Exploring strategies for building a sustainable healthcare system in Africa: lessons from Japan and Switzerland

Abdulbasit Opeyemi Muili, MBBS[a], Adrien Tangmi, MD[b,*], Sanobar Shariff, MBBS[c], Farah Awad, MBBS[d], Taha Oseili, MBBS[d]

Abstract

Strengthening healthcare infrastructure is an important strategy for building a sustainable healthcare system in Africa. This involves investing in facilities, equipment, and supplies, as well as training and retaining skilled healthcare workers. Additionally, improving healthcare infrastructure and investing in healthcare education and training can lead to significant improvements in health outcomes, such as reducing maternal and child mortality. This is critical for building a sustainable healthcare system. Through a literature review, we assessed the approaches to building a sustainable healthcare system in Africa from the perspectives of Japan's and Switzerland's healthcare systems. It was discovered that Japan currently has the highest life expectancy, which can be attributed to insurance policies, healthcare policies, and the integration of emerging technologies and clinical research into their healthcare system. Lessons that Africa must emulate from the Japanese healthcare system include ensuring universal healthcare coverage, improving the workforce, improving primary healthcare, prioritizing the aging population, and investing in technology, infrastructure, and research. Japans healthcare system is also sustainable thanks to its stable workforce and primary healthcare. Switzerland also has an exceptional healthcare system globally, with technical and socioeconomic advancements leading to increased life expectancy and population aging through a worldwide health policy approach, programs tackling professional responsibilities and interprofessional cooperation, and initiatives to support family medicine. By learning from Japan's and Switzerland's approaches, Africa will gradually achieve the Sustainable Development Goals and build a sustainable healthcare system.

Keywords: Africa, healthcare, Japan, Switzerland

Introduction

African countries face numerous challenges in their healthcare systems, such as poor healthcare insurance, inadequate infrastructure, and a shortage of trained health professionals. These challenges lead to high morbidity and mortality rates for preventable and treatable diseases[1]. Therefore, it is crucial to explore strategies for building a sustainable healthcare system in Africa that can address these challenges. One possible approach is to strengthen primary healthcare (PHC), as it is the foundation for preventing and managing diseases at the community level.

[a]Department of Medicine, Ladoke Akintola University of Technology, Ogbomosho, Nigeria, [b]Faculty of Medicine, Université Technologique Bel Campus, Kinshasa, DRC, [c]Yerevan State Medical University, Yerevan, Armenia and [d]Beirut Arab University, Beirut, Lebanon

Sponsorships or competing interests that may be relevant to content are disclosed at the end of this article.

*Corresponding author. Address: Association of Future African Neurosurgeons, Yaoundé, Centre Cameroon. Tel.: +243 894 329 074; fax: +243 906 816 564. E-mail: tangmiadrien@gmail.com (T. Adrien).

HIGHLIGHTS

- African countries face many challenges in their healthcare systems. This includes limited resources, inadequate infrastructure, and a shortage of trained health professionals, leading to high morbidity and mortality rates for preventable and treatable diseases.
- Currently, Japan is the country with the highest life expectancy. This is attributable to various developments in the healthcare system, from the enactment of health policies and the development of a universal healthcare system to the use of emerging technologies.
- In terms of access, effectiveness, equity, efficiency, and the promotion of healthy lifestyles, the Swiss healthcare system does exceptionally well globally.
- African countries can improve healthcare access, quality, and efficiency, reduce health disparities, and achieve better health outcomes for their populations.
- Research shows that investing in primary healthcare in low-income and middle-income countries can lead to significant improvements in health outcomes and reduce healthcare costs. Another strategy is to use technology and innovation, such as mobile health and electronic health, to improve healthcare delivery and management.
- Strong leadership and governance are essential to building a sustainable healthcare system in Africa that is responsive to population needs and accountable to stakeholders.

Muili et al. Annals of Medicine & Surgery (2024)

Annals of Medicine & Surgery

Research shows that investing in PHC in low- and middle-income countries can lead to significant improvements in health outcomes and reduce healthcare costs[2]. One possible approach is to strengthen PHC, as it is the foundation for preventing and managing diseases at the community level. Research shows that investing in PHC in low-income and middle-income countries can lead to significant improvements in health outcomes and reduce healthcare costs[2]. Another strategy is to use technology and innovation, such as mobile health and electronic health, to improve healthcare delivery and management. These solutions have already proven successful in Africa for improving maternal and child health, managing chronic diseases, and strengthening health systems[3,4]. Strong leadership and governance are essential to building a sustainable healthcare system in Africa that is responsive to population needs and accountable to stakeholders[1]. Effective leadership can ensure that healthcare systems are adaptable to changing circumstances, and building partnerships between governments, civil society, and the private sector can mobilize resources, leverage expertise, and sustain healthcare improvements over the long term[1,2]. Building a sustainable healthcare system in Africa requires a multi-faceted approach that includes strengthening PHC, using technology and innovation, and promoting strong leadership and governance[2–4].

