Information Governance as Determinants of Healthcare Service Delivery in Selected Tertiary Healthcare Institutions in South-West, Nigeria

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Abstract

The importance of health to any person, community or nation cannot be over emphasised. Healthcare service delivery is a vital element of any health system and it is required for human continuous existence. These services have been hindered by a number of factors and having policies for systematic collection of data and the procedures for security of data and policies to cover such items as accountability, transparency, integrity, protection, compliance, retention and disposition of data which are embedded in information governance may help to improve healthcare service delivery. This study investigates the information governance prevalent in the hospitals to ascertain how it may influence healthcare service delivery. The study adopts survey research design. The population of this study is 22,422, a sample size of 393 was selected across the THIs in South-West, Nigeria. Null hypothesis, which states that, Information governance has no significant influence on healthcare service delivery in selected tertiary healthcare institutions in South-West, Nigeria, was rejected. Relatively, availability (β = 1.544, t = 3.493, p<0.05), and disposition \ (β = 0.983, t = 3.230) were shown to have a significant positive influence on Healthcare Service Delivery in selected tertiary healthcare institutions in South-West, Nigeria. The study therefore concluded that, sustainable healthcare service delivery is a function of information governance. Thus, the tempo of information governance in tertiary healthcare institutions in South-West, Nigeria should be sustained.

Keywords: information governance, healthcare service delivery, tertiary healthcare institutions.

Word Counts: 225

Introduction

Health is wealth and no nation that values development will take the health of her citizenry with levity. Thus, a healthy nation is essential for national growth and development. Health has been described as a state of complete physical, mental, social and psychological well-being and not merely the absence of disease or infirmity (World Health Organization, 1948). Achieving healthy nation requires that countries put up deliberate actions to invest in the diverse components of the healthcare system which are health promotion and wellness, family and care
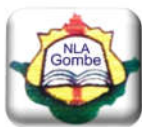
provider health education, as well as integrated primary healthcare (Ervin, Hennen, Merrick, & Morad, 2014). This requires that nations of the world such as Nigeria revamp their national health priority which is the driver of sustainable health service delivery.

The World Health Organization (WHO) defines healthcare service delivery as the way inputs are combined to allow the delivery of a series of interventions or health actions (WHO, 2001). It is the provision of quality and safe health service made so that people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease-management, rehabilitation and palliative care services. These services are delivered through the primary, secondary and tertiary healthcare institutions or other levels or tiers of healthcare delivery system, and according to their needs throughout the course of life. Competent and certified healthcare professionals and other certified care givers are usually required to deliver healthcare service under due regulation by the authorities empowered by law of the different countries under the supervision of the relevant agencies among which the World Health Organization is chief. The situation of healthcare service in Nigeria could be best described as epileptic despite a network of multi-discipline hospitals reported to have characterised healthcare delivery system in Nigeria, though mostly concentrated in the urban areas (Russo, Xu, McIsaac, Matsika-Claquin, Dhillon, McPake, & Campbell, 2019). There are indications of service dissatisfaction to patients and clients. Nigeria with current estimated population of 200 million people was being reported to experience to have loses of $1.35 USD Billion annually to medical tourism. On average, 9000 medical tours occur monthly from Nigeria to other countries (Epundu, Adinma, Ogbonna, & Epundu, 2017).

Information is an ethereal commodity (Okoro, Yacob, & Otuza, 2019), it could be described as the data and knowledge that intelligent systems (human and artificial) use to support their decisions. Therefore, governing information is key. The Nigerian Federal Ministry of Health (FMOH) developed health information system (HIS) with the goal to institutionalize an integrated and sustainable health information system for decision-making at all levels. Also stated in the year 2016 National Health Policy is a provision made for data governance; how much this will suffice for information governance leaves much to be desired. Information Governance (IG) is a strategic approach to maximizing value while mitigating the risks associated with creating, using, and sharing enterprise information. It is a spectrum of structural, procedural, and relational practices that cut-across all the stages of the information life cycle from the point of data creation up till the time of data destruction.

