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PARAMEDICAL SCIENCES AND SERVICES: THE NEED TO DEVELOP EFFECTIVE SYSTEMS IN AFRICA

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ABSTRACT

A paramedic is basically described as a health professional who provides rapid response, emergency medical assessment, treatment and care in the out-of-hospital environment. Typically, this individual works with the medical professional to provide pre-hospital services, supportive hospital services and post-hospital management and supportive care services. The need for paramedical services need not be debated again on the African continent. It is part of the biggest challenges of the health systems of many African countries. The fact that there is no system that takes care of health services prior the hospital services - aside from the traditional public health system - is a bane of development not only to the health care industry but the nations generally. Interestingly, definitions for paramedical sciences and services in many quarters are absurdly relative, with many seeing paramedical services as merely other health care services other than the one provided by the doctor or medic. This erroneous, yet, popular impression might have affected the making, interpretation and implementation of policies. This article is a concise review of the Nigeria scenarios as a representation of the African experience to a large extent, objective comparison of these scenarios to the rest of the world and a strategic proposition of the systemic structure to ensure a more dynamic and effective health care system as a whole. A strong informed case is being made for Nigeria and Africa to establish a functional and ideal paramedical system. African Nations and health systems can leverage on the abundant availability of medical scientists in fields such as Anatomy and Physiology to provide services upon successful paramedical training and certifications.

KEYWORDS: Paramedic, Paramedical Sciences, Paramedical Services, Nigeria, Africa.

INTRODUCTION

Community Paramedicine is an emerging healthcare profession. It allows paramedics and emergency medical technicians (EMTs) to operate in expanded roles to provide routine healthcare services to underserved populations, and helps to improve rural emergency medical services (EMS). Community paramedics generally focus on:

- Providing primary care.
- Post-discharge follow-up care.
- Integration with local public health agencies.
- Providing education and health promotion programs.[1]

A paramedic is basically described as a health professional who provides rapid response, emergency medical assessment, treatment and care in the out-of-hospital environment.[2] Typically, these service providers work with and are guided and instructed by the medical experts. Paramedical service is indispensable to the effective running of the modern health care system, not excluding research.[3] Paramedicine has been described as an emerging health profession.[4] A key focus of paramedicine and paramedical services globally is emergency medicine with primary emphasis on the outdoor response to emergency medical or health services demands.[5-7] Paramedics are trained, equipped and required to give emergency services not just in form of first aids; but may also include medical attentions that may not warrant taking the patients to the hospital. In certain instances, paramedic practitioners are trained with extended skills to assess, treat, and discharge older patients with minor acute conditions in the community.[6] In some other instances, they are required to provide pre-hospital care to stabilise patients or sustain them before receiving hospital-indoor medical attentions.[8,9] The report by Cooper and Grant[10] showed that paramedical services impact patient care positively and produced a quarter decline in the conveyance rate to hospital; there was also improved inter-professional working, immediacy of treatment and referral, and high patient satisfaction. More than ever before, paramedical services is becoming defined and professionalization is being

emphasised, especially considering its relevance and economic values.[11,12]

This article consists of a concise report of a conscientious review of available literatures towards making a case for a dedicated paramedical service in Africa in order to actualise the continents' goals of development.

METHODOLOGY

The key words were used to search for articles on the subject matter. A total of 46,500 sources were found. Considering only scholarly article that were relevant enough to the subject, about 10% of the original sources were eventually considered and the specially *referenceable* articles of interest were quoted. These formed the basis for the review and inferences.

Paramedical Science

Paramedical Science or Paramedicine is an evolving field of health. A number of institutions in various countries now offer bachelors and postgraduate programmes in Paramedicine or Paramedical sciences.[13-15] In some other countries, pre-trained health professionals and personnel are specially trained through a special national or integrated programme to provide paramedical services.[16] There are also instances of public private partnership and volunteer services or programmes that train interested individual to acquire certain special skills.[17] It is important to note that approaches vary between countries; albeit the goal is to produce a work force for effective paramedical services. This implies that a country is expected to develop a medial that works for it.

