

The future of healthcare in Africa



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Foreword

Healthcare demands in Africa are changing. Ensuring access to clean water and sanitation, battling ongoing communicable diseases and stemming the tide of preventable deaths still dominate the healthcare agenda in many countries. However, the incidence of chronic disease is rising fast, creating a new matrix of challenges for Africa's healthcare workers, policy makers and donors.

A growing urban middle class is willing to pay for better treatment. This has opened the door to the private sector, which is starting to play a new role, often working in partnership with donors and governments to provide better healthcare facilities and increased access to medicine at an affordable price.

For the vast majority of Africans still unable to pay for health provision, new models of care are being designed, as governments begin to acknowledge the importance of preventive methods over curative action. This, in turn, is empowering communities to make their own healthcare decisions. At the same time, some countries are experimenting with different forms of universal health provision.

Africa's healthcare systems are at a turning point. The reforms that governments undertake over the next decade will be crucial to cutting mortality rates and improving health outcomes in the continent. The Economist Intelligence Unit has undertaken this research to focus on how African healthcare systems might develop between now and 2022. It looks at both current challenges and promising reforms. The five scenarios that have emerged from this research reflect these trends, and are intended to show the possible consequences of decisions being taken by healthcare's stakeholders today.

About the research

To research this report, the Economist Intelligence Unit surveyed the literature and data available on Africa's current healthcare systems. We also conducted 34 in-depth interviews with leading experts in the different professional roles that make up the healthcare sector: academics, clinicians, healthcare providers, policymakers, medical suppliers, and think tanks. The data and interview comments were then analysed to define trends likely to have an impact on the direction of healthcare over the next decade. Finally, bearing in mind these trends, we developed five extreme scenarios, each a distillation of a possible outcome of the trends identified. The intention is to use these scenarios as a policy-neutral set of platforms upon which some degree of agreement can be reached about the future direction of African healthcare. A list of data sources consulted for this research is in Appendix I. A list of participants in the in-depth interview programme is in Appendix II.

The Economist Intelligence Unit bears sole responsibility for the content of this report. The findings and views do not necessarily reflect the views of the sponsor. The interviews were carried out by Andrea Chipman and Richard Nield. Andrea Chipman was the author of the report and Stephanie Studer and Aviva Freudmann were the editors.

Executive summary

Like many other regions, Africa must reassess its healthcare systems to ensure that they are viable over the next decade. Unlike other regions, however, Africa must carry out this restructuring while grappling with a uniquely broad range of healthcare, political and economic challenges.

The continent, already home to some of the world's most impoverished populations, is confronting multiple epidemiological crises simultaneously. High levels of communicable and parasitic disease are being matched by growing rates of chronic conditions. Although the communicable diseases—malaria, tuberculosis, and above all HIV/AIDS—are the best known, it is the chronic conditions such as obesity and heart disease that are looming as the greater threat. These are expected to overtake communicable diseases as Africa's biggest health challenge by 2030.

Additionally, continued high rates of maternal and child mortality and rising rates of injuries linked to violence, particularly in urban areas, are weighing down a system that is already inadequate to the challenges facing it. Healthcare delivery infrastructure is insufficient; skilled healthcare workers and crucial medicines are in short supply; and poor procurement and distribution systems are leading to unequal access to treatment.

The financing system is as deficient as the healthcare-delivery system that it supports. Public spending on health is insufficient, and international donor funding is looking shakier in the current global economic climate. In the absence of public health coverage, the poorest Africans have little or no access to care. What is more, they frequently also lack access to the fundamental prerequisites of health: clean water, sanitation and adequate nutrition.

Despite these major challenges, reforms of the continent's healthcare systems are possible. Indeed, some evidence of reform is already present. A number of countries are trying to establish or widen social insurance programmes to give medical cover to more of their citizens. Ethiopia, for one, has demonstrated the power of strong political will to create a primary-care service virtually from scratch. Yet the sheer diversity of the continent means that overall progress has been patchy at best.

Considering the massive challenges facing Africa's healthcare systems, several major reforms will be needed continent-wide to ensure their viability in the long term:

- shifting the focus of healthcare delivery from curing to preventive care and keeping people healthy;

- giving local communities more control over healthcare resources;
- improving access to healthcare via mobile technologies;
- tightening controls over medicines, medical devices, and improving their distribution;
- reducing reliance on international aid organisations to foster development of more dependable local supplies; and
- extending universal health insurance coverage to the poorest Africans.

Implementation of these reforms could strongly influence the future shape of healthcare in Africa. The Economist Intelligence Unit has identified the following five extreme scenarios to show how the system might develop over the next decade:

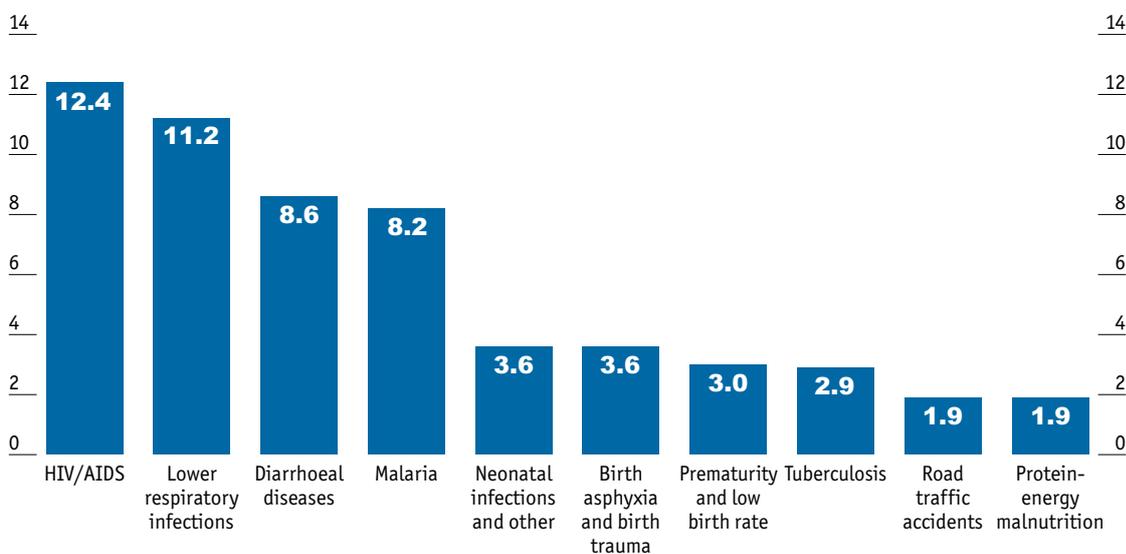
- health systems shift to focus on preventive rather than curative care;
- governments transfer healthcare decision-making to the local level;
- telemedicine and related mobile-phone technology becomes the dominant means of delivering healthcare advice and treatment;
- universal coverage becomes a reality, giving all Africans access to a basic package of benefits;
- continued global instability forces many international donors to pull out of Africa or drastically cut support levels, leaving governments to fill the gaps.

1 Drivers of the current crisis

For decades, Africa has seen the life expectancy of its populations stunted by communicable and parasitical diseases that have mostly been stamped out in the developed world. Now, the continent also faces increasing rates of the non-communicable lifestyle diseases that have become the biggest killers in industrialised countries.

Many African countries, however, are still unable to provide basic sanitation, clean water and adequate nutrition to all of their citizens, let alone deal with the onset of these latest killers. These countries, beset by poor infrastructure, a shortage of skilled professionals and geographic and socio-

Leading causes of burden of diseases in the African Region, 2004
(% of total DALYs*)



* The disability-adjusted life-year (DALY) provides a consistent and comparative description of the burden of diseases and injuries needed to assess the comparative importance of diseases and injuries in causing premature death, loss of health and disability in different populations. The DALY extends the concept of potential years of life lost due to premature death to include equivalent years of 'healthy' life lost by virtue of being in states of poor health or disability. One DALY can be thought of as one lost year of 'healthy' life, and the burden of disease can be thought of as a measurement of the gap between current health status and an ideal situation where everyone lives into old age, free of disease and disability.

Source: Health Situation Analysis in the African Region, *Atlas of Health Statistics 2011*, World Health Organization.

economic inequalities, face an uphill struggle in delivering adequate healthcare. With outlays on treatment for the major communicable diseases likely to occupy a significant chunk of national health budgets for the foreseeable future, better preventive care will be crucial to keep spending in check—and to improve health outcomes in the next decade.

Africa's healthcare challenges are heightened by the sheer diversity of the continent. Countries range from the resource-rich to the impoverished, from those with dynamic economies to those where conflict zones still simmer; they encompass large cities, remote villages and nomadic lands. Sharp discrepancies in the prevalence of illness and access to treatment exist, as well as differences in data collection, which complicates comparisons for policy-making purposes. For example, "In some states, midwives' salaries might be included in the healthcare budget, while in others it might not," says Anshu Banerjee, the World Health Organization (WHO) representative in Sudan.

Moreover, a number of social and demographic transitions taking place simultaneously on the continent are exacerbating the problem. Unni Karunakara, international president of Médecins Sans Frontières, notes that epidemiological and demographic shifts are coinciding with economic and migratory transitions, which make tracking and treating diseases more difficult. "Countries are no longer a useful unit to define the population from a health point of view," he adds. "In India, there are populations with health profiles similar to those in Europe or the US, and others whose health is the same or worse than populations in the poorest parts of Africa. We're now seeing that in Africa too."

Factor in the perilous state of the global economy and, in particular, the foreign aid and multilateral budgets on which African healthcare systems are heavily dependent, and the magnitude of the challenge becomes all the more apparent.

Treatable diseases continue to blight the future

The continent's continuing struggle with communicable diseases such as HIV/AIDS and tuberculosis (TB), parasitic diseases and poor primary and obstetric care has been a major factor in stalling the development and the extension of healthcare services in African countries at even the most basic level.

Undoubtedly, a unified global effort by governments and multilateral organisations has been hugely successful in recent years at bringing down mortality rates linked to these biggest killers. Deaths linked to malaria have fallen by 33% since 2000.¹ The adoption of antiretroviral medication as the main treatment protocol for HIV/AIDS has transformed HIV from a terminal illness into a manageable chronic condition in a number of African countries. Child mortality on the continent has dropped by 30% since 1990, largely thanks to routine immunisation programmes.²

The results of these policies remain, however, uneven. In 2000, world leaders drafting the UN Millennium Declaration adopted three health goals, which signatory countries were expected to reach by 2015. These included reducing child mortality, improving maternal health, and combating HIV/AIDS, tuberculosis, malaria and other diseases.

