ASSESSMENT OF PATIENT HEALTHCARE RECORD MANAGEMENT PRACTICES IN TERTIARY HEALTH INSTITUTIONS OF JIGAWA STATE, NIGERIA

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ABSTRACT

The purpose of this study is to assess the management of health information system, best practices for effective health care service delivery in Jigawa state of Nigeria. The objectives of the research aims at assessing the health information systems, best practices for effective health care service delivery in hospitals and there are four research questions. Literature was reviewed on Health information and management Systems and related scholarly articles and views. A cross- sectional explorative design was used for th82e study to assess the patient record management practices in the facilities. Samples were selected using simple random sampling technique where a total of 50 subjects were selected and data was collected using interview and observation. The study results indicated that the hospitals use traditional manual systems (Using no electronic method) to capture and transmit patient information as revealed by 91.4 percent of the respondents. As the hospital uses manual system and without use of electronic means to capture patient information and transmit it as revealed by 91.4 percent of the respondents and 8.6 percent they don't to know the use of electronic record. The result show the relevance of unprecedented investments in e-health should be done there is also need to adhere more to the best practices as identified in the study in other to improve knowledge and management of patient in all health related data and public health outcomes in general.

Keywords: Assessment, Best Practices, Management of Patient Data

I. INTRODUCTION AND BACKGROUND OF THE STUDY

The health information management system is an important area in health care service delivery because it provides the underpinnings for decision-making. It has four key functions: data generation, compilation, analysis, synthesis and utilization. It is the best way of managing patients' data and the entire hospital equipment. The health information system may capture patient data, it collects data from the health sector and other relevant sectors, analyses the data and ensures their overall quality, relevance and timeliness. It converts data into information for health-related decision-making for best health care delivery [1]

Health information has been variously described as the "foundation" for better health, as the "glue" holding the health system together, and as the "oil" keeping the health system running There is however a broad consensus that a strong health information system (HIS) is an integral part of the health system. [2]

The health care record may be paper, electronic form or in both. Where a health care record exists in both paper and electronic form this is referred to as a hybrid record. Where the hospital or health institution maintains a hybrid record health cares personnel must at all times have access to information that is included in each part [4].

ON THE 6TH OF MAY 2015 ¦ GENEVA ¦ SEATTLE - WHO and the Institute of Health Metrics and Evaluation (IHME) signed a Memorandum of Understanding defining areas where they will work together to improve the quality and use of global health estimates to measure the world's health challenges. WHO welcomes this agreement that aims to increase transparency, accessibility and consistency of health estimates to help policymakers make informed decisions about what public health programmes should be prioritized and the research that is needed.

"Accurate health statistics are the foundation of a good health system," says Dr Marie-Paule Kieny, Assistant Director-General for Health Systems and Innovation at WHO. "When we know what makes people ill and why they die, we know where to put resources."

The World Health Organization (WHO) stated that the proper collection, management and use of information within healthcare systems "will determine the system's effectiveness in detecting health problems, defining priorities, identifying innovative solutions and allocating resources to improve health outcomes.

The role of management of patient information raises the question of how relevant the quality of health information is for the evaluation of its impact on the effective health service delivery. Many studies point to the oftentimes poor or at least questionable quality of effective health care delivery (e.g. Anderson et al., 2003; Eysenbach & Jadad, 2011; Eysenbach & Diepgen, 2010; Kiley, 2013; Cullen, 2014; Jadad & Gagliardi, 2008; Morahan-Martin, 2009; McClung et al., 2007) [3]

1.1 The performance of Nigeria's health care system

This was seriously undermined by the nearly two decades of military rule. For example, between 1985 and 1993 per capita investment in health had stagnated at about $100 per person compared to the international recommended level of $34 per person [4].

There are three different levels involved in Nigeria's health care system which are; The federal level, more especially the Federal Ministry of Health(FMoH) which is responsible for policy and technical support to the overall health system, The state level, The State Ministries of Health (SMoH) which are responsible for the secondary hospitals and for the regulation and technical support for primary health care services, Primary health care is the responsibility of the local government where health services are organized through the wards. However, despite Nigerian's strategic position in Africa, the country is greatly underserved in the health care sphere. Health facilities and proper management patient information (health centers, personnel, and medical equipments) are inadequate in this country, especially in rural areas.While various reforms have been put forward by the Nigerian government to address the wide ranging issues in the health care system, they are yet to be implemented at the state and local government area levels. [4]

In Nigeria, the state of the art practices of patient healthcare management methods were observed to be lacking with limited use of modern technology resulting in problems in transmission of patient information, inadequacy of data, and duplication of records, loss of data which are inferably some of the factors that inhibit effective health care delivery, utilization and research. Personnel spend more time looking for information than they would spend on health care provision. [2].