Statement of the problem
The ideal of a healthcare service delivery is the provision of care by trained and licensed professionals to individuals or groups of individuals to ensure their physical, mental and social well-being. This often require access to a timely, safe, people-oriented, integrated, effective and efficient healthcare services with element of equity among citizenry. Health care service delivery in Nigeria has been poorly rated, Nigeria was ranked 187 out of 191 member states of the World Health Organization's (WHO) league tables, only ahead of Democratic Republic of Congo, Central African Republic and Myanmar (World Health Report, 2020). This calls for concern and desire for improvement in her healthcare system. Rendell, Lokuge, Rosewell, and Field (2020) identified effective use of data as enabler for targeted improvements in healthcare service delivery.

Researchers investigating the healthcare service delivery in Nigeria have argued that improvement could come through possible greater ICT skills or even greater commitment on the part of the practitioners (Addo & Agyepong, 2020). Meanwhile, the possible contribution of better information governance to adequate healthcare service delivery has not been
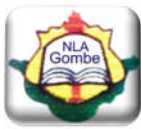
investigated. It is therefore the objective of this study to investigate not only the information governance prevalent in the hospitals but also the type of leadership style to ascertain how these may influence healthcare service delivery.

Research Questions

The study attempts to answer the following research questions:

1. What is the level of healthcare service delivery in selected tertiary healthcare institutions in South-West, Nigeria?

2. What is the state of information governance in selected tertiary healthcare institutions in South-West, Nigeria?

Statement of Hypotheses

The following hypotheses were tested at 0.05 level of significance

$H0_1$:   Information governance has no significant influence on healthcare service delivery in selected tertiary healthcare institutions in South-West, Nigeria.

$H0_2$:   Information governance has no significant influence on the indicators of healthcare service delivery in selected tertiary healthcare institutions in South-West, Nigeria.

Concept of healthcare service delivery

A health system is a local system made up of all people, institutions, resources, and activities whose primary purpose is to promote, restore, and maintain health (USAID 2015). Healthcare services consist of healthcare professionals and ancillary healthcare workers who provide medical care to those in need within and outside healthcare institution, as healthcare services required different care professionals and service providers to serve patients, families, communities, and populations. They cover emergency, preventative, curative, rehabilitative, long-term, hospital, diagnostic, primary, palliative, and home care. These services are centred around making healthcare accessible in high quality, and should be patient-centred.

The existing healthcare delivery system in Nigeria is a conglomerate of health practitioners, agencies, and organizations, all of which share the mission of healthcare delivery but operate more or less independently. The greatest portion of all patient services is provided in offices and clinics by physicians who sell their services on a fee-for-service basis. The majority of Nigeria has health insurance benefits through their place of employment, paid for by contributions from both the employee and the employer, but because of the high costs of health care, there has been a shift from unmanaged plans to manage where utilization is closely monitored. However, the number of citizens without health insurance continues to increase, and the American health-care system has been called the best in the world, but also the most costly, inefficient, wasteful, and inequitable system of healthcare in the industrialized world.

Plsek and Greenhalgh (2013) acknowledged the complex nature of healthcare in the 21st century, and emphasized that in order to solve clinical and organizational problems associated with healthcare, we must accept unpredictability nature of healthcare, respect and utilize the autonomy of different key players and creativity, then respond flexibly to emerging patterns and opportunities as being advanced by modern clinical practice, education, research, professional development and interacting systems. A good healthcare system provides individuals, families and communities with promotive, protective, preventive, diagnostic, curative and rehabilitative measures and services. The promotive health involves protective and preventive health care which may not require the physical presence of patients or clients in any hospital or facility, but diagnostic, curative, and rehabilitative care often require health care contacts during which the principal intent is to relieve symptoms of illness or injury, to

reduce the severity of an illness, injury or restore the affected individual to normal state of health and the services are provided at different levels of care which are primary, secondary and tertiary levels.

