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The paramedical school in Bo, Sierra Leone: A historical and institutional analysis of mid-level health worker training in a low-middle income country healthcare system

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Abstract

Background: Mid-level health workers are essential to Sierra Leone's health system, particularly in rural areas where physician shortages persist. Despite their importance, the institutions that train these cadres remain under-documented. The Paramedical School in Bo, established in the 1980s with European Union support, played a central role in producing Community Health Officers (CHO) and other mid-level practitioners. Understanding its evolution provides insight into health workforce development in fragile and post-conflict settings.

Methods: This historical and institutional analysis synthesises evidence from the global health literature, policy documents, architectural interpretation, and empirical studies on health system resilience. The paper examines the school's origins, design, pedagogical evolution, and institutional transitions, situating them within broader political, economic, and global health contexts.

Findings: The school's establishment aligned with the post-Alma-Ata expansion of primary healthcare and donor-driven investments in paramedical staff training. Its climate-responsive architecture and competency-based curriculum reflected both global development logics and local needs. The civil war severely disrupted operations, yet the school demonstrated resilience and remained central to post-war reconstruction. Subsequent epidemics, including Ebola and Mpox, reinforced the strategic importance of non-medical cadres. Integration into Njala University strengthened academic oversight but introduced governance and resource challenges.

Conclusion: Strengthening non-medical training institutions is essential to building resilient, equitable health systems in Sierra Leone and comparable low-income and mid-income contexts.

Keywords: Sierra Leone; Paramedical; School; Mid-level; Primary; Healthcare; Worker

1 Introduction

Mid-level health workers have long been central to the functioning of health systems in low- and middle-income countries (LMICs), particularly in sub-Saharan Africa, where shortages of physicians and uneven distribution of health professionals have created persistent gaps in service delivery. Sierra Leone exemplifies these challenges, owing to decades of underinvestment, civil conflict, and the Ebola epidemic, which have strained the health system and made non-medical cadres essential for maintaining primary healthcare services, particularly in rural and underserved areas (Bertone et al. [1]).

Despite their importance, the institutions responsible for training paramedical health workers remain largely undocumented in the academic literature. One such institution is the Paramedical School in Bo, established in southern Sierra Leone in 1980 with support from the European Union. The school played a pivotal role in training Community

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Health Officers (CHOs) and other mid-level cadres who formed the backbone of Sierra Leone's primary healthcare system. Yet the history of this important institution, its architecture, pedagogical model, and evolution have received limited scholarly attention.

This article reconstructs the development of the Paramedical School in Bo, situating it within broader global health trends, including the rise of primary healthcare following the 1978 Alma-Ata Declaration (World Health Organisation [2]), the expansion of mid-level cadres across Sierra Leone, and the postcolonial politics of health workforce development. It also examines how the school navigated periods of crisis, including the civil war, the Ebola epidemic, and the COVID-19 pandemic that exposed the fragility of Sierra Leone's health system while highlighting the resilience and indispensability of non-medical care workers.

The analysis draws on historical accounts, architectural interpretation, and contemporary research on the health workforce to explore four interrelated dimensions: historical origins and global health context, architectural and spatial design as a pedagogical tool, institutional development, challenges, and resilience; and integration into Njala University and implications for professionalisation.

By examining these dimensions, the article contributes to a deeper understanding of how training institutions shape and are in turn shaped by national health systems, particularly in fragile and post-conflict settings. The history of the Paramedical School in Bo offers a valuable example for strengthening appropriate health worker training as part of broader efforts to build resilient, equitable health systems in LMIC facing an acute shortage of trained doctors (Dussault & Cobbs [3]).