This current study aims to explore strategies for building a sustainable healthcare system in Africa, reviewing the successes of Japan and Switzerland healthcare system.

Methodology

In conducting an extensive literature review of the concerned literature, we employed a comprehensive and well detailed search and combinations meant to capture the strategies required to build a sustainable healthcare system in Africa, evaluating the healthcare system of Japan and Switzerland were used in the search terms.

The Literature search was conducted in 4 electronic databases, including Google scholar, Pubmed, EMBASE and AJOL. The search terms used were "Healthcare," "Africa," "Japan," "Switzerland," and "challenges." To ensure the proper inclusion of articles, the search was limited to articles published between 2010 and 2023 and further screening was done on the reference lists of included articles to identify additional studies relevant to the concerned literature

Articles were included if they met the following criteria: (1) studies conducted on the history and current state of healthcare in Japan (2) studies conducted on the history and current state of healthcare in Switzerland (3) studies focusing on the challenges facing healthcare in Africa (4) studies exploring various strategies that can help boost Africa healthcare system. Additionally, the study involved a background screening of all articles to be included, and Conference abstracts, Editorials, studies not written in English, and studies irrelevant to the topic of interest were excluded. Restrictions were not based on the length of the study.

The quantitative data were analyzed and the findings were categorized based on their relevance to various sections of the literature.

Japan's approach to building a sustainable healthcare system

Overview of Japan's healthcare system

Japan has come a long way from a low level of healthcare to having the most developed healthcare system in the world. Currently, Japan is the country with the highest life expectancy, which can be attributed to various developments in the healthcare system, from the enactment of health policies and the development of a universal healthcare system to the use of emerging technologies. Japan is also one of the few countries with a low infant and maternal mortality rate and a reduced burden of various communicable diseases in the world.

The cornerstones of Japan's healthcare system include insurance policies, healthcare policies, and the integration of emerging technologies and clinical research into their healthcare system. Various insurance policies in the Japanese healthcare system include health insurance, which sets the pace for the development of universal healthcare insurance and long-term insurance. Japan's healthcare insurance can be divided into two parts, which include the employees healthcare insurance (EIC) and the national health insurance (NHI)[5]. The earliest insurance scheme was the employee insurance scheme, which started in 1922 and was only applicable to the working class and their dependents. With time, the national healthcare insurance scheme was developed, and this had high coverage since it involved the self-employed and the non-working class[6]. The transition from the EIC to the NHI led to the achievement of universal healthcare coverage in 1961[7]. The universal healthcare insurance policy is the most important aspect of the Japanese healthcare system since it provides healthcare for all citizens at affordable costs, regardless of age or monetary status in the country. It has enabled all communities in Japan to receive treatment, rehabilitation, and palliative care without financial barriers. During the end of the 20th century, preparations for an aging society were made, which led to the introduction of long-term healthcare insurance. The long-term healthcare insurance system was created in 2000 to reduce caregiver burden and promote self-dependence among older people in the country[5].

Healthcare policies are paramount to the development of a sustainable healthcare system. Important healthcare policies in Japan, in addition to the insurance policies, include the promotion of preventive care and the integration of complementary and alternative medicine (CAM) into the healthcare system. In the promotion of preventive care, the government has implemented programs for a healthy lifestyle, good sanitation practices, and the encouragement of healthy checkup. In addition, complementary and alternative medicine has encouraged the use of generic and traditional drugs, which makes health services affordable in the country.

Japan is also known for its advancement in the use of cutting-edge technologies and research in the management of various diseases and disorders. The use of telemedicine and artificial intelligence has reduced the burden of healthcare delivery and made it accessible and affordable. Proper funding for research programs is also eminent in the Japanese healthcare system. Notable examples are the Aichi gerontological evaluation study (AGES), which started in 1999, and the Japan gerontological evaluation study (JAGES), which was created in

2010. [8]These research studies have helped in highlighting the role of prevention medicine in the healthcare system and have successfully helped in various health policy reforms in the country[8].