Some African countries have made remarkable strides in these areas, including Ghana, which is on track to halve maternal mortality rates in just a decade (See box *Ghana: Tackling maternal mortality*). Yet, in a 2010 report, the WHO noted that overall progress towards meeting these Millennium Development Goals (MDGs) had been less than impressive. Just six countries were deemed on track to reduce under-five mortality by two-thirds during the time specified, with 16 having made no progress; only 13 countries had maternal mortality rates of fewer than 550 deaths per 100,000 live births, while 31 countries had rates of 550 deaths or higher.³

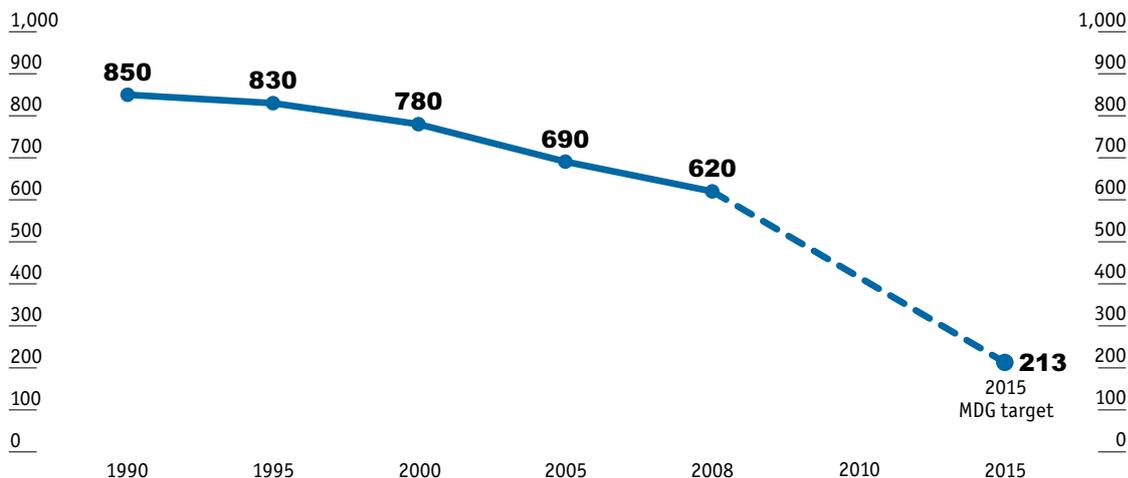
¹World Malaria Report 2011, World Health Organization, Geneva.

²"Levels and Trends in Child Mortality", Report 2011, UN Inter-agency Group for Child Mortality Estimation.

³Towards Reaching the Health-Related Millennium Development Goals, World Health Organization, 2010, pp 19-20.

Trend in maternal mortality ratio in the WHO African Region, 1990-2008

(per 100,000 live births)



Source: Health Situation Analysis in the African Region, *Atlas of Health Statistics 2011*, World Health Organization.

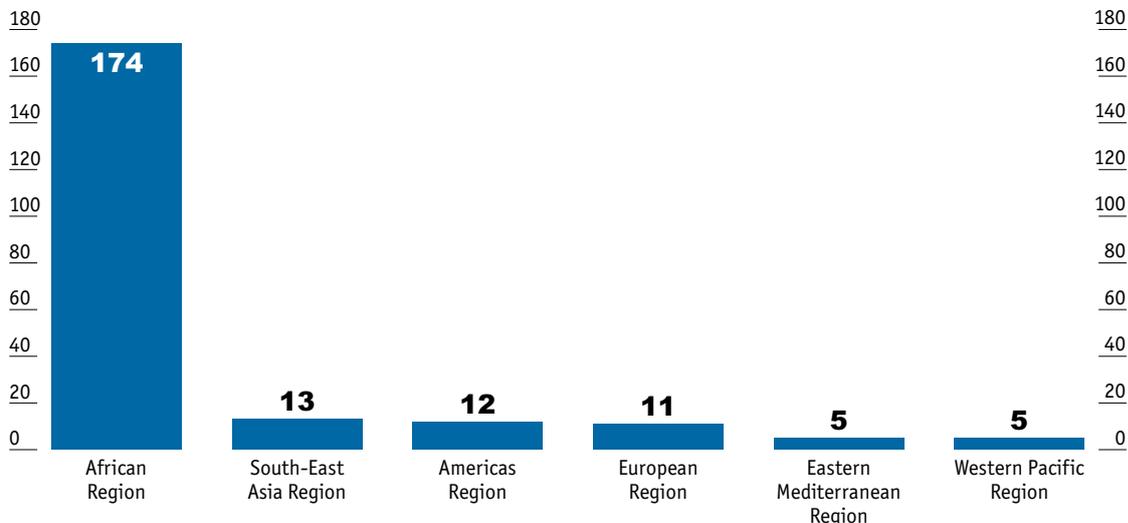
Although Africa bears 66% of the global burden of HIV/AIDS, according to the WHO,⁴ just one-third of the population with advanced HIV infection in Africa had access to antiretroviral medicines in 2007.⁵ “It’s pretty unlikely that an effective HIV vaccine will be in place [within the decade]” says Sneh Khemka, medical director for BUPA International, adding that the number of people

needing active antiretroviral therapy is likely to soar to 30m by the middle of the next decade, up from less than 7.5m today.

Improvements in access to safe drinking water and sanitation have also stalled in Africa, making it difficult to combat stubbornly high levels of water-borne illnesses.⁶ As a result, parasitic diseases

HIV/AIDS mortality rate in WHO Regions, 2007

(deaths per 100,000 population)



Source: Health Situation Analysis in the African Region, *Atlas of Health Statistics 2011*, World Health Organization.

⁴ *Strategic Orientations for WHO Action in the African Region 2005-2009*, World Health Organization, Africa.

⁵ *Towards Reaching the Health-Related Millennium Development Goals: Progress Report and the Way Forward*, Report of the Regional Director for Africa, World Health Organization, 2010, p 23.

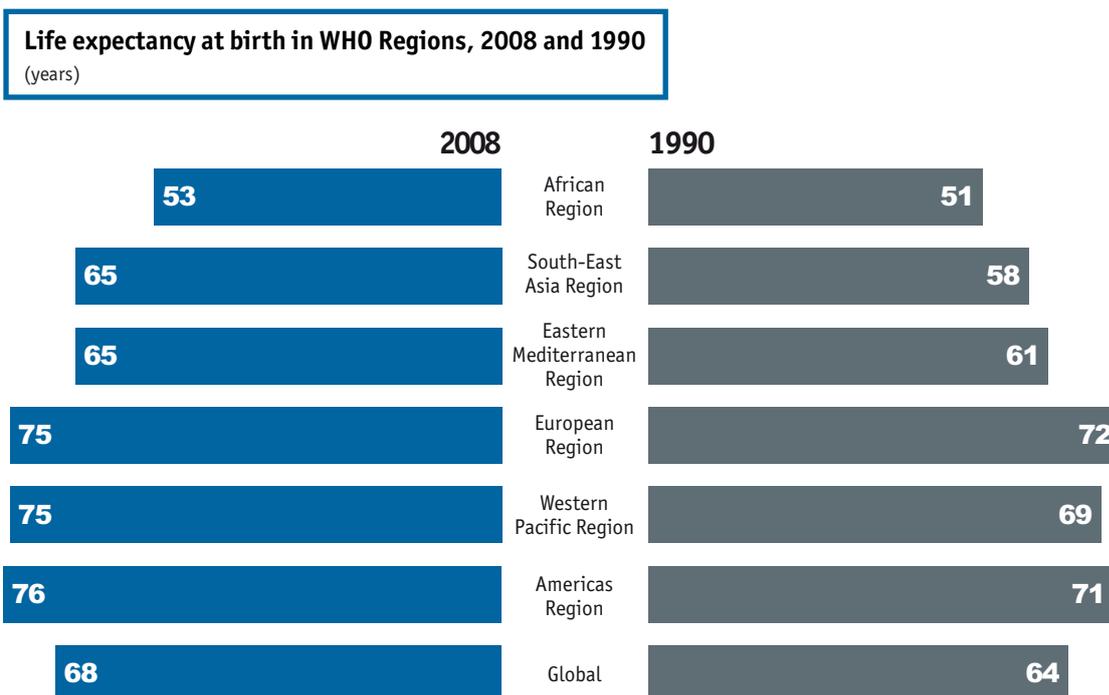
⁶ *Towards Reaching the Health-Related Millennium Development Goals*, charts pp 26-27.

such as guinea worm and schistosomiasis continue to wreak havoc in many areas of Sub-Saharan Africa. The continent also bears 60% of the global burden of malaria, for which insecticide-treated net use is about 3.5% for adults and 1.8% for under-fives.⁷ While the announcement in October of promising results in clinical trials of a new malaria vaccine rekindles hope for a new weapon against the disease as early as 2015, questions remain over the vaccine’s affordability.

North Africa, which is much less affected by communicable diseases, has generally been the bright spot in the picture. Because of both cultural and historical reasons, access to basic

healthcare has traditionally been more extensive than elsewhere on the continent. Yet Morocco continues to struggle with high rates of TB, with 25,000 new cases a year despite a vaccination rate of 95% at birth.

These conditions are both a result of, and a contributor to, weak and fragmented health systems throughout Africa. The WHO notes that the combined impact of these factors put the continent’s average life expectancy at birth at 53 years in 2008, up only slightly from 51 years in 1990.⁸



Source: Health Situation Analysis in the African Region, *Atlas of Health Statistics 2011*, World Health Organization.

⁷Ibid.

⁸ *Health Situation Analysis in the African Region, Atlas of Health Statistics, 2011*, World Health Organization Regional Office for Africa, Brazzaville, Republic of Congo.

Ghana: Tackling maternal mortality

⁹ *Global Health Observatory Data Repository*, World Health Organization, www.who.int

¹⁰ S. Witter, Sam Adjei, Margaret Armar-Klemesu and Wendy Graham, "Providing free maternal health care: ten lessons from an evaluation of the national delivery exemption policy in Ghana," *Global Health Action*, Vol. 2, 2009.

¹¹ Figures from the World Health Organization, 2008.

¹² "Providing free maternal health care: ten lessons from an evaluation of the national delivery exemption policy in Ghana", *Global Health Action*, p 3.

¹³ *Ibid.*

¹⁴ "Mixed Blessings: Burundi's free birth delivery and medical care for under-five children", *Unicef Humanitarian Action Report*, 2007.

¹⁵ *Providing free maternal health care: ten lessons from an evaluation of the national delivery exemption policy in Ghana.*

¹⁶ R Ochako, J-C. Fotso, L Ikamari and A Khasakhala, "Utilization of maternal health services among young women in Kenya: Insights from the Kenya Demographic and Health Survey, 2003", *BMC Pregnancy and Childbirth*, January 10th 2011.

Most countries in Africa have long struggled with high rates of maternal mortality. In recent years the issue has taken on international prominence, attracting a number of high-profile celebrity campaigners. Ghana, which had an estimated maternal mortality rate of over 500 deaths per 100,000 live births a decade ago,⁹ has been at the forefront of this battle on a national level.