2 Historical background

The development of Sierra Leone's healthcare system cannot be understood without situating it within the broader historical and political context of postcolonial state formation, global health policy shifts, and the country's prolonged periods of instability. At independence in 1961, Sierra Leone inherited a healthcare system marked by limited infrastructure, uneven service distribution, and a chronic shortage of trained health professionals, challenges common to newly independent African states (Newbrander et al. [4]). The concentration of physicians in urban or administrative headquarters town healthcare centres, combined with the absence of a robust pipeline for training other cadres besides doctors, created persistent gaps in rural health service delivery (Dovlo [5]). At independence, Sierra Leone had no medical school, 1 college of nursing (the National School of Nursing at Connaught Hospital, Freetown), 1 school of midwifery (Midwifery School at PCMH, Freetown), and a few Enrolled Nurse training programs at church mission hospitals, including those at Sarabu Hospital in the South and Segbwema Nixon Memorial Hospital in the East. Rural healthcare posts were staffed by Dispensers and Dressers, who had no specific training schools or colleges to attend and were mostly trained on the job, working under an experienced doctor or dispenser before being transferred to their own designated units. Sierra Leone's only medical school, the College of Medicine and Allied Healthcare Sciences (COMAHS), opened in 1988. Between independence in 1961 and when the first batch of medical doctors graduated from COMAHS in 1994, the country relied entirely on foreign-trained doctors. Because the number of new doctors produced via the foreign training school route was few (below 10 per year), the country's healthcare demand for trained doctors far outstripped supply.

During the 1970s and 1980s, global health policy was shaped by the rise of primary healthcare (PHC) as articulated in the 1978 Alma-Ata Declaration, which called for community-based, equitable, and accessible health services. This shift encouraged low-income countries to expand the training and deployment of paramedical health workers, including clinical officers, community health officers, and environmental health practitioners, as a pragmatic response to physician shortages. International donors and development agencies responded by increasingly supporting LMIC governments in establishing training institutions for these healthcare cadres, recognising their potential to strengthen PHC systems (Campbell et al. [6]).

Sierra Leone's adoption of paramedical cadres aligned with these global trends. The government sought to expand access to essential services in rural districts, where health indicators were poor and required urgent attention. The establishment of the Paramedical School in Bo in 1980 reflected both national priorities and international development logics, particularly European Union investments in health workforce capacity building. This period also saw the expansion of community health initiatives and the formalisation of roles such as Community Health Officers (CHOs) and Environmental Health Officers (EHOs), who became central to the delivery of healthcare services in rural areas (Lehmann & Sanders [7]). The transformation also saw the gradual phasing out of dispensers and dressers from the workforce.

The country's political and economic instability during the 1980s, culminating in the 1991 outbreak of civil conflict, severely constrained the health sector. The war disrupted service delivery, displaced health workers, and destroyed infrastructure, exacerbating pre-existing shortages and undermining training institutions (Abdullah [8]). These disruptions would have long-lasting effects on the health workforce training and supply, making the role of both medical and non-medical cadres even more critical during and after the conflict. The postwar period brought renewed attention to strengthening the health system, with support from international donors and global health initiatives. Efforts to rebuild the healthcare workforce emphasised the importance of non-medical cadres for restoring essential services, particularly in rural areas, where physician numbers remained critically low (Cometto & Campbell [9]). Despite the challenges it faced during the conflict, the Paramedical School in Bo survived and remained a key institution in the country's healthcare rebuilding process.

3 Origins and establishment of the Paramedical School in BO

The establishment of the Paramedical School in Bo in the 1980s reflected a convergence of national health priorities, global development agendas, and the strategic interests of international donors. During the late 1970s and early 1980s, Sierra Leone faced a severe shortage of trained health professionals, particularly in rural districts, where health indicators were (and still are) among the lowest in West Africa (WHO, 2026). The country's reliance on a small, urban- or district-headquarter town-based physician workforce made it difficult to deliver essential services outside the major towns, a challenge mirrored across postcolonial African states (Mullan & Frehywot [10]).

At the same time, global health policy was undergoing a major transformation. The 1978 Alma-Ata Declaration articulated a bold vision for primary healthcare (PHC), emphasising equity, community participation, and the strategic use of mid-level cadres to expand access to essential services. International development partners, including the European Union, increasingly supported the establishment of training institutions for non-physician clinicians as part of broader efforts to strengthen PHC systems in the countries they were supporting through financial and other development packages. These global realities strongly influenced Sierra Leone's decision to invest in training its own paramedical healthcare workforce domestically rather than sending students abroad.

The Paramedical School in Bo emerged from this context as a flagship initiative to produce appropriate healthcare cadres capable of delivering frontline services in rural areas. Its establishment was supported by evidence that appropriately trained and supported non-medical cadres can safely and effectively perform some clinical tasks traditionally reserved for doctors/physicians, particularly in resource-constrained settings (Eyal [11]). The school's mission was therefore both pragmatic and transformative: to rapidly expand the health workforce while reshaping service delivery.

