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THE ROLE OF HEALTH INFORMATION OFFICERS IN THE PREVENTION AND MANAGEMENT OF HIV/AIDS IN THREE TERTIARY HEALTH INSTITUTIONS IN SOUTH WESTERN NIGERIA

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CHAPTER ONE

INTRODUCTION

1.1   Background to the Study

Professional Health Information Managers (Health Information Officers) manage and construct health information programs to guarantee and accommodate medical, legal and ethical standards. They play a crucial role in the maintenance, collection and analyzing of data that is received by doctors, nurses, and other healthcare players. In return, these healthcare data contributors rely on the information to deliver quality health care. Health Information Officers possess competent professional authority required for search and use of health data and reports, information for case studies, research education, training, and compilation of numbers of facts to measure outcome of care, use of medical symbolisms, practical views and medical symbolisms, practical views and medical observations and accomplishments (Wikipedia, 2010).

Health Information Officers are of two principal cadres, that is, technicians and officers with Higher National Diploma. Ordinary National Diploma holders are classified as technicians.

IHVN (2007) highlights the role of Health Information Officers as:

- ensuring proper data management

- follow-up on issues raised in data error log

- checking data entered into electronic database

- liaising with anti-retroviral coordinator on Monitoring and Evaluation issues that need to be addressed.

- ensuring enough supply of forms

- ensuring security of patient monitoring and management forms

- ensuring that data collection tools are available at the various service areas

- troubleshooting data flow choice points

- carry out spot and back checks of the registers and forms.

Hassan (2005) identifies Health Information Officers in prevention and management of HIV/AIDS to be:

- strategic members of the health team

- first contact of the health teams with patients

- the memory of the health team

- the data bank managers of the health

- strategic members of research team.

Generally, Health Information Officers are responsible through the department for the followings:

i) to initiate, process, and check the patient records from inpatient, outpatient and emergency services to ensure that all the necessary form and information are available.

ii) to cooperate with the medical, nursing and other health care service officials in order to obtain comprehensive patients records and to design and develop effective medical records form.

iii) to assembly medical records in accordance with the prescribed standard order

iv). to code and index medical records as per international classification of diseases and operations.

v). to maintain and preserve patient records including X-rays and diagnosis reports in a scientific way for the period recommends in the "retention schedule".

iii) to retrieve medical records to meet the needs of patient care, medical education, medical training, medical research, medical legal problems and the evaluation of patient care.

iv) to provide and maintain a system for transcription of selected medical reports.

v) to control movement of patient files in order to achieve a unit record system, to protect files from unauthorized disclosure, to ensure confidentiality for the legal interests of the patient, the hospital, and the physician through proper custody of the records.

vi) to participate and cooperate with committees such as medical records, quality assurance, infection control, administrative, financial and other committees.

vii) to carry out the work of central registration for initiation new patient records including the patient master index.

viii) to schedule and register follows-up appointment cases and referral cases in the outpatient department.

ix) to register and maintain records for emergency cases including medical legal cases in the accident and emergency department.

x) to carry out admitting procedures for patients requiring hospitalization

xi) to coordinate with other services related to those of the medical records department for effective filling and retrieval of patient records.

xii) to prepare and complete procedures related to medical reports, certificates, and birth and death reports, and to submit data to appropriate authorities.

xiii) to register admitted and discharged causes in the ward register, schedule appointment for follow-up cases and to carry out the related ward clerk duties.

xiv) to retrieve and preserve the patient\s property in the admissions office in the absence of relatives who assume those responsibilities.

xv) to expedite the procedure of the department in accordance with the standards and rules established by the hospital.

xvi) to develop and maintain an information because mechanism for providing statistical data, and for submitting months reports concerning activities of the hospital and department, and for providing suggestions for effective functioning and future developments.

xvii) to develop education programs for the training of medical record personnel.

xviii) to observe the ethics of the medical record profession and to strive for new innovations to improve department functions.

xix) to expedite any responsibilities related to the medical record department allocated by the chief of the medical record or central information department of the hospital.

HIV/AIDS is human Immunodeficiency virus that attacks the body's immune system with which the body fights diseases. When a patient's immune system is damaged or compromised, the body is not able to fight disease. A person has HIV upon infection. This also may be called HIV disease. HIV disease progresses to AIDS which is Acquired Immunodeficiency Syndrome. HIV is fourth highest cause of death in the world. It is a major global health emergency. It affects all region of the world 70% of which are in Africa. It fans epidemic of TB in many African countries. Its impact is much greater where there is poverty and social inequality (UNAIDS 2007).

Estimated 42 million people are living with HIV/AIDS; one third of which are between 15-24 years. Most people are unaware they are infected and young women are more vulnerable. An infected person will always have it despite treatment. (UNAIDS, 2007)

There are two types of HIV identified as at 2005 (NIMR, 2005). HIV I causes worldwide epidemic while HIV II is found mostly in Africa. HIV is transmitted through sex. It is also transmitted through unscreened infected blood and blood product, pregnant mother to foetus, and use of unsterilised instruments and equipment.

HIV is not transmitted by hugging, kissing, massage, shaking hands, living in the same house, insects or animal bites. The driving forces include: lack of social health

information and education, distinct lack of voluntary and routine HIV testing, cultural practices, poor health care system, poverty, denial and stigmatization, and rape.

The HIV epidemic has decreased the growth of the population and economic development. It has increased orphan population and cost of health care. It has taken priority over all other essential health care programme.

A role or a social role is a set of connected behaviour, rights and obligations as conceptualized by actors in a social situation. It is an expected behaviour in a given individual social status and social position. It is vital to both functionalist and interactionists understanding of society. Social role posits the following about social behaviour:

1.   The division of labour in society takes the form of the interaction among heterogeneous specialized positions, we call roles.

2.   Social roles included appropriate and permitted forms of behaviour, guided by social norms, which are commonly known and hence determine the expectation for appropriate behaviour in these roles.

3.   Roles are occupied by individuals, who are called actors.

4.   When individuals approve of a social role (i.e. they consider the role legitimate and constructive, they will incur costs to conform to role norms, and will also incur costs to punish those who violate role norms.

5.   Changed conditions can render a social role outdated or illegitimate, in which case social pressures are likely to lead to role change.

The anticipation of rewards and punishments, as well as the satisfaction of behaving prosaically, account for why agents conform to role requirements (Wikipedia, 2010).

Preventive Medicine or Preventive Care: this refers to measures taken to prevent diseases, (or injuries) rather than curing them or treating their symptoms. The term contrasts in method with curative and palliative medicine, and in scope with public health methods (which work at the level of population health rather than individual health) (Wikipedia, 2010).

There are three levels of prevention of diseases (or injuries): primary, secondary and tertiary levels.

1.   Primary prevention avoids the development of a disease. Most population-based health promotion activities are primary preventive measures.

2.   Secondary prevention activities are aimed at early disease detection, thereby increasing opportunities for interventions to prevent progression of the disease and emergence of symptom

3.   Tertiary prevention reduces the negative impact of an already established disease by restoring function and reducing disease-related complications.

Diseases management is defined as "a system of coordinated health care interventions and communications for populations with conditions in which patient self-care efforts are significant". It is the process of reducing health-care costs and/or improving quality of life for individuals by preventing or minimizing the effects of a disease, usually a chronic condition, through integrative care (Wikipedia, 2010).

1.2 Statement of the Problem

Health information officers learn to identify and generate what information and data that are needed by doctors, hospital administrators, other health professionals, and how they are used in effective health care delivery.

In the prevention and management of epidemic diseases of global emergency like HIV/AIDS which is cardinal in health care delivery, Health Information Officers are strategic members of health and research team. International supporting Agencies such as GHAIN, IHVN, PEPFAR, etc rely heavily on data generated by Health Information Officers at the hospital level.

However, a good percentage of the public believes that all men working in the hospitals are doctors and all women are nurses. Even educated fellows will easily omit Health Information Officers if asked to list health care delivery professionals. Ironically, some management staff of tertiary health institutions even opined that health records staff are just ordinary card issuers and custodians of card and health records alone. Health Information Officers are seldom contacted in National health Information issues for their input. The International health agencies seem to prefer any health professional with foreign Masters in Public Health in carrying out data handling in their health projects. With all the above listed problems, one can deduce that society needs to know more about the actual roles played by Health Information Officers in the prevention and management of HIV/AIDS in Nigeria.

1.3 Objectives of the Study

The main objective of the study is to investigate the roles of health information officers in the prevention and management of HIV/AIDS in Nigeria.

Specific objectives are to:
1. find out the available measures for the prevention and management of HIV/AIDS in Nigeria.
2. find out the roles of Health Information Officer in the prevention of HIV/AIDS in Nigeria.
3. examine the roles of health information officers in the management of HIV/AIDS.
4. to find out factors that facilitate the role of Health Information officers in the prevention and management of HIV/AIDS in Nigeria.
5. to find out factors that militate the role of Health Information officers in the prevention and management of HIV/AIDS in Nigeria.