Lessons African countries must learn from Japan's healthcare system

Japan's healthcare system is a model for the world to follow, and comparing it to the African healthcare system, the level of healthcare in Africa is subpar; the number of human resources, infrastructural resources, disease management, and long-term care is very low in the African region. Various lessons that Africa must emulate from the Japanese healthcare system include ensuring universal healthcare coverage, improving the workforce, improving primary healthcare, prioritizing the aging population, and investing in technology, infrastructure, and research.

The most important of all is universal health coverage. The state of universal health coverage in Africa is subpar, as only a few countries have functional insurance policies for healthcare in the region. There have been reports of a very high coverage in North African countries like Algeria which has coverage of 75%. However, in the sub Saharan region, only few countries have achieved Universal health coverage (Table 1).Therefore, countries in Africa should ensure very high coverage of the national

health insurance (NIH) regardless of status in society, as it would ensure the accessibility and affordability of primary healthcare services for the majority of the populations of African countries.

Another important lesson to learn from the success of Japans healthcare system is its stable workforce and primary healthcare. Japan has numerous health professionals in various health sectors of the country, and there is no evidence of brain drain in the country due to the high standard of living and comfortable working environment for health professionals. The government and stakeholders should ensure a good standard of living for health professionals through good accommodation, investitures (salary) paid when due, and a good working environment through a proper health infrastructure provided by the government. Additionally, healthcare policies such as the promotion of preventive care and the introduction of CAM are essential due to sociocultural characteristics such as poverty. The encouragement of the use of generic drugs will increase access among the less privileged.

The aging population in Africa is very low, as the elderly have less access to healthcare services, and there are little or no insurance policies put in place for them to increase their access to primary healthcare. Therefore, the government and stakeholders should have insurance and pension policies put in place for them. A good initiative is the introduction of long-term care, which would improve self-dependence among the aging population.

Table 1

Comparing the current healthcare system of Japan and Switzerland with some African countries[9–11]

Countries	No. nurses and midwives per 10 000 population	No. specialist doctors per 1000 population	Current health expenditure as percentage of the GDP (%)	Health security (%)	Overall functionality of healthcare system (access, demand, quality and resilience) (%)	Poverty rate (%)	Coverage of essential health services (%)	Healthy life expectancy at birth
Algeria	15.5	39.1	6.2	77	68	38.30	75.0	66
Benin	3.0	0.3	3.4	39	48	38.50	38.2	55
Botswana	54.6	0.0	6.1	34	69	19.30	53.7	52
Cameroon	3.6	0.9	3.6	41	46	37.50	44.3	54
Chad	2.0	0.2	4.4	40	34	42.30	28.2	51
Congo	9.7	0.3	2.1	51	49	40.90	40.5	56
Cote d'ivoire	6.8	1.4	3.3	20	49	39.50	45.4	53
Ethiopia	7.8	5.4	3.2	72	45	23.50	38.1	59
Gabon	21.1	0.8	2.8	33	43	33.40	48.7	56
Gambia	9.5	0.1	3.8	44	56	48.60	47.8	56
Ghana	36.2	1.1	3.4	46	58	23.40	45.1	57
Japan	**119**	**N/A**	**10.9**	**N/A**	**N/A**	**2.49**	**85.0**	**84**
Kenya	11.7	2.4	4.6	57	63	36.10	56.0	56
Lesotho	32.6	0.2	11.3	37	63	49.70	48.1	42
Liberia	19.5	0.0	8.5	54	55	50.90	41.9	55
Madagascar	3.0	0.6	3.7	46	55	70.70	34.7	57
Niger	N/A	N/A	5.7	46	47	40.80	37.4	56
Nigeria	17.2	9.4	3.0	63	45	40.10	44.5	54
Rwanda	9.5	0.6	6.4	67	52	38.20	53.7	59
Senegal	1.8	2.2	4.1	60	57	37.80	49.0	59
South Africa	49.7	14.2	9.1	68	72	55.50	67.5	55
Switzerland	**183**	**N/A**	**11.8**	**N/A**	**N/A**	**0.84**	**87.0**	**84**
Togo	5.1	0.4	5.7	57	45	55.10	44.2	55
Uganda	16.4	0.2	3.8	68	58	20.30	50.5	56
Tanzania	5.7	0.5	3.8	54	50	26.40	46.4	58
Zambia	10.2	0.3	5.3	56	59	54.40	54.6	53
Zimbabwe	21.4	0.2	3.7	59	66	38.30	54.8	51

Significance of bold values are to provide an emphasis on the state of Japanese and swiss healthcare since we are comparing them to African countries.
GDP, gross domestic product; N/A, not applicable.

