Comparative Healthcare Delivery Models: Insights from the United States and Ghana

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***Abstract*— Comparing healthcare delivery systems across countries provides opportunities to identify best practices, highlight systemic challenges, and promote cross-national learning. This study evaluates healthcare delivery in Ghana and the United States through a mixed-methods comparative framework. We assess infrastructure capacity, financing mechanisms, accessibility, and health outcomes. Findings demonstrate similarities in shared health goals and reliance on mixed public-private systems, yet reveal profound differences in resource allocation, disease burden, and care affordability. Lessons learned provide actionable pathways for strengthening equity, efficiency, and resilience in both settings.**

Keywords- healthcare delivery; Ghana; United States; comparative analysis; health systems.

I. INTRODUCTION

Healthcare systems globally face mounting pressure to deliver equitable, affordable, and high-quality care [1]. Comparative studies of different systems shed light on effective strategies while identifying areas for reform [2]. Ghana and the United States, despite differences in socioeconomic context and resource levels, share the overarching goals of improving population health and reducing disparities. Ghana's healthcare model reflects ongoing transitions from managing infectious diseases to addressing an increasing burden of Non-Communicable Diseases (NCDs) [3]. Meanwhile, the United States grapples with high expenditures and persistent inequities despite advanced infrastructure and technology [4]. This paper builds on a U.S.–Ghana institutional collaboration to examine structural, financial, and health outcome differences between the two countries.

The rest of the paper is structured as follows. Section II presents the methods used while Section III described the findings. In Section IV, we discuss the implications of the findings, and conclude the work in Section V.

II. METHODS

This study employed a rigorous mixed-methods approach to capture the complexity of healthcare systems in Ghana and the United States, recognizing that both quantitative metrics and contextual insights are essential for meaningful cross-national comparisons. Quantitative analyses utilized secondary data from authoritative sources such as the World Bank [5], the World Health Organization [6], and national health system reports to examine key indicators, including physician density, healthcare expenditure as a percentage of GDP, insurance coverage rates, life expectancy, disease prevalence, and system financing models [7][8][9]. These measures provided objective benchmarks to compare resource allocation, population health outcomes, and system performance across countries. To complement this, a qualitative review of peer-reviewed literature explored healthcare access, workforce distribution, and health equity, offering a deeper understanding of structural, social, and cultural factors that influence care delivery but are not easily captured by numerical data. Additionally, semi-structured interviews with key stakeholders from the University of Houston College of Medicine and the University of Ghana Medical School provided real-world perspectives on operational challenges, policy priorities, and opportunities for adaptation of best practices. By integrating quantitative and qualitative evidence, this mixed-methods approach allowed for a nuanced synthesis of converging trends and critical divergences, highlighting how systemic, economic, and sociocultural factors interact to shape healthcare delivery and outcomes in each context. The combination of data-driven analysis and stakeholder insights strengthens the validity of the findings, providing a robust foundation for actionable recommendations in both countries.

III. FINDINGS

Both Ghana and the U.S. rely on hybrid systems blending public and private healthcare provision and insurance-based financing. However, critical differences emerged, as shown in Table I.

TABLE I. COMPARISON OF GHANIAN AND AMERICAN HEALTHCARE METRICS

Indicator	*Ghana*	*United States*	*Notes/Implications*
Healthcare Expenditure [% of GDP]	3.5%	17.8%	U.S. spends ~5x more of GDP on healthcare; Ghana faces resource constraints.
Per Capita Healthcare Spending	~$140	>$12,000	Huge gap in affordability and access to advanced technology.
Physician Density [per 1,000 people]	0.18	2.6	Severe shortage of healthcare professionals in Ghana.

