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## AN EVALUATION OF THE NATURE AND EFFECTIVENESS OF PRESERVATION MEASURES OF HEALTH RECORDS AT HWANGE COLLIERY HOSPITAL IN ZIMBABWE

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### ABSTRACT

*The current study sought to evaluate the nature and effectiveness of preservation measures of health records at Hwange Colliery Hospital in Zimbabwe. Staff at the health institution were the target population, and a sample of 18 (N=18) who comprised clerks, health practitioners and managers was utilised to accomplish the study. A Questionnaire was used as the research instrument. The major findings were that despite the advent of ICTs and their recommended use in organisations, most of the institution's health records are still paper based. Shelving was considered the best and most common way of preserving health records at the health institution and health records are mostly preserved to extend their life so as to be used for future purposes. The study further revealed that the policy of the institution on records preservation was largely based on the security measures of the records and less on the actual preservation practices of the health records. The study recommended among other things that the institution should hold staff workshops and refresher courses on records management. A more electronic records management system should be used as it has several advantages, such as the security of health information. In addition, more funds should be channeled towards improving the institution's records management system in order to improve it.*

*Key words: effectiveness, health, records, records preservation.*

### 1.0 INTRODUCTION

Health is one of the most important social issues that require all-time consideration and close attention at individual and community levels. The definition of health has from time to time been reviewed and accordingly; has undergone several changes over the years. The one formulated by World Health Organisation in 1948 cited in WHO (2003) is that 'Health is a state of relatively complete physical, mental and social well-being and not

merely the absence of disease and infirmity'. This definition has largely been debated upon because it tends to focus on the medicalization of society especially by emphasising the issue of 'relatively complete well-being'. For Huber, et al (2011:2);

*Health is the level of functionality or metabolic efficiency of a living organism, and in humans, it is the ability of individuals and/or communities to adapt to and self-manage when faced with physical, mental, emotional, social and other environmental challenges.*

Thus, the definition of health is, therefore, not static but dynamic as it continues to undergo some form of denotation metamorphosis.

One of the most important issues regarding health is the subject of 'records' and their preservation. Essentially, the preservation of any record is critical in any organisation, and health institutions are not an exception. This is basically because the preservation of health records is an essential component of records management and also due to the fact that health records are vital documents that should be well preserved for future reference.

### **1.1 Background to the study**

Records are generally preserved differently in different organisations including the Hwange Colliery Hospital in Zimbabwe which is a medical service centre that was established in 1951(Hwange Colliery Strategic Plan, 2014). At the time of establishment, the health institution in tandem with the laws of the country then, had to cater for only its employees and their dependents.

Hwange Colliery Hospital, which services more than 2000 Hwange Colliery employees, their dependents and other patients from the surrounding areas, is a mine health institution which is located in Hwange district in Matabeleland North province. Its vision is to become a world class health service provider of first choice in the country and abroad. Its vision can only be attained where its health information is readily available and can be achieved by ensuring that health records are adequately managed and preserved from deteriorating agents.

Health records are vital documents in an organization because they form the backbone of the organization (Roper, 1999). The existence of deteriorating agents, threaten the vision of the institution as these agents can destroy the documentary and cause records to deteriorate faster causing the loss of health including patients' information.

Preservation of records is important because it protects records from deteriorating and according to Roper (ibid), preservation is essential to records management in order to prevent information loss.

However, for records to last longer, they need to be well preserved so that they are protected from the threats that might occur during the course of time. Thus, there is need to preserve health records from the deteriorating agents largely to ensure their longevity since they are often used later. It is upon this background that this study sought to explore the preservation measures of health records in place at Hwange Colliery Hospital.

### **1.2 Statement of the problem**

There are visible signs of deteriorating agents at work at the health institution involving different agents such as unfavourable temperatures, moulds, insects and rodents which damage health records. The problem is compounded by the fact that due to the country's economic meltdown since the last decade, the institution is in a distressed condition; therefore, properly preserving records is frequently overlooked. During these troubled times, a combination of lack of funds, reduced staff, poor attention to industrial regulatory standards or deferral of decision making all work to negatively impact on the health information management of the institution under study.