Muili et al. Annals of Medicine & Surgery (2024)

Annals of Medicine & Surgery

The government and stakeholders in Africa should pool resources in the area of emerging medical technologies and research to ensure developments in the area of medicine in the country and improve the healthcare status. Technologies like artificial intelligence and telemedicine will improve access to healthcare and the management of various diseases and disorders. Additionally, funding research will help to know the current state of the healthcare system in the country, identify various gaps in the system, and provide opportunities for future growth in the system.

Switzerland's approach to building a sustainable healthcare system

Overview of Switzerland healthcare system

Switzerland is a nation with a liberal capitalist culture, a well-established legacy of cooperation and social security (a rich social spending and welfare system), and a strongly decentralized political structure founded on federalism within the framework of direct democracy[12].

Switzerland, which lies in central Europe, has a healthcare system that is partially public and partially private. Services make about 60% of the gross domestic product, followed by industry, which includes pharmaceuticals, at 35%. There are 26 cantons in the federal state of Switzerland[13]. The twenty-six cantons are in charge of the majority of the nation's medical care and social welfare, whereas the federal government only exercises legislative power in those sectors that have been explicitly delegated to it by the cantons. Every canton has its own set of laws governing social welfare, hospitals, and healthcare. These legal systems are not unified[13].

Every resident is enroled in a baseline health insurance plan that is required. The general population is free to select from a variety of health funds, notably managed care programs[14]. As opposed to private insurance, fundamental, so-called social insurance pays for all expenses related to injuries, illnesses, and disabilities as long as the client is not engaged in a managed healthcare program[13]. As a result, either social insurance or private health insurance covers more than 80% of the population. Both public (mostly hospitals) and private (primarily doctor's offices) providers are present. Decentralized health services are available. The traditional setting for ambulatory care is a doctor's office. Due to the shrinking financial attractiveness of physician offices over time, there has been a trend toward centres of clinics for ambulatory healthcare, group practices, and managed care plans in the last 10 years[13].

Increased life expectancy and population aging are results of socioeconomic and technical advancements, which have an impact on the prevalence of chronic illnesses and strain the world's health systems. Numerous issues have been identified, including incompatibilities between systems created to handle acute health problems and growing demands for managing chronic diseases, resource shortages (human and financial), interprofessional disintegration, a lack of care coordination, and weaknesses in primary care[15].

In terms of access, effectiveness, equity, efficiency, and the promotion of healthy lifestyles, the Swiss healthcare system does exceptionally well globally. Patients have a wide range of options available to them, and accessibility to all treatment levels is unlimited unless otherwise requested. A worldwide health policy approach and related strategies focusing on non-communicable diseases, mental health, and end-of-life care, among others; programs tackling professional responsibilities and interprofessional cooperation; and initiatives to support family medicine are just a few examples of federal policies and programs that address contemporary health issues[16].

Healthcare stakeholders, however, face a variety of issues that call for innovation, including subpar care quality, rising healthcare requirements and expectations, rising expenses, and limited human and financial resources. Despite these difficulties, Switzerland is thought to have made only a small amount of progress toward developing and implementing integrated care models. In fact, innovation appears to be limited to chronic disease programs, GP networks, and health maintenance organizations (HMOs) established since the 1990s[15].

The discovery, mitigation, and treatment of diseases have advanced dramatically as a result of early disease diagnosis made possible by improved screening techniques and diagnostic tests, in addition to the accessibility of a wide range of disease-specific pharmaceutical treatments. However, this knowledge may blind the clinician to the realities of those who deal with multiple and chronic health conditions. Multimorbid patients frequently seek the advice of a wide range of experts, one for each health condition, but the sum of their contributions may not be sufficient to meet the patients' overall health and health-related demands[16].

Lessons African countries must learn from Switzerland's healthcare system

The need to address the rising gap between professional competencies and the complexity of people's health and health-related requirements in Africa is expanding[16]. In the same vein, the need to align care for patients with long-term chronic diseases who have bouts of acute issues is also hindered by fragmented care in the delivery of health services. This fragmentation can be attributed to overspecialization and the attempt to deconstruct a whole into its constituent components in the numerous care plans that exist for patients with various medical conditions.

Working information is critical for the health system as a whole, as well as for analyzing and comprehending patients' health and healthcare needs, supporting patient-centred health services, and ensuring continuity of care. In addition to addressing each of the aforementioned building elements, efforts to sustainably develop health systems must also consider the numerous and dynamic relationships between them[17]. A study comparing the well-being coefficient in South Africa and Switzerland showed that only a small portion of the population in South Africa has the benefit of medical insurance and high-quality healthcare, but Switzerland has universal access to healthcare, which makes it different from South Africa[18]. The foundational idea behind the post-2015 agenda, or the Sustainable Development Goals, in terms of health is to eliminate health disparities across all nations by supporting universal healthcare for individuals of all ages. The cultural-behavioural, materialist, and psychodynamic models are some of the theories that have been used to explain the etiologies of health inequities. The concept of a life course is one of these models. Regardless of the causal explanation used to explain health inequities, it is widely agreed that actions are needed to change inequalities because they do not self-correct[19].