Concept of Information Governance
Information governance simply means taking control of all of the information within an organization. Kooper, Maes and Lindgreen (2011) stated that it is a comprehensive approach to a world of information management that requires a secured information exchange with the aim to maximise the value of information to the organisation and protect information within its own life cycle. Mikalef, Pappas, and Krogstie and Giannakos (2018) opined that information governance is a collection of competences or practices for the creation, capture, valuation, storage, usage, control, access, archival, and the deletion of information and related resources over its life cycle. The concept of information governance shows it is imperative for healthcare (AHIMA, 2018). Healthcare institutions depend largely on availability of secured patient interactions and trustworthy information to support patient care and treatment since information governance is an organization-wide framework for managing information throughout its lifecycle and for supporting strategies, operations, regulations, legal, risk, and environmental requirements of the organization.

The Association of Records Managers and Administrators' principles of information governance, also known as the Information Governance Principles for Healthcare (IGPHC), are comprehensive and written broadly, although, it was presented as a legal rule for which strict adherence is required by every organization in all circumstance, but are recommended to be interpreted and applied depending upon an organization's type, size, role, mission, legal environment, and resources available to each of the organization.

The IGPHC are based on practical experience, information theory, and legal doctrine within healthcare and further informed by other established practices and tenets from areas such as quality improvement, safety, risk management, compliance, data governance, information technology governance, privacy, and security. They are grounded in several common, yet essential, values embedded in healthcare—accuracy, timeliness, accessibility, and integrity. Organizations that adopt these principles shows dedication to strengthen its information governance, and increase its effectiveness for the benefit of its patients, stakeholders, and society at large. These principles form the basis upon which every effective information governance program is built, measured, and eventually judged. Therefore, it is in the best interest of patients, clients, other consumers, society, and all organizations in the healthcare ecosystem, that there is full awareness of the Information Governance Principles for Healthcare (IGPHC) and that information assets be managed in accordance with them, (ARMA International, 2013).

Information Governance and Healthcare Service Delivery
The craving for effective and efficient healthcare service delivery continues in many parts of the world, Nigeria inclusive. Thus, the continue search for the best possible approach in attaining health for all. Oyekale (2017) in a survey of 2480 healthcare facilities from 12 states in the Nigeria's 6 geopolitical zones between 2013 and 2014, on the primary healthcare facilities' service readiness in Nigeria reported the need for improved healthcare services at each level of healthcare facility, due to the numerous healthcare challenges confronting Nigeria. Muhammad, Abdulkareem, and Chowdhury, (2017) in a study on major public health problems in Nigeria carried out at the federal ministry of health, Abuja, Nigeria collected through scientific database sources and the study identified infectious diseases such as Malaria (20%), Lower respiratory infection (19%), HIV/AIDS (9%), Diarrhoea diseases (5%) as major

public health diseases but ensuring good healthcare service delivery at all level of healthcare delivery system of a nation is imperative as poor healthcare services have the potential to holding back progress of a nation at all levels, but when efforts are geared towards ensuring availability of competent healthcare workers, with well equipped healthcare facilities, medicines, and good technological devices to drive information system, there will be improvement.

Methodology

The study adopts survey research design. A survey study helps the researcher to obtain primary data from a large population. The population of this study is 22,422, comprising of both clinical and non-clinical personnel from the selected tertiary healthcare institutions in South-West Nigeria. The clinical personnel includes the Health Information Management Officers, Nurses, Pharmacists, Medical practitioners, Dieticians, Nutritionists, Medical Laboratory scientists, Radiographers, etc. A sample size of 393 was selected across the tertiary health institutions in South-West, Nigeria**.** In determining the sample size from the population of 22,422 the researcher made use of Taro Yamane formula for sample size determination. The main instrument for this study is questionnaire.

Results

Research Question 1: What is the level of healthcare service delivery in selected tertiary healthcare institutions in South-West, Nigeria?