1.4 Research Questions
1. What are the available measures for the prevention and management of HIV/AIDS in Nigeria.
2. What are the roles of Health Information Officers in the prevention of HIV/AIDS in Nigeria.
3. What are the roles of Health Information Officers in the management of HIV/AIDS in Nigeria.
4. What are the factors that facilitate the role of Health Information Officers in the prevention and management of HIV/AIDS in Nigeria.
5. What are the factors that militate against the role of Health Information Officers in the prevention and management of HIV/AIDS in Nigeria.

1.5 Significance of the Study
The study is most likely to be the first of its kind to study the roles of Health Information Officers in the prevention and management of HIV/AIDS in Nigeria. The public will be intimated on the roles play by health information officers in the prevention and management of HIV/AIDS in the country. Both students and practicing Health Information Officers would find this work as a developing and training material. This study would also inform the international organization about the factors facilitating and militating against the roles of Health Information Officers for necessary improvement. The HIV/AIDS patient would also enjoy more effective and efficient services.

1.6 Scope of the Study

This study is limited to the survey of roles of Health Information Officers in the prevention and management of HIV/AIDS in Nigeria. Three health tertiary institutions were selected. The survey will be carried out in Obafemi Awolowo Teaching Hospital Ile-Ife, University College Hospital, Ibadan and Federal Medical Centre, Owo, all located in Southern Western Nigeria.

All higher Health Information Officers and technicians in selected institutions would be selected for study.

Operational Definition of Terms

HIV: Human Immunodeficiency Virus that attacks the immune system of an infected person.

AIDS: Acquired Immunodeficiency Syndrome which is a advanced form of HIV diseases.

Health Professional: One who uses skills and knowledge to treat or contribute to patients' treatment and promote wellness in a clinic environment.

Tertiary Health Institution: Hospital where the highest level of health care delivery system is being offered to the patient, training of different cadres of health personnel to high international standards and research into medical and health problems are being carried out.

Health Information Officers: health care professional specialized in creating, storing, processing, searching and using of health data and report.

Prevention of HIV/AIDS: measure taken to prevent HIV/AIDS rather than curing them or treating their symptom.

Management of HIV/AIDS: Systems of coordinated HIV/AIDS are interventions and communications.

IHVN: Institute of Human Virology Nigeria

GHAIN: Global HIV/AIDS initiative Nigeria

PEPFAR: Presidential Emergency Plan for African Relief.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

In this chapter related literature is reviewed under the following sub-headings

2.2   Prevalence of HIV/AIDS in Nigeria

2.3   Treatment and Management of HIV/AIDS

2.4   Health Records

2.5   Role of Health Information Professionals in Health Information Management in Nigeria

2.6   The Role of Health Information Officers in Hospitals

2.2 Prevalence of HIV/AIDS in Nigeria

In Nigeria, HIV is primarily transmitted through heterosexual means. Factors contributing to this include lack of information about sexual health and HIV, low level of condom use and high level of sexually transmitted diseases that make it easier for the virus to be transmitted. It has been reported that blood transfusion accounts for up to 10% of new HIV infections in Nigeria. There is a high demand for blood because of blood loss form surgery, child birth, road traffic accident and anemia and malaria. Not all Nigerian hospitals have the technology to effectively screen blood and therefore contaminated blood is often used. The Nigerian Federal Ministry of Health have responded by backing legislation that requires hospitals to only use blood from the National Blood Transfusion Service which has far more blood screening technology. The other main transmission route is mother-to-child transmission. (UNAIDS, 2009).

Globally, as at December 2008, 33.4 million people were living with HIV/AIDS of which 2.01 million were children less than 15 years of age and 31.3 million were adults. Estimated new infection for year 2008 stood at 2.4 million and around 2 million deaths were also estimated (UNAID, 2009).

In Nigeria as at 2008, 2.95 million people were living with HIV/AIDS with 1.23 million male and 1.72 million female. Annual HIV positive birth was 56,681. 280000 AIDS deaths were also recorded. There were 380,000 cases of new infections. Overall HIV prevalence was 4.6%. Total AIDS orphaned was 2.23 million; Ekiti State had the lowest prevalence rate of 1.0% while Benue State had the highest prevalence rate of 10.6%. All other states and FCT had prevalence greater than 1% (2009 National HIV Sero prevalence sentinel survey).

For each route of transmission there are things that an individual can do to reduce or eliminate risk. There are also interventions that have been proven to work at the community, local and national level. Wherever there is HIV, all three routes of transmission will take place. However, the number of infections resulting from each route will vary greatly between countries and population groups.

HIV prevention should be comprehensive, making use of all approaches known to be effective rather than just implementing one or a few select actions in isolation. Successful HIV prevention programmes not only give information, but also build skills and provide access to essential commodities such as condoms or sterile injecting equipment. It should be remembered that many people don't fit into only one "risk category". For example, injecting drug users need access to condoms and safer sex counseling as well as support to reduce the risk of transmission trough blood.

Anyone can become infected with HIV, and so promoting widespread awareness of HIV through basic HIV and AIDS education is vital for preventing all forms of HIV transmission. Specific programmes can target key groups who have been particularly affected by a country's epidemic, for example children, women, men who have sex with men, injecting drug users and sex workers. Older people are also a group who require prevention measures, as in some countries an increasing number of new infectious are occurring among those aged over 50.

- People who do not have HIV need interventions that will enable them to protect themselves from becoming infected.
- People who are already living with HIV need knowledge and support to protect their own health and to ensure that they don't transmit HIV to others – known as "positive prevention". Positive prevention has become increasingly important as improvements in treatment have led to a rise in the number of people living with HIV.

HIV counseling and testing are fundamental for HIV prevention. People living with HIV are less likely to transmit the virus to others if they know they are infected and if they have received counseling about safer behaviour. For example, a pregnant woman who has HIV will not be able to benefit from interventions to protect her child unless her infection is diagnosed. Those who discover they are not infected can also benefit, by receiving counseling on how to remain uninfected.

The availability and accessibility of antiretroviral treatment is crucial; it enables people living with HIV to enjoy longer, healthier lives, and as such acts as an incentive for HIV testing. Continued contact with health care workers also provides further

opportunities for prevention messages and interventions. Studies suggest that HIV-positive people may be less likely to engage in risky behavior if they are enrolled in treatment programmes.

Someone can eliminate or reduce their risk of becoming infected with HIV during sex by choosing to:

- Abstain from sex or delay first sex
- Be faithful to one partner or have fewer partners.
- Condomize, which means using male and female condoms consistently and correctly.

There are a number of effective ways to encourage people to adopt safer sexual behaviour, including media campaigns social marketing, peer education and small group counseling. These activities should be carefully tailored to the needs and circumstances of the people they intend to help. Safe male circumcision demands considerable medical resources and some cultures are strongly opposed to the procedure.

People who share equipment to inject recreational drugs risk becoming infected with HIV from other drug users who have HIV. Methadone maintenance and other drug treatment programmes are effective ways to help people eliminate this risk by giving up injected drugs altogether. However, there will always be some injecting drug users who are unwilling or unable to end their habit, and these people should be encouraged to minimize the risk of infection by not sharing equipment.

Needle exchange programmes have been shown to reduce the number of new HIV infections without encouraging drug use. These programmes distribute clean needles and safely dispose of used ones, and also offer related services such as referrals to drug treatment centres and HIV counseling and testing. Needles exchanges are a necessary part of HIV prevention in any community that contains injecting drug users.

Also important for injecting drug users are community outreach, small groups counselling and other activities that encourage safer behaviour and access to available prevention options.

Transfusion of infected blood or blood products is the most efficient of all ways to transmit HIV. However, the changes of this happening can be greatly reduced by screening all blood supplies for the virus, and by heat-treating blood products where possible. In addition, because screening is not quite 100% accurate, it is sensible to place some restrictions on who is eligible to donate, provided that these are justified by

epidemiological evidence, and don't unnecessarily limit supply or fuel prejudice. Reducing the number of unnecessary transfusions also helps to minimize risk.

The safety of medical procedures and other activities that involve contact with blood, such as tattooing and circumcision, can be improved by routinely sterilizing equipment. An even better option is to dispose of equipment after each use, and this is highly recommended if at all possible.

Health care workers themselves run a risk of HIV infection through contact with infected blood. The most effective way for staff to limit this risk is to practice universal precautions, which means acting as though every patient is potentially infected. Universal precautions include washing hands and using protective barriers for direct contact with blood and other body fluids.

