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Original Article

Health systems, population and patient challenges for achieving universal health coverage for hypertension in Ghana

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Abstract

Ghana has signed on to the United Nations Sustainable Development Goal to achieve universal health coverage (UHC), ensuring that all individuals receive the health care they require without financial hardship. Achieving that goal is a difficult task in any setting. The challenges are further exacerbated by a changing disease landscape, as the burden of non-communicable diseases (NCDs) is increasing and creating a dual burden along with infectious diseases. This study explores the existing health system for delivering hypertension care and the challenges of delivering UHC for hypertension in Ghana. Document analysis of national health reports, policies and legislations along with a review of research articles was conducted to explore the challenges of delivering UHC for NCDs in Ghana, and hypertension in particular. The main themes and indicators related to the challenges of delivering UHC for hypertension were mapped and analysed. The main challenges to delivering UHC for hypertension can be grouped into population and patient, on the one hand, and health system factors, on the other. Population and patient factors include (1) unhealthy lifestyles overburdening the health system, (2) poor health-seeking behaviour and (3) poor adherence to medication, which has led to uncontrolled cases and poor clinical outcomes even among treated patients with hypertension. Health system factors include (1) inadequate health system capacity for early diagnosis due to an increasing number of patients, (2) inequitable distribution of health care facilities affecting access, (3) financial sustainability of the National Health Insurance Scheme and delays in reimbursement of claims to facilities that affect the health system's ability to provide timely management of hypertension and (4) health care facilities and practitioners' use of non-standardized and uncalibrated blood pressure measuring equipment. Ghana therefore will need to make important decisions to overcome operational and financial challenges on its path to UHC.

Keywords: Ghana, health systems, hypertension, non-communicable disease, universal health coverage

Key messages

- Hypertension cases are increasing and creating a dual burden along with infections within the health care system in Ghana.
- Population and patient and health systems challenges, such as unhealth lifestyle and inadequate screening, respectively, are influencing health care coverage and management of hypertension.
- Decisions and strategies to address and overcome operational and financial difficulties are critical in achieving universal health coverage for hypertension and other non-communicable diseases.

Introduction

Hypertension prevalence has significantly increased globally in the past 25 years, including in Ghana, where the burden is hampering progress in improving population health (Regional Committee for Africa., 2011; Forouzanfar *et al.*, 2017). Non-communicable disease (NCD) mortality, including hypertension mortality, is increasing, and Ghana now faces a dual burden as the major causes of deaths over the recent decade include a combination of communicable diseases and NCDs (de-Graft Aikins *et al.*, 2012). In 2017, hypertension was ranked the third most common cause of admission in regional and district hospitals in Ghana, and it has ranked among the top ten causes of outpatient morbidity. Data from the Ghana District Health Information Management System (DHIMS)

reported that hypertensive heart diseases were the leading cause of mortality in 2017, accounting for 2024 out of 13 198 (15.34%) deaths (Ghana Health Service, 2018). The increasing number of individuals with hypertension burdens the Ghanaian health care system, leading to capacity issues as well as subjecting the system and households to financial pressure (Ministry of Health, 2012a).

Ghana has signed on to the United Nations Sustainable Development Goals to achieve universal health coverage (UHC) (United Nations, 2015) with the aim to ensure that all individuals receive the health care they require without financial hardship. Ghana defines UHC as 'all people in Ghana have timely access to high-quality health services irrespective of ability to pay at the point of use' (Ministry of Health, 2020). The Ghanaian government's National Policy for Prevention and Control of Chronic NCDs commits to ensure such access for hypertension management (Ministry of Health, 2012a). The policy outlines strategies on primary prevention, early detection, clinical care, health system strengthening, research and development and surveillance of NCDs and their risk factors, and it seeks to promote secondary prevention among patients with diabetes, cardiovascular diseases (CVDs) and cancers (Ministry of Health, 2012a).