Table 3: Level of Healthcare Service Delivery in tertiary healthcare institutions in South-West, Nigeria

Level of healthcare service delivery in healthcare institution	Very high level	High level	Moderately low level	Very low level	$\bar{x}$	Std. Dev.
Structure My hospital has sufficient infrastructure to provide healthcare service (e.g. Building) to a	86(22.9%)	70(18.7%)	189(50.0%)	30(8.0%)	3.57	0.931
My hospital has adequate social amenities e.g. electricity power supply to deliver effective service to a	88(23.5%)	98(26.1%)	154(41.1%)	35(9.3%)	3.64	0.943
My hospital has sufficient modern technologies needed for effective service delivery (e.g. Telemedicine gadgets) to a	33(8.8%)	99(26.4%)	170(45.3%)	73(19.5%)	3.25	0.867
There is adequate provision of	23(6.1%)	109(29.1%)	176(46.9%)	67(17.9%)	3.23	0.813

|					
supplies e.g. drugs in my hospital to a					
The cost of services is affordable to majority of the citizenry in our catchment area to a	43(11.5%)	94(25.1%)	181(48.3%)	57(15.2%)	3.33 0.869
There is provision of adequate funding for my hospital to a	11(2.9%)	105(28.0%)	170(45.3%)	89(23.7%)	3.10 0.791
There is provision of incentives such as monetary rewards to motivate members of staff to a	2(0.5%)	29(7.7%)	167(44.5%)	177(47.2%)	2.62 0.651
Average Mean					**3.24**
Process					
Most healthcare providers in my hospital have favorable attitude to service delivery to patients		183(48.8%)	161(42.9%)	31(8.3%)	3.41 0.638
There is good interaction between care providers and patients in my hospital to a		251(66.9%)	104(27.7%)	20(5.3%)	3.62 0.587
My institution gives room for privacy of patient information to a great extent		302(80.5%)	63(16.8%)	10(2.7%)	3.78 0.476
There is proper coordination of activities to promote access to healthcare service in my hospital to a		256(68.3%)	88(23.5%)	31(8.3%)	3.60 0.638
Average Mean					**3.60**
Outcome					
There is improved health outcome of services being delivered in my healthcare institution to a great extent	93(24.8%)	180(48.0%)	81(21.6%)	31(8.3%)	3.92 0.827
There is reduction in death rate in my hospital to a	66(17.6%)	107(28.5%)	153(40.8%)	49(13.1%)	3.51 0.930
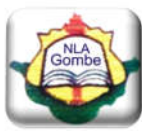
Patients have fewer clinic visits in my hospital to a great extent	32(8.5%)	119(31.7%)	176(46.9%)	48(12.8%)	3.36	0.812
There is reduction in medical errors among healthcare providers in my hospital to a	65(17.3%)	150(40.0%)	128(34.1%)	32(8.5%)	3.66	0.862
There is higher level of satisfaction with care outcomes in my hospital to a high extent	67(17.9%)	109(29.1%)	157(41.9%)	42(11.2%)	3.62	0.879
There is better acceptance of care rendered in my hospital to a	71(18.9%)	132(35.2%)	142(37.9%)	30(8.0%)	3.65	0.876
There is greater collaborative decision making among leaders in my hospital to a	67(17.9%)	109(29.1%)	157(41.9%)	42(11.2%)	3.54	0.912
There is enhanced consumer/patient safety in my hospital to a	66(17.6%)	126(33.6%)	144(38.4%)	39(10.4%)	3.58	0.897
Average Means					**3.60**	
Overall Mean					**3.47**	

Decision Rule: If mean score ranges between 1.0 - 1.5 = *it implies low level;*
1.5-1.9 = *moderately low level*
2.0- 2.9 = high level;
3.0 & above = very high level.
Criterion Mean = 2.5.

Tables 3 showed that the three constructs of healthcare service delivery (structure, process and outcome) as proposed by Donabedian indicated a high level of healthcare service delivery in tertiary healthcare institutions in South-West, Nigeria with an overall mean of 3.47 on the scale of 4 points. This means that; structure ($\bar{x}$= 3.24), process of care ($\bar{x}$=3.60) and outcome ($\bar{x}$= 3.60) was high. Meaning that, the overall level of healthcare service delivery in Federal Medical Centres in South-West, Nigeria with reference to structure, process and outcome has improved greatly in South-West, Nigeria.