In 2004 Ghana introduced a national policy to exempt women from paying for delivery care in public, mission and private health facilities, with payments initially delivered through local governments and later through the health system. The exemption was funded from a debt relief fund under the Highly Indebted Poor Countries (HIPC) initiative. This was phased out gradually and ultimately taken over by the national health insurance scheme in 2008.¹⁰

The exemption from delivery-care fees contributed to a drop in the maternal mortality rate from an estimated 500 deaths per 100,000 live births in 2000 to an estimated 350 per 100,000 in 2008. Despite this clear achievement, however, it remains doubtful whether Ghana will meet its Millennium Development Goal of 185 maternal deaths per 100,000 live births by 2015.¹¹

One factor limiting the impact of the delivery-fee exemption may be the stubbornly high number of Ghanaian women who continue to give birth without a trained birth attendant present. Indeed, the proportion of deliveries attended by skilled health personnel actually

dropped between 2005 and 2007—from 54% to 35%—following a steady improvement in the figure during the decade between 1993 and 2003. Some experts speculate that this decline could be related to underfunding of the exemption policy and a strike by health workers in 2007.¹²

Still, an evaluation of the delivery-fee exemption by the Initiative for Maternal Mortality Programme Assessment (IMMPACT) found that the policy had increased the use of obstetric facilities and achieved some reductions in inequality of access to care between different income groups.

Ghana's experiment with the delivery-fee exemption provides a number of lessons to countries looking to improve maternity care, including the importance of strong policy management or "ownership" within the relevant ministry (which was lacking in Ghana); tailoring exemptions to address the main household cost barriers, such as travel to hospital facilities; and reimbursing medical facilities for their costs.¹³

A number of African countries are already following suit. Burundi introduced free services for pregnant women in 2006, although health facilities have often struggled to cope with the influx of patients amid insufficient funding.¹⁴ In the same year, Burkina Faso introduced an 80% subsidy policy for deliveries;¹⁵ and Kenya already provides free antenatal care.¹⁶

Lifestyle diseases threaten to double the burden

The work of donor groups, including the Global Fund to Fight AIDS, Tuberculosis and Malaria and the Gates Foundation, on the major communicable diseases has been crucial in cutting mortality rates for specific illnesses. In Sub-Saharan Africa, AIDS-related deaths fell by 30% between 2004 and 2010, despite a peak in

mortality rates in 2006.¹⁷ Tuberculosis mortality rates on the continent have fallen by more than one-third since 1990.¹⁸ Although many hope that this will help to shift the focus to chronic disease management, others are less optimistic. For them, the concentration of substantial amounts of donor funding on individual diseases has made it more difficult to address broader health needs and set appropriate strategies for the future.

Indeed, increased urbanisation in many African countries, along with growing incomes and changing lifestyles, have led to a rise in the rate of chronic conditions such as diabetes, hypertension, obesity, cancer and respiratory diseases. These threaten to put considerable further strain on already overstretched healthcare systems. The WHO estimates that chronic diseases will overtake communicable diseases as the most common cause of death in Africa by 2030.¹⁹ The organisation has also predicted that a major increase in the number of deaths in Africa will come from cardiovascular and respiratory diseases, such as asthma and chronic obstructive pulmonary disease (COPD), both of which are related to fuel-burning for cooking and smoking.²⁰

In North Africa, lifestyle diseases are already more prominent given comparably wealthier populations and the eradication of many communicable diseases. With affordable tobacco, higher rates of smoking and urban pollution are leading to an increase in lung cancer, according to Sherif Omar, professor of surgical oncology and former head of the National Cancer Institute at Cairo University.

Most worryingly, the interplay of these new “lifestyle conditions” with Africa’s most debilitating communicable conditions has created an entirely new double-disease burden, which most healthcare workers have not seen before, and which current healthcare infrastructure is ill-prepared to manage. Moreover, there is growing evidence that communicable diseases and chronic conditions often exacerbate each other. For example, patients with diabetes are three times as likely to contract tuberculosis; Burkitt’s lymphoma is linked to malaria; and HIV patients on antiretroviral treatment are at a higher risk of developing diabetes and cancer.²¹

“It’s very difficult to go from a health service focused on treating diarrheal disease, TB and providing vaccinations for children to one

that is focused on promoting healthy lifestyles and changing behaviour,” says Stefano Lazzari, Tunisia’s World Health Organization representative. Kara Hanson, a health economist at the London School of Hygiene and Tropical Medicine, explains that “the interventions to reduce non-communicable diseases are very different,” adding that primary care will need to widen its traditional focus on women and children to meet the needs of men as well.

One major problem is that much of the existing chronic disease burden has not yet been identified. Dr Khemka notes that probably 85% of diabetes cases in Sub-Saharan Africa go undiagnosed. Currently, just 12.1m diabetes patients have been recorded, a number that is expected almost to double to 23.9m adult cases by 2030. “In real terms, that represents a greater number of people having diabetes than currently have HIV,” he says.

This lack of preparedness is compounded by a lack of data. The Harvard School of Public Health’s Partnership for Cohort Research and Training (PaCT) programme, which was launched in 2008, aims to conduct a cohort study in four African countries—Uganda, Nigeria, Tanzania and South Africa—following 500,000 participants over a ten-year period. According to Shona Dalal, an investigator with the programme, one of the main goals is to quantify better, and to understand the causes of, the current chronic disease burden on the continent with the ultimate goal of informing disease prevention.

Resources under strain

African countries have traditionally had fewer healthcare workers per head than anywhere else in the world.²² Low pay and poor living conditions contribute to a continuous brain-drain of health professionals to the developed world and make it difficult to recruit and retain skilled staff, particularly in more remote regions where the need is often greatest. This exacerbates health inequalities within nations and makes it more

¹⁷ “Global HIV/AIDS Response: Epidemic Update and Health Sector Progress Toward Universal Access; Progress Report 2011”, UNAIDS/UNICEF/World Health Organization, December 2011, pp 5-26, and Progress on Global Access to HIV Antiretroviral Therapy, World Health Organization/UNAIDS, March 2006.

¹⁸ WHO Report 2010: Global Tuberculosis Control, World Health Organization, Geneva, Switzerland, 2010, p 34.

¹⁹ WHO African Region Ministerial Consultation on Noncommunicable Diseases, Brazzaville, Republic of Congo, April 4th-6th 2011, p 6.

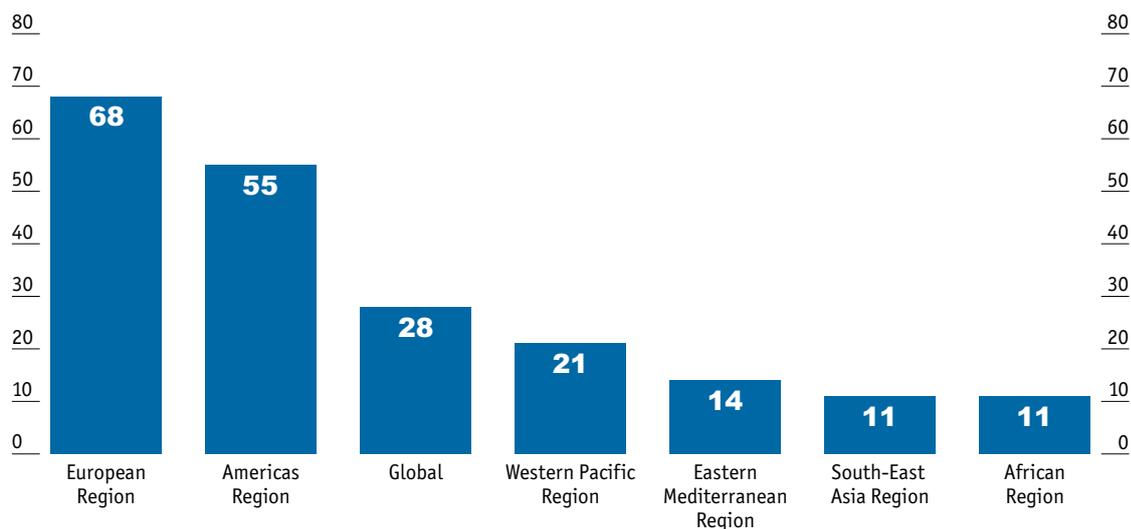
²⁰ WHO African Region Ministerial Consultation on Noncommunicable Diseases, p 10.

²¹ “Growing Pains”, *The Economist*, September 24th 2011.

²² *Health Situation Analysis in the African Region, Atlas of Health Statistics, 2011*, World Health Organization, pp 38-40.

Nursing and midwifery personnel-to-population in WHO Regions, 2000-09

(per 10,000 population)



Source: Health Situation Analysis in the African Region, *Atlas of Health Statistics 2011*, World Health Organization.

difficult to develop comprehensive primary care systems.

In Algeria, the human-resource challenge comes from deteriorating professional qualifications, according to an Algerian analyst who claims standards have slipped over the past 20 years. "You hear increasingly of doctors making mistakes because they are badly qualified," he says.

It is not surprising, therefore, that many African countries suffer from the poaching of their specialists by neighbours, as they rely on a dwindling pool of experienced workers. Medical tourism, aided by porous borders, is also putting strains on overburdened healthcare systems. In Tunisia, Libyans seeking treatment in private clinics make up nearly 70% of patients in some hospitals. Countries bordering with conflict regions also suffer from transient and acute influxes of patients. During the fighting in Libya last year, more than 300,000 medical refugees crossed the border into Tunisia for safety, doubling the number of daily patients in some medical centres. Similarly, vaccination programmes in the Darfur region of Sudan report

a convergence of patients from neighbouring Chad, where there is no such scheme.

Additionally, distribution channels for medical equipment and pharmaceutical products remain fragmented, and shortages of medicines and supplies are common in many countries. One important consequence of these logistical issues is the growing problem of counterfeit medicines and medical devices. Jacqueline Chimhanzi, the Africa lead for Deloitte Consulting South Africa, notes that in parts of Sub-Saharan Africa, sub-standard medicines can range from an estimated 20% in Ghana to 45% in Nigeria, and up to a high of 66% in Guinea.²³

Yet continued affordability of life-saving medicines is the dominant concern for most. With a few notable exceptions, such as South Africa's Aspen, a manufacturer and supplier of branded and generic medicines, there is little domestic pharmaceutical production on the continent, leaving many countries dependent on imports from Indian and Chinese generics companies. "The challenging thing is that the drugs that are available locally are the simple drugs, such as painkillers. The active

²³ Deloitte estimates on the basis of surveys that measure deviation from quality standards.

pharmaceutical ingredients (APIs) [for newer, more specialist drugs] aren't available," observes Emmanuel Mujuru, acting chairman of the Southern African Generic Medicines Association.

Meanwhile, pressure from the EU and world trade bodies for the generics industry to adhere to stricter intellectual property rights are contributing to a more immediate potential crisis. African countries are due to implement the Trade Related Aspects of Intellectual Property Rights (TRIPS)—an agreement establishing minimum standards for intellectual property and administered by the World Trade Organization—by 2016. Some non-governmental organisations assert that this would make Africa less attractive to generics companies by strengthening the intellectual property protections afforded to patent holders.

Dr Karunakara of Médecins Sans Frontières, for example, says that the continent's pharmaceutical sector is likely to remain underdeveloped for many years as it continues to depend on imports of generic drugs. Local generics manufacturers agree: if the 2016 TRIPS deadline is not extended, says Mr Mujuru of the Southern African Generic Medicines Association, "we will lose that cheaper access to APIs."

