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ASSESSMENT OF GOOD CLINICAL GOVERNANCE (AS MEASURED BY LEADERSHIP SUPERVISION) OF FOUR HEALTHCARE TERTIARY INSTITUTIONS IN ENUGU METROPOLIS, NIGERIA

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ABSTRACT

This paper examines role of good clinical governance as measured by; c leadership supervision at four healthcare institutions. The study showed that good clinical governance (as measured by leadership supervision is not significant the quality of healthcare waste management (policy) laws, compliance to Healthcare waste management guiltiness, in tertiary healthcare faculties. This study revealed that the level of leadership supervision is almost externally irregular. The absence of supervision guide (policy reward keeping, and guidelines) brings about low quality of good clinical governance in our tertiary healthcare facilities. The aim of this research is to assess the level of good clinical governance currently employed in HCWM (Healthcare in Enugu monopoles -: in practices in HCFs in southern Nigeria. This paper therefore recommend full participation from the leadership, management and every stakeholder to achieving effective good clinical governance more so, improvement through healthcare management guidelines at both national, state and local levels should be encouraged.

Keywords: Assessment, Clinical governance, Leadership, supervision, policy, Healthcare facilities

INTRODUCTION

ASTE generated in HCFs (Healthcare facilities) depends on numerous factors such as process of waste management methods, type of hospital establishment, hospital specialization, proportion of useable item employed

in the hospital; and proportion of patients treated on a day care basis. Focus of governance is onthese factors and actors. Good healthcare waste management in hospital depends on a dedicated waste management team; good administration; careful planning and sound organization. Other enabling factors are underpinning legislation; adequate financing; and full participation of trained staff. All these factors demand the waste management protocols must be convenient and sensible. Clinical governance relates to continuous improvement and is the policy instrument for modernizing healthcare. The governance and effectiveness of the healthcare sector is paramount due to its impact on human well-being and the size of this sector in the economy **[1, 2]**. Healthcare literature underscores the enormous challenges to improve clinical governance. The constraining factors which have meant that efforts and performance have not been commensurate with the enormity of the challenges faced have been highlighted. They include rising costs, political and escalating service expectations together with increasing demand for greater patient safety **[3]**. Others are greater demands for efficiency and effectiveness from hospitals and healthcare providers **[4, 5]** simultaneous with complex ethical issues and sustainable healthcare waste management practices all of which have added to the burden for healthcare boards **[6-8]**. However, as rightly pointed out by **[9]**, good governance especially as applied to the health sector and specifically to HCWM is difficult to achieve in its totality. However, to ensure sustainable human development, actions must be taken towards this ideal with the aim of making it a reality - this is the expressed interest of the application of clinical governance in HCWM in tertiary health facilities in Enugu Municipality. In this regard, the good governance principles will be deployed as a template to assess the condition of HCWM actors and processes in tertiary health institutions of interest in Enugu Metropolis with the aim of establishing the current level of performance as well as set the standard for the future.

Total Quality Management

Total Quality Management or TQM as this sometimes called, is an industrial model which encapsulates industrial quality method and has wide application. The incorporation of TQM management as part of the conceptual framework for this thesis is premised on the fact that its methods

would be useful in the health sector and specifically to act as leverage to good clinical governance. The advantages of moving from a traditional hospital structure to TQM that follows an industrial model for HCWM are numerous. They comprise: broad continuous improvement initiatives; full leadership commitment and total Employee involvement, quality training in the use of TQM tools for continuous improvement **[10]**. TQM is eminently apposite to HCWM within hospitals which is in line with the preoccupation of this thesis with the adoption of clinical governance approach in tertiary HCFs in Enugu Metropolis. The potential for TQM as a tool to enable hospitals improve care and to deliver better services especially HCWM revolve around its essential components namely: commitment and leadership. The key aspects are:

Improving effectiveness and flexibility of the HCF for the benefit of all stakeholders; planning, organizing and understanding each activity and of removing all the wasted effort and energy that is routinely spent in organizations. Ensures leaders adopt a strategic view of quality and focus on prevention not detection of problems. While it must involve everyone, to be successful, it must start at the top. With reference to clinical governance, this refers to the governing council and Provost. All senior staff must demonstrate their seriousness and commitment to quality - Professors, Consultants, Deans, Heads of Department of Teaching Hospitals. The middle cadre - Doctors, for example, must, as well as demonstrating their commitment, ensure they communicate the principles, strategies and benefits to the people for whom they have the responsibility. A fundamental requirement is sound policy, supported by plans and facilities to implement it. Leaders must take responsibility for preparing, reviewing and monitoring the policy, plus take part in regular improvements of it and ensure it is

understood at all levels of the HCF.