The Ministry of Health (MoH) aims to increase access to high-quality essential health care for NCDs, including hypertension with emphasis on primary and specialized health care service delivery and reduce population and patient barriers to health care (Ministry of Health, 2016). These health care services are provided through the MoH hospitals, clinics, health centres and community-based health planning and services (CHPSs) and private hospital and clinics. Population and patient barriers to care are mitigated through preventive and public health care initiatives of the MoH (Ministry of Health, 2016). As the country moves towards UHC in the context of hypertension, the health care system must be responsive to ensure that individuals with hypertension are aware of their health state, encourage them to seek treatment early, provide them access to quality antihypertensive medicines and reduce their financial burden from accessing care. A responsive health care system is therefore important for timely access to health care for hypertension prevention, detection, clinical care and management of related risk factors without any financial barrier (Mirzoev and Kane, 2017).

Improving access to health care irrespective of the ability to pay at the point of use is critical and a national priority. With this aim, Ghana introduced a social health insurance scheme, the first such national scheme in sub-Saharan Africa, in 2003 to replace its out-of-pocket system known as the 'cash and carry'. The National Health Insurance Scheme (NHIS) was introduced to reduce the financial barrier to care (Agyepong and Adjei, 2008). Although the scheme, which is managed by the National Health Insurance Agency (NHIA), has shown progress, it also faces significant challenges. The NHIS provides a benefits package that covers about 95% of diseases in the country and seeks to improve universal access to health care services. The benefit package includes diagnosis and treatment for individuals with hypertension. All residents of Ghana can enrol in the NHIS, and all persons under the age of 18 years and over the age of 70 years, and beneficiaries of social protection programme, are exempted from paying a premium (Akazili *et al.*, 2012). However, although NHIS seeks to ensure universal access to health care, its membership was estimated to cover 35% (10.3 million) of the population in 2017 (Nsiah-Boateng and Aikins, 2018). The road to increasing coverage while maintaining sustainability is a difficult balancing act.

Achieving access to quality health care with financial protection is a difficult task in any setting and particularly in low-and middle-income settings such as Ghana, whose health care system is insufficiently strong to deliver services to the entire population in a manner that does not financially overburden NHIS (Ministry of Health, 2016). It is therefore important to better understand the existing health system, population and patient barriers for hypertension management and factors influencing the country's drive towards UHC and thus improving timely access to health care with financial protection for hypertension. Prior studies have reported on hypertension prevalence and level of awareness (Bosu, 2010; Addo *et al.*, 2012; 2006) and stakeholders perspectives on health systems challenges to hypertension (Laar *et al.*, 2019). Our paper seeks to bridge the knowledge gap on understanding the existing health system for delivering hypertension prevention and care and the challenges the current systems pose for delivering UHC for hypertension in Ghana.

Methods

We conducted a review with sources including Ghanaian national health reports, the demographic health survey and policy and legislation documents, as well as research articles. We identified research articles in electronic database searches, including PubMed and Google Scholar. The search terms were 'hypertension services Ghana', 'hypertension epidemiology Ghana', 'cardiovascular disease', and 'universal health coverage Ghana'. The search years were from January 2000 to March 2018. The literature review protocol is stated in Table 1.

Data extraction, analysis and validation

The relevant evidence collected from these sources was reviewed and organized into four main themes: health systems for hypertension, financing hypertension health care system, monitoring and data collection systems and challenges for achieving UHC for hypertension (Table 2). Data on systems for screening and early detection, clinical care, primary prevention, financing of hypertension and admissions were documented and analysed. Further analysis involved mapping and categorizing documented challenges for achieving universal health access to hypertension care management within the Ghanaian health sector. To validate findings from the review, the research team had informal discussions with policy makers and health professionals in March 2019. These included a representative from the Policy Planning Monitoring and Evaluation of the MoH, a representative from the NHIA, three representatives from a private hospital and five representatives from a Ghana Health Service (GHS) hospital in Accra.

