

## Overcoming Africa's Health Burden: Challenges and Prospects

Siphamandla Zondi

Africa shoulders the world's burden of disease. It is the epicentre of the global resurgence of infectious epidemics and pandemics. Africans remain troubled by diseases like diarrhoea, measles, cholera and tuberculosis that have long been overcome elsewhere with the help of modern medicine and efficient public health systems. Notwithstanding the fact that the correlation between political economy and health was established in the 1970s, the twin challenge persists unabated in most of Africa. The modicum of public health systems and burgeoning private health care in Africa are under immense pressure due to the worsening socio-economy and illness. Against this background, this policy brief examines how the interaction between socio-economy and health plays itself out in Africa, including the prospects for overcoming this challenge in the near future.

### Introduction

Disease outbreaks are the most common news in Africa after conflict and political instability. News headlines suggest that communicable diseases like malaria, cholera and Tuberculosis (TB) are re-emerging at a time when the continent is reeling from the devastating effects of the HIV/AIDS pandemic. The International Conference on Primary Health Care held in Alma-Ata, USSR, in September 1978, catapulted public health into an absolute priority for every government in the world. Co-sponsored by the World Health Organisation (WHO) and the United Nations Education and

Culture Fund (UNECF), the conference bound governments and other actors to act quickly and decisively to achieve an acceptable level of health for all by the year 2000. Alma-Ata also introduced a new paradigm of public health, one that said health is a human right and that health and development are inextricably linked.<sup>1</sup>

As a result, since Alma-Ata the relationship between underdevelopment and ill-health, or between modernisation and changing disease patterns, is no longer in dispute. However, Africa has missed Alma-Ata's target of health for all by 2000 as it is still bedevilled by a high incidence of infectious diseases like cholera, HIV/AIDS, malaria and TB.

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**Table 1** Death by cause, estimates for 2004

| CAUSE                             | WORLD     |         | AFRICA  |         |
|-----------------------------------|-----------|---------|---------|---------|
| Population (000)                  | 6 436 826 |         | 737 536 |         |
|                                   | (000)     | % total | (000)   | % total |
| Total deaths                      | 58 772    | 100.0   | 11 248  | 100.0   |
| I. Communicable diseases          | 17 971    | 30.6    | 7 682   | 68.2    |
| Infectious and parasitic diseases | 9 519     | 16.2    | 4 849   | 43.1    |

Source: WHO, *Burden of Disease Statistics*, Geneva: WHO, 2004.

Just what is the relationship between this health burden and Africa's political economy of poverty? And what are the prospects for overcoming Africa's health challenges in the near future? This policy brief will examine the current state of health in Africa with a view to proposing ingredients of an effective response to its health conundrum.

### Africa's Health Burden

Africa's share of the global burden of ill-health is as disproportionately huge as its share of global poverty. In spite of many conference resolutions, innovative global plans and other laudable undertakings, the state of health in the world remains appalling. Health reports indicate that all health conditions are worse in Africa than in any part of the world. Until recently, we thought infectious diseases had been overcome and the focus was to shift to lifestyle diseases like cancer, diabetes, hypertension, heart diseases, depression, and so forth. But occasional outbreaks of lethal infections like bird flu, HIV and AIDS, and now swine flu, suggest otherwise. While communicable diseases are an occasional occurrence in the developing world, they are Africa's daily bane.

While globally the number of deaths due to communicable diseases and nutritional conditions was 30% of total deaths in 2004, in Africa these conditions accounted for 69% of natural deaths. This amounted to almost eight million deaths in Africa out of an estimated 17 million deaths caused by communicable diseases, maternal, perinatal and nutritional conditions globally. As will be illustrated, figures of morbidity and mortality in Africa indicate that women, infants and children are particularly vulnerable to health challenges facing the continent. They die in much larger numbers and much more frequently than other demographic cohorts. Figures also show that the causes of deaths among women and children have more to do with infections and socio-economic conditions, especially the nutritional quality of food they eat, than other causes. This means that Africa's health burden will impact negatively on its population structure in the long-run.