The European Union's support was instrumental in the school's creation, providing funding for infrastructure, equipment, and curriculum development. This investment reflected broader donor priorities that emphasised capacity building, decentralised service delivery, and the professionalisation of paramedical cadres (European Union [12]; Younus & Abdallah [13]). These priorities, as in 1980, remain the basis of EU support and cooperation with Africa today. The decision to locate the school in Bo City, Sierra Leone's second-largest city and a regional hub, was strategic. Bo City's central location, transportation links, and numerous existing secondary schools made it an ideal site for a national training centre.

The school's early curriculum balanced theoretical instruction with extensive practical training, reflecting the competencies required for rural service. Students were trained in maternal and child health, infectious disease management, environmental health, health promotion, and basic clinical procedures. This curriculum was aligned with global PHC principles and with evidence that non-medical paramedical cadres could deliver high-quality care when appropriately trained and supervised.

The establishment of the Paramedical School in Bo also marked an important step in the professionalisation of these healthcare worker cadres in Sierra Leone. Before its creation, health workers' training, especially outside Freetown, was fragmented, inconsistent, and often informal. The Bo Paramedical School provided a structured institutional identity, clearer career pathways, and a more coherent approach to healthcare workforce planning, developments that proved critical as the country faced growing health challenges in the decades that followed.

4 Architecture and design as health-system strategy

The architectural design of the Paramedical School in Bo was not merely functional; it reflected broader development ideologies, pedagogical priorities, and environmental considerations that shaped international health infrastructure projects of the late twentieth century. Donor-funded educational facilities in Africa during this period often incorporated modernist design principles **(Figure 1**), emphasising rational planning, modular construction, and climate-responsive features to maximise durability and minimise operational costs (Wakeman [14]). The school's layout, spatial organisation, and material choices therefore embodied both global architectural trends and local environmental realities.

Figure 1 Paramedical School, Bo in the 1980s (Photo credit – Wakeman)

The campus was organised around a series of low-rise, climate-appropriate buildings constructed of reinforced concrete, with wide verandas and cross-ventilation systems. These features were common in development projects funded by European partners, who sought to balance modern construction techniques with adaptations to tropical climates (Vale [15]). The use of shaded walkways, open courtyards, and natural airflow reduced reliance on mechanical cooling systems, aligning with sustainability principles increasingly recognised as essential in resource-constrained settings.

The school's spatial arrangement also reflected pedagogical priorities. Classrooms, laboratories, and demonstration rooms were positioned to support hands-on, competency-based training, a core requirement for health worker education. The inclusion of dedicated skills laboratories and clinical practice areas is consistent with global evidence that healthcare staff perform best when training environments simulate real-world clinical contexts (Browne [16]). These design choices supported the school's mission to produce graduates capable of effectively delivering essential services in rural and underserved communities.

Residential facilities were another critical component of the campus design. Dormitories for students and staff quarters for tutors and the school's Principal were integrated into the site plan, reflecting the boarding-school model common in health training institutions across sub-Saharan Africa (Teferra [17]). This model promoted social cohesion, reduced absenteeism, and ensured that students from remote districts could access training without the burden of securing private accommodation in Bo City. It also reinforced the school's identity as a national institution, drawing trainees from

across Sierra Leone, much like the very successful model at the Bo Government Secondary School (Bo School), an eminent boarding school established in 1906, initially for the sons or nominees of Paramount Chiefs.

The campus layout further reflected the broader political economy of development assistance. Donor-funded infrastructure projects often served as visible symbols of international partnership, modernisation, and state capacity (World Bank [18]). The Bo Paramedical School's orderly design, landscaped grounds, and durable construction materials conveyed a sense of institutional permanence and legitimacy, qualities particularly important in a health system marked by chronic underinvestment and uneven governance. Importantly, the school's architecture also supported resilience. Its robust construction enabled it to withstand periods of political instability and conflict, even as other health facilities were damaged or destroyed during the civil war. The campus's self-contained layout, including water storage, open spaces, and secure perimeters, enabled it to operate intermittently during crises and to serve as a site for post-war reconstruction efforts (Wakeman [14]).