Research Question 2: What is the level of information governance in selected tertiary healthcare institutions in South-West, Nigeria?

Table 4: Level of Information Governance

Information Governance	Strongly agree	Agree	Disagree	Strongly disagree	$\bar{x}$	Std. Dev.
Accountability					**3.12**	**0.75**
A senior executive or someone of comparable authority is responsible for records and information management in my hospital.	94(25.1%)	187(49.9%)	84(22.4%)	10(2.7%)	2.97	0.763
Head of Health Records and information management department in my organization is responsible for coordinating all organization wide records	155(41.3%)	176(46.9%)	30(8.0%)	14(3.7%)	3.26	0.760
My Organization holds each officer accountable for records keeping in my hospital.	117(31.2%)	206(54.9%)	41(10.9%)	11(2.9%)	3.14	0.721
Transparency					**2.65**	**0.78**
Information in my organization is stored in an open manner	43(11.5%)	93(24.8%)	180(48.0%)	59(15.7%)	2.32	0.874
Information stored in my organization is verifiable	94(25.1%)	259(69.1%)	14(3.7%)	8(2.1%)	3.17	0.587
Information stored in my organization is available to all personnel i.e. all stakeholders.	50(13.3%)	127(33.9%)	147(39.2%)	51(13.6%)	2.47	0.889
Integrity					**3.40**	**0.60**
Information in my organization is authentic.	190(50.7%)	178(47.5%)	5(1.3%)	2(0.5%)	3.48	0.556
Information in my organization is reliable	194(51.7%)	174(46.4%)	7(1.9%)		3.50	0.537

Chain of custody methods are used in my organization to enhance integrity.	138(36.8%)	180(48.0%)	53(14.1%)	4(1.1%)	3.21	0.715
Protection					**3.22**	**0.71**
Only authorized persons have access to information in my hospital.	201(53.6%)	158(42.1%)	14(3.7%)	2(0.5%)	3.49	0.598
There have not been many reported cases of breach of information in my hospital.	130(34.7%)	183(48.8%)	49(13.1%)	13(3.5%)	3.15	0.772
There is a written policy for information protection in my hospital.	100(26.7%)	187(49.9%)	78(20.8%)	10(2.7%)	3.01	0.763
Compliance					**3.24**	**0.62**
The information in my organization is constructed to comply with applicable laws.	110(29.3%)	239(63.7%)	15(4.0%)	11(2.9%)	3.19	0.643
The information in my organization is developed to comply with binding authorities.	119(31.7%)	228(60.8%)	20(5.3%)	8(2.1%)	3.22	0.639
The information in my hospital is constructed to comply with the organization's policies	136(36.3%)	221(58.9%)	16(4.3%)	2(0.5%)	3.31	0.576
Availability					**3.36**	**0.58**
Records in my organization are maintained in such a manner as to ensure timeliness.	139(37.1%)	220(58.7%)	14(3.7%)	2(0.5%)	3.32	0.571
Records in my organization are organized to ensure their efficiency	150(40.0%)	204(54.4%)	18(4.8%)	3(0.8%)	3.34	0.607
Records in my organization are organized in such a	170(45.3%)	195(52.0%)	10(2.7%)		3.43	0.547

way to ensure accurate retrieval.

					Mean	SD
Retention					**2.99**	**0.74**
My hospital has a retention schedule for its records.	85(22.7%)	219(58.4%)	59(15.7%)	12(3.2%)	3.01	0.716
My hospital retains information with financial value to ensure timely payment.	72(19.2%)	192(51.2%)	104(27.7%)	7(1.9%)	2.88	0.728
Records of historical value are readily available in my hospital.	112(29.9%)	190(50.7%)	61(16.3%)	12(3.2%)	3.07	0.765
Disposition					**2.77**	**0.78**
My hospital destroys records that have outlived their lifespan according to law.	50(13.3%)	156(41.6%)	143(38.1%)	26(6.9%)	2.61	0.803
My hospital has facility for long term storage of records.	85(22.7%)	197(52.5%)	87(23.2%)	6(1.6%)	2.96	0.723
My hospital has a policy for proper records destruction.	67(17.9%)	163(43.5%)	122(32.5%)	23(6.1%)	2.73	0.824
Overall Mean					**3.09**	**0.82**

Decision Rule: If mean score ranges between *1.0 - 1.5 = it implies low level;*
Criterion Mean = 2.5   *1.5-1.9 = moderately low level*
                         2.0- 2.9 = high level;
                         3.0 & above = very high level.