As Table 1 shows, deaths from infectious and parasitic diseases alone account for 43% of all deaths in Africa. This means that four in ten people in Africa are likely to succumb to preventable illnesses like TB, malaria, cholera and AIDS than from malignant neoplasms or cardiovascular diseases that are difficult to treat. Therefore,

**Table 2** Death from maternal conditions, estimates for 2004

| CAUSE                  | WORLD     |         | AFRICA  |         |
|------------------------|-----------|---------|---------|---------|
| Population (000)       | 6 436 826 |         | 737 536 |         |
|                        | (000)     | % total | (000)   | % total |
| Total deaths           | 58 772    | 100.0   | 11 248  | 100.0   |
| Maternal conditions    | 527       | 0.9     | 259     | 2.3     |
| Maternal hemorrhage    | 140       | 0.2     | 62      | 0.5     |
| Maternal sepsis        | 62        | 0.1     | 30      | 0.2     |
| Hypertensive disorders | 62        | 0.1     | 22      | 0.1     |
| Obstructed labour      | 34        | 0.1     | 13      | 0.1     |
| Abortion               | 68        | 0.1     | 36      | 0.3     |

Source: WHO, *Burden of Disease Statistics*, Geneva: WHO, 2004.

**Table 3** Perinatal mortality rates, estimates for 2004

| CAUSE                            | WORLD     |         | AFRICA  |         |
|----------------------------------|-----------|---------|---------|---------|
| Population (000)                 | 6 436 826 |         | 737 536 |         |
|                                  | (000)     | % total | (000)   | % total |
| Total deaths                     | 58 772    | 100.0   | 11 248  | 100.0   |
| Perinatal conditions             | 3 180     | 5.4     | 977     | 8.6     |
| Prematurity and low birth weight | 1 179     | 2.0     | 309     | 2.7     |
| Birth asphyxia and birth trauma  | 857       | 1.5     | 285     | 2.5     |
| Neonatal infections              | 1 144     | 1.9     | 382     | 3.3     |

Source: data from WHO, *Burden of Disease Statistics*, Geneva: WHO, 2004.

contrary to global trends showing a rise of non-communicable sickness, in Africa millions still die unnecessarily from conditions that are completely preventable and curable.

Table 2 indicates that Africa accounts for half of global deaths caused by maternal conditions. This is highly disproportionate given the fact that Africa accounts for less than a third of the world population. Maternal deaths caused by bleeding at the point of delivery or complications during abortion are particularly high in Africa. Part of the challenge is the shortage of skilled medical staff, including midwifery, and the equipment necessary to cope with these occurrences. The proliferation of backyard abortion clinics with sub-standard medical care is causing thousands of unnecessary deaths during abortion. This means African women die unnecessarily from manageable conditions.

Like African women, infants in Africa are severely affected by the continent's health burden. Table 3 shows that perinatal conditions such as premature birth, birth trauma and neonatal infections accounted for the death of almost a million infants near birth in 2004 alone. Most of these babies died from infections contracted at birth, a situation that

is better managed elsewhere due to strict hygiene conditions in medical facilities, as well as strong infection control systems. These measures are relatively easy to enact and their application would prevent the trauma and costs that society and health institutions incur due to these deaths.

The close links between ill-health and conditions of poverty that millions of Africans experience is best illustrated by mortality due to nutritional deficiency. Table 4 shows that, in 2004, over 150 000 people died from conditions caused by deficiency of nutrients like iron, protein, carbohydrates and vitamins. This means Africans are largely susceptible to disease and death due to a deteriorating socio-economy marked by high food insecurity, low nutritional content in food and high incidence of absolute hunger.