5 Institutional development, pedagogy, and challenges

From its inception, the Paramedical School in Bo was designed to provide a structured, competency-based training pathway for health workers who would serve as the backbone of Sierra Leone's primary healthcare system. Both male and female students were admitted to the first cohort. This was a progressive move for the era, valuing gender diversity in community health roles from its inception. The School's development reflected national health priorities and global evidence on the effectiveness of paramedical cadres in expanding access to essential services in resource-constrained settings (Booker [19]). The school's curriculum, governance structures, and pedagogical approaches evolved, shaped by shifting health system needs, donor priorities, and the broader socio-political environment. The first cohort of students admitted followed a two-year intensive curriculum and, on completion, were awarded a certificate in Community Health with specialisation in Maternal and Child Health Aide (MCHA), Nursing Aide (NA), and State Enrolled Community Health Nurse (SECHN).

Pedagogically, the school adopted a blended model that combined theoretical instruction with extensive practical training. This approach aligned with global best practices in health worker education, which emphasise hands-on clinical exposure, supervised practice, and the development of critical thinking skills relevant to rural service delivery (Weber et al. [20]). Students were trained in maternal and child health, diagnosing and treating common conditions such as neglected tropical diseases, infectious disease management, environmental health, health promotion, and basic clinical surgical procedures essential for frontline service delivery in Sierra Leone's decentralised health system (WHO [21]).

The school's teaching staff played a critical role in shaping its institutional culture. Tutors were often experienced clinicians or public health practitioners who brought practical expertise into the classroom. Sierra Leonean staff were supported by expatriate staff from the UK, the EU, and the USA. However, like other training institutions in fragile and low-income settings, the Paramedical School Bo faced chronic shortages of qualified educators, limited opportunities for faculty development, and challenges in retaining experienced staff. These constraints affected the consistency and quality of instruction, particularly during periods of political instability and economic hardship.

Infrastructure limitations also presented significant challenges. Although the school's original design incorporated climate-responsive and pedagogically functional features, maintenance was often underfunded, leading to deteriorating buildings, equipment shortages, and inadequate learning materials. These issues were exacerbated during the civil war, when disruptions to funding, governance, and supply chains undermined the school's ability to operate effectively (Africa Development Bank [22]).

Despite these challenges, the Paramedical School in Bo demonstrated considerable resilience. Its boarding school model helped maintain student attendance and training continuity, even during periods of instability. The school also adapted its curriculum over time to reflect emerging health priorities, including HIV/AIDS, malaria control, maternal health, and, later, epidemic preparedness following the Ebola outbreak. These adaptations reflected a broader trend in global health workforce development, in which non-doctor cadres increasingly take on expanded roles in disease surveillance, community engagement, and emergency response.

As an institution, the school operated within a complex governance environment shaped by the Ministry of Health and Sanitation, donor agencies, and, later, university oversight structures. This multi-layered governance created both opportunities and constraints. Donor support provided essential resources for infrastructure and curriculum development but also introduced dependencies and periodic misalignment between national priorities and external

agendas. Meanwhile, limited domestic financing for health workforce training made long-term planning difficult, contributing to fluctuations in student intake, staffing levels, and program stability (MOH, Sierra Leone [23]).

6 Civil conflict, disruption, and post-war reconstruction

The outbreak of Sierra Leone's civil war in 1991 marked a profound turning point for the country's health system and the Paramedical School in Bo. Like other public institutions, the school was severely affected by the conflict, which caused widespread infrastructure damage, mass displacement of students and staff, and the collapse of essential services. Training institutions for health workers are particularly vulnerable in fragile settings, where instability disrupts governance, financing, and human resources, all of which are essential to sustaining educational continuity.

During the war, the Paramedical School Bo faced severe operational challenges. Staff and students were displaced, teaching was intermittently suspended, and the school's infrastructure deteriorated due to a lack of maintenance and conflict-related damage. These disruptions mirrored patterns observed in other conflict-affected countries, where health worker training pipelines often collapse, leading to long-term workforce shortages that persist well into the post-conflict period. The school's boarding-school model, which had previously supported student retention, became difficult to sustain as insecurity and resource scarcity intensified.