Despite the evidence that they do not encourage drug use, some authorities still refuse to support needle exchanges and other programmes to help injecting drug users. Restrictions on pharmacies selling syringes without prescriptions, and on possession of drug paraphemalia, can also hamper HIV prevention programmes by making it harder for drug users to avoid sharing equipment.

Many resource-poor countries lack facilities for rigorously screening blood supplies. In addition, a lot of countries have difficulty recruiting enough donors, and so have to resort to importing blood or paying their citizens to donate, which is not the best way to ensure safety. In much of the world the safety of medical procedures in general is compromised by lack of resources, and this may both patients and staff at greater risk of HIV infection.

HIV can be transmitted from a mother to her baby during pregnancy, labor and delivery, and late through breastfeeding. They first step towards reducing the number of babies infected in this way is to prevent HIV infection in women, and to prevent unwanted pregnancies.

There are a number of things that can be done to help a pregnant woman with HIV to avoid passing her infection to her child. A course of antiretroviral drugs given to her during pregnancy and labour as well as to her new born baby can greatly reduce the chances of the child becoming infected. Although the most effective treatment involves a combination of drugs taken over a long period, even a single dose of treatment can cut the transmission rate by half.

A caesarean section is an operation to deliver a baby through its mother's abdominal wall, which reduces the baby's exposure to its mother's body fluids. This procedure lowers the risk of HIV transmission, but is likely to be recommended only if

the mother has a high level of HIV in her blood, and if the benefit to her baby outweighs the risk of the intervention.

Weighing risks against benefits is also critical when selecting the best feeding option. The world Health Organization advises mothers with HIV not to breastfeed whenever the use of replacements is acceptable, feasible, affordable, sustainable and safe. However, if safe water is not available then the risk of life-threatening conditions from replacement feeding may be grater than the risk form breastfeeding. An HIV positive mother should be counseled on the risks and benefits of different infant feeding options and should be helped to select the most suitable option for her situation.

In much of the world a lack of drugs and medical facilities limits what can be done to prevent mother-to-child transmission of HIV. Antiviral drugs are not widely available in many resources-poor countries, caesarean section is often impractical, and many women lack the resources needed to avoid breastfeeding their babies.

HIV related stigma is another obstacle to preventing mother-to-child transmission. Some women are afraid to attend clinics that distribute antiretroviral drugs, or to feed their babies formula, in case by doing so they reveal their HIV status.

To be successful, a comprehensive HIV prevention programme needs strong politic political leadership. This means politicians and leaders in all sectors must speak out openly about AIDS and not shy away from difficult issues like sex, sexuality and drug use.

An effective response requires strategic planning based on good quality science and surveillance, as well as consideration of local society and culture. All sectors of the population should be actively involved in the response, including employers, religious groups, non-governmental organization and HIV-positive people. Many of the world's most successfully HIV prevention efforts have been led by the affected communities themselves.

HIV epidemics thrive on stigma and discrimination related to people living with the virus and to marginalized groups such as sex workers. Their spread is also fueled by gender inequality, which restricts what women can do to protect themselves from infection. Protecting and promoting human rights should be an essential part of any comprehensive HIV prevention strategy. This includes legislating against the many forms of stigma and discrimination that increase vulnerability (UNAIDS, 2009).

Comprehensive sex education for young people is an essential part of HIV prevention. This should include training in life skills such as negotiating healthy sexual relationships, as well as accurate and explicit information about how to practice safer sex. Studies have shown that this kind of comprehensive sex education is more effective at preventing sexually transmitted infections than education that focuses solely on teaching abstinence until marriage.

There is now very strong evidence that male circumcision reduces the risk of HIV transmission form women to men by around 50%, which is enough to justify its promotion as an HIV prevention measure in some high-prevalence areas.

Some sexually transmitted infections – most notably genital herpes – have been found to facilitate HIV transmission during sex. Treatment these other infections may therefore contribute to HIV prevention.

2.3   Treatment and Management of HIV/AIDS

Antiretroviral Drug Treatment

This is the main types of treatment for HIV or AIDS. It is not a cure, but it can stop people from becoming ill for many years. The treatment consists of drugs that have to be taken every day for the rest of a person's life.

The aim of antiretroviral treatment is to keep the amount of HIV in the body at a low level. This stops any weakness of the immune system and allows it to recover from any damage that HIV might have caused already. The drugs are often referred to as antiretroviral therapy. This therapy involves taking two or more antiretroviral drugs at a time which is called combination therapy. Taking a combination of three or more anti-HIV drugs is sometimes referred to as Highly Active Antiretroviral Therapy (HAART). The patient's need to take more than one drug at a time because if only one drug was taken, HIV would quickly become resistant to it and the drugs would stop working. Taking two or more antiretroviral at the same time vastly reduces the rate at which resistance would develop, making treatment more effective in the long term.

PMM and PME

Another component and management of HIV/AIDS is Patient Management and Monitoring (PMM). This is a system that routinely collects longitudinal clinical/health data on patients. It provides a evidence based and valuable information for the care provider. In conjunction with this Program Monitoring and Evaluation (PME) which is a system that collects routine data on services provided in programme implementation

and aggregate the same, and also provides timely reports to program managers and donors.

PMTCT

PMTC refers to Prevention of Mother To Child Transmission

The minimum package of services for preventing mother-to-child transmission (MTCT) of HIV includes at least all four of the following services. Counseling and testing for pregnant women, ARB prophylaxis to prevent MTCT, Counseling and support for safe infant feeding practices and family planning counseling or referral.

Palliative Care

Palliative care is patient and family-centered care which optimizes the quality of life of adults and children living with HIV through the active anticipation, prevention and treatment of pain, symptoms and suffering form the onset of HIV diagnosis through death.

TB/HIV Care

This indicator will measure the implementation of the recommended activity to integrate TB and HIV activity and reduce the burden of TB in HIV-infected clients. In this component, HIV infected patients with tuberculosis are identified and placed on appropriate TB treatment in order interrupts TB transmission, and reduces the burden of TV among HIV infected clients.

Adherence Counselling

This refers to how closely patients follow a prescribed treatment regimen. It includes patients' willingness to start treatment and their ability to take medications exactly and correctly as directed. Adherence affects how well anti-HIV medication decreases your viral load and helps prevent drug resistance.

Laboratory Services

In the laboratory series of tests are carried out to monitor the clients' progress and the laboratory tests/services that are offered to the client in this programme area include: HIV Serology, Hematology, Microbiology, PCR Viral Load and PCR infant diagnosis.

Condoms & Other Prevention (C & OP)

Other behaviors change beyond abstinence and/or being faithful includes the targeting of behaviors that increase risk for HIV transmission such as engaging in casual sexual encounters, engaging in sex in exchange for money or favors, having sex

with an HIV positive partners or one whose status is unknown using drugs or abusing alcohol in the context of sexual interactions, and using intravenous drugs.

Other high-risk persons or groups include men who have sex with men and workers who are employed away from home. This could include targeted social marketing and/or the promotion of condoms to these high risk groups.

Orphans and Vulnerable Children (OVC)

This consists of management of children between 0-17 years old, who is either orphaned or made more vulnerable because of HIV/AIDS. This could be because such children are HIV positive, live without adequate adult support, live outside family care and are marginalized, stigmatized or discriminated against.

2.4   Health Records

Health records are essential component in the effective management of patient health care. Good health care generally means a good health record while an inadequate health record may reflect poor medical care.

Huffman (1976) described health records as collection of health information into a jacket or case folder. According to her, health record or health information is the who, what, why, where, when and how to patient care during hospitalization.

Health records stored contain the knowledge concerning the patient and his care. According to Huffman (1985) Health Records on every person who has been admitted to or treated in a hospital or other healthcare facility must be maintained. This may be as an in-patient, ambulatory care patient, emergency patient, or as a home care patient. The health records document the health care experience of the patient. The documents on the other hand should contain the information needed to plan, provide and evaluate the care given to the individual which serves as a tool for communicating information to all health professionals who deal with the patient and it also contributes to the continuity of patient care.

Mogli, (2001) defined health record as an orderly written document encompassing the patient's identification data, health history, physical examination findings, laboratory reports, diagnosis, treatment and surgical procedures and hospital course. He stated that when the record is complete, it should contain sufficient data to justify the investigation, diagnosis, treatment length of hospital stay, results of care, and feature courses of action. He also stated that the skills of all health professionals are required to give complete care to the patient.   The content of health records is developed as a result of the interaction of the members of the health care "team" who

use it as a communication tool. The team is an interdisciplinary group composed of physicians, nurses and numerous allied health personnel.

They inform and advise each other through their entries in the record about their findings. It is necessary that there be prompt recording of observation, treatment and care by all who contribute to the care of the patient. Therefore, a good health record in a hospital or any other health institution is not a coincidence. The health records staff must always be trying to get cooperation from doctors, nurses and other members of the health team towards the prompt completion of patient's records.

