

HEALTHCARE AND ECONOMIC GROWTH IN AFRICA



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United Nations
Economic Commission for Africa



GBCHealth

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First printing February 2019

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Cover design, layout and printing: ECA Printing and Publishing Unit. ISO 14001-2015 certified.

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FOREWORD

The moderately positive economic performance since 2000 has provided opportunities for improvements in health outcomes. Africa recorded average real annual GDP growth of 5–6 per cent between 2000 and 2010 before slowing down to about 3 per cent per annum over the period 2010–2015. Economic growth rate is projected to decline slightly from 3.4 per cent in 2017 to 3.2 per cent in 2018. Accelerating economic growth and achieving the goal of a prosperous Africa requires countries improve health outcomes, for better productivity and job creation.

The trend in Africa's overall health landscape is one of progress. Life expectancy has increased since 2000 and Africa is now adding nearly 5 years per decade on average; this has been accompanied by equally encouraging improvements in mortality indicators. The Under-5 Mortality Rate (U5MR) in Africa declined from 148 to 62.8 deaths per 1,000 live births over the period 1990 to 2017, averaging 2.1 per cent per annum. The Infant Mortality Rate declined at an average rate of 1.9 per cent per annum from 91 to 44.1 deaths per 1,000 live births in the same period. The Maternal Mortality Ratio also declined at an average 0.9 per cent per annum from 542 to 421 per 100,000 live births between 1990 and 2015. But there is need to do more.

Healthcare is a public good that confers benefits directly to individuals and is also a human right to which all are entitled. Consequently, African member states have placed healthcare financing as one of the central tenets to improve the well-being of their populations. However, while a small number of African governments have increased the

proportion of total public expenditure allocated to health, overall healthcare financing remains a major constraint to effective health service delivery undermining outcomes.

Overall, health spending in Africa remains largely inadequate to meet the growing healthcare financing needs and the rising healthcare demands, creating a huge financing gap of \$66 billion per annum. The slowdown in economic growth and high public indebtedness across the continent have restricted the fiscal space for the public financing of health, with the average debt-to-GDP ratio increasing by 15 percentage points between 2010 and 2017. Total spending on healthcare in Africa remained within a narrow band of 5–6 per cent of GDP over the period 2000–2015, while at the same time in per capita terms it almost doubled from \$150 to \$292. Scarce public resources and unpredictable donor aid have resulted in the private out-of-pocket expenditure becoming the single largest component of total health expenditure, pushing many people into abject poverty.

The achievement of the health goals of the 2030 Agenda for Sustainable Development and the Africa Agenda 2063 demands countries take a fresh look at healthcare financing. The crowding in of the private sector in healthcare financing is an important channel for improving health outcomes, enhancing labour productivity, creating employment, and accelerating progress towards the continental and global health goals, while leaving no one behind.

Africa imports about 70 per cent of the pharmaceuticals from outside the continent totalling

\$14.5 billion, and imports substantial health services. There is scope to leverage the capital and capacity of the private sector to complement government financing and to increase investments. This can be done through enhancing the ease of doing business, developing health insurance systems, the issuance of health bonds, and public–private partnerships (PPPs) in order to bridge the financing gap and ultimately increase access to quality healthcare in Africa. National Health Insurance Schemes provide an opportunity for governments to partner with private health facilities to deliver affordable, efficient and accessible healthcare.

The continental dimension of the recently signed African Continental Free Trade Area (AfCFTA) provides a critical and promising market for the engagement

of the private sector. The involvement of the private healthcare sector can boost intra-African trade on pharmaceuticals, health services, achieve economies of scale in health infrastructure, expand employment opportunities and deepen regional integration.

Africa's health market is large and growing. Estimated to be \$259 billion, it will be the second largest after the US in 2030. This provides an opportunity for large-scale investments in healthcare to contribute to improved health outcomes.

This report serves as a background document to the African Business: Health Forum, providing a strategic direction that enables African countries to better engage with the private health sector and thereby accelerate the health status of African people.

Vera Songwe

Executive Secretary
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ACKNOWLEDGEMENTS

This report is a joint publication of the United Nations Economic Commission for Africa (UNECA), GBCHealth, and the Aliko Dangote Foundation (ADF).

The report was prepared under the overall direction and intellectual leadership of Vera Songwe, Executive Secretary, UNECA; Aigboje Aig-Imoukhuede, Co-chair, GBCHealth; and Zouera Youssoufou, CEO/MD, ADF.

Substantial support from the UN Joint Programme on HIV and AIDS (UNAIDS), the World Health Organisation (WHO), and the African Union Commission (AUC) in the preparation of the report is gratefully acknowledged.

Consistent support from Michel Sidibe, Executive Director, UNAIDS; Tedros Adhanom Ghebreyesus, Director-General, WHO; and Amira El-Fadil, Commissioner for Social Affairs, AUC was particularly valuable in the completion of the report.

Within UNECA, the report was completed under the guidance of Thokozile Ruzvidzo, Director, Social Policy Development Division (SDPD). In the initial stages the work was led by Stephen Karingi, Director, Regional Integration and Trade Division (RITD).

Preparation of the report was coordinated by Saurabh Sinha (task manager and lead author) with a team comprising of background paper writers (Chigozirim Bodart, Adrian Gauci, Darren Martin Kabione, Jane Karonga, Maraki Fikre Merid, Selahattin Selsah Pasali, Dommebeiwin Juste Metoiole Some, Heini Emilia Suominen and Ali Yedan) and a very

able group of research assistants (Melat Getachew, Myunggu Jung, Ali Saichi and Lesego Selotlegeng). The list of the background papers is provided in the Bibliography.

The report benefited from inputs from Elena Konzourova-Graeff (AXA); Suzanne Hassanein and Menna Atwan (Ngage Consulting).

Significant contributions at the finalization stage of the report were provided by Valeria Bempomaah Mensah, Habiba Ben Barka, Prosper Tanyaradzwa Muwengwa Chitambara, Adrian Gauci, Melat Getachew, Jane Karonga, Maraki Fikre Merid, Vera Songwe, and Edlam Abera Yemeru.

Helpful review and comments that helped strengthen the analysis and improve the quality of the final product were received at different stages from Babatunde Olumide Omilola and a team of experts from the African Development Bank; Zakari Momodu from the Aliko Dangote Foundation; Ochuko Keyamo, Mercy Machiya, and Nancy Wildfeir-Field from GBCHealth; Muntaqa Umar-Sadiq from Private Sector Health Alliance; Iris Semini and a team of experts from UNAIDS; Eunice Ajambo, Chigozirim Bodart, Hopestone Kayiska Chavula, Tidjani Chetima, Stephen Karingi, Mama Keita, Gideon Rutaremwa, Fatouma Sissoko, Edlam Abera Yemeru, and Jack Jones Zulu from UNECA; and Grace Kabaniha from WHO.

Guidance and support at various stages were received from Marie-Goretti Harakeye (AUC); John N. Nkengosong (Africa Centres for Disease Control and Prevention); Oliver Chinganya, Inderpal Kaur

Kanwal Dhiman, Khaled Hussein, Stephen Karingi and Thokozile Ruzvidzo (UNECA); and Matshidiso Moeti and Innocent Ntaganira (WHO).

A draft version of the report was presented at the meeting of the External Peer Review Group in Addis Ababa in November 2018. Very useful comments were provided by Chienye Ogwo (Africa Initiative for Governance); Hassan El Shabrawishi (AXA); Clémence A. Habi Bare and Iris Semini (UNAIDS); Germano Mwabu (University of Nairobi); and Grace

Kabaniha (WHO). Preliminary findings of the report were shared at a side event at the United Nations General Assembly in New York in September 2018. Comments and suggestions from participants at both events are gratefully acknowledged.

The report was edited by Sandra Jones. The layout and printing of the report was undertaken at UNECA and would not have been possible without the contributions of the Publications Section.

ABBREVIATIONS

AfCFTA	African Continental Free Trade Agreement
AUC	African Union Commission
BIAT	Boosting Intra-African Trade Initiative
BOOT	Build, own, operate, transfer
CD	Communicable Disease
CSR	Corporate Social Responsibilities
DAC	Development Assistance Committee
DAH	Development Assistance for Health
DALYs	Disability Adjusted Life Years
DBFO	Design, build, finance, operate
FBO	Faith-based organizations
GDP	Gross Domestic Product
GFF	Global Financing Facility
GHC	Global Health Consortium
GHSP	Global Health Service Partnership
GMP	Good Manufacturing Practice
GNI	Gross National Income
GPPPH	Global Public private partnerships for Health
HIC	High Income Countries
HLTF	High Level Task Force on Innovative International Financing for Health Systems
HRH	Human Resource in Health
IBM	International Business Machines
IMR	Infant Mortality Rate
LAC	Latin America and the Caribbean
LIC	Low Income Countries
LMIC	Low Middle Income Countries
MENA	Middle East and North Africa
MMR	Maternal Mortality Ratio
NCD	Non-Communicable Disease
NGO	Non-governmental organization

NHA	National Health Account
ODA	Official development assistance
OECD	Organization for Economic Co-operation and Development
OOPE	Out of Pocket Expenditure
PEPFAR	President's Emergency Program for AIDS Relief
PPP	Public private partnerships
PPP\$	Purchasing Power Parity
SAP	Structural adjustment programme
SDG	Sustainable Development Goals
UHC	Universal Health Coverage
UMIC	Upper Middle Income Countries
UN HABITAT	United Nations Human Settlements Programme
UNDESA	United Nations Department of Economic and Social Affairs
UNECA	United Nation Economic Commission for Africa
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
WASH	Water, Sanitation, and Hygiene
WDI	World Development Indicators
WHO	World Health Organization

FACTSHEET

Indicators	Unit	2000	2015	2050 (p)
Total population	'000	816,360	1,192,736	2,525,062
Population of children (0-14 years)	% of total population	43	41	32
Population of youth (15-24 years)	% of total population	20	19	18
Working age population (25-64 years)	% of total population	34	37	44
Old age population (65+ years)	% of total population	3	3	6
GDP	current '000 US\$	12,093,768	43,117,549	
GDP per capita	constant 2010 US\$	1917	2648	
Debt-to-GDP ratio	%	113.5	52.8	
Life expectancy at birth	years	54.4	62.8	
Total fertility rate**	births per woman	5.2	4.4	
Infant Mortality Rate	per 1,000 live births	78.4	44.1 (2017)	
Under-5 Mortality Rate	per 1,000 live births	126.7	62.8 (2017)	
Maternal Mortality Ratio	per 100,000 live births	561	421	
Prevalence of stunting, height for age*	% of children under 5	38.3	31.2	
Disease-Adjusted Life Years (DALYs)	per 1,000 population	927	556	
Share of CDs in Total DALYs	%	65.4	52.9	
Share of NCDs in Total DALYs	%	26.2	36.7	
Share of Injuries in Total DALYs	%	8.4	10.4	
Current Health Expenditure (CHE)	As % of GDP	5	6.2	
Domestic government health expenditure	as % of CHE	36.7	34.7	
Out-of-pocket expenditure	as % of CHE	45.4	36.1	
External health expenditure	% of current health expenditure	10.3	22.3	
External health expenditure per capita	Current US\$	2.5	13.5	
External health expenditure per capita	Current international US\$, PPP	7.8	32.6	
Prepaid private expenditure	per total health spending (%)	6.2	6.9	
Domestic private health expenditure	% of current health expenditure	53.5	42.6	
Urban population	% of total population	26.7 (1980)	40.4	55.9
Urban population living in slums	% of urban population	62.3	56.3 (2014)	

(p) is projections.

Source: Extracted from the data mentioned in the report.

EXECUTIVE SUMMARY

Key messages

- ***Robust economic growth creates more fiscal space for public investment in healthcare.*** Most countries in Africa witnessed strong economic growth of 5–6 per cent per annum over the period 2000–2010. Growth recovered in 2016 and is projected to remain strong in the coming years. Economic growth is necessary but not sufficient to improve health outcomes. Health matters for economic growth, though the link between health and economic growth is complex.
- ***Ensuring access to quality healthcare for all at affordable rates is constrained by a scarcity of public resources.*** Africa has made significant progress in health outcomes, particularly since 2000, though out-of-pocket expenditure, the single largest component (36 per cent) of total healthcare expenditure on average, creates financial barriers to access health services and puts people at risk of impoverishment, slows down poverty reduction and exacerbates inequalities.
- ***Africa has a current health financing gap of at least US\$ 66 billion per annum.*** Government expenditure on health in all but two countries (Algeria and Namibia) is less than the minimum of 5 per cent of gross domestic product, which is considered necessary for ensuring adequate health coverage for at least 90 per cent of the population. On average, countries need to increase public spending on health by 2.5

times. On current trends, and with numerous competing demands for public resources, governments are unlikely to be able to meet the health financing requirements.

- ***The private sector needs to leverage the African Continental Free Trade Area to invest in many under-invested sectors at a continental level.*** For instance, Africa manufactures less than 2 per cent of the medicines it consumes. Imports cater for over 70 per cent of the pharmaceutical market in Africa worth about \$14.5 billion.

Key findings

Challenges in improving healthcare in Africa

- Africa is undergoing rapid demographic, urban and epidemiological transitions that will have profound effects on the type, quantity and cost of health-care services for the future.
 - With fertility rates that are still high, in spite of declining mortality rates, most countries are experiencing rapid population growths of between 2.5 per cent and 3 per cent per annum. Africa's population is expected to double from 2015 to 2050 with concomitant changes in the age structure. By 2050, the ageing population group in Africa will increase by more than 100 million. It is a population group with very specific health needs. The competition for resources is likely to become sharper as countries struggle

to increase access to healthcare for the younger population groups.

- Africa is urbanizing rapidly and by 2035, the majority of its population will live in urban areas. Rapid urban growth provides opportunities but unplanned growth gives rise to densely packed slums, which exposes residents to the spread of infectious diseases. At the same time, urban lifestyle changes lead to a rise in non-communicable diseases. National health-care systems need to adapt quickly to the challenge of coping with a heavy and growing caseload of communicable and non-communicable diseases simultaneously.
 - Africa's average disease burden has declined from 927 to 538 disability-adjusted life years (DALYs) per 1,000 population in the period 2000–2016, but there has been a change in disease profile. The average share of communicable diseases in the total disease burden on the continent is still in excess of 50 per cent, and the average share of non-communicable diseases has increased from 26 per cent to 37 per cent in this period, signifying a rising double burden of disease.
- ***Africa has among the lowest densities of skilled health professionals in the world.*** Against the global threshold of 23 health professionals per 10,000 population, 13 of the 47 countries for which data are available have less than five health professionals per 10,000 population. Scarce resources are misallocated as many countries produce more physicians when more nurses are required to deal with communicable diseases. There is an 'urban bias' in the location of physicians: in 23 of the 25 countries with comparable data, the percentage of total physicians in urban areas far exceeds the proportion of the urban population.

The burden of financing healthcare

- ***Total spending on healthcare in Africa remained within a narrow band of between 5 per cent and 6 per cent of GDP in the period 2000–2015 on average,*** although in per capita terms, it almost doubled from \$150 to \$292 (in constant PPP dollars) with wide variation across countries.
- ***On average, healthcare in Africa is predominantly financed through out-of-pocket expenses (36 per cent) and domestic resources (35 per cent),*** with external aid accounting for 22 per cent of total health expenditure. National health systems in most countries struggle with insufficient and inequitably distributed resources and the poorest countries bear a disproportionately high share of the burden of disease and injury, yet have fewer resources for financing healthcare.
- ***Expenditure targets as a percentage of government budgets compromise the flexibility of finance ministries to make allocative decisions across various competing requirements.*** Health needs and the availability of funds for healthcare differ significantly across countries, and there is no consensus on how much countries should spend on the health sector. In 2001, member States of the African Union committed to allocate at least 15 per cent of their annual budgets to healthcare, commonly referred to as the Abuja target, but few countries have achieved this target.
- ***There is an estimated health financing gap of \$66 billion per annum for the continent based on the threshold of 5 per cent of GDP for government expenditure.*** Against

the required \$114 billion in current dollars, governments in Africa spend approximately \$46 billion. This is a conservative estimate that is likely to increase over the years. More than half of this amount is required by Egypt (19 per cent or \$12 billion) and Nigeria (32 per cent or \$21 billion).

Resource mobilization for health financing

- *Africa's tax-to-GDP ratios are among the lowest in the world.* Tax revenues are the most important component of domestic resources, and raising them has been at the centre of many domestic reforms and regional and international initiatives. These efforts helped increase on average the total taxes to up to 19.3 per cent of GDP in 2015 in Africa. In general, low-income countries and non-resource-rich countries place a greater reliance on indirect (as opposed to direct) taxes than do high-income countries and resource-rich countries. This could be a result of the low levels of formal sector employment in lower-income countries and non-resource rich countries.
- *"Sin taxes" serve the dual purpose of increasing government revenues and discouraging the consumption of products detrimental to health such as alcohol, tobacco and sugary drinks.* South Africa, with the highest obesity rates in Africa, other than North Africa, introduced the Sugary Beverages Levy in 2018 to raise prices for soda and other sugary drinks, with the aim of reducing obesity rates by 10 per cent by 2020. Morocco's revenues increase in 2017 with a surtax on alcoholic drinks, tobacco, and gambling that also aims at protecting Moroccans. On the other hand, Kenya with the highest rate of diabetes in Africa, other than North Africa, faced stiff resistance and had to withdraw a tax aimed to reduce consumption of sugar.
- *Debt servicing constrains governments' availability of discretionary resources and limits the fiscal space.* There are concerns about the rising level of government debt and debt sustainability in several countries. In Africa, total debt service has increased from 1.6 per cent of gross national income (GNI) in 2011 to 2.6 per cent in 2017. The average interest-to-revenues ratio increased from 5 per cent in 2012 to an estimated 10 per cent in 2017. The interest cost exceeds 20 per cent of revenues in Burundi, the Gambia, Ghana, Nigeria and Zambia.
- *In 22 countries, the average annual value of illicit financial flows far exceeds the health financing gap.* This suggests that by reducing these illicit flows, governments can fund healthcare and other social sectors in these countries.
- *In six countries, military spending as a percentage of GDP exceeds public spending on health.* Countries have their own security requirements, but given the importance of improved health outcomes for the future well-being of their populations, governments could consider prioritizing health in their budgetary allocations.
- *Results-oriented innovative financing mechanisms such as Development Impact Bonds and Social Impact Bonds have been launched in some countries.* For example, important lessons can be learned by other countries from the Cataract Bond in Cameroon.
- *There is an urgent need to improve health outcomes in health-stressed countries.* To target the countries with maximum health

needs, the report uses a combination of thresholds covering seven indicators, such as domestic government health expenditure, out-of-pocket expenditure, density of skilled health workers, average disease burden, government debt and the annual GDP growth rate. Eight countries are severely health-stressed: **Angola, Chad, Mauritania, Nigeria, Sierra Leone, South Sudan, Togo and Zimbabwe**. They are below the thresholds on six of the seven indicators. Another 12 countries are very health-stressed: **Benin, Cameroon, Central African Republic, the Democratic Republic of the Congo, Congo, Côte d'Ivoire, Guinea, Guinea-Bissau, Mali, Mozambique, Niger and Zambia**. They are below the acceptable thresholds on five of the seven indicators. These 20 countries need to be prioritised for immediate attention.

Role of the private sector in financing healthcare in Africa

- *Developing effective health financing mechanisms and harnessing the strengths of the private health sector are key strategies to address the increasingly complex health challenges in the region*, particularly to help bridge the health financing gap of \$66 billion per annum. Fiscal space for increased government spending is constrained in many countries. Governments can only do so much, and the private sector is an important contributor to providing healthcare in Africa.
- *Business opportunities in the health-care and wellness sector in Africa are estimated to be worth \$259 billion by the year 2030, with the potential to create 16 million jobs*. There are numerous opportunities for the private sector to invest in laboratory and diagnostics, pharmaceuticals, skills development, research and capacity-building, and digital health innovations. Investing in health in

Africa is increasingly attractive to the for-profit private sector. It is estimated that 14 per cent of all business opportunities in the health and well-being sector globally will be in Africa, second only to North America with 21 per cent.

- *There is considerable scope to leverage the capital and capacity of the private sector to complement government financing and increase investments*. Increasingly, governments are turning to the private sector to improve quality and deliver value for money, build infrastructure, provide staff and training, improve productivity, undertake social marketing, and enhance procurement.
- *The interest in public-private partnerships is driven by a number of factors: the rising costs of delivering healthcare as populations age; the shift in disease profile in Africa towards non-communicable or chronic diseases; changing lifestyles with increased urbanization; and costly and rapidly advancing medical technologies*. For example, UNAIDS has proposed a fast-track strategy to end the AIDS epidemic as a public health threat by 2030. The estimated price tag to achieve this on a global scale is approximately \$26 billion per year until 2030. The cost of treating diabetes is estimated at \$2,300 per patient per year in Africa.
- *A review of the current public-private partnership cases in health in Africa revealed that two-thirds are located in Eastern and West Africa*. Central Africa, with the poorest health outcomes, has less than 10 per cent of the public-private partnerships. Moreover, over half of the 178 cases reviewed were located in just 10 African countries. This indicates unequal distribution of such partnerships.

- ***Despite the potential benefits of public-private partnerships, private sector involvement and contributions to financing in Africa have not been optimized.*** Ten countries benefit from 51 per cent of the PPPs on the continent and are engaged in only a small number of areas. Challenges in enhancing the role of the private sector include the lack of effective dialogue among stakeholders; weak regulation and policies specifically related to health financing schemes and strategies; and a poor environment in terms of ease of doing business.
- ***Opportunities for the private sector to engage need to be properly aligned to a country's public health goals, including better access and affordability for the poor to access high-quality healthcare and medicines.*** Public-private partnerships in health need to be institutionalized with public and private risk-sharing, well-structured and aligned to achieve the 2030 Agenda for Sustainable Development. Evidence suggests that public-private partnerships are effective models for development in part because of their ability to expand, reach and multiply impact.

Recommendations for both governments and the private sector are summarized as follows:

What should governments do?

1. Focus on achieving broad-based economic growth and prudent macroeconomic management that includes strengthening of debt management frameworks and strategies; improved tax administration to increase tax revenues; strengthening

of financial administration to reduce illicit financial flows; and prioritizing public funding for health by reducing fossil-fuel subsidies and other wasteful expenditures.

2. Identify innovative sources for financing healthcare such as Development Impact Bonds and debt-to-health swaps;
3. Allocate sufficient resources in health-associated sectors such as water and sanitation to reduce the extent of communicable diseases, and undertake mass awareness campaigns to reduce non-communicable diseases; and
4. Enhance regulatory systems for improved governance of public-private partnerships, create suitable conditions to attract private investments, provide other incentives such as strengthening infrastructure, and improved internet connectivity, and promote intra-African trade in health products and services.

What should the private sector do?

1. Promote private sector investments in health sectors such as the pharmaceuticals, medical education and digital technologies that are presently under-invested;
2. Build upon the recently-signed African Continental Free Trade Area (AfCFTA) to identify market opportunities and invest in countries or create manufacturing hubs in the sub-regions;
3. Comply with the regulatory mechanisms and oversight measures aimed to curtail trade mispricing and tax evasion;
4. Work with governments through various modalities, including public-private partnerships, to crowd in more private sector investment aligned to achieve the health-related Sustainable Development Goals and the aspirations of the African Agenda 2063.

CHAPTER 1

OVERVIEW



Key Messages

- Most countries witnessed strong economic growth of 5–6 per cent in 2000–2010 but there has been some volatility since then. Growth recovered in 2016 and is projected to remain high in the coming years. Robust economic growth provides more fiscal space for public allocation of resources for social sectors and for prioritising healthcare.
- Health matters for economic growth, but the link between health and economic growth is complex. The health of a population is one of the potent drivers of economic growth, but economic growth also contributes to improvements in health outcomes.
- Africa has made considerable progress in improving health outcomes. From 1990 to 2015, life expectancy at birth (LEB), a key indicator of population health and economic development, increased from 54 to 63 years. An increase in life expectancy, especially since 2000, has been accompanied by equally encouraging improvements in mortality indicators.
- Still, Africa accounts for almost half of all child deaths globally and is the region with the highest proportion of child mortality. Nearly 3.2 million of Africa's children did not reach their fifth birthday in 2012. Most die as a result of easily preventable infectious diseases.
- At low levels of per capita income, further increases in income are associated with large gains in life expectancy, but as incomes increase there is little associated change in life expectancy. Thus, economic growth is necessary but not sufficient to improve health outcomes.

1.1 Overview of healthcare financing in Africa

Before reviewing healthcare financing in Africa, it is important to consider the macroeconomic context of African countries. Overall, Africa recorded average real annual GDP growth of 5–6 per cent between 2000 and 2010 before slowing down to about 3 per cent per annum between 2010 and 2015. In 2016, annual growth rate was estimated at 1.2 per cent and rebounded to 3.4 per cent in 2017 before falling back slightly to 3.2 per cent in 2018.

Africa's population has also been growing by an average 2.6 per cent a year, meaning that the income has to be shared by an increasing number of people. While the poverty headcount ratio declined from 54.3 per cent in 1990 to 36.0 per cent in 2016, the number of people in poverty since 2002 has remained approximately constant at 390 million (ECA, 2017b). Informal employment comprises a substantial portion (about 66 per cent) of non-agricultural employment.

Healthcare financing provides the resources and economic incentives for the operation of health systems and is a key determinant of health system performance in terms of equity, efficiency and health outcomes. Adequate financing of health systems largely determines whether people can obtain the healthcare they need, whether they suffer financial hardship in obtaining it, or cannot even afford to seek medical help. Enhancing access to effective and affordable healthcare of adequate quality to all is predicated on increased public funding for the health sector.

Total healthcare spending stems from four sources: (i) government health spending, which includes general government budgets and social health insurance; (ii) out-of-pocket (OOP) payments; (iii) development assistance for health; and (iv) prepaid private spending, which includes private insurance and non-governmental organisation (NGO) spending.

Total spending on healthcare in Africa remained within a narrow band of 5–6 per cent of GDP in

2000–2015, on average, though in per capita terms it almost doubled from \$150 to \$292. These figures are reported using 2015 PPP \$ to account for inflation and different prices across countries. There is wide variation across countries, with most of the spending concentrated in the upper middle-income countries. Low-income countries (LICs) spent on average \$99 per capita per year, ranging from \$32 (Central African Republic) to \$256 (Sierra Leone) in 2015. Spending per capita across lower middle-income countries was on average \$298, ranging from \$147 (Djibouti) to \$774 (Tunisia), while average spending per capita in upper middle-income countries was \$914, ranging from \$481 (Gabon) to \$1,100 (Mauritius).¹

There is a relatively heavy reliance on out-of-pocket (OOP) payments in African countries, averaging 36 per cent of current health expenditure and ranging from 2 to 75 per cent across countries, compared with an average of 22 per cent in the rest of the world. This has led to financial barriers for the poor in accessing healthcare.

High funding gap in healthcare financing

Scarce public funds and unpredictable donor aid have resulted in high OOP expenditure that has pushed many people into poverty. Health spending in Africa remains largely inadequate to meet the growing healthcare financing needs and rising healthcare demands, thereby creating a huge financing gap of \$66 billion per annum. Moreover, the demographic and epidemiological transitions currently on-going in Africa will have a profound effect on the economies and future health needs. African countries are also facing the challenges of slowing economic growth and high public indebtedness which have hampered public financing of healthcare. The average debt-to-GDP ratio of African countries increased by 15 percentage

points from 2010 to 2017, with some countries' debt-to-GDP ratios increasing fivefold.

The role of the private sector

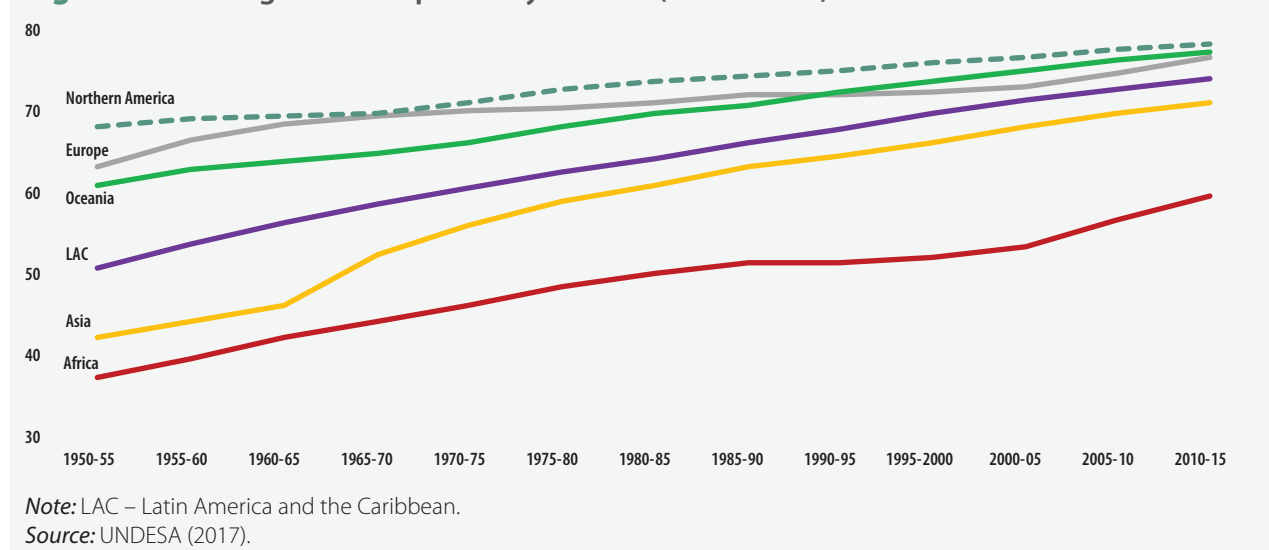
In view of the huge financing gap and the rising disease burden in Africa, it is clear that governments cannot meet all health costs on their own. The private sector has an important role to play in helping countries in Africa to achieve significant improvements in health outcomes. The private sector already plays an important role in healthcare in Africa. With limited financial and operational capacity in the public sector, and unpredictable donor funding, almost half of total health expenditure in Africa other than North Africa is accounted for by the private sector (IFC, 2008) spread all along the health value chain, including provision, financing, manufacturing, distribution and retail.

There is scope to harness and leverage the capital and capacity of the private sector to complement government financing and make investments by enhancing the ease of doing business, and by establishing public–private partnerships (PPPs) in order to increase access to quality healthcare in Africa.

1.2 Progress on health in Africa

Africa has made considerable progress in improving health outcomes, in spite of the challenges posed by pervasive poverty, epidemic diseases, food insecurity and conflict. Progress has been particularly impressive in recent years. From 1990 to 2015, life expectancy at birth (LEB), a key indicator of population health and economic development, increased from 54 to 63 years. During the same period, the number of women dying in childbirth and the number of children dying before the age of five nearly halved (WHO, 2016c).

¹ WHO, Global Health Expenditure Database (GHED).

Figure 1.1: Change in life expectancy at birth (1950–2015)

There have been reversals too, largely as a result of the HIV epidemic that swept through the continent during 1980–2000. After adding 4.9 years per decade from 1960 to 1980, growth in life expectancy² in Africa slowed down by 1.9 years per decade during 1980 to 2000. Fourteen countries registered a decline in life expectancy in this period, half of which are in Southern Africa.³ That is, life expectancy in Africa was almost stagnant at a time when it was increasing in other regions (Figure 1.1).