Despite these challenges, the school demonstrated notable resilience. Its robust design, using durable materials, climate-responsive features, and a self-contained campus layout, enabled parts of the facility to remain functional even during periods of instability, non-occupation, or use for purposes other than the intended purpose. This resilience aligns with evidence that well-designed infrastructure can mitigate the impact of conflict on health and educational institutions. Nevertheless, the cumulative effects of prolonged disruption due to the civil war significantly weakened the school's capacity to produce health workers at a time when the country's health system needed them most.

The postwar reconstruction period, beginning in 2002, renewed attention to rebuilding the health workforce. International donors, including the World Bank, the UK Department for International Development (DFID), and various global health initiatives, prioritised health system strengthening as part of broader state-building efforts (Buse et al. [24]). Non-physician cadres, such as CHOs, were recognised as essential for restoring basic services, particularly in rural areas where the number of physicians remained critically low, and the need for basic healthcare services was greatest. The Paramedical School in Bo became a focal point for these efforts, receiving a fresh injection of support from international partner organisations, including to rehabilitate the infrastructure, recruiting tutors, updating the curricula, and expanding student intake.

Reconstruction also involved reestablishing governance structures, improving faculty recruitment, and restoring supply chains for teaching materials and equipment. However, these efforts were uneven and often constrained by limited domestic financing and competing donor priorities. Sierra Leone continues to rely on significant foreign donor support, especially in the immediate period following the end of the civil war (IMF [25]). The school's recovery was further complicated by the need to address the psychosocial and economic impacts of the war on both staff and students, who had experienced trauma, displacement, or the loss of colleagues, family members, or friends.

In addition, the country saw the emergence of new health challenges, including very high maternal mortality rates (at the time the worst globally), a persistent high malaria burden, the HIV/AIDS epidemic, later, the devastating 2014–2016 Ebola outbreak, and, more recently, the Mpox outbreak. These crises underscored the importance of a resilient, well-trained health workforce capable of responding to emergencies while maintaining essential services. The Paramedical School adapted its curriculum by incorporating new competencies and programs to prepare frontline staff to address these challenges. Hence, the school introduced updated curricula, including modules on infection prevention and control, public health, community engagement, outbreak response, and minor surgical training, which align with global trends in health workforce preparedness (WHO [26]).

The civil conflict profoundly disrupted the Paramedical School in Bo, but the institution's resilience and strategic importance enabled it to play a central role in postwar reconstruction. Its recovery illustrates both the vulnerabilities and the critical contributions of paramedic health worker training institutions in fragile and post-conflict settings. The school's experience underscores the need for sustained investment in infrastructure, governance, and workforce development to ensure the health system's long-term resilience.

7 Integration into Njala University and the transformation of mid-level training

The integration of the Paramedical School in Bo into Njala University marked a significant institutional transition in Sierra Leone's approach to training health workers. This shift reflected broader national efforts to strengthen higher education, professionalise the health workforce, and align training programmes with international standards. It also represented a strategic response to the evolving demands of the health system, particularly in the aftermath of the civil war and subsequent public health crises.

Njala University, originally established in 1964 as part of the University of Sierra Leone, has long been a centre of higher learning in agriculture, the environment, applied sciences, and teacher education (Njala University [27]). Several factors influenced the decision to incorporate Paramedical School into a university structure. First, the Ministry of Health and Sanitation recognised the need to formalise and elevate paramedic training to ensure consistency, quality, and accreditation. This is aligned with global trends in which mid-level cadres increasingly require standardised curricula, competency-based assessments, and recognised qualifications to support expanded scopes of practice. University integration provided a framework for academic oversight, curriculum review, and quality assurance mechanisms that were difficult to sustain under the previous standalone school model.

Second, the integration supported the professionalisation of non-physician cadres by embedding their training within a broader academic ecosystem. This shift enabled clearer career pathways, opportunities for postgraduate training, and improved recognition of paramedic practitioners within the health system. Such professionalisation is essential for workforce motivation and retention, particularly in fragile settings where health workers often face limited career progression and challenging working conditions.