However, African pharmaceutical manufacturers could ultimately benefit from the TRIPS regime. By harmonising product standards, TRIPS could also smooth the way for patent holders to issue licences to local companies to produce generic versions of patented products.

North African countries have a key advantage over their southern neighbours because they already have a developed local manufacturing sector for generic drugs, often involving joint ventures between local firms and Indian or Chinese companies. Yet a general preference for branded drugs also indicates that the population needs to be educated in parallel to ensure take-up of out-of-patent medicine, for example.

Given shortages of vital medicines such as insulin in some parts of Africa, most agree that the continent will almost certainly need to develop its own manufacturing capability for essential drugs and vaccines. One interviewee, however, raised the question of financial viability given the huge production plants in the high-growth economies of Brazil, India and China. Other obstacles include a lack of pharmacy degree programmes in many countries and a critical shortage of product development capabilities.

Equally problematic is the lack of a stable pharmaceutical market, for which Africa's reliance on donor funding could be partly responsible, Mr Mujuru says. "Donations in some African countries have had a negative effect, shutting out the local industry," he explains, noting

that his home country of Zimbabwe had experienced this difficulty first-hand. He cited one example in which a local manufacturing company for mosquito nets treated with anti-malarial solutions was pushed out of business because of large donations of nets from a multilateral agency that sourced its products outside the country.

Gaps in financing

The improvement and extension of healthcare delivery in Africa is also being constrained by gaps in financing. Sub-Saharan Africa makes up 11% of the world's population but accounts for 24% of the global disease burden, according to the International Finance Corporation.²⁴ More worrisome still, the region commands less than 1% of global health expenditure.

Public-sector funding for healthcare remains uneven across the continent. While 53 African countries signed the Abuja Declaration pledging to devote 15% of their national budgets to health, most remain far from that target and, according to some estimates, seven countries have actually cut their spending on health over the past decade.²⁵ More than half of healthcare

²⁴*The Business of Health in Africa; Partnering with the Private Sector to Improve People's Lives*, International Finance Corporation, vii

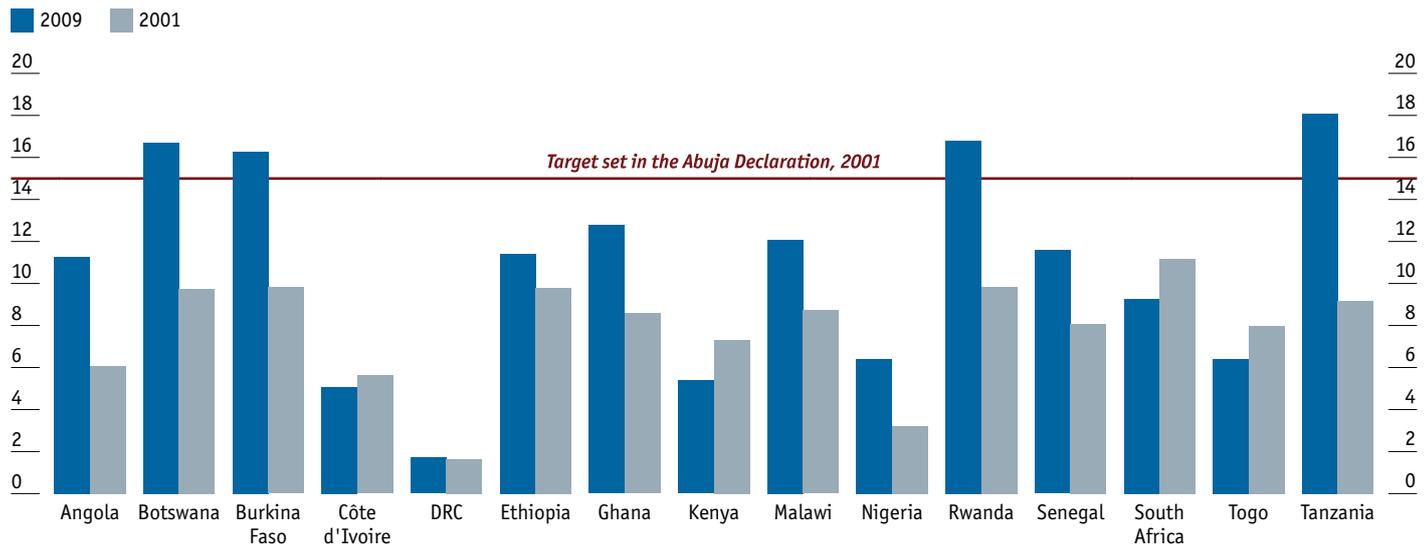
²⁵ *Health Situation Analysis in the African Region*, Fig. 38, p 34. There is some discrepancy between reports on which countries are meeting the target. The latest figures on public healthcare spending are due to be released by the World Health Organization in February 2011.

²⁶ *Ibid*, Fig. 41, pp 35 and 36.

General government health expenditure in sub-Saharan Africa, 2009 and 2001

(as a % of general government expenditure)

Representative sample of countries



Source: Global Health Expenditure Database, World Health Organization.

costs on the continent are currently met by out-of-pocket spending, a ratio that rises to as much as 90% in some countries.²⁶ With many of the poorest unable to afford treatment, costs are kept down artificially by people's ability to pay, further exacerbating the problem.

A small handful of countries, including Ghana, Rwanda and South Africa, have taken steps towards universal healthcare coverage. However even in countries or communities that currently offer a form of insurance scheme, many drugs and services are not included and must be covered by out-of-pocket payments.²⁷ The legacy of the French colonial period left Morocco, Algeria and Tunisia with varying levels of national health insurance coverage. Yet, by some estimates, as much as 50% of health expenditure is currently out-of-pocket in Tunisia, although it boasts some of the highest health indicators in the region (See box *Tunisia: Starting ahead of the game*).

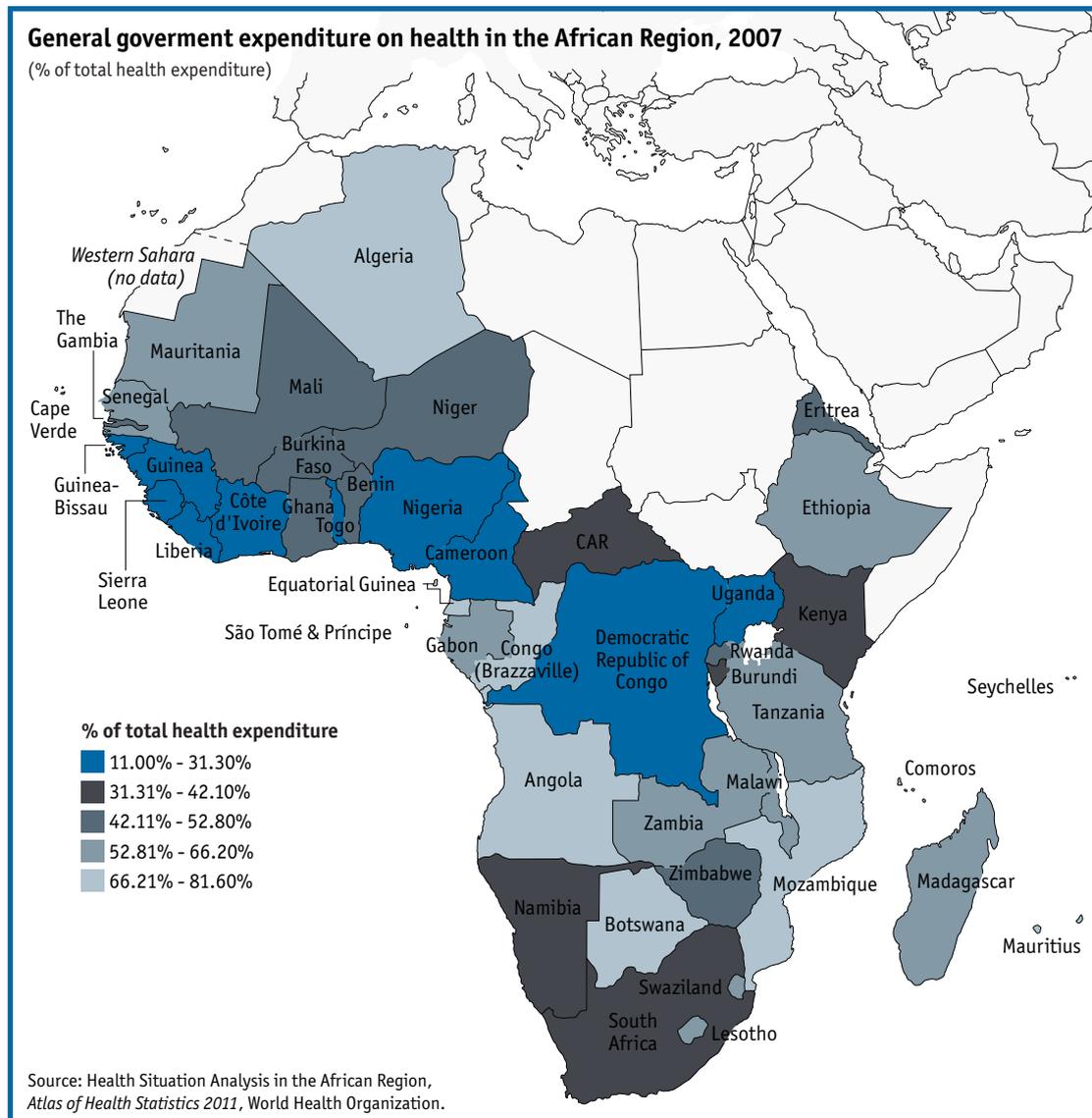
²⁷ *The World Health Report 2010*.

²⁸ Arnab Ghatak, Judith Hazlewood and Tony M Lee, "How private health care can help Africa," *McKinsey Quarterly*, March 2008.

For Belgacim Sabri, a Tunisia-based independent health consultant, reduced public budgets and the introduction of user fees have exacerbated

the problem in North Africa; he notes that many observers believe this was one of the major catalysts for the uprisings of the Arab Spring in 2011, along with lack of access to healthcare for the poorest citizens. "[The North African countries] have to reduce reliance on user fees as a mechanism of finance," he says. "It is not sustainable".

Across Africa, the result of fragmented coverage has been a growth in private financing and private provision of health care—a category that encompasses the for-profit sector and non-profit providers such as aid organisations and missionary hospitals. A McKinsey study from 2008 reported that in Ethiopia, Nigeria, Kenya and Uganda more than 40% of people in the bottom 20% income bracket received their healthcare from private, for-profit providers.²⁸ Private insurance schemes have also been growing in countries with larger affluent populations or industries capable of funding large worker plans. However, the existence of these plans has contributed to concerns about two-tiered provision of care.