Life expectancy has been increasing since 2000 and Africa is now adding nearly 5 years per decade on average. Still, Africa remains the region with the lowest average life expectancy – nearly 10 years less than the global average.⁴ There are large differences across the continent. In 2016 Sierra Leone had a life expectancy at birth of 51.8 years compared to 76.1 years in Algeria (World Bank, 2018).

An increase in life expectancy, especially since 2000, has been accompanied by equally encouraging improvements in mortality indicators. The Under-5 Mortality Rate (U5MR) in Africa declined on average

from 148 to 62.8 deaths per 1,000 live births from 1990 to 2017, which equates to 2.1 per cent per annum. The Infant Mortality Rate (IMR) declined at a similar rate of 1.9 per cent per annum from 91 to 44.1 deaths per 1,000 live births in the same period. The Maternal Mortality Ratio (MMR) also declined from 542 to 421 per 100,000 live births from 1990 to 2015, which is 0.9 per cent per annum (Table 1.1). But the 1990s witnessed a very slow decline and the MMR even increased marginally.

However, Africa accounts for almost half of all child deaths globally, an increase from 29 per cent two decades ago, and is the region with the highest proportion of child mortality. Nearly 3.2 million of Africa's children did not reach their fifth birthday in 2012. Most die as a result of easily preventable infectious diseases.

Even when satisfactory, national averages on most health indicators mask variations among income groups and socioeconomic categories. Across most countries, infant and maternal mortality rates are markedly higher in poorer than wealthier groups, and

² The term 'life expectancy' is used to signify 'life expectancy at birth', unless stated otherwise.

³ The countries are Cameroon, Côte d'Ivoire, Sierra Leone (*West Africa*); Central African Republic, Congo (*Central Africa*); Kenya, Uganda (*East Africa*); Botswana, Eswatini, Lesotho, Namibia, South Africa, Zambia, Zimbabwe (*Southern Africa*).

⁴ The world average life expectancy at birth in 2016 was 71.6 years. Source: UNDESA (2017).

Table 1.1: Africa's health and mortality indicators, 1990–2016

Indicator	Unit	Average Value			% change per year*		
		1990	2000	2017	1990–2000	2000–2017	199–2017
Infant Mortality Rate (IMR)	Per 1 000 live births	91	78.4	44.1	-1.4	-2.6	-1.9
Under-5 Mortality Rate (U5MR)	Per 1 000 live births	148	126.7	62.8	-1.4	-3.0	-2.1
Maternal Mortality Ratio (MMR)	Per 100 000 live births	542	561	421 (2015)	+0.3	-1.7 (2000–2015)	-0.9 (1990–2015)
Life expectancy at birth (LEB)	Years	53.6	54.4	62.8	0.8*	4.9*	3.4*

Note: * Change in life expectancy at birth is expressed in number of years per decade.

Sources: Data from World Development Indicators and WHO Global Health Observatory.

in rural than in urban areas. Poor, rural, less educated women usually have a worse health status than non-poor, urban, more educated men. This represents considerable losses to national economies.

Since 2000, the overall picture of health in Africa is one of progress. On average, a child born in Africa today can expect to live until about 2080. Whether this child will have a healthy life during the various stages of her life-cycle will depend not only on where she is born or decides to live, and the types of decisions made by her, but also by the social, political, economic and environmental factors that shape our health and well-being.⁵ Many factors influence health outcomes. People experience good and poor health individually, but illness and death are also social phenomena shared by households, neighbourhoods, work environments and the larger society.

Equitable and sustainable access to functioning health systems is critical. However, effective access to healthcare in Africa is constrained by income, location, education and gender. For instance, affordability of healthcare, especially by the bottom

quintiles, is a serious issue and out-of-pocket expenditure on health remains the single largest source of vulnerability to poverty. Many people forgo treatment because they cannot afford it, or find the cost ruinous and the quality of service poor.

Supply of healthcare services are also constrained in Africa. For every 10,000 people, there are only 9 hospital beds, in comparison to the global average of 27; and 2.7 physicians as against the global average of 13.9 (WHO, 2016). Access to essential medicines is restricted by high prices, unreliable public health facility supply, and limited availability of quality drugs. For instance, a WHO survey of the quality of anti-malaria's in seven countries in Africa found that the majority of drugs in private facilities (pharmacies, drug shops, street vendors) failed quality testing.⁶

Governments and businesses across the world are exploring how to control costs while ensuring citizens and employees have access to quality healthcare. They are also striving to ensure that investments in care bring the best returns. In addition, technological innovations are altering the healthcare landscape

5 The 2015 Rockefeller Foundation–Lancet Commission on Planetary Health argued that unsustainable exploitation of the natural environment will lead to the deterioration of ecological resources that support human life and health. The Commission documented the health effects from a variety of environmental threats, including climate change, loss of biodiversity, land degradation, water scarcity, and overexploitation of fisheries. Examples of health effects included increased rates of waterborne infectious diseases, malaria, air pollution-related respiratory diseases, and injuries due to natural disasters.

6 https://www.unido.org/sites/default/files/2016-01/IFC_healthinafrica_final_0.pdf

and offering potential responses to some of these challenges.

Digital and mobile tools can be harnessed to transform the delivery of healthcare, lowering costs and broadening access. A new generation of health consumers is demanding more choice and customisation, while alternative business models and new technologies have the potential to improve the quality of provision. Technology can help citizens manage their own care, and give them a greater role in controlling healthcare costs by taking more responsibility for their personal well-being.

The forces shaping healthcare certainly create new hurdles, but there is a growing recognition that delivering efficient and effective healthcare is more than a means of tackling illness. It creates returns on investment from an economic and social perspective, contributing to prosperous and resilient communities, businesses and countries.

1.3 Health and economic growth – what is the link?

Before exploring the link between health and economic growth, it is important to distinguish

between the terms ‘health’ and ‘healthcare’, which are often used interchangeably. They are distinct, as discussed in Box 1.1.

The link between health and economic growth is complex as the causality is bidirectional. There is considerable evidence that a healthy population can spur economic growth. For instance, malnutrition costs African economies between 3 and 16 per cent of GDP per annum. Better health outcomes contribute to significant economic gains and to the growth of GDP per capita through various channels such as (i) altering decisions about expenditures and savings over the life cycle that can substantially boost investment and economic growth rates; (ii) encouraging foreign direct investment since investors shun environments where the labour force suffers a heavy disease burden; and (iii) boosting education through higher rates of school attendance and improved cognitive development (Bloom, Canning and Jamison, 2004) which, in turn, enhances labour productivity. Healthy workers are more productive and can earn higher wages.

Individuals with a better health status are also likely to invest more in education because they expect to enjoy the benefit over a longer period (Bloom and

Box 1.1: Health or healthcare?

Health is a broad concept. According to the World Health Organisation, health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1948).

Healthcare is both a means and an end. As a means, healthcare is an instrument for maintaining, restoring and promoting health. As an end, healthcare is in many instances a consumer good (Grossman, 1972) that confers benefits directly to individuals, as it is used to relief pain or anxiety. Like education, health is among the basic capabilities that give value to human life (Sen, 1980).

Since quality healthcare saves life when properly administered, it is also a human right to which everyone is entitled. It also occupies a special place as an industry because it is a key input in the production of health capital (Grossman, 1972). Thus access to quality and affordable healthcare is crucially important for economic growth.

However, many factors, including healthcare, contribute to good health outcomes. In particular, the social context – how people live, work, and the differences between rich and poor and other kinds of social groups – greatly affects who becomes ill, disabled, or dies prematurely. Studies that examine the economic effects of health without explicitly considering the role played by healthcare are incomplete, as they ignore the channels that lead to improved health outcomes.

Canning, 2003). ECA's analysis⁷ reveals that a one-year increase in female schooling at the primary level leads to 3.3 fewer infant deaths, 8.6 fewer child deaths and 5.2 additional years of expected life (Some et al. 2018). These improve the quality of the labour force and enhance economic growth.

Evidence from cross-country growth regressions suggests a fairly large contribution of better health to economic growth. The initial health of a population has been identified as one of the most robust and potent drivers of economic growth. Healthier populations contribute better to economic activities, as evident from the rapid growth of countries in East Asia since the 1980s (Bloom, Canning and Jamison, 2004). One quarter of economic growth between 2000 and 2011 in low-income and middle-income countries is attributed to improvements in health (Szlezák et al., 2010). An increase in life expectancy by an extra year has been estimated to raise a country's per capita GDP by 4 percentage points (Bloom, Canning and Sevilla, 2005).

For lower-income countries (LICs) and middle-income countries (MICs), health is estimated to have contributed about 1.8 per cent to annual growth in income (McIntyre and Meheus, 2014). In Africa excluding North Africa, the annual contribution was as large as 5.7 per cent. Analysing data from 94 LICs and MICs, it was found that every dollar invested in childhood immunisation can expect to save \$16 in healthcare costs, lost wages and productivity due to illness.⁸ Around 11 per cent of the growth in low-income and middle-income countries in 1970–2000 can be attributed to reductions in adult mortality (McIntyre and Meheus, 2014).

ECA results on the impact of health outcomes on economic growth have shown that a reduction in the MMR by 125 deaths per 100,000 live births, and a reduction in the U5MR by 50 deaths per 10,000,

would each increase GDP growth by 1 per cent (Some et al. 2018).

The causality goes the other way as well, though the role of economic growth in health improvements is more contentious and, as the analysis of the Preston curve indicates, needs to be more nuanced. Plotting the cross-country data over 1990, 2000 and 2017 on life expectancy and GDP per capita shows that many countries have achieved remarkable improvements in health with little or no economic growth (Figure 1.2).

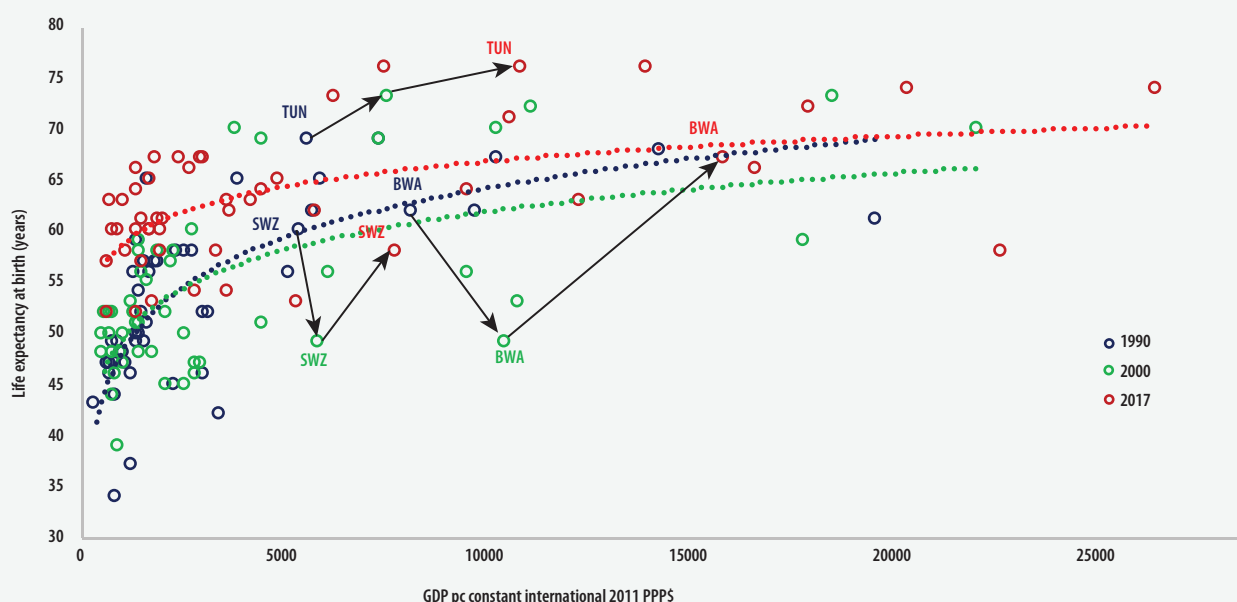
A significant feature of the Preston curve is that it shifts upwards progressively, suggesting that life expectancy increases in most countries, independently of changes in income. This could be for a variety of reasons such as education, better technology, vaccinations, improved provision of public health services, oral rehydration therapy, and better nutrition with these exogenous improvements in health.

The unusual feature of the curves shown in Figure 1.2 is that they do not shift progressively upwards. The curve for 2000 (shown in green), dips below the 1990 curve (shown in blue), reflecting the declines in average life expectancy in the 1980s and 1990s as a result of the HIV/AIDS epidemic, observed in Figure 1.1 as well. This is peculiar to Africa and defies the global trend of the consistent shift in the Preston curve upwards over time. The change in concavity between 2000 and 2017 suggests that poorer countries increased their life expectancy proportionately more than the richer countries in this period.

Another significant feature of the curves in Figure 1.2 is that the independent increases in life expectancy are the greatest in the poorer countries (on the bottom left-hand side). That is, the link between

⁷ In 37 of the 48 countries in the period 2000–2015.

⁸ A study published in the journal *Health Affairs* gives further detail on these returns (Xu, 2007).

Figure 1.2: Preston Curves for Africa, 1990, 2000, 2017

Note: The arrows indicate the movement of different countries over different years. So life expectancy in Botswana (BWA) and Eswatini (SWZ) drops from 1990 to 2000 before increasing in 2017, in Tunisia (TUN) it improves steadily from 1990 to 2000 to 2017.

Source: ECA calculations based on life expectancy data from IHME and income data from World Development Indicators.

income and life expectancy flattens out at higher incomes. At low levels of per capita income, further increases in income are associated with large gains in life expectancy, but at high levels of income, increased income has little associated change in life expectancy.

As shown in the Figure 1.2, countries move along the Preston curves for the various years. If economic growth were the sole reason for improved health, countries would move along the Preston curve, but the curve itself would remain fixed. Preston estimated that only about 15–20 per cent of the increase in life expectancy results from increases in income alone. Improvements in the public health environment, diffusion of health technologies, widespread extension of vaccination, and changes in personal health-seeking behaviour explain the rest. Economic growth is necessary but not sufficient to improve health outcomes.

There is no presumption that economic growth will improve health without deliberate public action, which may explain why a child born in Niger in 2016 can expect to live nearly seven years longer than one born in in neighbouring Nigeria, even though Nigeria's per capita GDP is nearly six times larger than that of Niger.⁹ Similarly, life expectancy in Kenya was almost 25 per cent higher than in Lesotho in 2016, even though both countries had similar GDPs per capita. Interestingly, both countries had similar life expectancies in 1960,¹⁰ but while Kenya added 3.7 years per decade since 1960, Lesotho could only increase it by 1.4 years per decade in the same period. It is likely that some rapidly growing economies fail to provide the overall public health environment necessary alongside economic growth to achieve the required health outcomes.

Replacing life expectancy at birth with the infant mortality rate, we find that per capita GDP has a significant effect on infant mortality rates, signifying

⁹ In constant international 2011 US\$ PPP.

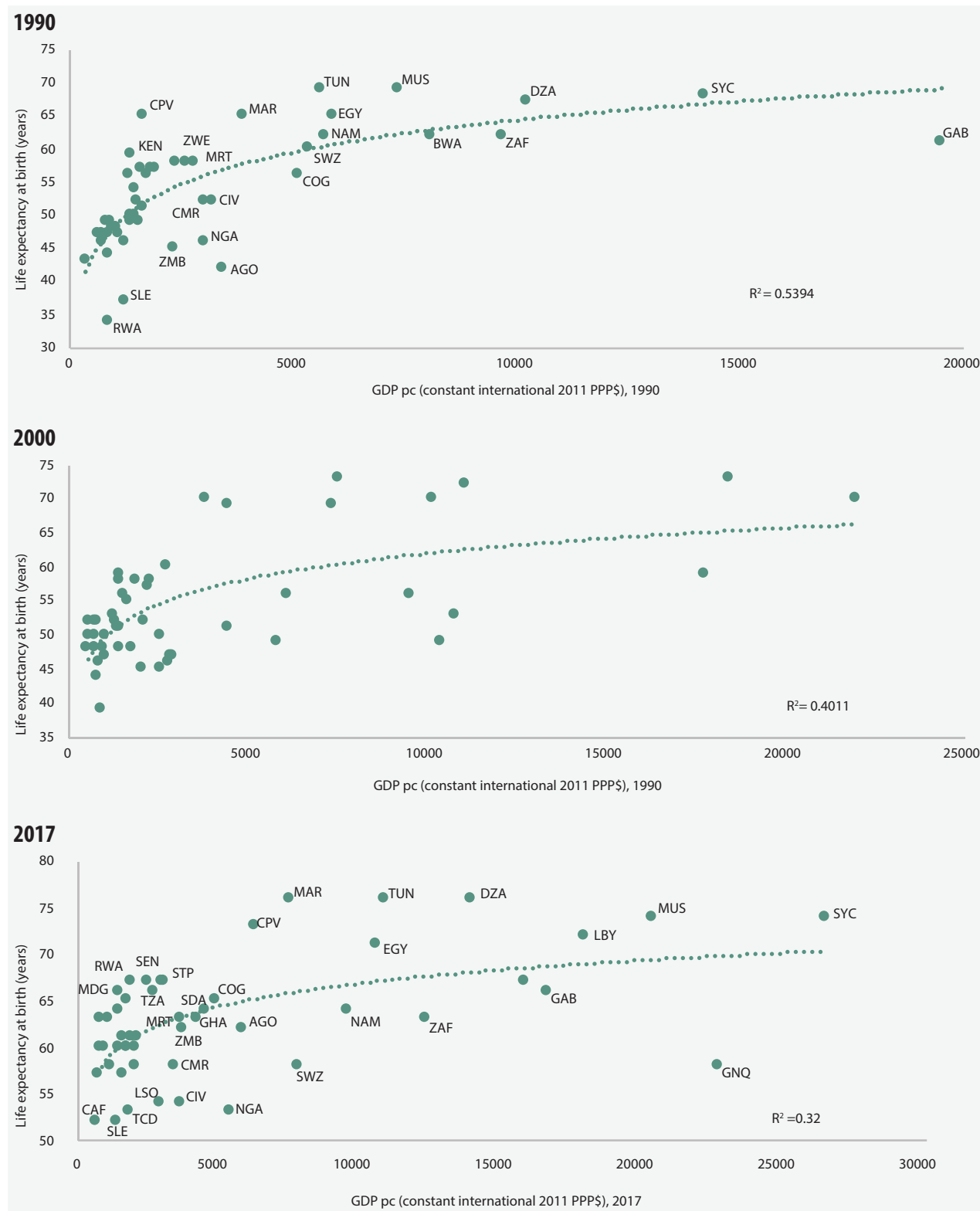
¹⁰ Life expectancy at birth was 46.3 years in Kenya and 46.6 years in Lesotho in 1960.

the importance of income, particularly on the health of the infant (Arthur and Oaikhenan, 2017). This suggests that increases in GDP per capita allow governments to allocate resources to the health sector, and enable households to afford essential health services, especially child healthcare, leading to the reduction in infant mortality rates. Specifically, a 1 per cent increase in GDP per capita leads to approximately 0.19 per cent fall in infant mortality rates in Africa other than North Africa. Similar results have been reported by Musgrove (1996), Filmer and Pritchett (1997, 1999), Gupta et al. (2002, 2003), and Issa and Ouattara (2005).

So overall, health and economic growth are closely related and the causality can go in both directions. Moreover, with the relatively easy access to medical technology and drugs, life expectancy can improve independently of any increase in incomes. But do all countries benefit? How can good health be accessible to all at affordable rates? What is the role of health spending on health outcomes? What role can the private sector play in enhancing access to healthcare for all? These are some of the questions motivating this report.

Appendix

Preston Curves for Africa¹¹



11 Compiled using data from World Development Indicators.

CHAPTER 2

CHALLENGES IN IMPROVING HEALTHCARE IN AFRICA



Key Messages

- Africa's healthcare financing faces demographic, urban and epidemiological transitions. These transitions, linked with a double disease burden, will have profound effects on the amount of resources needed to ensure access to quality healthcare for all.
- The demographic transition in Africa is characterised by a decline in mortality rates but still high fertility rates, as a result of which Africa's population will double in 2015–2050. The large proportion of the working-age population (44 per cent of the total) together with the forecast 100 million elderly people, will result in the double burden of diseases (especially those associated with ageing) and increased health costs.
- Until 2000, the rate of urban growth exceeded the average per capita income growth and this has led to an increase in slums and informal settlements. Urbanisation in Africa poses opportunities but unplanned urban growth, including unregulated and sub-standard settlements, pose serious health hazards for the inhabitants.
- Africa's average disease burden declined from 927 to 538 disability-adjusted life years (DALYs) per 1,000 population in 2000–2016, and has been accompanied by a changing disease profile. While the share of communicable diseases in the total disease burden is still in excess of 50 per cent, the gap between the relative shares of communicable and non-communicable diseases has declined from 40 percentage points to only 16. This reflects a double burden of disease that has important implications for types of health demands and health financing needs.
- Against the global threshold of 23 health professionals per 10,000 population, 13 of the 48 African countries for which data are available have less than five health professionals per 10,000 population. Niger and Somalia have less than two per 10,000. Many countries produce more physicians when more nurses are required to deal with communicable diseases. This suggests a misallocation of scarce resources. There is an 'urban bias' in the location of physicians. In 23 of the 25 countries with comparable data, the percentage of total physicians in urban areas far exceeds the proportion of the urban population.
- On average, community health workers account for 11 per cent of the health workforce in Africa, other than North Africa, and help top-up healthcare provision to 50–60 per cent in Central African Republic, Ethiopia and Guinea; and to 65–70 per cent in Malawi. Up to 2 million community health workers will be needed by 2020 to help close the human resource gap for health but at a much lower cost. This is an opportunity for the private sector to seize. Well-trained and equipped community health workers can provide adequate care in addressing much of Africa's disease burden.
- Strengthening national health systems through increased financing is essential to respond to the transitions currently underway in Africa and to build a healthy labour force.

2.1 Demographic, urban and epidemiological transitions

In 2015, approximately \$9.7 trillion were spent globally on health, with Africa representing just 2 per cent of the total expenditure, notwithstanding it represents 16 per cent of the global population and 26 per cent of the global disease burden. Inadequate health spending on the continent is due to a combination of factors.

First, Africa is undergoing rapid transitions on at least three fronts: *demographic changes* (such as longer life expectancy and changing age-structure); *urban growth*; and *epidemiological changes* (such as the shifting burden of illness toward non-communicable diseases [NCDs]). All of these will have profound effects on the type, quantity and costs of healthcare services needed. Second, in addition, national healthcare systems in Africa face severe shortages of suitably qualified health workers and limited availability of quality medicines.

Africa's population grew at an average rate of 2.6 per cent per annum during the period 1990–2015, more than twice the world average (ECA and UNFPA, 2016). In the same period, the regions of Asia, Latin America and the Caribbean achieved rapid declines in annual population growth. Not only is Africa's annual population growth rate the highest in the world, it has remained in the range of 2.4–2.6 per cent since 1990. From 1995 to 2015, it increased marginally from 2.44 to 2.55 per cent (ECA, 2017b).

The average annual population growth rate masks variations across countries. In particular, Angola, Chad, DR Congo, Equatorial Guinea, The Gambia, Niger and Uganda increased their populations by more than 3 per cent per annum in 2000–2015. On the other hand, populations in the small island

countries such as Cabo Verde, Mauritius and Seychelles, along with Lesotho, Morocco and Tunisia, grew at around 1 per cent per annum in the same period (UNDESA, 2015).

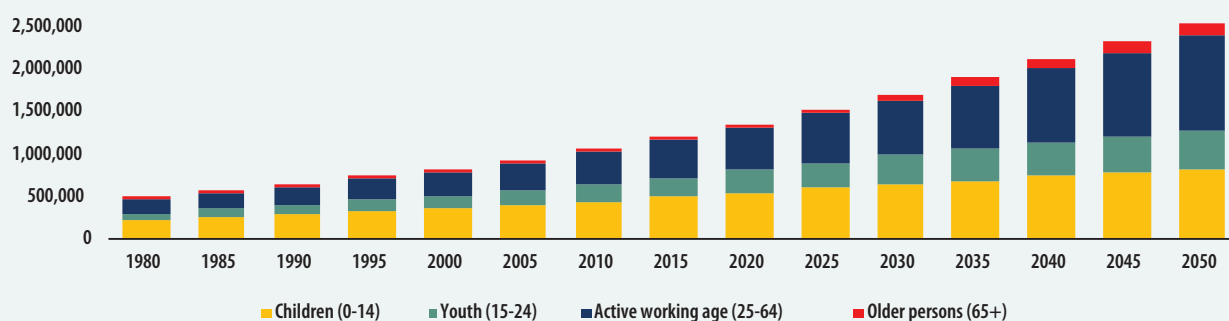
The rapid population growth has occurred because of the rapid decreases in the Infant Mortality Rate (IMR) and the Under-5 Mortality Rate (U5MR), and despite lagging decreases in the Total Fertility Rate (TFR) (Bongaarts and Casterlin, 2017). Fertility rates in Africa are falling but at a slow pace. The TFR in Africa declined from 6 births per woman in 1990 to 4.4 births per woman in 2014, though with variation across countries (World Bank, 2016). Of the four factors that lead to population growth over time – fertility, mortality, migration and momentum effects¹² – in Africa, the fertility component accounts for around three-quarters of the projected population increase to 2050 (UNDESA, 2013).

As a result, Africa's population is expected to increase fivefold between 1980 and 2050 and to more than double between 2015 and 2050 (Figure 2.1). In 1980, Africa's population comprised about 10 per cent of the global population; by 2050 it is projected to make up 26 per cent of the global population (UNDESA, 2017). Continuing population growth will pose a challenge to Africa's health and educational infrastructure.

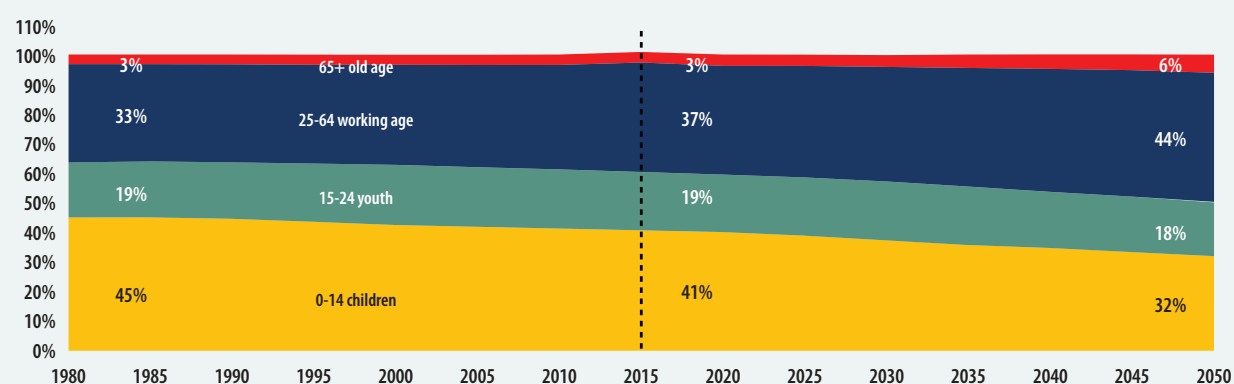
The changing population age structure in Africa

Africa has a young age structure, with 41 per cent of its population in the 0–14 year age group and nearly one-fifth (19 per cent) in the 15–24 year age group. By 2050, the two age groups will make up half the population, with the working-age population constituting 44 per cent of the total population. Population in the 65+ age group will proportionately double by 2050 (Figure 2.2).

¹² Momentum effects are conditioned by the population's age structure at the starting point of a projection. In countries undergoing a demographic transition with a young age profile, population will continue to grow because births by a large group of women in the reproductive age cohort will exceed the mortality rate.

Figure 2.1: Population growth in Africa, 1980–2050 ('000)

Source: ECA staff calculations using data from UNDESA (2017).

Figure 2.2: Projected changing population age structure in Africa, 1980–2050

Source: ECA staff calculations using data from UNDESA (2017).

Children (0–14 years): As shown in Figure 2.2, the proportion of population under 15 years declined from 45 per cent in 1980 to 41 per cent in 2015, and by 2050 only about one-third (32 per cent) of Africa's total population will be in this age group. However, the absolute number of children is projected to increase from 489 million in 2015 to 811 million in 2050 (Table 2.1). The absolute increase in the number of children in Africa constitutes a large proportion of health demands and will further catalyse the need for increased spending in this sector.

Youth (15–24 years): The proportion of young population accounted for 19 per cent of the total population in 2015 and is projected to decline slightly to 18 per cent by 2050 (Figure 2.2). However, the number is expected to double from 230 million in 2015 to 460 million in 2050 (Table 2.2).

Active working age (25–64 years): The need for a healthy labour force is predicated on sufficient access to quality healthcare. The active working-age population is expected to grow more rapidly than any other age group, from 37 to 44 per cent from 2015 to 2050 (Figure 2.2). In absolute numbers, it is forecast to increase by more than 2.5 times from 431 million to 1.1 billion in this period (Table 2.3). This projection suggests Africa has considerable potential to experience a 'demographic dividend', defined as the tendency for economic growth to be spurred by rapid growth of the working-age share of the population (Bloom 2005, 2011; Harper 2016).

The active working-age population has a significant effect on the quantity of spending required. The productivity gains from a healthy workforce (estimated at 5.1–5.7 per cent per annum from 2015 to 2050 in Central, West and Eastern Africa)

Table 2.1: Projected increase in the population of children (0-14 years) by sub-region, 2015–2050

Sub-region	2015		2050 (projected)		% increase/year (2015-2050)
	Number (in '000)	% of total	Number (in '000)	% of total	
North Africa	74 297	15	91 070	11	0.6
West Africa	153 194	31	282 104	35	2.4
Central Africa	21 815	4	36 792	5	2.0
East Africa	173 683	35	293 407	36	2.0
Southern Africa	66 815	14	107 924	13	1.8
Africa	489 804	100	811 297	100	1.9

Source: UNDESA (2017).

Table 2.2: Projected increase in population of youth (15–24 years) by sub-region, 2015–2050

Sub-region	2015		2050 (projected)		% increase/year (2015-2050)
	Number (in '000)	% of total	Number (in '000)	% of total	
North Africa	40419	18	55550	12	1.1
West Africa	67016	29	153889	33	3.7
Central Africa	9801	4	20891	5	3.2
East Africa	79666	35	168648	37	3.2
Southern Africa	33342	14	61883	13	2.4
Africa	230244	100	460862	100	2.9

Source: UNDESA (2017).

will necessitate a spending level on healthcare that responds to the increase in the working-age cohort of the population.

Old age (65+ years): While the focus is on the rapid increase in the working-age population and the demographic dividend that Africa is expected to reap, an important development is the almost imperceptible rise in Africa's old age population.

Over the 35-year period (1980–2015), the size of the population aged 65 years and above increased by nearly 2.7 times, from 15 million to 41 million. Over the next 35 years (2015–2050), the population in this age group is projected to increase by 3.6 times, from 41 million to 150 million (Table 2.4). Africa's population aged 65 years and above is projected to double proportionately from 3 to 6 per cent in 2015–

2050 (Figure 2.2). In absolute terms, this equates to a population increase of more than 1 million in this age group (Table 2.4).