### **1.3 Aim and Objectives of the Study**

The main purpose of the study was to evaluate the nature and effectiveness of preservation measures of health records at Hwange Colliery Hospital in Zimbabwe. It was guided by the following specific objectives;

- To establish staff members' understanding of records management
- To establish ways of keeping and protecting records at the health institution
- To examine the effectiveness of the preservation measures in light of policy and longevity of the records
- To suggest possible measures that can be employed to improve preservation measures of record sat the health institution

## 1.4 Significance of the study

The study would be important in that:

- It will help consumers of this study to appreciate the nature of records preservation at the research site
- It will inform health management on how best to improve policy and service delivery through the adoption of proper preservation measures of health records
- Highlight the areas of weakness in preservation of health records, thereby enabling the management to work on staff training requirements in order to achieve the goal of well-preserved records
- Health beneficiaries such as the patients will benefit from this study as preservation of their medical history will be improved
- The study will also aid to the transfer of records in good state to the National Archives.

## 2.0 REVIEW OF RELATED LITERATURE

### 2.1 The Concepts of 'Records' and 'Records Preservation'

A record is generally viewed as being something that represents proof of existence and that can be used to recreate or prove the state of existence, regardless of medium or characteristics. It is recorded information regardless of physical form or medium created or received by an organization in pursuance of its legal obligation. Kennedy (1998) states that records are recorded information, regardless of their form or characteristics and can be a transaction preserved to be used as evidence in future due to the nature of the information it contains.

A health record according to Benjamin (2000) is the type of record generated at the health care institution during the process of attending to people and communities' health issues, such as documents that carry information pertaining to the treatment of patients at a hospital. Such records are also known as Personal Health Records (PHRs) and are usually characterised by, amongst others, the nature and source of information contained. Rauchand Rauber (2004) note that when generated electronically, this type of record is called electronic medical record (EMR) or E-health record (EHR). EMRs or EHRs are "a longitudinal collection of electronic health information about individual patient and population" (Best, 2003:198).

Generally, preservation of records is the protection of records from damage or from any risk that might occur during the course of time. Records preservation according to Ritzenthaler (2006) is the set of activities that aims

to prolong the life of a record or enhance its value. The underlying principle of preservation is that it respects and maintains the integrity and intent of original material and its contents. This applies to both analogue and digital records or works because although the practices may vary, the ethics guiding the activity does not. According to Patton (2002) original work must not be altered, manipulated or edited by records preservation, except to remove irreparably damaged or deteriorated fragments which could jeopardise the safety of the works.

Preservation is also concerned with the protection of cultural property through activities that minimize chemical and physical deterioration and damage and that prevent loss of informational content (Kennedy, *ibid*). For Patton (*ibid*), preservation encompasses activities that prevent damage to paper-based, audio-visual collections or electro-material, such as proper housing, environmental control, and disaster planning; and activities such as treatment, replacement, or reformatting that address existing damage. Preservation of records is the set of activities that aims to prolong the life of a record or enhance its value states (Miller, 1999). This includes actions taken to influence records creators prior to selection. Preservation of records is the passive protection of archival material in which no physical or chemical treatment to the item occurs.

Ritzenthaler (*ibid*) states that records preservation involves keeping a balance between collection-level activities such as environmental control, which can be difficult and/or costly to manage but provide the greatest long-term benefit for most materials, and item-level activities such as conservation treatment, which are often more easily understood and managed but can have limited effect, especially if the items are returned to a damaging environment. The primary goal of records preservation is to prolong the existence of some works and cultural property.

Miller (*ibid*) states that a preservation policy functions as a set of guidelines in principle for staff and volunteers especially those working on preservation projects. The preservation policy ensures that preservation practice follows the highest standards with the ultimate commitment of keeping the collections open and accessible. The policy also raises preservation awareness amongst staff, users and other departments and stakeholders.

## ***2.2 Methods of preserving records***

Health records should be preserved or kept secure as long as they still have value. Miller (*ibid*) postulates that 'records should be well kept throughout their life cycle as long as they still have some value and their storage records depends on the intended use. This is because some beneficiaries will encounter a health problem for

whose management old health information can be crucial, a case can be made for storing health information at least for the life time of every beneficiary. The working assumption would be that the cost of storing more information that will actually be useful is outweighed by the value of those who will continue to benefit from the records and will benefit at time of need.

For Wallace (2001:193);

*Good storage significantly prolongs the preservation of institutional health records and these may include minimal exposure to all kinds of light, unfolded and flat or rolled storage for oversized papers and also isolated storage of acidic papers to prevent acids from migrating into the other works on paper.*

Health files must be stored in lockable cabinets or office for security reasons because they have significantly confidential information about individuals. Ritzenthaler (ibid) resonates states that active files should be stored in an upright position in compact or filing cabinets; they should also be stored in a secure area either within a locked office or locked cupboard, particularly if they are confidential.