Some of the Elements of TQM which Facilitate HCWM Lessons from experience have yielded a number of critical elements which facilitate the daunting task of TQM and which are eminently suited to sustainable HCWM in tertiary-level health facilities **[11-15]**.

- Long-term commitment to continuous improvement.
- Adoption of the philosophy of zero errors to change the culture to right first time.
- Looking at the total cost in the purchase of products or services not dependent on prize alone.
- Recognize that improvement of

systems must be managed

- Adopt modern methods of supervising and training.
- Eliminate barriers between departments by managing the process, improve communications and team work.
- Eliminate goals without methods, standards based only on numbers, barriers to pride of workmanship and fiction: get facts by studying processes.
- Constantly educate and retrain - develop experts in the organization.
- Develop a systematic approach to manage the implementation of TQM.

The building blocks of TQM need to be embedded in the HCFs and HCWM systems. These are processes, people, management systems and performance. Everything about HCWM is a process. In each HCF department or function, there are numerous processes taking place - generation of HCW, segregation, sorting, treatment, transport and disposal. Each can be analysed by an examination of the inputs and outputs to determine the action necessary to improve quality. True responsibility for performance and quality lies with the people (i.e. the staff) who actually do the job or carry out the process of HCWM. Teamwork represents an efficient and effective way to tackle the processes or quality improvement. Also important is appropriate documented Quality Management System as an aid to an HCF to achieve the objectives set out in its policy and strategy, Quality Management System is also desirable for sustaining and building upon policy and strategy. The performance measures are important to monitor and control the move towards sustainable HCWM and to ensure the desired level of performance is being achieved and sustained. Development of a HCWM protocol based on clinical governance and supported by TQM hold great promise as part of the overall inputs in realizing the set aim of this thesis. They have the potential to establish a HCWM system in the tertiary HCFs in Enugu Metropolis which will be comprehensive, environmental friendly and holistic.

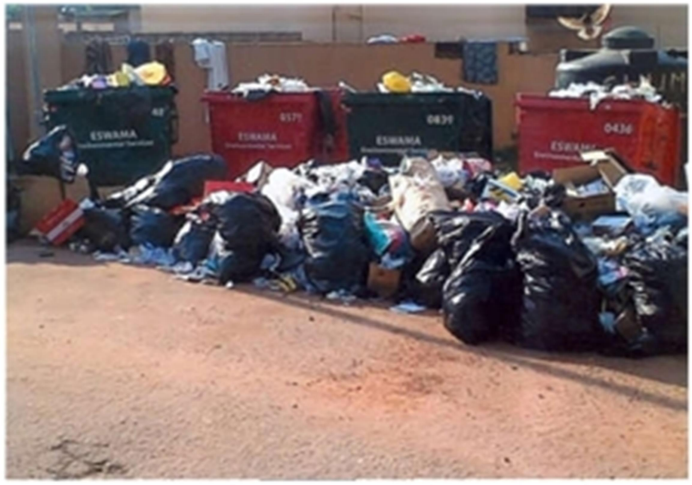

Figure 1: Risk and Non-risk Healthcare Waste Mixed together in the Waste Containers

Figure 2: Waste Handler Collecting Waste in one of the Tertiary Hospitals

Figure 3: Map of Enugu showing the Area of Study

National and State Provisional Totals of 2006 Census). The city is located within latitude 6°23' and 7°30' North and longitude 7°30' and 8°19, East of the Greenwich Meridian. It lies between 200 and 300 meters above sea level, having an area of about 79.2sq.km. The city lies mainly on Asata Nkporo Shale sedimentary formation and on the northeast out-crop of the basal section of the lower coal measures **(Figure 4)**. The vegetation is generally loosing its original forest to savannah type. Thick green belt's running down along riverine and rivulets that criss-cross the city have insured that the city scape is entirely metropolitan. The city has a moderately undulating terrain with slopes ranging between 1% and 25%, thus enhancing effective drainage as runoffs

