slips would suffice. When file movements are over 400 per week, serious consideration of a bar coding system should be given.

The use of computer databases for tracking Systems will usually be dictated by similar applications elsewhere in organizations, as well as their use for combined record tracking system.

Records tracking is the process of locating and removing a record or file from the stored record and thus there three retrieval systems that are being ueds. Read and Ginn(2015) further argues the tracking process is aimed at searching band finding records, it can be manually, or electronically done. However good and effective records tracking depends on a number of factors some of which include records inspection, records coding, bar coding, underlining , records cross referencing and records sorting. Therefore the organization should specifybthe retrieval roles of the data stored for example the accessibility clearly so that they are secured from unauthorized access (Cox, 2014), Records tracking practices include the following:

2.4.1 Indexing Files

An index is a listing of the files arranged alphabetically or numerically that is used to determine where files are located. If you have an indirect access filing system, you must have an index in order to find the file (Read and Ginn,2015). The most common type you of index is called a relative index. It alphabetically lists the various combinations of how records might be requested and if one is looking for property deeds, for instance, one might look under "Deeds, property". If one is looking for the Department of Highways Maps, one might search for "Maps, Department of Highways." Both the headings (Deeds, Maps) and subheadings (property, Department of Highways) will be arranged in alphabetical order. This type of index is used in most published material such as books or periodicals. Any reference book or textbook can be used to see an example of this.

Whenever multiple terms can be applied to the same records, a cross-reference is created to the indexed topic. The cross-reference acts as a pointer to redirect the user to another location where the file can be found. For example, patient records can be cross-referenced by patients number, name and social security number. However cumbersome it may sem to do this at the outset, those three parameters each time a file is create,the process becomes routine and very quickly.

If a computer database is available, or the software to create a spreadsheet can be bought (many can be bought off set the shelf from office supply stores), that's ideal. Through keyboards or

descriptor, documents and their locations can be accessed in a Matter of seconds. For those who are able to do this and must budget for it in the future, the time to set up the index manually is not wasted. Any system that is created electronically must have first created an index manually.

According to IRMT(2018), systems for monitoring the physical movement of the record files include: index cards, diary cards, docket books, transfer or transit slips, bar-coding, computer databases (electronic document management system) and regular record audits or censuses(preferably once a year). The system that is adopted should maintain control on the dispatch of records, the movement of records between person's or operational areas, and return of records to their home location for storage. The simple marking of file jackets to indicate to whom the file is being sent too.

2.4.3 Coding Documents

When documents are released to be filed, they should be indexed and coded according to the classification systems established (Mokhta and Zawiyah, 2017). Coding is the process of making the filing segment (name, subject or number) used for filing a document. Colors and bar codes also can be used as codes. File codes must be accompanied by an index that details the meaning of each code.

During the coding process, keywords in the document are marked by underlined or circling names or subjects. A subject title, name or numeric code also may be written at the top of the document to indicate where it should be filed.

For example, a piece of correspondence relating to the employees worker's compensation claim may be filed under employee payroll records, risk management records or insurance records, depending on the classification system. If the records can be requested by more than one term, a cross-reference should be created to direct the requester to another location. The person coding the text may place a mark by a name or subject to indicate a cross-reference. A cross-reference card or folder is placed in a separate location; also, the source document can be photocopied and placed in a separate location, although that can lead to excessive duplicates.

2.5 The challenges associated with records tracking system

The following below are the most common challenges or problems associated with tracking records in many organizations:

2.5.1 Security

With the increased information sharing that an electronic records management system makes possible comes the issue of security. Unless adequate measures are put into place, it becomes possible for conditional company information to end up in the wrong hands. Moreover, management of records could become a problem with the system is clogged with unnecessary records (such a document copies). It is uncommon to find situations where a substantial amount of records held are actually junk mail.

2.5.2 Equipment Costs and potential for obsolescence

When an organization goes paperless, there are huge volumes of data held on paper that have to be scanned and stored in a digital format. The hardware and software needed for this exercise cost a substantial amount of money. Initial cost aside, a significant disadvantage with electronic systems is that both hardware and software become obsolete in a relatively short time. Hardware could require changing in as little as 18 months while software changes every after some time.

2.5.3 Data Retrieval Sharing

A leading reason why many organizations have gone paperless is the ease with which an electronic system allows for information retrieval and Sharing. When data is held on paper and stored in a registry, retrieving it presents a challenge. Moreover, the information can only be used by individual at a time. While electronic systems solve this problem, they too come with other challenges.

2.5.4 Electronic Systems and people Issue

Implementation of an electronic records management system calls for a change in the employee's attitudes. Any radical change in an organization is viewed with skepticism by many employees who are not sure how such changes will affect them. When older ways of organizing files are

replaced by new ones, the employees feel a loss of control and this needs to be addressed by assurances from the employer and backed by the success of the system implemented.

2.6 Research Gap

Records tracing is a complex task and it is always tailored by an organization. So as to peak it's requirements, the above literature has dealt extensively on the records tracking and how it should be improved. There is a justifiable research gap as regards to records tracking at Masindi General hospital. The research will assist to design a records tracking system for the records at MGH, as well as document findings that are intended to supplement on the existing literature and increase on the available and accessibility of information about the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Katebirr(2007) defines methodology as the technical and scientific activitie, tools and procedures used to plan, gather and analyze data. This section presented the methods the researchers used in the study. This involves the Area of the study, Research Design, study population, sampling techniques, sample size, data collection methods, research instruments, Data analysis and presentation, Data Ethical Considerations, limitations of the study and time frame and conclusions.

3.1 Area of study.

The research was carried out at Masindi General hospital. It is a public hospital funded by the government of Uganda, Ministry of health. The hospital is located in central division, masindi municipality in masindi District P.O BOX 29, Masindi District is located in one of the 122 districts in Uganda borders by Kiryandongo in the north, Kiboga in the south, hoima in the Southwest, Kyankwanzi in the Southeast and Buliisa in the west.

3.1 Research design.

A research design also called a research strategy is a plan to answer a set of questions (McCombes 2020). It is a framework that indicates the methods and procedures to collec, analyze and interpret data. In Other words, the research design presented how the researcher will investigate the central problem of the research, and thus it was part of the research proposal. Research designs are plans and procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis (Creswell,2013).

The research was based on a case study research design carried out at Masindi General hospital. Creswell, (2013) defines a case study as a qualitative strategy in which the researcher explores in depth a program, event, activity, process, or one more individuals. The reseachers therefore, used cases that are bounded by time and activity, the reseachers collected detailed information using a variety of data collection procedures over a sustained period.

The researchers used a mixed approach of qualitative and quantitative research. Thus, it is more than simply collecting and analysing both kinds of data, it also involves the use of both approaches in the tandem so the overall strength of the study is greater than either qualitative or quantitative research (Creswell, 2007).

3.2 Study Population

Shukla (2020) defines population as the set or group of all the units on which the finding of the research are to be applied. The study mainly concentrated on the medical records, staff of Masindi General hospital. This includes medical records officer, administrators, data officers. This is because they are the ones who are responsible for the management of records from the time of their creation to their ultimate disposal.

3.3 Sampling

Sampling as defined by Shukla(2017) is a technique (procedure or device) employed by a researcher to systematically select a relatively smaller number of representative items or individuals (a subset) from a pre-defined population (sample frame) to serve as subjects (data source) for observation or experimentation as per objectives of the study.

The main primary goal of sampling is to create a representative, one in which the smaller group (sample) accurately represents the characteristics of the big group (population). Sampling is closely related to the generalisation of the findings.

3.3.1 Sampling Technique.

Sample technique refers to the name or any other identification of the specific process by which the entities of the sample size as been selected. It is a method that allows researchers to infer information about a population based in results from the subset of the population without having to investigate every individual.

Valuable information is gained from people selected on the basis of position they hold in administrative levels of their institutions. Etikan &Bala (2017), states that when carrying out research, it is impractical yo survey every number of a particular population because the sheer

number of people is simply too large. The researchers will therefore employ the purposive sampling technique to collect data and information from the different subgroups of the organization categorized on departmental level. These departments will include the records department, hospital administration, health service department of Masindi General hospital.

3.3.2 Sample Size.

Sample Size refers to the number of participants or observations included in the study. The researchers intends to have a sample size of 15 whereby atleast each department has a representative. The sample size of the study was determined regarding the researchers interest and it constituted staff based on organization structure, especially the medical records department.

3.4 Data collection Methods.

Data collection is the process of gathering and measuring information on targeted variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes(Roux,2022). Data collection is a research component in all study fields, including physical and social sciences, humanities and business. While methods used vary by disciplines, the emphasis on ensuring accurate and honest collection remains the same. The goal of all data collection is to capture quality evidence that allows analysis to lead to the formulation of convincing and credible answers to questions that have been posed(Collon,2020). The study will use both primary and secondary data. Primary and secondary methods of data collection will be used in the collection of data from the different participants selected from the different respondents. Observation and interview were used in the study as in the context below.

3.4.1 Interview Guide.

Interview as a data collection method was used. An interview is a qualitative research method that relies on asking questions to collect data which is a face-to-face conversation between the researcher(s) and respondent(s) conducted to obtain information. Interviews involve two or more people, one of whom is the interviewer who is asking questions to get answers from respondents involved in the study.(George,2022).

