

Role of Cardiology Clinical Officers in the Preventive Cardiology: An Overview from Nairobi County, Kenya

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Abstract

Kenya struggles with a limited number of cardiologists, which poses a significant gap in the healthcare system's ability to provide adequate cardiovascular care. To bridge this gap, cardiology clinical officers plays a vital role in preventing, diagnosing, treating, and managing various cardiovascular conditions. As the healthcare landscape advanced, clinical officers began specializing in various areas to meet the growing demand for specialized care. The involvement of clinical officers in different specialties have significantly expanded healthcare access and improved the quality of care provided. According to WHO (2019) in Sub-Saharan Africa, Cardiovascular Diseases(CVD) contribute to around 1 million deaths annually, representing 5.4% of global CVD-related fatalities and 13% of total deaths in Africa.

Aim: To determine the role of clinical officers in cardiology and to explore factors that will enhance the training and to promote collaboration between clinical officers in cardiology and physician cardiologist.

Methodology: A study design applying a qualitative approach. The sampling frames comprised all Clinical Officers working in 5 selected health facilities within Nairobi County. A purposive sampling technique was utilized to obtain the study sample.

Findings/Results: 95.2% of respondents could perform initial assessment and diagnosis of CVDs, 4.8 % could perform and interpret Echo & ECG, 54.7% could treat, plan and prescribe medication, 28.6% could monitor patients' progress and adjust treatment plans, 73.8% could give Patient education on lifestyle modification and disease management.

Conclusion: 88.1% of the respondents proposed training clinical officers on cardiology as faculty in colleges. A paradigm shift is needed to bridge the gap between primary and tertiary levels of cardiovascular healthcare by utilizing cardiology clinical officers and expanding cardiology training programs.

Keywords: Cardiology; Clinical officers; Clinical officer training; Physician assistants; PA

Introduction

Clinical officers can train at Diploma Level, Higher National Diploma Level, Degree Level, Master level, and Ph.D. They have specialized in many areas such as obstetrics and gynecology, Reproductive Health, Pediatrics, Anesthesia, Surgery, Orthopedics, ophthalmology including Cataract surgery, and recently, cardiology at The Karen Hospital Medical Training College. Their expertise allows them to handle various medical conditions; ensuring patients receive appropriate and quality healthcare [1] (Gitau, 2018).

According to the World Health Organization (WHO), in 2019, cardiovascular diseases (CVDs) were the leading cause of death globally, claiming approximately 17.9 million lives each year, accounting for 32% of all deaths (WHO, 2019). In Africa, especially in Sub-Saharan Africa, CVDs contribute to around 1 million deaths annually, representing 5.4% of global CVD-related deaths and 13% of total deaths in Africa [2] (WHO, 2019).

In Kenya, 25% of hospital admissions and 13% of deaths are attributed to CVDs. Kenya is a low-middle-income country, with 72.5% of its population residing in rural areas and 28% residing in urban areas, of which 50% and 34% of the total urban and rural populations live below the poverty index. The burden of CVDs is highest among individuals in the lower socioeconomic status quintile, as a strong relationship exists between cardiovascular health and education level, occupation, and income [3] (David et al. 2023).

Cardiovascular diseases (CVD) present a significant health challenge in Kenya, contributing to 25% of hospital admissions and 13% of deaths [2].

According to Dr. Ngunga, 2018, about 40 physician cardiologists serve a population of 48 million Kenyans, most of who practice in level five and six facilities within Nairobi and a few in Mombasa and Kisumu. This translates to one physician cardiologist serving 1.2 million Kenyans, of which 72.5% reside in rural areas. Clinical officers-cardiology can provide a much-needed bridge between the patients in the primary and secondary levels to the physician cardiologists at the tertiary level. Currently, there are ten licensed clinical officers-cardiology, most working in level five facilities, and 14 are awaiting graduation in 2023 from The Karen Hospital Medical Training College (TKHMTC).

This leaves level two to four facilities needing specialists to prevent, detect, manage, and appropriately refer to cardiovascular diseases.

The involvement of clinical officers in various specialties has significantly expanded healthcare access and improved the quality of care provided. They have helped bridge the healthcare gap, particularly in marginalized areas where the availability of specialized healthcare professionals is limited There is an emerging acute issue of increasing the level of training of clinical officer specialists who are proficient in modern methods of diagnosing and treating diseases and capable of applying the latest medical advances of science to ensure the focus of preventive cardiology in a scientific way.

