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Research

Organogram for Medical Laboratory Services in Nigerian Public Health Institutions

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***Abstract**: Departmental or Directorate organogram is a chart or graphic representation of reporting hierarchical relationships with descriptive roles and responsibilities. Organogram in many human resource related processes is employed to make decisions including, but not limited to, recruitment, classification, organizational development activities such as restructuring, and training and medical laboratory services is not an exception. The organogram of various health institutions exists with or without medical laboratory services, organogram for medical laboratory services in Nigeria provided by this paper puts all health institutions in a clear picture of nature of the organogram every health institution running medical laboratory services should look like in near future with emphasis on medical laboratory management.*

***Keywords**: Organogram, Medical Laboratory Services, Management, Nigeria*

Introduction

An organogram is organizational chart which is a graphic portrayal of a unit's formal structure that provides clear picture of the area of responsibility and reporting relationships within the unit. Medical laboratory services is a unit of the health practice of which the organogram can be used to define the roles and responsibilities of positions within the unit; visualize the structure of the workforce; and establish a structure of authority, communication channels, and specific operational functions and tasks with the services. Organogram shows a hierarchical, or ranked, relationship in organizational structure which affects both the overall

behavior of firms and the situations of individuals and subunits within firms. The effect of exogenous changes in the environment (market prices, costs, or regulations) on organizations can be partitioned into the immediate direct effect of the change and the full effect after organizational structure has had time to adjust (Stephen *et al*, 2000).

An effective structure facilitates management and clarifies relationships, roles and responsibilities, levels of authority, and supervisory or reporting lines. By reviewing an organization's structure, a manager will be able to determine which human, financial, and technical resources are available, how they should be allocated, and which resources are lacking.

A manager can use organogram to define tasks, determine information flow within the organization, and ensure accountability for achieving organizational goals and objectives. On the other hand, a consolidating organization may propose several new units or an expansion plan in response to its past dynamic growth and its future strategic plans. It is expected of Program managers to make sure that the structure is appropriate for the organization's size, resources and program mix.

An organogram may be hierarchical, team or network in structure but should be able to show functions of departments and units, job positions and formal relationships and linkages such as authority, formal power, delegation, span of control, responsibility, accountability, communication and coordination.

Massimo & Lei (nd) findings provide a first evidence of the trade-off between vertical hierarchy and degree of specialization within organizations. While the effect of vertical structure seems to prevail, still the degree of specialization plays a very important role in the provision of "unique" managerial solutions.

Medical Laboratory Services in Nigeria

Medical Laboratory science is a diagnostic aspect of healthcare which means the practice involving analysis of human or animal tissues, body fluids, excretions, production of biological, designs and fabrication of equipment for the purpose of medical laboratory diagnosis, treatment and research and includes; medical microbiology, clinical chemistry, chemical pathology, heamatology, blood transfusion science, virology, histopathology, histochemistry, immunology, cytogenetics, exfoliativecytology, parasitology, forensic science, molecular biology, laboratory management, or any other related subject as may be approved by the council. (Obeta *et al.*, 2019; MLSCN, 2003)

The medical laboratory service in Nigeria has grown from the era of Medical Laboratory Assistant, Medical Laboratory Technician (Lab Man) to Medical laboratory Technologist and now Medical Laboratory Scientists. The training for Medical Labotorians grew from UK training to now over 30 training Universities in Nigeria with some colleges of health training the lower cadre professionals. The regulation grew from Institute of Medical Laboratory Technology (IMLT) of Nigeria to Medical Laboratory Science Council of Nigeria (MLSCN) through Act, 2003. The MLSCN (2003) recognizes three professional cadres in the Act who are Medical Laboratory Assistant, Medical Laboratory Technician and now Medical Laboratory Scientist. However, there are other categories of staff that can be found in the medical Laboratory such as Pathologist, Secretaries or Laboratory Information Management officers or Information Communication Technology Offices and Phlebotomists as the case may be for various institutions.

Though these other categories of staff may exist in the medical laboratory, in line with the provision of the MLSCN Act 11 of 2003 Section 18, Sub-section 2, "no person not being a fully registered medical laboratory scientist under this Act shall be entitled to hold any appointment in the Public Service of the Federation or state or any public or private establishment, body or institution, if the holding of such appointment involves the performance by him in Nigeria or any act pertaining to the profession of medical laboratory sciences for gain". This implies that a defined roles is very important among the categories of staff that may be found in the medical laboratory and this paper proposes an organogram which shall define the roles of staff categories found in medical laboratories in Nigerian public health institutions and beyond.