In other words, a good health record should:
* identify clearly the person about whom it is written:
* be legible and able to be understood by anyone likely to use it;
* be accurate, concise and logical in its organization;
* be consistent in lay-out and in the size of papers used in it
* identify the people contributing to the record so that they can be asked for further information if necessary.
* be promptly retrievable when required
* provide a means of communication among physicians, nurses and other allied health care professional.
* serve as an easy reference for providing continuity in patient care
* furnish documentary evidence of care provided in the health care facility
* serve as a information document to assist in the quality review of patient care
* protect the patient, physician, as well as the health care institution and its employees in the event of litigation.
* render clinical can administrative data required for budgeting, management, service development, planning, review, medical education and medical research.

2. 5   Role of Health Information Professionals in Health Information Management in Nigeria

The following are the code of ethics for the health information professionals as formulated by Nigeria Health Records Association.
* Place service before material gain, the honour of the profession before personal advantage, the health and welfare of patient above all personal and financial interests, conduct himself in the practice of the profession as bringing honour to himself, his associates and to the health information profession.

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- reserve and protect the medical records in his custody and hold inviolate the privileged contents of the records and any other information of a confidential nature obtained in his official capacity, taking due account of applicable status and of regulations and policies of his employers.

- serve his employer loyally, honourably discharging the duties and responsibilities entrusted to him, and give due consideration to the nature of these responsibilities in giving his employer notice of intent to resign his position.

- refuse to participate or conceal mythical practices or procedures.

- report to the proper authorities but disclose to no one else any evidence of conduct or practice revealed in the medical records in his custody that indicate possible violation of established rules and regulations of the employer or of professional practice.

- preserve the confidential nature of professional determination made by the staff committee which he serves.

- accept only those fees that are customary and lawful in the area for services rendered in his official capacity.

- avoid encroachment on the profession of assuming the right to make determination area outside the scope of his assigned responsibilities.

- strive to advance the knowledge and practice of medical record science including continual self-improvement in order to contribute to the best possible medical care.

- participate appropriately in developing and strengthening professional manpower and in representing the profession to the public/.

- discharge honourably the responsibilities of any association post to which appointed or elected, and preserve the confidentiality of any privileged information made known to him in the official capacity.

- State truthfully and accurately his credentials, professional education and experience in any official transaction with the Nigeria Health Record Association and with any employer or prospective employer.

2.5.1 Health Information Services

Mogli, (2001) broadly classified functions carried out in health information services by Health Information Officers into four categories which are as follows:

i.   out patient

ii.   accident and emergency (casualty) service

iii.   in patient

iv.   Medical record library

Functions of each unit section are explained as follows:

Outpatient service

The outpatient medical record services are classified into two sections:

i)   **Central Registration and Appointment:** This section functions around the clock throughout the year with three shifts in operation. The Health Information Officer in this service performs the following functions.

-       control of hospital numbers

-       preparation of pre-numbered folder

-       registration of new cases

-       maintenance of patient master index

-       registration of follow-up appointment cases

-       supply of records to outpatient clinics

-       supply of records to outpatient clinics.

ii)   **Outpatient Clinics:** The Health Information Officer posted in this unit performs the following functions.

-       collection of new and follow-up registered patient records including X-rays.

-       maintenance of account of patients treated in the clinic

-       maintenance of account of patients referred to and received form other clinics, investigations and admissions.

-       collection and return of records to the medical record files.

Accident and Emergency (casualty) Service: This unit functions around the clock through the year with three shifts in operation. The Health Information Officer in this service performs the following functions, the function of third shift of the admissions office are also undertaken.

-       control of casualty numbers

-       preparation of pre-numbered folders

-       registration of casualty cases

-       referral of patients for follow-up appointments, admissions, and so on

-       registration of medico-legal cases

-       collection and mounting of investigation reports

-       collection of statistics and filing of A/E records.

In-patient Service

The in-patient Health Information Services are classified into two sections:

i)   **Admission Office:** this office functions around the clock throughout the year. Health Information Officer are posted in three shifts to perform the following functions. In small hospitals, the work of the third shift can be transferred to casualty section.

-       maintenance of waiting list of patients

-       registration of admissions and discharges

-       maintenance of the bed occupancy board

-       secures patient property.

ii)   **Ward:** The work relating to Health Information in the word may be performed by the ward nurse, or ward clerk (MRT). The following are the main functions:

-       registration of admissions and discharge

-       receipt and mounting of investigation reports in the appropriate records

-       maintenance of accounts of bed position

-       scheduling of appointments for follow-up cases

-       preparation and submission of ward daily census reports.

2.5.2   Health Information Library Services

The Health Information Library (especially the filing and retrieving units) function around the clock. Three staff are posted on three shifts and broadly perform the following functions.

Processing of outpatient records includes

-       receipt of records form outpatient clinics and arrangement of these records in a prescribed standard order

-       receipt and mounting of investigation reports in appropriate records

-       checking for deficiencies inpatient records.

Processing of in-patient records include

-       collection and checking of daily ward census reports along with the discharged patient records and collection of late investigation reports.

-       analysis of discharged patient records

-       assembly of records in a prescribed standard order and checking for deficiencies.

-   coding and indexing of completed records as per the latest revision of International Classification of Diseases (ICD) by World Health Organization (WHO).

Collection and Analysis of Hospital Statistics includes

-      to collect statistics of outpatient

-      to collect statistics of impatient

-      to collect statistics of accident and emergency

-      to collect statistics of administrative statistics

-      To collect analysis these statistics in order to prepare reports on a daily, monthly and yearly basis.

2.5.3   Formulation of Standard and Policies in Health Information Services.

Health Record department with clearly laid down written medical record standards should be developed in accordance with the institutional mission, goals, objectives and resources and to meet standards proper comprehensive medical record policies and procedures.

According to Huffman (1980) a standard is a criterion against which performance can be compared. Standards are important in planning schedules and determine staffing needs.

Mogli, (2001) stated that standards are generally, a measure set by a competent authority as the rule for measuring quantity or quality. Conformity with standards is usually a condition of licensing, accreditation, or payment of service.

Health Information Officers must maintain medical records that are complete and readily accessible for prompt retrieval of information including statistical data. Adequate patient case records are maintained for all inpatients, out patients, and emergency patients. All significant clinical information pertaining to the patient are incorporated into the patient's medical records. The content of the medical records must be sufficiently detailed and organized to enable the medical care team responsible for the patient to provide continuity of care, to determine at any time the status of the patient, and to review the diagnostic and therapeutic procedures performed and the patient's responses to treatment. The patients health record must contain sufficient information to identify the patient, support the diagnosis, and the justify the treatment and end results.

He stated further that the impatient medical record must include at least the following:

- A through medical history completed within the first twenty-four hours of admission to inpatient services.

- A physician assessment completed within the first twenty-four hours of admission to inpatient services.

- Evidence of appropriate informed consent

- Reports of pathology and clinical laboratory examinations as well as radiology and nuclear medicines examinations.

- Consultation reports and progress notes

- Operative and anesthesia reports

- A discharge summary written at the termination of hospitalization concisely recapitulating the reason for hospitalization, significant findings, and procedures performed and treatments rendered the condition of the patient on discharge and specific instructions given to the patient and family.

Medical records must be confidentially assured, currently authenticated, legible and complete. The medical record is the property of the hospital get is maintained for the benefit of the patients the medical staff, and the hospital. The hospital is responsible for safeguarding both the record and the information contained within it against loss, defacement, tempering, or use by unauthorized individuals. The records of discharged patients must be entirely completed within thirty days following discharge.

2.5.4 Medical Records Policies

Apart from having clearly laid down written medical record standards, there must be availability of hospital general rules and regulations.

Mogli, (2001) highlights how some aspect of medical records should be maintained. These are:

Registration System – A central registration system with 24 hours service should ideally be maintained for all out patients and inpatients. With this system, each patient will have one unit record and one permanent number used for all episodes of care.

A separate registration for accident and emergency patients with 24 hours service should also be provided. On each visit to the casualty department a new record is generally created and a new A & E number is usually assigned.

Numbering System – Six digits numbers are generally used for out patients and inpatients starting from 000001 and continuing to 999999. Health Information Officer ensures that new patient receives a new hospital number only at the first time of registration. The causality department also begins numbering with 000001 on first day

of the year and continues this sequence until the end of a given year. On the first day of the next year, a new numbering begins.

- **Patient Master Index (PMI)** – Is created with the important identification information for each new patient registered in the central registration area and filed alphabetically in the manual system and electronically through computer.

- **Patient ID and Appointment Card** – An identification information card is given to each new patient registered for out patient or impatient services.

- **Appointment system** – The appointment system should be practiced in all referral/specialty hospitals. All patients should observe the appointment system except labor and emergency cases.