3.5.2 Observation method.

Observation is a way of gathering data by watching the behavior, events, or noting the physical characteristics of participants in their natural setting. Observation can be overt, direct or indirect (CDC, 2018).

The researcher(s) used the observation method to physically see the types of medical records being generated and designing the best records tracking system in the records department, challenges encountered in tracking medical records.

Therefore, observation will be a good technique, especially for activities that could not be measured; for example, looking at how the staff at Masindi General Hospital manages their medical records

3.6 Data analysis and presentation

Data presentation and analysis ensures that all relevant and important information is analyzed and presented at the end of the study.

3.6.1 Data Analysis

Data analysis is defined as a process of cleaning, transforming, and modeling data to discover useful information for business decision-making . The purpose of Data Analysis is to extract useful information from data and take a decision based on the data analysis (Johnson,2022).

In this study, both qualitative and quantitative approaches of data analysis were used to analyze data and extract meaningful information which enabled the researcher (s) to make sense of it, correct mistakes, organize, provide and elicit meaning.

3.6.2 Data presentation.

Data was presented in figures and narratives for statistical analysis. In qualitative research, information obtained from participants is not expressed in numerical form.

Presenting data involved the use of a variety of different graphical technique to visually show the reader the relationship between different data sets, to emphasize the nature of a particular aspect of the data, or to geographically place data appropriately on a map(Searl,2017).

3.7 Data quality control

This refers to the efforts and procedures that the reseachers will put in place to ensure that the quality and accuracy of data collected using the methodologies that will be used in Paramount.

3.7.1 validity of the research instruments.

While testing the validity of the research instruments, the reseachers will formulate research questions according to the study objectives, questions and significance. The questionnaire will undergo a pilot study as the interview guide so that the study is effective. The research team will mainly be concerned with content validity with respect to whether or not the collected data would reflect what is at the recored department, Masindi General Hospital, this will achieved by checking and correcting mistakes in findings by the team with the help of the supervisor. I this case, the content will be made responsive, comprehensive, and consistent ith the variables and the sample of subjects measured.

3.7.2 Reliability of the research instruments.

The reseacher(s) will carry out a pilot Study of both the questionnaires and the interview guide to assess their effectiveness.the reliability of the research instrument concerns the extent to which the instrument yields the same results on repeated trials Neumam (2014) notes. based on this concept, the research team will use three datacollection tools that is to say, interview guide, an observation guide, and document analysis guide, all results will be analyzed to ensure the consistency of the data.

3.7 Ethical Considerations.

The reseachers will ensure that they attain an introductory letter from the East African School of Library and Information Sciences of CoCIS at Makerere University that will introduce them to the field of data collection and that is masindi General hospital. This will then be handed to the

authorities at Masindi General hospital seeking permission to collect data. The data that will be collected with at most confidentiality. Arrangements will be made with the respondents on the modules of collecting the required data. The researchers will ensure that every citation in this report has been acknowledged and referred to avoid plagiarism.

3.7.1 Limitations of the study.

The stipulated time for the study was very limited, so at least enough time should be allocated to us the researchers and come up with a well-standing project that can benefit both the study organization and the university as well as to change the students' career by earning income if these projects are adopted and implemented by the target observation.

Researcher's bias: these researchers took the lead in the participants' natural environment, this created bias in case of a negative response from the respondents. There was a financial challenge as the research team had various financial obligations to the institute.

Response bias: individual characteristics of participants influenced their responses to questions; therefore, the research team anticipated biased responses, over responsiveness, and acceptance.

Conclusion.

In conclusion, the chapter outlined the procedure for the performance of the study, discussed the steps and activities performed during the study, researchers identified and discussed the research design approach, population of the study, sample size and sampling technique, data collection methods, data collection instruments, data analysis technique, data quality control, and the ethical considerations of the study as presented above.

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter interprets, presents and discusses findings and secondary sources of data. These are presented in tables and other graphical representations following the sequence of the specific research topic which is designing a records tracking system at Masindi General hospital. They are discussed basing on the repondants opinions, views and judgment s based on the study objectives. In collecting and analysing data the reseacher used two different methods of data collection that is to say interviews, questionnaires, and observation. The study was based on both qualitative and quantitative approach.

4.1 Response Rate.

The study targeted 15 respondents and the researcher managed to obtain responses from 8 respondents making the response rate 100% as shown in table one below.

Table 1: Showing Age of Respondents at Masindi General Hospital

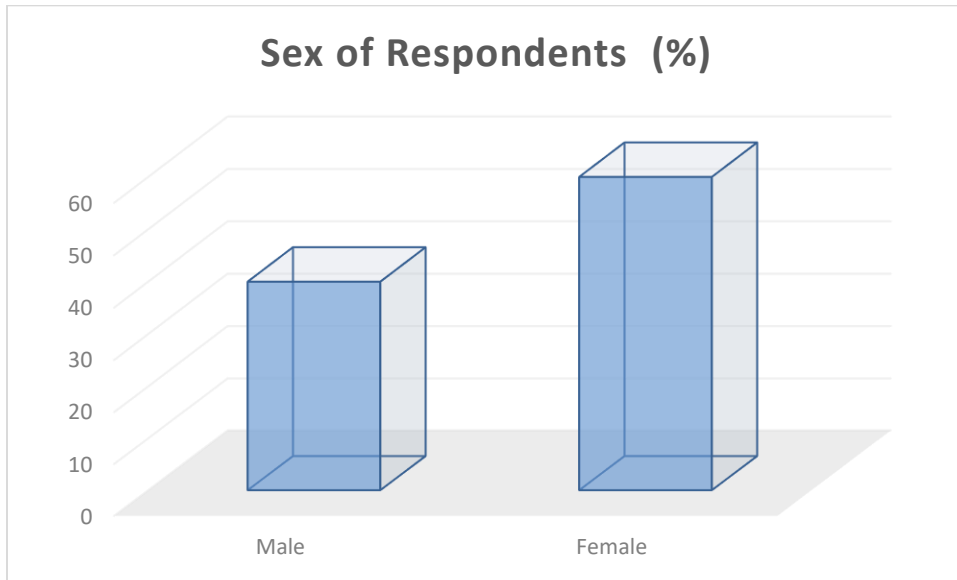
S/NO	Age group	Frequency	Percentage
1	26-30 years	3	20
2	31-35 years	5	34
3	36-40 years	3	20
4	41-45 years	2	13
5	46 years and above	2	13
	Total	15	100

4.1.2 Sex of Respondents at Masindi General Hospital.

Sex can be defined as either the male or female division of species; the study wants to know the ratio between males and female in the study area in relation to their contribution in organization performance. It was assumed that the sex of respondents being male or female could influence the performance in an organization. The analysis showed that six respondents (40%) were male and nine respondents (60%) were female as shown in figure below. This indicates that there is more Female staff to a larger extent compared to male ones. In additional, it also showed that Masindi General Hospital is not gender balanced.

Sex of Respondents at Masindi General Hospital

Figure 1: Showing Sex of Respondents at Masindi General Hospital



Source: Field data, (2022)

4.1.3 Professional Level of Respondents at Masindi General Hospital

Professional levels are different types of level within profession knowledge that employees should have a qualification in getting the job title. It was assumed that the higher the level of professional could influence the staff contribution on organization performance. The analysis showed those 33% of the respondents had a professional level of Bachelor degree, 14% had professional level of masters' degree and 20% had professional level of Diploma while 33 didn't have formal levels. This indicates Masindi Generl hospital staff had adequate professional level to influence organization performance as shown in figure below

Professional Level of Respondents at Masindi General Hospital

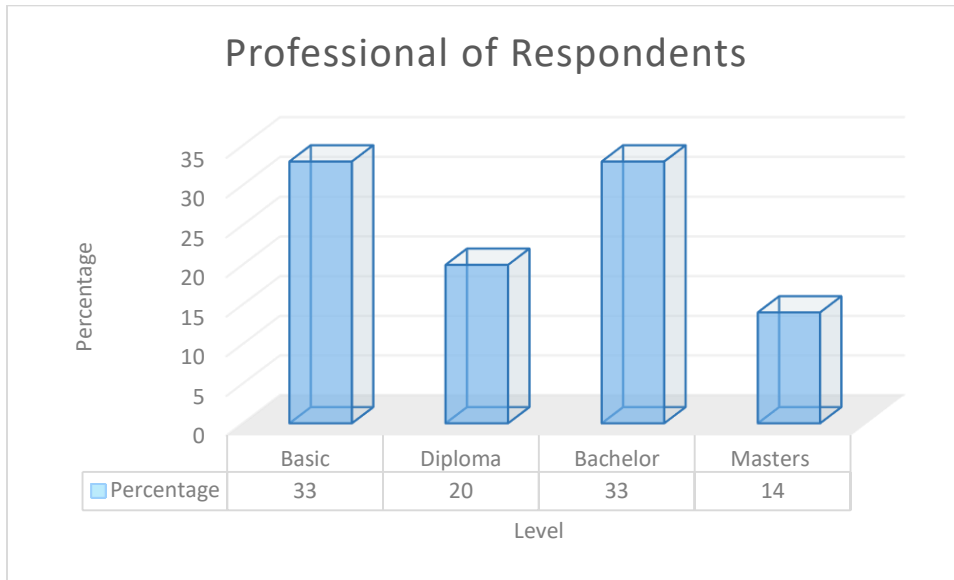


Figure 2: Showing Professional Level of Respondents at Masindi General Hospital

Source: Field data, (2022)

4.1.4 Work Experience of Respondents at Masindi General Hospital

Work experience is the period that the employee of a certain organizational has worked. This is according to years, months bases. Work experience was grouped into four major categories 1-3 years, 4-6 years, 7-10 years and 11 and above years. It was assumed that work experience had a direct relation to staff contribution to organization performance. The analysis showed that the five respondents (33%) they had work experience between 4-6 years, three respondents (20%) had work experience between 7-10 years and one respondents (07%) they had work experience above 11 years while six of the respondents (40%). This indicate that majority of staff had worked but not for so long.