In the meantime, donor funding for charity hospitals and clinics, and for targeted medicines, is often the only way of filling the gaps, particularly in undertaking mammoth tasks such as the scaling up of antiretroviral protocols across Africa. However, while some analysts have criticised donor financing as an insufficient solution even during better periods, the global economic crisis has in turn raised new questions

about its sustainability as a major source of financing for healthcare in Africa.

“The opposite of sustainability is dependence and what we’ve done in most cases is create dependence,” says Keith McAdam, a member of the board of directors of the African Medical and Research Foundation (AMREF).

Tunisia: Starting ahead of the game

As other African healthcare systems face a future characterised by multiple epidemiological threats, fragmented health coverage, extreme poverty and disintegrating facilities, Tunisia appears to have the edge in many respects.

Unlike many of its Sub-Saharan counterparts, the country has no malaria and low rates of HIV/AIDS. It has a tuberculosis rate that is one-quarter that of Morocco, and a maternal mortality rate that is half that of Algeria.²⁹ With life expectancy of around 75 years for both men and women, the main burden of disease is chronic conditions such as cardiovascular and respiratory disease.

“Tunisia has the best health indicators across the board of all the countries in North Africa”, says Stefano Lazzari, World Health Organization (WHO) representative for Tunisia. The country boasts a large number of qualified specialists, strong public and private hospitals, good equipment and a high level of services.

Nearly 90% of Tunisia’s citizens have access to health insurance that provides a relatively high level of basic services—a higher coverage rate than in Algeria and Morocco, according to Belgacim Sabri, a Tunisia-based independent health consultant and retired director of health systems for the WHO in the eastern Mediterranean. Coverage is funded through employee contributions and government-subsidised cover for those who are unemployed.

In common with most of its North African neighbours, Tunisia’s health system has benefitted from the French colonial legacy of robust infrastructure for primary healthcare and a strong medical education system. The country has built on these foundations over the past 30 years, making particular efforts in developing the health workforce and rehabilitating facilities.³⁰

Despite its clear advantages, though, Tunisia’s current health challenge is similar to that faced by many of its African neighbours: an inefficient distribution of services, which reflects and contributes to social inequalities in the country. “In the rich coastal areas, the services are comparable to those in Europe, whereas in the interior of Tunisia the number of specialists and doctors, the quality of equipment and the coverage of services are all much lower,” says Dr Lazzari.

Tunisia’s private sector currently serves only around 20% of the country’s population. Yet it gets the lion’s share of investment and attracts a disproportionate number of available medical professionals. Bridging this gap in health provision will be a major challenge for Tunisia’s new leaders, healthcare experts say—but one that the country is better positioned than most of its neighbours to take on.

²⁹ All figures from latest World Health Organization country health profiles, using 2009 data, www.who.int.org

³⁰ Habiba Ben Romdhane and Francis R Grenier, “Social determinants of health in Tunisia: the case-analysis of Ariana”, *International Journal for Equity in Health*, April 3rd 2009

2

Future trends

A wholesale restructuring of Africa's healthcare systems will be necessary over the next ten years, including strong measures to expand access to healthcare, eradicate treatable illnesses and manage chronic conditions.

This would require a new approach to tackling disease. It would also involve an overhaul of healthcare delivery, including greater use of technology, co-operation between the public and private sector and task-shifting to help extend scarce human resources. The procurement and supply of medicines and medical products will need to be streamlined in order to reduce shortages and logjams. Finally, governments and international organisations will be searching for funding solutions that can cover a larger percentage of the population and be sustainable in the long run.

From curing illness to preserving health

One of the biggest factors hampering Africa's ability to confront its multiple health challenges, according to healthcare providers, aid organisations and entrepreneurs, is a structural one. The continent's healthcare systems remain focused on acute, short-term treatment, and on fighting the traditional battles against infectious and tropical diseases, diarrhea and maternal and child mortality.

Yet the growth of both chronic conditions and the increase in populations living for longer periods with diseases such as HIV/AIDS is driving a new emphasis on preserving good health and widening the current approach to primary healthcare. According to Ernest Darkoh, founding partner of BroadReach Healthcare, an African healthcare services company, the most successful outcome should be defined as never needing to see the inside of a hospital. The continuous need to build more hospitals and clinics should be considered a sign of failure. "We must make disease unacceptable instead of building ever larger infrastructure to accommodate it", Dr Darkoh adds.

Wellness campaigns will involve not only medical staff, but also officials dealing with agriculture, transportation, law enforcement, water and sanitation, food security and housing. Dr Darkoh remarks that violence, road accidents and poor living conditions play as important a role in health outcomes as lifestyle does. Better and focused education will be crucial to prevent African populations from developing chronic diseases in the first place. Further down the line, teaching those with chronic conditions to manage their health will be key to avoiding overreliance on expensive and overstretched health workers and facilities.

Part of this evolution will also require new healthcare strategies evaluated for the realities of African life, says Dr Karunakara of MSF. “We need to develop new models of care to treat people in rural remote areas,” he explains. “Even if cheap insulin suddenly becomes available, if it still needs to be refrigerated you can be sure that take-up will be low. Most of the tools developed today are being developed for wealthier societies, and that’s a big problem for Africa.” Earlier diagnosis of diseases such as HIV/AIDS will lead to earlier treatment and help prevent complications. Botswana is already a leader in this area; it was the first country to roll out opt-out testing for HIV in 2000, and has since raised the percentage of those being tested to over 90% from less than 10%. Increasing immunisation coverage rates for common childhood diseases such as diphtheria, polio, measles and hepatitis will also be a crucial part of this process.

Revamping healthcare delivery

Reversing the focus from acute to preventive care, and from treating single ailments to tackling multiple conditions, will require a significant overhaul of Africa’s healthcare systems, in terms of mindset, structure and human resources. According to some experts, a more proactive approach will be needed to address current and future disease burdens, including the creation of systematic touch-points throughout a citizen’s life to keep them healthy. “Hospital and clinic-based models of care, where people must come to healthcare instead of healthcare coming to the people, are by definition reactive,” explains Dr Darkoh of BroadReach Healthcare.

● Shifting tasks to lay healthcare workers in primary care

Task-shifting, already important in a continent with severe shortages of trained medical personnel, is likely to be the only way to provide a quality, basic level of care to entire populations.

“We need to better leverage health workers,” Dr Darkoh explains. “We don’t necessarily need doctors and nurses to provide basic things like health education. We can use so many other types of people with very little training and at little expense to build the model of individual, family and community ownership of health.”

Even non-professional people can be trained to provide education, support treatment for HIV, deliver prescribed medicines, and use a weighing scale or glucose-testing device, say Dr Darkoh and others, freeing up specialised medical staff to perform more complicated procedures and reducing the pressure on overstretched public-sector hospitals. One example of such an initiative is Ethiopia’s health extension programme (HEP), which trained extension workers to provide basic health information and education in rural areas where none existed before (See box *Ethiopia: Creating a primary-care system from scratch*).

“We recognise that communities themselves must own and lead the effort,” explains Tedros Adhanom Ghebreyesus, minister of health for Ethiopia. Indeed, programmes such as Ethiopia’s are particularly good at creating a cadre of health workers who do not have advanced medical skills, but who, as local people already committed to their communities, are also less likely to be poached by foreign healthcare systems.

Other countries are looking at more regional solutions. In South Sudan, where human-resource shortages are at crisis levels, support from the Intergovernmental Authority for Development (IGAD) allows neighbouring countries to provide specialist labour to the country. The originating countries continue to pay the workers’ salaries, and the South Sudan government provides an allowance, according to Dia Timmermans, a senior health adviser with the Joint Donor Office of the World Bank, based in South Sudan.

Ethiopia: Creating a primary-care system from scratch

Few countries in Africa can boast a healthcare system that has developed from virtually nothing in the space of just a decade. As the third most populous country in Africa, Ethiopia is also one of the poorest, emerging from nearly two decades of civil war and famine only 30 years ago. Missionary clinics and international donor-run hospitals then made up the fragile backbone of the country's healthcare infrastructure, and a majority of the population relied on traditional and spiritual healers for advice and care.

Today, more than 85% of the population has access to primary healthcare. The percentage of births attended by a skilled worker doubled between 2004 and 2008; in the same period, the number of women receiving antenatal care rose by more than 50%, as did the number of infants receiving full immunisation. Initial surveys indicate that under-five mortality was down to 88 per 1,000 live births in 2010, which corresponds to a 52% decline over the last decade.

Several factors have contributed to Ethiopia's success. Strong leadership from the Ministry of Health has driven healthcare policy. "The approach they took was historical. They really started from nothing," says Dina Balabanova, senior lecturer in health systems at the London School of Hygiene and Tropical Medicine. The government chose a top-down approach to kick-start the programme and to scale it up quickly across the country—a method that has rankled a few stakeholders and prompted some isolated criticism. Dr Balabanova concedes, "It was almost an emergency system; but the next stage will be getting people on board and incorporating local knowledge."

Indeed, the government claims it is now working to broaden and deepen the engagement of local communities through its Health Extension Programme. According to Ethiopia's minister of health, Tedros Adhanom Ghebreyesus, the

initiative has already trained and deployed over 38,000 health extension workers throughout the country—almost doubling Ethiopia's health workforce in three years. These local health extension workers have been engaged as full-time salaried civil servants to ensure retention and build a sustainable system, moving away from models based on volunteerism.

The government has recently launched a mobilisation campaign targeted at young women—who are often closest to the main beneficiaries of primary care—in the hope that more will train as health extension workers. According to Dr Tedros, "We want to build a 'women-centred' health system. We are linking leaders at all levels with women's groups in every village across the country".

Although priority has been given to primary healthcare delivery, which usually involves high-impact, low-cost interventions, the government is already close to its goal of building 15,000 new health posts and 3,200 health centres across Ethiopia, thus complementing parallel private-sector investments in new hospitals around the country. "This is helping to broaden access to a continuum of care at secondary and tertiary levels," says Dr Tedros.

Dr Tedros admits that big challenges lie ahead, particularly in further scaling up towards a national health system and in sustaining current efforts in the sector. Reaching the maternal health targets set by the Millennium Development Goals (MDGs) in Ethiopia will also be challenging. For Dr Tedros, the two go hand-in-hand: "We cannot hope to achieve the health MDGs without ensuring universal access to basic health service first". Yet Ethiopia shows what it is possible to achieve in a limited time frame, and may point towards a model for other African countries with similar socio-economic and demographic conditions.

● Expanding access to secondary care

In addition to shifting more healthcare tasks to non-professional healthcare workers, African countries will need to expand access to secondary care—the type of medical care provided by specialists who do not have first contact with patients. In many African countries, private hospitals already treat a significant proportion of the population, many of whom are covered by employee-sponsored health insurance plans. Even in areas where fewer people have access to private insurance, private hospitals are often the first choice of the well-to-do, and have the capacity to siphon off both human and financial resources. Determining the place of the private sector in healthcare delivery will therefore be a key priority for African countries.