- **Investigation Reports** – Diagnostic reports of outpatients is received and mounted by the Health Information Officer in the respective patient records. Inpatient diagnostic reports should be received and mounted on the ward by ward clerk or nurse.

- **Health center** – The health center or clinic generally directs patients to the hospital with a referral letter. The hospital and health center should develop a clear referral and appointment system for both new and established patients.

- **Referral of patient** – Patients referred from either outside or within the hospital should receive three referral copies, the first two copies are presented to the hospital by the patient whereas the third copy is retained by the referring health center or clinic after treatment the first copy is forwarded to the health center or hospital as deed back information and the second copy is retained in the hospital. All three copies of the referral from patients referred within the hospital become part of main patient file.

- **Outpatient Clinics** – the names of all outpatient clinics with the names of the clinic chiefs in the hospital should be exhibited in the main entrance of the outpatient department and in each clinic, the name of the chief consultant should also be exhibited.

- **Accident and Emergency** – There are three forms designed for accident and emergency services which are maintained by Health Information Officer, first copy is retained in the casualty department, the second copy is presented by the patient in the pharmacy to obtain mediations and the third copy is retained by the patient. If this patient is admitted to either an outpatient or an inpatient service, the second and third copies become part of the main patient file. The first copy however is retained in the casualty department. If a patient has a unit

record in the hospital and the casualty medical officer desires to review it, the medical record department should forward the record to him. All diagnostic investigation reports of a casualty patient are attached to the casualty form. If a patient is referred as either an outpatient or an inpatient, the reports become part of main patient file. All of the casualty record including the X-rays must be kept for one year in the A/E department. Later they may be transferred to the medical record department.

- **Admission Office** – the admission office functions around the clock and is responsible for the admission of patients, for the maintenance of the bed occupancy rate and for the safe keeping of patient's property in the absence of patient relatives.

- **Direct Admission** – the ward manager in charge is responsible for registering the case in the admissions office within two hours of the patient's admission on to the ward.

- **Absconded patients –** Information about absconded patients must be recorded in the patient's file with details concerning the data and time the patient was discovered to the missing from the ward. The treating physician should note and sign the record accordingly. The matter must also be communicated to the police through hospital social worker or Public Relation Officer.

- **Against Medical Advice –** The patient who leaves against medical advice should be considered as discharged. It should be ensured that the signature of the patient or his/her nearest relative is obtained in the prescribed form.

- **Declaration by the patient –** Any patient, who wishes to make a declaration before his death, should have such statements recorded in the patients file in the presence of a magistrate. In the absence of a magistrate, the declaration may be recorded in the presence of three persons including the treating physician, nurse, and the hospital administrator or his representative.

2.6   Role of Health Information Officers in Hospitals

The main purpose of an operational policy is to guide the functions of the medical record department effectively and efficiently. This is a directive for members of the staff in the performance of their day to day tasks according to a predetermined schedule.

Mogli, (2001) enumerates about some of the activities encompassed by an operational policy, which are as follows:

-       **Working Hours and Shifts** – These following units of the medical record department function around the clock.

- Accident and Emergency registration

- Central registration

- Admissions office

- Medical record filling area (library)

The 24 hours service is divided into three shifts with most medical record personnel working 48 hours per week.

-       **Monthly Duty Rosters (Schedules) –** For effective utilization of personnel, a monthly duty roster is prepared by the head of unit or department to ensure that in every month the staff are rotated from one section or unit to another with the exception of the specially trained and supervisory staff. The supervisor and specially trained staff are rotated once in every three to six months. The monthly duty roster should include, name of the staff person, his or her designation. Place of work, main duties and responsibilities, and the person to whom he or she should report.

-       **Implementation of Instructions –** Decisions of the hospital board and medical record committee in which health information officer participate significantly in making, relating to the functioning of the hospital and the medical record department is circulated, discussed, demonstrated, or explained among the staff as and when required. This is essential to maintain a feeling of involvement of the staff in the day to day administration and sharing of responsibilities.

-       **Organizational Chart –** An organizational chart indicating the functions and lines of authority is clearly established by senior health information officer at managerial level so that three is no ambiguity in understanding either the lines of authority or the duties and responsibilities of staff members. It is necessary that job descriptions be explicitly written for every staff person.

-       **Training of new staff:** an intensive training of one or two week duration is organised for new employed staff by Chief Health Information Officer before they are actually put to work. The new staff members are first introduced to all the personnel of the department and later to the important units of the hospital which maintain a close relationship with the Health Information department. In the initial training stage, staff members are posted under an experienced senior

supervisor who in term must impart "on the job training" and indoctrinate the new employee in observing the correct policies and procedures.

- **Department meetings** – this is conducted monthly with all department staff to review the day to day work carried out within Health Information department.

- **Department Rounds by the Medical Record Officer -** In order to experience for him the type of service rendered by the staff, the head of Health Information Department should make periodic visits to different sections of the department which are functioning under his supervision and control. There should be two types of rounds. The first type is made in accordance with a preplanned schedule; the second type is a surprise round to be made, on any day at any time, at least twice each week.

- **Submission of Reports** – Health Information Officer schedules reports which are forwarded promptly at the proper time, which enhanced effective admission decision making.

- **Equipment, furniture and supplies** – Providing all units of the medical record department with suitable equipment and furniture enables the staff to perform their duties effectively.

- **Communication** – The Health Information department establishes a good communication system within the department as well as between other departments also.

- **Supervision of transcription of medical Report** – The Health Information Officers supervise the work of transcriptions which include the typing discharge summaries, operative reports, treatment records, and other medical report.

- **House Keeping and Physical Environment**   Health Information Officer ensures department is kept clean and tidy and the office environment is conducive to productive work. They also see to temperature and humidity control, and adequate ventilation and lighting which help in enhancing work productivity.

- **Protection from fire** – Health Information Officer ensures that the entire department, especially the filing area of records and X-rays, are protected from fire by installing, in key points, adequate fire extinguishers. Important documents such as medical legal cases are preserved in "fire-proof" cabinets. Health Information Office also makes sure electrical cords are covered to avoid short circuiting.

- **Infection control** – Adequate measures are taken to protect employees from infections and other disease.

- **Disaster and Emergency Plans** – The Health Information Officer is generally a member of hospital disaster and emergency planning force and the responsibilities of health but department in a disaster are clearly set forth in such a plan. Therefore, Head Information Officer are oriented to be plan in order to meet exigencies. Similarly, a disaster and emergency plan for the Head Information department are prepared, and the staffs are trained to meet these emergencies.

2.6.1 Health Records Registration and Creation

Registration is the process of records creation and its recording and its recording in an appropriate finding aid, such as a register, index, computer database etc. Records are crated and included in a registered file system to provide formal evidence of the business transactions of an organization. Their purpose is to capture, maintain and provide access to evidence of transactions over time in accordance with accountability and business practices.

According to Osundina (2005) health records registration is defined as the act of maintaining an official list of all the written record, which are regularly kept in a prescribed register of all the patients who have ever come in contact with the hospital. Registered patients are usually issues with a unit number, which serves as hospital number to the record of the patient.

Patient registration falls into two fairly distinct procedures, that for the inpatient and the outpatient.

Outpatient Registration: the majority of registration takes places in the outpatient department by direct enquiry with the patient on first attendance at the hospital. The registration desk is the patient first point of contact with the hospital and the importance of first impression cannot be over emphasized. The Health Information Officer initiates the health record of the patient. They also ensure that this record and the referral letter (if any) precede the patient into the clinic. The following identification details could be found in the patient identification form among others.

Hospital Number: This is pre-stamped on the card by Health Information Officer clearly identifies the patient records as far as possible.

Date of Birth/Age: This provides a positive identification of the patient where probably two parents bear the same name Health worker ensure that correct date of b/age is

obtained during registration. The doctor on the other hand uses it to determine dosage or quantity of drugs to use accordingly to patient's age.

Sex: Some researchers would like to know some particular sex group for his research and also for the sake of compiling a general outpatient statistics. So Health Information Office should endeavour to collect this vital information

Occupation: Some diseases are directly associated with the type of occupation of the patient which can assist for prompt diagnosis of the patient. This information is collected by Health Information Officer during initiation of patient record.

Nationality Tribe/Race: It determines to facilities an effective communication between doctors paramedical staff and the patient, which also good for researchers as materials. Health Information Officer design registration card and folders to capture this information.

Date/time: Date helps in two ways in police cases; the police, the lawyer and the magistrate are all interested in the data and time of the incidence. Researchers are interested in a particular period of incidence e.g. month of pregnancy onset of diseases. Health Information Officer records this important data as soon as patient enters their department for registration.