### Food Insecurity and Disease

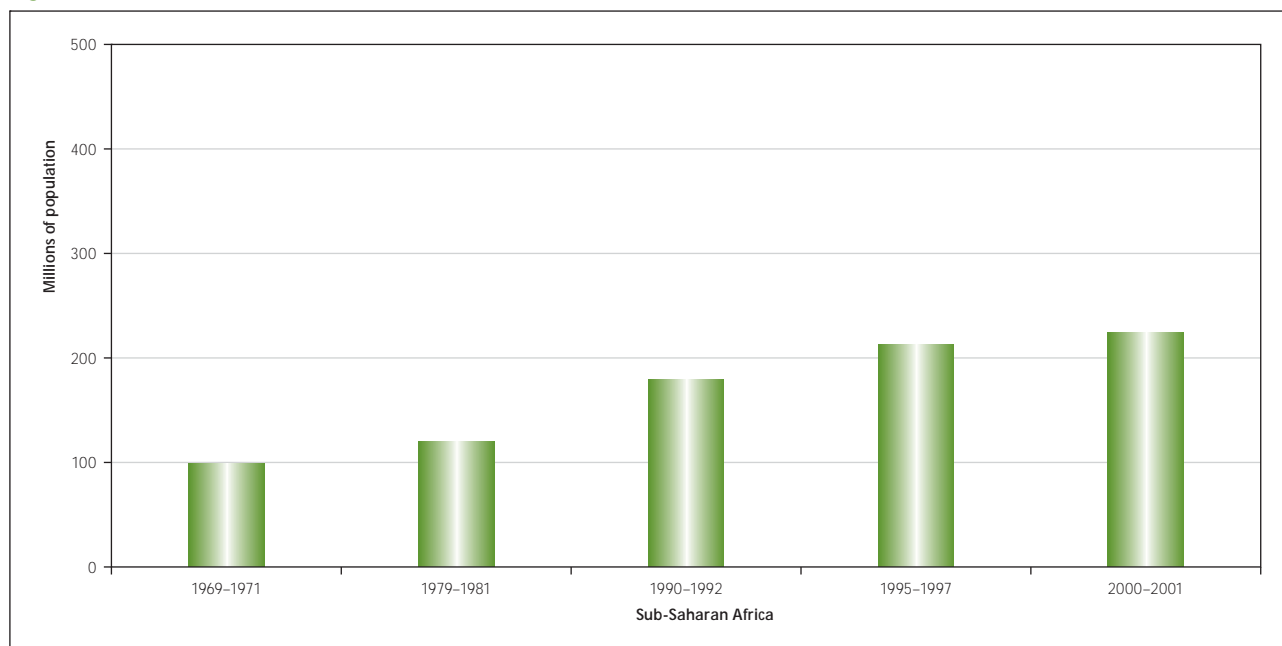
This is not surprising given the fact that Africa has been particularly susceptible to recurrent food crises since the 1980s. There was a bad food situation in 2001, which grew worse and became a

**Table 4** Nutritional deficiency as a cause of death, estimates for 2004

| CAUSE                       | WORLD     |         | AFRICA  |         |
|-----------------------------|-----------|---------|---------|---------|
| Population (000)            | 6 436 826 |         | 737 536 |         |
|                             | (000)     | % total | (000)   | % total |
| Total deaths                | 58 772    | 100.0   | 11 248  | 100.0   |
| Nutritional deficiencies    | 487       | 0.8     | 159     | 1.4     |
| Protein-energy malnutrition | 251       | 0.4     | 111     | 0.9     |
| Iodine deficiency           | 5         | 0.0     | 2       | 0.0     |
| Vitamin A deficiency        | 17        | 0.0     | 13      | 0.1     |
| Iron-deficiency anaemia     | 153       | 0.3     | 27      | 0.2     |

Source: data from WHO, *Burden of Disease Statistics*, Geneva: WHO, 2004.

Figure 1 Malnutrition Trends in Africa, 1969-2001



Source: Adapted from FAO, *The State of Food and Agriculture 2006*, Geneva: FAO, 2006, p 84.

real calamity in Southern Africa in 2002/3. In that period, 32% of the population in Africa was said to be malnourished, and Africa accounted for 24% of an estimated 854 million malnourished people in the world.<sup>2</sup> Figure 1 shows that, whereas global trends in the past decade indicate that there has been a decline in absolute malnutrition, in Africa the number of malnourished people has actually increased.<sup>3</sup>

By 2005, the whole of the Sahel was hit by a famine which killed thousands in Niger and left close to six million people without food for months. As a result, just over 300 000 children were reported to have died of malnutrition by the end of that year.<sup>4</sup> In 2006, 11 million people were said to be facing starvation. This was broken down to 2.5 million people in Kenya, 1.4 million in Somalia, 1.5 million in Ethiopia, and 60 000 in Djibouti. Five million children were said to be surviving on one poor meal a day. The affected countries already had high rates of malnutrition and morbidity before the crisis as a result of endemic drought since the 1980s.<sup>5</sup> Families lost crucial sources of nutrients as livestock, from which they got meat and milk, perished due to incessant droughts. While the much-publicised crises came, went, and returned, the problem of poor food quality has remained constant over several decades. The effect of this high nutritional deficiency in the African population is unusual sickness and death among children and infants, in particular.