Records are a valuable resource because of the information they contain. High-quality Information underpins the delivery of high-quality evidence based safe healthcare for patients, and many other key service deliverables. Information has most value when it is accurate, up to date and accessible when it is needed. An effective records management service ensures that information is properly managed, is available whenever are needed, but duplication of records resulting from multiple registration and misplacement of some of the records of patients make the situation for the patients worse and delays in proper care delivery.

Health information management plays a significant role in the healthcare industries by ensuring that the right health information is provided to the right person at the right place and time in a secure, electronic form for the purpose of optimizing the quality and efficiency of health care delivery [5].

Therefore the strengthening of the traditional medical records in general and the health electronic record in particular, could contribute to its position as a valuable source of information for health care delivery, public health and policy making. [7]Furthermore change in public administration culture and good governance among others are all essential for the devolution of Health Management Information System (HMIS) to health decision making.

In 2010, the School of Public Health, University of Ghana, during an annual summer short course in Improving Management for Public Health Interventions (IMPHI), a number of district health directors identified misfiling and multiple patient folders as a major problem in their facilities. This paper reports the results of an intervention in medical record filing system of a municipal hospital in Ghana [8].

1.2 Data Documentation standards

Development and implementation of standards for health care documentation, the primary purpose of recording data is communication. To make sure that communication is achievable, it is important to ensure that the language of health information, regardless of the level of service and information concepts, conform to a recognized standard. Every data that is going to be documented should be done in according to the national standard as given by world health organization (WHO) such a data will assist in provision of effective health care delivery [6].

1.3 Information Communications and Technology Tools that Enhances Data Management

Technical tools play a very significant role in securing information in electronic form by supporting the core processes in information security management by providing scalability and reducing complexity. The classification scheme for security tools presented by Purser, provides a clear distinction between host-based security tools that focuses on securing layers of software and network oriented security tool that is geared on securing network data flows by working at the protocol level or secure objects visible on the network[6].

Draft Framework For Enterprise Information Management

Below are the latest, though still evolving, characteristics and functions of HIM job roles in an enterprise information management environment.

Information Building Blocks	EIM Goals	Key Functions
1.Information Integrity	To continuously improve the value of the information asset by ensuring that data and content are accurate, reliable, up-to-date, consistent and "fit for use"	1.1 Architecture, definitions, and relationships, including metadata 1.2 Data accuracy audit, structured and unstructured data 1.3 Data provenance or lineage 1.4 Error correction/amendments 1.5 Interface and upgrade assurance
2. Information Use	To correlate and cross-reference data and content requirements to the range of clinical and business needs and ensure that those who rely on information have the requisite tools and skills to use it effectively	2.1 Clinical applications 2.2 Quality measurement and improvement 2.3 Patient access 2.4 Information exchange 2.5 Business applications 2.6 Research and secondary uses
3. Confidentiality and Protection	To ensure that personal health information and business information are available only to authorized persons and used only for authorized purposes and that	3.1 Access controls 3.2 Confidentiality/privacy 3.3 Security

	security risks and vulnerabilities are proactively managed	3.4 Authentication 3.5 Business continuity 3.6 Audits of compliance
4. Life Cycle	To develop a common understanding of the life cycle of patient medical record and other key business records and explicit plans and processes for their retention and disposition, accounting for clinical and business needs and legal and regulatory requirements for creation and maintenance	4.1 Retention policies and practices 4.2 Disposition policies and practices 4.3 Audit of records, clinical and corporate
5. Information Governance	To ensure that the organization has the leadership and organizational structures, policies, procedures, technology, and controls for enterprise information management that represent the highest standards for legal, ethical, and business practice serving patients, stakeholders and advancing the public good	5.1 Transparency of policies, procedures, and standards 5.2 A culture of ethical stewardship 5.3 Compliance with applicable laws, regulations, other requirements 5.4 Enhance the value of managed information assets 5.5 E-discovery

Source: American Health Information Management Association: (AHIMA)

The chart above shows the various functions and goals of an HIM professional working in an enterprise information management health system. The core functions have not changed, just how they are applied, and stated by American Health Information Management Association: (AHIMA)