Work Experience of Respondents at Masindi General Hospital

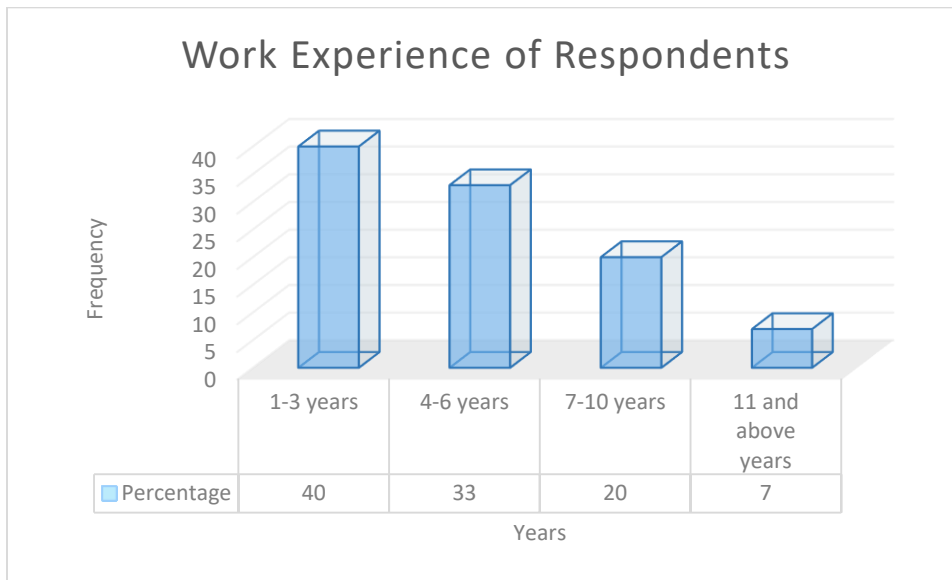


Figure 3: Work Experience of Respondents at Masindi General Hospital

Source: Field Data, (2022)

4.1.5 Work Position (Job title) of Respondents at Masindi General Hospital

Job title is a term that describes the position held by an employee within an organization. Job title depends according to education knowledge that the employee has. It was assumed that work position had a direct relation to the organization performance. The analysis showed that 14% respondents belong to IT officers, 20% were Administrators, 33% were data officers. While 33% were records officers. This implies that there more staff belong to records and data officers.

Working Position of Respondents at Masindi general hospital

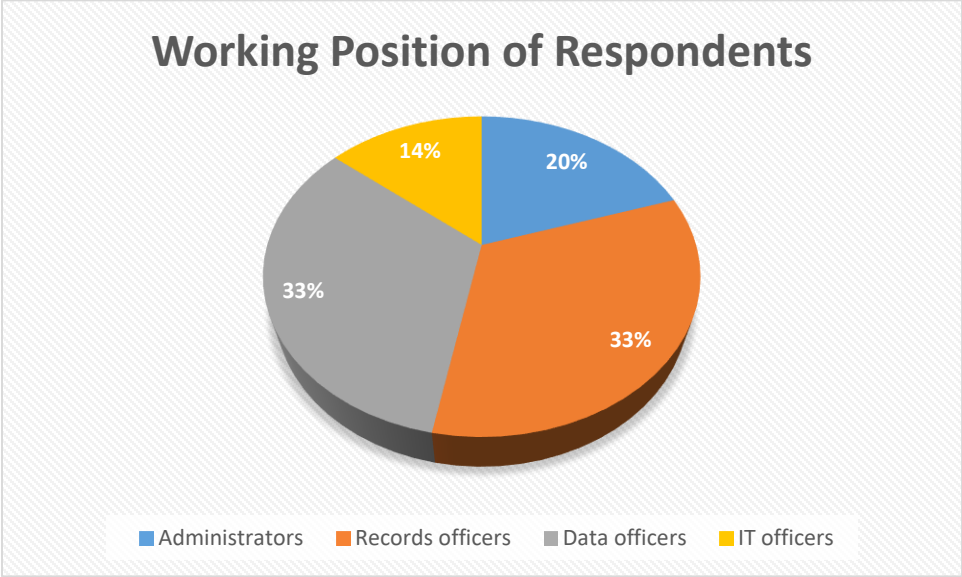


Figure 4: Showing Working Position of Respondents at Masindi general hospital

Figure 5: Showing Working Position of Respondents at Masindi general hospital

Source: Field data, (2022)

4.2 Types of records kept and managed at Masindi general hospital

Most of the data concerning types of records stored and managed at Masindi general hospital was collected through interview method. The research team asked respondents a question “What are the types of records kept and managed at masindi General hospital”?

Outpatient records: the reseach findings indicated that the hospital creates and keeps patients records which are records of patients' daily attendance. The Medical Records Officer responded that;

" Outpatient records are some of the most created records in the hospital, especially in the outpatient department and the report about a patient's attendance who were attended to, treated, and also review cases are collected every week by the medical records staff and this is done every Mondays".

Such records include registers, lab tests, and diagnosis, prescriptions, patients history, weekly, monthly and quarterly reports as discussed below.

Registers: this is where the patient's history, diagnosis, prescriptions are entered by one of the staff at recieving desk of OPD specifying the type of metadata the captured. The information captured includes the name of the facility, monthly, financial year, serial NIN, age, name, sex ,residence, next of kin and contact, diagnosis and treatment is given.

Here the medical records officer still stated that;

" Outpatient registers are used in collecting information on the utilization of health services at the hospital,for planning activities of the out-patient department, it shows that the drugs needs to be at the OPD, It esposes the disease pattern at the hospital and also aids follow ups of the patient attending for great for care at the hospital".

Reports: Research findings indicated that reports were part of the records kept in the medical records department of the hospital. These records collected by the medical records officer on a weekly, monthly, and quarterly basis specifying the number of patients attended to. These reports even from the small health centers like health center three are a collected and put together.

The MRI responded that;

" Medical report are medical records that contain systematic documentation of an individual patients important clinical data and medical history over time.

Discharge forms: The research findings through interviewing indicated that the discharge forms are records issued to patients who were admitted and recovered from sickness or disease and are ready to leave the hospital. Before discharging the patient's from the hospital, there is certain important information to be filled and recorded in the discharge register.

The Administrators who is also a Doctor responded that:

The discharge form is given to the patient who has recovered from illness and is being discharged off. The information captured is very important and includes the reason for hospitalization, all findings, procedures, and treatments provided to the patient depending on the condition, patients and family instructions, and the attending physician's signature.

Personal records: personal records include patients records, Administration records, legal records, Academic records, financial records, historical records.

Patients records like patients notes, medical results, x-rays, specimens, drug records and patient registers, medical research, statistical reports and health information, CVs, application, bio data forms, contacts, appointment letters, recruitment, national IDs appraisal forms,

Staff files. Staff files contain the medical records that belong to staff of health workers and non-health workers of Masindi General Hospital that has to also be registered with the hospital . This includes the medical examination, the diagnosis, and the lab test results among others

Patient Casenotes

Casenotes are created or written when a patient comes into contact with any member of the medical staff. Notes may also be created to record contact with nurses, physiotherapists and others involved in patient care. Casenotes include patient histories, diagnostic test results and temperature, blood pressure and other charts, as well as records of operations and other forms of treatment. At Masindi

General Hospital, the notes about each patient are kept together in one file bearing the patient's name and other personal details.

X-rays

These are large-size photographic records produced for diagnostic purposes in response to a request from a clinician. They form part of a patient's case history, but because of their size they cannot be kept in the files containing the casenotes. X-rays are usually filed separately, according to a unique identifying number that is linked with the patient's name. Requests for X-rays can be made on a printed form and it is usual for the same form to be used subsequently for a written report based on examination of the X-ray. This form or a copy of it is placed in the casenote file.

Pathological Specimens and Preparations

Specimens taken from patients (such as plasma, serum, bodily fluids, swabs, wet tissue or whole blood samples) and the preparations made from them for pathological examination and diagnosis are also part of a patient's case history. However, as with X-rays, the format of specimens and preparations makes it impossible for them to be housed with the casenotes. Specimens and preparations are usually kept in labelled boxes or on shelves. Again, it is usual for a combined request and report form to be used and for this form, or a copy of it, to be placed in the patient's file.

Patient Indexes and Registers

At Masindi general Hospital, Indexes are maintained, either in traditional card index form containing the names and other appropriate details about the hospital's patients. This index serves as a finding aid for the patient casenotes and it also provides location information for X-rays and other diagnostic documentation. In addition to providing access to the casenotes and related documents.

Besides the indexes, various chronological registers of patients are maintained at the hospital and these are maintained in individual departments. Specialist department maintain a day book or register in which is recorded information about each patient seen or request received. Chronological registers are also be used by the hospital to record admissions, discharges, births and deaths of patients.