A discussion of root causes of this precarious nutrition and food insecurity in Africa falls outside the purview of this article. Suffice to say that

Africa's persistent food crisis is an artefact of a complex interface of many factors. These include natural disasters such as recurrent droughts and violent climate changes that produce flash floods. Occasionally, there are locust attacks. Strife and internecine conflict disrupt food production and distribution. Lack of food reserves, poor distribution mechanisms, weak food marketing systems, low use of agricultural inputs, non-existence of food policies, and weak focus on agriculture as a policy priority suggest that food insecurity is also a product of bad governance.<sup>6</sup>

### Pathogens and Africa's Health Challenge

However, it is mortality caused by the incidence of communicable diseases that is consistently high in Africa. In this regard, there are five main categories of communicable diseases that constantly transmute from being mild endemic to lethal epidemics: HIV and AIDS; diarrhoeal diseases; malaria; TB; and a cluster of tropical diseases that includes sleeping sickness, dengue fever and river blindness. The ones that cause the greatest damage in all regions of Africa, which we will discuss in this article, are the first four categories.

### HIV and AIDS

While HIV and AIDS has spread faster than any of the other diseases mentioned and is now killing

millions of Africans every year, the biggest cause of disease-linked mortality is still diarrhoeal diseases. Yet, AIDS-related deaths are rising fast. With 24 million people affected, Africa accounted for 60% of the HIV prevalence. Of the four million new infections, 2.1 million took place in Africa. Of the 2.9 million deaths due to full-blown deaths, 2.1 million were Africans.<sup>7</sup> This means the prevalence of HIV and AIDS in Africa is excessively high, making it the second biggest cause of morbidity and mortality on the continent. Its effect, however, is particularly extreme among able-bodied men and women, thus robbing the struggling African economies of much-needed labour.

Also worrying is the fact that in Africa, unlike elsewhere, women are infected and affected more than men by the AIDS epidemic. There are also a large number of women who are forced to fend for orphaned children on their own because men have died of AIDS. The number of female-headed households has increased astronomically since AIDS became epidemic in the early 1990s.<sup>8</sup> These households are particularly vulnerable to poverty and endemic childhood diseases like measles, tetanus, diphtheria and polio, as well as TB.<sup>9</sup> The impact of this disease on the economy and social stability is very severe.

## Cholera

Diarrhoeal diseases remain the biggest cause of sickness-linked death in Africa, killing slightly more than AIDS in the past few years. They are the second biggest cause of infant death the world over. These infectious illnesses are characterised by frequent loose or liquid bowel movements and excessive loss of body fluids, which causes severe dehydration and death. The problem is that through diarrhoea, sufferers lose not only water, but also vital nutrients like salts, electrolytes and minerals necessary for the healthy functioning of the body and its organs. Diarrhoea is commonly caused by viral infections, bacterial toxins and parasites found in food and drinking water. For this reason there are four types of diarrhoea, namely secretory diarrhoea, osmotic diarrhoea, motility-related diarrhoea and inflammatory diarrhoea.

The most common cause of death, which falls into the category of secretory diarrhoea, is cholera. Cholera is caused by enterotoxin-producing strains of the bacterium called *vibrio cholera*. It is transmitted between humans through eating food or drinking water contaminated with the bacterium passed from other sufferers. The bacterium affects the internal membrane of the small intestines,

causing excessive diarrhoea. Cholera is particularly fatal because it can cause massive loss of water, blood and nutrients in a short space of time unless oral rehydration therapy is provided.