Rhoads (2009) states that there are two aspects of protecting records which are the preventive measures which include all forms of indirect actions aimed at increasing the life expectancy of undamaged or damaged elements of cultural property. It comprises all the methods of good house-keeping, caretaking, dusting, periodical supervision and prevention of any possibility of damage by physical, chemical, biological and other factors. There is also the curative measure which consists of all forms of direct actions aimed at increasing the life expectancy of undamaged or damaged elements of cultural property. It includes repairing, mending, fumigation, deacidification, lamination and other jobs which are required considering the physical condition of the individual document (Ritzenthaler, ibid).

### ***2.3 Importance of preserving records***

Preservation of records is important because it protects records from deteriorating. However, for records to last longer, they need to be well preserved. Anderson (1996) postulates that for records not to deteriorate fast, facilities should be cleaned and also environmental conditions monitored. Ritzenthaler (ibid) advises that records should be well preserved and be kept in containers that keep out light, water and dust. In order for records not to



deteriorate fast whilst they still have value, they need proper storage facilities that will protect them from any risk that might occur during their existence, for example, cabinets and lockers as well as maintaining disaster control plan.

Preservation of medical records is important for referral purposes when the health institution needs to refer beneficiaries to other institutions for further attention. Preservation of records is also important in the management and use of records. Many documents have been lost through time due to torn pages, rust from paper clips, improper storage containers, and exposure to negative elements such as pests, water and heat postulates (Anderson, *ibid*). If health records are not well preserved, they can easily deteriorate or may end up being completely lost.

Anderson (*ibid*) goes on to say that health records are apt to contain more personal information than any other single document. They contain not only sensitive health care information but also demographic, sexual, behavioural, dietary and recreational information because of the vast amount of highly sensitive information in the health record. Beneficiaries have the expectations that the information will be held in privacy. Thus, the confidentiality of health beneficiaries and their history should be maintained by correctly preserving their records.

### 3.0 RESEARCH METHODOLOGY

This study adopted the descriptive survey research design since it could easily and effectively be used to measure opinions and attitudes. This research design is the most suitable since opinions and attitudes about the preservation measures of health were explored. According to Chikoko and Mhloyi (1995:71), “the descriptive survey research design has many strengths including the fact that it allows for a wide range of social and institutional problems to be investigated”

The population of this study were health staff that comprised of management staff, health practitioners and records clerk at the Hwange Colliery Hospital. A study population is that aggregation of elements from which a sample is actually selected (Babbie, 2004). Patton (2002:93) advises that:

*The key issue in selecting and making decisions about the appropriate unit of analysis is to decide what it is that you want to study and be able to say something about at the end of the study.*

This study sampled 3 senior management staff, 10 health practitioners 5 records clerks (N=18) using purposive sampling on the basis of their relevance to this study with the assumption that they will provide rich information for the generalise ability of the findings. Sampling is the selection of the representative subsection of the population and samples for qualitative research are relatively small compared to those for quantitative research. According to Patton (ibid), there are no hard and fast rules for sample size in qualitative inquiry; the sample depends on what you want to find out, why you want to find it out, how the findings will be used and what resources (including time) you have for the study.

The researchers used Questionnaires for data collection. To counter the weaknesses of difficulties in interpretation of the questions in the study, a pilot study was conducted to check that the questions and instructions were clear and items that did not yield any usable data in the research study were removed. The pilot study was conducted on subjects similar but different to those participating in the research study and that, fear of victimization was circumvented by use of a covering note on the questionnaire guaranteeing confidentiality.

According to George (2005:17) “a questionnaire is a document containing questions designed to solicit information appropriate for analysis”. The questionnaires were administered to the health practitioners, senior management staff and the records clerks and were personally administered by the researchers. The researchers left the questionnaires with the respondents to complete them which gave the respondents the room to be honest and truthful since their responses were anonymous. Robinson (2005) asserts that the advantage of a questionnaire as a research instrument lies in the fact that it is very efficient in terms of researcher’s time and effort. Furthermore, Babbie (ibid) sums up the advantages by noting that carefully constructed; standardized questionnaires provide data in the same form from all respondents. A questionnaire also strives to secure information about the present practices, conditions, opinions or knowledge of respondents.