Results

Summary of documents reviewed and key findings on the existing health care systems for hypertension and challenges

Table 1. Literature review protocol

Objectives	Synthesize evidence on hypertension prevalence, hypertension risk factors and burden of hypertension in Ghana Synthesize evidence on the challenges to timely access to timely care for individuals with hypertension	
Research questions	What is the prevalence of hypertension in the context of UHC? What are the risk factors for hypertension in the context of UHC? What are the health systems for hypertension management in Ghana? What factors influence the delivery of UHC for hypertension management in Ghana?	
Search strategy	Inclusion criteria	Hypertension-related studies (on prevalence, population, and risk factors) conducted in Ghana Ghanaian Heath sector policies on hypertension, NCDs, and service delivery Grey literature, including documents in institutional websites, printed copies of national policies; full peer-reviewed journals. Language: English
	Exclusion criteria	Excluded countries other than Ghana
	Time frame	January 2000 to March 2018
Data source	Institutional website and offices for grey literature. PubMed and Google Scholar	Ministry of Health, Ghana Health Service, National Health Insurance Authority. Peer-reviewed literature

Table 2. Framework for analysis (themes and subthemes)

Theme	Sub-theme
Health systems for hypertension	Systems for screening and early detection Systems for clinical care Systems for primary prevention
Financing hypertension health care systems	
Monitoring and data collection systems	
Challenges to achieving UHC for hypertension	Population and patient factors Health systems factors

to achieving UHC for hypertension are shown in Table 3 and set out next section according to the themes of the study.

Existing systems for screening and early detection

Ghana's early detection policy focuses on encouraging individuals with NCD symptoms and those potentially at risk (e.g. the elderly and overweight) to report to health care facilities early for blood pressure and body mass index screening. The main policy tool for early detection is public education (Ministry of Health, 2012b). The MoH through its Regenerative Health and Nutrition Programme unit campaigns on media platforms and creates awareness for regular blood pressure check-ups to detect early high blood pressure cases. Individuals' blood pressure is checked at different health facilities, and individuals with hypertension are managed or referred to a hospital or clinic. In areas with functional CHPS, community health workers (CHWs) go into the communities to provide preventive and promotive services, including checking blood pressure of individuals. According to the GHS, in 2016, there were 4400 functional CHPS across the country and these contributed to 2 528 036 out of 29 741 608 (8.5%) of overall outpatient service attendance in public health facilities (Ghana Health Service, 2017).

Traditionally, public and private hospitals, clinics and health centres conduct blood pressure check-ups. Some pharmacies have started to provide this service, but information on what proportion of pharmacies provide regular blood pressure check-ups is not available. The GHS has set up *ad-hoc* community-based screening programmes to detect high blood pressure cases that are missed at the health facilities and by CHWs in the community.

Existing systems for clinical care

Clinical care for hypertension is provided in health care facilities. In the general adult population, treatment for hypertension is initiated at a blood pressure of 140/90 mmHg or higher for individuals below 60 years of age and 150/90 mmHg or higher for those above 60 years. For individuals with diabetes mellitus or non-diabetics with chronic kidney disease, treatment for hypertension is initiated at a blood pressure of 140/90 mmHg, irrespective of age. Once a diagnosis of hypertension is made, the individual is evaluated to exclude secondary causes and to identify other existing cardiovascular risk factors such as diabetes, dyslipidaemia and hyperuricaemia (Ministry of Health, 2017c). High blood pressure is managed with antihypertensive medicines, specifically, thiazide diuretics, calcium channel blockers, angiotensin-converting enzyme inhibitors, angiotensin receptor blockers and beta-blockers. The preferred first treatment for uncomplicated hypertension is thiazide diuretics or calcium channel blockers, either as monotherapy or in some cases as a combination therapy (Ministry of Health, 2017c). Individuals diagnosed with high blood pressure are made to return to the health facilities for follow-up and review to check progress on treatment and blood pressure. There are national guidelines for the management of hypertension through a primary care approach and at all levels within the health system (Ministry of Health, 2017c; 2012a).