THE STUDY AREA

Enugu metropolis is in the capital of Enugu State of Nigeria. The study area is Enugu Metropolis comprising Enugu City and the wider Enugu Metropolis within which is located the HCFs of interest namely: the University of Nigeria Teaching Hospital (UNTH) located formerly near the Prisons but now located at the new permanent site at Ituku Ozalla; Enugu State University of Science and Technology (ESUTH) Teaching Hospital, located in the GRA; the National Orthopaedic Hospital Enugu (NOHE) located at Nike; and Niger Foundation Hospital and Diagnostic Centre on Presidential close in the Independence Layout, Enugu city covers an area of 113km^2 while Enugu Metropolis cover an area of 200km^2 and by implication the UNTH at Ituku Ozalla falls within the Metropolis **(Figure 3)**. Enugu is the capital of Enugu State. It is located in the South Eastern area of Nigeria. The city has a population of 722,664 according to the 2006 Nigerian census (Federal Republic of Nigeria official Gazette, 15 May, 2007, Legal Notice on publication of the Details of the breakdown of the easily empty into the network of natural drainage channels criss-crossing the city. It is, however important to note that relative to the position of the dominant escarpment, Enugu is a depression. This has made the city relatively susceptible to air/water pollution.

MATERIAL AND METHODS

This study was carried out between November 2008 and December, 2012 as a cross sectional descriptive and inferential study at four (4) tertiary healthcare institutions in Nigeria based on the principal compact analysis. Using the lists obtained from the personnel departments of the hospitals, a total of 2577 healthcare staff was obtained. Using the **[16]** analysis formula, a population of 400 was deduced approximately. A total of 400 questionnaires were randomly administered to healthcare staff,

comprising of 9 administrators, 304 Doctors / Nurses and 87 orderlies / waste handlers. The questionnaires were administered by researchers and it consists of questions of their knowledge and practice of health care waste management, knowledge and practice of waste handling, Segregation, color coding, waste treatment and waste management. For proper assessment on healthcare waste management of the hospitals, the key researchers were able to interview the various heads of Departments of the hospitals administration face to face and also using telephone oral methods to obtain accurate information on the management of the healthcare waste. The main questions asked were

a) The various healthcare management practices observed.

b) Personnel allotted to each ward.

c) Training of waste handlers.

d) Policy, record keeping, management guidelines.

The waste management practices of the hospitals was assessed using checklist of **[17]** Standards.

RESULTS

The null hypothesis attempts to show that good clinical governance as measured by leadership supervision is not significant in the quality of healthcare waste management (policy, laws, compliance to HCWM guidelines in tertiary health care facilities. The principal component analysis was employed. Principal component analysis was applied to determine the level of good clinical governance in place, at the four tertiary healthcare facilities. Eight (8) sets of variables were employed. The good clinical governance variables are:-

X1 = percentage of policy adoption supervision by leadership

X2 = percentage of HCWM Laws policy in place

X3 = percentage of HCWM Laws available and address

X4 = percentage of compliance to HCWM guidelines

X5 = percentage of compliance to HCWM policy

X6 = percentage of HCWM record keeping

X7 = percentage of compliance HCWM best practice

X8 = percentage of yearly trend personnel

The collected data was subjected to principal component analysis with the 8 variables, which were reduced to 3 component and then to a single component. The 3 components with their variable loading, their eighen values, (which is the sum of the squared loadings), the percentage of total explained variance the cumulative percentage explained by each component, plus the communalities

(which is the proportion of the variance for each variable explained by all the 3 components are presented in the tables. From the **Table 1** the rotated component which have 3 significant components together explained 90.130% of total variance, leaving 9.87% unexplained. The unexplained may be due to various other factors not involved in the analysis. To determine the significance of the variables that are related to each component, only those variables with high component loadings are considered. The high component loadings are in parenthesis.

TABLE I: ROTATED COMPONENT MATRIX OF GOOD CLINICAL GOVERNANCE VARIABLES

Variables	Component 1	Component 2	Component 3	Communalities
X_1 percentage of policy adoption supervision by leadership	(.780)	.155	-.501	.884
X_2 percentage of healthcare waste management policy in place	-.039	(.993)	.018	.989
X_3 percentage of healthcare waste management laws policy in place	.128	.059	(.967)	.956
X_4 percentage of healthcare waste management to guidelines	-.039	(.993)	.018	.989
X_5 percentage of healthcare waste management policy	(.872)	-.200	.018	.801
X_6 percentage of healthcare waste management to record keeping	(.930)	-.100	.090	.884
X_7 percentage of healthcare waste management compliance to best practice	(.882)	.192	.107	.826
X_8 percentage of yearly trained personnel	(.930)	-.100	.090	.884
Eigen values	3.909	2.089	1.215	
Percentage variance explained	48.860	26.088	15.183	
Cumulative percentage	48.860	74.947	90.130	