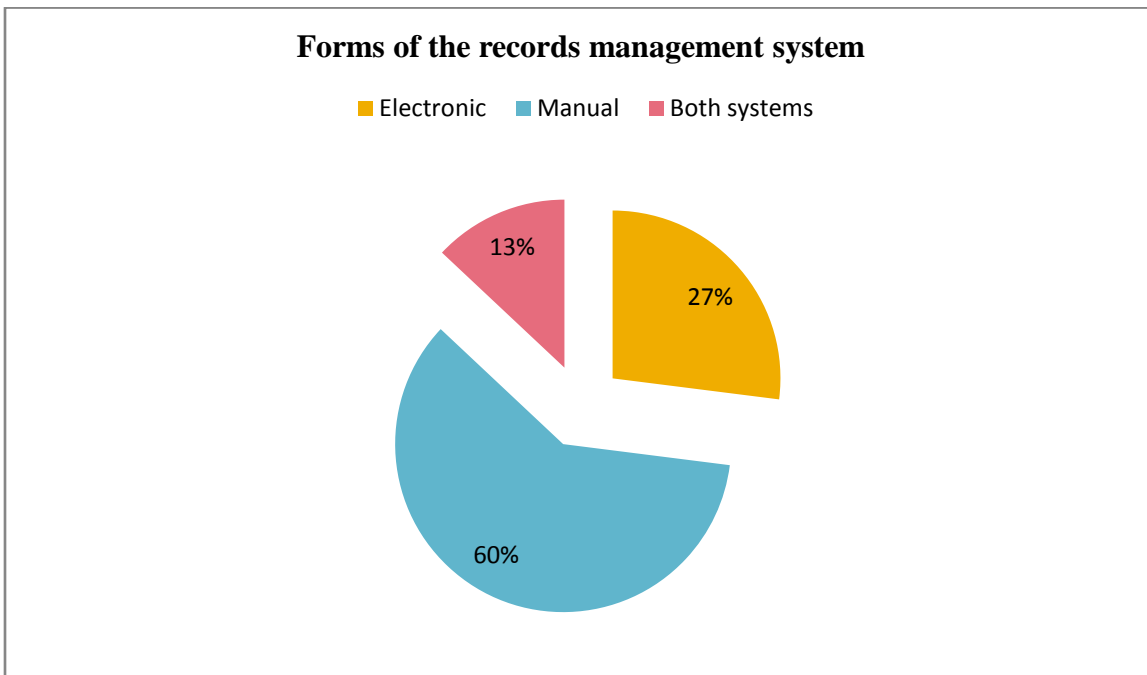
After data was collected, it was necessary to scrutinise and make sense out of it. This was the essence of data management which is a crucial precursor of analysis (Masuku, 1999). Data analysis involved the use of various analytical methods with the aim of drawing informed conclusions (Creswell, 2007). The collected data was therefore analysed so as to produce any trends that could emerge. The responses were interpreted so as to reveal their meanings and to draw conclusions that answered the research problem.

## 4.0 STUDY FINDINGS

### 4.1 Respondents' knowledge of records preservation

The first item sought to find out respondents' knowledge of records preservation. From a total of fifteen returned questionnaires, (3)20% respondents viewed records preservation as the passive protection of records and archival material. The other (4)27% respondents viewed preservation as the treatment given to materials to resist further deterioration. A total (5)33% respondents viewed preservation as the protection of records and archives against damage. Lastly, (3)20% respondents viewed preservation as the day to day care of records.