Peter Botha, chief executive of AIM-listed African Medical Investments, currently operates private specialist hospitals in Mozambique, Tanzania and Zimbabwe, and is looking to expand into markets in Kenya, Ethiopia, Nigeria and Uganda. Mr Botha says his company sees strong demand in Africa for “quality, international-standard healthcare” from emerging middle classes, overseas investors, governments and health insurers. Even the private sector, though, shares many of the same human-resource constraints as the public system, he acknowledges.

While African Medical Investments has seen strong demand for outpatient maternity and paediatric services, the biggest challenge is attracting more specialists to extend the range of inpatient services in its hospitals, Mr Botha says. “To get a good cardiologist, neurosurgeon or orthopaedist doing joint replacements is extremely difficult,” he says. “You have to cater to what the market is allowing you to do because of the supply of skills. Our main challenge is trying to entice a specialist to come to Africa.”

Liza Kimbo, a Kenyan entrepreneur and chief executive of Carego Livewell, is targeting a different demographic through her company,

which operates community-based clinics servicing the “middle 60% of the population that can afford to pay something”. In less than three years, she has built up five clinics in and outside the Kenyan capital, Nairobi. Typical patients are low-income day labourers who cannot afford to lose wages waiting in queues in crowded public hospitals.

Others are more wary about the growing role of the private sector in providing healthcare in some regions of Africa. Dr Karunakara, for one, believes that “the government should still provide a basic, but essential, level of healthcare for free, and not just preventive but also curative. The private sector should be filling the gaps.” A recent report by the International Finance Corporation noted that, while the role of the private sector in African healthcare continues to be “contentious”, better collaboration between both the public and private sectors will be crucial to improving healthcare provision in Africa.³¹

In many cases, governments and multilateral donors are likely to look to public-private partnerships (PPPs) as the most efficient way of extending high-quality healthcare across the continent. Large-scale collaborations have already been critical to developing medical treatment, such as the Medicines for Malaria Venture and the International AIDS Vaccine Initiative. Other initiatives have aimed to strengthen health services by developing a comprehensive approach to prevention, care, treatment and support. For example, the Botswana Comprehensive HIV/AIDS Partnership involves private partners and Botswana’s government, each committing US\$50m over five years to strengthen the country’s health infrastructure for combatting this disease. The programme includes training health workers and setting up new laboratories and mobile clinics. Other partnerships are supranational in scope, such as the “Children Without Worms” programme under which donated deworming medicine is distributed to needy children.

³¹ *Healthy Partnerships: How Governments can Engage the Private Sector to Improve Health in Africa*, International Finance Corporation, World Bank Group, Washington, DC, 2011.

In the future, those interviewed say, private partners could help to build hospitals or advise on social insurance schemes.

● Relying more on technology

Technology could also be a huge enabler of cross-border co-operation, and is likely to play an important role in the development of a multi-tiered health workforce. It is expected that telemedicine will evolve to allow remote healthcare workers to confer with specialists in tertiary medical facilities to confirm diagnoses and agree on treatment. Chinese and Indian companies have been some of the heaviest investors in video-related health technology in Africa. India-based doctors are already treating African patients remotely in five regional hospitals including Nigeria, Republic of Congo, Mauritius and Egypt. The African hospitals are linked to specialist facilities in India under the pan-African e-Network Project, a joint venture between the Indian government and the African Union.

Ishe Zingoni, an industry analyst in information and communications technology (ICT) and healthcare at consultancy firm Frost & Sullivan, in South Africa, observes that although 80% of African countries claim to be using telemedicine or m-Health in one form or another, the majority of these projects are still informal or in the pilot phase. Only a few have been fully implemented and can be considered an integral part of healthcare delivery systems. Most projects involve health call centres that offer healthcare services over the phone and appointment reminders via SMS, he says.

Further developments in this sector, however, signal a huge opportunity for African healthcare. "A lot is happening in the IT realm to make medicine more efficient and reach a population that is underserved but all have cell phones," says Heather Sherwin, an investment manager for the Netherlands-based Investment Fund for Health in Africa (IFHA). Indeed, many applications and services are already being developed in response

to the remarkable penetration of mobile phones in Africa, Mr Zingoni says, adding that Africa has 600m mobile-phone subscribers out of a total population of around 900m. Already, penetration has exceeded 100% in South Africa and 80% in Ghana. Nigeria currently has the largest number of subscribers on the continent, although its mobile penetration rate lags behind at 54%.³²

One example is Project Masiluleke, in South Africa, a mobile health initiative that promotes HIV/AIDS awareness, education and treatment, launched 18 months ago. It now sends 1m-2m messages a day to South Africans, providing information or asking them to call into the national AIDS health line. According to Robert Fabricant, vice-president of creative at Frog Design, which helped to set up the project as part of a consortium, the group also plans to introduce a set of mobile services that enable users to receive HIV counselling remotely and to receive treatment reminders. The consortium has also partnered with South African rap label, Ghetto Rough, to create celebrity voices to deliver reminders about medical tests for men, who tend to be more suspicious of healthcare services.

Private equity is an active investor in telemedicine initiatives on the continent, according to Ms Sherwin. The IFHA has already invested in Hello Doctor, a telemedicine plan that aims to operate across Africa, providing people with the opportunity to speak to a qualified physician by phone (although it will first need to overcome the regulatory dilemma of allowing doctors to operate across different countries). It is also looking to increase its investments in telemedicine education initiatives, including interactive voice-recognition education services that provide area-specific information and health watch alerts via SMS, such as warnings of a cholera outbreak.

Resolving procurement logjams

Improving the way that African healthcare systems work will also require governments to strengthen supply chains for pharmaceuticals

³² *African Mobile Observatory 2011; Driving Economic and Social Development through Mobile Services*, GSMA and AT Kearney, www.gsmworld.com, www.atkearney.com, pp 4 and 12.

and medical supplies, and is likely to involve more local production of medicines in Africa.

Currently, many African countries experience regular shortages of medical products. As governments and multilateral health organisations work to improve take-up of antiretroviral drugs for HIV/AIDS or medicines for tuberculosis, a reliable supply network will be crucial to maintain regular treatment courses. With healthcare systems gearing up to address chronic conditions too, procurement issues will move to the forefront.

Babatunde Osotimehin, executive director of the UN Population Fund (UNFPA), believes the private sector can play an important role in helping African governments to smooth distribution logjams and to provide logistics expertise. In Nigeria, he notes, the government partnered with Coca-Cola, which has a well-developed distribution structure across the country, to coordinate HIV/AIDS education and prevention campaigns nationwide. "It should be possible for DHL or UPS to help a country develop a supply chain management system," adds Dr Osotimehin.

Expanding local production of medical products including, ultimately, more complex drugs, will also be important. For Mr Zingoni of Frost & Sullivan, "It's a 'security of supply' issue." However, that would require greater investment in skills. Around 80% of the antiretroviral drugs provided by MSF and the Global Fund to Fight Aids Tuberculosis and Malaria are currently manufactured by Indian generic companies, says MSF's Dr Karunakara.

Greater regulation should also be a key priority for African governments, according to those interviewed, and will also help to combat the proliferation of counterfeit medicines. Governments and regulatory authorities from the Southern African Development Community are already working on the adoption of common

standards for regulation of medical production and registration of medications. Companies such as US-based Sproxil, a software provider that offers SMS verification services through its Mobile Product Authentication (MPA) system, have partnered with pharmaceutical companies to add scratch cards to the back of medicine packaging. The cards, which are now in use in Ghana, Nigeria and Kenya, among others, reveal a code that consumers can check via mobile telephony to verify that the drug is genuine.

Finding sustainable financing

The financing of healthcare in Africa remains a patchwork of meagre public spending, heavy reliance on foreign donors and a large dependence on out-of-pocket contributions and user fees that place the greatest burden on the poorest members of society.

It is this fragmented approach that is likely to come under the greatest scrutiny over the next 15 years as governments, multilateral lenders and private investors look for ways to pay for healthcare for Africans in a more sustainable way. "The main challenge facing African countries is separateness," says Kgosi Letlape, president of the African Medical Association. "There's no solidarity. There's a system for the haves and a system for the have nots."

Mr Botha of African Medical Investments observes that poor tax collection and inefficiencies in national governments make the creation of a social or national health insurance system particularly challenging. "If you look at all countries that have evolved either to national health insurance or social insurance, the time period is 40 to 80 years."

Indeed, even in a country with the relative wealth and infrastructure development of South Africa, the process of creating universal health coverage is exposing a number of systemic deficiencies that need to be addressed first (See box *South Africa: Developing a national health insurance plan*).

Micro-insurance plans are often cited as one potential solution for covering poor and middle-class populations who do not have access to employment-related and other private schemes. Dr Khemka of BUPA says his company has already been looking at the potential to introduce such schemes in markets like Tanzania, Ghana and Malawi, in partnership with the Gates Foundation. Ms Kimbo of Carego Livewell hopes eventually to be able to offer such insurance products through her clinics. "Ideally, I would want less than 50% of our clients to be relying on cash for payment," she says.

For the near-term, however, donor funding will remain one of the dominant sources of healthcare financing in Africa. This is problematic for two reasons. First, donor funding tends to be short-term, and relies on financing from foreign governments, multilateral or non-government organisations, all of which are suffering from continued global economic instability. Second, donor funding has traditionally been focused on single ailments or conditions, rather than on the multi-condition, comprehensive healthcare system that Africa will require in the future.

Take The Global Fund to Fight AIDS, Tuberculosis and Malaria as an example. An international financing institution that receives funding from governments, the private sector, social enterprises and individuals, it cancelled its 11th funding round in December 2011, potentially putting many African countries' disease protocols into disarray.

"In 2000, none of the public health programmes in Sub-Saharan Africa were running ARV

[antiretroviral] treatment programmes," Dr Karunakara notes. Indeed, thanks to work by MSF, the Global Fund and other organisations, as well as the increased availability of generic drugs, the price of antiretroviral medications dropped to less than US\$100 from around US\$10,000 in 1999. On the one hand, this made treatment affordable to huge sections of the population, drastically cutting mortality rates linked to the disease. However, African governments were thus also encouraged to change their treatment protocols for HIV/AIDS, committing them to critical health investments for the long term. "Now we are at the point where sustainable, predictable funding is no longer there. Governments will not want to start something they cannot deliver in the coming years," explains Dr Karunakara.

However not everyone is worried about a future in which donor funding may be scarce. Dr Tedros, the Ethiopian health minister, argues that a more efficient healthcare system—that focuses on disease prevention and health promotion, and can pool funds from different sources to address funding gaps flexibly—can "offset the impacts of any declines in external funding flows." Professor McAdam of AMREF agrees that countries will have to find ways of living with less funding from external sources. In the case of HIV, he notes, it is unclear to what extent the international community will be able to provide for everyone who needs HIV care. Some countries, such as South Africa and Botswana, are already seeking to finance antiretroviral treatment for their own populations.

South Africa: Developing a national health insurance plan

By many health measures, South Africa is the most advanced of the Sub-Saharan nations. It has the biggest and most well-developed private insurance sector, the largest and best-trained health workforce on the continent and—with the exception of Tanzania—is the closest to achieving the Abuja targets on public spending for healthcare.³³ Now it is working to put in place one of the first, and arguably most ambitious, universal national health insurance (NHI) systems on the continent.