2.6.2 Coding

Coding, according to Mogli (2001) is defined as the translating of narrative descriptions of diseases, injuries and procedures into alphanumeric codes. Precisely, the process of assigning numbers of medical and health terms.

Health Information Officers assign International Classification of Diseases (ICD) code number diagnosis and Classification of Surgical Operations (CSO) code numbers of surgical procedures respectively.

Coding by Health Information Officer is done in order to group conditions and procedures that are similar for statistical tabulation statistics generated from this source is use for decision making in the following process:
- Plan appropriate health services
- Classify patterns of disease in a health care facility
- Forecast health needs of communities, region and nations
- Study epidemiology (incidence rates of diseases etc)
- Standardize reporting systems for easy assimilation
- Provide teaching material for medical education
- Evaluate health care with appropriate measures.

2.6.3 Health Information Unit (Statistics)

Health Information Officers carry out important cardinal duties here by performing all the activities involved in data capturing/collection, verification, classification, sorting, manipulating, summarizing, storage, reproduction and dissemination of meaningful information to various levels of users, the processed data and interpreted numerically and graphically or both for policy formulation and other decision making. Some of the common information processed are:

- Out patient data (GOPD, COPD, A& E, staff and clinic for both new and old patient.
- In-patient services of admissions discharges, death and transfers
- Health data on surgical procedure classified into major minor or intermediate.
- NPI, physiotherapy, Radiology, ENT, Dental Ophthamology, Onology and other service procedures.

2.6.4 Health Record Retrieval and Tracking by Health Information Officer

International Council on Archives (ICA) said that records are created and captured in order to be used; therefore record keeping systems must include effective mechanisms for retrieving records and tracking their whereabouts and use. Health Information Officer put in place effective procedures swift retrieval, an audit trail of use and, for paper records, their accurate return.

Health Information Officers use individual, multipurpose registers and book out book for tracking of case notes which provide for the transfer of records between individuals when the record is not first returned (and tracked) back to the storage system.

Mogli (2001) was of the opinion that some medical records have to be retained for more than 10 years and some for even an indefinite period because of the important purpose they serve, namely.

- To meet the needs of patient
- To assist in protecting the legal interest of the patient, the attending staff and the hospital and to serve as proof of work done.
- To assist in the teaching of medical and paramedical staff and to carry out medical research

He therefore, recommended the following measures for proper preservation of medical records.

2.6.5 Preservation of decay and role in the health Records Library: Health Information Officers arrange for proper cross-ventilation and provision for an adequate number of electric fans/air-conditioners and exhaust fans to ensure good air circulation. Regular dusting of records with the help of vacuum cleaners is also necessary to keep them clean and tidy.

Protection from insect attack: Wooden shelves are kept 5" away to the wall to prevent destruction by white ants, skeleton or closed steel rack preferred for filing medical records. Dark and dingy places, crevices, crack, loose joints in floor and walls and presence of edibles in the record room are discouraged to prevent breeding of insect and other pests. Fumigation are done with only fumigants which do not have any dexterous effect on paper and other records materials.

Atmosphere Pollution: (Acidic gases and dust) records and register are prevented from acidic gases and dust because they have deteriorative effect on quality of paper which might likely resulted to record mutilation.

Safety measures against fire in records room: Smoking, lighting of match stick or carrying of an open flame and storage of chemicals in a record room are prohibited and adequate fire extinguishers should be fixed at convenient places. All electric wires should run through conducts. Windows and ventilators should be covered with wire-net frames as safeguard and against sabotage or pilferage.

Care of Handling: Health Information Officer ensures proper preservation and storage which will be in vain if care is not observed in handling the record. Unauthorized person should not be allowed to handle to have access to records.

2.6.6 Records Retention

According to Wikipedia, the free Encyclopedia (2005) record retention refers to the practice of retaining copies of business or personal records over time. It is important for small business owners not only to keep good records, but also to know which ones to retain and for how long. The retention period of a document is an aspect of records management. It represents the period of time a document should be kept. At the termination of the retention period, the document is usually destroyed.

2.6.7 Record Disposition

Ira A., Penn (2003) explained that records are authorized for disposal in accordance with a records retention schedule, whether the records are stored in the officer area or in a records centre. In the hospital. Health Information Officer select and supervise the disposition of health information.

2.6.8 Records Disaster Recovery Programme

Alegbeleye (2007) defined disaster as event when things are unexpected happened and the consequence can be destructive or unpalatable. Health Information office designs records disaster recovery programme in the hospital.

According to Ira A., Penn (2003) disaster can strike anywhere, at anytime, that nature deals its blows with no respect for person, place, or thing, accidents, by definition, are unpredictable, sabotage or terrorism is not necessary somebody else's problem, he said. He highlighted series of disaster recovery programme that can affect any and all information (records) in an organization as follows:

- Minimize disruption of normal business operation
- Prevent further escalation of this disruption.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Introduction

The purpose of this chapter is to state the methods used in carrying out the research. It is imperative that a research must follow or have a pattern.

According to Popoola (1993) "the success and acceptability of results obtained from any research work depend largely on the procedure or methodology adopted in executing it". It is also important to note that for proper and accurate data analysis and conclusion to be made, the use of proper method when carrying out a research work is highly essential.

The chapter will describe the research design, study population and sample, sampling techniques, instrumentation, validation of instrument for data collection, methods of data presentation and analysis.

According to Ofo (2001), the objectives of the descriptive survey research are:

1)   to collect information order to describe an existing phenomenon

2)   to identity problems

3)   to make comparisons and systematic evaluations

4)   to know efforts others have made to solve similar problems, and by so doing benefit from the such efforts which may be of assistance in future plan and decision makings.

3.2   Research Design

The study design adopted for this research work is the descriptive survey method. The reason for the adoption of this technique is to analytically and qualitatively investigate the population of study, organised the data gathered, summarise and present it in a statistical table using simple percentage analysis. This technique involves observing the variables of study. Aina (2002) describes survey research as a process that involves a systematic and comprehensive collection of information about the opinions, attitudes, feelings, beliefs and behaviour of people. Hence the need for the adoption of descriptive survey.

3.3 Population of the Study

The population of this study consists of 109 Health Information Officers in University Teaching Hospital in Obafemi Awolowo University Teaching Hospital, Ile-Ife, University College Hospital, Ibadan and Federal Medical Centre, Owo.

Table 3.1: **Heath Information Officers in the Selected Tertiary Health Institution**

1.	O.A.U. T.H.C. Ile-Ife	26
2.	U.C.H. Ibadan	28
3.	F.M.C. Owo	55
	Total	109

3.4 Sample size and Sampling Techniques

The entire study population was selected for the study in each of the institutions selected. The participants for the study were 109 (One Hundred and Nine) Health information Officers from Obafemi Awolowo University Teaching Hospital Complex, Ile-Ife, Osun State, University College Hospital, Ibadan and Federal medical Centre Owo, Ondo State. Thus, the total enumeration sampling technique was used for the study.

3.5 Research Instrumentation

The questionnaire is the main instrument applied for this research project. The questionnaire has six sections namely:

The first part (Section A) sought personal information from the respondents, such as name of institution, gender, sex, section/unit, educational qualification and age. Section B requested information on available measures for the prevention and management of HIV/AIDS in Nigeria as applicable in the respondent's health institutions; Section C sought information on roles of Health Information Officers in prevention of HIV/AIDS. Section D inquired of the roles of Health Information Officers in management of HIV/AIDS.

Section E dealt with the factors militating against the role of Health Information Officers in prevention and management of HIV/AIDS. While Section F sought information on the factors facilitating the roles of Health Information Officers in prevention and management of HIV/AIDS

3.6   Validation of Research Instrument

The reliability of the Research instrument was reviewed by the researchers, supervisor and experts in the area of study. The corrections and suggestions of the supervisor led to modification of some items in the questionnaire and the validation of the instrument.

3.7   Reliability of the Instrument

The reliability of the instrument was tested by the consistency of response, which was evaluated by restating a question, in slightly different form at a later time during the questionnaire administration shall be done by the research.

3.8   Procedure for Data Collection

The researcher will pass through the administrative protocol of those health institutions selected for the researcher study. The data collection exercise will last for a period of 2 weeks with the aid of research assistant that involved in distribution and collection of questionnaire. 109 questionnaire will be administered.

3.9   Method of Data Analysis

Data generated will be analyzed by using descriptive statistics such as frequency tables and percentages.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1   Introduction

This chapter deals with the presentation, analysis, and interpretation of data. The chapter presents demographic characteristics of the respondents and provides answers to the research questions.

4.2   Data Presentation

This section is used to discuss frequency of respondents from the selected tertiary health institutions (distributions of demographic characteristics). The data collected were presented in tabular form.