All sub-regions are likely to witness rapid increases in their old age populations, with Eastern Africa leading at 8.5 per cent per annum. With the increase in life expectancy at age 60, around 16 years for women and 15 years for men, Africa will soon have a large number of older people living longer.

The change in the disease profile for different age groups brings with it big implications for healthcare provision. Many countries will have to contend with growing proportions of the elderly and rapidly rising health expenditures, as the costs to the health system posed by this segment of the population are significant. Can national healthcare systems in Africa

Table 2.3: Projected increase in active working age population (25–64 years) by sub-region, 2015–2050

Sub-region	2015		2050 (projected)		% increase/year (2015-2050)
	Number (in '000)	% of total	Number (in '000)	% of total	
North Africa	102 168	24	177961	16	2.1
West Africa	118 470	27	330966	30	5.1
Central Africa	16 542	4	47599	4	5.4
East Africa	130637	30	393449	36	5.7
Southern Africa	63708	15	152695	14	4.0
Africa	431527	100	1102670	100	4.4

Source: UNDESA (2017).

Table 2.4: Projected increase in old age population (65+ years) by sub-region, 2015–2050

Sub-region	2015		2050 (projected)		% increase/year (2015-2050)
	Number (in '000)	% of total	Number (in '000)	% of total	
North Africa	11 907	28.9	43 307	28.8	7.5
West Africa	9 747	23.7	33 790	22.5	7.0
Central Africa	1 529	3.7	5 272	3.5	7.0
East Africa	11 843	28.8	47 160	31.4	8.5
Southern Africa	6 136	14.9	20 705	13.8	6.8
Africa	41 161	100.0	150 233	100.0	7.6

Source: UNDESA (2017).

respond adequately to the current challenges and the future demands that will be placed on them by the changing age structure?

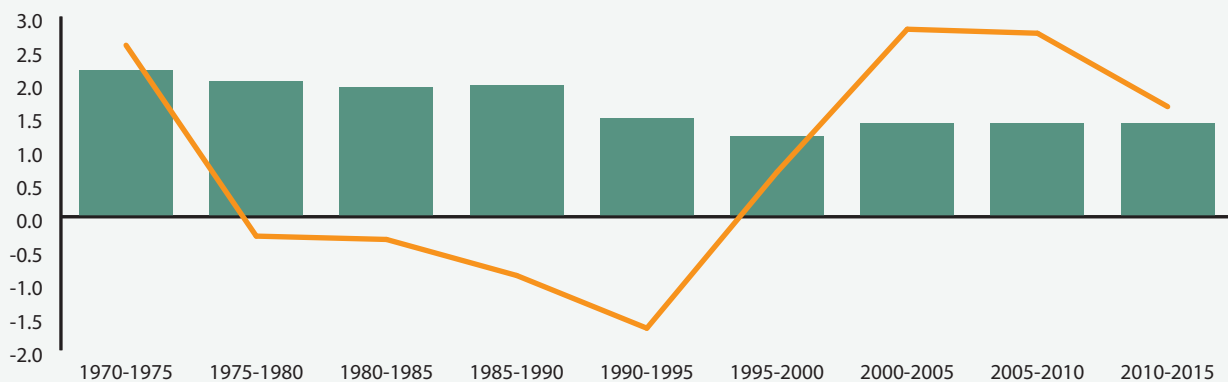
Urban transition

The second type of transition Africa is experiencing is urban transition. Africa is rapidly becoming an urban continent – 41 per cent of its population (unweighted) currently live in cities (in 2015), compared to just 14 per cent in 1950. By 2035, the majority of Africa's population will live in urban areas and by 2050, it is forecast that almost 60 per cent of Africa's population will be urbanised (UNDESA, 2018).

Urbanisation in Africa poses opportunities as well as risks for its inhabitants and broader health outcomes. Africa is urbanising at an aggregate lower per capita income and for the most part, since 1970, the rate

of urban growth has exceeded growth of average per capita income. During 1975–1995, the urban population grew rapidly even as the continent was registering negative growth (Figure 2.3).

Cities such as Lagos (Nigeria) and Nairobi (Kenya) are home to some of the world's largest slum areas. Fifty-six per cent of Africa's population resided in slums in 2014, down slightly from 60 per cent in 2005, but with wide variation across countries. While less than 10 per cent of the urban population in Tunisia live in slums, more than 90 per cent of the urban population in Central African Republic, South Sudan and Sudan resided in slums in 2014. In absolute numbers, the slum population in Africa, excluding North Africa, rose from 152,223 in 2005 to 200,677 in 2014 (UN-Habitat, 2016).

Figure 2.3: Africa* has urbanised faster than its GDP per capita has grown, 1970–2015

Note: * Data exclude North Africa.

Source: ECA staff calculations based on data on urban population growth from UNDESA (2018), and on GDP per capita growth from World Development Indicators.

The proliferation of slums is often driven by the unplanned nature of cities and the inability to adequately accommodate growing numbers arriving from rural areas. On average, nearly two-thirds of the urban population in Eastern Africa live in slums compared to 43 per cent in North Africa, 46 per cent in Southern Africa, 57 per cent in West Africa, and 65 per cent in Central Africa (UNDESA, 2018).

Densely packed settlements in the slums are characterised by inadequate provision of services and infrastructure, such as sanitation, water, electricity, waste management and security among others. This exposes slum residents to the spread of disease and poor health outcomes and increases the risk of both communicable and non-communicable diseases.

Evidence from Kenya (Ezeh et al., 2016) suggests that urban slums have worse health outcomes for children than living in rural areas. Children have higher mortality rates in the slums of Nairobi. While the U5MR is decreasing in Kenya in both rural and slum areas, in Nairobi the situation of children in the slum areas relative to rural poor children seems to have worsened over time.

In 2015 only 40 per cent of the urban population in Africa, excluding North Africa, had improved sanitation, whereas 33 per cent had piped water in their homes. The situation in slums specifically can only be worse. Gastrointestinal infections are highly prevalent in slums (Harpham and Stephens, 1991; Lima and Guerrant, 1992) and children younger than 5 years are especially vulnerable. Two systematic reviews of cholera outbreaks in Africa identified slum neighbourhoods as the usual source of the epidemic (Rebaudet et al., 2013a and 2013b). Cholera incidence was found to increase 1 per cent for every 1 per cent increase in the percentage of informal residents in a ward, and 2 per cent for every increase in population density of 1,000 persons per square kilometre (Penrose et al., 2010). Unsurprisingly, slum dwellers perceive lack of access to clean water and sanitation as their biggest need (Parikh et al., 2012).

Social factors affect the transmission of disease. Overcrowding contributes to the high prevalence of communicable diseases like tuberculosis. Slum residents are a young, highly mobile population contributing to the higher incidence of HIV there, compared to non-slum city areas (Van Renterghem et al., 2012). In the Ebola epidemic in West Africa, slum conditions amplified the spread of the disease (Snyder et al., 2014). The Democratic Republic of Congo, where 75 per cent of the urban population

lives in slums, has witnessed recent outbreaks of Ebola.

Concurrent with the increased risk of infectious diseases, urbanisation is associated with chronic diseases arising from a sedentary lifestyle and a changing pattern of urban food consumption. Urban exposures drive increases in NCDs in rapidly growing cities in Africa and other low-income and middle-income settings through a compromised food system, inadequate housing, poor urban planning, unsafe services, air and noise pollution, and degraded work environments. These increase the risk of NCDs such as respiratory conditions as well as accidents, injuries, crime, and environmental exposures including air pollution and industrial waste (Mutatkar, 1995; Wong et al., 2014). Poor people in urban areas, and in slums, are particularly vulnerable to these exposures and disproportionately experience conditions that drive tobacco use, alcohol and substance abuse (Beaglehole et al., 2011).

Easy availability and consumption of high starch, high-fat processed foods contribute to the development of chronic conditions like hypertension, overweight and obesity, type II diabetes, heart disease, and strokes (Phillips, 1993; Mutatkar, 1995; Moore, Gould and Keary, 2003; Leon, 2008; Khan et al., 2013). Unhealthy food environments are compounded by high levels of stress, making healthy food choices less likely and further contributing to cardiovascular risk (Suchday et al., 2006). The burden of diabetes in Africa is expected to increase by 110 per cent between 2013 and 2035, and a very high proportion (50.7 per cent) of diabetes cases are currently undiagnosed (Peer et al., 2014). Eight of the 20 countries globally with the fastest increasing rates of adult obesity are in Africa.

The scale of challenges related to unplanned urbanisation are vast and complex. However, if well planned and managed, urban areas can provide a

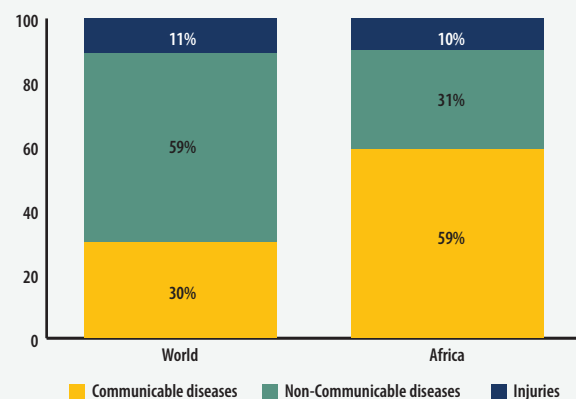
healthy living environment. Indeed, African cities have performed better than rural areas on some health indicators such as the use of improved sanitation facilities (ECA, 2017b). Better housing and living conditions, access to safe water and good sanitation, efficient waste management systems, safer neighbourhoods, food security, and access to services such as education, health, welfare, public transportation, and child care can be addressed through better planning and managing Africa's rapidly growing cities. Investing in healthcare also involves improving infrastructure with notable costs. The introduction of PPPs in the management of water and sanitation to ensure quicker implementation times and efficiency can be useful in improving healthcare financing gaps (Chapter 4).

An epidemiological transition is underway in most countries where NCDs associated with urban lifestyle changes are increasing, even as hygiene and crowding-associated infectious diseases are prevalent simultaneously. This is discussed in the next section.

The epidemiological transition

Africa is progressing through an epidemiological transition¹³ that has important implications for life expectancy, the burden of disease, and most importantly, health financing. Most developing countries are currently confronting a significant challenge because of a continued high burden of communicable diseases. These diseases, particularly malaria, tuberculosis and HIV/AIDS, account for close to 60 per cent of the disease burden in Africa, which is the highest in the world (WHO, 2018) and almost twice the share of the global average (Figure 2.4). Of these, malaria, HIV/AIDS, pneumonia, tuberculosis, diarrhoea, and measles make up more than 90 per cent of over 10 million disease-related deaths in Africa every year.

13 The epidemiological transition is the shift in the major causes of morbidity and mortality – from communicable, maternal, and childhood causes to non-communicable diseases.

Figure 2.4: Proportional share of disease burden by disease category, 2015

Source: ECA staff calculations based on data from WHO Global Health Observatory.

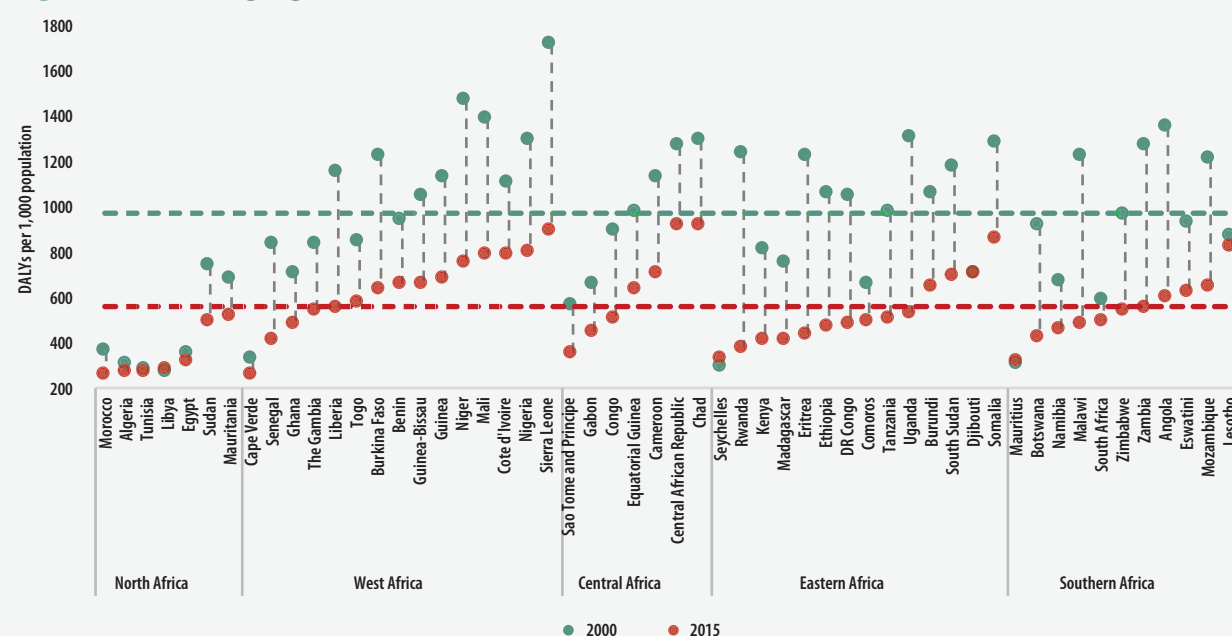
Even while countries cope with childhood and communicable diseases, malaria and HIV remain the leading causes of sickness and death. Africa is undergoing a major epidemiological transition whereby there is a shift in cause-of-death patterns, with an overall decline in mortality rates. As the

threat from infection declines, cardiovascular disease, cancers, chronic respiratory diseases and injuries become dominant determinants of life expectancy.

Africa's disease burden is high but converging towards the global average

The metric Disability Adjusted Life Years (DALYs) is commonly used to examine and compare the trend and patterns of the disease burden.¹⁴ Figure 2.5 compares DALYs (per 1,000 population) of African countries between 2000 and 2015. Almost all countries have witnessed a decline in DALYs from 2000 (green dots) to 2015 (red dots), with the overall disease burden declining on average by 42 per cent during this period. The overall disease burden declined by more than 60 per cent in 15 countries, with Rwanda achieving the highest decline of more than 70 per cent.

As a result, the gap between Africa's average disease burden and the global average has narrowed. Across

Figure 2.5: Changing disease burden in Africa 2000 - 2015

Note: The horizontal dashed lines are the average DALYs per 1,000 population in 2000 (green) and 2015 (red). The vertical dashed lines only serve to connect the two values for the respective country and indicate the extent of change.

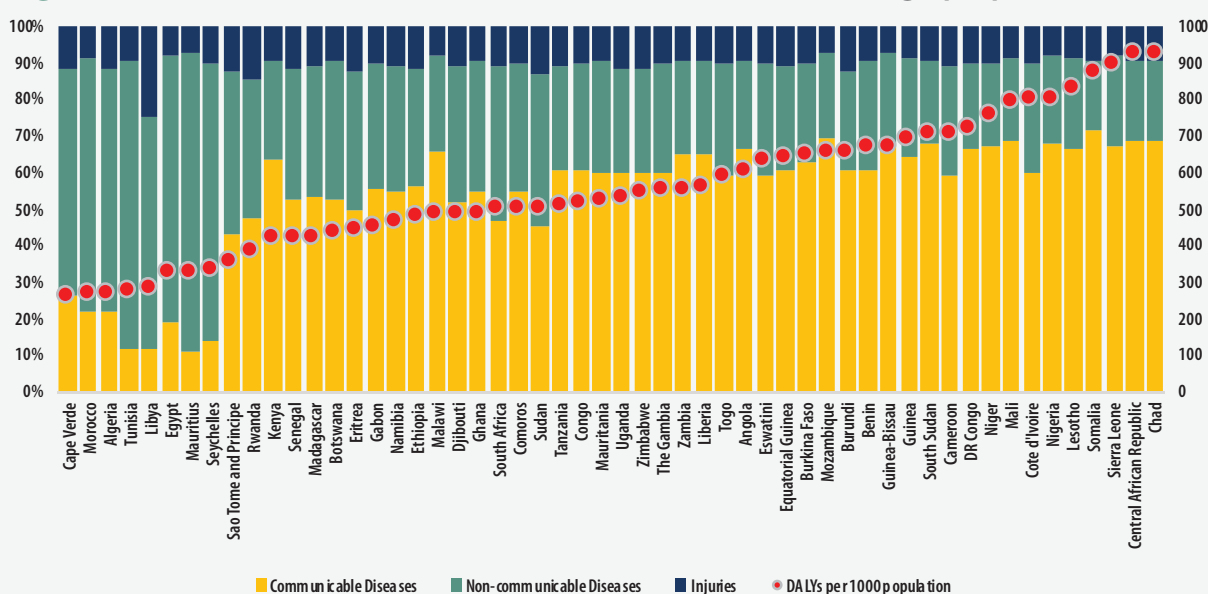
Source: ECA staff calculations using WHO Global Health Estimates 2016 from WHO (2018).

¹⁴ DALYs measure the amount of life lost in a population as a result of premature death or disability. They are used to estimate the burden of disease on populations.

Table 2.5: Average disease burden in Africa by sub-region, 2000–2015

Sub-region	DALYs per 1,000 population		% decline (2000–2015)
	2000	2015	
North Africa	432.0	348.0	19.44
West Africa	1072.0	638.5	40.44
Central Africa	977.6	642.7	34.26
Eastern Africa	981.7	538.5	45.15
Southern Africa	944.4	547.5	42.03
Africa	927.5	538.1	41.98

Source: WHO Global Health Estimates 2016 from WHO (2018)

Figure 2.6: Countries with a low overall disease burden have a high proportion of NCDs

Source: ECA staff calculations using WHO Global Health Estimates 2016 from WHO (2018) and Dieleman et al. (2017).

sub-regions, Eastern, West and Southern Africa reduced their respective disease burdens by 40–45 per cent in 2000–2015 (Table 2.5). North Africa is by far the sub-region with the lowest disease burden.

A low disease burden does not necessarily mean a healthier population

Figure 2.6 shows the relationship between DALYs (per 1,000 population) in red dots and the composition of the disease burden in each country. At higher levels of DALYs (as the red dots move from left to right), the proportion of CDs in each country (the yellow-shaded bar) tends to increase. Non-communicable diseases (shown in green) make up two-thirds of the average disease burden of the ten countries, with

the lowest DALYs (on the left-hand side in Figure 2.6). Communicable diseases (shown in yellow), on the other hand, make up an almost the same proportion of the average disease burden of the ten countries with the highest DALYs (on the right-hand side of Figure 2.6).

Thus, an overall low disease burden does not necessarily mean a healthier population. Rather, it reflects emerging health challenges with the increasing proportion of NCDs as a result of the changing age structure and lifestyle changes, particularly in older age populations and higher-income countries. The need for medical care for complex and chronic conditions will grow with the

shifting epidemiology, especially in those countries where the shift has been most pronounced.

Africa is experiencing a double burden of disease with high CDs and increasing NCDs

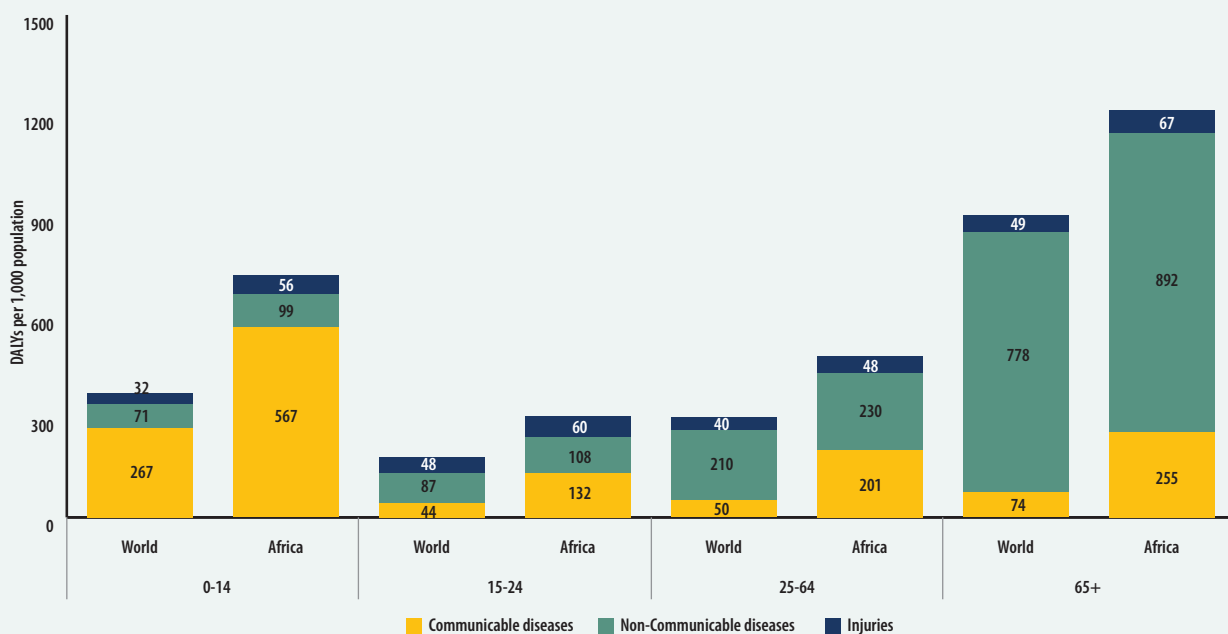
The continent is also experiencing a ‘double burden of disease’ which is characterised by an increasing proportion of NCDs, even though the proportion of communicable diseases remains high (WHO, 1999; Murray and Lopez, 1996; Bygbjerg, 2012; Kushitor and Boatemaa, 2018). This has severe implications for the cost of diagnosis and treatment and consequently increases national healthcare resource requirements. For example, in Kenya NCD screening costs ranged from \$4 to \$36, while diagnostic procedures, particularly for breast and cervical cancer, were substantially more expensive. Annual hypertension medication costs ranged from \$26 to \$234 and \$418 to \$987 in public and private facilities, respectively. This large cost differential between public and private facilities was also reflected in stroke admissions (\$1,874 in public facilities versus \$16,711 in private facilities) and dialysis for chronic kidney disease (\$5,338 versus \$11,024 respectively);

these were among the most expensive treatments (Subramanian et al., 2018).

Inefficient healthcare delivery systems and high rates of urbanisation have contributed to periodic rises in communicable diseases such as tuberculosis, malaria and HIV. As life expectancy increases in these countries, there has been a concomitant hike in the prevalence of NCDs such as cancer, diabetes and cardiovascular diseases. The average burden of CDs has reduced but they still contributed more than 50 per cent to the disease burden in 41 African countries in 2016. At the same time, all countries except Libya registered an increase in their share of NCDs – 30 countries registered a double-digit increase in 2000–2016 with three of them (Botswana, Eritrea and Rwanda) increasing the share of NCDs in the total disease burden by more than 20 percentage points.

This double disease burden has become a common characteristic in many countries and the increasing morbidity and loss of economic activity jeopardise future economic growth. Healthcare systems in Africa need to adapt quickly to the challenge of

Figure 2.7: Distribution of the age-specific disease burden in Africa and the world, 2015



Source: ECA staff calculations using WHO Global Health Estimates 2016 from WHO (2018).

coping with a heavy and growing caseload of communicable and non-communicable diseases simultaneously. Countries of Western Europe and North America became rich before they became old, having two to three generations to develop health, care and social security systems to meet the needs of the growing number of older citizens. By comparison, Africa may have only one generation (25 years) to make the same adjustments.

In Africa, NCDs account for 73 per cent of the disease burden among the elderly population. CDs, on the other hand, account for 78 per cent of the disease burden among the 0–14 year olds (Figure 2.7). With a large population of 0–14 year olds and a rapidly increasing population of the elderly, countries have to strengthen their national healthcare systems to respond to this challenge of a double burden of disease.

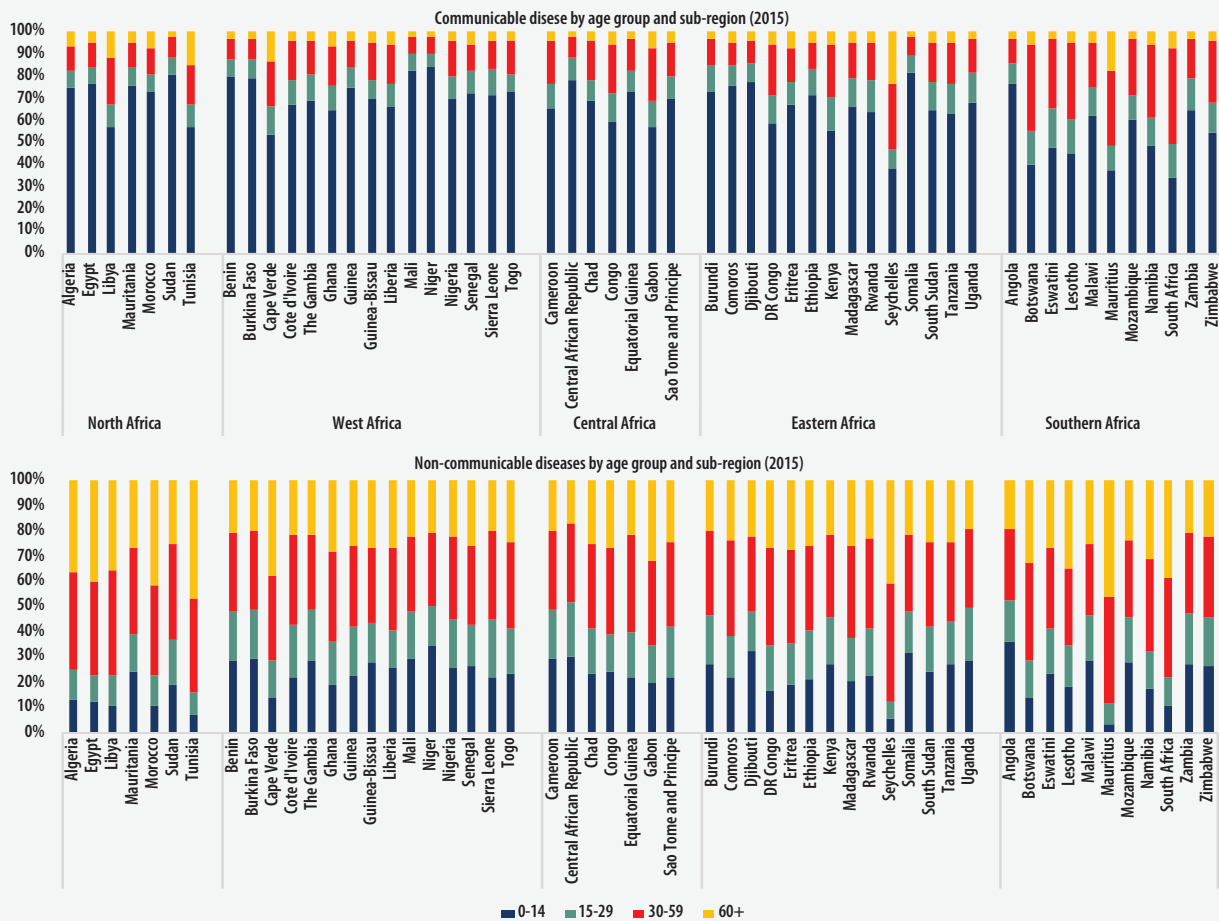
Children in Africa are vulnerable to infectious diseases (CDs) whereas the 65+ age group has a high burden of NCDs

As evident from the upper panel in Figure 2.8, the 0–14 year olds are vulnerable to CDs across all countries. At the same time, NCDs predominate among the older age groups (bottom panel in Figure 2.8). This may be due to an unhealthy diet, physical inactivity, tobacco use and excessive alcohol consumption, induced by lifestyle choices that often influenced by economic development and urban living. Communicable diseases among younger populations will continue to put pressure on healthcare systems, while increased life expectancy will heighten demand at the other end of the age spectrum.

A number of interrelated trends have led to the growing burden of NCDs in low-income countries (LICs) and middle-income countries (MICs). These include a decline in the share of deaths from infectious diseases due to improvements in nutrition, public health, and medicine; longer life expectancies as more children survive into adulthood; and population ageing, as women have fewer children and older people represent a greater proportion of the total population. This shift in disease patterns is also characterised by a decline in deaths from infectious diseases of childhood and an increase in NCDs of adulthood, which is the epidemiological transition previously discussed. These changes reflect advances in socioeconomic development and progress in battling the most virulent infectious diseases. But the unprecedented pace of population ageing is fuelling the growing burden of NCDs in LICs and MICs.

The epidemiological transition is occurring at different rates in different countries and illustrates the substantial challenges facing many countries with still high levels of morbidity and mortality, limited financial resources, weak health infrastructure, and rapid growth of the urban population, all within the context of a slow decline in fertility rates.

Demographic changes, rapid urban growth and the epidemiological transition are likely to have a crucial impact on the need for increased healthcare expenditure in Africa (see Chapter 3). This is exacerbated by supply-side constraints, such as the number of health personnel graduating and retained, together with the availability and affordability of medicines, discussed next.

Figure 2.8: Age-specific distribution of the disease profile, 2015

Source: ECA staff calculations based on data from WHO Global Burden of Disease 2016 from WHO (2018); population data from UNDESA (2017).

2.2 Supply-side constraints

Skills shortages in health

The healthcare sector in Africa faces a serious Human Resource in Health (HRH) crisis (Sirili et al., 2014). The WHO African Health Monitor (2007) warned that an “unprecedented crisis in human resources for health plagues Africa, leading to a health crisis whereby the survival gains achieved ... are fast eroding.”

The health worker crisis is neither new, nor confined to Africa. The ratio of health personnel to population in Africa has always been low, lagging behind the

rest of the world. In the 1980s and 1990s, most countries in Africa had 1 doctor for more than 10,000 persons with ten countries having 1 doctor per 30,000 population. These ratios were far worse than in most developing countries which had ratios of 1:2,000 or 1:3,000 during the same period. The WHO’s ‘Health for All’ sets a standard of 1 doctor per 5,000 population (USAID, 2003) compared to Africa’s average ratio of 1:10,000.¹⁵

The shortage of skills in Africa morphs into a crisis when viewed against the enormity of the health challenge facing the continent. Africa, excluding North Africa, accounts for 26 per cent of the

¹⁵ Africa is not alone facing the skills shortage in health. Researchers have routinely commented on the “massive global shortage of health workers estimated at more than 4 million workers approximately.” (Chen et al., 2004).