Third, university oversight facilitated the modernisation of the curriculum. Njala University introduced a new departmental administrative structure, updated program modules in epidemiology, health systems management, research methods, and emergency preparedness, reflecting lessons from the Ebola epidemic and the growing emphasis on health system resilience. These updates align with global calls for paramedic cadres to assume expanded roles in disease surveillance, community engagement, and outbreak response. The integration, therefore, strengthened the school's ability to produce graduates equipped to meet contemporary health challenges.

Following integration into Njala University, the certificate-level MCHA, NA, and SECHN training courses were gradually phased out and replaced with the CHO and SRN programs (Njala University [27]). Students are now offered options to pursue a diploma (2 years), a higher diploma (3 years), and a bachelor's (BSc, 4 years) degree programmes. More recently, Master's (MSc) and Doctorate (PhD) programmes in Public Health have been added.

As is generally the case with any merging of two educational entities, the transition also introduced new complexities. University governance structures, while beneficial for academic quality, sometimes create bureaucratic delays in procurement, staffing, and program implementation. Funding constraints persisted, as the higher education sector in Sierra Leone faced chronic underinvestment, limited research infrastructure, and competing institutional priorities. These challenges slowed the pace of curriculum reform, faculty recruitment, and infrastructure rehabilitation.

Moreover, the integration raised questions about the Paramedical School's identity and mission. While university affiliation enhanced academic legitimacy, some stakeholders, including students, were concerned that the school's original focus on practical, community-oriented training might be diluted by academic formalisation (Sasie [28]). Balancing academic rigor with the pragmatic needs of frontline service delivery remains a persistent challenge in non-medical training programs worldwide. Another unresolved issue was the regulation and accreditation of graduates of the Paramedical School Bo. Between 1982, when the first students graduated, and 2023, a regulatory body was not established to oversee the CHO/EHO and similar non-nurse, non-midwife or non-physician cadres. They were not also incorporated with Registered Nurses or Registered Midwives for regulation under the already existing Sierra Leone Nursing and Midwifery Board (now known as the Sierra Leone Nursing and Midwifery Council). Instead, the Ministry of Health provided oversight. After many years of discussions locally and with international advocacy, in 2022, The Sierra Leone Parliament (Government of Sierra Leone [29]) finally passed a bill to create the Allied Health Professions Council, with CHOs included for regulation and the issuance of licenses by this new body. The bill was enacted in 2023, and the Council has commenced its statutory duties.

Despite these challenges, integration into Njala University was a critical step toward strengthening Sierra Leone's health workforce pipeline. It aligns with national strategies to expand training capacity, improve quality, and equip non-doctors to support universal health coverage and health system resilience. The transition also positions the school to

contribute more effectively to research, policy development, and regional collaboration, roles increasingly expected of health training institutions in the twenty-first century (WHO [30]).

8 Discussion and policy implications

The history and evolution of the Paramedical School in Bo illustrate broader dynamics in health workforce development, institutional resilience, and postcolonial state-building in Sierra Leone. As this analysis has shown, the school's trajectory reflects the interplay among global health agendas, national policy priorities, and the realities of operating within a fragile, resource-constrained health system. Its experience offers important lessons for strengthening paramedic healthcare worker training and for building a more resilient, equitable health system.

A central theme in this history is the critical role of trained paramedic cadres in expanding access to essential services for the population (Olaniran et al. [31]). Evidence from across sub-Saharan Africa shows that non-physician health workers can deliver high-quality care, particularly in rural and underserved areas where physician shortages are most acute. Sierra Leone's reliance on Community Health Officers, Environmental Health Officers, and other mid-level practitioners is therefore consistent with global best practice. It reflects a pragmatic response to longstanding workforce gaps (Sesay et al [32]). The Paramedical School in Bo has been central to this strategy since its inception, producing various cadres of healthcare professionals who form the backbone of primary healthcare delivery in the country. Students who complete the CHO training program are employed by the Ministry of Health in various categories, with titles including Anaesthetics CHO or Surgical CHO. Additionally, during emergencies such as the 2014 – 2016 Ebola and 2025 Mpox crises, many healthcare workers, including CHOs, are employed by international NGOs and play vital roles in the fight against these deadly diseases, often at high personal risk. A commemorative plaque **(Figure 2)** stands on the grounds of Bo Government Hospital in honour of the frontline health workers - trained at the Paramedical School and serving as Community Health Officers (CHO), Maternal and Child Health Aides (MCHA), Nursing Aides (NA), and State Enrolled Community Health Nurses (SECHN) - who died after contracting the fatal haemorrhagic virus while delivering care to patients and communities during the 2014–2016 Ebola epidemic. Their courage and sacrifice in the face of danger from an unknown disease demonstrate their dedication to the values of public health and community protection at all costs.