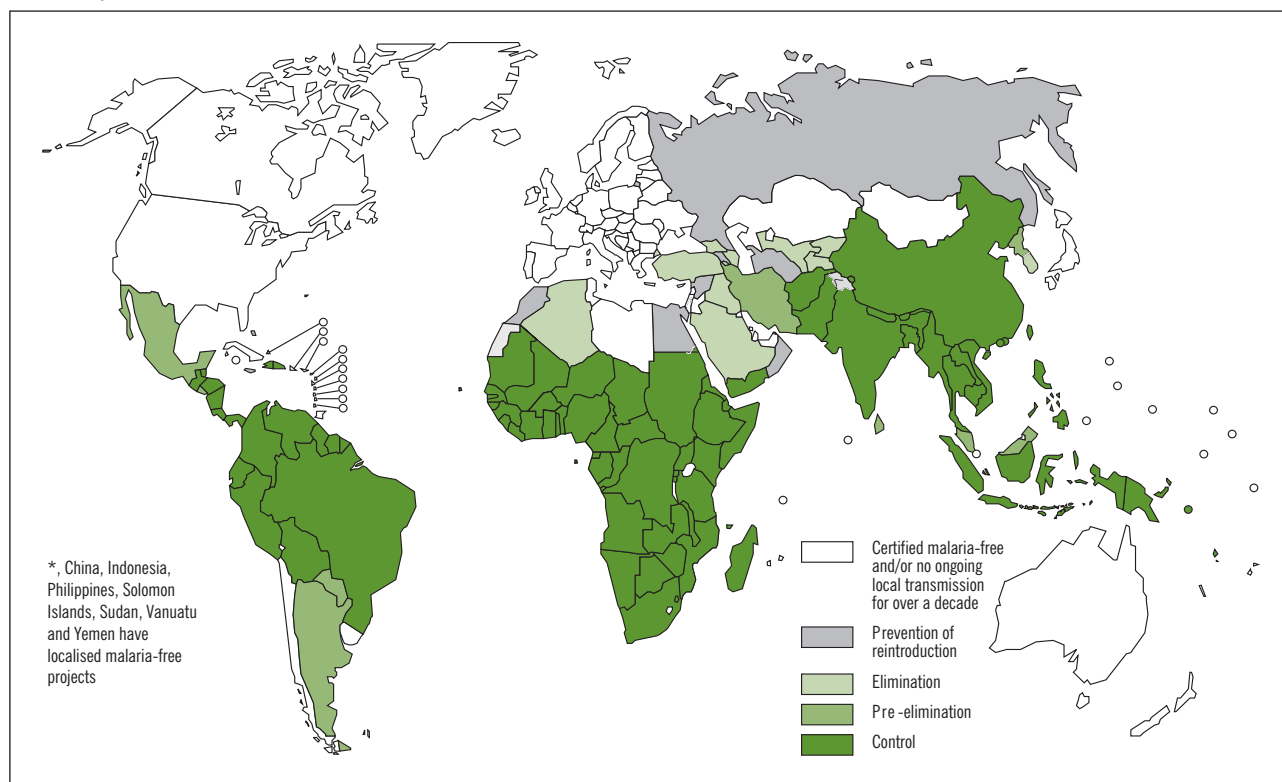
While cholera is no longer a major public health issue in most of the world due to improved sanitary conditions, the disease has re-emerged as a grave threat in Africa since 2005, partly due to poor sanitation and weak health systems. Indications that cholera is becoming resistant to commonly used drugs such as *streptomycin* and *trimethoprim* is a major cause of concern. In 2006 alone, lethal cholera outbreaks were reported in fourteen countries in West Africa. A total of 125 082 cases were recorded in Africa in that year, 31% higher than figures for 2004 and accounting for 95% of global outbreaks. There were just over 2 000 deaths as a result. Of the 33 countries affected, Senegal, Guinea-Bissau and the Democratic Republic of Congo together accounted for 70 260 of incidents and 1 100 deaths.<sup>10</sup> Cholera was a major newsmaker in 2008 because of the devastation it caused the people of Zimbabwe.