Table 3. Summary of literature included in the review and key findings ($n = 17$)

Author, year	Themes/subthemes	Key findings
(Ghana Statistical Service (GSS) *et al.*, 2015)	Population and patient factors	• Overall hypertension prevalence • Individuals with hypertension awareness of their condition and treatments • Hypertension risk factors
(Addo *et al.*, 2012)	Population and patient factors	• Hypertension prevalence
(Bosu, 2010)	Population and patient factors	• Hypertension prevalence • Individuals with hypertension awareness of their condition and treatment status
(World Health Organization, 2007)	Population and patient factors	• Hypertension risk factors
(Ghana Health Service, 2018)	Health systems for hypertension management	• Mortality due to Hypertension • Outpatient morbidity due to hypertension • Hypertension cases in health facilities
(Ghana Health Service, 2017)	Population and patient factors	• Individuals with hypertension awareness of their condition and treatment status • Mortality due to Hypertension • Hypertension cases in health facilities
(Ministry of Health, 2016)	Health system for clinical care	• Primary care for hypertension (clinical and preventive)
(Ministry of Health, 2012b)	Health systems for hypertension management	• National strategies to tackle NCDs including hypertension • Individuals with hypertension awareness of their condition and treatment status. • Individuals with hypertension in public and mission facilities • Hypertension risk factors, management and prevention
	Health systems and population and patient challenges	• Individuals with hypertension awareness of their condition and treatment status
(Ministry of Health, 2017a)	Health systems for clinical care	• Medicines for hypertension management.
(Addo *et al.*, 2008)	Population and patient factors	• Individuals with hypertension awareness of their condition and treatment status
(Ministry of Health, 2017c)	Health systems for clinical care	• Hypertension management
(Ministry of Health, 2012a)	Systems for screening and early detection/Systems for primary prevention	• Preventive care (screening and early detection)
(Ministry of Health, 2017b)	Health systems for hypertension	• Regulation of alcohol production, distribution, sale, advertisement and consumption
(Government of Ghana, 2012)	Health systems for hypertension	• Tobacco control measures
(Atinga *et al.*, 2018)	Systems for clinical care	• Adherence to antihypertensive medication
(Aryeetey *et al.*, 2016)	Financing hypertension health care systems	• Delays in NHIS repayment to accredited health facilities
(Sodzi-Tettey *et al.*, 2012)		• Delays in NHIS repayment and effect on health care service delivery

Existing systems for primary prevention

Primary prevention measures for hypertension, include appropriate diet, physical activities, and control on the use of tobacco and alcohol products. The MoH, through its Regenerative Health and Nutrition Programme, promotes regular medical check-up and intake of fruits, vegetables and high-fibre diets, and moderate physical activity. In addition, the programme encourages reduction in the intake of energy-dense foods, salt, trans-fatty acids, sugar and alcohol and the avoidance of tobacco smoking and periodic medical check-ups (Ministry of Health, 2012a; 2007). The MoH also educates the public to consume at least five servings of a variety of fruits and vegetables, consume whole grain and high-fibre food and reduce intake of red meat and foods high in saturated fatty acids (Ministry of Health, 2012a).

Alcohol production, distribution, sale, advertisement and consumption is guided by the national alcohol policy, while tobacco use is guided by the Public Health Act 2012 (Act 851). The alcohol policy regulates the advertisement of alcoholic beverages and bans radio and television advertisement of alcoholic beverages between the hours of 5:00 a.m. and 8:00 p.m. Advertisements are required to contain health warnings about the negative consequences of alcohol consumption (Government of Ghana, 2012; Ministry of Health, 2017b). The Public Act 2012 specifies tobacco control measures, which include the prohibition of smoking in public places and public education against tobacco use (Government of Ghana, 2012).