The history of Paramedical School Bo continues to evolve. It underscores the vulnerability of training institutions in fragile settings. Periods of conflict, economic instability, and epidemic shocks have repeatedly disrupted training pipelines, undermined infrastructure, and strained governance systems. These disruptions have long-term consequences for workforce availability, distribution, and quality, which continue to shape Sierra Leone's health system today. Strengthening institutional resilience, therefore, requires sustained investment in infrastructure, faculty development, and governance, as well as contingency planning for future crises (Africa CDC [33]).

The integration of the Paramedical School into Njala University marks an important step toward professionalising paramedic staff training and aligning it with international standards. University oversight has facilitated curriculum modernisation, strengthened academic quality assurance, and expanded research and postgraduate training opportunities. These developments support the important goal of creating a competent, motivated, and career-oriented healthcare workforce capable of contributing to universal health coverage and health system resilience.

Additionally, this transition introduced new challenges. University governance structures can be bureaucratic and slow to respond to the rapidly evolving needs of the health system. Funding constraints persist, and the risk remains that formalisation within academia may dilute the school's original focus on practical, community-oriented training. Policymakers must therefore ensure that university integration strengthens rather than undermines the school's mission to produce competent frontline healthcare practitioners equipped for rural service.

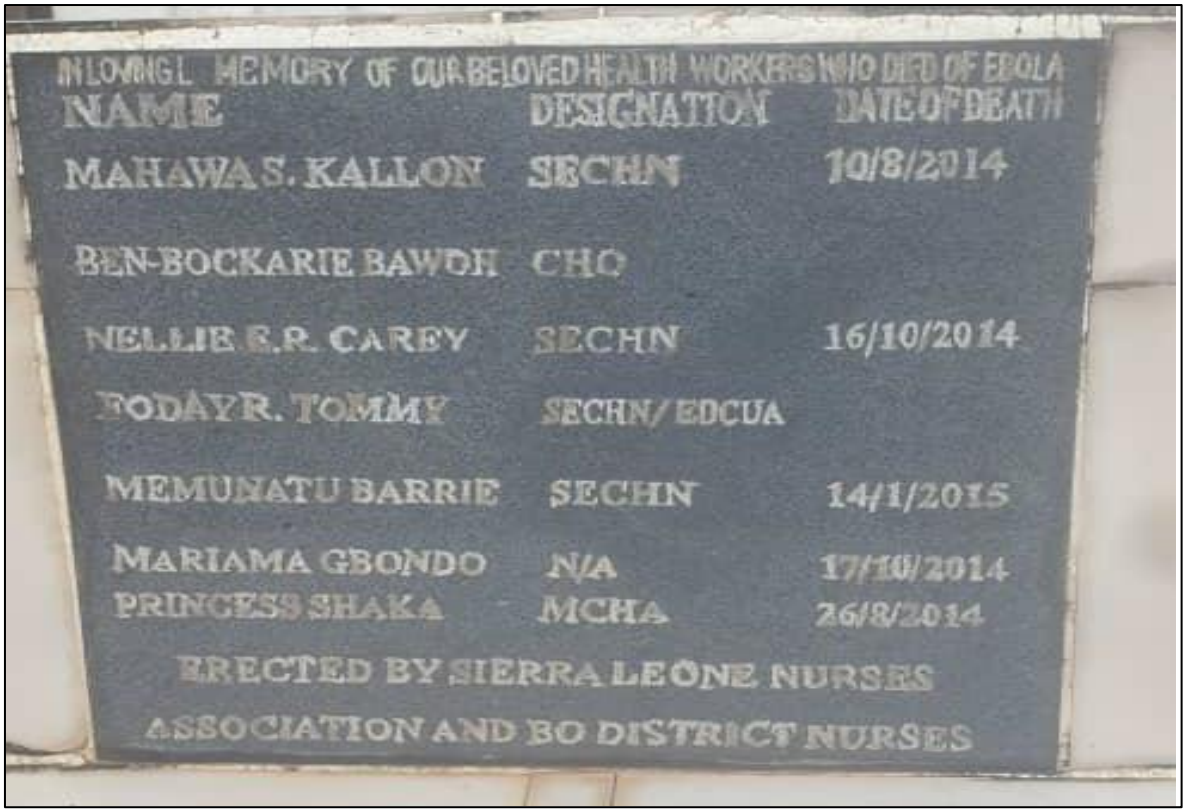

Figure 2 Memorial plaque at Bo Government Hospital (photo credit – author)

The Paramedical School's experience also underscores the importance of aligning training with national health priorities. As Sierra Leone continues to face high burdens of maternal mortality, infectious diseases, non-communicable diseases, neglected tropical diseases, and periodic viral epidemics, mid-level cadres must be trained in competencies such as healthcare preparedness, outbreak response, infection prevention and control, and community engagement. Integrating these competencies into curricula is essential to building a workforce capable of responding to both routine and emergency health needs.

Finally, the Paramedical School's history highlights the need for coordinated, long-term investment in health workforce development. Donor support has been vital but often fragmented, short-term, or misaligned with national priorities. New realities also mean that donor funding is decreasing as larger donor countries, including Canada, Germany, the USA, and the UK, are reducing their international commitments. Strengthening Sierra Leone's health workforce requires a clear national strategy that integrates training, deployment, retention, and career development supported by sustainable domestic financing and strategic partnerships with alternatives, including diaspora organizations (MOH, Sierra Leone [34]; [35]).