In many ways, South Africa is a microcosm of the healthcare woes facing African countries. It suffers from a “quadruple burden” of health problems, including maternal, infant and child mortality, chronic conditions, injuries and violence, and HIV and tuberculosis. Although it is home to just 0.7% of the world’s population, 17% of HIV/AIDS cases globally are to be found in South Africa.

Policymakers will also need to grapple with underperforming health institutions, poor management, deteriorating infrastructure, and under-funding—all factors that have widened health inequality levels in the country in recent years. Yet South Africa is also unique in possessing a well-established, high-quality private insurance system that is both an asset and a potential obstacle to implementing an NHI system.

Of South Africa’s 48m people, around 8m are covered by private healthcare (usually company schemes) and the remaining 40m by the state, with spending levels similar on both groups.³⁴ Getting public-sector care up to a level where it can compete with other schemes will be a key precondition for successfully rolling out national health insurance.

The government’s green paper on the NHI, published last year, promises “equity and

efficiency” in the new system. Its aim is to design an NHI programme that will create solidarity by ensuring that all South African citizens and legal residents “benefit from healthcare financing on an equitable and sustainable basis”. The plan envisions the use of both public and private health providers, and would allow citizens to remain members of private schemes, although they would be required to pay into the public one as well.

Most importantly, perhaps, the government’s aims encompass a holistic vision of healthcare reform. They require a total re-engineering of the existing system, including a “complete transformation of healthcare service provision and delivery” that emphasises primary care over curative, hospital-centred care; the “total overhaul” of healthcare networks to designate hospitals as district, regional, tertiary, central and specialised facilities; and the provision of a comprehensive package of benefits.³⁵

Admittedly, the country has been exploring the possibility of an NHI programme since 2002. Its launch is designed to take place incrementally, starting this year with pilot projects in ten districts of the country, and will be implemented in three phases within 14 years, according to the government.

Policy-makers are also looking at other countries’ experiences for ideas. Ghana, for one, has increased value-added tax to help pay for its social health insurance programme while other countries have experimented with employee-employer levies or special earmarked taxes. “We can look at best practice, but ultimately it needs to be designed for South Africa,” says Ashleigh Theophanides, director of actuarial health practice at Deloitte & Touche, South Africa.

³³ *The Abuja Declaration: Ten Years On*, World Health Organization, Geneva, Switzerland, 2011. There is some discrepancy between reports on which countries are meeting the target. This is partly because countries met the target in different years, with some subsequently falling short of the target.

³⁴ Interview with Valter Adao, consulting strategy and innovation team, Deloitte & Touche’s life sciences practice, South Africa.

³⁵ *National Health Insurance in South Africa*, Department of Health, Republic of South Africa, pp 5 and 29-30.

3

Five scenarios for 2022

Following are five potential scenarios depicting the possible health landscape on the African continent in 2022. While each of these storylines is unlikely to develop alone, as outlined here, they suggest the potential outcome of the trends that the Economist Intelligence Unit has identified, as well as the possible consequences of decisions being taken by governments, donor organisations and healthcare investors today. They are intended to prompt debate on the possible ramifications of different health policies and approaches. Although the scenarios offer different visions of the future, most are complementary; that is, some elements of each of these scenarios could well coexist with elements of others.

1. Refocusing on primary and preventive care

Within the next decade, the initiatives for improving healthcare delivery that were identified in Part II will attract imitators, as various African countries strive to put their healthcare systems on a sustainable footing. By the end of the decade, many African countries will have overhauled their health facilities and treatment pathways to emphasise primary care services that educate people about healthy lifestyles, keep them in good health and help them to manage chronic conditions. The changes will amount to a revolution in healthcare delivery.

Leading the charge will be a renewed focus on preventive care as a way of managing chronic conditions, promoting wellness and reducing expensive hospital stays. Mass immunisation campaigns will include new vaccines against malaria and multi-drug resistant tuberculosis. In parallel, education campaigns, particularly those involving sexual health and nutrition, will target behavioural change. Clinics will be staffed with skilled nurse practitioners able to help monitor conditions such as diabetes, hypertension and COPD.

Clearly, change is likely to be uneven across the continent. The most advanced countries, such as South Africa, Kenya, Tanzania, Uganda, Nigeria and Mozambique will have multi-tiered, high-quality health delivery at both the primary and secondary levels, while their less-developed neighbours will concentrate their limited resources on primary care, prioritising wellness for the many over curing the few.

Investments will be channeled into prenatal and paediatric care. Referrals will be required for appointments at hospitals, which will be devoted almost exclusively to specialist care. Indeed, some countries, in an effort to cut hospital admissions more quickly, may resort to the “gatekeeper” approach used by managed care companies in the US, in which primary-care

providers receive incentives for keeping people out of hospital.

With resources less stretched, public hospitals will be able to concentrate on treating and curing the most serious cases; specialist HIV/AIDS and malaria clinics will open in South Africa and Uganda, attracting patient referrals from across the continent. In parallel, private hospitals will be able to develop themselves as elite facilities and benefit from targeted private investment.

The increasing popularity of Africa as an investment destination will attract private equity and other investors, creating pan-African companies and public-private partnerships to improve hospitals, ambulance services and community health standards.

In a best-case scenario, according to BroadReach Healthcare's Dr Darkoh, by 2022, "the results of a focus on prevention will be encouraging, populations will be healthier and hospitals won't have to worry about having to continually increase staff and infrastructure. These countries will realise this is proof that the course they are on is directionally the right one and they will invest even more in these models."

Risks to the scenario

Health education campaigns may have mixed results, and may take a long time to produce improved outcomes. This would leave hospitals overwhelmed in the medium-term.

Divergence between the quality of care in the public and private sector and the growing ranks of people with no healthcare access could exacerbate existing health inequalities. This could outweigh the benefits of a policy shift towards primary and preventive care.

Moreover, the "gatekeeper" approach to regulate hospital use is controversial and any suggestion that financial incentives are being used to deny necessary treatment will be criticised.

2. Empowering communities as healthcare providers

In 2022 the global market for highly-skilled health staff will be more competitive than ever, and the health budgets of many African governments will remain strained. With roads and transport links still poor in many countries, governments will try to empower communities to deliver basic care in remote areas. African health systems will refocus on the education and training of community outreach workers and health extension staff, to gain the most service delivery from existing human and material resources.

By creating new tiers of lay healthcare workers, African countries will not only free up those with more specialist skills to treat patients with the most serious or complex conditions, but will also create health teams that are more closely linked to their local community, less likely to leave, and better able to respond to local health priorities.

A number of regional training academies for community healthcare workers will be established across the continent, with the aim of creating a consistent level of basic, quality care. Regional organisations such as the Southern African Development Community and the African Union will supervise the development of curriculums and standards. In most countries, however, communities will be given a greater degree of authority to set priorities for their care.

A significant portion of international aid will be dedicated to establishing and staffing training academies and paying the salaries of healthcare workers in countries that still lack the finances to support them. Realising the potential for economies of scale, medical supply companies will strike deals with the regional training bodies, providing community workers with basic tools to monitor blood sugar and blood pressure or provide prenatal vitamins.

Meanwhile, African countries will look to other ways to ease staff shortages. In South Africa, the government will build on its reputation for

training highly skilled doctors and nurses and reach formal accords with former “poaching” countries such as the UK and its European neighbours, offering their nationals a chance to receive qualified medical training in South Africa for a fraction of the price it would cost at home. South African hospitals and clinics will benefit from the extra workforce while doctors and nurses are completing their training, and in return will give students from the developed world experience treating pathologies that they would not normally encounter during a clinical rotation in their home countries.

“We have a high burden of disease. You can turn it around to say we have a lot of ability to teach clinical skills,” says Dr Letlape of the African Medical Association.

Risk to the scenario

Creating a new tier of community-based lay healthcare workers will not eliminate the need for highly-trained physicians and nurses to treat more serious or chronic conditions. Identifying individuals who are the best fit with a given community, and are committed to remaining in the role for some time, will be extremely important to gain the trust of local people.

Balancing the needs of stretched African governments to make sure that all community workers fulfill particular national priorities could conflict in some cases with community control of these programmes.

3. Implementing universal coverage

Most African countries will be well on the path to providing most or all of their citizens with a basic health insurance package by 2022, although countries will develop their own paths towards comprehensive coverage.

In South Africa, the transition to a national health insurance system will be well underway, with the training of additional workers, an agreement on health delivery standards, and the implementation of information systems

to monitor and manage the new system. Ghana, Ethiopia, Rwanda and Nigeria will have comprehensive social insurance systems, while the North African countries will have strengthened and in some cases extended the basic set of benefits covered under their national systems in response to demands following the Arab Spring revolts of 2011.

Elsewhere on the continent, many countries will have reached agreements with foreign insurance companies to set up micro-insurance coverage, coverage aimed at poorer populations with lower premiums and low coverage limits, while making use of existing social insurance schemes, extending them where necessary, and linking them to schemes covering those at work. All governments will have instituted a safety net for the poorest citizens so a ten-cent malaria tablet is no longer beyond the reach of the most impoverished families.

As this will ensure that virtually all Africans have insurance, public-private partnerships will have incentives to invest more broadly in the continent’s health infrastructure to build hospitals and clinics, create or extend drug distribution networks and train additional skilled medical workers. Many of these partnerships will operate on a regional, or even continental basis, with new pan-African hospital groups extending their reach gradually to previously remote areas.

The extent of the public-private mix of healthcare delivery is likely to vary from country to country under this scenario, with the private sector becoming the dominant provider of care in wealthier countries. “If managed properly, we’d have a mixed scheme with a public system efficient enough to deliver a basic package and a private system that would have the quality to provide some extra care for those who could pay a bit more,” says the UNFPA’s Dr Osotimehin.

Risks to the scenario

This scenario will be one of the most challenging to enact within the given timeline, given Africa’s

high level of out-of-pocket health payments and heavy dependence on donor financing for many life-saving medicines and treatment. Only a handful of countries currently have, or are seeking to introduce, universal coverage. Even South Africa has been deliberating over some form of national health insurance since 2002.

Ramping up tax collection to levels sufficient to create a tax-financed health system is unrealistic in most areas. Many countries have little in the way of a middle class to support employment-based schemes, outside of the civil service.

4. Making telemedicine ubiquitous

Technology will be the dominant means of extending access to healthcare across the continent, enabling every citizen to access both basic and more specialist healthcare by 2022 even in the most rural parts of Africa.

This process will build on the mobile applications rolled out a decade earlier that reminded patients to attend clinic appointments or to take medicine. By 2022 the use of nanotechnology to create diagnostics tools for individuals and health extension workers in the field will be routine. Platforms that use SMS to link with voice messages will provide additional support, and most rural health workers will use SIRI, a speech recognition “personal assistant” that will allow them to schedule appointments, record patient data and information and include low-cost diagnostics applications.