Drug Records

The prescription and supply of drugs generates a variety of records, including pharmacy stock, ordering and dispensing records, requests for drugs from wards and departments, drug administration records and prescriptions for individual patients. The receipt and issue of all drugs are recorded. Records about drugs are held by the ward, and cross-referencing and uniform management are done to ensure that documentation are retrieved easily.

4.3 The records management methods used in at Masindi General Hospital.

The medical Records department uses an entirely manual records management system. Records are categorized under two classes namely; staff and private clients, the Records are shelves according to the year of creation for the staff and patients respectively. An Out Department (OPD) register and file transfer book is used when borrowing files. It is used for registering checked out and returned records.

While Tracking the records, the person or individual who has a particular record is tasked to know it's whereabouts. That is to say, a form is created to fill the necessary details. A unique identifier that is a patient number is the key entry in form and keeps track of the record or document even when it is transferred from one department to another as long as the hand out is well recorded in the file transfer book. The file transfer book contains the date of the records files check out, the shelf name from which it has been checked out, the name of the staff that has checked the file out, the department in which it is currently used and signature of the particular action officer.

The records department also uses codes for different categories of records for easy identification. These codes are written on the files where the records are primarily stored. The files are then we'll ordered according to year is indicated on each shelf. The study therefore found that MGH uses a manual medical records retrieval/tracking system where records are collected and kept in files are indexed for easy access and retrieval, record files are then arranged in shelves in a chronological order on a yearly basis.

One of the interviewees who is the MDO describes how the medical records in and out of their custody are tracked,

" Here, we use file transfer books and an Outpatient register, where a patient must present their clear identification in order for their files to be retrieved. After retrieving the file, the details contained on the file which is the file number, names, date of request and department where the file is going are all recorded down in the file transfer book for easy tracking. Then with approval from the Records Officer, the file is then dispatched to the office of the requester. When files are returned, they are then recorded in the Outpatient Register which helps to improve that the file was returned after being used and I make sure I write in the register to confirm it had been returned."

(Interviewees 1 female).

These findings indicated that even though a records tracking system is in place and operations are simplified as possible, there are still concerns that the Doctors and clinicians misplace the files and sometimes the files take along to be returned. By the time they are returned, it is quite hectic to check through the register to confirm receipt considering the system is not computerized at all. This does not make the system as effective as possible, all of which remains a daunting challenge to access and retrieval of records.

The sample of the location card used at Masindi General Hospital

FILE LOCATION CARD		FILE NUMBER:	
TITLE:			
BORROWED BY:	DATE	BORROWED BY:	DATE

Figure 6: Showing the The sample of the location card used at Masindi General Hospital

The sample of the file transfer slip used at Masindi General Hospital

File Transfer Slip

To: Registry, 1st Floor Selborne House

Please complete this form when you pass a file to someone else so that Registry can update its computer database

Please remember that file booked out to you are your responsibility and you must be able to produce them on request.

File No (include Section or part no where appropriate)	Passed to (individuals name)

From: (Block Capitals) _____

Date: _____ Telephone No: _____

Figure 7: Showing the sample of the file transfer slip used at Masindi General Hospital

A record audit/ consensus form

<u>PERIODIC CHECK</u>	DSR 59
MOVEMENT OF FILES AND PAPERS	
To: Department:	
File/Folio No: of (year)	
Title/Subject:	
was sent to you on:	
Please:	
<ul style="list-style-type: none">• return it to the Registry with this memorandum; or• confirm that you still hold and wish to retain it; or• if not with you, say when and to whom you passed it.	
Date:	Signed:
 Registry
	Building/Room No:

Figure 8: Showing the sample of record audit/ consensus form

4.4 Challenges encountered in tracking medical records at Masindi General Hospital.

The respondents were asked what are the challenges encountered in tracking medical records at Masindi General Hospital. There were several views from the different respondents but this is summarized as below;

Some of the challenges encountered by the records staff working at MGH included time consuming retrievals, sorting and organizing records in cumbersome, inadequate records storage space in the shelves are too small and incapacitated to hold the growing volumes of records, misfiling, loss of records attributed to staff who borrow files and never return them.

Manual tracking systems put pressure on people to be correct in all details of their work at all times, the problem being that people aren't perfect, however much each of us wishes we were. With manual tracking systems the level of service is dependent on individuals and this puts a requirement on management to run training continuously for staff to keep them motivated and to ensure they are following the correct procedures. It can be all too easy to accidentally switch details and end up with inconsistency in data entry or in hand written orders. This has the effect of not only causing problems with the patients but also making information unable be used for reporting or finding trends with data discovery. Reporting and checking that data is robust can be timely and expensive. This is often an area where significant money can be saved by automation.

Staff also complained that is it quite hectic to record each and every file or patient number in the OPD register and this has caused issues in compliance and adherence to the method. Most health workers are not accustomed to it and in the absence of the records staff in charge, records are borrowed within a record of the transaction on the register.

Even when a physical records tracking method is in place, most staff do not confirm to the standard set by the records department, Observation findings indicate that some record files lacked all the key details to support the records staff in locating and categorizing them.

It takes more effort and physical space to keep track of paper documents, to find information and to keep details secure. When mistakes are made or changes or corrections are needed, often a manual documentation must be completely redone rather than just updated. With manual or partially automated systems information often has to be written down and copied or entered more than once. Systemization can reduce the amount of duplication of data entry.

Another challenge or limitation is limited resources for proper storage and location of records files is evident from the old covers and naked paper documents that do not have their primary storage shelter. Inadequate man-power at the Records department. Then also the respondents complained about the low number of staff in the department, which cripples the records staff to execute their duties swiftly and timely.

It is also evident that the amount of work at hand is great load that the available staff cannot manage effectively.

The researcher(s) gathered that there was a need for an automated records management and Electronic Records Tracking System. A new automated system that is able to capture read and update data. The new change in technology would have a bigger impact positively and close the gap on the incapacibilities of the department.

A question that says, " what do you think about a computerized database to help track the medical files?" This was posted to one of the respondents, and this was his response quotes verbatim;

" Of course a computerized system is very okey although we don't know if the department can afford one, but I think it should be able to handle most of the work. if it is in place, it means we have to use the OPD register and the file transfer books, checking for an entry in the register is

so hectic, sometimes some of us get lazy and bored to check and confirm that we have received once a file is returned, you can see from these empty columns. This is where signatures of confirmation should be but people don't sign files back in ",

(Interviewee 4, male)

In light of the above responses, the researchers gather that the hospital medical records department realize the eventual need of a computerized records tracking tool considering the number of issues highlighted above and also the staff together with the head of department recognize the positive impact a computerized records tracking system would have as far as carrying out the department duties is concerned.

4.5 Recommended tracking system for medical records at MGH.

In order to find out what an idea of how the records tracking system should look like, respondents were asked difference questions related to the system.

The interviewees recommend a computerized tracking system for the medical records in MGH's registry custody. The system should support cloud computing or storage although it was evident that management and staff were hesitant to take this up due to the costs that could be involved as it can be expensive to set up. It is evident that the current tracking method is cumbersome and the staff feel that a computerized system would be a better choice than the current one. However, the system must have some requirements which have to be met in order to be used by the target users.

For example, the respondents were asked about their knowledge of the new filing system. The responses were recorded in categories that is to say, "to a smaller extent", "*to a very small extent*", "Don't know" and "well versed". The responses were recorded and presented as below;

Response	Frequency	Percentage
To a very small extent	4	27
To a smaller extent	7	47
Well versed	1	6
Don't know	3	20
Total	15	100

Table 2: Respondents knowledge about the electronic records tracking system

Source: field data 2022

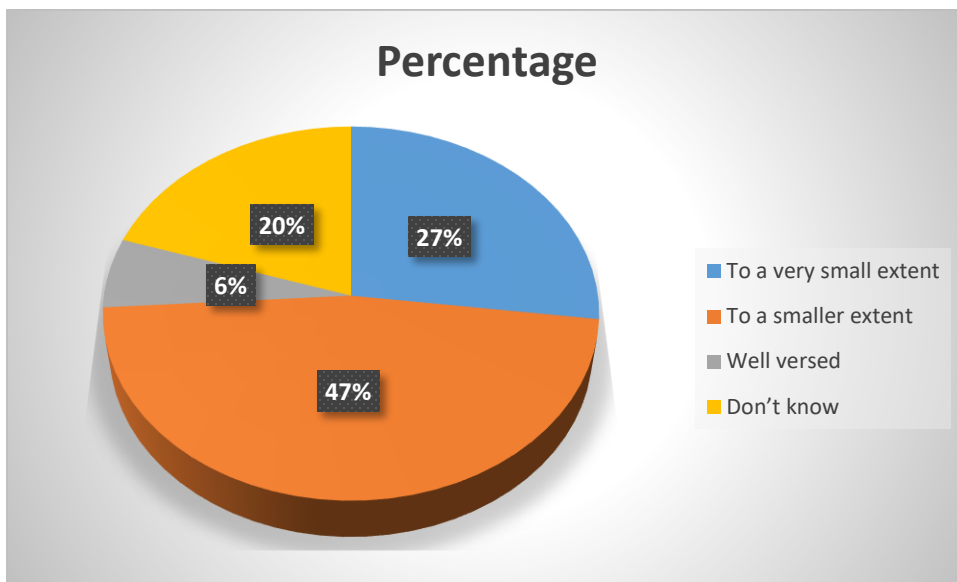


Figure 9: Respondents knowledge about the electronic records tracking system

From the figure above, 20% of the respondent have no idea what the electronic records tracking system is. 27% of the respondent know about it but to a very small extent. This meant that they have only heard about it but there's nothing more they know about it and 47% of the respondents

know what the electronic system is to a small extent. This it can be evident out of the 15 respondents, 6% of the 15 said they understand electronic tracking and they are well versed with it. This means these are the only people who really understands the system and they require little or no training once the system has been implemented. These people can also be relied upon to train the other staff.