Source: Statistical Computation (2012)

TABLE II
VARIABLE GROUPING AND COMPONENT LOADING FOR GOOD CLINI GOVERNANCE

Component	Component Description	Variable grouping	Con load
1	Inputs into staff capacity building on HCWM	Policy adoption supervision by leadership	.780
		Compliances to HCWM policy	.872
		HCWM record keeping	.930
		Compliance to best practice	.882
		Yearly trained personnel	.930
2	Supervision guide	HCM policy in place	.993
		Compliance to HCWM guidelines	.993
3	HCWM laws addressed	HCWM laws addressed	.967

Source: Summarized from Table 2 (2012)

TABLE III
STRUCTURE OF GOOD CLINICAL GOVERNANCE VARIABLES

Input	Component Description	Total variance explained	% variance explained	Cumulative %
1	Inputs into staff capacity building HCWM	3.909	48.860	48.860
2	Supervision guide	2.087	26.088	74.947
3	HCWM management laws	1.215	15.183	90.130

Source: Summarized from Table 3. (2012)

TABLE IV
ROTATED COMPONENT SCORE COEFFICIENT MATRIX OF GOOD CLINICAL GOVERNANCE

	Variables	Component I
X_1	Inputs into staff capacity building on healthcare waste management	.604
X_2	Supervision guide	.318
X_3	Healthcare waste management laws available and addressed	.731

Extraction Method: Principal Component Analysis

TABLE V
TOTAL VARIANCE EXPLAINED

Component	Initial Eigen Values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.000	33.333	33.333	1.000	33.333	33.333
2	1.000	33.333	66.667			
3	1.000	33.333	100.000			

Extraction Method: Principal Component Analysis

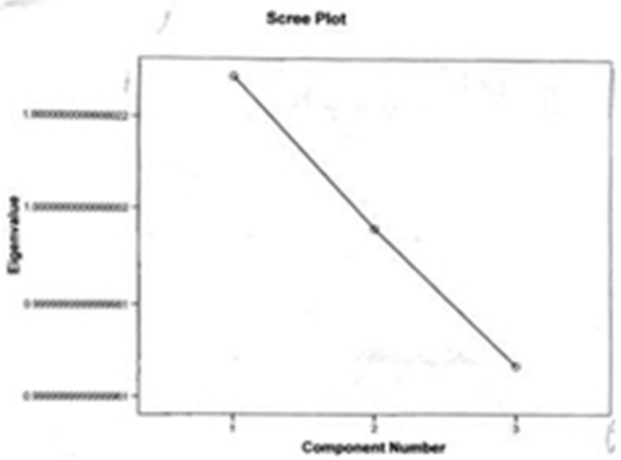

Figure 4: Lower coal measures

Moreso, from the **Table 1**. It shows that component 1 has eigen value of 3.909 and accounts for only 48.860 of the total explained variance. The component has positive loadings on X1 (policy adoption supervision by leadership), X5 (healthcare waste management policy), X6 (healthcare waste management record keeping), X7 (compliance to healthcare management best practice) and X8 (yearly trained personnel), component 1 describes the general trend of correlation resulting from inputs into staff capacity building on healthcare waste management. This component is thus a general index (that is variable) of the "inputs into staff capacity building on healthcare waste management". The positive loadings means that there is positive correlation between the components and the variables. Component 2 has high positive loadings on X2 (healthcare management policy in place) and X4 (compliance to healthcare waste management guidelines). Components 2 describes the supervision guide. This component 2 is thus an index of the "supervision guide". Component 2 which has an eigen value of 2.087 and accounts for 26.088% of the total variance explained and shows the

significance of supervision guide in healthcare waste management in tertiary health facilities in Enugu metropolis. The positive loadings of the correlation shows that as the supervision guide variables of healthcare waste management improves, there will be significant positive move towards achieving effective good clinical governance. Component 3 has an eigen value of 1.215 and accounts for about 15.183% of the total explained variance. It has high positive loadings on X3 (healthcare waste management laws addressed). The high positive loading indicates that if the healthcare waste management laws are provided and adhered to strictly, the effectiveness of good clinical governance will be on the increase and that will make good clinical governance significant. From the component principal analysis and interpretations of the components, it can be seen that 8 variables on effective good clinical governance criteria was reduced to 3 components and then to a single component, which can be used to explain the variations in the components that may contribute towards achieving high effective good clinical governance in healthcare waste management in Enugu metropolis. The following underlisted dimensions may be accepted and used as the underlying indices/components for the area studied in order of importance.