Partnerships between the Mobile Health Alliance and UNICEF will help to tie in telemedicine platforms with child protection and other elements of social protection, thereby creating a seamless social service safety net.

Local clinics and health workers will have the services of remote general practitioners and specialists accessible 24 hours a day. Video-conferencing will allow doctors to treat patients remotely, and wireless applications for mobile-phone platforms will enable reliable

data collection. In addition, global advances in “smart fabrics” will enable people to monitor conditions such as diabetes and hypertension at home through their own clothing, making it easier for those in rural areas to manage their own treatment between clinic visits.

Community health workers will have a more high-tech toolbox available to them as well. Using Shazam auto-recognition technology—originally developed to sample and compress music digitally and to create an acoustic fingerprint that can be matched against central databases—even those with the most basic training will be able to capture the sound of a child’s cough or photograph an abnormal growth by mobile phone and transmit the data to specialists for their opinion and treatment advice.

Risks to the scenario

The most immediate risk to this scenario is the lack of uniformity in mobile broadband across the continent, as well as the absence of harmonisation of service agreements and platforms across national borders.

Training less-educated community workers to use mobile technology will be a major challenge and will require significant investment up front. There are risks that life-threatening conditions could be missed.

Further down the line, the use of technology is likely to raise privacy issues, forcing African countries to implement more comprehensive regulatory regimes to protect the security of medical data.

5. Encouraging local suppliers

By 2022 continued global economic instability will lead to cuts in foreign aid budgets and leave many donor organisations overstretched, with the result that many of them are forced to pull out of African countries. The migration of skilled medical personnel to developed countries is likely to accelerate.

The initial consequences of such a development could be empowering for many countries, as well as catastrophic for a smaller number. Countries with greater resources will use the opportunity for emancipation from charity to build up their own local manufacturing capability for basic drugs and medical equipment. In the medium term, booming economies in these more fortunate countries will attract international companies from high-growth markets to develop generic drugs locally, to train local medical staff, to offer new insurance products and to set up research and development centres on the continent. The countries that are most successful at developing the different aspects of their healthcare infrastructure will more easily attract and retain skilled healthcare workers.

Many experts have argued that external funding has, albeit unintentionally, often set the health agenda for African countries, rather than the other way around. With this source of money largely unavailable, it will be up to African governments, community organisations and other local stakeholders to define their health priorities and health strategies.

Ultimately, in many poorer countries, growing public pressure for better government services

will put pressure on governments drastically to cut military budgets and allocate extra, ring-fenced funding for healthcare expenditure.

Risks to the scenario

The countries that combine heavy dependence on donor financing with high levels of HIV/AIDS are likely to see their health systems overwhelmed and their economic development stunted when aid is withdrawn. Others will be forced to make difficult decisions about the care that they can offer, with many focusing even more on preventive care to stem the tide of sickness. For many of these countries, progress toward the Millennium Development Goals will stall for the near future. Deteriorating infrastructure and increasing economic polarisation will discourage the private sector from further investment.

This suggests that countries should prepare for this eventuality by weaning themselves off aid voluntarily—and gradually. Dr Letlape of the African Medical Association notes that governments can start now. “If we are at 90% donor funding now, let’s create a plan that in 2022 we will move to 50-50,” he says.

Conclusion

By 2022 a number of African countries may have found a way to rethink and restructure their healthcare systems so that they are fit for purpose, making care available to a majority of their citizens, and improving health outcomes. That any of the individual scenarios imagined above will take shape by 2022 is unlikely; but what can be expected is that elements of all five will be present in Africa's healthcare landscape, to varying degrees, over the next decade. A number of obstacles, however, will need to be overcome.

The first challenge for African governments will be increased investment in healthcare, particularly in the majority of countries still failing to meet the spending targets. This is likely to involve hard political choices, as well as an acceptance by governments that healthcare represents a critical investment in their populations and countries. According to the Economist Intelligence Unit's Democracy Index 2011, democratic institutions are increasingly taking root in Africa. This evolution, coupled with a growing middle class, will likely lead to greater expectations and

grass-roots pressure for increased healthcare investment.

Next, governments will need to focus on eliminating disparities in access to, and affordability of, healthcare. This will require broader vision about how the public and private sector can work together; a greater emphasis on providing and funding primary-care services; and strategies to ensure that all citizens, including the most impoverished, have reliable and affordable methods of paying for them.

Finally, African countries may need to re-evaluate their relationships with the international donor community. Some of this rebalancing depends on global economic developments and is beyond the control of African governments. Yet, particularly for the most developed countries, the reverberations from the global financial crisis offer an opportunity for governments to imagine a future of greater self-sufficiency in healthcare provision.

Appendix I Data Sources

Achieving Sustainable Health Development in the African Region: Strategic Directions for WHO 2010-2015, World Health Organization Regional Office for Africa, Brazzaville, Republic of Congo.

"Addressing Ghana's high maternal mortality rate", Ghana News, February 13th 2010.

Hailom Banteyerga, Aklilu Kidanu, Lesong Conteh and Martin McKee "Ethiopia: Placing Health at the Centre of Development", from *Good Health At Low Cost*.

The Business of Health in Africa: Partnering with the Private Sector to Improve People's Lives, International Finance Corporation, World Bank Group, Washington, DC.

"Fat is bad but beautiful", The Economist, January 17th 2011.

Arnab Ghatak, Judith G Hazlewood and Tony M Lee, *How Private Health Care Can Help Africa*, McKinsey Quarterly, March 2008.

Adam Robert Green, *The end of cheap medicine?*, thisisafricaonline.com, November 15th 2011.

"Growing pains", The Economist, September 24th 2011.

"The future of health care in Africa", *British Medical Journal*, Vol. 331, No. 7507, June 30th 2005.

Harmonization for Health in Africa; An Action Framework, World Health Organization, 2009.

Health Situation Analysis in the African Region: Atlas of Health Statistics, 2011, World Health Organization Regional Office for Africa, Brazzaville, Republic of Congo, fig 2 (p 18), fig 8, (p 24), figs. 10-11 (p26-27), fig 38, (p 34), fig. 49 (p 39), fig. 61 (p 45), fig. 151 (p 74).

Health transition in Africa: practical policy proposals for primary care, Bulletin of the World Health Organization, May 28th 2010.

Healthy Partnerships: How Governments Can Engage the Private Sector to Improve Health in Africa, International Finance Corporation, The World Bank Group, Washington, DC, 2011.

Robert Mensah, *How is Ghana Dealing with Maternal Mortality?*, GhanaWeb, April 23rd 2011.

Di McIntyre, Lucy Gilson, Vimbayi Mutyambizi, *Promoting equitable health care financing in the African context: Current challenges and future prospects*, Regional Network for Equity in Health in Southern Africa (EQUINET), October 2005.

“Miracle or Malthus?”, *The Economist*, December 17th 2011.

“Mobile health offers hope to patients in Africa”, *The Guardian*, June 8th 2011.

Frost & Sullivan, *Primary Healthcare Focus to Drive Telemedicine As South Africa Prepares to Roll out National Health Insurance*, October 27th 2011.

Strategic Orientations for WHO Action in the African Region: 2005-2009, WHO Regional Office for Africa, Brazzaville, Republic of Congo, 2005.

Towards Reaching the Health-Related Millennium Development Goals: Progress Report and the Way Forward, report of the regional director, World Health Organization Africa Regional Office for Africa, Brazzaville, Republic of Congo, 2010.

The Abuja Declaration: Ten Years On, World Health Organization, Geneva, Switzerland, 2011.

The World Health Report 2010—Health Systems Financing: the path to universal coverage, World Health Organization, Geneva, Switzerland, 2010.

World Malaria Report 2009, World Health Organization, Geneva.

Appendix II Interview Programme

The Economist Intelligence Unit would like to thank the following experts (listed alphabetically by organisation name) who participated in the in-depth interview programme.

- Valter Adao, Consulting Strategy & Innovation, Healthcare, Deloitte & Touche, South Africa
- Tedros Adhanom Ghebreyesus, minister of health, Ethiopia
- Dina Balabanova, senior lecturer in health systems, London School of Hygiene and Tropical Medicine
- Anshu Banerjee, World Health Organization representative in Sudan
- Peter Botha, chief executive, African Medical Investments
- Jacqueline Chimhanzi, Africa lead for Deloitte Consulting South Africa
- Shona Dalal, research associate, Harvard School of Public Health
- Ernest Darkoh, founder, BroadReach Healthcare
- Ben Davis, Consulting Strategy & Innovation – FSI, Deloitte & Touche, South Africa
- Robert Fabricant, vice-president, creative, Frog Design
- Kara Hanson, health economist, London School of Hygiene and Tropical Medicine
- Unni Karunakara, international president, Médecins Sans Frontières
- Sneha Khemka, medical director, BUPA International
- Liza Kimbo, chief executive, Carego Livewell
- Stefano Lazzari, World Health Organization representative, Tunisia
- Kgosi Letlape, president, African Medical Association
- Emmanuel Mujuru, Southern African Generic Medicines Association
- Keith McAdam, member of the board of directors, African Medical and Research Foundation (AMREF)
- Sherif Omar, professor of surgical oncology and former head of the National Cancer Institute, Cairo University, Egypt
- Marie Onyamboko, Kingasani Maternity Clinic, Kinshasha, Democratic Republic of Congo
- Babatunde Osotimehin, executive director, UN Population Fund
- Sharon Padayachy, FIST Capital Markets, Deloitte & Touche, South Africa

- Belgacim Sabri, health consultant, Tunisia
- Heather Sherwin, investment manager, Investment Fund for Health in Africa
- Gillian Stewart, Clients & Markets, Deloitte & Touche, South Africa
- Gaba Tabane, Consulting Clients & Industries, Deloitte & Touche, South Africa
- Dia Timmermans, senior health advisor, Joint Donor Office, World Bank, South Sudan
- Ashleigh Theophanides, director, actuarial health practice, Deloitte & Touche, South Africa
- Kay Walsh, Consulting Strategy & Innovation Economics Unit, Deloitte & Touche, South Africa
- Ishe Zingoni, industry analyst, ICT and healthcare, Frost & Sullivan, South Africa

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GENEVA

Boulevard des Tranchées 16
1206 Geneva
Switzerland
Tel: (41) 22 566 2470
Fax: (41) 22 346 93 47
E-mail: geneva@eiu.com

LONDON

26 Red Lion Square
London
WC1R 4HQ
United Kingdom
Tel: (44.20) 7576 8000
Fax: (44.20) 7576 8500
E-mail: london@eiu.com

FRANKFURT

Bockenheimer Land-
strasse 51-53
60325 Frankfurt am Main
Germany
Tel: +49 69 7171 880
E-mail: frankfurt@eiu.
com

DUBAI

PO Box 450056
Office No 1301A
Thuraya Tower 2
Dubai Media City
United Arab Emirates
Tel: +971 4 433 4202
E-mail: dubai@eiu.com

PARIS

6 rue Paul Baudry
Paris, 75008
France
Tel: +33 1 5393 6600
E-mail: paris@eiu.com