Table 4 revealed a high level of information governance in selected tertiary healthcare institutions in South-West, Nigeria with an overall mean of 3.09 on the scale of 4points. The analysis of the sub-constructs indicates that integrity has the highest mean score ($\bar{x}$ =3.40), closely followed by availability ($\bar{x}$ =3.36), and compliance ($\bar{x}$ =3.24). Others have mean scores ranges from accountability ($\bar{x}$ =3.12), protection ($\bar{x}$ =3.22), retention ($\bar{x}$ =2.99), and disposition ($\bar{x}$ = 2.77) and transparency ($\bar{x}$ =2.65). It implies that records and information creation, storage, retrieval, use and dissemination in tertiary healthcare institutions in South-West, Nigeria is generally high because it is guided by information governance principles.

Testing of Hypotheses
The study will test the following hypotheses were tested at 0.05 level of significance

Testing of research hypothesis 1
H0₁: Information governance has no significant influence on healthcare service delivery in selected tertiary healthcare institutions in South-West, Nigeria.

Table 5: Multiple regression analysis showing the influence of information governance on healthcare service delivery in selected tertiary healthcare institutions in South-West, Nigeria.

Model	Unstandardized Coefficients		Standardized Coefficients						
	B	Std. Error	Beta	t	Sig.	R^2	Adj. R^2	F	ANOVA (Sig)
(Constant)	26.646	4.391		6.068	.000				
Accountability	-.205	.862	-.031	-.238	.812				
Transparency	-.121	.337	-.022	-.361	.719				
Integrity	.504	.351	.202	1.437	.152	.209	.192	12.041	.000[b]
Protection	.583	.468	.083	1.245	.214				
Compliance	.024	.339	.004	.072	.943				
Availability	1.544	.442	.234	3.493	.001				
Retention	-.129	.348	-.022	-.371	.711				
Disposition	.983	.304	.171	3.230	.001				

a. Dependent Variable: Healthcare Service Delivery
Df (F-Statistics) = 8, 364

Table 5 revealed that information governance has significant relative influence on Healthcare Service delivery of tertiary healthcare institutions in South-West, Nigeria (*Adj. R^2*= 0. 192, *F*(8, 364) = 12.041, *p*<0.05). The model shows that the linear combination of components of information governance accounted for 20.9% in the tertiary healthcare institutions in South-West, Nigeria. This implies that the linear combinations of dimensions of information governance are key determinants of Healthcare Service Delivery. Hence, the null hypothesis, which states that, Information governance has no significant influence on healthcare service delivery in selected tertiary healthcare institutions in South-West, Nigeria was rejected. Relatively, availability (β = 1.544, t = 3.493, *p*<0.05), and disposition \ (β = 0.983, *t* = 3.230) were shown to have a significant positive influence on Healthcare Service Delivery in selected tertiary healthcare institutions in South-West, Nigeria. Other determinants did not revealed significant positive influence on Healthcare Service Delivery in selected tertiary healthcare institutions in South-West, Nigeria.

The regression model generated from the data in Table 4.10 is:
Regression Model:
HSD = 26.646+ 0-.205 A-.121 T+.504 I +.583 P+.024 C+ 1.544A-.129R+.983D+*e*
HSD = Healthcare Service Delivery, A= Accountability, T = Transparency, I= Integrity, P= Protection, C= Compliance, A= availability, R= Retention, D= Disposition, *e*= Error term (All uncaptured variables that can influence AP but not included in the model).
Furthermore, when Information Governance is improved by one unit on a measurement scale, there will be corresponding increase in Healthcare Service Delivery.