The Paramedical School provides a strong example of how training institutions can influence and be influenced by the broader health system. Its resilience, flexibility, and lasting contributions highlight the vital role of CHO cadres in Sierra Leone's health system. At the same time, its challenges emphasise the importance of ongoing investment, governance reform, and strategic planning to keep mid-level healthcare staff training aligned with the country's changing health needs.

9 Conclusion

The history of the Paramedical School, Bo, offers a compelling lens for understanding the evolution of Sierra Leone's health system, the centrality of appropriate alternatives for doctors, and the challenges of sustaining training institutions in fragile and post-conflict contexts. Established amid global enthusiasm for primary healthcare and national efforts to expand rural service delivery, the school became a cornerstone of the country's health workforce strategy. Its architecture, curriculum, and institutional culture reflected both international development logics and local health system needs, positioning it as a vital contributor to frontline service provision.

The school's trajectory also underscores the profound impact of political instability, economic hardship, and public health crises on training institutions. The civil war disrupted operations, displaced staff and students, and weakened infrastructure, mirroring patterns observed in other conflict-affected settings where health workforce pipelines are particularly vulnerable. The school's resilience, supported by durable infrastructure, committed educators, and its strategic importance to national health priorities, enabled it to play a central role in postwar reconstruction and subsequent epidemic responses.

The integration of the school into Njala University marks a major institutional change, creating opportunities for professional growth, curriculum updates, and better academic oversight. At the same time, this shift reveals ongoing tensions between formal academic structures and the practical, community-focused spirit that has long characterized mid-level training. Making sure that university integration enhances, rather than weakens, the school's core mission remains a key policy goal.

The Paramedical School's history highlights several important lessons for health workforce development in Sierra Leone and similar settings. First, ongoing investment in training is vital to reach universal health coverage, especially in rural and underserved areas where doctor shortages remain. Second, training institutions need adequate infrastructure, faculty development, and good governance to stay resilient against future challenges. Third, national plans should align training efforts with evolving health priorities, including epidemic preparedness, community involvement, and strengthening health systems.

Ultimately, the Paramedical School in Bo, now part of Njala University, serves as a symbol of the lasting importance of mid-level non-medical health workers in Sierra Leone's health system. The School's history and journey highlight the transformative power of carefully designed and well-supported training institutions to promote health equity – addressing the broad and specific health needs of children, women and men, enhancing primary healthcare, and creating resilient health systems in low- and middle-income countries.

Compliance with ethical standards.

Disclosure of Conflict of Interest

I declare no competing financial or personal relationships that would appear to influence the work reported in this article.

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