4.5.1 Requirements for an Electronic records tracking system

- A tool which is easy to learn
- A tool that is fast and flexible
- A tool that is effective and efficient
- A tool which shows the real content of the records
- A tool that has security restrictions like encryption, password or codes.
- A tool that can correct errors
- A tool which is able to track records or information required.
- A tool that can be navigated well and can be in two view modes i.e; the administrator and user view.

4.5.2 Functional requirements.

Functional requirements can be defined as to what the system is supposed to perform for the users. They can include the inputs and outputs.

Therefore, the system is supposed to;

- Capture all key details about the record.
- Track the records file required.

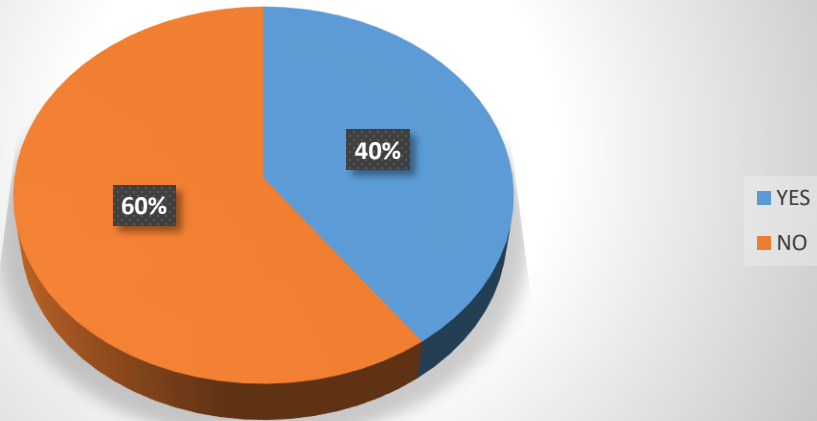
- Maintain all the details of the user logging into the system.
- Store the records with all the contents.
- It should enable the administrator to register more users if need arises.

4.5.3 Non-functional Requirements.

- It should be able to maintain accurate records once captured.
- It should be able to communicate with other systems.
- It should be able to maintain a safe and secure environment for the captured records.
- It should have a faster response time when dealing with requests.

Figure 10: Showing the percentage of respondents view on implementing the new system

%age of respondents view on implementing the new system (%)



From the above figure, only 40% of the respondents accepted that the electronic records tracking system can be designed and implemented at Masindi General Hospital. While 60% of the respondents which represent the majority said no to the implementation. This is basically because of the above challenges such as lack of knowledge about the system, lack of equipment among others.

CHAPTER FIVE:

DEVELOPING AND IMPLEMENTATION OF A RECORDS TRACKING SYSTEM FOR MASINDI GENERAL HOSPITAL

5.0 Introduction

This chapter describes what was involved in coming up with the system, the requirements for the system, the functionalities available and how the system works.

5.1 Summary

In this section, we study about the tool features, aims and benefits of the tracking system while also looking at the different system components and features in other sections of the chapter.

5.2 Description of the current system

As present in the subsequent chapter, there is no proper records tracking system at Masindi General Hospital other than the manual system. The manual system involves use of file transfer slip, the file movement slip and the tracer card to track files. This system also needs the records manager to send a reminder to an action officer in case the specified system for use of records has elapsed and the record has not been returned. This means the system is much reliant on the efficiency of the records officer. In other words, should a records officer forget to send a reminder, the record mainly holds for long or even be lost because it can be borrowed from the way before it is returned. The system as well as does not have any permission restriction for some who wants to make a copy of restricted records. This implies that the current records tracking system used at Masindi General Hospital is very fragile and exposes records to a lot of risks such as misfiling, theft, loss of confidentiality among others.

5.1.1 Weakness of the current system

Repetitive tasks: The manual tracking contains a lot of tasks that are repeated for each records movement. That is to say one has to fill in the file movement slip and the tracer card every time the file is removed from the records office.

Time Consuming: All the previously mentioned repetitive tasks will be time consuming for the records department.

Process Delay: Records requisition is not responded to on item. This is because of the processes involved like the forms filled.

Costly process: The time spent on the manual tracking processes can increase the number of required resources in the records department, delayed process can affect different departments' business processes that are awaiting for the records to make decisions.

Reporting Difficulties: In manual tracking all reports will also be created manually, when it is a huge challenge to do the data entry for all performed processes, and to handle it in all the different ways to produce the required outcome.

Miscommunication: Who contacted who, and who is responsible for what, which employee is the contact with which record, these things can make a huge burden in the hospital's tracking process disagreements and loss of information.

Error Handling: Normally day to day work can yield some errors made by any party involved in the process. These errors are not easily handled in the manual tracking, mostly the process should start all over, or in best cases it will start from where the actual mistakes was done which could be anywhere.

5.1.2 Strength of the new system

The proposed tracking system will help solve a number of challenges currently faced by the Hospital's records department. When in full effect, the Records tracking system will improve not only records tracking but records management as a whole as seen below;

Saving operational time used for replacement of records and searching through the paper files

Minimize risks of misfiling and loss of files

Organizing information for retrieval when needed.

Protecting records that are essential to mission-critical business operations.

Ensuring compliance with legal and regulatory record-keeping requirements, thereby avoiding costly fines or other penalties.

Reducing risks in litigations,

Reducing labor requirements for creating, organizing, retrieving, and dissemination of recorded information.

Minimizing storage requirements (space, equipment, and supplies) for a given quantity of records.

Reducing the time and effort require to reconstruct vital information in the event of disaster, theft, and other losses.

5.2 System Requirements

The requirements for the system are based on the findings from literature reviews, as well as from interview sessions with users. After careful analysis of the findings, the following system requirements were derived.

5.2.1 General Requirements

The general requirements refer to the generic features of the system. These features shall span across the system regardless of functionality and modularity. The derived general requirements were as follows:

The application must be an offline based system. This is to allow users to have greater access to the application.

The system must operate on an open source platform to allow easier future upgrades and enhancements.

Application navigation should be easy to use and self-explanatory

5.2.2 User Management Requirements

There should be two main groups of users; administrator and Records users. Each user shall have different access level or privilege to the application. The following describes each user's role:

The administrator has access to manage the system users and assign roles.

The users have access to view records.

5.2.3 Functional Requirements

Functional requirements are important as they are used to determine what the system should be able to do, and the functions it should perform to produce a particular output or outputs that are desired by the system users. The system includes modules to:

- Login to the system using user name and password
- Add administrative staff
- Add records
- Delete records forms from the database system
- Update records
- Track records
- Run reports
- Log out of the system

5.2.4 Non-Functional Requirements

Non-functional requirements are factors used to judge how the system operates. Unlike functional requirements, which describe the specific functions that the system has to deliver, non-functional requirements illustrate the quality of the system.

Accessibility - The system should be accessible to any of the authorized users anywhere without requiring excessive effort. This also includes platform compatibility with all the platforms. The system is designed to be an offline system that has to be accessed through the server computer where the system has been installed. To login to the system, the user should supply a valid username with the corresponding password. After the authentication of the user's access rights have been made, the user is signed on.

Availability - The system should be readily available at any time of the day.

Maintainability – The system should be easily maintained and does not demand too much effort to enhance or extend.

Security - All passwords are encrypted while usernames are unique to ensure that each system user is distinct from the other. This also certifies that only authorized users can use the functionalities of the system, based on the level of privilege and access rights granted. Besides

these, only the system administrator is allowed to make any changes to the internal features and structure of the system. It is crucial that the system is secure from malicious attacks.

Usability - The system should require little effort to learn and use. Thus, it is important that the layout of the system components and workflow of the system be consistent to accelerate the familiarization and usability process.

5.2.5 Hardware Requirement

For effective operation of the newly designed system, the following minimum hardware specifications are recommended:

- The computer system to use should be 100% IBM compatible since they are considered done systems.
- The computer system processor to be used be Intel Pentium technology.
- The minimum Random Access Memory (RAM) should be 128MB.
- The system should have a hard disk of at least 20GB, 3.5 floppy drive and CD-ROM drive.
- The system to use should be equipped with 14" VGA or SVGA monitor (colored).
- The mouse, keyboard and printer are also required.

5.2.6 Software Requirements

The following specification are needed

- Operating System-Certified distribution of Windows.
- Front end-Visual Basic 6.0 Professional Edition.
- Back end-Microsoft Access 2007

5.3 Description of the new system

The system incorporates all the activities associated with records management with major attention given to audit trail management in order to enable tracking of records. The system shall allow for restricted access whereby only users with a combination of user names and passwords shall be able to login. Further, the system shall allow for electronic filing of records, it will allow addition of records, modification and deletion. It will also allow for the addition of new users.