Testing of research hypothesis 3
H0₃: Information governance will have no significant influence on healthcare service delivery in selected tertiary healthcare institutions in South-West, Nigeria.

Table 6: Linear regression analysis showing the significant influence of Information governance and leadership style on healthcare service delivery in selected tertiary healthcare institutions in South-West, Nigeria

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.				
	B	Std. Error	Beta			R^2	Adj. R^2	F	ANOVA (Sig)
(Constant)	15.227	4.447		3.424	.001				
Information Governance	.236	.049	.246	4.780	.000	.264	.260	66.842	.000

a. Dependent Variable: Healthcare Service Delivery
   Df (F-Statistics) =2, 372

Table 6 revealed that information governance has significant relative influence on Healthcare Service delivery of tertiary healthcare institutions in South-West, Nigeria (*Adj. R^2*= .260, *F*(2, 372) = 66.842, *p*<0.05). The model shows that the linear combination of components of information governance 26.4% (*Adj. R^2*= .262) in the tertiary healthcare institutions in South-West, Nigeria. This implies that the linear combination of dimensions of information governance is key determinants of Healthcare Service Delivery. Hence, the null hypothesis, which states that, Information governance and leadership style will have significant influence on healthcare service delivery in selected tertiary healthcare institutions in South-West, Nigeria was rejected. Relatively, information Governance (β = 0. .236, *t* = 4.780, *p*<0.05) had significant positive influence on Healthcare Service Delivery in selected tertiary healthcare institutions in South-West, Nigeria. The regression model generated from the Table is:

The regression model generated from the data in Table 6 is:
Regression Model:
HSD = 1. 15.227+ 0. .236 IG
HSD = Healthcare Service Delivery
IG = Information Governance
e = Error term (All uncaptured variables that can influence AP but not included in the model)
Therefore, when Information Governance is improved by one unit on a measurement scale, there will be corresponding increase in Healthcare Service Delivery.

Conclusion
The findings from the study have proven the need for the federal government to sustain the current level of information governance employed for healthcare service delivery in selected tertiary healthcare institutions in south-west, Nigeria. This study therefore concluded that, since sustainable healthcare service delivery is a function of information governance. Thus, the workforce currently working in these healthcare facilities should be well motivated for enhanced performance. There is also evidence of improvements in the area of infrastructure, the process which leads to better outcome of care, these improvements might have come bye due to the surge of COVID-19, which compelled most of these hospitals to improve in their structure. However, efforts must be made to sustain these heights.

Recommendations
Based on the findings of this study, the following recommendations are made for policy implementation.
1. The results of this research indicates that there is a high level of healthcare service delivery in tertiary healthcare institutions in South-West, Nigeria, thus, the Federal Government of

173
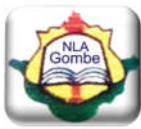
Nigeria and policy makers at the hospital level should sustains the level of care being rendered to the citizenry.

2. The study indicates a high level of information governance in selected tertiary healthcare institutions in South-West, Nigeria, it is therefore recommended that the hospital authorities in particular should encourage information governance practice with the view of integrity and compliance to relevant law guiding information management in their establishments.

3. The findings of the study showed that outcome of healthcare service being delivered in the selected tertiary healthcare institution is improving as there was reduction in death rate, therefore, the CMDs of the tertiary healthcare institutions should put up measures to sustain this.

4. The FMoH and the CMDs of the tertiary healthcare institutions should formulate policies that will further encourage the use information governance especially for more clinical use due to critical influence of the clinical use of information governance on the quality of healthcare service delivery.

5. Training modules on information governance should be included in the curriculum of all health information management students both at undergraduate and graduate levels by the FMoH and the Federal Ministry of Education (FMoE) in order to sustain and possibly improve the level of information governance among health information management, and other relevant professions in the health sector.

6. More studies to further confirm the place of health information management practitioners in driving information governance using direct observation method should be conducted by researchers.

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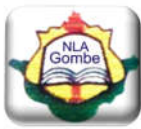
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