Financing hypertension health care systems

The government funds management of hypertension through the NHIS. The NHIS benefits package covers hypertension

diagnosis and management, including reviews, laboratory investigations and medicines. NHIS subscribers can access services from both private and public accredited health care facilities. Health care facilities submit claims to NHIS on service provision (i.e. diagnosis and investigations) and treatment based on the NHIS medicines list for reimbursement. Increasingly, facilities face challenges with reimbursement from the NHIS, which pays facilities up to a year after submission of claims (Aryeetey *et al.*, 2016). Individuals pay out-of-pocket at the health care facilities as non-NHIS members or if the medicines prescribed are not on the NHIS medicines list. Health facilities use their internally generated funds from NHIS reimbursement and out-of-pocket payments to support NCD screening and public health education (Ministry of Health, 2016).

Monitoring and data collection systems

The Centre for Health Information Management of the GHS manages a routine collection of health care data in the DHIMS Data on NCD admissions, including hypertension, is captured within the public health sector and, until recently, in some private health care facilities using web-based software which feeds into the DHIMS. The data includes demographics of the individuals, diagnosis, comorbidities, and mortalities, and these are entered on a monthly basis. Additionally, the 2014 Ghana Demographic Health Survey (GDHS) provided national estimates of hypertension prevalence among adults, and these data can be monitored in the next survey (Ghana Statistical Service (GSS) *et al.*, 2015).

Challenges to achieving UHC for hypertension

Increasing prevalence of hypertension due to population and patient factors

Several challenges currently prevent achieving universal access to systems and services for management and prevention of hypertension. We categorize these as population and patient and health systems challenges. Population and patient factors such as tobacco use, excessive consumption of alcohol and unhealthy diets (e.g. high salt intake) are high-risk factors and prevalence increasing in Ghana, overburdening the health system (Ghana Statistical Service (GSS) *et al.*, 2015). The lifestyle of the Ghanaian population has evolved in recent decades as the country urbanized and transitioned from a low-income economy to a middle-income one.

These lifestyle behaviours include tobacco smoking and the increasing use of salty products. However, the prevalence of smoking, which is an acquired behaviour that can be prevented, is relatively low in Ghana. National data from the 2014 GDHS survey in which 12 831 households were interviewed indicated only a small number of male (253) and female (5) smoked tobacco (Ghana Statistical Service (GSS) *et al.*, 2015). On the other hand, the Ghanaian population is increasing its use of salt to preserve food or make it tastier. According to the 2014 GDHS, 70% (6578 out of 9363) of females had used bouillon cubes—a significant source of salt—a day before they were interviewed. Its use is higher in the Northern region (92%; 723 out of 786) and lower in the Greater Accra region (62%;1177 out of 1898) (Ghana Statistical Service (GSS) *et al.*, 2015). Given that high salt intake increases the prevalence of hypertension, intensive educational campaigns by the MoH will go a long way to caber these lifestyle practices.

The population health-seeking behaviour is poor. According to the 2014 GDHS, 85% (3278 out of 3856 men measured) and 63% (5894 out of 9356 women measured) of hypertensive men and women were unaware of their status, respectively. The level of awareness and treatment status are important indicators for understanding the gaps that policies and interventions can help fill. Additionally, patient adherence to antihypertensive medication is a challenge (Atinga *et al.*, 2018). According to Atinga *et al.*, non-adherence to antihypertensives medication is mainly due to the patients' ill perception of the medication efficacy. Additionally, factors such as reliance on herbal medicines and spiritual healing and interactive effects of polypharmacy contribute to non-adherence (Atinga *et al.*, 2018).

Health systems challenges

The health systems factors include inadequate resource capacity to diagnose early due to an increasing number of patients, inequitable distribution of health care facilities and human resource that provide greater access for certain portions of the population than others, and poor quality of medicines including substandard and falsified medicines, which negatively affect the management of hypertension and may cause disease progression, disabilities and death (Ministry of Health, 2016; 2012b; Ghana Health Service, 2017).