Organogram for Medical Laboratory Services in Nigeria

Organogram of medical laboratory services in Nigeria is sketchy without a detailed hierarchical, team or network structural display. New Telegraph of 21st December, 2017 reported there is no coordination of medical laboratory services in Nigeria. It is also important to note that the Nigerian Medical Laboratory Policy (2009) is yet to be implemented thereby making the organogram of medical laboratory services nearly impossible before now. The organogram however is as old as the Scheme of service in Nigeria but no readily available template. The Nigerian Scheme of Service for medical laboratory scientists has been repeatedly modified to meet up with other health professional counterparts and the organogram proposed by Obeta and colleagues (2018) as shown below

has taken care of such corrections in line with available circulars using corresponding Grade level salary structure.

Stephen and colleagues (2000) suggest that organizational structure is indeed a crucial element in the diffusion of technological innovations. This is to say that the medical laboratory services should have a definite structure which would propel the discoveries and improved management system expected of medical laboratories.

Updating the organizational chart is an important part of business operations Medical Laboratory Services inclusive. Reviewing the organizational chart on a regular basis is best practice as some activities or occurrences that may trigger an organizational chart update may include but not limited to position description changes that affect the organization, addition or elimination of positions and organizational restructuring. In Nigeria, the occurrences has taken place and urgent need to propose and improved organogram is germane.

Avioworo (2012) proposed an organogram for Federal Ministry of Health and tertiary institutions in Nigeria, however there were some gaps which must have made some authorities to describe the organogram as organogram for medical laboratory scientists rather than organogram for medical laboratory services. An example is the appointment of Director Medical Laboratory Scientists in some Tertiary Hospitals. Erhabor & Adias (2014) developed organogram for medical laboratory scientists while relating the organogram of the UK Biomedical Laboratory Scientists described a harmony organogram template for Nigerian Medical Laboratory Scientists and Pathologists. The organogram under discus in this paper provides a single team form of organogram expected of any institution providing medical laboratory service and not just medical laboratory scientists practice as cited above.

The size of the organogram depends on the size of the institution, however, the Director Medical Laboratory Services should be one at any point in time to direct all activities of medical laboratory services in any given institution.

The Deputy Director Medical Laboratory Services (DDMLS) should not be less than two and not more than eight depending on the size of the institution like Teaching Hospitals. An example of DDMLS are in Medical Laboratory Management, Chemical Pathology, Heamatology / Blood Transfusion Science, Medical Microbiology, Histopathology / Cytology, Infectious Diseases, Medical Laboratory Research, etc.

The Assistant Director Medical Laboratory Services (ADMLS) should not be less than two under each mentioned DDMLS and not more than sixteen. Using Medical Laboratory Management as an example to describe the required ADMLS are in Medical Laboratory Organization / Administration, Medical Laboratory Ethics, Medical Laboratory Safety,

Medical Laboratory Equipment, Quality Management System / Sigma Quality, etc. The ADMLS should have some Pathologists relating with them at this level especially in the areas of Chemical Pathology, Heamatology / Blood Transfusion Science, Medical Microbiology, Histopathology / Cytology, and Infectious Diseases based on the information generated by CMLS. At this level there is no one taking instruction from the other (ADMLS/Pathologist) however, inter-professional teamwork and collaborative practice is expected.

The Chief Medical Laboratory Scientist (CMLS) should not be less than two each under mentioned ADMLS and not more than thirty two. Using Medical Laboratory Organization / administration as example to describe required CMLS are Human Resources Management, Medical Laboratory Space / Inventory, Team Building / Interpersonal Relations, Conflict Resolution and Management, Administrative techniques / Communication, etc.

The Principal Medical Laboratory Scientist (PMLS) should not be less than two and not more than seventy four under the enumerated CMLS in the organogram. Take Human Resources for instance are Planning / Forecasting, Recruitment / Division of labour, Training / Continuous Professional Development, Job motivation / Labour relations, Leadership / Discipline, etc. The SMLS, MLS, Intern MLS, Chief MLT and others workers should be under the supervision PMLS.

The Senior Medical Laboratory Scientist (SMLS) should not be less than two and not more than one hundred and forty on listed PMLS. The SMLS should man various benches attached with MLS with supervised assistance of available MLTs and MLAs.

Medical Laboratory Scientist (MLS) should not be less than four and not more than one hundred and seventy under a given SMLS.

Intern MLS are MLS on their last stage of training. They are having provisional license which is covered by licensed MLS where they work. They are expected to be not less than ten and not more than two hundred under an assigned PMLS.