The level of public-private partnerships (PPP) in Africa is also low compared to Switzerland. PPP serves to improve financial and technical capacity in places where the public sector is weak and helps improve the efficiency of the healthcare management system by reducing the cost of services and increasing their effectiveness of services[20]. As such, improving PPP is necessary to improve the healthcare system in the region.

Just like Japan, Switzerland has introduced various emerging technologies into its healthcare, such as artificial intelligence, the use of telemedicine, and the use of a digitalized health information system. So we implore African governments to work towards integrating these emerging technologies into their healthcare, as this will not only improve healthcare but also sustain it.

Challenges and limitations to building a sustainable healthcare system in Africa

Over time, human-made problems that affect institutional, human resource, financial, technical, and political developments have harmed Africa's healthcare systems. As a result, the WHO in 2007 proposed a framework that breaks down healthcare systems into six main "building blocks" or components: service delivery, workforce, healthcare information systems, drugs and technologies, financing, and leadership/governance[21].

Four major issues facing the health sector in African countries include insufficient human resources, poor resource allocation to health, poor maintenance of healthcare system infrastructure, and a lack of political will[22]. Other important factors are lack of access to healthcare, inadequate healthcare systems, a high disease burden, healthcare system corruption, poor leadership and administration, a lack of evidence-based interventions, poor quality healthcare services, poor resource management, inadequate training and education of healthcare workers, inadequate healthcare management information systems (HMIS), a failure to prioritize healthcare activities, and professional rivalry[22].

One of the challenges facing the African healthcare system is the lack of proper coverage of the health insurance scheme, which has led to a high out-of-pocket payment (OOP) for healthcare services in the region[23]. Various healthcare services, such as medicinal products, inpatient and outpatient services, treatment, diagnostic imaging services, and surgery, are very expensive and cannot be afforded by the majority of people living in low-income and middle-income countries, especially Africa. This high cost of healthcare services has made people resort to self-prescription and visit quacks or traditional doctors for treatment due to the low cost of the service rendered by these people[24]. According to the WHO, financial risk protection is achieved when OOP health spending is not catastrophic. However, the outrageous spending on healthcare, in addition to the amount spent on basic necessities, has increased the level of poverty in Africa[25].

Additionally, the bulk of African nations lack the foundational elements of effective healthcare systems. In countries with low resources, inadequate service integration is connected to poor governance and human resource issues[26–28]. The national health systems in the region lack basic infrastructure, including labs, information and communication networks, and human and financial resources, which makes it difficult for them to offer universal coverage and respond to emergencies. This has increased the incidence of various emerging global health issues, such as maternal mortality. The goal to reduce maternal mortality by 75% between 1990 and 2015 stems from the fact that it is one of Africa's most challenging health issues. According to recent data, just five of the region's 46 nations are on pace to meet the Millennium Development Goal. 4 9 and, as of now, 31 nations have very high maternal mortality ratios (MMRs) ranging from 550 to 1000 per 100 000 live births. There are 247 million documented cases of malaria worldwide, with 86% of those cases occurring in the region. The estimated fatalities in 2006 were 881 000, with 90% of those deaths occurring in the African region[29]. Early efforts are being put in place in global health to combat infectious diseases and promote vaccination programs that boost life expectancy but neglect non-communicable conditions, including cardiovascular disease, cancer, and injuries[30]. This was caused, in part, by the perception that these NCDs had lower disease burdens than communicable illnesses and that surgical treatment, including the infrastructure, manpower, and trustworthy supply chains, was more expensive and difficult. To date, the number of lives prevented by surgery and anaesthesia (16.9 million in 2010) outweighs historically important communicable diseases like TB (1.2 million), HIV (1.46 million), and malaria (1.17 million) all together[31,32].