4.2.1   Distribution of Respondents by their tertiary health institutions

The respondents were asked to indicate their tertiary health institutions. The responses are presented in Table 1

Table 1: Distribution of respondents in selected tertiary health institutions

Institutions	Frequency	Percentage
FMC. Owo	46	50
OAUTHC. Ile-Ife	22	23.9
UCH, Ibadan	24	26.1
Total	92	100

Table 1 shows total number and percentage of respondents from each selected tertiary health institution. Out of one hundred and nine (109) copies of questionnaire distributed only ninety two (92) were retrieved. From FMC. Owo, there 46 respondents, representing 50% of total; OAUTHC has 22, representing 23.9% and UCH has 24 respondents, representing 26%.

4.2.2   Distribution of Respondents by Gender

The respondents were asked to indicate their gender. The results were presented in Table 2.

Table 2:   **Distribution of respondents by Gender**

Gender	Frequency	Percentage
Male	38	41.3
Female	54	58.7
Total	**92**	**100**

Table 2 shows that 58.7% which represents the majority of the respondents in the selected tertiary health institutions were female Health Information Officers while 41.3% were male. This implies that Health Information Officers in those health institutions are made up of skilled male and female which does not give room for gender discrimination.

Distribution of Respondents by educational qualification

The respondents were asked to indicate their educational qualification. The results are presented in Table 3

Table 3: Distribution of respondents by educational qualifications

Educational qualification	Frequency	Percentage
Certificate	33	35.9
OND	15	16.2
HND	40	43.5
MHIM	3	3.3
Others	1	1.1
Total	**92**	**100.0**

Table 3 shows the respondents by their educational qualification, HND carried majority of 43.5% while others carried the least of 1.1%. Certificates/OND represents 52.1%. Out of the people with HND, (40+ 3) only 3 had advanced their study. The overall result above indicates that Health Information Officers in the selected health institutions are actually professionals.

Distribution of Respondents by Age

The respondents were asked to indicate their age group. The results are presented in Table 4.

Table 4:   Distribution of respondents by age

Age group	Frequency	Percentage
21-35	10	10.9
26-30	39	42.4
31-35	23	25.0
36-40	3	3.2
41-45	8	8.7
46 and above	9	9.8
Total	**92**	**100**

Table 4 shows that 42.4% which is the highest percentage score of respondents fall within the age category of 26-30 years followed by 25% of the respondents that fall within the category of 31-35 years. 36-40 years which has 3.2% is the lowest. This implies that many Health Information Officers are young and have spent few years in service. Experienced people who are above 41 years are responsible for guiding the younger ones.

Distribution of Respondents by Marital Status

The respondents were asked to indicate their marital status. The results are presented in Table 5.

Table 5:   Distribution of the respondents by marital status

Marital Status	Frequency	Percentage
Married	54	58.7
Single	38	41.3
Widow	0	0
Total	**92**	**100.0**

Table 5 shows that 58.7% of Health Information Officers in those selected hospitals are married while 41.3% are single. No widow or widower case was recorded. This implies that greater percentage of Health Information Officers is married.

The respondents were asked to indicate their length of service. The results are presented in Table 6.

Table 6:   **Distribution of respondents by length of Service**

Length of Services	Frequency	Percentage
0-9 years	71	77.2
10-19	10	10.9
20-29	6	6.5
30 and above	5	5.4
Total	**92**	**100.00**

Table 6 indicates that 77.2% of Health Information Officers in those selected tertiary health institutions have spent less than 10 years in service while 5.4% have spent more than 30 years. This means that there were massive employments of Health Information Officers in the last 9 years in those selected institution.

4.3.1   Research Questions

Research Question 1

What are the available services for the prevention and management of HIV/AIDS in Nigeria?

Table 7:   **Responses to Availability of various services for the prevention and management of HIV/AIDS in Nigeria**

Services	Always	Most of the time	Sometimes
VCT	92 (100%)	0	0
PMTCT	92 (100%)	0	0
Adherence counseling	92 (100%)	0	0
Laboratory	71(77%)	21(23)	0
Condon & Other prevention (C & Op)	66(72%)	26(28%)	0
Orphan and Vulnerable (OVC)	53(58%)	0	39(42%)
Antiretroviral therapy (ART)	92(100%)	0	0
Patient Management and Monitoring (PMM)	92(100%)	0	0
Palliative care	79(86%)	13(4%)	0
Tuberculosis /HIV Care	92(100%)	0	0
Pharmacy	92(100%)	0	0
Others (specify)	0	0	0

Research question 1 seeks to know the various services available for the prevention and management of HIV/AIDS in Nigeria. The result from Table 7 shows that voluntary counseling and testing (VCT) prevention of mother to child transmission (MPTCT), adherence counseling, Antiretroviral therapy (ART), Patient Management and monitoring (PMM) and Tuberculosis/HIV care are services that are always available 92 (100%) according to responses. Laboratory, Pharmacy, Condom and other prevention (C & OP) and Palliative care also had 92 (100%) responses. Only Orphan and vulnerable services 53 (58%) has always, and 39 (42%) has sometimes. This result affirms that all the above stated services are available for the prevention and management of HIV/AIDS in those selected tertiary health institutions.

Research Question 2

What are the roles of Health Information Officers in the prevention of HIV/AIDS in Nigeria?

Table 8: Responses to the roles of Health Information Officers in the prevention of HIV/AIDS in Nigeria.

(SD = Strongly Disagree, D = Disagree, UD = Undecided, A = Agree, SA = Strongly Agree

Roles	SD	D	UD	A	SA
I generate information useful for prevention of HIV/AIDS	0	0	0	0	92%
I participate in voluntary counseling and testing	0	0	0	14((15%)	78(85%)
I promote the use of condom	0	0	0	20(22%)	72(78%)
I preach abstinence as a means of preventing HIV/AIDS	12(13%)	0	0	0	80(87%)
I preach faithfulness	0	0	7(8%)	15(16%)	70(76%)
I educate HIV/positive mothers on the importance of prophylaxis	0	13(14%)	10(11%)	19(21%)	50(54%)
I generate information that aids in tracing defaulters	2(2%)	1(1%)	0	18(20%)	71(77%)
I participate in outreach programmes	1(1%)	2(2%)	10(11%)	17(18%)	60(68%)
I do nothing in preventing HIV/AIDS	92(100%)	0	0	0	0
I educate HIV positive individual on the need to live positively	0	0	0	25(27%)	67(73%)

Research question 2 seeks to know the variety of roles play by Health Information Officers in the prevention of HIV/AIDS in Nigeria. The result from table 8 shows that Health Information Officers perform generation of information useful for the prevention of HIV/AIDS 92 (100%). They also participate in: voluntary counseling and testing 92 (100%), promotion of condom use 92 (100%), preaching of abstinence as a means of preventing HIV/AIDS 80 (87%), educating HIV positive mothers on the

importance of prophylaxis 69 (75), preaching of faithfulness 85 (92%), generating information that aids in tracing defaulters 89(97%), participating in outreach programmes 77 (86%), and educating HIV positive individual on the need to live positively 92 (100%). I do nothing in preventing HIV/AIDS had 92 (100%) strongly disagree responses.

This implies that all Health Information Officers participate in HIV/AIDS preventive services as stated above.

Research Question 3

What are the roles of Health Information Officers in the Management of

HIV/AIDS in Nigeria?

Table 9: **Responses to the roles of Health Information Officers in the Management of HIV/AIDS in Nigeria.**

Factors	Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
I uniquely identify he client/patient through documentation	74 (80%)	18(20%)	0	0	0
Their records are kept by my department	92(100%)	0	0	0	0
I fill identification part of all investigative request form	80 (87%)	12 (13%)	0	0	0
I file investigative results in the record folder	92 (100%)	0	0	0	0
I serve in Health Management Team	10 (11%)	06 (7%)	17 (18%)	24(26%)	35 (38%)
I serve in Monitoring and Evaluation Team	11 (12%)	18 (20%)	4 (4%)	20 (22%)	39 (42%)
I serve in pharmaco-viglance team	8 (9%)	15 (16%)	22 (24%)	17 (18%)	30 (33%)
I serve in contact and adherence team	13 (14%)	8 (9%)	0 (0%)	31 (34%)	40 (43%)
I generate monthly summary report	19 (21%)	25 (27%)	16 (17%)	13 (14%)	19 (21%)
I do nothing in the management of HIV/AIDS.	0	0	0	0	92 (100%)

Research question 3 seeks to know the roles of Health Information Officers in the management of HIV/AIDS in Nigeria. Table 9 signifies that Health Information Officers uniquely identify the client/patients through documentation 92 (100%) as well as keeping records of HIV/AID patient in their department 92 (100%), filling of

identification part of all investigative request forms 92 (100%), and filing of investigative results in patient folder 92 (100%). 59 (64%) respondents disagree that they served in Health management time while 16 (18%) agree. 59 (64%) also disagree that they served in Monitoring and Evaluation while 29 (32%) agree. 47 (51%) disagree to serving in Pharmaco-viglance team while 23 (25%) agree. 71 (77%) disagree with serving in contact and adherence team while 21 (23%) agree. While responding to generating monthly summary report, 44 (48%) agree while 32 (35%) disagree. 92 (100%) disagree with items – I do nothing about the management of HIV/AIDS.