5.4 Design Standard

The major fact taken into consideration in the design of the new system is the audit trail management to enable tracking of records movement and modifications within the system. In the design, records Meta data shall be captured in a table of its own, the user information shall also be captured.

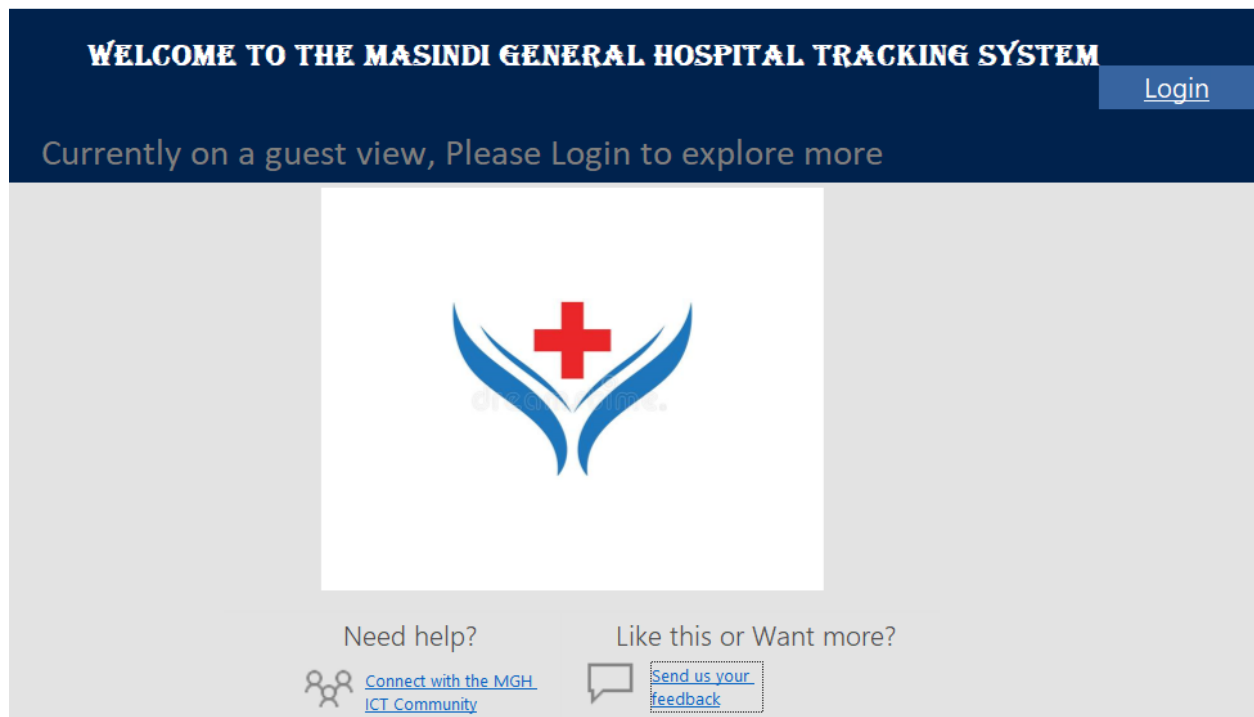
5.4.1 Input Specification

Inputs are raw materials that are fed into the computer for processing. The systems accept input through the mouse and the keyboard. The registering of the data of records is done via the mouse and keyboard. The mouse plays an important role in closing windows, validating password. The keyboard is used to enter text and values into the boxes.

5.4.2 Output Specification

An output is the information or result obtained from processing data which has been fed into the computer e.g. screen, printer etc. The user shall be able to view the records with the help of a monitor or in a hard copy form after printing.

5.4.3 The Welcome form of the new system



We treat and God Heals

Figure 11: Showing the Welcome form of the new system

5.4.4 The login Form of the new system

The figure below illustrates the log-in page. Here the system requires only users who have got login account, and once the correct login details are entered, the system will provide access to the user.

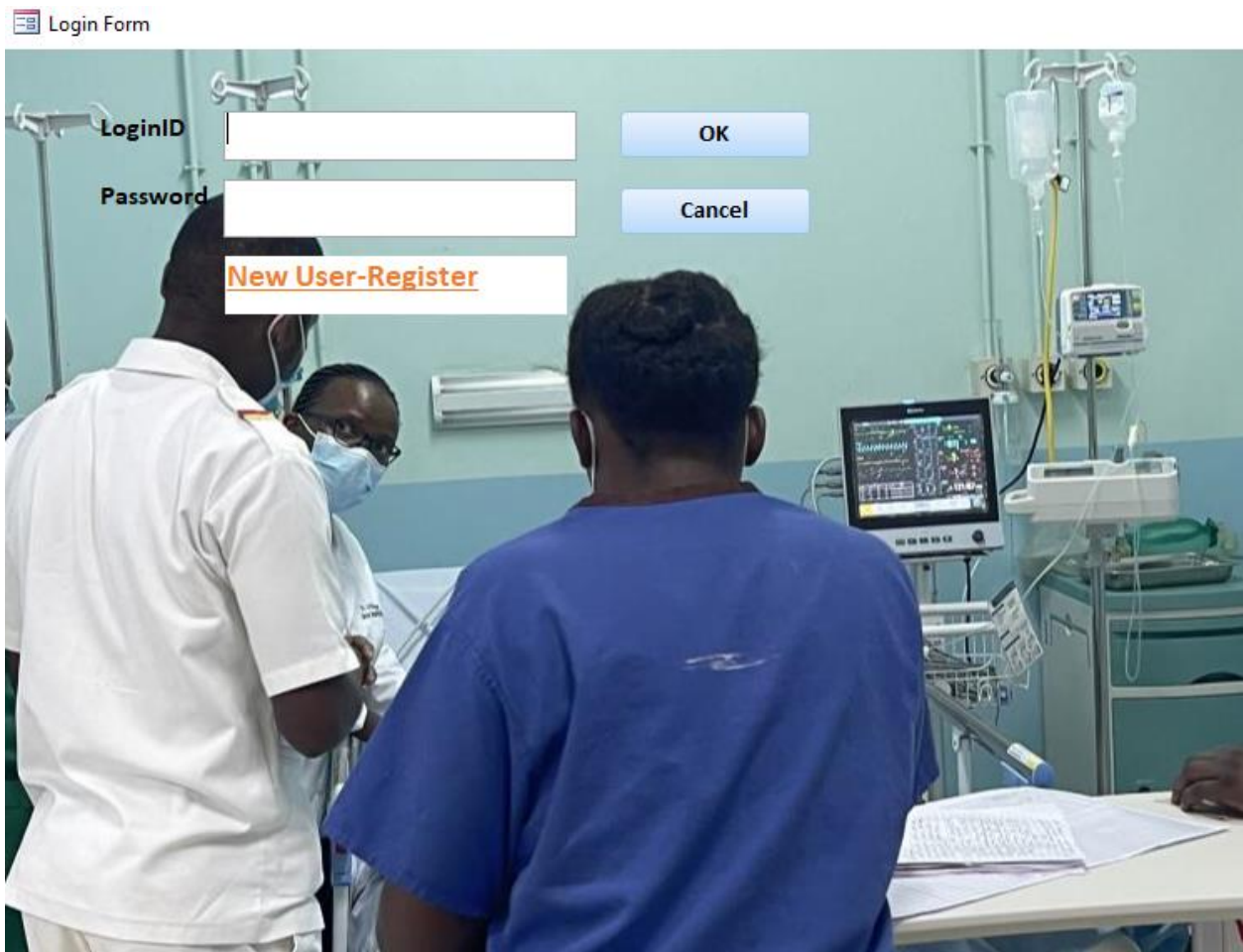


Figure 12: Showing the Login form of the new system

5.4.5 The user registration form

The figure below illustrates the user registration page. Here the new user for the database is required to register with the tool in order to gain access to the records or information required. The user is required to put in the “full name”, “User ID desired”, “log in ID”, “Password” and the “user level”. The user level simply means if the new user is an administrator or normal user for the tool

Registration Form

MGH New User Registration

UserID	<input type="text" value="(New)"/>
Full Name*	<input type="text"/>
LoginID*	<input type="text"/>
Password*	<input type="text"/>
Address	<input type="text"/>
City	<input type="text"/>
State	<input type="text"/>
UserLevel*	<input type="text" value=""/>

*Please Note: fields with * are required fields and must be filled before submitting the form. You are required to confirm the information before submitting. thanks*

Figure 13: Showing the New User registration form

5.5 Implementation and Testing

5.5.1 Implementation

Systems implementation is the process of defining how the information system should be built (i.e., physical system design), ensuring that the information system is operational and used, as well as ensuring that the tracking system meets quality standard (i.e., quality assurance). The purpose of implementation is to make the new system available to a prepared set of users (the deployment), and positioning on-going support and maintenance of the system within the Performing Organization

This phase consists of the following processes:

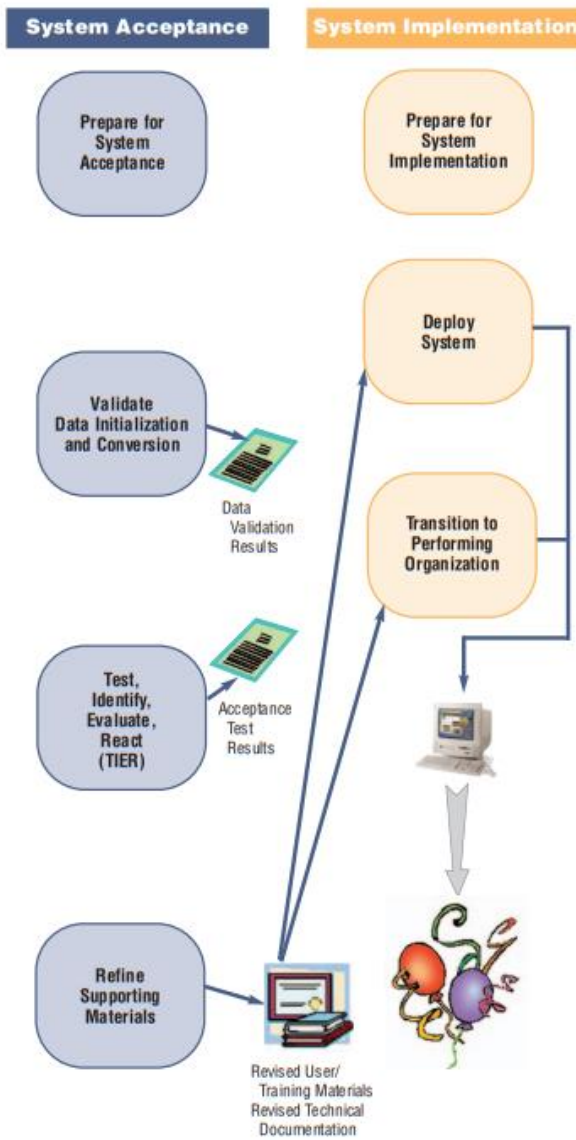
Prepare for System Implementation, where all steps needed in advance of actually deploying the tracking system are performed, including preparation of both the production environment and the Consumer communities.

Deploy System, where the full deployment plan, initially developed during System Design and evolved throughout subsequent lifecycle phases, is executed and validated.

Transition to Performing Organization, where responsibility for and ownership of the system are transitioned from the Project Team to the unit in the Performing Organization that will provide system support and maintenance.

This is explained by the chart below;

Figure 14: Showing the system implementation process



5.5.2 Testing

Testing is a level of testing that validates the complete and fully integrated designed system

Testing is critical for a newly developed system as a prerequisite for it being put into an environment where the end users can use it. Exhaustive testing is conducted to ensure accuracy and reliability and to ensure that bugs are detected as early as possible. In the process of designing

the tracking system, three levels of testing were conducted, namely, unit testing, integration testing and system testing.

5.5.3 Unit Test

Unit test is where the system is tested partially and independently, component by component, to ensure that particular portion or module is workable within it. For example, the tables, modules, forms, queries and reports were all tested for their independent functionality at this stage

5.5.4 Integration Test

Integration test is where a combination of several portions or components/sub components of programs are being tested sequentially and continuously. At this stage, the different modules were added to each other check for their interaction and compatibility. After which the system test followed

5.5.5 System Test

A system normally consists of all components that makeup the total system to function. It is required to ensure the smooth running of the system as a whole, and it should perform as expected and as required. Here, technical and functional testing were performed. The technical testing involved the process of testing the systems compatibility with the hardware, operating system, data integrity in the database and user authorization access rights. Functional testing was also carried out to establish how the system would function in its intended working environment.

5.5.6 User Acceptance Test

User test involved presenting the system to user to test if the requirements recommended by them are in full effect.

5.6 System Documentations

System documentation is a crucial aspect of system development. It provides a frame of reference with regards to the design and development process. In designing the Records tracking system, the step by step procedures or the manual was printed in a leaflet where users can always refer to in case of anything.

5.7 Benefits that the proposed tracking system will pose may include;

- a) Ensure that only those users with appropriate clearance or permission are performing tasks for which they have been authorized.
- b) keep track of information necessary for the institution's current business.
- c) provide a measure to determine when disposal action can most effectively and economically be taken; the level of usage of a records is a determining factor in deciding its retention period.
- d) provide statistical information as part of assessing the overall performance of the records tracking system; performance management of systems provides information to support decision making (for example, the allocation of resources), enables the evaluation of the progress towards aims, and shows how well resources have been used. Performance management in records management is to be subjects of a separate standard.
- e) maintain a proper trail of all the records managed in the MGH registry.
- f) Ensure accountability of the individual requesting for a particular record.
- g) Reduce the challenges faced by the staff while managing and tracking these records.

5.8 Chapter Summary.

The study primarily focused on the methods in tracking and Managing of students records at MGH where the manual system is mainly used. However, it calls in for the proper electronic records system which is recommended by the staff. Further studies can be done on how the records tracking system is being used, maintained , challenges faced and the possible strategies present to reduce the challenges.

CHAPTER SIX:

CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter summarizes, concludes and recommends about the project report basing on the research study objectives or questions which include; identifying the different types of medical records generated at MGH, Identifying the methods used in tracking of medical records at MGH, identifying the challenges encountered in tracking medical records at MGH and developing a records tracking system at MGH.

This chapter also includes summeries from the findings or the data collected from the field where the researcher carried out the research study.

6.1 Summary of data collection

The study took place at MGH in the medical records department withan aim of helping the staff in the field of records management, specifically computerized file tracking. This was achieved through use of data collection methods like interviews and observation and tools such as interview and observation Guide. Observation was used when the researchers were able to obtain access in the records storage section

The reseachers used secondary sources for example Web, electronic journals and e-book from Google scholar with the same background of the study so that literature can be well obtained. These sources helped provide relevant information as well as relevant insight into the problem under investigation. Using the field data from respondents and a wide range of literature as said above, the reseachers were able to formulate the system requirements of the tracking took to be used.

6.2 Summary of the data analysis.

The data collected from the field of the study was analyzed using some qualitative and quantitative means such as tables

6.3 Summary of main findings.

The main findings of the study in this section are summarized below: Records managed at MGH are categorized into financial, administrative, medical, staff, and clients all which are in paper and electronic form representative of the entire records collection. Medical Records include a number of patient records from services like laboratory, family, dental, family planning, optometry among others which include medical reports, diagnosis and treatment patient records and lab investigation records.

The researchers also found out that the Records department at MGH mainly uses the manual records tracking system which includes the use of Out Patient Department register and the file transfer books where all the relevant information about the records is well recorded. The forms are also used to track the whereabouts of the records.

6.3.1 Challenges faced in the tracking and managing of the records.

The researchers also found out that the records staff at MGH records department face a number of records tracking challenges which include but not limited to;

- Time consuming retrievals.
- Current system is cumbersome whereby each record to be transferred has to be registered.
- The cumbersome method of recording transactions.
- Inadequate records storage space as the shelves are too small and incapacitated to hold the growing volumes of records which explains the too many cases of misfiling.
- Inadequate man-power in the department.
- It is too hectic for the records staff to record each and every file in the OPD register and due to this, it has caused in compliance and adherence to the method. Limited resources for the proper storage and location of the records files is evident from the old file covers and baked paper documents that do not have their primary file storage.

6.4 Summery of system analysis and design.

As explained in chapter four, the anlysis and design of the proposed tracking system was simplified in the in the model diagram. The diagram helped the researchers to put the proposed records tracking tool on paper it can be illustrated more effectively to the reader.

6.4.1 Summery of the system Development.

The reseachers developed the records tracking system in Microsoft Access considering that it is cheaper to mantain and easy to use, and can get the job done quickly.

6.6 Recommendations.

Basing on the study findings through data collection from the field, the staff and the reseachers recommend to;

Develope a proper tracking system for the records at MGH medical records department. This will help in contributing a high- perfomance scale in tracking and managing of the medical records in and outside the department. Preferably, an electronic tracking system. This will help to reduce the challenges already existing in the manual method such as time consuming registration.

Recruit more skilled staff to support the various duties of the department. More employees are needed to manage the much- accumulated semi-active records which are mainly paper-based.

Sensitize the staff at MGH about the use, benefits and impotence of proper records tracking system. The staff could be educated about the importance of the records tracking system since more accountability will be created, meaning the details of the individual who requested for the records will be recorded properly.

Establish a digitization road map for the proper records. This help in educating the staff how digitization operates, stages at which it is done and significance.

Encourage the government to invest more in e-government of its MDAs and their organizational functions.

The researchers also recommend that the staff should study and establish the user-friendly, efficient and effective guidelines when improving the access and retrieval (tracking) of the records. Non records staff such as health workers, heads of department, nurses among others need to be sensitized on the benefits of good record keeping so that they can be able to appreciate the proposed system and also follow the St records management guideline.

More computers should be purchased to facilitate the automation and its benefits so that the investment of computers can be appreciated and recognized as a more effective trend of the records management age.

The researchers recommend that to achieve full benefit from new records management systems, all affected staff should be thoroughly trained in its use, new work patterns and techniques and training procedures need to be identified and agreed upon by the staff. The formation of staff work groups to agree on training processes and appraise their progress can be beneficial. Training projects, level of expertise of existing records staff, variety and levels of training required, training resources and time required, revision training after implementation as well as ongoing training for new staff.

Masindi General Hospital should ensure that its staff members handle all the information materials with care especially art clinic records.

Converting records to new processes .Conversion requires careful planning to minimize costs, risks and personal irritation thus according to the researcher the elements to be considered are the scope of conversion which can be either full or partial, paper and or electronic, manual or automatic.