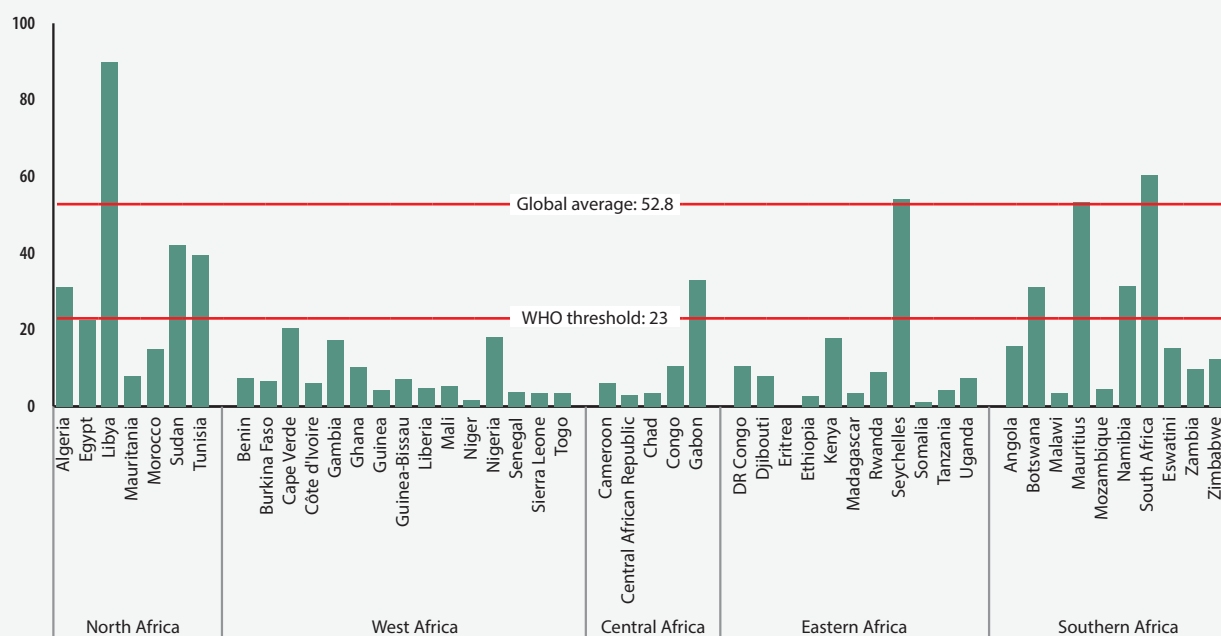
estimated 10.4 million new cases of tuberculosis and 88 per cent of the 214 million malaria cases (WHO, 2017: 2). This is alongside a rise in the proportion of NCDs in Africa's overall disease burden. The Ebola virus exposed the fragility of health systems in the affected countries and the acute shortage of human and physical capacities (WHO, 2016, 2014). It is important to analyse the nature and extent of the HRH challenge in Africa and review the changes over time and across sub-regions within this context.

In 2006 the World Health Organization estimated a global shortage of 4.3 million health workers. Among the 57 countries identified with a critical health worker shortage, 36 were in Africa (WHO, 2006). Countries are defined as having a 'critical shortage' when they have fewer than 23 healthcare professionals – including doctors, nurses and midwives – per 10,000 population. Research studies indicate that below this threshold, countries are likely to fail to achieve an 80 per cent coverage rate for deliveries by skilled birth attendants or for measles immunisation (Chen et al., 2004; WHO, 2006).

There has been some progress since then, though many countries in Africa still have among the lowest densities of skilled health professionals in the world (Figure 2.9). Of the 48 countries for which data are available, 13 countries (Guinea, Liberia, Niger, Senegal, Sierra Leone, Togo, Central African Republic, Chad, Ethiopia, Madagascar, Somalia, Tanzania, Malawi) have less than 5 skilled health workers per 10,000 population. Niger and Somalia have less than 2 per 10,000. Ten countries from this group of countries also are above the WHO threshold with Libya, Mauritius, Seychelles and South Africa exceeding the global average of 52.82 per 10,000 population (WHO, 2017).

Further, the pace of progress across countries varies greatly, with some countries recording a faster pace of increase and others being remarkably slow. Nearly half the countries (26), instead of increasing their supply of health workers, have recorded a decline though at varying rates. The number of health workers in Cameroon declined by nearly 11 per cent per annum in 2004–2010. The Gambia also lost its health personnel at nearly 20 per cent per annum

Figure 2.9: Skilled health professional density (per 10,000) by sub-region, various years



Source: Prepared using data from WHO (2017).

during 2003–2006 but, interestingly, since then it has increased health professional density (at almost the same rate) and by 2015 the density was slightly higher than the level in 2003.

Of the 26 countries where the workforce declined consistently, only four (Algeria, Gabon, Namibia and Seychelles) have a stock of health workers above the WHO threshold. Niger has among the lowest density of skilled health professionals. For Niger to lose them at more than 8 per cent per annum is particularly worrying as it will undoubtedly impact access to healthcare in the country and consequently on outcomes. Most of the decline has come from the sharp reduction in the nursing and midwifery personnel. International migration of skilled health workers could also be a factor behind the decline and this is discussed in a subsequent section. But since people are free to move in search for better economic opportunities, countries need to invest more in training and medical education, and overall strengthening their human resource capacities.

Distribution of health workers and the disease burden

It is widely known that Africa is the region with the highest disease burden. The critical question, however, is whether this is reflected in their health workforce. Figure 2.10 shows the relationship between the DALYs of countries and their core health workforce density. There is some association between disease burden and numbers in their health workforce, but the relationship is weak. There are many countries that have a low disease burden with a smaller health workforce density. The case of Kenya and Nigeria is particularly revealing. Both have similar densities of health workforce but Nigeria's per unit disease burden (in 2016) was almost twice as high as that of Kenya.

While an adequate number of health professionals is indeed important, having the right mix of doctors, nurses and midwifery professionals is equally important (Box 2.1). Prevention of many infectious

Box 2.1: Getting the mix right

Considering the pattern of disease burden for most countries, emphasis is still being placed on the production of more doctors than nursing and midwifery personnel. This implies a mismatch between the skills being produced and the requirements given the disease burden.

Analysis of the annual changes in the production of physicians compared to nursing and midwifery personnel shows that Benin, Botswana, Burkina Faso, Cabo Verde, Côte d'Ivoire, Ghana, Guinea, Mali, Mauritius, Senegal, Togo, Uganda, and Zimbabwe produced more physicians than nurses and midwives. With the exception of Mauritius and Cabo Verde, a significant share of the disease burden in these countries is from communicable diseases. These trends in workforce production indicate that African countries have largely focused on clinical training and specialties, rather than on the more relevant public health training.

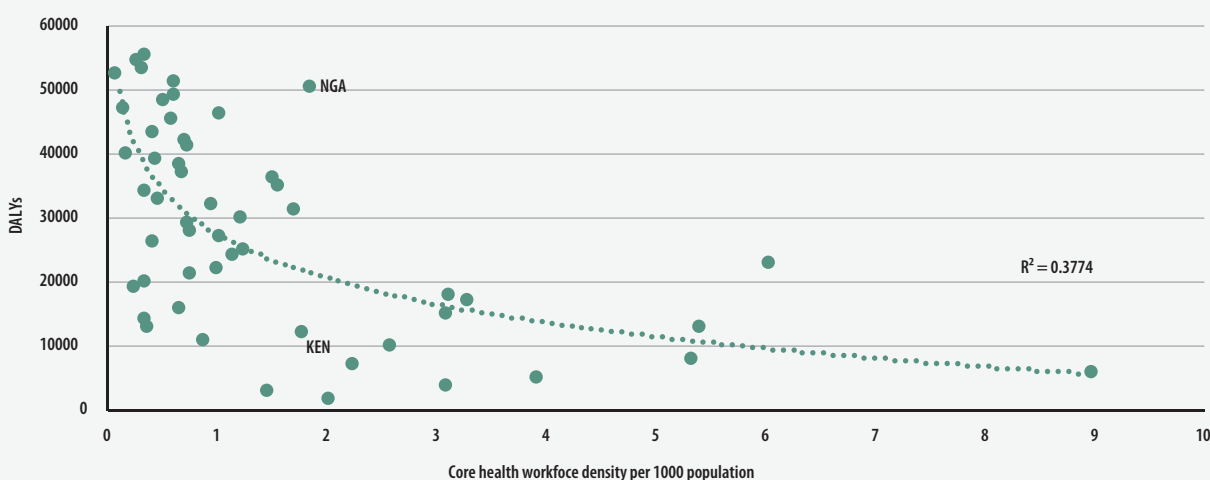
(Source: Anyangwe and Mtonga, 2007)

diseases such as malaria and tuberculosis does not necessarily require the skills of trained physicians for better health outcomes. Also important is where the health workforce is located.

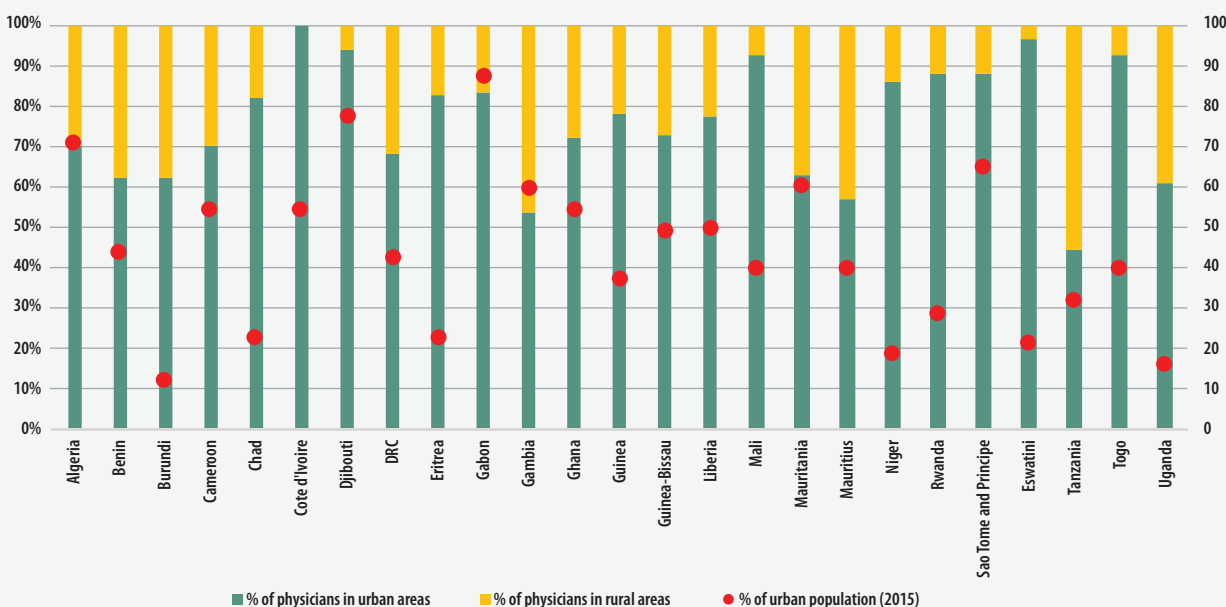
Location of the health workforce

In many countries, rural and remote areas lack sufficient numbers of health workers and disparities in the location of the health workforce are high. Health worker shortages are more than twice as high in rural than in urban areas, with rural populations experiencing high levels of unmet needs for physicians, nurses and midwives (ILO, 2015). Figure 2.11 presents the 'urban bias' in the location of physicians. Of the 25 countries for which comparable data are available, in 23 of them the percentage of total physicians in urban areas (green bars) far exceeds the proportion of urban population to total population (red dots).

A disproportionately large number of skilled health personnel are located in urban areas. Countries such as Côte d'Ivoire, Mali and Togo have over 90 per cent of physicians located in the urban areas. In Equatorial Guinea and Tunisia, over 95 per cent of nurses are in urban settings. Over 60 per cent of the midwives are

Figure 2.10: Distribution of DALYs and health workforce

Source: ECA staff calculations based on data from WHO (2017).

Figure 2.11: Urban bias in the location of physicians

Sources: ECA staff calculations using UN HABITAT database (2014), and proportion of physicians from WHO (2017).

located in the urban areas too. Proportionately more physicians serve the urban areas in all countries, except in The Gambia where an equal proportion of physicians are in urban and rural areas. In Côte d'Ivoire and Eswatini, there are no physicians serving the rural areas, though the data need to be carefully checked. Often, it is only the nursing personnel that respond to the health needs in the rural areas.

Given the already limited resources and access challenges to remote areas, populations in rural areas have inadequate access to preventive health services such as vaccinations and immunisations, hygienic water and sanitation services, and antenatal care. Consequently, these populations are predisposed to a higher prevalence of preventable conditions and higher mortality rates.

Role of community health workers in improving health outcomes

Evidence points to the role of indigenous health workers in supporting the health workforce systems, achieving a more sustainable skills match for a wider health coverage, and improving access to care (Anyangwe and Mtonga, 2007; Bangdiwala et al., 2010). Community health workers account for, on average, 11 per cent of the health workforce in Africa, excluding North Africa.

Well-trained and equipped community health workers can provide adequate care in addressing much of Africa's disease burden (Lewin, 2010; Global Health Workforce Alliance, 2010; Luboga et al., 2009). There is now a significant increase in health science training, highlighting the growing importance of this cadre of health workers (WHO, 2017).

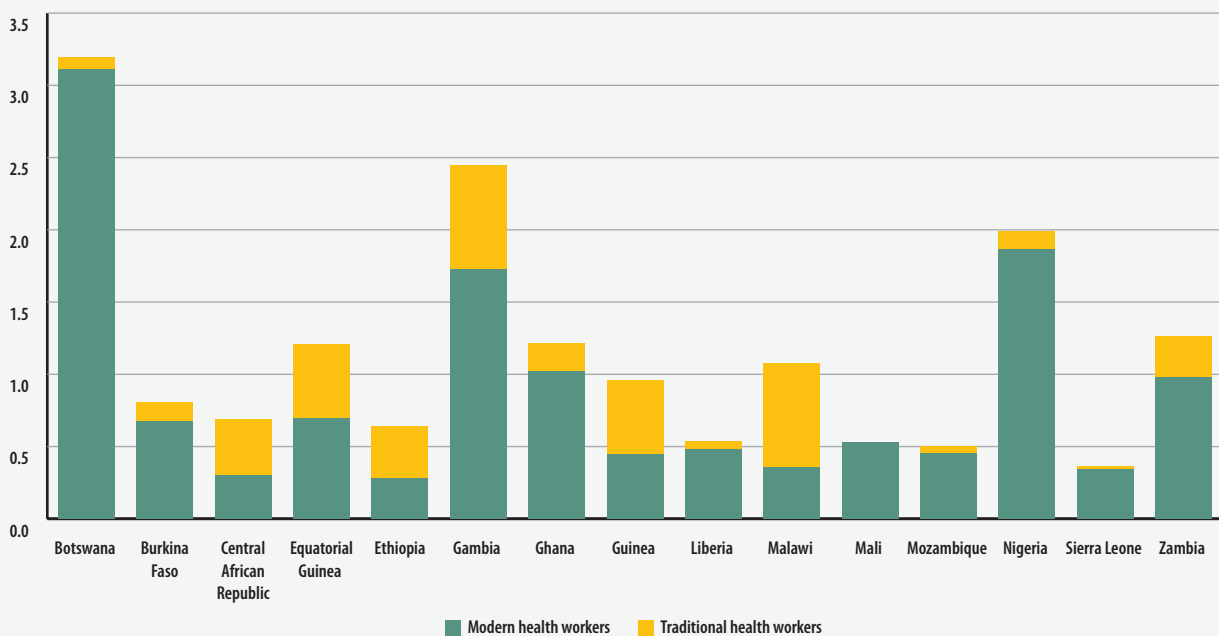
Botswana, Ethiopia, Kenya, Rwanda and Senegal have made considerable investments in community health worker systems, incorporating them as integral and pivotal to the health system (AUC and UNAIDS, 2017). Cameroon, Ethiopia, Malawi, Mali and Rwanda

have adopted community-based approaches, using community health workers especially in rural areas for health promotion and preventive care. As depicted in Figure 2.12, community health workers help top up healthcare provision to 50–60 per cent in Central African Republic, Ethiopia and Guinea, and to 65–70 per cent in Malawi.

Community health workers in many countries face the challenges of being under-paid, under-utilised and poorly integrated in the health system. Still, the employment potential of health personnel remains high. Recent estimates suggest that 2 million community health workers will be needed by 2020 to help close the human resource gap for health (AUC and UNAIDS, 2017).

On a more positive note, the cost of community health training is much lower than the training of doctors and nurses, and interestingly the non-state actors in both NGOs and the private sector are involved in training (Qualcomm Wireless Reach, 2014). Furthermore, their improved location in rural areas, their expertise matched to the disease burden,

Figure 2.12: Topping up of healthcare provision by traditional health workers



Source: ECA staff calculations using data from WHO (2017).

and their role in supporting the health workforce systems, all lead to a greater sustainable skills match for a wider health coverage and improved access to care (Anyangwe and Mtonga, 2007; Bangdiwala et al., 2010).

Migration of health workers

Retention of trained health workers is another major issue facing African countries. Low wages and the attractiveness of destination countries are some of the push factors impacting the migration of health workers to wealthier countries. Recent estimates show that, in total, the number of migrant doctors and nurses working in OECD countries has increased by 60 per cent over the last decade (WHO 2016a). This rate is higher for those emigrating to OECD countries from countries with severe health workforce shortages, with an 84 per cent increase over the same time period (WHO, 2016a).

Countries like Nigeria face severe shortages in the supply of health professionals – it has 18.63

healthcare professionals per 10,000 population, as against a minimum requirement of 23. Yet, the number of Nigerian doctors working in OECD countries nearly doubled in 2000/01 to 2010/11. South Africa and Nigeria represent the countries with some of the highest number of doctors and nurses practising in the OECD countries. However, South Africa has shown some declining trends over the five years preceding 2016/17.

One of the major challenges confronting African countries is how to manage the pull and push factors to stem the migration of its skilled health workforce against a tide of high global demand for health workers that is expected to rise to 80 million by 2030 (Liu et al. 2017). Upper middle-income countries will see the greatest demand and the shortfall of global supply by 15 million may fuel competition for a skilled health workforce. As mentioned above, countries in Africa will need to find ways to strengthen their human resource base in medical professionals so as to respond to this challenge.

CHAPTER 3

THE COST OF HEALTHCARE IN AFRICA



Key Messages

- Africa accounts for less than 2 per cent of the nearly \$9.7 trillion spent globally on health in 2015, even though it has 16 per cent of the global population and 26 per cent of the global disease burden.
- Total spending on healthcare in Africa remained within a narrow band of 5–6 per cent of GDP in 2000–2015, on average, though in per capita terms it almost doubled from \$150 to \$292 (in PPP\$).
- On average, healthcare in Africa is financed through out-of-pocket expenditure (36 per cent) and domestic government spending (35 per cent) with external assistance contributing 22 per cent of the total health expenditure.
- The average share of domestic government spending on health in upper middle-income countries is more than twice the share in low-income countries, though there is wide variation across countries. Angola, Congo, Egypt, Equatorial Guinea, Gabon and Nigeria spend much less than might be expected, given their respective income levels.
- At higher income levels, less of the total spending is out-of-pocket (OOP), but there is no clear trend. This could be because while transitioning from low-income to middle-income status, countries receive less development assistance, despite an inability to domestically raise sufficient government resources to replace the lost external resources.
- Adopting a broad threshold of government health expenditure of 5 per cent of GDP, there is a financing gap of \$66 billion per year in Africa. More than half of this amount is required by Egypt (19 per cent or \$12 billion) and Nigeria (32 per cent or \$21 billion).
- Tax revenues are the most important component of domestic resources, and raising them has been at the centre of many domestic reforms and regional and international initiatives. These efforts have helped increase average total taxes up to 19.3 per cent of GDP in Africa in 2015. Still, Africa's tax-to-GDP ratios are among the lowest in the world.
- In general, in low-income countries there is a greater reliance on indirect (as opposed to direct) taxes than in high-income countries. Similarly, non-resource-rich countries also place a greater reliance on indirect taxes (44 per cent) compared to resource-rich countries (33 per cent). This could be a result of the low levels of formal sector employment in lower-income countries and non-resource rich countries.
- Taxes on alcohol, tobacco, and sugary drinks, commonly known as 'sin taxes,' serve the dual purpose of increasing government revenues and discouraging the consumption of products detrimental to one's health and reduce the threat of NCDs that kill 40 million people worldwide each year.
- Countries may face objections to the introduction of such taxes from the private sector. South Africa, with the highest obesity rates in Africa, other than North Africa, introduced the Sugary Beverages Levy in 2018 to raise prices for soda and other sugary drinks and reduce obesity rates by 10 per cent by 2020. On the other hand, Kenya with the highest rate of diabetes in Africa, other than North Africa, faced stiff resistance and had to withdraw a similar sugar tax.
- There are concerns about the rising level of government debt and debt sustainability in several countries. Twenty countries have an average debt burden in excess of 60 per cent of GDP, and in six countries it exceeds 100 per cent. The average interest-to-revenues ratio increased from 5 per cent in 2012 to an estimated 10 per cent in 2017. The interest cost exceeds 20 per cent of revenues in Burundi, Gambia, Ghana, Nigeria, and Zambia. Debt servicing constrains governments' availability of discretionary resources and limits the fiscal space.

- In 22 countries the average annual value of illicit financial flows far exceeds the health financing gap. This suggests that by taking measures to reduce these illicit flows, governments could fund healthcare and other social sectors.
- In six countries, military spending as a percentage of GDP exceeds public spending on health. Countries have their own security requirements, but given the importance of improved health outcomes for the future well-being of their populations, governments could consider prioritising health in their budgetary allocations.
- Results-oriented innovative financing mechanisms such as Development Impact Bonds (DIBs) and Social Impact Bonds (SIBs) have been launched in some countries. There are important lessons to be learnt from the Cataract Bond in Cameroon that has gone to scale.
- Eight countries are severely health-stressed: Angola, Chad, Mauritania, Nigeria, Sierra Leone, South Sudan, Togo and Zimbabwe. Another 12 countries are very health-stressed: Benin, Cameroon, Central African Republic, the Democratic Republic of the Congo, Congo, Côte d'Ivoire, Guinea, Guinea-Bissau, Mali, Mozambique, the Niger and Zambia. These 20 countries need to be prioritised for immediate attention.

3.1 Introduction

Healthcare financing provides the resources and economic incentives for the operation of health systems and is a key determinant of health system performance in terms of equity, efficiency and health outcomes. Adequate financing of health systems largely determines whether people can obtain needed healthcare and whether they suffer financial hardship in so doing. Total healthcare spending stems from four sources: (i) the government, which includes general government budgets and social health insurance; (ii) out-of-pocket (OOP) payments; (iii) development assistance for health; and (iv) pre-paid private spending, which includes private insurance and non-governmental organisation (NGO) spending.

Enhancing access to effective and affordable healthcare of adequate quality to all is predicated on increased public funding for the health sector. Although development assistance is an important source of funds in many countries, domestic resources for health need to increase in the longer term to ensure more predictable and sustainable funding. However, fiscal space for increased government spending is constrained in many countries.

In most countries in Africa, health systems struggle with insufficient and inequitably distributed resources. The poorest countries bear a disproportionately high share of the burden of disease and injury, yet have fewer resources for financing healthcare. In these countries, a large proportion of people have no access to needed health services because they cannot afford to pay for them or because these services are not available in the first place. In 2015 about \$9.7 trillion was spent globally on health (Dieleman et al, 2018) but there is a mismatch between countries' healthcare financing needs and their health spending levels. Africa accounts for less than 2 per cent of the total global spending on healthcare, even though it has 16 per cent of the global population and 26 per cent of the global disease burden.

The demographic and epidemiological transitions currently ongoing in Africa will have profound effects on the economies and future health needs. The shift in demographics (high rates of population growth and increased life expectancies) as well as the increasing proportion of NCDs and injuries will dictate the needs and service delivery systems in most countries. Africa's population is expected to grow to a projected 1.7 billion by 2030 and to 2.5 billion by

2050. High rates of population growth coupled with longer life expectancy mean that countries will face significant increases in population in all age ranges, each with its own epidemiological profile. Low-income countries face the highest rates of growth, and populations in 44 countries are expected to double by 2050.

This chapter examines health expenditures and revenues to analyse whether governments are spending enough to enhance access to affordable health services of adequate quality for all, in line with SDG3 to 'Ensure healthy lives and promote well-being for all at all ages'. In light of the 2015 Addis Ababa Action Agenda for financing sustainable development, this chapter provides an overview of innovative methods for raising new domestic resources to increase the flow of funds into the health sector. The analysis will focus on tax and non-tax options for broadening the general tax base, as well as levies on specific consumption goods or sectors to generate government revenues. It will also examine the factors influencing domestic taxation policy choices. At the current low rates of per capita spending on healthcare, governments will need to increase their expenditure on health by a substantial amount, both in per capita terms and as a share of the GDP.

3.2 Healthcare expenditure and outcomes in Africa

Total spending on healthcare in Africa remained within a narrow band of 5–6 per cent of GDP in 2000–2015, on average, though in per capita terms it almost doubled from \$150 to \$292 during this period (Table 3.1). These figures are reported using 2015 PPP \$ to account for inflation and different prices across countries.

Health is predominantly financed by domestic resources in Africa, which contributed an average 34 per cent in 2015, while external aid increased from 13 per cent to 24 per cent of total health expenditure in the same period. (WHO, 2016a). Since 2000, most African countries have increased the proportion of total public expenditure allocated to health. The average annual public expenditure on health in the region was 10 per cent of total public spending in 2014, ranging from 4 per cent (Cameroon) to 17 per cent (Eswatini). The average level of per capita public spending on health rose from about \$70 in the early 2000s to more than \$160 (in 2014 PPP\$).

However, while Burundi, Ethiopia, Lesotho, Liberia and Eswatini have increasingly prioritised health spending over time, in recent years 19 countries have been spending less on health as a percentage of total public spending than in the early 2000s. A total of 29 countries increased total health spending (as a percentage of GDP) during 2000–2015. Total

Table 3.1: Healthcare spending in Africa, 2000–2015

Year	Current Health Expenditure (CHE)*		Domestic govt health spending as % of CHE	Out-of-pocket spending as % of CHE	External assistance for health as % of CHE	Prepaid private spending as % of CHE
	Per capita PPP	As % of GDP				
2000	150.4	5	36.7	45.4	11.7	6.2
2005	186.5	5.5	35.4	41.6	15.9	7.1
2010	244.7	5.8	33.2	39.9	20.7	6.2
2015	292.3	6.2	34.7	36.1	22.3	6.9

Note: * Total health spending comprises capital and current health expenditure.

Source: Data from WHO Global Health Expenditure Database.

health spending declined in 13 countries in this period. West and Southern Africa sub-regions spend the highest on average (7 percentage of GDP) with Central Africa spending the least (4.7 per cent). The number of countries spending more than \$44 per capita per annum doubled from 15 to 31 in 2000–2015. In 2000, 23 countries spent less than \$20 per capita each year. By 2015, only the Central African Republic spent below this threshold. Algeria, Botswana, Mauritius, Namibia and South Africa emerged as the top five spenders on health in 2015 (WHO, 2016b).

Most healthcare expenditure tends to be concentrated in the upper middle-income countries, which spent an average of \$908 per capita in 2015, ranging from \$481 (Gabon) to \$1,100 (Mauritius).¹⁶ Low-income countries spent on average \$99 per capita per annum, or little more than one-tenth of the amount spent by the upper middle-income nations in 2015. There was a considerable variation in spending across LICs, ranging from \$32 (Central African Republic) to \$256 (Sierra Leone). Spending per capita across lower middle-income countries averaged \$298 in the same year, ranging from \$147 (Djibouti) to \$774 (Tunisia).

Notwithstanding such variations, certain common trends underpin health spending in Africa. These reflect the key features of what is commonly referred to as the ‘healthcare financing transition’ observed across countries over time. The driving forces behind the shifts are: per capita income growth, technological advances, maturation of healthcare financing systems, greater government fiscal capacity, introduction of social health insurance, and population ageing, which are all associated with socioeconomic development (Dieleman et al., 2017).

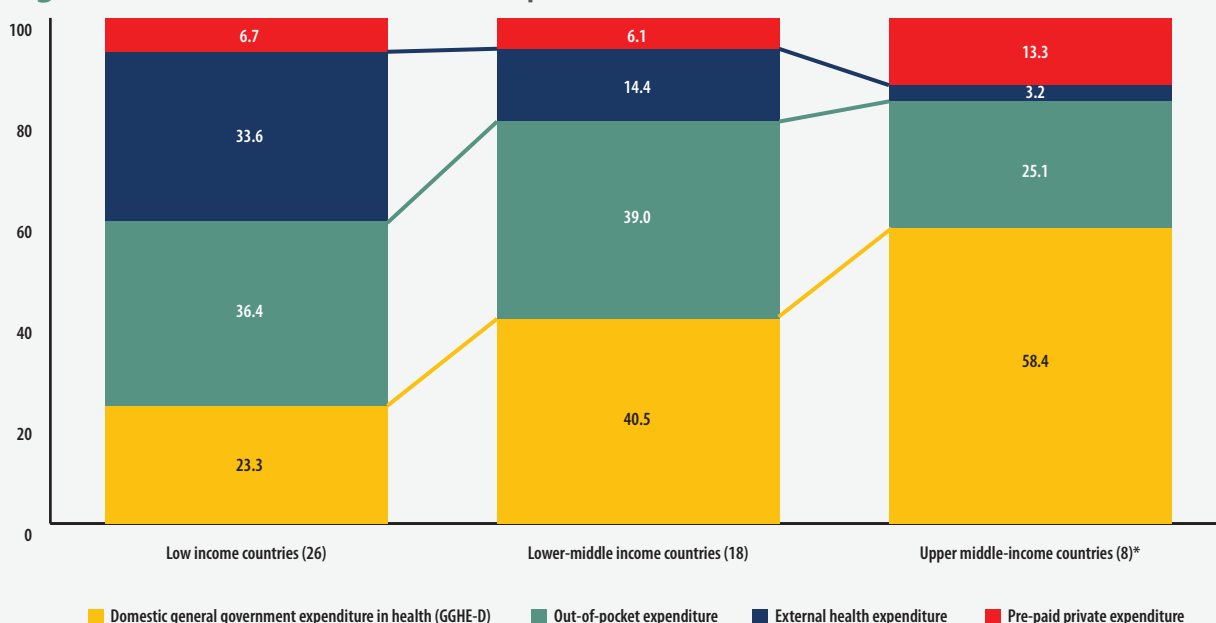
Richer countries spend more per capita on health from domestic funds

In addition to spending more on health, richer countries also tend to finance more health spending from public sources of funds. As observed from Figure 3.1, the average share of domestic government spending on health in upper middle-income countries in Africa (58.4 per cent) is more than twice the share observed in low-income countries (23.3 per cent), though there is wide variation across countries (Figure 3.2). As might be expected, external assistance for health makes up a smaller share of total health spending in upper middle-income countries than in low-income countries. Pre-paid private health spending is quite low across both low-income and lower middle-income groups, but almost doubled proportionately in the upper middle-income group (Figure 3.1).

While there is little to differentiate between the countries at the bottom end with less than \$4,000 GDP per capita (shown in the red circle in Figure 3.2), the variation among countries increases at higher levels of GDP per capita. Equatorial Guinea’s GDP per capita is nearly four times that of Morocco, but both spend the same amount on healthcare. Countries above the trend line – Algeria, Botswana, Eswatini, Mauritius, Namibia and Seychelles among others – spend more on healthcare proportionate to their per capita incomes. Countries that lie below the trend line such as Angola, Congo, Egypt, Equatorial Guinea, Gabon and Nigeria, spend much less than their respective income levels might imply.