There are emerging strategies to facilitate health information management and exchange across different healthcare sectors, including healthcare reform initiatives promoting meaningful use of electronic health records (EHR). For example, patients, families and outpatient providers may view selected parts of a patient's hospital-based EHR using an internet-based portal [9]. However, few systems have been customized for patients, and little information is available for informatics architects and software programmers concerning how patients with complex medical needs such as tracheotomy and other related diseases could use and benefit from these strategies [10].
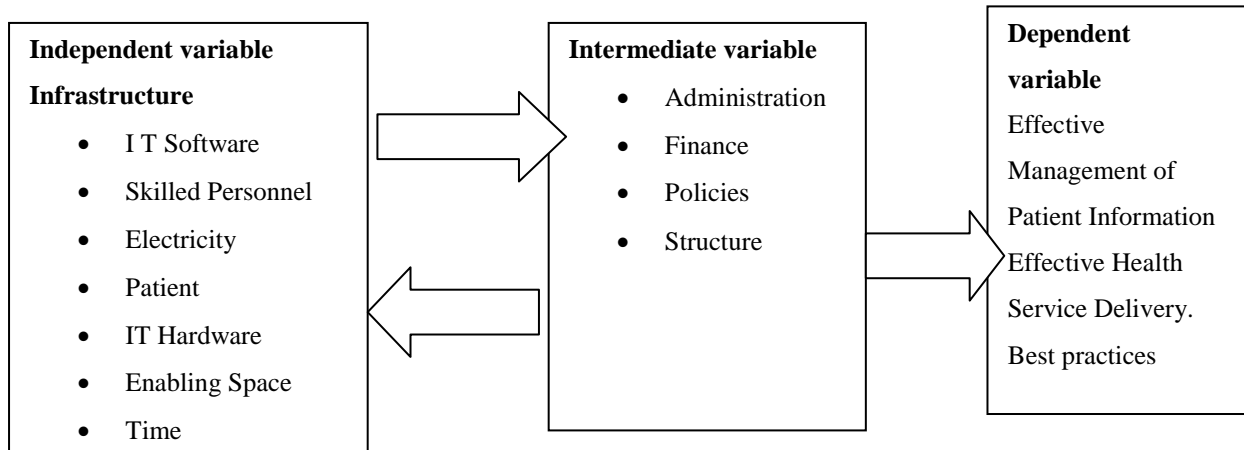
II. PURPOSE OF THE STUDY

Is to access all the practices used in the management of patient records in the selected healthcare facilities.

III. OBJECTIVE OF THE STUDY

The research aims at assessing the health information systems and the practices used in the management of patient health records for effective health care service delivery in hospitals.

IV. DESCRIPTION OF PROBLEM ANALYZED

| Independent variable Infrastructure	Intermediate variable	Dependent variable
• I T Software • Skilled Personnel • Electricity • Patient • IT Hardware • Enabling Space • Time	• Administration • Finance • Policies • Structure	Effective Management of Patient Information Effective Health Service Delivery. Best practices

V. METHODOLOGY

A cross- sectional explorative design was used for the study to assess the patient record management practices in the facilities. All the professionals involved in the management of patient healthcare records in the two facilities formed the population of the study. Samples were selected using simple random sampling technique where a total of 50 subjects were selected and data was collected using interview and observation.

VI. RESULTS

The Methods Used at Specialist Hospitals and Federal Medical Centre Jigawa State of Nigeria in Capturing Patient Information

The study results indicated that the hospitals use traditional manual systems (Using no electronic method) to capture and transmit patient information as revealed by 91.4 percent of the respondents. Majority of the subjects (54.8%) perceived that even the use of the rational system was poor, 23.7% thought that the system is good while 21.5 percent of the respondent were not sure whether the system was good or bad (fig 2).

Fig 2: Perception of the Respondents About the quality of the system used at the Hospitals
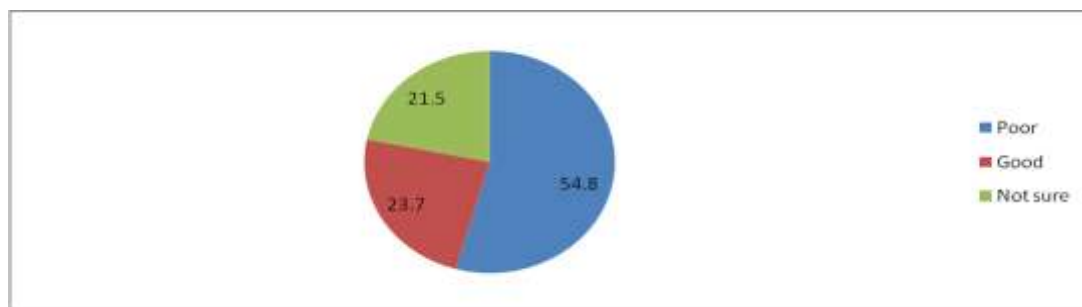
Using this manual system of patient information systems, the health workers reported that they make reports, statement and analysis of patients' data weekly (62.4 percent) and monthly 37.6 percent).