Limited access to healthcare is also a major challenge facing the African healthcare system, which can be attributed to the limited human and infrastructural resources. Infrastructure issues in low-income countries (LMICs) cause limited access to surgical healthcare facilities and delayed service delivery[33]. Children are twice as likely to die from surgical complications, while pregnant women in Africa are fifty times more likely to die from c-section problems than women in high-income nations. This situation is attributable to the lack of a qualified workforce and an inadequate technical platform, giving rise to unsafe surgical practices[34]. Patients in the Democratic Republic of the Congo have limited access to normal otolaryngology care due to cost barriers[34]. Africa accounts for more than 15% of the global burden of neurosurgical illness but has the lowest number of neurosurgery workers in the world[35]. Due to a lack of resources and infrastructure and an insufficient neurosurgical workforce, the Democratic Republic of the Congo (DRC) faces difficulties. Ninety-five million people live in the DRC, making up the ratio of 9 local neurosurgeons per 10.6 million Congolese people[36]. This is due to a laxly regulated healthcare system and decades of political unrest[37]. In low-income and middle-income countries (LMICs), funding for National Surgical, Obstetrics, and Anaesthesia Plans (NSOAPs) also poses a special issue that necessitates resource mobilization from both local and international players[38]. The Lancet Commission on Global Surgery (LCoGS) predicts that failing to construct surgical care systems might cost LMICs up to 2% of their economic growth by 2030, although individual nations find it difficult to produce a country-specific estimate[38]. No nation having an NSOAP has, as of yet, allocated a sizable sum of money for surgical treatment[38,39].

Strategies for building a sustainable healthcare system in Africa

Strengthening healthcare infrastructure is an important strategy for building a sustainable healthcare system in Africa. This involves investing in facilities, equipment, and supplies, as well as training and retaining skilled healthcare workers. Research shows that improving healthcare infrastructure can lead to

Muili et al. Annals of Medicine & Surgery (2024)

Annals of Medicine & Surgery

significant improvements in health outcomes, such as reducing maternal and child mortality rates[2]. Additionally, healthcare infrastructure plays a critical role in responding to epidemics and other public health emergencies, as demonstrated by the Ebola outbreak in West Africa[1].

Investing in healthcare education and training is critical for building a sustainable healthcare system in Africa. This involves providing quality education and training to healthcare workers to improve their skills and knowledge. Research shows that investing in healthcare education and training can lead to significant improvements in healthcare delivery and outcomes, such as reducing infant and maternal mortality rates[40]. Additionally, well-trained healthcare workers are essential for responding to public health emergencies and building strong healthcare systems[41].

In addition to the aforementioned digital health solutions, other technologies like artificial intelligence (AI) and blockchain have shown promise in improving healthcare delivery and management in Africa. For instance, AI-powered diagnostic tools have been developed to assist healthcare workers in accurately diagnosing diseases, while blockchain technology can be utilized to secure patient data and enhance transparency in healthcare transactions. It is essential to invest in the development and implementation of these technological innovations to support the building of a sustainable healthcare system in Africa that is responsive to the needs of its population[3].

A sustainable healthcare system in Africa requires a strong focus on improving healthcare financing and insurance. This can be achieved by increasing investments in healthcare services, implementing comprehensive health insurance schemes, and exploring innovative financing mechanisms like public-private partnerships. Evidence from research studies indicates that enhancing healthcare financing and insurance can lead to better health outcomes, increased access to care, and reduced financial burdens on households, which is especially important for impoverished households. The financial burden of healthcare expenditures on low-income households has been demonstrated in Thailand, where the implementation of universal coverage policies has resulted in improved health outcomes and reduced financial burdens[42]. Additionally, sustainable financing models can help ensure the long-term availability of essential medicines, supplies, and equipment, which are essential for effective healthcare delivery. Therefore, strengthening healthcare financing and insurance is a vital step towards achieving sustainable and equitable healthcare in Africa.

Collaboration between government, stakeholders and international organizations is also an important strategy for improving Africa healthcare system. This can be through the creation of capacity building programs to strengthen the health workforce, investments in healthcare infrastructure to ensure a standard provision of health services and the strengthening of health insurance schemes to improve the accessibility and affordability of healthcare.

Strengths and limitations

This study has several strengths such as the availability of many studies to properly access the Japan and Switzerland healthcare system which helped in providing an overview on various strategies Africa can learn from these countries. However, it is important to acknowledge that this study has some limitations.

The significant limitation of this study is the limitation of the search to articles published in English, which may lead to language bias. Therefore, future studies should endeavour to prevent this bias by making use of studies from other languages to ensure a more comprehensive understanding of the particular literature.

Conclusion

In conclusion, building a sustainable healthcare system in Africa requires a multi-faceted approach that encompasses several strategies, including strengthening healthcare infrastructure, improving the health workforce, improving healthcare insurance, investing in emerging technologies, conducting research, and learning from the experiences of successful healthcare systems in other countries. By implementing these strategies, African countries can improve healthcare access, quality, and efficiency, reduce health disparities, and achieve better health outcomes for their populations[3,40]. However, achieving a sustainable healthcare system in Africa will require collaborative efforts from governments, international organizations, and other stakeholders.