Non-resource-rich countries allocate more to health from domestic government spending (41.5 per cent) than do resource-rich countries (31.3 per cent) (Figure 3.3). This is surprising since resource-rich

¹⁶ The upper middle-income category includes Seychelles, which is the only high-income country in Africa. The income-based country classification is based on the World Bank’s definition calculated using the Atlas method. For the 2018 fiscal year, low-income countries are those with a GNI per capita of \$1,005 or less in 2016; lower middle-income economies with a GNI per capita between \$1,006 and \$3,955; upper middle-income economies with a GNI per capita between \$3,956 and \$12,235; and high-income economies with a GNI per capita of \$12,236 or more.

Figure 3.1: Share of current health expenditure in Africa, 2015

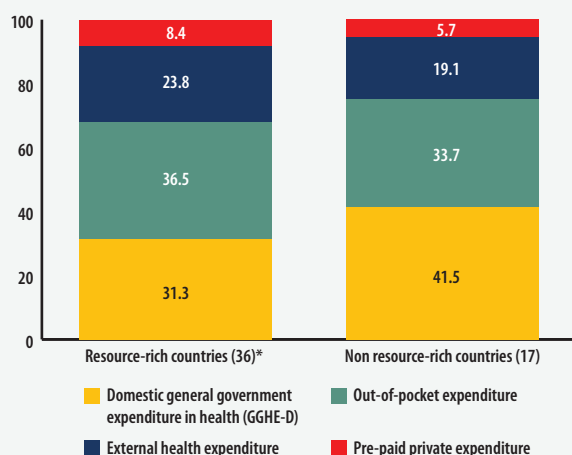
Note: * Seychelles, the only high-income country in Africa, has been included within the category of upper middle-income countries.

Source: ECA staff calculations based on data from WHO Global Health Expenditure Database.

Figure 3.2: Richer countries tend to spend more on health, but not always, 2015

Source: ECA staff calculation based on data from WHO Global Health Expenditure Database.

Figure 3.3: Share of health expenditure in Africa: resource-rich countries vs non-resource-rich countries, 2015



Note: * Resource-rich countries are those with 20 per cent or more exports of either oil or minerals.

Source: ECA staff calculation based on data from WHO Global Health Expenditure Database.

countries enjoy larger fiscal space than countries with fewer resources.

Upper middle-income countries worldwide reveal less out-of-pocket (OOP) expenditure on health

On average, and as depicted in Figure 3.1, the share of OOP on health spending in upper middle-income countries (25.1 per cent) is one-third less than that in low-income countries (36.4 per cent). Yet, there is no clear pattern across countries (Figure 3.4).

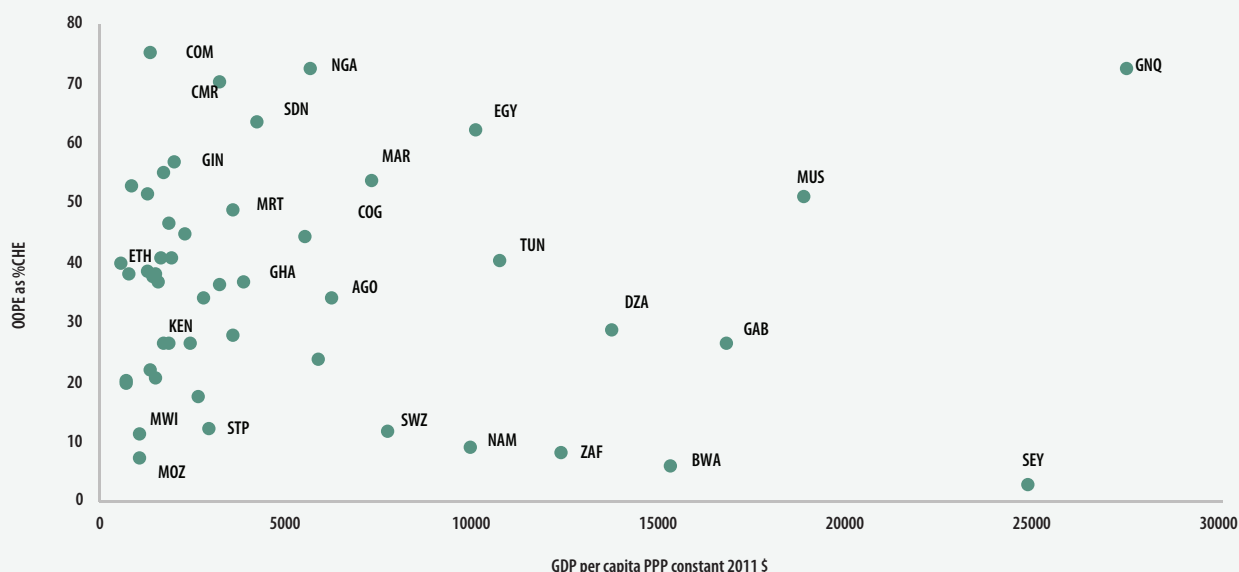
This could be because in the process of transitioning from low-income to middle-income status, countries receive less development assistance for health, but they are not yet able to domestically raise sufficient government resources to replace lost external resources. Identifying, understanding, and managing this potential risk are crucial to ensure that the poor in middle-income countries are adequately covered by healthcare. A premature transition from development assistance for health may lead to less pre-paid, pooled resources, and an increase in OOP expenditure. As shown in Figure 3.1, OOP expenditure is largest in lower middle-income countries (39 per cent).

Importantly, total healthcare expenditure funded from OOP payments declines exponentially with increased government spending on health services as a percentage of GDP – with a strong correlation of -0.62 (Figure 3.5). Increasing spending on health per capita leads to more resources for health and improved access to higher quality health services. A declining share of OOP health spending enhances access to prescribed medicines, improved care, better health outcomes, and reduced impoverishment (Xu et al., 2007).

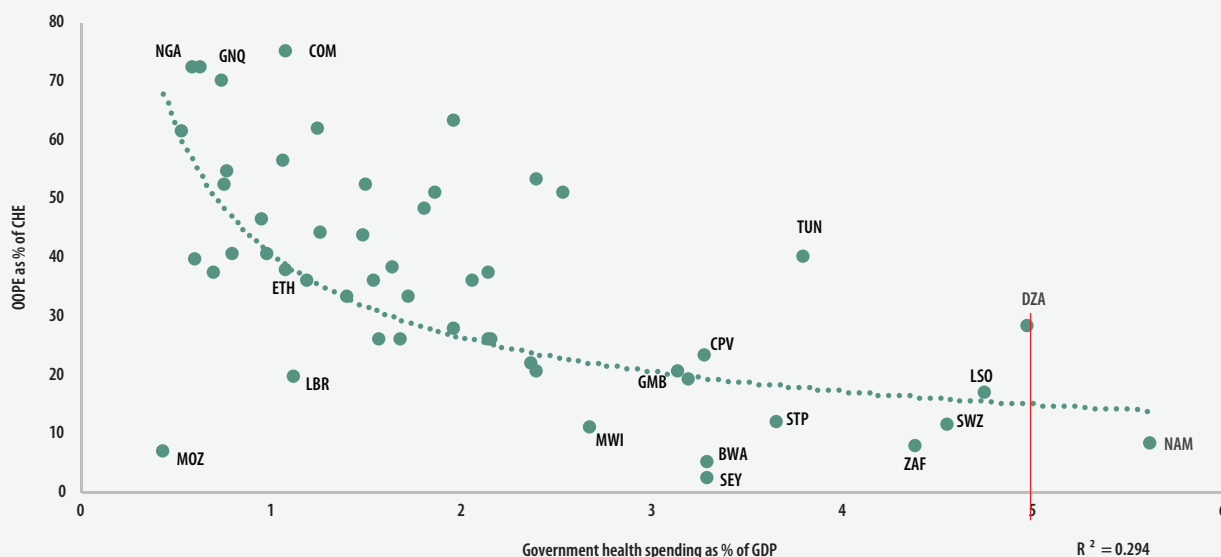
Despite the clear and intuitive trends engendered by the healthcare financing transition, country-specific characteristics in Africa are central to understanding the nature of health financing. The level of economic development alone does not guarantee a transition towards either increased public spending on health or reduced OOP spending. While overall there was increased spending on health, public spending on health in 37 countries in 2015 was less than \$100 per capita.

On average, development assistance for health almost quadrupled from \$8.8 to \$34.4 in the period 2000–2015, though its growth rate was uneven. For many countries, these trends could have major impacts on the provision of essential health services, unless the trends reverse or domestic funds are identified. At the same time, it is not clear how these disbursements affected total health spending. In some cases, external assistance might prop up domestic spending and hide the true amount of spending that is being financed domestically (Dieleman and Hanlon, 2014). In other cases, development assistance may crowd out or replace government spending that otherwise exists (Lu et al., 2010). Because development assistance for health is not always predictable and sustainable, ongoing maturation of domestic pre-paid financing is important.

While health expenditure in Africa increased significantly from \$150 to \$292 per capita (PPP)

Figure 3.4: Out-of-pocket expenditure in Africa does not decline at higher income levels, 2015

Source: ECA staff calculation based on data from WHO Global Health Expenditure Database.

Figure 3.5: Government spending and dependence on out-of-pocket expenditure, 2015

Source: ECA staff calculation based on data from WHO Global Health Expenditure Database.

from 2000 to 2015, health outcomes exhibited mixed results. Infant and under-five mortality rates declined moderately from 86.52 to 64.88 and 140.82 to 99.56 per 1,000 live births, respectively; however, life expectancy at birth increased only slightly from approximately 51 years to 56 years within the same period (World Bank, 2014). The percentage improvement in health status is low compared to

the percentage increase in health expenditure per capita for the period. Some studies have suggested that the marginal improvement in health outcomes may be due to inadequate health spending (Arthur and Oaikhenan, 2017). For instance, the World Bank (2014) reports that the average health expenditure in Africa of \$85 is far below the world average of \$950 per capita recorded in 2010. The report

further argues that Africa spends only 6 per cent of GDP on healthcare compared to 13 and 17 per cent respectively in the OECD countries and North America.

3.3 How much should countries spend on healthcare?

There is no unanimity on how much countries should spend on healthcare. As discussed in Chapter 1, while government expenditure as a percentage of GDP is on average higher in 'advanced economies', there is no strong correlation between levels of government spending and economic development across individual countries. In other words, the size of a country's GDP does not 'predetermine' or dictate government spending levels.

While health needs and availability of funds for healthcare differ significantly across countries, international benchmarks and targets have been developed to guide health expenditure. The High Level Task Force on Innovative International Financing for Health Systems (HTLF) estimated that low-income countries, on average (unweighted), need to spend at least \$44 per capita (in 2005 PPP) to achieve 21 hospital beds per 10,000 population and 1.9 nurses/midwives per 1,000 population by 2015 (Davén, 2017). The estimates varied among the 49 countries and a caveat was given that for individual countries this figure could differ significantly. The weighted average presented in the HTLF report was \$54 (ibid.), which was later updated by McIntyre and Meheus to \$86 per capita in 2012 PPP, factoring in local inflation and exchange rates for each of the 49 countries (McIntyre and Meheus, 2014). It is not explicitly stated in the HTLF or the 2010 World Health Report whether these targets should relate to public or total health expenditure. However, it was later clarified that the public expenditure should be the main unit of analysis in terms of financing universal healthcare.

In addition to these per capita benchmarks, some relative targets were developed, such as the 2006 commitment by African Union member states to allocate at least 15 per cent of government budgets to health, commonly referred to as the Abuja target. However, measuring expenditure as a percentage of GDP is more useful because it can be more easily applied across different income levels and, unlike the Abuja target, it does not compromise finance ministries' integrity to make allocative decisions (McIntyre and Meheus, 2014).

The 2010 World Health Report found that achieving universal health coverage will require at least 4–5 per cent of GDP. More recently, McIntyre, Meheus and Røttingen (2017) have made a strong case that domestic public funding of 5 per cent of GDP is an appropriate target to make progress towards both financial risk protection and health service coverage. A Lancet commission in 2013 (Jamison et al., 2013) found that as little as 3 per cent of GDP could significantly improve health outcomes in LICs by 2035, based on projected GDP growth.

Through an empirical analysis, McIntyre and Meheus (2014) make a strong case for setting a target of domestic government spending on health of at least 5 per cent of GDP. According to the authors, this will help provide financial protection and access to needed health services. The authors establish that, unlike the Abuja target, it is preferable to have a target for government spending on health relative to the total economy, namely, GDP. The authors further used the method of costing a set of basic health services to propose a minimum government expenditure of \$86 per capita per annum (in 2012 PPP) to provide a minimum level of key primary healthcare services in LICs.

At the same time, it has also been estimated that "it is only when direct payments fall to 15–20 per cent of total health expenditures that the incidence of financial catastrophe and impoverishment falls to negligible levels" (WHO, 2010). As shown in Figure

3.5, public spending of about 5 per cent of GDP coincides with OOP payments of 15–20 per cent (shown by the red vertical line). In 2015, only Algeria and Namibia were above this level and satisfactorily placed to ensure sufficient coverage of healthcare to their populations. Eswatini, Lesotho and South Africa were also close to this target. So public expenditure on healthcare should be around 5 per cent of GDP in order that OOP payments do not exceed 20 per cent of the total spending on healthcare.

In a recent paper, Stenberg et al. (2017) develop projections for 67 low-income and middle-income countries from 2016–2030. This estimates that an additional \$274 billion spending on health would be needed by 2030 to make progress on the SDG 3 targets. The same analysis estimates that the share of GDP on health would increase from a mean of 5.6 per cent to a mean of 7.5 per cent by 2030.

It is important not to have a too simplistic view on spending targets. The various international targets and benchmarks are crude and should not be seen as universal; nonetheless they are useful advocacy tools and serve to highlight resource gaps and the need to advocate for additional investments.

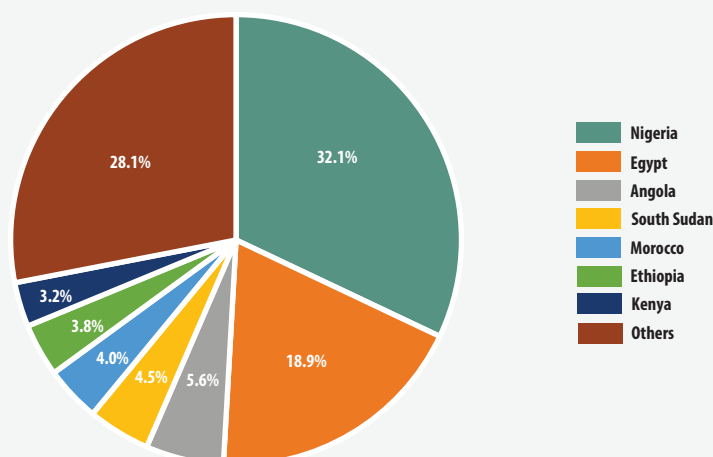
Although levels of public spending are central to improving healthcare coverage and financial protection, there can be no guarantee that spending a specific amount per person across countries will necessarily produce a specific outcome. As a result, WHO does not recommend global or regional spending targets. Instead, because of their diverse contexts, WHO works with individual countries to estimate how much the countries need to spend to ensure universal health coverage.

3.4 Financing gap in Africa

This report adopts the conservative target of government health expenditure of 5 per cent of GDP to gain a rough estimate of the financing gap in different countries. This exercise is considered useful to assess country-level health financing needs, which can help private companies plan their investments.

Although government health expenditure has increased over the years, albeit marginally; yet in all but two countries it falls below the conservative threshold of 5 per cent of GDP. Only Algeria and Namibia spend more than this. Out-of-pocket payments are still extremely high and, on average,

Figure 3.6: Financing gap in selected countries as a percentage of Africa's total shortfall, 2015



Note: Discrepancies in the additions are due to rounding.

Source: ECA staff calculation based on data from WHO Global Health Expenditure Database.

constitute 36 per cent of the total health spending in Africa, which ranges from 2.5 per cent in Seychelles to over 70 per cent in Cameroon, Comoros, Equatorial Guinea and Nigeria.

Against the \$114 billion required per annum in current dollars to meet the 5 per cent of GDP threshold, countries in Africa only spend about \$46 billion, leading to a financing gap of \$66 billion per year. As shown in Figure 3.6, more than half (51 per cent) of this amount is required by just two countries – Egypt (19 per cent or \$12 billion) and Nigeria (32 per cent or \$21 billion). Together these two countries make up 23 per cent of the continent's population but face a shortfall of 51 per cent of the total financing gap in Africa.

It is imperative that countries enhance funding for the health sector by identifying innovative sources of finance and accessing private financial investors. This will offer the best chance for the countries to provide the high-quality, affordable and accessible healthcare for their populations.

The case for health insurance

Health insurance is a major financing mechanism to improve access to health services, as well as to provide financial risk protection. This means that the scope of treatment, scale of treatment costs, the method of reimbursements and improving the quality of care become important determinants of health insurance interventions.

Many countries in Africa have high levels of out-of-pocket expenditures on health. On average, Cameroon, Comoros, Equatorial Guinea and Nigeria spend more than 70 per cent of total health expenditure out-of-pocket. Carefully designed health insurance schemes can reduce out-of-pocket health spending that is regressive, have a catastrophic impact on household expenditures, and often push households into poverty.

There are four common types of health insurance (Table 3.2), though in most countries there is a mixture of the types indicated in the Table. Complementary private insurance is popular with the middle and upper classes seeking to bypass waiting lines for care. Further, one scheme can also have a combination of funding mechanisms, as in Rwanda where the community-based health insurance (CBHI) is financed both by the beneficiaries (through premium contributions) and by the government (through subsidies).

National and social health insurance systems need an effective and efficient system of tax collection. With more formal sector employees and thus a larger tax base, there will be greater capacity to generate revenue for the health system and greater ability to subsidize low-income groups. A higher income country, with a small informal sector, can more easily support a social health insurance system than countries with a high level of informality.

Table 3.2. Major Advantages and Challenges of Different Health Insurance Models

Health insurance model	Advantages	Challenges	Example
National / state-funded (Beveridge) Funding source: General tax revenues	<ul style="list-style-type: none"> Comprehensive coverage of population Progressive revenue collection Large scope for raising resources Simple mode of governance Potential for administrative efficiency 	<ul style="list-style-type: none"> Funding subject to political pressures and available tax revenues Potential inefficiency in health care delivery because of lack of competition and provider choice 	
Social insurance (Bismark) Funding source: Payroll taxes	<ul style="list-style-type: none"> Mobilizes resources from employers for health Funding typically earmarked for health Can be progressive Strong support from covered population 	<ul style="list-style-type: none"> Coverage limited to workers employed in formal sector Less progressive if tax is capped Burden of payroll contributions may increase unemployment More complex to manage Workers may leave formal sector to avoid payroll taxes 	
Community-based (microinsurance or mutuelles) Funding source: Premiums paid by households	<ul style="list-style-type: none"> Available to low-income groups and informal sector workers Useful complement to other financing mechanisms, such as user fees or SHI Facilitate government or donor funding to subsidize premiums to target populations 	<ul style="list-style-type: none"> Limited financial protection for members Small risk pools risks sustainability (bankruptcy common) Exclusion of poorest without subsidies Limited effect on delivery of care Require national-level political and financial support to achieve breadth and depth 	Rwanda, Senegal, Mali, Niger
Voluntary (private) Funding source: Premiums paid by households or employers / employees	<ul style="list-style-type: none"> Financial protection for higher income population Can supplement state or social insurance coverage Can build local capacity in professional insurance management 	<ul style="list-style-type: none"> Typically limited to higher income populations Plans compete for healthy/ wealthy members (cream-skimming) Increases differentials in access based on income Has high administrative costs 	Namibia, South Africa

Source: Adapted from Hong Wang, et al. 2012.

3.5 Mobilising domestic resources to finance healthcare

There is considerable emphasis on mobilising domestic resources since the adoption of the Addis Ababa Action Agenda (AAAA) in 2015 to achieve the SDGs. This is of particular importance given the financing gap of \$66 billion per annum in government funding, as detailed above. There are a number of ways of mobilising additional domestic resources:

- increase tax revenue through new taxes and improved tax administration;
- reduce the debt burden and increase borrowing;
- undertake debt-to-health swaps;
- reduce illicit financial flows;
- re-allocate budgetary flows and rationalise inefficient fossil-fuel subsidies;
- earmark revenues from natural resources; and
- identify innovative financing mechanisms.

These are discussed briefly below.

Increasing tax revenues

The level of general taxation can be increased either by improving the efficiency of tax collection, increasing its coverage, or rationalising tax rates. Another option is to impose new taxes, though that option rarely receives much political support. Nonetheless some countries have introduced taxes on harmful products such as tobacco, alcohol, sugar, etc. (also known as ‘sin taxes’) to improve both health outcomes and domestic resources.

From an equity perspective, taxes need to be progressive, as the purpose of public expenditure on social assistance is defeated if the revenue used for such expenditure is generated from regressive sources.¹⁷ Progressive tax revenue sources should be prioritised, particularly in countries with high levels of poverty and inequality.

A range of factors influences government revenue levels, including the types of revenue that can feasibly be generated within a country. In 41 countries for which data are available, on average 89 per cent of government revenue is raised from taxes (e.g. on income, consumption, wealth, property and capital). The remaining revenue comes from social contributions (e.g. pensions, health and social security) and from grants and other sources. Revenue through social contributions is partly related to the level of formal sector employment; generating much revenue from this source is difficult if formal sector employment is low. While social contributions are widely used as a revenue source in many countries, their use is very limited in Africa, especially in countries with high levels of informal employment.

There is a sharp distinction in the revenue from taxes between resource-rich and non-resource-rich

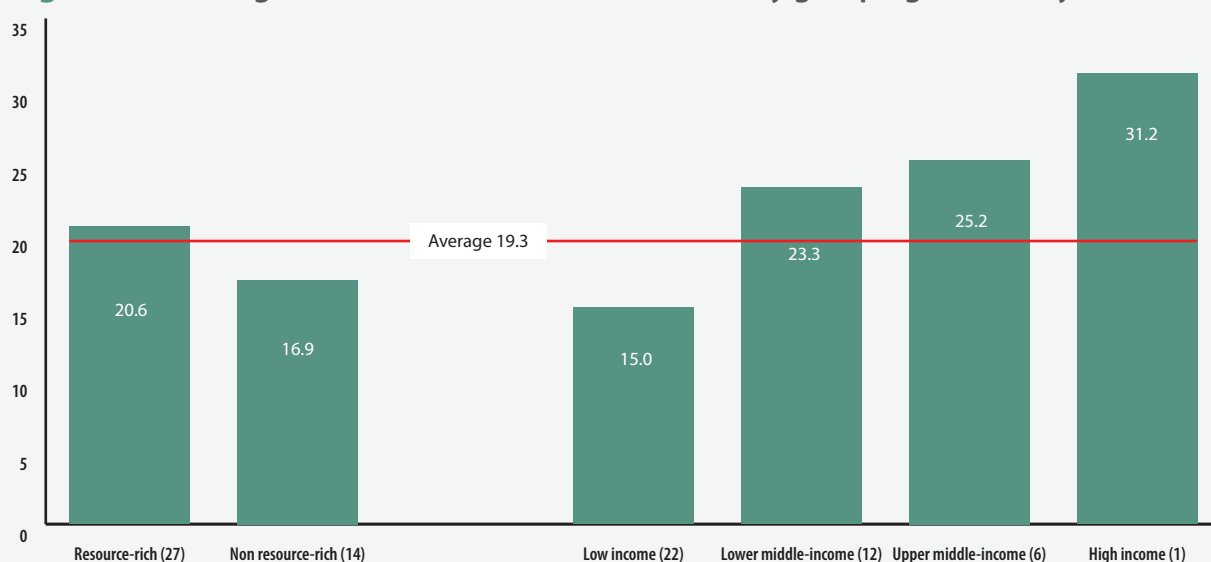
countries. Almost all (99 per cent) of government general revenue in the 27 resource-rich countries with comparable data comes from taxes. In the 14 non-resource-rich countries with data, only 72 per cent of government general revenue derives from taxes. The fiscal space is very limited given the low level of the average total tax revenue (Figure 3.7).

The level of government revenue is also influenced by the types and rates of tax that a government chooses to levy. In low-income countries, indirect taxes account on average for nearly half (46 per cent) of tax revenue, whereas in lower middle-income and upper middle-income countries, the share of indirect taxes is about 28 per cent. In Seychelles, a high-income country, indirect taxes make up 46 per cent of the total taxes.

In general, there is greater reliance on indirect (as opposed to direct) taxes in low-income countries than in high-income countries, and in non-resource-rich countries (44 per cent) compared to resource-rich countries (33 per cent). This could be related to the far lower levels of formal sector employment in lower-income countries and non-resource-rich countries. Overall, the informal sector is a major contributor to the GDP in many countries (ECA, 2018) and enforcing payment of income taxes and social contributions (i.e. direct taxes) on those outside of formal employment is challenging and administratively costly.

However, additional forms of indirect taxation must be carefully evaluated as they may be regressive. In this context, it is useful to mention that many countries have begun imposing taxes on consumption of certain harmful products such as alcohol, tobacco and sugary drinks, to curb their consumption but also raise revenue (Box 3.1).

¹⁷ A progressive tax is a tax whereby groups with a higher income contribute a higher percentage of their income than lower-income groups (i.e. the tax rate increases with income). A tax is considered regressive when lower-income groups contribute a higher share of income than higher-income groups.

Figure 3.7: Average total taxes* across different country groupings, various years

Notes: * Total taxes are the sum of direct, indirect, trade and resource taxes. Direct taxes comprise corporate and individual income taxes.

** Resource-rich countries are those with 20% or more of exports of either oil or minerals. The income-based country classification is based on the World Bank's definition calculated using the Atlas method. For the 2018 fiscal year, low-income countries are those with a GNI per capita of \$1,005 or less in 2016; lower middle-income economies with a GNI per capita between \$1,006 and \$3,955; upper middle-income economies with a GNI per capita between \$3,956 and \$12,235; and high-income economies with a GNI per capita of \$12,236 or more.

Source: ECA staff calculations from Mansour (2014).

Across countries with comparable GDP and formal sector employment levels, there are differences in the level of total tax revenue and the distribution of that revenue by type of tax. Tax rates are a key factor contributing to those differences.

There is considerable variation in the rates of direct and indirect taxes across countries. For example, of the 22 countries with available data on indirect tax rates, the range is from 5 per cent (Nigeria) to 20 per cent (Morocco). There is little difference between the indirect tax rates in resource-rich countries (14.6 per cent) and the non-resource-rich countries (16.7 per cent).

Rates of personal income tax vary considerably across countries too. These variations do not follow a pattern according to the level of economic development. For example, DR Congo, Mauritania, Senegal and Uganda, which have widely different

per capita GDP levels, all levy a 40 per cent rate of personal income tax. Similarly, Zimbabwe with a per capita GDP level that is one-sixth that of South Africa has a higher personal income tax rate (51.5 per cent) than South Africa (45 per cent). All the same, there is a negative correlation (-0.26), suggestive of lower direct tax rates in higher-income countries.

Some countries, such as Algeria, Morocco, Senegal, Tunisia and Uganda, impose high direct income taxes as well as high indirect taxes. Others, mostly in Southern Africa, such as Eswatini, Namibia, South Africa, Zambia and Zimbabwe, have low indirect tax rates, but high individual income tax rates. Still others, such as Angola, Mauritius and Sierra Leone, have both low direct income taxes and low indirect taxes. The rates for the various categories of direct and indirect taxes are ultimately a matter of fiscal policy choice.

Box 3.1: 'Sin taxes'

Taxation is a powerful lever to reduce risks from exposure to or consumption of unhealthy products, and taxes on alcohol and tobacco, commonly known as 'sin taxes', serve the dual purpose of increasing government revenues and discouraging the consumption of products detrimental to one's health.

Although alcohol and tobacco taxes are regressive, and consume a larger fraction of the income of poor than of rich people, the consequences are likely to be favourable for the poor because they benefit disproportionately more in terms of health gains.

The WHO strongly promotes taxes on sugary drinks, as well as on alcohol and tobacco, as a cost-effective measure to reduce the threat of NCDs that kill 40 million people worldwide each year.¹

In Africa, the share of NCDs such as obesity, diabetes, cardiovascular illnesses and certain types of cancer, in the average disease burden increased from 26 per cent in 2000 to 37 per cent in 2016. More than 30 per cent of adults in Africa are overweight, with obesity rates nearing 10 per cent even in some of the poorest countries such as Sierra Leone and Liberia (WHO).

According to the latest Global Nutrition Report, a quarter of the world's 41 million overweight children under the age of five now live in Africa, a figure that has nearly doubled over the last 20 years (Development Initiatives, 2018). By 2030, obesity-related NCDs such as diabetes are expected to become the single largest killer in Africa (WHO).

South Africa, which has the highest obesity rates in Africa, other than North Africa,² introduced the Sugary Beverages Levy in 2018 to raise prices for soda and other sugary drinks and reduce obesity rates by 10 per cent by 2020. On the other hand, Kenya with the highest rate of diabetes in Africa, other than North Africa, faced stiff resistance and had to withdraw a similar sugar tax.

So far, more than 30 countries have introduced a tax on sugary drinks or passed legislation to implement such a policy. A larger group of countries, including the Philippines, Antigua, Nepal, and the Seychelles are debating the introduction of a tax on sugary drinks.³ Such policies have already helped people choose healthier products: in Mexico, for instance, soda consumption fell by between 7-10 per cent and water consumption rose following the implementation of a sugary drink tax.⁴

A sugar tax, or any kind of 'sin tax', is not a magic bullet. The sin taxes need to be accompanied by public health initiatives such as investing in health education, improving nutrition labels on products, and banning marketing of such goods to children. In particular, there needs to be earmarking of the revenues for health so that the additional revenues gained through the sin taxes are not lost to other fiscal areas of the government budget.

1 <http://www.afro.who.int/news/who-commends-south-african-parliament-decision-pass-tax-bill-sugary-drinks>.

2 <https://www.beveragedaily.com/Article/2018/04/03/South-Africa-introduces-sugar-tax>.
Also, <https://intpolicydigest.org/2018/04/06/the-case-for-sin-taxes-in-africa/>.

3 <http://www.afro.who.int/news/who-commends-south-african-parliament-decision-pass-tax-bill-sugary-drinks>.

4 <https://theconversation.com/south-africa-moves-one-step-closer-to-a-sugar-tax-and-a-healthier-lifestyle-88045>

Reducing the debt burden

In relation to public revenues and resources in any given year, the amount available for discretionary expenditure is what remains once non-discretionary payments, like debt services, have been made. Thus, the size of debt payments influences what is ultimately spent on health and the social sectors.

There are concerns about the rising level of government debt and debt sustainability in several countries. Countries carry a heavy debt burden of, on average, more than 57 per cent of GDP, though with

wide variation across countries (Table 3.3). Twenty countries have an average debt burden in excess of 60 per cent of GDP, and in six countries it exceeds 100 per cent.

The data do not necessarily reflect governments' lack of commitment to spending on health and social sectors, rather they indicate their lack of fiscal manoeuvrability as a result of a high debt burden. Reductions in total debt and debt service commitments can therefore play a crucial role in expanding the fiscal space for increased government spending on health.