Paramedical Services

Paramedical services include a wide range of medical services provided by paramedics and these may include the following:

1. Emergency services: Trauma; Acute Illness.[18,17] These are traditional paramedical services that are provided by trained paramedics to victims of accidents and disasters in order to provide first aid, stabilise them, and prepare them for transport to the hospital facility. These services also include the special care that may accompany the transport such as air lifting and placement on life support machine for instance as well as the first aid care.
2. Rescue Services: Fire, Water, Natural Disasters.[19] Rescue services are part of paramedical services. This may include a very wide number of services including rescue from fire, natural disasters, epidemiological outbreaks, drawing and flooding, building collapse and so on.
3. Routine outdoor services: Children and the Elderly with Special Needs.[20] This may include, but not limited to, the routine care of the elderly and vulnerable children.
4. Industrial Paramedics.[21] These include services provided for industrial workers with special emphasis of the nature of work and the working environment. Examples may include coal miners, petroleum miners, construction workers, airline operators, shipping companies and so on.

Case for a Paradigm Shift: A Proposition for a Dynamic System

There is the need to a paradigm shift in policy making and in the management of the health care system. The current system has obviously failed to meet the crucial needs of the people. Hence, the following should be given critical consideration:

[A] Training System for Specialisation

This requires strategy to ensure adequate preparation of professionals for the services and the demands thereof. The following levels of training may be recommended:

1. Basic Training: this will include a college or university degree in paramedical science to qualify an individual to provide basic paramedical services.
2. Specialisation Training: this will include the advanced training that will enable individuals specialise in certain areas of paramedical services where they can give highly specialised services .e.g. fire emergency, bomb last emergency response; natural disaster emergencies. This training may be opened primarily to individuals with a basic [Bachelors] degree in paramedical science and to qualified interested medical scientists upon the fulfilment of highly regulated conditions.
3. Conversion and Auxiliary Trainings: this will provide opportunities for individuals who work in certain environments with a level of qualification and skills to do their jobs but with special interests in providing paramedical services for members of such society or community. For example, a secondary or high school teacher with a basic degree in health education may be trained as a paramedic officer for the community after proper training and certification.
4. Others: paramedic and emergency medical technicians (EMT) etc. These are support staff members that provide technical services for the paramedic based on the specific job requirements as dictated by the services demanded.

[B] Policies for Inclusion in the Healthcare

There is the need for a programme and objective set of policies to make the paramedical system work as a component of the larger healthcare system. This policy should ensure that the following services should be included in the paramedical services.

1. Outdoor Paramedical Services
2. Hospital-Indoor Paramedical Services
3. Special Paramedical Services

[C] Installing an Enabling System for Performance

To ensure that the policies do not die upon arrival; the following should be done to install an enabling system for performance:

1. Effective Restructure of the Existing System
2. Provision of Facilities and
3. Instituting a Synergistic Working-Relationship among Health Care Professionals.

Anticipated Ideological and Idiosyncratic Challenges

1. Conflict between the emergency physician and paramedic team[22]
2. Clear description of the Paramedical Service
3. Inter-professional Complexes among health care service providers
4. Professional Grading and placement of paramedics on salary scales
5. Survival and continuity of the programme.

Making a Case

It is important to emphasise the fact that there must be a dedicated paramedical arm of the health care system in order to effectively meet the heath service needs and demands of the society.[20-23] Factors to consider include:

1. Population growth
2. Modern set up
3. Influence on hospital services outcome
4. Ideal set up

In the current Nigerian scenario, there is no dedicated paramedical system in the health sector. Even the impact of the traditional public health system is barely felt. This current scenario is far from ideal; it is alarming and compromising. Opinions exist on possible reasons for the current situation, which is far from being adequate. Among prevalent opinions are poor development of the system, myopic understanding of the ideal modern health care systems, limiting but prevalent professional rivalry and nepotisms. Despite the current problems, Nigeria can leverage on the currently available abundant human resources in the fields of basic medical sciences including Anatomy and Physiology. Most of the medical scientists are currently unemployed as the current systemic structure makes no provision for the participation and adequate contribution to the provision of heath or medical services. They are barely invited to work within the health systems. However, with the thorough understanding of the human body, health and associated abnormalities, these professionals can be productively and purposefully engaged as paramedics after they must have passed though a strategic programme designed to equip them with paramedical skills. The health systems will also have to be restructured to accommodate these professionals. Very importantly, there should be clearly defined career paths for them.

Figure 1: Paramedical Services that ensure the success of the healthcare when there is a holistic systemic setup.

CONCLUSION

The need for a paramedical service system is essential to national growth and development. It will meet the need of the society, enhance specialisation and widen the scope of job opportunities for professionals. African governments must break the jinx of underdevelopment in the healthcare sectors and develop the paramedical service systems.

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