Nonetheless, the benefits of a good healthcare system are enormous, including an improved health workforce, improved health, well-being, and quality of life for patients in a country, and enhanced social and economic development. Overall, it is essential that African countries explore various strategies to improve their healthcare systems and work towards achieving this important goal.

Overall, implementing these evidence-based solutions can lead to sustainable, equitable, and responsive healthcare systems that meet the needs of African populations.

Ethical approval

Not applicable.

Consent

Not applicable.

Sources of funding

Not applicable.

Author contribution

Conceptualization: A.O.M.; Writing—original draft: A.O.M., T.A., S.S., F.A., T.O.; Writing-review and editing: A.O.M., T.A.

Conflicts of interest disclosure

There are no conflicts of interest.

Guarantor

Muili Abdulbasit Opeyemi.

Data availability statement

Not applicable.

Provenance and peer review

Not commissioned, externally peer-reviewed.

References

[1] Oleribe OO, Salako BL, Ka MM, *et al*. The Ebola virus disease epidemic in Nigeria: Transmission dynamics and control measures. Pan Afric Med J 2014;18:268.

[2] Kruk ME, Myers M, Varpilah ST, *et al*. What is a resilient health system? Lessons from Ebola. Lancet 2010;385:1910–2.

[3] Gurman TA, Rubin SE, Roess AA, *et al*. Mobile technologies in support of frontline health workers in low and middle-income countries: a systematic review. PLoS One 2018;13:e0202021.

[4] World Health Organization. Global diffusion of eHealth: Making universal health coverage achievable.[Online]. Accessed 13 April 2023. https://www.who.int/goe/publications/global_diffusion/en/

[5] Sakamoto H, Rahman M, Nomura S, *et al*. Japan Health System Review. World Health Organization, Regional Office for South-East Asia; 2018; Vol. 8(No. 1).

[6] Hatanaka T, Eguchi N, Deguchi M, *et al*. Study of Global Health Strategy Based on International Trends:—Promoting Universal Health Coverage Globally and Ensuring the Sustainability of Japan's Universal Coverage of Health Insurance System: Problems and Proposals—. Japan Med Assoc J 2015;58:78.

[7] Nakatani H. Population aging in Japan: policy transformation, sustainable development goals, universal health coverage, and social determinates of health. Glob Health Med 2019;1:3–10.

[8] Kondo K, Rosenberg M. Advancing universal health coverage through knowledge translation for healthy ageing: Lessons learnt from the Japan Gerontological Evaluation Study. World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO.

[9] Atlas of African Health Statistics 2022. Health situation analysis of the WHO African Region — Country profiles. WHO Regional Office for Africa; 2022.

[10] World Bank. World Bank Open Data. Accessed 12 May, 2023. Available from: https://data.worldbank.org/

[11] World Population Review. Poverty Rate by Country Accessed 12 May 2023. https://worldpopulationreview.com/country-rankings/poverty-rate-by-country

[12] Crivelli L, Salari P. The impact of federalism on the healthcare system in terms of efficiency, equity, and cost containment: the case of Switzerland. Dev Health Econ Public Policy 2014;12:155–78.

[13] Koch P, Schilling J, Läubli M, *et al*. Health technology assessment in Switzerland. Int J Technol Assess Health Care 2009;25(suppl 1):174–7.

[14] Mattke S, Epstein AM, Leatherman S. The OECD Health Care Quality Indicators Project: history and background. Int J Qual Health Care 2006;18(suppl 1):1–4.

[15] Schusselé Filliettaz S, Berchtold P, Kohler D, *et al*. Integrated care in Switzerland: results from the first nationwide survey. Health Policy 2018;122:568–76.

[16] Hopfe M, Prodinger B, Bickenbach JE, *et al*. Optimizing health system response to patients' needs: An argument for the importance of functioning information. Disabil Rehabil 2017;40:2325–30.

[17] Bugnon B, Geissbuhler A, Bischoff T, *et al*. Improving primary care medication processes by using shared electronic medication plans in switzerland: lessons learned from a participatory action research study. JMIR Format Res 2021;5:e22319.

[18] Kollamparambil U. Socio-economic inequality of wellbeing: a comparison of Switzerland and South Africa. J Happiness Studies 2020;22:555–74.