Table 3.3: Average general government gross debt by sub-region, 2015–2017

% of GDP range	Number of countries	Sub-region				
		North	West	Central	Eastern	Southern
0-20	3	Algeria	Nigeria			Botswana
21-40	13		Burkina Faso, Liberia, Mali,	Cameroon	Comoros, DR Congo, Djibouti, Rwanda, Tanzania, Uganda	Eswatini, Lesotho, Madagascar
41-60	18		Benin, Côte d'Ivoire, Guinea, Guinea-Bissau, Niger, Senegal, Sierra Leone	Burundi, Central African Republic, Chad, Equatorial Guinea, Gabon	Kenya	Ethiopia, Namibia, South Africa,
61-80	9	Morocco, Tunisia	Ghana, Togo		Seychelles, South Sudan	Angola, Malawi,** Mauritius,** Zambia, Zimbabwe
81-100	3	Egypt, Mauritania		São Tomé and Príncipe		
Above 100	6	Sudan	Cabo Verde, Gambia	Congo	Eritrea	Mozambique
Total	52*	6	15	8	10	13

Notes: * There is no data for Libya and Somalia.

** Debt levels in Malawi and Mauritius are only just above 60 per cent.

Source: ECA staff calculations using data from IMF database.

Debt-to-health swaps¹⁸

The Debt-to-Health (or, D2H) swaps, which were originally launched with a pilot phase in 2007, see a donor cancel publicly held debt if the recipient government transfers some of the resources to the Global Fund to invest in domestic health programs.

Debt2Health is an innovative financing mechanism that encourages domestic financing in health by converting debt repayments into investments in health. Under individually negotiated 'debt swap' agreements, a creditor nation foregoes repayment of a loan when the beneficiary nation agrees to invest part or all of the freed-up resources into a Global Fund-supported program. A total of close to 200 million euros have been swapped under this arrangement with the support of Australia, Germany and Spain.

The Global Fund's latest Debt2Health initiative, announced in 2017, allows Cameroon to invest 9.3 million euros in HIV programs; the Democratic Republic of Congo to invest US\$ 3.4 million in malaria programs; and Ethiopia to invest 3.2 million euros to strengthen its health system. By cancelling the debts through the Debt2Health program, Spain is assured that the mobilized funds go directly to country-led programs as part of the respective national health strategies, which are supported and monitored by the Global Fund partnership.

Reducing illicit financial flows

During the period 2003–2012, Africa is estimated to have lost about \$300–\$600 billion in capital flight resulting from illicit outflows.¹⁹ Ninety per cent of these outflows were from resource-rich countries compared to 17 per cent from low-income countries, 52 per cent from lower middle-income countries, and 30 per cent from upper middle-income and

¹⁸ This section is based on Pallares, (2017).

¹⁹ The wide range is due to different methodologies used by ECA (2015b) and by Kar and Spanjers (2014).

Table 3.4: Government health expenditure compared to debt-to-GDP ratios

Country Name	Government health expenditure (% GDP)	General government gross debt (% of GDP)	Debt/Government health exp.
	2015	Avg. (2015-2017)	
Algeria	4.98	18.38	3.7
Angola	1.40	69.91	49.9
Benin	0.80	48.90	60.8
Botswana	3.29	15.82	4.8
Burkina Faso	1.54	37.46	24.4
Burundi	3.20	49.72	15.5
Cabo Verde	3.29	127.18	38.7
Cameroon	0.74	32.06	43.4
Central African Republic	0.61	57.81	94.8
Chad	1.07	49.57	46.2
Comoros	1.08	28.66	26.6
DR Congo	0.70	16.19	23.0
Congo, Rep.	1.48	110.27	74.3
Côte d'Ivoire	1.19	46.88	39.5
Djibouti	2.40	32.01	13.4
Egypt	1.25	96.19	76.7
Equatorial Guinea	0.63	42.34	66.7
Eritrea	0.76	132.18	173.5
Eswatini	4.56	24.12	5.3
Ethiopia	1.09	55.07	50.6
Gabon	1.58	56.66	35.9
Gambia, The	3.14	115.68	36.8
Ghana	2.06	72.49	35.1
Guinea	0.78	41.53	53.4
Guinea-Bissau	2.15	47.04	21.9
Kenya	1.73	53.58	31.0
Lesotho	4.75	37.08	7.8
Liberia	1.13	29.50	26.2
Libya	..		
Madagascar	2.37	37.06	15.7
Malawi	2.67	60.23	22.5
Mali	0.96	34.04	35.5
Mauritania	1.81	96.10	53.1
Mauritius	2.54	60.15	23.7
Morocco	2.39	64.26	26.9
Mozambique	0.43	103.04	237.9
Namibia	5.62	43.76	7.8
Niger	1.51	44.23	29.4
Nigeria	0.59	19.67	33.4
Rwanda	1.69	37.08	22.0
São Tomé and Príncipe	3.66	87.75	24.0
Senegal	1.26	59.49	47.2
Seychelles	3.29	66.77	20.3
Sierra Leone	1.64	52.86	32.2
Somalia	..		
South Africa	4.39	51.18	11.7

Country Name	Government health expenditure (% GDP)	General government gross debt (% of GDP)	Debt/Government health exp.
	2015	Avg. (2015-2017)	
South Sudan	0.54	74.04	138.4
Sudan	1.97	111.42	56.7
Tanzania	2.16	37.82	17.5
Togo	1.86	77.48	41.6
Tunisia	3.80	62.45	16.5
Uganda	0.98	36.56	37.3
Zambia	1.96	61.71	31.5
Zimbabwe	2.15	66.69	31.1

Source: ECA staff calculation based on data from WHO Global Health Expenditure Database.

high-income countries. Illicit outflows (Box 3.1) from Nigeria and South Africa comprise nearly half (46 per cent) of the total outflows.

The total outflows from Africa make up nearly 160 per cent of the Official Development Assistance (ODA) received during this period. Thus, in reality Africa is a net creditor to the world rather than a net debtor, as is often assumed. The increasing trend of illicit financial outflows coincided with a period of relatively high economic growth in Africa. The IFFs are negating the

expected positive impact of increased GDP growth on the continent, by limiting governments' abilities to allocate adequate resources for health and other social sector investments.

In 22 countries the average value of the IFFs far exceeds the health financing gap (shown in red in Table 3.5). This suggests that reducing illicit flows could free up sufficient resources to fund healthcare in these countries.

Box 3.1: Illicit financial flows from Africa

Outflows due to deliberate trade misinvoicing (that is, over-invoicing of exports and under-invoicing of imports) make up more than three-quarters of the total illicit financial flows (IFFs). Trade mispricing is the falsification of the price, quality and quantity values of traded goods for a variety of purposes. These could range from the desire to evade customs duties and domestic levies to the intent to export foreign exchange abroad. The over-invoicing of imports has been practised by a variety of importers for a number of years. Under-invoicing of exports was quite common in Africa, and particularly in the natural resources sector.

Transfer pricing, whereby inputs are sold at highly inflated prices to a sister company so that very little profit is reflected in countries with high tax rates, is also frequently used for tax avoidance purposes. Although tax avoidance is not illegal insofar as companies comply with tax laws but simply ensure that profits are reflected to the greatest extent possible in countries with the lowest tax rates, many would nonetheless regard it as immoral, particularly when governments of lower middle-income countries are being deprived of desperately needed tax revenue to meet the social service needs of their populations.

(Source: ECA, 2015b)

Table 3.5: Illicit financial flows (2003–2012) and government health expenditure (2015)

Country	Illicit Financial Flows (in million USD, nominal)	GGHE-D Financing Gap (million US\$)	Illicit financial flows as % of government health expenditure
	Yearly average (2003-2012)	2015	
Algeria	1,575	32.4	4866
Angola	631	3,694.4	17
Benin	41	347.9	12
Botswana	856	246.6	347
Burkina Faso	341	360.7	94
Burundi	75	55.2	136
Cabo Verde	40	27.3	144
Cameroon	783	1,317.2	59
Central African Republic	18	69.5	25
Chad	930	431.3	216
Comoros	44	22.2	198
Congo, Dem. Rep.	301	1,628.8	19
Congo, Rep.	1,535	300.7	510
Côte d'Ivoire	2,406	1,264.0	190
Djibouti	354	42.5	833
Egypt	3,768	12,460.1	30
Equatorial Guinea	1,607	575.4	279
Eritrea			
Eswatini	371	17.8	2082
Ethiopia	2,207	2,522.3	87
Gabon	358	492.0	73
Gambia, The	61	16.9	359
Ghana	316	1,096.0	29
Guinea	317	374.0	85
Guinea-Bissau	58	29.9	195
Kenya	86	2,094.3	4
Lesotho	249	6.2	3997
Liberia	982	78.8	1246
Libya	1,078	0.0	
Madagascar	426	256.8	166
Malawi	585	148.3	394
Mali	411	529.4	78
Mauritania		154.5	
Mauritius	153	288.1	53
Morocco	998	2,622.2	38
Mozambique	116	675.8	17
Namibia	603	-73.4	
Niger	137	253.3	54
Nigeria	15,746	21,219.5	74
Rwanda	260	274.2	95
São Tomé and Príncipe	18	0.0	
Senegal	2	510.1	0.3
Seychelles	32	23.5	134
Sierra Leone	71	141.7	50
Somalia		0.0	
South Africa	12,215	1,931.6	632
South Sudan		487.0	

Country	Illicit Financial Flows (in million USD, nominal)	GGHE-D Financing Gap (million US\$)	Illicit financial flows as % of government health expenditure
	Yearly average (2003-2012)	2015	
Sudan	1,290	2,947.8	44
Tanzania	462	1,295.0	36
Togo	1,824	128.3	1422
Tunisia	28	520.0	5
Uganda	713	1,089.3	65
Zambia	2,597	643.6	403
Zimbabwe	267	465.0	58

Sources: Prepared using data from Kar and Spanjers (2014) and WHO Global Health Expenditure Database.

Reallocating resources from other sectors and reducing fossil-fuel subsidies

Increasing government expenditure on health without additional resource mobilisation is unlikely, since many countries are already running substantial deficits and have high debt burdens. Consequently, increasing the budgetary allocation for health is likely to require a reduction of spending elsewhere. However, that would be a zero-sum game as it may leave other social sectors such as education and social protection, which are of equal importance, starved of crucial resources. That approach would therefore have little overall impact on reducing poverty and inequality. These kind of trade-offs further emphasise the political nature of allocating budgetary resources.

All the same, governments can prioritise health spending by reallocating resources from low- to high-priority sectors within existing budgets. One such sector that might be considered for pruning is the defence sector.

Africa accounted for 2.2 per cent of the world's military spending (or \$37.9 billion) in 2016, according to data published by the Stockholm International Peace Research Institute. Of the 38 countries for which comparable data are available, military expenditure ranged from 0.2 to 4.5 per cent of GDP (in Mauritius and Mozambique respectively). In Benin, Kenya, Morocco, Mozambique, Sudan, Uganda and

Zimbabwe, military spending as a percentage of GDP exceeds public spending on health. Countries have their own security exigencies, but given the importance of improved health outcomes for the future well-being of their populations and of their labour forces, governments could consider prioritising health in their public expenditures.

Energy subsidies on coal, petrol, and diesel divert public resources away from spending that could be more pro-poor, such as on health interventions that address infectious diseases and NCDs, education, and social protection programmes. Many countries have large energy subsidies on air polluting fuels.

Although these subsidies were at first intended to protect poor people from high fuel costs, in practice they mostly benefit wealthy households, promote over-consumption of fuel, and discourage energy efficiency. Energy subsidies were estimated to be 3.5 per cent of GDP on a post-tax basis in Africa, other than North Africa (IMF, 2013).²⁰ The reallocation of fuel subsidies could become an important mechanism for countries to increase government spending on health.

However, the abolition of fuel subsidies for redirection of funds to social sector investments such as health, is often difficult to pursue because of public opposition. Attempts to reduce fuel subsidies, as in Nigeria in 2012, Sudan in 2013, and Egypt in

²⁰ IMF. 2013. Energy subsidy reform: lessons and implications.

2015, were met with violent protests. Nigeria, which has some of the worst social indicators in the world, cut fossil fuel subsidies by 50 per cent in 2010 to redirect funds towards maternal and child health programmes, only to partly reinstate a subsidy because of widespread protests.

The perceived benefits of fossil fuel subsidies are apparent in daily life, and their removal is felt abruptly and immediately. In places where corruption is common, people might be sceptical that the savings would be effectively used for such programmes and therefore prefer to retain the benefits they already receive from fossil fuel subsidies. Meanwhile, reallocation of funds towards other government programmes can take time to yield results.

Earmarked taxation based on natural resources

In Africa, the mining and extractive industries sector is an important government asset. In resource-rich countries, taxes imposed on these industries may offer a viable alternative to raise health financing, especially when countries renegotiate the terms on which operations have been performed in the past.

Another way to generate revenue is through better expenditure management, either in the procurement of goods and services or through rationalisation of fuel subsidies as discussed. The idea is that savings accrued in this way also increase a government's fiscal base.

Innovative financing mechanisms: Health bonds²¹

With a huge government healthcare financing gap across Africa, estimated conservatively at \$66 billion per year, and with limited opportunities for increasing either public funding or external assistance for health, there is considerable interest in innovative financing models such as Performance-Based Financing (PBF), Development Impact Bonds (DIBs),

Box 3.2: The Cameroon Cataract Bond

The Cameroon Cataract Bond was issued to address a critical shortage of cataract surgery services in Cameroon but also in neighbouring countries. It is based on the social enterprise model of eye-care first popularized in India by the Aravind Eye Care System. The Hilton Foundation serves as the principal outcome funder. The service provider is the Magrabi ICO Cameroon Eye Institute (MICEI). The secondary goal of the cataract bond was to leave the legacy of a financially sustainable hospital after 5 years and serve as a centre of excellence in the Central African Economic and Monetary Community (CEMAC).

Source: Oroxom et al., 2018

and Social Impact Bonds (SIBs). These are considered to “have the potential to revolutionize development financing and better leverage the private sector's growing capacity” (Oroxom et al., 2018).

DIBs or SIBs are results-oriented funding mechanisms that coordinate public, philanthropic and private-sector resources to leverage upfront financing for service delivery. Typically, they involve four main players:

- i. investors who provide the start-up or growth capital for an intervention and bear some financial risk,
- ii. service providers (also referred to as implementing organizations) who use the capital to implement the intervention,
- iii. outcome funders (also referred to as outcome payers) who agree to repay investors their principal plus some rate of interest if the intervention reaches certain previously agreed-upon targets, and
- iv. independent third party who must verify the results generated by the intervention before the outcome funder repays the investor.

The only difference between DIBs and SIBs is that in the latter, domestic governments are the outcome funders. Many of the DIBs in development relate to health, such as those for

²¹ This section is based on Oroxom et al. (2018).

- enhancing cataract surgeries in Cameroon (also known as The Cataract Bond);
- addressing sleeping sickness in Uganda with the UK's Department for International Development (DFID) as the outcome funder;
- addressing the prevalence of malaria in Mozambique for which the Rollback Malaria Partnership (RMP) 3-year pilot project was funded by the restaurant group, Nando's;
- increasing the amount of skin-to-skin contact between mothers and their newborns in Cameroon through the Kangaroo Mother Care.

Of these, the Cataract Bond (Box 3.2) is the most developed even though it also faced numerous challenges during launch. There are many lessons to be learnt from its implementation.

Owing to the relative novelty of this financial instrument, there are scarcely any data currently, therefore it is difficult to assess the validity and success of health bond in healthcare financing. Health bonds are more likely to succeed in countries where legislative and institutional arrangements for public–private partnerships are well established. The demarcation of roles and responsibilities of the various partners, together with the design, definition of targets and benchmarks, and focus on health outcomes are crucial elements to the success of these initiatives. Furthermore, the timing of the issuance of the bond and the investor climate at the time of the launch are also crucial issues. Finally, the data needed to develop DIBs, and in particular health bonds, are built on best practices that are often difficult to obtain.

Still the impact bonds, particularly in the health sector, offer viable alternatives in mobilising resources from the for-profit private sector to help bridge the health gap and ensure universal access to healthcare.

3.6 Health-stressed countries

The report has estimated that overall, the continent needs about \$66 billion per annum to bridge the gap in government expenditure on health.

To target the countries with maximum need, we use a combination of thresholds to assess the extent of health challenges facing different countries. Healthcare financing is a key determinant of health system performance but it is not the only one. Seven indicators, such as domestic government health expenditure, out-of-pocket expenditure, density of skilled health workers, average disease burden, government debt and the annual GDP growth rate, are used to estimate the extent of health-stress across countries. The aim is to prioritise interventions in those countries that need them most.

While increased government expenditure on health (both as a percentage of GDP and on per capita terms) is important to increase access to healthcare, OOP expenditures should be below the 20 per cent of total health expenditure so as not to cause impoverishment. At the same time, the supply of health services in the country (in terms of medical professionals) should be above the WHO requirement of 23 per 10,000 population.

The following thresholds are used to assess the state of health-stress of a particular country:

- Government spending on health:
 - at least 5 per cent or more of GDP;
 - at least \$86 (at 2012 PPP) per capita per year;
- Out-of-pocket (OOP) spending – not exceeding 20 per cent of total health spending;
- Density of skilled health workers – more than 23 per 10,000 population;
- Disease burden (in DALYs) – above the African average;
- Gross government debt – less than 60 per cent of GDP; and

- Average annual GDP growth rate in 2015–2017 – above 2 per cent.

Both the choice of the indicators and some of these thresholds are arbitrary but they provide a very useful picture (Table 3.6). Using these seven indicators, the table shows that eight countries – Angola, Chad, Mauritania, Nigeria, Sierra Leone, South Sudan, Togo, and Zimbabwe – are below the thresholds on six of the seven indicators and so are classified as severely health-stressed.

In addition, 12 countries – Benin, Cameroon, Central African Republic, DR Congo, Congo, Cote d'Ivoire, Guinea, Guinea-Bissau, Mali, Mozambique, Niger,

and Zambia – are below the acceptable thresholds on five of the seven indicators and are classified as very health-stressed.

These 20 countries have above average disease burden, low government expenditure on health, high out-of-pocket expenditures, low density of health professionals, high levels of government debt (as percentage of GDP), and low GDP growth rates. Taken together, these indicators suggest severe limitations in public provisioning of health, and thus there is an urgent need for targeting these countries for immediate action to improve their health outcomes.

Table 3.6: Health-stressed countries in Africa

Country Name	Gross govt health expenditure (GGHE-D) as % GDP (2015)	GGHE-D per capita, PPP (current international \$) 2015	Out-of-pocket expenditure (OOPE) as % of CHE (2015)	DALYs per '000 population (2016)*	Density of skilled health workers (per 10000)	General government gross debt, % of GDP		GDP growth (annual %) (2015-2017)
						Avg. (2015-2017)	Avg. (2015-2017)	
Thresholds →	>5% of GDP	>\$86	<20%	<538 (African average)	>23	<60%	<60%	>2%
Algeria	4.98	727.78	28.10	267	31.16	18.38	18.38	2.9
ANGOLA (6)*	1.40	92.88	33.39	580	15.86	69.91	69.91	1.0
Benin (5)	0.80	17.01	40.50	650	7.51	48.90	48.90	3.9
Botswana	3.29	534.45	5.26	417	31.11	15.82	15.82	1.7
Burkina Faso	1.54	27.14	36.11	622	6.78	37.46	37.46	5.5
Burundi	3.20	24.74	19.07	639		49.72	49.72	-1.3
Cabo Verde	3.29	210.50	23.17	257	20.44	127.18	127.18	2.9
Cameroon (5)	0.74	23.55	69.74	674	6.03	32.06	32.06	4.4
Central African Republic (5)	0.61	4.07	39.60	908	2.99	57.81	57.81	4.5
CHAD (6)	1.07	23.41	56.37	899	3.52	49.57	49.57	-2.1
Comoros	1.08	16.22	74.81	486		28.66	28.66	1.9
DR Congo (5)	0.70	5.60	37.43	697	10.53	16.19	16.19	4.3
Congo, Rep. (5)	1.48	87.59	43.84	484	10.48	110.27	110.27	-1.6
Côte d'Ivoire (5)	1.19	41.38	36.02	772	6.22	46.88	46.88	8.3
Djibouti	2.40	80.13	20.38	479	7.86	32.01	32.01	7.5
Egypt	1.25	148.95	61.96	317	22.48	96.19	96.19	4.3
Equatorial Guinea	0.63	185.75	71.98	632		42.34	42.34	-7.0
Eritrea	0.76	12.92	52.38	426		132.18	132.18	
Eswatini	4.56	406.88	11.31	619	15.33	24.12	24.12	1.3
Ethiopia	1.09	17.63	37.81	454	2.77	55.07	55.07	9.4
Gabon	1.58	283.27	25.90	442	33.03	56.66	56.66	2.4
Gambia	3.14	53.11	20.31	536	17.25	115.68	115.68	3.3
Ghana	2.06	87.14	36.11	477	10.21	72.49	72.49	5.4
Guinea (5)	0.78	9.81	54.49	648	4.43	41.53	41.53	7.5
Guinea-Bissau (5)	2.15	31.35	37.16	629	7.3	47.04	47.04	6.1
Kenya	1.73	52.04	33.37	402	17.86	53.58	53.58	5.5
Lesotho	4.75	142.70	16.85	797		37.08	37.08	3.5
Liberia	1.13	9.47	19.64	545	4.79	29.50	29.50	0.3

Country Name	Gross govt health expenditure (GGHE-D) as % GDP (2015)	GGHE-D per capita, PPP (current international \$) 2015	Out-of-pocket expenditure (OOPE) as % of CHE (2015)	DALYs per '000 population (2016)*	Density of skilled health workers (per 10000)	General government gross debt, % of GDP Avg. (2015–2017)	GDP growth (annual %) (2015–2017)
Thresholds →	>5% of GDP	>\$86	<20%	<538 (African average)	>23	<60%	>2%
Libya	..	..	..	288	89.97		5.0
Madagascar	2.37	34.65	21.66	411	3.61	37.06	3.8
Malawi (5)	2.67	31.00	10.98	461	3.54	60.23	3.1
Mali	0.96	19.60	46.31	760	5.28	34.04	5.7
MAURITANIA (6)	1.81	69.10	48.24	510	7.85	96.10	2.3
Mauritius	2.54	503.23	50.67	328	53.49	60.15	3.7
Morocco	2.39	188.46	53.08	265	14.9	64.26	3.3
Mozambique (5)	0.43	5.16	6.85	620	4.56	103.04	4.7
Namibia	5.62	593.57	8.33	455	31.32	43.76	2.0
Niger (5)	1.51	14.39	52.27	724	1.59	44.23	4.7
NIGERIA (6)	0.59	35.57	72.24	784	18.25	19.67	0.6
Rwanda	1.69	30.60	25.97	370	8.96	37.08	7.0
São Tomé and Príncipe	3.66	114.67	11.67	350		87.75	4.0
Senegal	1.26	30.83	44.18	407	3.78	59.49	6.7
Seychelles	3.29	841.25	2.48	330	54.17	66.77	4.5
SIERRA LEONE (6)	1.64	22.98	38.24	822	3.42	52.86	-3.5
Somalia	..	..	..	850	1.08		
South Africa	4.39	581.82	7.70	492	60.46	51.18	1.1
SOUTH SUDAN (6)	0.54	15.04	61.35	687		74.04	-7.0
Sudan	1.97	86.26	63.23	490	42.2	111.42	4.6
Tanzania	2.16	34.07	26.15	492	4.38	37.82	7.0
TOGO (6)	1.86	26.78	50.96	570	3.58	77.48	5.4
Tunisia	3.80	435.83	39.78	268	39.59	62.45	1.4
Uganda	0.98	18.61	40.50	513	7.42	36.56	4.6
Zambia (5)	1.96	74.23	27.53	535	9.76	61.71	3.6
ZIMBABWE (6)	2.15	37.95	25.79	522	12.44	66.69	1.9

Note: * Number of indicators in which the country is deficient compared to the threshold. Countries deficient in six of the seven indicators, and so categorised as severely health-stressed, are shown in capitals. Countries deficient in five of the seven indicators are categorised as very health-stressed.

Sources: Health expenditure data from WHO Global Health Expenditure database. Disease burden data from WHO Global Health Estimates (WHO, 2018). Data on skilled health professionals from WHO, 2017. Debt data from IMF database and GDP data from World Bank, 2018.

CHAPTER 4

PRIVATE SECTOR ROLE IN FINANCING HEALTHCARE IN AFRICA



Key Messages

- Developing effective health financing mechanisms and harnessing the strength of the private health sector are key strategies to address the increasingly complex health challenges in the region, particularly to help bridge the \$66 billion financing gap per annum.
- The Business and Sustainable Development Commission has estimated the value of business opportunities in healthcare to be worth \$259 billion by the year 2030, with the potential to create 16 million jobs in Africa.
- Today Africa manufactures less than 2 per cent of the medicines it consumes. Current estimates are that imports cater for over 70 per cent of the pharmaceutical market in Africa, amounting to \$14.5 billion worth of pharmaceuticals. The manufacture of pharmaceuticals and health products is a prime target for PPP engagement.
- Opportunities for the private sector to engage need to be properly aligned to a country's public health goals, including better access and affordability for the poor to access quality healthcare and medicines.
- The private sector needs to leverage the African Continental Free Trade Area (AfCFTA) to invest in the growing pharmaceutical industry and health product manufacture at a continental level and contribute to development goals.
- Public-private partnerships (PPPs) in health, and especially in health financing, are burgeoning across the continent and are concentrated on the demand side, while the supply side of healthcare (infrastructure, health workers, health products) attracts less funding.
- Opportunities for private sector investments include pharmaceuticals and medical devices; digital health technology; financial services; diagnostics and laboratories; media and communication; logistics and transportation; and training and skills development.
- A review of current PPP cases in Africa revealed that two-thirds are located in Eastern and West Africa. Central Africa, with the poorest health outcomes, has less than 10 per cent of the PPPs. Moreover over half of the reviewed 178 PPP cases were located in just 10 African countries. This indicates inequities in the distribution of PPPs and a lack of alignment with countries' health burden indicators.
- Despite the potential benefits of PPPs, the private sector's involvement and contribution to financing in Africa has not been optimised due to the lack of effective dialogue among stakeholders; weak regulation and policies specifically related to health financing schemes and strategies; as well as a poor ease of the doing business environment in most African countries. PPPs in health need to be institutionalised with public and private risk-sharing, well-structured and aligned to meet the SDGs at regional, sub-regional and national levels.

4.1 The private health sector in Africa

Private sector participation in healthcare in Africa is not new. There is a long history of involvement of private actors in the provision of healthcare across the continent, whether as direct providers of services (e.g., physicians, pharmacies, and hospitals) or as the providers or manufacturers of drugs, materials and technologies. As a result of the perceived lack of efficiency and quality in the provision of public healthcare, increased costs and reduced budgets, “the private sector already delivers about half of Africa’s health products and services” (International Finance Corporation, 2007).

In the early 2000s, Coca-Cola routinely hired two workers for every job opening in Africa because it was understood that at least one worker would soon become terminally ill (Kristi, 2010). Businesses are showing interest in improving health outcomes across the continent as better health for all promotes economic development, enhances worker productivity and quality of human resources in health, creates new markets, and improves the conditions under which firms operate (AfDB, 2013).

Companies outside the health sector such as Exxon Mobil, Nestle, and Pepsico are beginning to engage in efforts to improve outcomes in malaria, HIV infection, nutrition and hygiene through improved access to water and sanitation. A recent independent review examined the impact of private health providers in low- and middle-income countries which concluded that private providers should be considered on their outcomes for the whole health system and not only on how well they care for their patients (Institute of Global Health Innovation, 2017).

Investing in health in Africa is also increasingly attractive to the private sector and businesses and companies (Sturchio and Goel, 2012), as there are

major opportunities in the health and well-being sector. The Business and Sustainable Development Commission (BSDC, 2017) estimates the value of the opportunities for businesses addressing health-related challenges to be about \$259 billion in 2030, with the potential to create over 16 million jobs in Africa. Furthermore, 14 per cent of all business opportunities in the health and well-being sector globally will arise in Africa, second only to North America at 21 per cent. The opportunities (*ibid.*) are expected to be in:

- **Risk pooling** (\$150 billion). Increasing the penetration and scale of private, public-private and community insurance schemes could transform access to better healthcare if the right insurance mechanisms, including forms of micro-insurance, are put in place.
- **Better maternal and child health** (\$15 billion). Effective delivery of interventions requires talent development, supply chain management and partnerships with the public sector.
- **Remote patient monitoring** (\$15 billion). Sensors that read the vital signs of patients at home alert nurses and doctors cost-effectively to problems before they worsen.
- **Better disease management** (\$14 billion). Much of the mortality associated with the burden of disease is preventable through relatively low-cost interventions.
- **Telehealth** (\$11 billion). Primary healthcare provision could be transformed through telehealth and remote monitoring of patients, combined with new financing approaches to support healthcare access.

This report adopts a broad definition of the private sector that includes the formal for-profit sector (such as private hospital groups, general medical practitioners, and pharmacies, as well as private health insurance), non-governmental organisations (NGOs), faith-based organisations (FBOs),²² social

²² Services provided by FBOs are often subsidised by public and/or external funding and it is not always clear whether data distinguishes between funding flows to public and FBO facilities.

Table 4.1: Forms of private sector involvement in health

Type of involvement	Actors
Providers	Private hospitals and clinics Private doctors and nurses Civil society organisations Charities
Payers or financiers	Private health insurance companies Charities
Suppliers	Pharmaceutical companies Suppliers of medical equipment

Source: Compiled by ECA based on various sources.

enterprises, charitable philanthropic organisations (Galea and McKee, 2014), and a host of individual private providers, such as general practitioners and consultants, in the formal and informal for-profit sectors. The definition also includes the informal and often unregulated private sector that relates to traditional healers, informal drug sellers and unregistered health practitioners.

In essence, the private health sector refers to all organisations involved in the financing or provision of health services that fall outside the direct control of the government of the country. These include the direct provision of healthcare, the management of healthcare institutions, the manufacturing of healthcare goods and services (e.g., medicines, pharmaceutical products and rehabilitation), and the financing of healthcare products and services (Table 4.1).

The discussion in the chapter analyses the role of the for-profit private sector in the provision of healthcare, manufacturing and supply of healthcare-related goods, as well as in healthcare financing.

Role of the for-profit private health sector in Africa

There is an increasing reliance on private actors to provide, finance, and supply healthcare goods and services. It is useful to distinguish between private financing and private health service provision

components (Table 4.2). As shown, in addition to the direct delivery of healthcare services, the private sector engages at various stages of the health value chain, which includes research and development, manufacturing and supply, and wholesale and retail distribution of new health technologies, medicines, vaccines, diagnostics and medical devices, as well as health insurance and medical education. So for example, publicly provided services may be privately financed, as is the case for out-of-pocket (OOP) payments made by individuals at public facilities and where there is private health insurance, which may be commercial or voluntary community-based pre-payment schemes.

Linking the public and private sectors in health in Africa

The public sector uses a wide range of policy instruments to engage and create partnerships with the private sector in health (Table 4.3). These interventions, which include contracting in and out, licensing and accreditation, social franchising, social marketing, and vouchers, have proven successful in advancing health priorities, including family planning, tuberculosis treatment, malaria prevention and treatment, and child and maternal health, as well as in reducing impoverishment through healthcare payment subsidies. Often, these are commonly known as PPPs (Sturchio and Goel, 2012).