Indicator	*Ghana*	*United States*	*Notes/Implications*
Insurance Coverage	~40% National Health Insurance Scheme (NHIS)	~90.4% covered [9.6% uninsured]	Many Ghanaians lack financial protection for care.
Life Expectancy	64 years	77 years	Reflects differences in disease burden and healthcare access.
Infant Mortality Rate	35 per 1,000 live births	5.4 per 1,000 live births	Indicates maternal and child health disparities.
Disease Burden	Infectious + rising NCDs [40% deaths]	Predominantly chronic diseases: heart disease [695k deaths], cancer [609k deaths], obesity [42.4%]	Double burden in Ghana; U.S. faces lifestyle-related NCDs.
Hospital Beds [per 1,000 people]	0.9	2.8	Limited inpatient capacity in Ghana.
Physician-to-Nurse Ratio	1:3	1:4	Slightly lower nursing capacity in Ghana.
Access to Essential Medicines	Limited	High	Affordability and supply chain challenges in Ghana.
Healthcare Infrastructure	Urban concen-tration, rural gaps	Widespread, advanced	Rural areas in Ghana underserved; U.S. has advanced tech broadly.

IV. DISCUSSION

This comparative study highlights how context-specific challenges shape healthcare delivery and offers important lessons for both Ghana and the United States. In Ghana, the dual burden of infectious diseases and rising NCDs creates complex demands on an already resource-constrained health system [3]. Lessons from the U.S., a high-resource setting with extensive experience in chronic disease management, can guide Ghana in developing strategies for prevention, early screening, and effective long-term management of NCDs. Adapting these strategies to local contexts—such as integrating community health workers, leveraging mobile health technologies, and implementing population-level screening programs—can help mitigate the rising burden of chronic diseases [10]. Additionally, expanding medical and allied health training programs, creating structured workforce pipelines, and incentivizing practice in underserved regions are essential for addressing the country's severe physician and nurse shortages.

Conversely, the U.S. can benefit from Ghana's emphasis on community-based, cost-effective approaches to healthcare delivery. Programs like Ghana's National Health Insurance Scheme [NHIS] demonstrate progress toward universal health coverage, particularly in providing financial protection to populations that might otherwise face catastrophic health expenditures. Such models illustrate how high-resource systems can incorporate grassroots-level strategies to improve affordability, equity, and accessibility, especially for vulnerable populations who may encounter barriers to care despite technological and infrastructural advantages. Furthermore, Ghana's focus on preventive care and primary health interventions offers insights into reducing healthcare costs while improving population health outcomes—lessons that could be applied to U.S. efforts in value-based care and health equity initiatives [11].

Despite differences in resources, infrastructure, and epidemiological profiles, both healthcare systems face shared challenges. Inequitable distribution of care between rural and urban regions persists in both countries, contributing to disparities in health outcomes [12][13]. Rising rates of NCDs, coupled with the need to maintain sustainable financing mechanisms, further complicate the delivery of effective healthcare. By examining these commonalities and divergences, this comparative analysis underscores the potential for cross-country learning, where lessons from one system can inform innovations and reforms in the other. Ultimately, a nuanced understanding of context-specific challenges paired with adaptive strategies can enhance the capacity of both Ghana and the U.S. to provide equitable, efficient, and high-quality care for their populations.

V. CONCLUSION

To translate these insights into practice, both countries can consider targeted policy and implementation strategies. In Ghana, this could include scaling up community health worker programs, integrating chronic disease management into primary care, and investing in workforce development initiatives to address provider shortages. In the U.S., adopting more community-centered, cost-conscious interventions—such as expanding preventive care outreach and exploring innovative insurance models inspired by Ghana's NHIS—could improve equity and reduce unnecessary expenditures. Collaborative exchanges, research partnerships, and cross-country learning initiatives can further strengthen both systems, fostering adaptable solutions that respond to local needs while addressing shared healthcare challenges.

Cross-national learning between Ghana and the United States underscores the importance of adaptable, resilient, and people-centered healthcare models. While differences in resource allocation remain stark, opportunities exist for both countries to strengthen care delivery by adopting innovative practices from each other. International collaborations between medical institutions play a critical role in advancing shared learning and improving global health outcomes.

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