Over the years, NHIS expenditure has increased above its income causing delays in reimbursement payment (Aryeetey *et al.*, 2016). Financial sustainability of the NHIS and delays in reimbursement of claims to facilities can affect facilities' ability to provide timely management of hypertension (Sodzi-Tettey *et al.*, 2012). Some facilities, especially those which are faith based, periodically do withdraw services to NHIS clients and patients are forced to pay out-of-pocket for services and medicine (Aryeetey *et al.*, 2016).

Treatment and management of hypertension are guided by Ghana's National Standard Treatment Guidelines (Ministry of Health, 2017c) and the Essential Medicines List (Ministry of Health, 2017a); however, it is not clear to what extent these guidelines are followed and whether they can be enforced. Anecdotally, in our conversations with health care professionals in Ghana, they indicated that they were not aware of the newest guidelines (i.e. the 7th edition) and to what extent the Standard Treatment Guidelines is adhered to. They also noted that health care facilities and practitioners' use of non-standardized and uncalibrated blood pressure measuring equipment may lead to misdiagnosis and inappropriate treatment. Data on adherence to guidelines are scanty and undocumented, but a few efforts are currently underway to collect and publish such data by the Pharmacy Directorate of the MoH.

Discussion

This document review highlighted existing health care systems for hypertension screening, detection, prevention, management, and treatment as well as the health systems and population and patient factors influencing timely access to care with financial protection for individuals with hypertension. These findings have policy and practice implications.

First, due to the shifting lifestyle and behaviour and increasing burden of hypertension with its related challenges of late diagnosis and awareness, the government needs to

Table 4. Governments responses to NCDs in Ghana

1993—National Strategy for prevention and control NCD with disease-specific strategies for 1994 to 2014 in two phases
1998—A strategic plan to help document the NCD burden and identify the risk factors and appropriate intervention packs
2002—National Policy Framework was developed to emphasize the need for focus actions on NCD, capacity building, health care cost sharing and monitoring and evaluation
2007—Strategic Framework for NCD was developed
2008—A position paper on the need for assessment of the NCD situation at the time was developed with recommendations
2011—Strategy for the management, prevention and control of NCD in Ghana developed for 2012 to 2016

Source: Ministry of Health Policy Planning Monitoring and Evaluation presentation on hypertension in Ghana. March 2019.

invest additional resources to change people's behaviour and keep up with treatment, management, and early screening efforts. Hypertension incidence in Ghana is increasing and is a major cause of death. Shifting lifestyle behaviours, an ageing population and an overburdened health care system are the major contributing factors to Ghana's increasing hypertension burden. Outcomes of unhealthy lifestyles overburden the health system by increasing demand for health care workers, screening equipment, medicines, and other supplies as well as additional funds for the NHIS. Therefore, reducing the incidence and prevalence of hypertension is a national priority, and the government has historically implemented policies to reduce morbidity and mortality related to NCDs (see Table 4). The current NCD policy sets the framework for interventions and strategies to reduce hypertension prevalence, create awareness and promote the use of appropriate medicines (Ministry of Health, 2012a), and the MoH regenerative health policy promotes a healthy lifestyle (Ministry of Health, 2007).

Second, the NHIS is under financial strain (Alhassan *et al.*, 2016), which is increasing with the burden of NCDs and as the NHIA manages between increasing coverage of the population and increasing treatments and services it reimburses. The NHIA needs to be financially sustainable as the NCD burden increases and the MoH makes decisions on increasing the NHIS coverage of the population and/or reimbursing for additional treatments and services. New and existing initiatives such as early screening need to be feasible, sustainable, and economically efficient as well as adhere to the principles of UHC—that all individuals receive the health care they require without financial hardship.