Table 4.2: Private sector contribution in health financing strategies

	Public Delivery	Private Delivery
Public Financing	Public hospitals, clinics, etc.	Contracting (financing on the demand or supply side) Examples: PPPs or PPE
Private Financing	National or global disease control initiatives (e.g. TB/HIV) Examples: Product Development Partnership and Global PPPs; Blended Financing/Bonds; Hybrid Health Insurance schemes	Fully private hospitals etc. but may have social impact aspirations too Examples: Social Franchising, Privatization; Impact Investments Bonds

Source: Compiled by ECA based on various sources..

4.2 Public–Private Partnerships (PPPs) in health in Africa

This report adopts a broad definition of PPPs, namely “a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance” (Richter, 2004).

As evident from Table 4.3, PPPs are one of the many types of public–private collaborations in healthcare delivery. However, PPPs, involving the structured collaboration of one or more public and private entities to achieve a common objective, represent a distinct model for engagement. Governments are increasingly looking at PPPs to expand access to higher-quality health services by leveraging capital, managerial capacity, and know-how from the private sector.

Originally confined to the traditional infrastructure sectors of transport, water, or energy, PPPs are increasingly applied in social infrastructure sectors, particularly for the delivery of health services. PPPs in health can help harness private sector interests to improve public health and meet government health priorities. PPPs encompass a wide variety of arrangements that can leverage capital, managerial capacity, and know-how from the private sector. For example, the initial injection of capital by the private partners is a key component of many PPPs, particularly those in the hospital sector. However,

PPPs in the healthcare sector vary in the scope of services covered (Table 4.4).

In addition, there are many private sector investments that are not governed by formal PPPs, but if properly regulated, could go a long way in increasing access to healthcare, especially if there is effective dialogue between government and the private sector.

A common critical element of the different types of PPPs is that the private partner shares risks with the government. However, the degree of risk sharing between the private and public partners is not homogeneous; it depends upon the level of capital committed by the private party, the length of the partnership, the provision for renegotiation, and how payment mechanisms are structured.

PPPs have been explored as a mechanism through which to mobilise additional resources and support for health activities in Africa. They may focus on combatting neglected diseases or be engaged in developing new drugs or vaccines. The UN agencies have been engaging with the private sector to deliver more resources for health, especially in poorer countries. WHO has identified partnerships with civil society organisations, philanthropic foundations and the for-profit private sector as key to the future of global health. This burgeoning collaboration with the private sector is in accordance with the United Nations’ Global Compact, which seeks to increase and distribute the benefits of global economic

Table 4.3: Public–private collaborations in healthcare delivery

Intervention	Description	Expected results	Where happening
Contracting in and out	Governments contract with private providers (nonprofit and for-profit) to deliver health services.	Private-sector coverage of particular services expanded via public funding; Improved efficiency and quality of care through competition.	Senegal, South Africa
Licensing and accreditation	Governments extend licensing and accreditation systems to include provisions for private-sector providers.	Strengthened quality of private health services; Governments monitor the care that private providers offer.	South Africa, Tanzania, Zambia
Regulation	By updating and harmonising laws, policies, regulations and procedures, governments authorise private provision of services and products by certain health professionals in specific settings.	Increased competition and organisation (for example, multi-pharmacy chains) more conducive to quality or lower prices; Increased private-sector contribution by removing obstacles and creating incentives for the private sector to provide public health services and products.	Tanzania
Provider networks and franchises	Networks and franchises group healthcare providers under an umbrella structure or parent organisation.	Ensure standard quality and prices and encourage individual private providers to scale up their services.	Benin, Cameroon, Eswatini, Ethiopia, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mali, Rwanda, Sierra Leone, South Africa, Togo, Zimbabwe
Public–private partnerships	Private providers and businesses join with governments, international organisations, or non-profits to address social needs.	Private-sector resources and expertise leveraged to deliver health products and services.	Egypt, Ghana, Lesotho, Nigeria, South Africa
Social marketing programs	Use commercial marketing techniques to make subsidised products more widely available. The programmes can distribute and promote products such as contraceptives, oral rehydration salts, and insecticide-treated bed nets.	Increased access to and use of essential health products.	Many countries, for family planning products and services and bed nets
Training and continuous education for private providers	A variety of training techniques, including direct training, long-distance learning, continuous medical education, and detailing to improve the knowledge and skills of private healthcare providers.	Improved private providers' knowledge, skills, and the quality of the care provided in areas that address public health objectives.	Cameroon, Ethiopia, Malawi, Nigeria, Senegal, Tunisia, Uganda
Vouchers	Government gives vouchers to target populations to subsidize the price of health services and products to make them more affordable and more likely to be used.	Increased consumer choice and private-sector care more affordable through subsidies. Vouchers create financial incentives to private providers to offer services and products they might not otherwise deliver. Motivates quality improvement via provider eligibility requirements.	Ghana, Tanzania
Insurance	Government-funded insurance, commercial insurance, and community-based mutuelles pool financial risk across large population groups.	Expands financial protection and eases burden on households paying out-of-pocket for health services. Insurance reduces financial barriers to seeking healthcare, especially for preventative health services.	Ghana, Mali, Namibia, Nigeria, Rwanda, Senegal

Sources: Harding (2009), O'Hanlon (2009); Lagomarsino and Singh Kundra (2008)

Table 4.4: Typology of PPPs in the healthcare sector PPP model

	Common term	Definition / Explanation
Health services only (selective)	Operating contract, performance-based contract (concession, lease)	A private operator is brought in to operate and deliver publicly funded health services in a publicly owned facility.
Facility finance (accommodation only)	Design, build, finance, operate (DBFO), build, own, operate, transfer (BOOT)	A public agency contracts a private operator to design, build, finance, and operate a hospital facility. Health services within the facility are (mostly) provided by government.
Combined (accommodation and health services)	Twin accommodation/clinical services joint venture/Franchising	A private operator builds or leases a facility and provides free (or subsidised) healthcare services to a defined population.

Sources: Adapted from Montagu and Harding (2012) and Barlow, Roehrich and Wright (2013).

development through voluntary corporate policies and actions in the areas of human rights, labour, the environment, and good governance.

It is widely believed these partnerships could help address specific cost and investment challenges faced by governments, as well as improving the efficiency and quality of health services and contributing to greater equity in access to essential drugs.

The underlying causes of this increased interest in PPPs are the rising costs of delivering healthcare services as populations age; increases in non-communicable or chronic diseases; changing lifestyles with increased urbanisation; and rapidly advancing medical technologies. For instance, UNAIDS has proposed a fast-track strategy to end the AIDS epidemic by 2030; the estimated price tag to achieve this on a global scale is approximately \$30 billion per year until 2030 (UNAIDS, 2014). The cost of treating diabetes is estimated at \$2,300 per patient per year in Africa (Hall et al., 2011). With rapid population growth and ageing populations (discussed in Chapter 2), the demand for health services in Africa will only intensify.

Yet, public–private partnerships in health have traditionally been treated as transactional, ‘contract-out’ models where the government delegates a particular project to a private organisation. The

private sector is viewed as a vendor rather than a partner. Unfortunately, this model tends to generate distrust and debates about its effectiveness in delivering health outcomes (WEF, 2016).

The next part of this chapter assesses the current trends, models and roles of the private sector in healthcare financing across the continent through the PPP modality by reviewing a number of case studies across the region. It also analyses the gaps and opportunities to better make use of this burgeoning private sector.

4.3 Key features of the PPPs in the health space in Africa

Similar to PPP cases elsewhere across the world, the private sector in Africa has evolved from being a purely inactive bystander to a more active implementer in the GPPPH (Global Public–Private Partnerships for Health) cases. GPPPH have great value for financing and implementing product development, which is generally too expensive and too resource-intensive for a country to undertake on its own. An example is the U.S. President’s Emergency Program for AIDS Relief (PEPFAR), which has relied on innovative private sector partnerships for everything from supply chain management to laboratory strengthening to HIV prevention among youth. Such PPPs have shown tremendous impact and success.

The GPPPH cases typically raise the necessary finance and intervene across multiple areas of service delivery and also engage in training and capacity building. A majority of the GPPPH cases reviewed intervene in communicable diseases. Only 6 per cent of the cases focus on non-communicable diseases (NCDs). This indicates the need to align where such cases should be located and to target countries such as Ghana and Senegal that are now slowly experiencing an increasing burden of NCDs. For instance, NCDs constitute 36 per cent and 37 per cent respectively of the total disease burden in Ghana and Senegal, even though a significant portion of the currently established PPPs focus on communicable disease interventions.

More recent GPPPH cases adopt a health ecosystem approach as opposed to vertical disease intervention which was seen in the early days of GPPPH, such as the Stop TB or other partnerships. The ecosystem approach requires a forum where stakeholders can consult and agree on a holistic view of health needs and desired outcomes. Such a model is used in Water, Sanitation, and Hygiene in schools program (WASH), a global partnership aimed at providing schools with safe drinking water, improved sanitation facilities and hygiene education.

Some of the key features of PPPs in health in Africa are:

Unequal distribution of PPP cases across Africa

The 178 PPP cases considered in this analysis were mapped across the countries in which they engaged. Results indicate that nearly two-thirds (63 per cent) of PPP cases are located in Eastern and West Africa (Figure 4.1). Central Africa, with the poorest health outcomes, has less than 10 per cent of the PPPs.

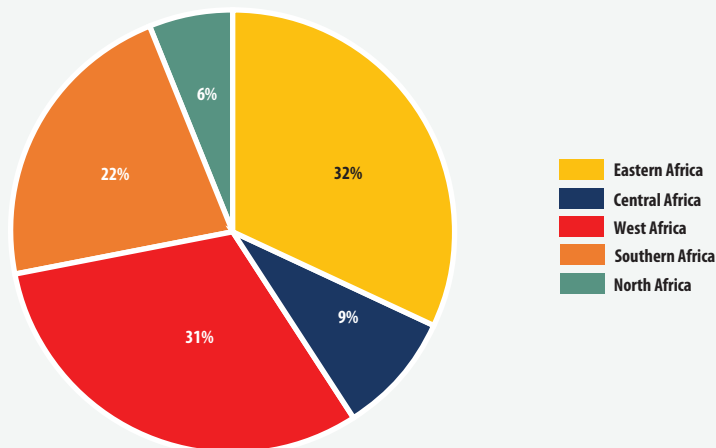
Further, over half (51 per cent) of the PPP cases in health are concentrated in ten countries in Africa – Cameroon, Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Senegal, South Africa, Tanzania and Uganda – which indicates considerable inequities in the distribution of the PPP cases across the continent. The distribution across the sub-regions for these ten countries is as follows:

- Eastern Africa: Kenya (9%); Tanzania (5%), Uganda (4%) and Ethiopia (4%)
- Western Africa: Nigeria (8%), Ghana (5%) and Senegal (3%)
- Southern Africa: South Africa (6%) and Mozambique (3%)
- Central Africa: Cameroon (4%)

Misalignment of PPP cases to countries' health burden indicators

PPPs are expected to engage the private sector's innovation and financing capacities to complement and support the country's objectives to meet certain

Figure 4.1: Distribution of health PPP cases by sub-region in Africa (N=178 Cases)



Source: ECA staff calculations using data from the review of PPP cases.

identified health outcomes and public health goals. However, the private sector's interventions through PPPs often fail to be aligned to a country's specific disease burden. Moreover the countries with the highest disease burdens have the least number of PPPs. For example, Kenya is among the top-ranking countries in the number of PPP cases with 60 cases but it also has among the lowest disease burdens. On the other hand, Comoros and Somalia that have among the highest disease burdens also have the least number of PPPs, whereas these countries should be targeted for a greater number of PPP cases.

More than half of PPP cases are engaged in service delivery and health financing

The PPP case studies reviewed for this chapter were mapped to ten thematic areas of engagement aligned to categories used in the literature review. As evident from Figure 4.2, most of the cases (38 per cent) engage in service delivery, followed by health financing (13 per cent); then multi-area globally (12 per cent). In summary, nearly two-thirds of PPP cases in health across Africa intervene across either service delivery or health financing, as even the GPPP cases intervene across service delivery (62 per cent) such as access to treatment, education etc. and the remaining across product development, human resources and education (only 9 per cent of GPPP cases).

Why are the top 10 countries with the most health PPPs attractive to the private sector?

For the most part, where PPP cases choose to focus in Africa is probably driven by the private sector's desire to invest in health and the country selections are driven by the level and potential of economic growth, economic diversification (an indicator of economic resilience), easy availability of infrastructure, and governance.

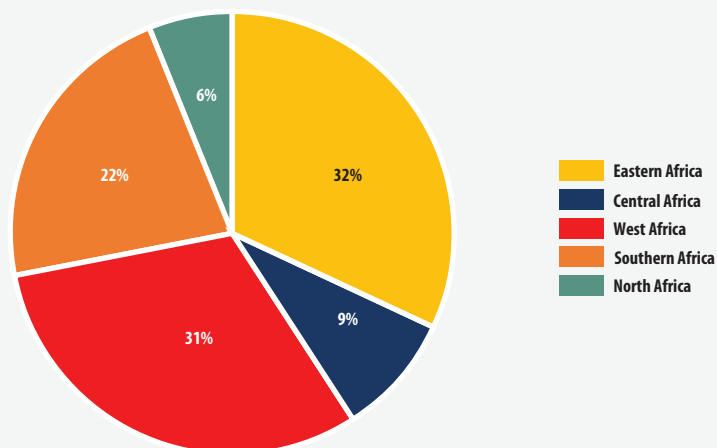
Economic growth and resilience matters:

- Eight of the ten countries were projected as high-growth and high-resilience countries in 2018.
- Of the two remaining, Mozambique has high growth prospects, and South Africa is considered resilient.
- Kenya (61st) and South Africa (82nd) are in the top half of the global Ease of Doing Business 2019 rankings (n=190).

Infrastructure matters:

- For the 10 countries, internet growth (2000–2017) was 4 times higher and internet penetration 20 per cent higher than the African average.
- The ten countries together comprise 37 per cent of total Facebook users in Africa.

Figure 4.2: PPP cases by areas of engagement in Africa



Source: ECA staff calculations from review of PPP cases

Box 4.2: Global Financing Facility (GFF)

GFF can finance investments outside the health sector such as education, clean water and sanitation. It mobilises three key sources of funding: public finance, private domestic financing, the GFF Trust Fund and the International Development Association (IDA), as well as targeted additional donors such as Gavi the Vaccine Alliance, the Global Fund to fight HIV/AIDS, TB and Malaria, and bilateral assistance.

Such a model is used in the Water, Sanitation, and Hygiene (WASH) schools programme. This is a global partnership aimed at providing schools with safe drinking water, improved sanitation facilities and hygiene education. This programme, which is the result of collaboration among more than 70 organisations worldwide, has led to a 30 per cent reduction in hygiene-related diseases, while reducing absenteeism by 20 to 40 per cent.

There is an opportunity to guide and align such private sector interest in health as these countries reflect new regional trends and incentives that can attract PPP cases in the respective areas of engagement.

Service delivery PPP cases

The PPP models in service delivery have evolved over time from being focused on access to treatment and medicine (mostly driven by pharmaceutical companies and social marketing initiatives under their Corporate Social Responsibility [CSR] policies) to more 'ecosystem' driven partnerships that have shown successful impact at primary-care level of service delivery.

A new generation of partnerships, such as the Global Financing Facility (GFF) (Box 4.2), creates a cooperative and innovative ecosystem between the public sector, private companies and international organisations and intervenes at country level. The goal is to operate via a multi-stakeholder platform to build a case for a 3–5 year investment deploying an integrated, system-wide approach to strengthen healthcare delivery, disease prevention and health systems as a whole.

A more detailed analysis was undertaken of the 68 (16 at national level and 52 at institutional level)

PPP cases that are engaged in service delivery. Most cases (40 per cent) are driven by pharmaceutical private sector actors through their CSRs.

The areas of focus of these cases were mainly educational and preventative initiatives, and social marketing types of intervention, followed by some actors working on access to treatment/medicine (mainly communicable diseases). These include:

- *Pfizer* – Trachoma Zero Campaign Initiative;
- *Sanofi* – National Diabetes Campaign;
- *Gilead* – Hepatitis C Initiative; and
- *Merck for Mothers* – Strengthening maternal health at primary care level.

Recent cases in service delivery are PPP service contracts at institutional levels, which are becoming popular across Africa as the understanding of how to structure such cases becomes more evident. These types of PPPs harness private financing and expertise to achieve public health goals. Some examples below

Box 4.3: Lesotho infrastructure PPP case

In 2008, Lesotho embarked on a PPP to upgrade the Queen Elizabeth II Hospital. Tsepong Limited (led by Netcare SA) was awarded the contract to replace the hospital and three local clinics. The new 425-bed hospital was set to open in October 2011.

The government of Lesotho funded a third of the capital cost and the PPP operator was responsible for two-thirds of the capital costs, construction, equipping and operational costs of the hospital (including all clinical and non-clinical services and hospital management). The intention was for the government to then purchase healthcare for its citizens from the hospital group, and patients would reportedly be charged no more than what it already cost them to access public healthcare. Eighty-five per cent of the equity for the project was supplied through a loan from the Development Bank of South Africa.

An analysis of the baseline and endline studies of the PPP in Lesotho published in 2015 indicates that the PPP delivered more clinical services and of higher quality and achieved patient outcomes. However, more recent findings indicate some potential higher costs to patients that need to be better evaluated.

Sources: (Wearden, 2009; Makholwa, 2010; McIntosh, Jack and Grabowski, 2015)

showcase more recent 'infrastructure' PPPs that combine infrastructure build-up with financing and delivery of clinical services. A review of such models has shown the potential to improve access, quality and efficiency in healthcare; however, they have to be well launched and evaluated for effectiveness (Sekhri et.al , 2011). Some examples include:

- **Bareeq Capital and Hospital Company** is a new private equity firm in Egypt, focusing on social infrastructure projects and it brings finance, equipment, design and operates turnkey private sector engagement capability. More than three facilities have successfully implemented this initiative. The PPP brings together local and international partners such as Siemens and Deta (World Bank, 2012).
- **The Alzira Model** in Lesotho is used as an example of a successfully implemented PPP model for service management and contracts with the private sector. It does have some implementation challenges, and this highlights the need to ensure transparent and accountable governance and monitoring of the partnership (Box 4.3).

4.4 Opportunities for the private sector in healthcare in Africa

Access to quality healthcare at affordable rates is an urgent challenge in Africa. The private sector can innovate to create self-sustaining solutions to deliver quality healthcare in Africa. Active participation by companies, both non-profit and for-profit businesses, is critical to achieving the health-related SDGs. Increased investments by the for-profit private sector can greatly increase the total health expenditure from governments and other sources.

Apart from the opportunities for businesses to engage directly in health service delivery in many countries, companies can focus on their core competencies when contributing to improving health outcomes in

Africa in a number of ways (Box 4.4). Private investors are spurring innovations in telemedicine, delivery, operating room procedures, workforce training and the generation of new revenue streams (IFC, 2017).

Promising areas of potential engagement with the private sector remain under-invested

Other than service delivery and financing, the other areas of private sector engagement in health remain relatively under-represented and probably under-invested because of their more recent nature. Although evidence remains weak in these 'newer' areas, such models of private sector engagement in the supply-side of healthcare service delivery, namely laboratory systems and the development of workforce skills, offer significant opportunities for effectiveness and their impact should be explored further. Each of these areas is discussed in detail below and illustrated with case studies. What emerges is that the opportunities for effectiveness should be properly aligned to public health goals.

Laboratories and diagnostics

Laboratories are essential for surveillance, outbreak control, and clinical decision making (Bloland et al., 2012) as more than 70 per cent of clinical decision making is based on (or confirmed by) medical laboratory test results (Alemnji et al., 2014).

Evaluating the economic and health impact of investing in laboratories in Eastern Africa, a World Bank report (World Bank Group, 2015) concluded that strengthening laboratory capacity improves diagnostic capabilities and reduces the incidence of misdiagnosis. These contribute to better alignment of treatment options for patients which, in turn, lead to enhanced economic outcomes, reducing worker absenteeism and increasing labor productivity.

And yet, like the broader health system in most countries, national laboratory systems suffer from a dearth of professional staff, outdated equipment and poor equipment maintenance, weak supply chain management for consumables, insufficient

Box 4.4: Opportunities for businesses to engage in Africa's healthcare sector

- **Pharmaceutical and medical device** industries can focus on healthcare products and services. They can also invest significantly in delivery infrastructure and systems to enable their businesses to operate efficiently in new markets. Examples include Astrazeneca, Merck APOC (river blindness), GSK, Gilead and others.
- **Digital technology (IT and telecoms)** companies enable health systems by improving communications and the ability to process information. This has been demonstrated by the pattern of their investments in recent years by companies including Intel, Vodafone, Novartis SMS for Life, J&J Every Mother Every Child, Bharti Airtel, Safaricom and others.
- **Financial services** companies focus on health financing (e.g. health system funding, insurance and payment services). Examples include AXA. Working with partners, they can raise awareness of the availability of health financing, contribute to policy and governance decisions, and help generate more demand for their services.
- **Media, communication and entertainment** companies' products and services can be used to deliver health messages to people, for example through radio, television, social media or text messages. Innovative examples include Globo TV, BBC, DMI and others. They can also be used to mobilise resources in innovative ways.
- **Logistics and transportation** companies like DHL help both the public and private sectors to maximise supply chain efficiency and meet customer needs. They can do this in areas such as patient transportation services, laboratories, clinics and hospitals.

Source: Private enterprise for public health, 2012.

quality control, and poor infrastructure—namely, inconsistent electricity and water, as well as crumbling physical infrastructure (Alemnji et al., 2014; Bloland et al., 2012; Nkengasong et al., 2010; Sturchio and Cohen, 2012).

PPPs play an important role in supporting the implementation of strategic plans for strengthening national laboratory systems (Nkengasong et al., 2010). The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and Becton, Dickinson and Company (BD) lead one such PPP with a funding of \$18 million between 2007 and 2012 to strengthen national laboratory systems in eight African countries severely impacted by HIV/AIDS and tuberculosis (TB).²³

The PPP focused on training laboratory workers, improving the range and quality of services, developing tools and guidelines for quality control and quality assurance, strengthening TB reference laboratories to serve as training facilities, and improving access to diagnostics for TB.

By 2012, PEPFAR and BD, in partnership with the Centres for Disease Control and Prevention (CDC), ministries of health, national reference laboratories, and local implementing partners, had launched the initiative in Ethiopia, Mozambique, South Africa, and Uganda. The PPP adjusted training curricula according to the need of each country, addressing topic areas such as referral procedures for clinical specimens, record keeping, quality assessment, project management, and TB-specific services (including TB identification and drug susceptibility testing).

There have already been improvements in the diagnosis of multidrug-resistant TB, patient management, and treatment outcomes through strengthening of technical skills, developing guidelines and planning referral networks. In Uganda for instance, the PPP trained 120 laboratory workers on antiretroviral therapy and improved quality management services in laboratories that serve almost 100,000 people (Sturchio and Cohen, 2012). This PPP has demonstrated a measurable, scalable, evidence-based model to multiply the

²³ National Academies of Sciences, Engineering, and Medicine (2016).

individual strengths of the public and private sectors (Shrivastava et al., 2016).

The PPP between the Abbott Fund and the Government of Tanzania launched in 2001 has helped modernise facilities, train staff, improve hospital and patient management, and expand capacity for HIV/AIDS testing and treatment at over 90 hospitals and rural health clinics across the country. To date, Abbott Fund has invested more than \$50 million in the initiative, in addition to providing the technical expertise of Abbott employee volunteers to address a range of critical health areas. The PPP has strengthened public health systems and fostered improved health outcomes (Adeeb and Parkhurst, 2007).

Pharmaceuticals and the supply chain

Pharmaceutical companies, such as Novartis, Merck and Glaxo-Smith Kline (GSK), continue to play a critical role in developing countries and have significantly improved access to medicines and quality care (Adeeb and Parkhurst, 2007). They are supporting numerous projects to combat HIV/AIDS, TB and malaria as well as strengthening health systems and engaging in product development projects. While there are still questions of access to affordable drugs, over the last few years there has been a sea change in pricing and social impact through these companies' corporate social responsibility initiatives. For example, in 2010, Johnson & Johnson made a major commitment to develop new mobile health applications but to also donate its deworming medicine on a large scale (Johnson & Johnson, 2010). GSK initiated its voluntary licensing of anti-retroviral (ARV) drugs, with a notable example being Aspen Pharmacare in South Africa in 2001, where GSK created a partnership with a local generic manufacturing company to produce their own versions of GSK's ARV.

There are a number of disparate factors that call for the urgent development of the pharmaceutical industry on the continent. These range from the patent expirations of many leading medicines, to

the growth of pandemics, increasing numbers of people on various treatments, an improving health insurance and coverage environment, a consequent increase in the number of people with access to healthcare, increasing life spans and a consequent increase in lifestyle diseases. More than all these issues, growth of a domestic pharmaceutical industry is matter of health security; a continent cannot have sustainable and inclusive development without meeting the health needs of its growing population. For example, it is forecast that non-communicable diseases are becoming increasingly prominent across the continent, and they are predicted to overtake infectious diseases as the leading causes of death in Africa by 2030 (WHO, 2018).

Africa manufactures less than 2 per cent of the medicines it consumes. Over 70 per cent of the world's HIV/AIDS cases and 90 per cent of the deaths due to malaria currently occur in Africa. In addition, the continent bears 50 per cent of the global deaths of children aged under 5, which is mainly due to neonatal causes as well as pneumonia, diarrhoea, measles, HIV, tuberculosis and malaria. The tragedy is that these diseases are treatable: most related deaths could be prevented with timely access to appropriate and affordable medicines.

Current estimates are that imports cater for over 70 per cent of the pharmaceutical market in Africa, amounting to \$14.5 billion worth of pharmaceuticals – 60.4 per cent from Europe, 11.7 per cent from India, and 9.54 per cent from China (UNCTAD, 2018). Only 3.3 per cent of the pharmaceutical imports originate from within Africa. Furthermore, ten countries comprise nearly two-third of the \$14.5 billion worth of total pharmaceutical imports into Africa in 2017 – South Africa, Egypt, Algeria, Morocco, Ethiopia, Kenya, Tunisia, Cameroon, Tanzania and the Democratic Republic of Congo.

According to McKinsey (2015), Africa's pharmaceutical markets are growing in every sector. Between 2013 and 2020, prescription drugs are forecast to grow at a

compound annual growth rate of 6 per cent, generics at 9 per cent, over-the-counter medicines at 6 per cent, and medical devices at 11 per cent. According to the report, the value of Africa's pharmaceutical industry jumped to \$20.8 billion in 2013 from just \$4.7 billion a decade earlier. In 2015 it was valued at \$40 billion and was forecast to increase to \$65 billion by 2020 driven by urbanisation, a growing middle class, an improving business environment, the demographic dividend etc.

The potential benefits of building a thriving pharmaceutical industry capable of meeting domestic and foreign demand for medicaments reflect the dynamics of many other industries. These benefits include, inter alia, profitability, job creation, an inducement to transfer technology, and the generation of foreign exchange. However, for the pharmaceutical industry, the rationale for encouraging local production in Africa goes beyond simply supporting a budding local industry.

The pharmaceutical sector is distinguished from other sectors by the underlying health rationale for local production derived from demographic changes, rapid urban growth reflecting changing lifestyles and disease profiles, and the double burden of disease, as discussed in Chapter 2.

Enhanced integration on the continent premised on the adoption of the Boosting Intra-African Trade Initiative (BIAT) in 2012 and the launch and ongoing ratification of the African Continental Free Trade Area (AfCFTA) provides a huge opportunity for Africa's pharmaceutical industry to safeguard public health. The main proviso is that the final AfCFTA agreement needs to integrate an awareness of the multiple ways in which trade impacts on health and health systems to ensure that the agreement, on balance, contributes to improving health outcomes on the continent.

Health services in Africa can be supported by the provisions on trade in services through increased competition, addressing of gaps in service provision

and spread of qualified medical professionals and new health technology. Some countries could pursue policies to emerge as regional hubs for health services, aided by the free movement of persons and goods embedded in the AfCFTA and the lower cost of treatment and travel for Africans relative to seeking treatment in Europe or North America.

Pharmaceutical companies and pharmacies play an important role in providing primary health services in many countries. Development partners and governments are exploring ways to expand the role of these stakeholders. The global PPP (GPPP) cases have shown many successful collaborations between the private sector and government in the supply of essential medicines, access and treatment. As seen from the above discussion, the PPP cases mainly focus on the fight against HIV/AIDS, malaria and TB. Compared to many other industries, the pharmaceutical companies through both their business and philanthropic arms have opportunities to engage in a variety of economic business activities in developing countries (Adeeb and Parkhurst, 2007).

Skills development, research and capacity building

The world is currently facing a global shortage of healthcare workers, especially pharmacists (Global Health Workforce Alliance, 2014). Shortages of pharmacists have been reported in all sectors on a global scale (Gall, Bates and Bruno, 2012), and Africa is the continent most severely affected (Bates et al., 2016). Africa has the smallest proportion of pharmacists working in the pharmaceutical industry, a majority of whom work in the community pharmacy setting. South Africa has 13,000 pharmacists, with the greatest number of these (43 per cent) in communities, 35 per cent in hospital settings, and only 6 per cent in the pharmaceutical industry (Gray, Riddin and Jugathpal, 2016). As well as a general shortage of qualified pharmacists in the pharmaceutical industry, their distribution is inequitable and the industry suffers from a skills mix imbalance and limited capacity training.

Box 4.5: Kenya and K-MET

Kenya is showcasing innovation in Medical Education and Training PPPs. The Kisumu Medical and Educational Trust (K-MET), is a non-profit network of 204 health providers and community-based workers that works to expand and promote access to affordable and quality reproductive healthcare to communities in need of such services, and with an emphasis on maternal and newborn health and adolescent reproductive health services. Its mission is to promote innovative and sustainable health and education programmes among underserved communities in Kenya.

The program has trained many Youth Peer Educators, who educate others on HIV/AIDS. Educating women and girls is especially important, since they bear the burden of HIV/AIDS and suffer from inadequate access to reproductive health services.

K-MET workers make sure to empower the community. They involve them in family planning, community-based service providers, distribute contraceptives and educate the community. Certified home workers are provided with drug kits and are educated in drug kit management, basic nutrition, and other areas. They also counsel patients. Nutritional programs are also run.

Sources: (Patsis, 2007; International Women's Health Coalition, n.d.)

Given the population growth expected in the region, the only way to meet rising health demands with equally rising health supply is the active engagement of the private sector in skills development, research and capacity development. Experiences such as the Kenya Healthcare PPP (Box 4.5) as well as the midwifery PPP in Malawi have proved to be successful.

There is also a growing interest among health professionals and investors in the African diaspora in the US and the UK to invest in their countries of origin, especially for social causes. In Nigeria, various private hospitals and clinics have been established with investment from Nigerian physicians based in the US and the UK. In Ethiopia, a group of more than 300 Ethiopian-American doctors have invested in a medical city concept and contribute significantly to the production of health workers by providing continuing medical education and visiting specialists for training.