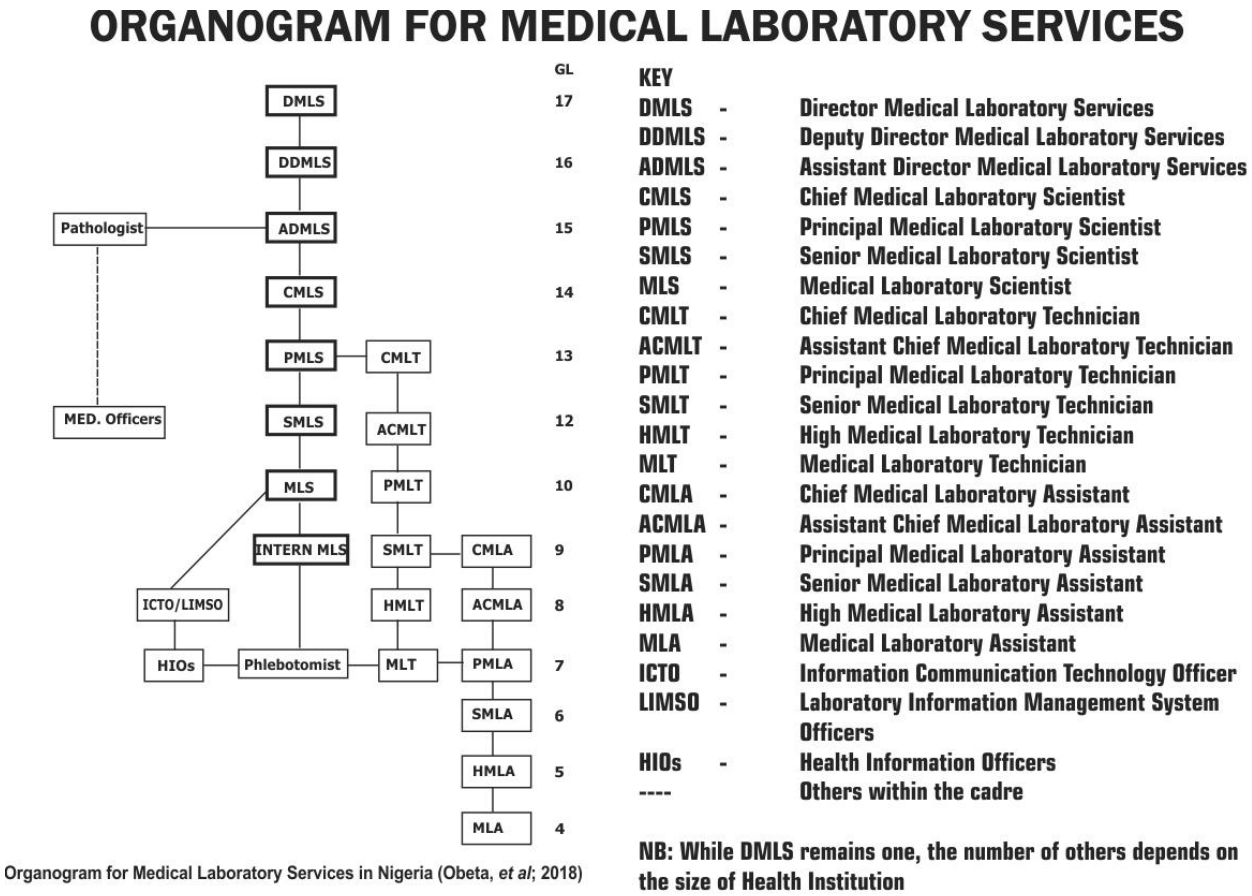
The Chief medical laboratory technician down to the MLA in that cadre works under the supervision of a licensed MLS available. However, the number of MLA at a time no matter the cadre should be two or one MLS to one MLT (MLSCN, 2018)

The MLA cadre is created for assistance in the Medical Laboratory Services and for professional assistance of MLS and MLT cadres. Their number should be one MLA to seven MLS plus MLT.

The Pathologist should report directly to ADMLS. The number of Pathologist should be equal to number of ADMLS in the Directorate. Other members of the Profession of the Pathologist down to House / Medical Officers reports directly to the Pathologist.

The Health Information Officers (ICTO) / Laboratory Information Management System Officers (LIMSO) should report to Medical Laboratory Scientists. This paves way for attachment of one ICTO/LIMSO to every cadre of the Medical Laboratory Service. They could serve as secretaries in the department.

The Phlebotomists should report to Intern MLS or MLS and inversely supervised by MLS. The number of Phlebotomists could be as that of MLAs especially where there is no MLA.



Organogram for Medical Laboratory Services in Nigeria (Obeta, *et al*; 2018)

The above Organogram takes cognizance of MLS Scheme of Service of the Federal Republic of Nigeria as reviewed in 2015, MLSCN (2018) minimum Staffing Requirements of department and WHO (2010) Workload Indicator of Staffing Need (WISN).

Conclusion

Though organogram of various health institutions exists with or without medical laboratory services, this organogram puts all health institutions in a clear picture of nature of the organogram every health institution running medical laboratory services should look like in near future. In a health system in Nigeria which has suffered backwardness in performance indices (WHO, 2016) this organogram encourages inter-professional teamwork and

collaborative practice to help in moving from 187 out of 191 countries of the world after 18 years to a better position with seriousness in the performance of medical laboratory services in various Public Hospitals and other public health organizations across Nigeria. Medical Laboratory Management should be recognized in various medical laboratories to aid in general laboratory management and quality improvement.

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