Data on hypertension prevalence, risk factors, and health-seeking behaviour improve our ability to project and evaluate policies and interventions. The GDHS provides a national overview of the hypertension prevalence, risk factors, awareness and control (Ghana Statistical Service (GSS) *et al.*, 2015). This is a big step towards providing data to inform developing hypertension strategy and policy, strengthening the hypertension health systems and implementing interventions. Previous studies collected data limited to a few areas in the country, and these studies are not necessarily comparable since they were done at different time points and using different protocols (Bosu, 2010; Addo *et al.*, 2012; 2008). The GDHS (2014) presents a comprehensive information from across the country on the prevalence and risk factors, and this evidence can support the design of strategies and interventions. The GDHS data, as well as data from the GHS DHIMS, will be particularly useful for system modelling work and health technology assessment that aims to alleviate the hypertension burden by projecting outcomes of initiatives.

However, there are also limitations for accessing data within the Ghanaian health system. The GHS DHIMS data largely focuses on public health facilities and until recently only some private facilities, which may not necessarily be an accurate representation of the hypertension situation in the country. GDHS hypertension data started with the 2014 survey, and therefore, only data from small-scale studies can be used to evaluate the effects of existing intervention. Further, additional data on age groups, health-seeking behaviour (e.g. the stage patients present), adherence to guidelines and current prescription pattern are not covered by the GDHS. These data are needed to evaluate the success of implemented interventions and to project outcomes of potential policies and interventions. We do not suggest delaying new initiatives but starting to collect these data before the initiatives take place will provide a baseline for evaluation.

Third, adhering to UHC principles requires a focus on poor and vulnerable communities to ensure new and existing initiatives reach populations that are difficult to reach and are often unaware of their hypertensive condition. Health systems barriers such as inequitable distribution of health care facilities and human resources persist (Ministry of Health, 2016) and the government needs to overcome these barriers to improve early detection, diagnosis and appropriate management and control of hypertension, especially in underserviced communities. Early diagnosis, controlling and managing blood pressure initiatives are critical for hypertension control and averting CVDs (Campbell and Lemogoum, 2015), and the inequitable distribution of human resources and health care facilities can lead to hypertensive individuals' lack of awareness of their condition. The government needs to mandate community pharmacies to screen hypertension, encourage the communities to seek care early and provide required human resources and medicines. In deciding which options to implement, health systems modelling and assessment as tools can be used to support these decisions. Government investments in health care need to be evidence-based to ensure the success of UHC.

Study limitation

In this document review of health systems, population, and patient barriers to delivery UHC for hypertension, we gathered existing available information—both published and grey literature—on health systems and challenges to accessing health care among individuals with hypertension. However, due to the lack of a national database on NCDs or hypertension, in particular, the search may not be exhaustive. To minimize this risk, we informally engaged policymakers and health professionals to solicit for additional literature, especially the grey literature.

Conclusion

Ghana will need to make important decisions to overcome operational and financial challenges on its path to UHC. In particular, health systems need to be strengthened to alleviate

the inequity of access and identify patients with hypertension, who are often unaware of their condition, earlier. This needs to be done in a manner that will ensure a sustainable path towards UHC. Producing evidence-based UHC policy will require collaboration between research institutions in Ghana, the MoH, the GHS, and other bodies. Together, they can develop the methodology for data collection, system modelling and assessment to project and evaluate policy and intervention outcomes, and ensure the relevance and feasibility of implementing the proposed initiatives.

Abbreviations

CHPS: Community-based Health Planning and Services
CWHs: Community Health Workers
CVD: Cardiovascular Disease
DHIMS: District Health Information Management System
GDHS: Ghana Demographic Health Survey
GHS: Ghana Health Service
MoH: Ministry of Health
NCDs: Non-Communicable Diseases
NHIA: National Health Insurance Authority
NHIS: National Health Insurance Scheme
UHC: Universal Health Coverage

Data availability statement

The data underlying this article are available in the article.

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