The Kigali Institute of Science and Technology is developing an e-health Centre of Excellence that will serve as a national and regional locus for e-health research, education, and capacity building.

However, there are various quality and regulatory challenges in establishing PPPs across healthcare human resources. In many African countries, private

healthcare education institutions are expensive and are of very low quality. Furthermore, incentives such as private wing working regulations hamper and increase staff turnover. Nevertheless, these challenges also present unique opportunities to leverage private sector innovations and technology, such as telemedicine and tele-radiology services, which can help governments to 'leapfrog' and meet the demands in a unique way.

Health insurance²⁴

Health insurance coverage rates in Africa are low, providing opportunities for private insurance companies to engage in the health insurance sector and contribute to reducing the overall health financing gap. The challenge lies in extending coverage from mandatory, formal public and private sector social contributory schemes to a more universal access to health care to cover the unprotected population groups.

Private health insurance schemes have the potential to offer improved access to newer and modern private health facilities with reduced waiting queues and generally higher patient satisfaction. However, the role of governments in the extension of coverage to the informal sector is crucial and can take different forms of subsidizing insurance products and

24 This section is based on the Briefing Note provided by AXA.

outsourcing the management of health insurance to private companies. The latter implies a stronger regulatory role to ensure affordability and access. For example, in Ghana the National Health Insurance Authority (NHIA) also serves as regulator for private health insurance schemes. By the end of 2018, fourteen companies were licensed to provide private health insurance in Ghana.

The private sector role can have three distinct roles in extending access to health insurance: as substitutes of governments to extend capacity to a larger proportion of the population; in a public-private partnership with outsourcing management responsibilities (as in Cote d'Ivoire); and as provider of complementary health insurance to national public schemes. In all circumstances, the necessary private-private engagement to ensure affordability and access remain critical.

In Egypt, the recently-enacted Universal Health Coverage Act in 2018 aims to ensure adequate and sustainable funding for health care services and reduce the share of out-of-pocket expenditures in accordance with international quality standards. The move is in line with the global movement to provide universal health insurance to all citizens of the world, with various meetings being held by international organizations to push for countries to pass local legislations laying down the framework for universal healthcare (Axa, 2018).

The implementation of Egypt's Universal Health Coverage Act (2018-2032) will be in six phases covering different governorates. More importantly, the financial resources of the health sector are sourced from: State Budget, Citizen-paid Premiums and Tobacco & Cement Tax.²⁵ According to the Egyptian Ministry of Finance, the State bears one third of the budget of the new health insurance system. Under this new health system, the State treasury

will bear 5 per cent of those who cannot afford medical coverage. As for the Citizen-paid Premiums, employers would be required to pay a premium of each employee's salary into the fund, while employees pay a further premium that would be deducted from the salary. Additionally, the Egyptian government imposed a new tax on tobacco and cement industries to provide additional revenues, most of which is to be allocated for spending on the new health insurance system (Axa 2018).

Again, the hybrid format of public-private engagement in health ensures a service provider that offers complementary health services besides those offered by the public sector. This includes commissioning of certain functions to the private sector such as service digitalization, patient enrollment process, network management, fraud management and financial monitoring. In terms of areas of competence, the government plays the main role in setting regulations and raising funds while the insurance company takes care of monitoring technical and financial operations, evaluates performance to ensure technical excellence, a strong IT infrastructure and a well-designed operational setup.

Digital health and innovations

Digital health is a broad term that generally describes the use of information and communication technologies (ICT) for healthcare purposes. This includes eHealth and mHealth products and services, including telehealth, electronic medical records (EMRs), telemedicine, eLearning and mobile health. Digital health is increasingly employed—in combination with tools that build capacity and address the quality of care—to improve health systems and use resources efficiently. When combined, these approaches can reduce health disparities and improve patient care.

25 Pharos Holding Report. 2017. Available at: <http://enterprise.press/wp-content/uploads/2017/12/Egypt-Universal-Healthcare-Act-A-Primer.pdf>. Accessed on 14 December 2018.

Since early 2000s, Africa has witnessed a growing number of new private investments in health innovation and product development with enormous potential for scaling up and greater impact. Major eHealth projects include the Telemedicine Network for Francophone African Countries (RAFT), HINARI Access to Research in Health Programme, ePortuguese Network and Pan-African e-Network Project.

Telemedicine, also known as 'e-Health/telehealth', is a promising innovation which employs modern technology to transmit information (Shekar and Otto 2012). Several countries are implementing telemedicine and eLearning projects, including Algeria, Benin, Burkina Faso, Burundi, Cameroon, Chad, Republic of Congo, Cote d'Ivoire, Ethiopia, Ghana, Kenya, Madagascar, Mali, Mauritania, Niger, Rwanda, Senegal and South Africa. Some of these use mobile phones to support the delivery of health care, awareness and education; remote data collection; remote monitoring and home care; communicating treatments to patients; and reporting and responding to disease outbreaks and emergencies (WHO, 2011).

Airtel Tanzania, the second largest telecommunications company in Tanzania, provides a free service that facilitates text messages about infant care to mothers and pregnant women. For over a two-year period, some 500,000 parents received 40 million text messages about safe motherhood practices, thereby helping to reduce infant mortality by 64 per cent and maternal mortality by 55 per cent (Mangone and Gitonga 2017).

Other e-health initiatives are also becoming linked throughout Africa. The Open Medical Record System (OpenMRS) is a multi-institution, non-profit collaboration led by the Regenstrief Institute and Partners in Health to develop and install medical record systems in concert with local users. OpenMRS

teams use open-source, non-proprietary strategies in which the software programming code is available for everyone to see, enhance, use, and share. The focus is on creating medical record systems and implementation networks that enable systems development and self-reliance within resource-constrained environments. To date, OpenMRS has been implemented in South Africa, Kenya, Rwanda, Ghana, Lesotho, Zimbabwe, Mozambique, Uganda, and Tanzania.

Currently, a large number of healthcare innovators are focused mainly in Rwanda, Kenya and Uganda. Indeed, Eastern Africa is a growing hub for ICT innovation, while innovators across the continent are early-stage organisations focused on building networks, and improving the quality of care. While Kenya and Uganda's private sectors spur innovation, in Rwanda healthcare innovation has been driven by the government's comprehensive nationwide ehealth plan.

Most countries in Eastern Africa such as Kenya, Rwanda, Tanzania and Uganda have invested significantly in broadband internet infrastructure since 2009 and have national broadband strategies. Also, they have made large-scale, state-funded infrastructure investments. Most of these initial initiatives are private sector driven, for-profit models. Understanding how to structure high-value partnerships with the public sector can open up a pathway to engage healthcare innovators and multinational corporations, while making progress towards public sector goals (SEAD, 2017).²⁶

Many countries in Africa have already achieved a high level of mobile penetration and internet penetration is also on the rise – mobile devices have become increasingly common and have been adopted in some countries in Africa as a force for delivering better healthcare. The South African messaging platform *MomConnect* (a mobile

26 Available from <https://www.innovationsinhealthcare.org/healthcare-innovation-in-east-africa-navigating-the-ecosystem/>. Accessed on 22 January 2019.

messaging platform) saw 465,703 users adopt the service, demonstrating increasing maturity of digital participation (de Morais, 2017).

Rwanda is the first country in the world to use the drone technology for saving lives. Launched in October 2016, the drone delivery project is a partnership between the Government of Rwanda and the California based robotics company, Zipline, Inc. which is a drone start-up delivering medical supplies in Rwanda. With the help of these drones, patients no longer have to wait for blood for hours to get to remote clinics and hospitals. Since its launch in 2016, Zipline has taken over 20 per cent of blood deliveries within rural Rwanda (Ackerman, 2018).

The Novartis Foundation and its partners have developed a telemedicine system in Ghana to connect frontline health workers with a simple phone call to consultation centres in referral hospitals several hours away, where doctors and specialists with the right expertise are available around-the-clock. A total of 6 million patients were reached and 31 per cent unnecessary referrals were avoided through teleconsultation (\$31 saved per avoided referral), as more than half of all teleconsultations could be resolved directly by phone (Novartis Foundation et al., 2018).

Novartis has pioneered the use of mobile phone technology to help expand access to medicines in the most remote areas. With public and private partners under the umbrella of the Roll Back Malaria Partnership, the SMS for Life was established to eliminate stock-outs of anti-malarial drugs in public health facilities. The solution is flexible and scalable to support additional health facilities, countries and products at an operational cost of less than \$80 per health facility per year. Today, SMS for Life has been introduced in five African countries and a new enhanced solution is being piloted in Nigeria that uses tablet computers to provide data on stock levels and disease surveillance,

while also offering training in disease management to healthcare professionals.²⁷

In many African countries, challenges in the supply chain make it difficult to get medicine to patients. The benefit of mobile technologies lies in access and it is much easier to overcome the geographical barriers which have long prevented many people from getting the care they need. For example, previously, patients would travel to far-off health clinics only to find that the medicines they needed were no longer in stock. Today, around 27,000 government health workers in Uganda use a mobile health system called mTRAC to report on medicine stocks across the country (de Morais, 2017). During the 2014-2015 Ebola crisis in West Africa the WhatsApp system allowed the BBC to use its platform to share lifesaving health information with people in rural and quarantined areas, as well as ask questions, share stories and local solutions.

Furthermore, an m-health pilot has been launched in the private sector in Nairobi and Mombasa, Kenya, to better understand the supply chain cycle and build capabilities to ensure Novartis medicines reach patients at the right time. Pharmacists register their patients for surveys via SMS, and the survey results help to map out patients' locations and redistribute medicines to areas where they are needed most.

Acknowledging a growing demand for improved healthcare services and products in Africa, Quantum Global Group has created a dedicated \$400 million healthcare fund that will consider investment opportunities in private medical centres, pharmaceuticals, biotechnology, medical equipment and medical support services across the continent (de Morais, 2017).

In Ghana, the company mPedigree uses a simple sticker on the packaging, which, when scratched with a fingernail or coin, reveals a numeric code

27 Available from <https://www.novartis.com/sites/www.novartis.com/files/novartis-brochure-africa.pdf>. Accessed on 18 November 2018

that can be verified by SMS. This provides a direct confirmation of the drug's authenticity. Operating in 12 African countries, nearly 75 million people are said to have benefited directly or indirectly from this strategy (mPedigree, 2018).

As this brief summary indicates, there are numerous possibilities. However, to effectively leverage technology in the sector, adequately trained doctors and nurses are needed. As discussed in Chapter 2, there is a severe shortage of skilled healthcare professionals in most countries in Africa and often they do not have appropriate training or access to continuing medical education. Upskilling the local healthcare workforce is thus a major prerequisite for benefiting from the innovations made possible with the spread of digital health technologies.

In addition, countries need to address limited awareness about eHealth; lack of an enabling policy environment; weak leadership and coordination; weak ICT infrastructure and services; inadequate financial resources; and weak monitoring and evaluation systems.

The advent of technology, especially internet and internet-enabled services, has made it much easier for countries in Africa to provide healthcare services to its citizens. The recently signed AfCFTA provides opportunities for larger markets and encourages more innovations in healthcare. The real challenge lies in the ability to transform these initiatives to achieve real scale and long-term sustainability using digital technologies that can deliver healthcare to people living in remote parts of Africa.

Conclusion

Increasingly, governments are turning to the private sector to improve quality and deliver value for money, build infrastructure, provide staff and training, raise quality, improve productivity, undertake social marketing, and enhance procurement (Rockefeller Foundation, 2008).

Indeed, there is no health system that is entirely public or private (Sekhri and Savedoff, 2006).

The public and private sectors have different strengths and taking advantage of the existence of the private sector to serve public health objectives can be often challenging because of:

- a lack of vision, common definitions and disagreement over what role the private sector should play;
- mistrust, lack of communication, and negative attitudes toward the private sector, which often inhibit collaboration between the public and private sectors (Bennett et al., 2005);
- the reality and perception of trade-offs between for-profit healthcare and access for the poor, and healthcare as a 'public good';
- a diverse and fragmented private sector, which makes finding a representative entity or group with whom to collaborate difficult;
- scant information on who private providers are and what services they offer; and
- lack of public sector skills and expertise in developing and managing strategies to influence and collaborate with the private sectors.

PPPs are effective models for development in part because of their ability to expand reach and multiply impact (European Commission, 2013). But with expansion comes the need to harness such private sector investments and market reach to complement national goals. In this endeavour, the private sector needs to work better for the poor in particular, and to complement government efforts to attain the SDGs, including the health SDG3 targets, at country and regional levels.

Appendix

Table 4.1: Global level PPPH case studies by area of engagement

Area of Engagement	Multi-area engagement	Medicine & other Medical/ Device Product Development	Human Resources & Education
No. of GPPPH cases	21	10	3
PPP Cases	<ol style="list-style-type: none"> 1. RBM - Roll Back Malaria 2. Zero Malaria Starts With Me Campaign 3. President's Malaria Initiative 4. Stop TB Partnership 5. The Global Fund 6. PEPFAR ACT for Partnership 7. Global Plan Collaboration 8. GAVI - Global Vaccine Alliance 9. Global Alliance to Eliminate Lymphatic Filariasis 10. The Micronutrient Initiative 11. Global Alliance for Improved Nutrition 12. Scaling Up Nutrition 13. Zinc Alliance for Child Health 14. Food Fortification 15. Global Road Safety Partnership 16. Global PPP for Handwashing 17. Global Alliance for Clean Cook Stoves 18. Partnership for Maternal, New born and Child Health 19. HANSHEP – health Enterprise Fund 20. WEF Leapfrogging Initiative 21. Pink Ribbon Red Ribbon 	<ol style="list-style-type: none"> 1. MMV - Medicines for Malaria Venture 2. TB Alliance 3. Mission AERAS 4. GHITF - Global Health Innovative Technology Fund 5. International Vaccine Institute 6. International AIDS Vaccine Initiative 7. Sabin PDP 8. DNDi for Neglected Diseases 9. Uniting to Combat Neglected Tropical Diseases 10. FIND Diagnostics 	<ol style="list-style-type: none"> 1. Global Health Service Partnership 2. One Million Health workers 3. WHO/TDR Career Development Fellowship Programme

Source: ECA's review of PPP cases.

Appendix 4.1: Background to the PPP case studies

A total of 178 private sector engagement cases in health were reviewed in the period since 1998. The analysis included cases that had a deliberate and intentional collaboration between a public sector and private sector. Individual interventions or programs without a public–private mix were not included (e.g. the private sector for-profit provision of health services or full privatisation). In doing so, some of these cases may be classified as traditionally structured PPPs whereas others are more informal collaborations with the public sector.

The analysis provides insights into the nature and extent of PPP arrangements in the health space in Africa, the types and ranges of private sector actors involved in such models, and the gaps and

opportunities for scaling up such activities for health system sustainability. It focuses on understanding regional patterns and potential correlations with enablers/deterrents of such partnerships, such as the country's ease of doing business indicators or policy environment, and existing private–public dialogue platforms and other social factors. Such information will foster a greater understanding of the nature and effectiveness of the PPPs across the continent and opportunities for guiding future engagements for more sustainable impact.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS



5.1 The nexus between health and economic growth

Health matters for economic growth, but the link between health and economic growth is complex. The health of a population is one of the most robust and potent drivers of economic growth, but economic growth also contributes to improvements in health outcomes. At low levels of per capita income, further increases in income are associated with large gains in life expectancy, but as incomes increase there is little associated change in life expectancy. Thus, economic growth is necessary but not sufficient to improve health outcomes.

Most countries witnessed strong economic growth of 5–6 per cent in 2000–2010 but there has been some volatility since then. Growth recovered in 2016 and is projected to be on a high trajectory in the coming years. Robust economic growth provides more fiscal space for public allocation of resources for social sectors and for prioritising healthcare. This is sorely needed as it is estimated that Africa faces a financing gap for healthcare of \$66 billion per annum.

5.2 The most severely health-stressed countries

Using a combination of thresholds covering seven indicators, such as domestic government health expenditure, out-of-pocket expenditure, density of skilled health workers, average disease burden, government debt and the annual GDP growth rate, the report estimates that eight countries (Angola, Chad, Mauritania, Nigeria, Sierra Leone, South Sudan, Togo, and Zimbabwe) are severely health-stressed as they are below the thresholds on six of the seven indicators. In addition, Benin, Cameroon, Central African Republic, DR Congo, Congo, Cote d'Ivoire, Guinea, Guinea-Bissau, Mali, Mozambique, Niger, and Zambia are very health-stressed as they are below the acceptable thresholds on five of the seven indicators.

On average, 64 per cent of the disease burden in these 20 health-stressed countries is from communicable diseases, as against the Africa average of 53 per cent in 2016. This suggests both the urgent need for prioritising these countries for urgent attention and also for targeting the reduction of communicable diseases.

5.3 Africa's major challenges

African countries face enormous challenges in enhancing access to quality healthcare at affordable rates to all their populations. These challenges are likely to increase in the coming decades as Africa undergoes demographic, urban and epidemiological transitions, all of which have profound implications for the amount of resources needed. The lack of skilled physicians and pharmacists, particularly in rural areas, is another barrier to achievement of health outcomes and to SDG3.

Demographic changes: As a result of high fertility rates, in spite of declining mortality rates, Africa's population is expected to double between 2015 and 2050, and nearly one-third of the population will be below the age of 14 years by 2050. This is often referred to as the 'demographic dividend', which potentially offers the hope of greater productivity and economic growth if backed by commensurate skills growth. However, the proportion of population above 65 years is expected to double in 2015–2050 with all the associated social and healthcare costs this implies. So while Africa is the youngest continent with a median age of less than 20 years, and with nearly 60 per cent of its population below 24 years, it is also ageing rapidly. This indicates large health funding needs to strengthen national health systems to respond to differing health needs at opposite ends of the age spectrum.

Rapid urbanisation: While Africa is still predominantly rural, it is also witnessing the fastest rate of growth of urban population. Urban populations face high health risks from changing lifestyles and food habits,

as these can lead to obesity and diabetes, as they do in many HICs. Moreover many people (especially youth) migrating from rural villages to big urban centres end up living in squalid, overcrowded conditions and shanty-towns, often with poor infrastructure and inadequate access to improved water and sanitation, with all the associated health risks.

Rise in Non-Communicable Diseases: Encouragingly, Africa's disease burden, while still high, is converging towards the global average. Yet, a lower disease burden does not necessarily mean a healthier population as low disease burden countries have a higher proportion of non-communicable (also called chronic or lifestyle) diseases such as diabetes that are far more expensive to treat. Africa is experiencing a double burden of disease that will require large increase in healthcare expenditure to ensure adequate access to quality healthcare at affordable rates for all.

Skills shortage: Most countries face a severe shortage of skills. Against the recommended 23 skilled health workers per 10,000 population, 11 countries have less than 5, while Niger and Somalia have less than 2 skilled health workers per 10,000. The low availability of skilled human resources in health is exacerbated by misaligned distribution, so that in 23 countries the proportion of physicians in urban areas far exceeds that of rural areas. The same situation pertains to pharmacists, who are also in short supply. In addition, there has been a 60 per cent increase in the proportion of qualified health professionals migrating to OECD countries in the last decade. The training of community health workers, at far less cost than to train doctors or nurses, offers an alternative pathway to mitigating the crisis.

5.4 The biggest challenge: bridging the financing gap

Most of the challenges facing national healthcare systems in Africa arise from low levels of health

spending in most countries. Total spending on healthcare in Africa remained within a narrow band of 5–6 per cent of GDP in 2000–2015, on average, though in per capita terms it almost doubled from \$150 to \$292 (in 2015 international PPP). On average, healthcare in Africa is predominantly financed through out-of-pocket expenses (36 per cent) and government expenditure (35 per cent) with external aid accounting for 22 per cent of total health expenditure. The share of prepaid private expenditure is extremely small (7 per cent). There are of course variations across countries and sub-regions.

Unlike global trends, higher-income countries in Africa do not always spend more on health. Nor does the out-of-pocket spending reduce at higher incomes. As a result, large proportions of people, especially the poorest, continue to bear an excessive burden of ruinous health expenses, or avoid seeking medical assistance altogether.

Using a conservative threshold of 5 per cent of GDP for government expenditure on health, surpassed by only two countries (Algeria and Namibia) this report estimates a total financing gap of \$66 billion per year. More than half of this gap is represented by just two countries, Nigeria and Egypt. There is therefore an urgent need to mobilise resources to finance healthcare – both domestically and from the private sector, particularly through PPPs. How then to mobilise these massive amounts to help plug the financing gap?

5.5 Mobilising funding: constraints and ways forward

In terms of domestic resources, *the high levels of informal employment* in many countries limits the tax revenues to less than 20 per cent of GDP, while also making it difficult to increase the proportion of direct taxes that are more progressive.

The high debt burden in most African countries takes away more resources in debt servicing, which severely limits the fiscal space for health. There are concerns about the rising level of government debt and debt sustainability in several countries. Twenty countries have a debt burden higher than 60 per cent of GDP, with six countries in excess of 100 per cent. Further, the average interest-to-revenues ratio increased from 5 per cent in 2012 to an estimated 10 per cent in 2017. The interest cost exceeds 20 per cent of revenues in Burundi, the Gambia, Ghana, Nigeria and Zambia.

Africa loses about \$ 30–60 billion per year *in illicit financial flows*. In 21 countries the average annual value of illicit financial flows exceeds the annual health financing gap, which suggests that these countries could pay for their government health expenditures simply by plugging the illicit flows.

Yet while the needs of the health sector continue to grow, budgetary allocations to that sector are rarely prioritised. Reallocation of financial resources from other sectors always involves trade-offs and may result in reduced funding for other equally critical social sectors. All the same, governments could review their security compulsions and consider reducing military expenditures, especially in six countries where military expenditure exceeds public spending on health as a percentage of GDP.

The recent interest in identifying innovative financing models such as the results-oriented Development Impact Bonds is encouraging and needs to be developed and challenges addressed so that the pilots can go to scale. They can benefit from the experience of the Cataract Bonds in Cameroon.

Private sector engagement

There is a strong rationale for the private sector, especially the for-profit sector, to work with governments to strengthen national health systems, improve health outcomes, and develop a healthy workforce. The available market opportunities are

likely to be about \$259 billion in 2030, and with the potential to create over 16 million jobs in Africa.

The public and private sectors have different strengths and weaknesses, and a judicious blending of the two can produce optimal results. This is often done through public–private partnerships (PPPs) that are increasingly becoming common in the health domain with rising costs of delivering healthcare. For instance, the cost of treating diabetes is estimated at \$2,300 per patient per year in Africa.

However, of the current PPPs in Africa, more than half are located in just 10 countries and are engaged in ‘service delivery’ and ‘financing’. While it is difficult to attribute causality, most of the PPP cases are not always aligned to the country’s disease profile and are located in countries with a low disease burden. The private sector needs to be better represented in countries with a higher disease burden and incentivized to locate there by government interventions to build a better business-enabling environment. This involves investing in basic infrastructure, improving internet connectivity and penetration, and diversifying their economies to attract the interest of the for-profit private sector.

For many, Africa’s business environment and the current role and potential of the private sector remain poorly understood. Their interest and potential impact in financing healthcare through the production of health goods and pharmaceuticals as well as training of health personnel remains untapped. Often, businesses interested in working in Africa cite concerns about economic and political risks as obstacles to long-term investment and to the successful implementation of their business strategies. On the public side, there remains a lingering concern and debate on the role private sector and businesses in health. All players in the health space, including the private sector, will need to be involved for countries to achieve the SDG 3 on Health.

The central question is not whether the private sector has a role to play (in many countries in Africa the majority of healthcare services are already delivered by the private sector), it is rather how to put the private sector skills to best use and direct their investment interests to meet public health priorities and goals. It is imperative that countries enhance funding for the health sector by identifying innovative sources of finance and accessing private financial investment. Private funding and private capital hold a great potential for growth. The opportunity is such that public-private synergies are key to the development of the industry. New business models and partnerships applicable to Africa should be designed to better meet the specific requirements of the continent.

5.6 Recommendations

Recommendations for both governments and the private sector are summarized as follows:

What should governments do?

1. Focus on achieving broad-based economic growth and prudent macroeconomic management that includes strengthening of debt management frameworks and strategies; improved tax administration to increase tax revenues; strengthening of financial administration to reduce illicit financial flows; and prioritizing public funding for health by reducing fossil-fuel subsidies and other wasteful expenditures.
2. Identify innovative sources for financing healthcare such as Development Impact Bonds and debt-to-health swaps;
3. Allocate sufficient resources in health-associated sectors such as water and sanitation to reduce the extent of communicable diseases, and undertake mass awareness campaigns to reduce non-communicable diseases; and

4. Enhance regulatory systems for improved governance of public-private partnerships, create suitable conditions to attract private investments, provide other incentives such as strengthening infrastructure, and improved Internet connectivity, and promote intra-African trade in health products and services.

What should the private sector do?

1. Promote private sector investments in health sectors such as the pharmaceutical industry, medical education and digital technology that are presently under-invested;
2. Build upon the recently-signed AfCFTA to identify market opportunities and invest in countries or create manufacturing hubs in the sub-regions;
3. Comply with the regulatory mechanisms and oversight measures aimed to curtail trade mispricing and tax evasion;
4. Work with governments through various modalities, including public-private partnerships, to crowd in more private sector investment aligned to achieve the health-related Sustainable Development Goals and the aspirations of the African Agenda 2063.

Additional investment in health is urgently needed in most countries in Africa to address the growing healthcare demands. There is scope to leverage the capital and capacity of the private sector to complement government financing and increase investments. PPPs in health, and other investments by the for-profit sector, have achieved considerable successes over the years, though countries need to strengthen their governance and regulation structures. Moving forward, there is an urgent need for a closer partnership between private businesses and the public sector to enhance access for our peoples to quality healthcare at affordable rates that they deserve.

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ANNEX

Country Classification and Codes

A. By Sub-region (as per ECA classification)

North Africa (7)	West Africa (15)	Central Africa (7)	Eastern Africa (14)	Southern Africa (11)
Algeria	Benin	Cameroon	Burundi	Angola
Egypt	Burkina Faso	Chad	Comoros	Botswana
Libya	Cape Verde	Central African Republic	D.R. Congo	Eswatini
Mauritania	Côte d'Ivoire	Congo	Djibouti	Lesotho
Morocco	The Gambia	Equatorial Guinea	Eritrea	Malawi
Sudan	Ghana	Gabon	Ethiopia	Mauritius
Tunisia	Guinea	Sao Tome & Principe	Kenya	Mozambique
	Guinea-Bissau		Madagascar	Namibia
	Liberia		Rwanda	South Africa
	Mali		Seychelles	Zambia
	Niger		Somalia	Zimbabwe
	Nigeria		South Sudan	
	Senegal		Tanzania	
	Sierra Leone		Uganda	
	Togo			

B. By Resource dependency

Resource rich countries are those with 20 per cent or more exports of either oil or minerals. Groupings are based on UNCTAD trade data, 2016.

Resource rich – 36		Non-resource rich – 18
Algeria	Liberia	Burundi
Angola	Libya	Cabo Verde
Benin	Madagascar	Comoros
Botswana	Mali	Egypt
Burkina Faso	Mauritania	Eswatini
Cameroon	Mozambique	Ethiopia
Central African Republic	Namibia	Gambia
Chad	Niger	Guinea-Bissau
Congo	Nigeria	Kenya
Côte d'Ivoire	Rwanda	Malawi
Djibouti	Sierra Leone	Mauritius
Dem. Republic of Congo	South Africa	Morocco
Equatorial Guinea	South Sudan	São Tomé and Príncipe
Eritrea	Sudan	Senegal
Gabon	Tanzania	Seychelles
Ghana	Togo	Somalia
Guinea	Zambia	Tunisia
Lesotho	Zimbabwe	Uganda

C. By Income

The income-based country classification is based on the World Bank's definition calculated using the Atlas method. For the 2018 fiscal year, low-income countries are those with a GNI per capita of \$1,005 or less in 2016; lower middle-income economies with

a GNI per capita between \$1,006 and \$3,955; upper middle-income economies with a GNI per capita between \$3,956 and \$12,235; and high-income economies with a GNI per capita of \$12,236 or more.

Low income countries (27)		Low middle income (18)	Upper middle income (8)	High income (1)
Benin	Malawi	Angola	Algeria	Seychelles
Burkina Faso	Mali	Cabo Verde	Botswana	
Burundi	Mozambique	Cameroon	Equatorial Guinea	
Central African Republic	Niger	Congo	Gabon	
Chad	Rwanda	Côte d'Ivoire	Libya	
Comoros	Senegal	Djibouti	Mauritius	
Dem. Republic of Congo	Sierra Leone	Egypt	Namibia	
Eritrea	Somalia	Eswatini	South Africa	
Ethiopia	South Sudan	Ghana		
Kenya	Tanzania	Kenya		
Gambia, The	Togo	Lesotho		
Guinea	Uganda	Mauritania		
Guinea-Bissau	Zimbabwe	Morocco		
Liberia		Nigeria		
Madagascar		São Tomé and Príncipe		
		Sudan		
		Tunisia		
		Zambia		

D. Country Codes

Sub-region	Country	Code	Sub-region	Country	Code
North	Algeria	DZA	East	Burundi	BDI
	Egypt	EGY		Comoros	COM
	Libya	LBY		D.R Congo	COD
	Mauritania	MRT		Djibouti	DJI
	Morocco	MAR		Eritrea	ERI
	Sudan	SDN		Ethiopia	ETH
	Tunisia	TUN		Kenya	KEN
West	Benin	BEN		Madagascar	MDG
	Burkina Faso	BFA		Rwanda	RWA
	Cape Verde	CPV		Seychelles	SYC
	Côte d'Ivoire	CIV		Somalia	SOM
	Gambia	GMB		South Sudan	SSD
	Ghana	GHA		Tanzania	TZA
	Guinea	GIN		Uganda	UGA
	Guinea-Bissau	GNB	Southern	Angola	AGO
	Liberia	LBR		Botswana	BWA
	Mali	MLI		Lesotho	LSO
	Niger	NER		Malawi	MWI
	Nigeria	NGA		Mauritius	MUS
	Senegal	SEN		Mozambique	MOZ
	Sierra Leone	SLE		Namibia	NAM
	Togo	TGO		South Africa	ZAF
Central	Cameroon	CMR		Swaziland	SWZ
	CAR	CAF		Zambia	ZMB
	Chad	TCD		Zimbabwe	ZWE
	Congo	COG			
	Eq. Guinea	GNQ			
	Gabon	GAB			
	Sao Tome & Principe	STP			



Notable achievements in health outcomes in Africa since the early 2000s can lead to a more productive healthy workforce and progress towards the 2030 Agenda and the Africa Agenda 2063. This has been driven partly by improved health financing by member States and by the private sector which has played an important role in health delivery and health financing on the African continent.

Providing access to quality healthcare for all at affordable rates remains an important challenge facing Africa and the financing of healthcare is a key policy issue in most countries. Scarce public funds and unpredictable donor aid often result in high out-of-pocket expenditure that pushes many people into poverty and exacerbates inequality.

Countries need to mobilize more domestic resources and identify innovative sources of finance for healthcare. The private sector can contribute by leveraging the African Continental Free Trade Area to invest in sectors such as pharmaceuticals, digital technologies and health education to expand access to quality and affordable healthcare for all.