This outcome implies that virtually all Health Information Officers participate in identifying patient though documentation, keeping records HIV/AIDS in their department, filling of identification part of all investigative request form and filing investigate results in the patient folders. However, small percentage of Health Information Officers participate in Health Management Team, Monitoring and Evaluation team, Pharmaco-Viglance team, Contact and Adherence team, and generation of Monthly Summary report.

Research Question 4

What are the factors facilitating the roles of Health Information Officers in the Prevention and Management of HIV/AIDS in Nigeria.

Table 10 – Responses to the factors facilitating the roles of Health Information Officers in Nigeria.

Factors	Greatly Exceeded	Exceeded	Adequately met	Met somewhat	Not met at all	Not applicable
Is your office supplied with these items?						
Computers.	0	0	80 (87%)	12 (13%)	92 (100%)	0
Photocopying machine.	0	0	0	0	92 (100%)	0
ICT equipment.	0	0	0	0	92 (100%)	0
Electronic database.	0	0	63 (68%)	9 (10%)	20 (22%)	0
Cooling system.	0	0	62 (67%)	10 (11%)	20 (22%)	0
Good lightening	0	0	60 (65%)	32 (35%)	0	0
Furniture	0	25 (27%)	61 (66%)	6 (7%)	0	0
Stationeries	71 (77%)	9 (10%)	12 (13%)	0	0	0
Financial reward	0	0	82 (89%)	10 (11%)	0	0
Training given to you	0	11 (12%)	79 (86%)	2 (2%)	0	0
Commendation either in writing or verbally	13 (14%)	0	52 (57%)	27 (29%)	0	0
Comfortability of the office provided	0	0	92 (100%)	0	0	0
Gift at the end of the year by patient	0	0	0	0	0	92 (100%)
Supporting agencies	0	0	0	0	0	92 (100%)

Research Question 4 seeks to know factors facilitating the roles of Health Information Officers in the prevention and management of HIV/AIDS in Nigeria. The

results in Table 10 shows that 92 (100%) agree that computers required to perform their roles were supplied. 71 (78) agree the electronic database was supplied. 72 (78%) agree that cooling system, good lightening, financial reward, commendation either in writing or verbally and comfortability of offices were provided 92 (100%) agree that internet facilities, photocopying machine and all other ICT equipment were not supplied. 92 (100%) agree that Gift at the end of year either by patient or supporting agencies were not applicable. This implies that facilitating factors such as internet facilities, photocopying machine and all other ICT equipment were not supplied while others were, at least, met somewhat.

Research question 5

What are the factors militating against the roles of Health Information Officers in the prevention and Management of HIV/AIDS in Nigeria.

Table 11: Responses to factors militating against the roles of Health Information Officers.

Factors	Very common	Common	Rare	Very rare	Not sure	Never occur
Over expectation from supporting agencies	35 (38%)	42 (46%)	0	0	15 (16%)	0
Exhaustion due to complex services	32 (35%)	46 (50%)	14 (15%)	0	0	0
Power failure	43 (47%)	49 (53%)		0	0	0
Complex protocol	13 (14%)	52 (57%)	27 (29%)	0	0	0
Abuse by the patient	0	39 (42%)	43 (47%)	10 (11%)	0	0
Shortage of staff	12 (13%)	14 (15%)	41 (45%)	25 (27%)	0	0
Shortage of materials	0	9 (10%)	56 (61%)	14 (15%)	0	13 (14%)
Change in policy of the donors	13 (14%)	27 (29%)	52 (57%)	0	0	0

Research Question 5 seeks to know the factors militating against the role of Health Information Office in the prevention and treatment of HIV/AIDS in Nigeria. Table 11 shows that over expectation from supporting agencies has 77 (84%). 78 (85%) respondents agree that exhaustion due to complex services as common factors. Power

failure has 92 (100%) as common factor. Complex protocol has 65 (71%) as a common factor.

Abuse by the patient has 53 (57%) as a rare factor, 66 (72%) as shortage of staff has a rare factor. 83 (90%) has shortage or materials as a rare factor. 52 (57%) has change in policy of the donors has a rare factor. This portends that factors such as over expectation from supporting agencies, exhaustion due to complex services, power failure and complex protocol were all common factors militating against the roles of Health Information Officers in the prevention and management of HIV/AIDS while remaining factors such as abuse by the patient, shortage of staff, shortage of materials were rare, in militating against Health Information Officer roles.

4.3   Discussion of Findings

The study reveals that voluntary counseling and testing (VCT), Prevention of mother to child Transmission (PMTCT), Adherence Counseling, Laboratory, Condom and other prevention (O & OP), orphan and vulnerable (OVC), Antiretroviral therapy (ATP), Patient Management and Monitoring (PMM), Pharmacy, Palliative care and Tuberculosis/HIV care are all services rendered under the prevention and management of HIV/AIDS in Nigeria.

The study also seeks to investigate the role of Health Information Officers in the prevention of HIV/AIDS in Nigeria. The result shows that Health Information Officers participate significantly in generating useful information in prevention of HIV/AIDS, Voluntary counselling and Testing of clients, promoting the use of condom, preaching abstinence as a means of preventing HIV/AIDS, preaching faithfulness to spouse, educating HIV positive mothers on the importance of prophylaxis, generating information that aids in tracing defaulters, outreach programmes, and educating positive individual on the need to positively.

The study investigates the role played by Health Information Officers in the management of HIV/AIDS in Nigeria. The result signifies that virtually all Health Information Officers uniquely identify client/patient through documentation, keep HIV/AIDS patients records, fill identification part of all investigative request form, and file investigative results in the patient folders. But when it comes to serving in the teams of Health Management, Monitoring and Evaluation, Pharmaco-Viglance, and contact and adherence, few of them participated. Also, almost half does not participate in generating monthly summary report.

The study explores the factor facilitating the role of Health Information Officers in prevention and management of HIV/AIDS in Nigeria. The outcome reveals that their roles are facilitated by provision of computers, electronic database, cooling system, good lightening, furniture, stationeries, financial rewards and commendations either in writing or verbally. But internet facilities and photocopying machines were not provided.

Finally, the study intends to find out the factors militating against the role of Health Information Officers in the prevention and management of HIV/AIDS in Nigeria. The result shows that over expectation from supporting agencies, exhaustion due to complex services, power failure and complex protocol constitute factors militating against the roles of Health Information Officers in the prevention and Management of HIV/AIDS in Nigeria.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1   Introduction

This chapter deals with Summary, Conclusion and Recommendation.

5.2   Summary

The research work is the role of Health Information Officers in the prevention and management of HIV/AIDS in Nigeria. To explore into the stages of the study for reliability of the concept, three (3) tertiary health institutions were used. They were Obafemi Awolowo University Teaching Hospital, Ile-Ife, University College Hospital, Ibadan, and Federal Medical Centre Owo. Data were collected from ninety two participants (92) who were all Health Information Officers.

The review of relevant literature was done with suitable headings from several authors and researchers on the subject matters. The study adopted a social survey descriptive design with a well structured questionnaire as well as personal interview.

The study shows the several services rendered to HIV/AIDS patients, as well as healthy individual to prevent and manage HIV/AIDS. Roles of Health Information Officer in these services were also discovered.

Facilitating and Militating factors that affect Health Information Officers in playing these roles were also found.

5.3   Conclusion

The importance of Health Information Officers in the prevention and management of HIV/AIDS cannot be over-emphasized. They generate data from all points of services regularly form which the donors derive satisfaction with services rendered. GHAIN (2008), opined that non documented work is worse than undone work. Health Information Officers are strategically placed which make them the backbone of services rendered in the hospital generally.

5.4   Recommendations

The researcher in light of the observation and findings of this study came up with the following recommendations aimed at improving the role of Health Information Officers in the prevention and management of HIV/AIDS in Nigeria.

1. Internet facilities with its accessories should be provided in order to enhance documentation, treatment and tracing of defaulters by Health Information Officers.

2. Photocopying machine should also be provided to facilitate duplication of forms

3. Supporting agencies such as GHAIN, PEPFAR and IHVM should employ Health Information Officers who will be able to render their requests at their pace.

4. Additional Health Information Officers should be employed or be redeployed to HIV/AIDS health records unit especially on patient heavy traffic clinic days.

5. Health Information Officers should be made to be answerable to their employer alone by restricting facility employee cum supporting agencies interactions.