1. Inputs into staff capacity building in healthcare waste management
2. Supervision guide
3. Healthcare waste management laws addressed.

These 3 major variables were reduced to single (1) component which was healthcare waste management laws addressed **(tables 1, 2. and 3)**. The three (3) components that were reduced to a single (1) component, showed that healthcare waste management laws available and addressed had the highest loading, it has a total variance explained of 33.33% cumulative (see table 5). It is imperative that, for a supervision by leadership to be efficient and effective, there must be healthcare waste management laws available and properly addressed. The information discussed is summarized in **Tables 1, 2, 3, 4, and 5**. These tables shows details of the variables groupings, component description and component loading for good clinical governance variables.

Since the percentages for the structure of good clinical governance variables are low **(Table 5)**, we accept Ho which states that "good clinical governance (as measured by leadership) is not significant in the quality of healthcare waste management (policy, laws, compliance,

to HCWM guidelines) in tertiary healthcare facilities in Enugu metropolis

DISCUSSION OF FINDINGS

The Null hypothesis: Good clinical governance (as measured by leadership supervision) is not significant in the quality of healthcare waste management (policy, laws, compliance to HCWM guidelines) in tertiary healthcare facilities in Enugu metropolis. Finding: The finding of the study shows that the null hypothesis was accepted. We therefore state that there is no significant variations of good clinical governance in the quality of healthcare waste management in Enugu metropolis. This is not surprising because about 33.33% of total explained variance of good clinical governance major variable was found in the healthcare waste management in Enugu metropolis.

Discussion: According to Punch November 7, 2012, says "Nigeria and other four West-African countries are canvassing for a better management of healthcare wastes to protect "medical staff" and the population" from risk of infection. The other countries also agreed with Nigeria that there was need for a 'practical and explicit document that clearly provides legal, administration and financial guidelines on daily basis for a rational and responsible management of healthcare waste'. The study revealed that the level of leadership supervision is almost extremely irregular. The leadership/management of tertiary healthcare facilities in Enugu metropolis do not regularly supervise the adoption of the policy on waste management, thereby resulting to non performance on the part of the management with respect to waste management. This is reflected as the compliance to HCWM guidelines from WHO status and available laws addressed were less than 10%. This ineffectiveness is further evidenced in the lack of adoption of any new improved technology on waste management practice and the poor/terrible record keeping on waste management data, as well as chemical/disinfection. With these lacking, the percentage compliance to best practice is less than 10%. The ineffectiveness of the current clinical governance efforts and management practices of Healthcare waste in the tertiary HCFs has resulted to the inability of the various tertiary HCF not showing knowledge of appropriate incineration and lack of practice of adequate sterilization of waste. This indicates that for effective good clinical governance, healthcare waste management policy, guidelines, record keeping and healthcare management laws must be in place and adhered to. According to that Punch November 7, 2012, government should have a speed implementation of the policy, guidelines as was discussed, but more importantly,

there should be laid down laws guiding the healthcare waste management.

CONCLUSION

Good clinical governance indicators also have high relevance to the study. Eight factors or components were reduced to 3 major components and then to a single component. The single (1) component gave 33.333%variations of good clinical governance found in the healthcare waste management in Enugu metropolis. The study revealed that the level of leadership supervision is almost extremely irregular. Absence of supervision guide (policy, record keeping, and guidelines) brings about low quality of good clinical governance in our tertiary healthcare facilities. No wonder, this call from the four West Africa countries including Nigeria for practical and explicit document that clearly provides legal, administration and financial guidelines on daily basis for a rational one responsible for management of healthcare waste. If the entire nation or government of Nigeria on November 7, 2012, could advocate for a rational document for a guide in healthcare waste management, this invariably means, that, there had not been any good clinical governance in place, anywhere in Nigeria before, seeing that there are no documented policy or guide in place. This implies that there should be quick government intervention and reform bills passed for healthcare waste management for our various hospitals.

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