Conceptual framework



Results/Findings



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Chi-Square table

Working experience in the hospital department	χ2	Df	N	Sig
	Value			(p-value)
Knowledge of handling the following; Initial assessment and diagnosis of CVDs,	15. 540	2	42	0.000
Treatment planning, and prescribing medications,				
Performing and interpreting Echo and Ecg	9.45	2	42	0.002
Monitoring patients' progress and adjusting treatment plans,	11.57	2	42	0.000
Patient education on lifestyle modifications and disease management	6.89	2	42	0.013
Any specific training programs or continuing education opportunities provided	4.933	2	42	0.085
to clinical officers to enhance their skills in preventive cardiovascular disease				
management				
Initial Assessment and Diagnosis of CVDs	40	95.2		
Performing and interpreting Echo & ECG	2	4.8		
Treatment Planning and Prescribing Medication	23	54.7%		
Monitoring patients' progress and adjusting treatment plans	12	28.6%		
Patient education on lifestyle modifications and disease management	31	73.8%		



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Specific training programs or continuing education opportunities provided to clinical officers to enhance their skills in prevention in preventive cardiovascular disease management.

Table indicate that most respondents had any specific training programs or continuing education opportunities to clinical to enhance their preventive cardiovascular disease management skills;76% (n=32) and others had not24% (n=10). How ever there was no significant correlation association between Working experience in the hospital department concerning any specific training programs or continuing education opportunities provided to clinical officers to enhance their skills in preventive cardiovascular disease management [χ 2 (2 df, N = 42) = 4.933, p=0.085>0.05].

Frequency The role of the clinical officer in the hospital	Frequency	Percentage%
Initial assessment and diagnosis of CVDs	23	51.1
Other	19	45.2
Total	42	100.0

The findings in Table 4.6 indicate that the respondents had the role of Initial assessment and diagnosis of CVDs 51.1% (n=23), while others referred patients to a cardiologist 45.2% (n=19).

Additional steps that can be taken to enhance the role of clinical officer cardiology		Percentage%
in preventive cardiology in Kenyan hospitals		
Engagement of clinical officers on continuous training in cardiology diseases preven-	5	11.9
tive management		
Start training clinical officers on cardiology as faculty in colleges	37	88.1
Total	42	100.0

Table 4.7 indicate that the majority of the respondents had the engagement of clinical officers in continuous training in cardiology diseases preventive management as additional steps that can be taken to enhance the role of clinical officer cardiology in preventive cardiology in Kenyan hospitals 88.1% (n=37) while others were for to start training clinical officers on cardiology as a faculty in colleges were referring patients to a cardiologist 11.9% (n=5).

Referral System

The information generated from these findings is represented in below Table.

Hospital Referred To	Frequency	Percentage %
Kenyatta National Hospital	18	42.9%
The Karen Hospital	13	30.9%
Matter Hospital	7	16.6%
Other Hospitals	4	9.5%



The data in Table 4.8 indicate that 42.9% of the respondent referred cardiovascular cases and complications to Kenyatta national hospital, 30.9% to The Karen Hospital, 16.6% to Mater Hospital, and 9.5% to other hospitals.

Conclusion

95.2% of respondents could perform initial assessment and diagnosis of CVDs, 4.8% could perform and interpret Echo & ECG, 54.7% could treat, plan and prescribe medication, 28.6% could monitor patients' progress and adjust treatment plans, 73.8% could give Patient education on lifestyle modification and disease management.

11.9% of the respondents proposed engagement of clinical officers in continuous training in cardiology diseases preventive management able to do initial assessment and diagnosis of CVDs, 88.1% proposed to start training clinical officers on cardiology as a faculty in colleges.

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42.9% of the respondents refer cardiovascular cases and complications to Kenyatta National Hospital, 30.9% to The Karen Hospital, 16.6% to Mater Hospital, and 9.5% to other hospitals.

The government, private and non-governmental healthcare training institutions should invest in expanding cardiology training programs for clinical Officers.

The government and other stakeholders in the health sector should embrace clinical officers-cardiology as a pivotal cadre in bridging the gap between primary and tertiary healthcare levels with a clear scope of practice.

In collaboration with other cadres, physician cardiologists, and clinical officers-Cardiology should adopt a patient-centered and team-based care approach that promotes; effective communication channels, clear roles and responsibilities, mutual respect and trust, and shared decision-making.

The government and other stakeholders in the health sector should embrace clinical officers in cardiology as a pivotal cadre in bridging the gap and enhancing referrals from primary level to tertiary healthcare levels with a clear scope of practice.

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