Conversion phases include the selection and conversion of new records process: analysis of needs, outcome benchmarks identified pre-conversion system testing, implementation strategies: piloting/phased introduction, progress auditing and post implementation review procedure.

Increase funding. Masindi General Hospital should ensure that adequate budget allocation to records management to enable proper running of records activities

6.7 Conclusions.

The study concluded that MGH did not have an efficient records tracking system for eth the medical records department which is evident by the number of challenges highlighted in summary in the section 5.3.1 above. In light of the matter, the records staff and the reseachers recognized the fact that once developed, a computerized records tracking system would play a great role in solving the research problem and also improve service delivery within and outside the hospital

REFERENCES

- Aguolu, O.C & Aguolu, L.E (2002). Libraries and Information management in Nigeria. Maidugari: University press. 183-196.
- Adam, A. (2007). Implementing Electronic Document and Records Management Systems. New York: Auerbach Publications.
- Amin, N. A M., Yatin, S. F. M.Jali, J. M. Sahid, N. Z. Shuhidan, S, M, Noordin, S.A., & Abdullah, W.A.M. W. (2020). Role of Medical Records Management Practice in Improving Decision Making in University Hospital International Journal of Academic Research in Business and Social Sciences, 10(11), 1160 1175
- Australia, N. A., & Newzealand, A. (2015). Australian government record keeping metadata. National Archives of Australia
- Bali. A. Bali. D. Iyer, N., Iyer, M., & Springer Link (Online service) (2011). Management of Medical Records: Facts and Figures for
- Bates, M. J. (2012). Understanding information retrieval systems. London: Taylor and Francis Group
- Blokdyk, G. (2019). Records Management en complete Guide Emereo PTY limited. Designing and Conducting In-depth interviews for Evaluation Input Boston: Pathfinder International.
- Canada, P. A. (2007). Records Organization and Operations, Michigan, Canada: Minister of Supply and Services.
- Capritto, A. (2019). How to keep track of your medical records. Retrieved from <https://www.cnet.com/health/medical/how-to-keep-track-of-your-medical-records> on 2 September, 2022. CNET,
- Carreiras, H., & Castro, C. (2013). Qualitative methods in Military Studies: Research Experiences and Challenges. London: Routledge.

- Cox, R. J.. (2014). Closing an era: Historical perspectives on modern archives and records management, Westport, Conn: Greenwood Press.
- Creswell, J. W. (2014). Research Design, Qualitative, Quantitative and Mixed Methods Approaches (4 ed.). London: Sage.
- Cunningham, G. C. & Montana. I. C. (2006). The Lawyer's Guide to Records Management and Retention. New York: American Bar Association
- Egwunyenga, E.J. (December 01, 2009). Record keeping in Universities: Associated Problems and Management Options in South West Geo-Political Zone of Nigeria. International Journal of Educational Sciences, 1.2, 109-113.
- Franks, P. (2018). Records and Information Management, London: Facet Publishing.
- Hirak, C. & Chang, A.. (2018). Doctors want Canadian medical records to be more accessible. Toronto: Canadian Broadcasting Corporation.
- Houston, B. & Horvit, M., (2021). The investigative reporter's handbook: A guide to documents, databases and techniques. Investigative Reporters and Editors Inc.
- IRMT & ICA. (1999). Managing hospital records. London: International Records Management Trust
- IRMT. (2018). Managing Current Records: A Procedures Manual. London: IRMT.
- Kanakulya, H., Ndwiga, C. Sripad, P., Amoll, E., Mukisa, R., Warren, S., & Barneine. 1. (November 29, 2018). Assessment of health worker knowledge in fistula management in Uganda. Nepal Journal of Obstetrics and Gynaecology, 13,2)
- Kelvin, S. (2007). Public Sector Records Management: A Practical Guide Aldershot: Ashgate.
- Kemoni, H. N. (October 02, 2009). Management of electronic records. Records Management Journal, 19, 3, 190-203

- Lawal R.A. Aina O.F. Ladapo H.T, & Owoeye O.A. (2008). Community oriented services in a psychiatric hospital. Effort to reduce stigmatization (Nigerian Journal of Psychiatry: Vol 5. No 1 (2007). 19-25.) Nigerian
- Levy, P.S., & Lemeshow, S. (2008). Sampling of Populations: Methods and Applications. New Jersey: John Wiley & Sons Inc.
- Luyombya, D. (2018). Handbook of research on Heritage management and preservation. IGI Global Michigan: Society of American Archivists,
- Oliver, P. (2013). Writing Your Thesis. Student Succes. London: Sage Publications Olatokun, W.M. & Folaranmi. M.F.. (2008). Private and public schools dichotomies in the adoption and use of information and communication technology. Vol 5.
- Pagadala, S. D. (2017). Research Methodology: A Handbook for Beginners. Chenai: Notion Press.
- Paul, S.L. & Lemeshow, S. (2008). Sampling of Populations: Meslends and Applications. New Jersey: John Wiley & Sons Inc.
- Pearce-Mones, R. (2005). A glossary of Archival and Records Terminologies publishing.
- Qureshi, D. K. (2019). Latest trends of information technology, Books clinic
- Read, I., & Ginn, M. L. (2015). Records Management. Boston: Delmar Cengage.
- Safraday, W. (2009). Managing Electronic Records. Kansas: ARMA International
- Sam Efrat Efron, R. R. (2019). Writing the literature review; a practical guide London: Guilfordpress.and book of principles and
- Sanderson, M., & Ward, S. (2003). Records management mission critical Library and Information update. Retrieved from http://www.clip.orgulc/update/issues/aug_03/article2august.html
- Shepard, J. E., & Yeo, G. (2003), managing records a practice, bodon: facet publishing.
- Stevens, G.M., 2007). Electronic personal health records. Library of Congress

- Surgeons. *Journal of maxillofacial and oral surgery*) Barr, P. B., Dave, D. S., & May, D. B. January 01, 2012). A hybrid approach for running medical record facility information system. *Health Marketing Quarterly*, 10, 83-9.
- Tough. A., & Moss, M. (2006). *Record keeping in a hybrid environment: Managing the creation, we preservation and disposal of unique information objects in context*. Oxford Publishing Press
- Trochim, M. W. (2015). *Social Research Methods - The Essential knowledge Base* (2nd ed.). London: Cenage Learning.
- United Nations. (2017). *Records Management: Principles and Practices*. New York: United Nations
- Wojtkowski, G. (2006). *Information systems development*. Gunnsk: Springer
- Wright, C. D. (2014). *A guide to Massachusetts public records: Parishes, town, and*

APPENDICES

APPENDIX A: INTERVIEW GUIDE.

Dear interviewee,

We are a research group from the East African School of Library and Information Science at Makerere University. We are conducting a research project under the topic: Records Tracking in a health institution, with a case study at Masindi General Hospital. Good Records tracking helps to maintain records, aiding clear communication between professionals, and demonstrates that files are not lost or misplaced. Complete, contemporaneous and well-organised medical records are essential for good medical practice and continuity of care. We therefore, are required, are required to conduct this study not only for contribute to the research survey of medical records tracking in health institutions. So we are kindly requesting for your time to take a mini survey in your institution.

Section A: Background Information

1. Name of the respondent
2. Sex
3. Position of the respondent
4. Qualifications
5. For how long have you worked with Masindi General Hospital?

Section B: Types of records kept at Masindi General Hospital

Section C: challenges of Filing, access and Masindi General Hospital.

Section D: existing Filing System at Masindi General Hospital

1. Does Masindi General Hospital system to support retrieval of Records?
If no, have you ever planned to introduce a system to support retrieval of information?
If no, is it important to introduce an Electronic Records Tracking System to support retrieval of Records?
2. The filing system available is it manual or electronic?

3. Is there a special team responsible for updating system used to retrieve records?
4. What are the challenges you face while using available Filing systems?

Section D: requirements for an Electronic Records Tracking System at Masindi General Hospital

1. What are the personal requirements?
2. What are the information needs of users?
3. What are the organizational requirements?
4. What are the technological requirements?
5. What are the software requirements?
6. What are the human resources?
7. What are the financial resources?

Section E: designing an Electronic Records Tracking System at Masindi General Hospital

1. What equipment that may be introduced in order to improve tracking system?
2. How best Records access and retrieval can be performed?
3. When an Electronic Records Tracking System should be updated and how best it should be done?
4. What other areas that you would recommend for improvement of Records access and retrieval at Masindi General Hospital?
5. Which software do they prefer for the online system?
6. Whether the system should be networked,
7. What are the metadata requirement?
8. How are the Interfaces?
9. How are records filed and classified?

10. How should the system best be implemented?

11. What are the kind of testing to be done?

Thank you very much for your participation

Observation guide

An observation guide has been prepared for data collection concerning the design and implementation of an Electronic Records Tracking System at Masindi General Hospital.

Activities

Issues to be observed

1. Categories of records kept
2. Tracking methods
3. Challenges in tracking
4. Formats, media in which records are?
5. Storage equipment used at Masindi General Hospital
6. Security measures to ensure safety of removed records
7. Access and retrieval of hospital records
8. How records are preserved at Masindi General Hospital
9. Tracking tools used
10. Organization of records
11. Records storage area
12. Staffs in the records center

13. Computer available to manage the electronic records