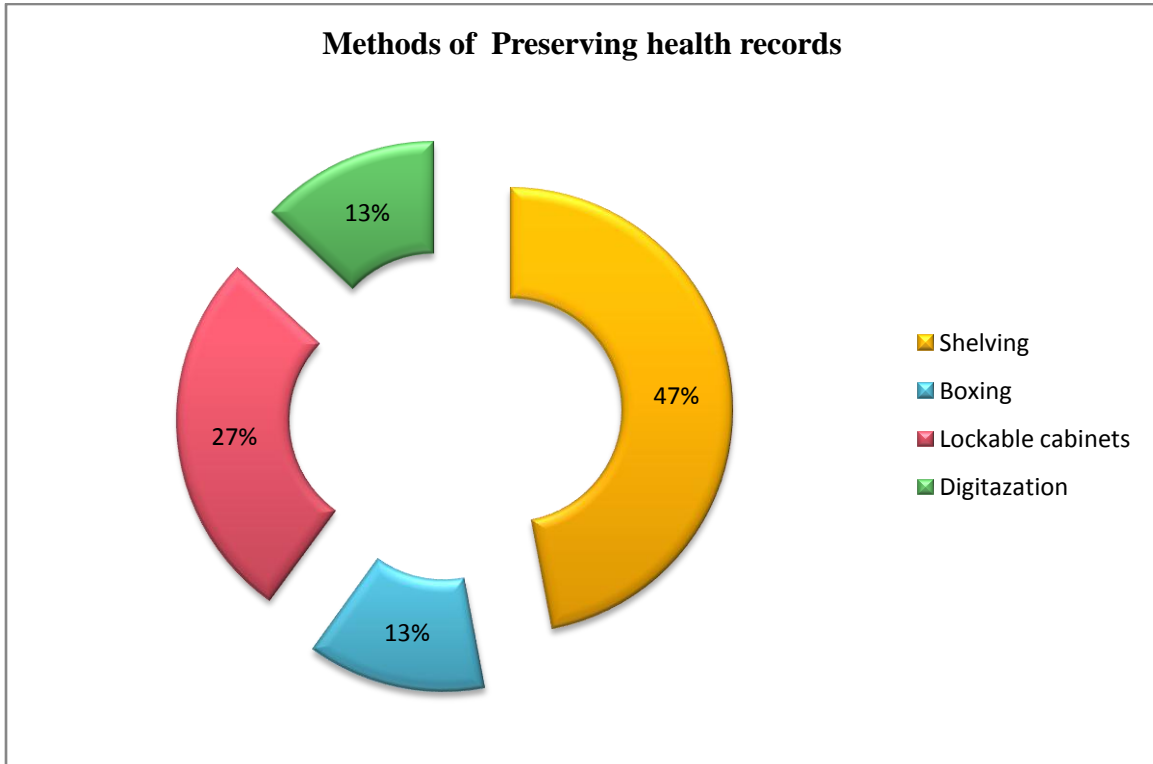
### 4.1Forms of the records management system



*Fig 4.1Forms of the records management system*

The responses to the question of current records management system revealed that 4 (27%) respondents say records are managed electronically, 9 (60%) respondents revealed that records are manually managed. As little as 2 (13%) of the respondents revealed that both electronic and manual systems were used. Thus, the findings showed that most of the records are kept manually. This is evident as most of the health records are paper based.

**4.2 Methods of preserving health records**



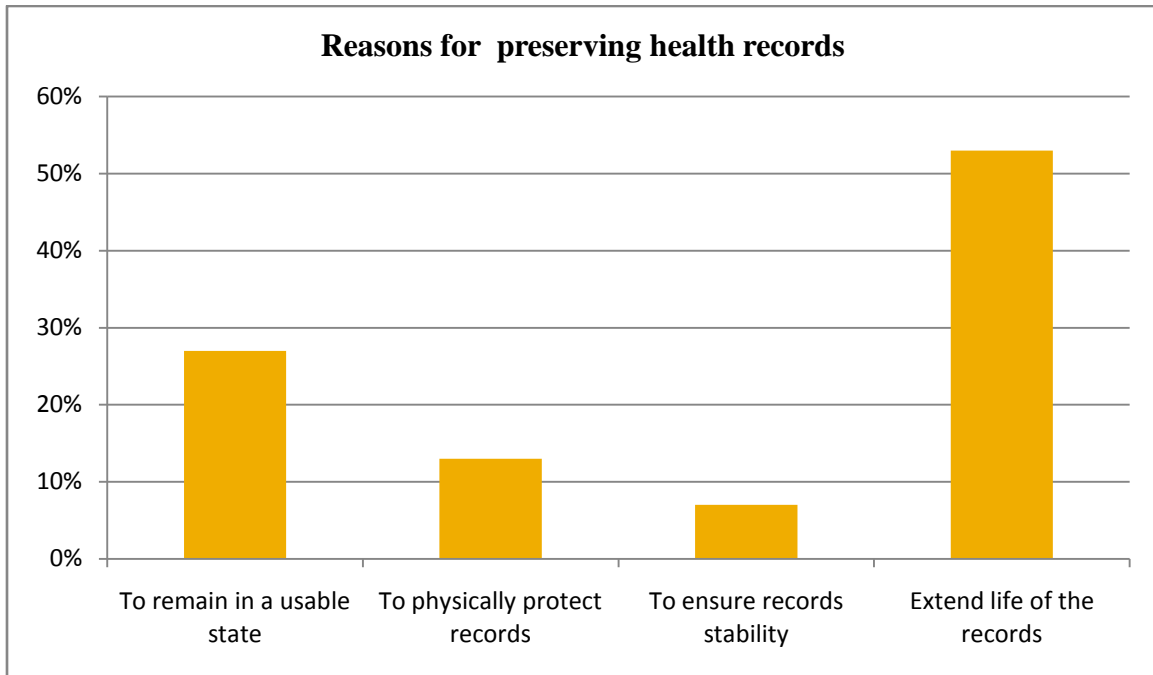
**Figure 4.2 Methods of preserving health records**