[19] Alonge O, Peters DH. Utility and limitations of measures of health inequities: a theoretical perspective. Global Health Action 2015;8:27591.

[20] Rodrigues NJP. Public-private partnerships model applied to hospitals—a critical review. Healthcare (Basel) 2023;11:1723; Published 2023 Jun 12.

[21] World Health Organization. Everybody's business -- strengthening health systems to improve health outcomes: WHO's framework for action. Updated: 2007. Accessed 25 April 2023. https://apps.who.int/iris/handle/10665/43918

[22] Oleribe OO, Momoh J, Uzochukwu BS, *et al*. Identifying key challenges facing healthcare systems In Africa and potential solutions. Int J Gen Med 2019;12:395–403.

[23] World Health Organization. Financial Protection. [Updated: 2007; Accessed 1 October, 2023. https://www.who.int/data/gho/data/themes/topics/financial-protection

[24] Arora V, Moriates C, Shah N. The challenge of understanding health care costs and charges. AMA J Ethics 2015;17:1046–52; Published 2015 Nov 1.

[25] World Health Organization. Tracking Universal Health Coverage in the WHO African Region. WHO Regional Office for Africa. Online]. [Updated: 2022; Accessed 1 May 2023. Tracking Universal Health Coverage in the WHO African Region, 2022 | WHO | Regional Office for Africa.

[26] Petersen I, Marais D, Abdulmalik J, *et al*. Strengthening mental health system governance in six low- and middle-income countries in Africa and South Asia: challenges, needs and potential strategies. Health Policy Planning 2017;32:699–709.

[27] Mack N, Wong C, McKenna K, *et al*. Human resource challenges to integrating HIV pre-exposure prophylaxis (PrEP) into the public health system in kenya: a qualitative study. Afric J Reprod Health/La Revue Africaine de la Santé Reproductive 2015;19:54–62. https://www.jstor.org/stable/45239737

[28] Marais DL, Petersen I. Health system governance to support integrated mental health care in South Africa: challenges and opportunities. Int J Mental Health Syst 2015;9:14.

[29] World Health Organization. Achieving Sustainable Health Development in the African Region Strategic Directions for WHO (2010-2015). [Online].Updated: 2010. Accessed 1 May 2023. https://strategic-directions2010-2015.pdf (who.int)

[30] Lozano R, Naghavi M, Foreman K, *et al*. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. Lancet 2012;380:2095–128.

[31] Shrime MG, Bickler SW, Alkire BC, *et al*. Global burden of surgical disease: an estimation from the provider perspective. Lancet Glob Health 2015;3:S8–9.

[32] Debas HT, Donkor P, Gawande A, *et al*. Essential Surgery: Disease Control Priorities, Third Edition. Volume 1. The International Bank for Reconstruction and Development/The World Bank; 2015. http://www.ncbi.nlm.nih.gov/books/NBK333500/

[33] Davies JI, Meara JG. Global surgery—going beyond the Lancet Commission. Lancet 2015;386:507–9.

[34] Botelho F, Gripp K, Yanchar N, *et al*. Decolonizing global surgery. Can J Surg 2022;65(4 suppl 1):S1–18.

[35] Dada OE, Bukenya GW, Konan L, *et al*. State of African neurosurgical education: an analysis of publicly available curricula. World Neurosurg 2022;166:e808–14.

[36] Awuah WA, Adebusoye FT, Tenkorang PO, *et al*. Ailing neurosurgical services in rural Africa. Int J Surg 2023;109:227–9; Published 2023 Mar 1.

[37] Tshimbombu TN, Kalubye AB, Hoffman C, *et al*. Review of neurosurgery in the democratic republic of congo: historical approach of a local context. World Neurosurg 2022;167:81–8.

[38] Truché P, Shoman H, Reddy CL, *et al*. Globalization of national surgical, obstetric and anesthesia plans: the critical link between health policy and action in global surgery. Globalizat Health 2020;16:1.

[39] GBD_Protocol.pdf [Internet]. Accessed April 23, 2023. https://www.healthdata.org/sites/default/files/files/Projects/GBD/GBD_Protocol.pdf

[40] Aremu O, Lawoko S, Dalal K, *et al*. Impact of health education and training on maternal and child health in low- and middle-income countries: a systematic review. PLoS One 2020;15:e0233177.

[41] Crisp N, Gawanas B, Sharp I. Global health capacity and workforce development: turning the world upside down. Infect Dis Poverty 2014;3:1–10.

[42] Tanimura T, *et al*. Financial burden of health care expenditures in impoverished households under the universal coverage policy in Thailand. PLoS One 2014;9:e95390.