Because of the manual nature of the information system at the Hospitals, it was reported that it takes quite some time for the health workers to find the information for the patient before he/she sees a Doctor. The majority (45.2%) reported 11-20 minutes, 26.9 percent reported 21-30 minutes while 27.9 percent reported over 30 minutes. The patients' information is the basis for treatment of any patient.

The electronic health records should be encouraged in the hospital since this will shorten the time spent by the patients as they wait for their information to see a doctor. The electronic record keeping is known to have an effective impact on health care delivery. It is faster and efficient, the patients do not wait for long for their information and yet the security for such information is more guaranteed.

VII. DISCUSSION OF FINDING

As the result revealed, the healthcare facilities though in the tertiary level of healthcare delivery in Nigeria, are using 100% manual system in keeping patient health information which poses a particular challenge in keeping the records for a long time, inter-facility transmission of information, carriage cost, and research amongst others. This is in line with the findings of John Glaser where he revealed that only about 10 percent of hospitals and providers in Africa have fully implemented EHR systems and even fewer have adopted CPOE systems published in New England Journal of Medicine Vol. 356: 24, June 2007.

In their study (Marsha and Donna, 2010) established that hospitals were equipped not only to collect information from their patient populations but also to use it as another prism through which quality of care can

be viewed and assessed. Similarly, a study published in 2010 in the *Journal of the American Medical Informatics Association,* found that 78 percent of developing countries uses manual records and 22 percent used electronic and combined records systems (hybrid record) in their hospitals and health institutions.

Contrary to our finding, Hakes and Whittington (2008) In their studies shown that Electronic Medical Record implementation increase documentation and /or medication task times

The two facilities as referral centers in the state, it can be inferred that the management of patient health information at the lower levels is using the traditional manual system.

VIII. CONCLUSION

The study assessed Health Information Systems, best patient management practices for effective service delivery in hospitals and it was found that the hospitals uses manual systems to capture patient information. Moreover, there are many areas to be improved in management of patient data in Jigawa hospitals in order to comply with WHO criteria in management of patient information.

REFERENCE

[1]   World Health Organization. (2010). *Classifying health workers*. Geneva: WHO.

[2]   Abdelhak M,etal (2008), Health Information: Management of a Strategic Resource.

[3]   Eysenbach Philadelphia, E tal, 2001. Australian Council on Health Care Standards. The EQUIP Guide: Standards and Guidelines for the Evaluation and Quality Improvement Programme (2nd edition).

[4]   World Health Organization Catalogue of health indicators. Geneva, World Health Organization; 2006. (unpublished document WHO/HST/96.8; available on request from Department of Organization of Health Services Delivery, World Health Organization, 1211 Geneva 27, Switzerland): 25-27.

[5]   A.K. Jha et al., "How Common Are Electronic Health Records in the United States? A Summary of the Evidence," Health   Affairs   25:6   (2006):   w496-w507.   Abstract   available at: content.healthaffairs.org/cgi/content/abstract/25/6/w496. Retrieved September 20, 2015.

[6]   Sydney, ACHS, (2010).Australian Institute of Health and Welfare. *National Health Data Dictionary*: Version 10. Canberra, AIHW, 183, 2001.Davis N, LaCour M. *Introduction to Information Technology*. Philadelphia, WB Saunders, 2002.Donabedian A. Quality Assessment and Assurance: Unity of Purpose, Diversity of Means. *Inquiry*: Vol. 25. 173–195, 1988.

[7]   Kamadjeu RM, Tapang EM, Moluh RN. Designing and Implementing An Electronic Health Record System In Primary Care Practice In Sub-saharan African: A Case Study From Cameroon. Informatics in Primary Care. 2005;13:179–186. [PubMed]

[8]   Qazi MS, Ali M, Kuroiwa C. The Health Management Information System Of Pakistan Under Devolution: Health Managers' Perceptions. Biosci Trends. 2008;2(2):75–80. [PubMed]

[9]   Halamka JD, Mandl KD, Tang PC: Early experiences with personal health records. J Am Med Inform Assoc. 2008, 15 (1): 1-7.PubMed CentralView ArticlePubMed

[10]   Policy Statement--Using personal health records to improve the quality of health care for children. Pediatrics. 2009, 124 (1): 403-409.