From the fifteen questionnaires returned, (7)47% respondents viewed shelving as the best way of preserving records, (4)27% respondents viewed keeping of records in lockable cabinets could help preserve records, the other (2)13% say boxing can also be used to preserve the records. The last (2)13% respondents revealed that digitalization could be the best way of preserving records. The results showed that shelving was considered the best and most common way of preserving health records at the institution.

**4.3 Types of Health Records preserved**

In response to the question of the types of records kept at the health institution, a total (3)20% indicated that birth and death records are kept at the hospital. Most respondents (8)53% indicated that health case notes are the key records kept at the institution. About (3)20% indicated that admission records are kept at the institution while only (1)7% indicated that X- ray records are kept at the institution. The findings indicated that patient case notes are the health records that are most preserved at the institution.

#### 4.4 Reasons for preserving health records



**Figure 4.3 Reasons for preserving health records**

In response to the question of reasons for preserving health records (4) 27% indicated that it is to ensure records remain in a usable state, (2)13% indicated that it is to physically protect records, only (1)7% indicated that it is to ensure records stability. Lastly (8)53% indicated that the importance of preserving records is to extend life of the records. Thus, the findings showed that health records are mostly preserved to extend the life of the records so as to be used for future purposes.

#### 4.5 Preservation measures that can be adopted to improve preservation of health records

From the fifteen respondents,(8)53% indicated that proper preservation plan can be adopted in order to improve the preservation of health records, (3)20% of the respondents indicated adapting temperatures could help while only (1)7% indicated that in order to improve the preservation of records, a disaster plan should be adopted. The other (3)20% indicated that proper metal shelving helps improve preservation of records. The findings revealed that most respondents indicated that by having a proper preservation plan, health records can be effectively preserved.

#### ***4.6 Preservation policy of the health institution***

In response to the question of the policy of the health institution about preservation of health records (7)47% of the respondents indicated that policy was centred more on security measures, (3)20% indicated that the policy was about proper handling of materials and the same indicated that policy is mainly on proper storage equipment. Lastly (2)13% indicated that policy was centred on proper house-keeping. The findings revealed that the policy of the institution is largely centred on the security measures of the records, which implied that the institution focused more on the security measures and less on the actual preservation practices of the health records.

### **5.0 CONCLUSIONS AND RECOMMENDATIONS**

Based on the findings, the study concluded that;

- Understanding of records preservation differed with the majority of health workers taking it to be treatment given to records to resist further deterioration and the protection of records and archives against damage
- Despite the advent of ICTs and their recommended use in organisations, most of the institution's health records are still paper based
- Shelving was considered the best and most common way of preserving health records at the health institution
- Patient case notes were the health records that are most preserved at the health institution
- Health records are mostly preserved to extend their life so as to be used for future purposes
- By having a proper preservation plan; health records can be effectively preserved
- The policy of the institution on records preservation was largely based on the security measures of the records and less on the actual preservation practices of the health records

Based on the above findings and conclusions, the following recommendations were made:

- The institution should hold workshops, refresher courses and in house training on records management. Staff members who handle health records should have a basic training on the importance of records and how best to preserve them

- A more electronic records management system should be used as it has several advantages, for example, records will be secure in the sense that not everyone will have access to the password of the computer hence only authorized persons will have access to the information.
- More funds should be channeled towards improving the institution's records management system
- Close supervision of records clerks by supervisors is needed so that health records of the are well preserved in the proper preservation methods
- Security is key in the management of health records hence the highest degree of confidentiality should be maintained to avoid unauthorized people from accessing vital health information
- Policy on records preservation should encompass both the security of records and the actual management of records

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