Where sanitary conditions are good with a sufficient supply of safe drinking water and food, cholera sufferers easily recover with the help of home remedies. But in the case of poor sanitary conditions and malnourished individuals, diarrhoea causes severe dehydration and death. It requires a good dose of oral rehydration therapy within hours of diagnosis. However, in Africa, access to these curatives is complicated by a shortage of primary health facilities within a reasonable distance, as well as poor sanitary conditions, posing a threat of repeat infection in many cases.

## Malaria

Malaria is another grave health threat globally, with nearly half of the world's population living in areas where malaria is endemic. Some 109 countries are classified by the WHO as 'malarious.' Figure 2 indicates that these are mainly in Africa, South Asia and Latin America. This means malaria is largely confined to developing regions of Africa where poverty and inequality are high. Fifty of 109 malarious countries are in Africa. Forty-six countries are in control mode, meaning they are battling the disease using normal control measures such as the supply of insecticide-treated bed nets, indoor spraying of homes and conducting targeted diagnostic tests and administration of curatives. Many of these countries are expected to be in this phase of the anti-malaria fight for another twenty years because they have conditions that promote

**Figure 2** Malaria-free countries and malaria-endemic countries in phases of control\*, pre-elimination, elimination and prevention of reintroduction, end 2008



Source: WHO, *World Malaria Report 2009*, Geneva: WHO, 2009.

a high transmission of vectors responsible for malaria outbreak.<sup>11</sup> Countries like Malawi are badly affected, with the entire 11 million population susceptible to contracting malaria.<sup>12</sup>

Malaria is responsible for the death of 397 000 people in Africa, which is 45% of total malaria-instigated deaths. Some 203 000 cases of malaria were detected in Africa alone in 2005, out of a total of 241 000. This means that Africa accounts for 84% of total global incidence of malaria. Malaria accounts for around 100 000 infant deaths and is responsible for 18% of deaths among children under the age of five.<sup>13</sup>

Four African countries are placed in the elimination phase, meaning that the malaria situation in these countries has begun to improve enough for control measures to be scaled down.<sup>14</sup> This also means a resurgence of malaria incidence is deemed unlikely. The successes registered in these countries are generally ascribed to effective use of control measures. This indicates that the roll-back malaria campaign is having an impact in some countries and lessons are being learned for application in the rest of the malaria-prone countries. But most of these countries have small populations, which means in these countries malaria is relatively easier to control than in countries with larger populations and malaria-prone physical environments.

## TB

TB is one of the oldest health challenges in Africa. It has not received sufficient attention within and outside Africa due to the fact that it is neither a violent nor a quick killer disease, such as malaria and cholera. TB is caused by mycobacteria, mainly *tubercle bacillus*, which attacks the lungs in humans. But the greatest danger it causes is that it also often goes on to compromise the central nervous system, the lymphatic system, the circulatory system, the genitourinary system, the gastrointestinal system, joints, and even the skin. It has a corrosive effect on these crucial systems in a human body, leaving a sufferer emaciated to death. Its main symptoms are a chronic cough with blood-stained sputum, high fever, night sweats and weight loss.<sup>15</sup> It requires an X-ray to effectively detect it, an instrument that many primary health centres do not have in many parts of Africa. It spreads easily between humans through the emission of respirable pathogens in body fluids transferred through coughing, sneezing or the sharing of drinking and eating utensils.

Commonly called a disease of poverty, TB thrives in crowded and squalous conditions found in many human settlements in Africa. It incubates in unhygienic conditions and spreads stealthily through close human contact in these conditions.



In a seminal book entitled, *The White Plague*, Randal Packard (1989) connects the incidence and spread of TB in Southern Africa to the rise of industrial capitalism under colonial rule. Packard traced the origin of pathogens that cause TB to 19<sup>th</sup> century sick Europeans who were transported on ships to Africa and other parts of the developing world in search of tropical climatic conditions thought to have a healing effect on TB sufferers. Thus, a highly contagious disease was introduced into 'virgin' territory. For this reason, TB is also called a disease of globalisation. The problem is that in these conditions TB becomes latently endemic, allowing it to spread and kill sufferers secretly before being properly detected and treated.

Packard also detailed how the disease became widely endemic in the region with the expansion of the mining industry, where crowded and unhygienic working and living conditions prevailed. Because industrial capitalism depended on migrant labour drawn from the countryside, the disease was spread through trains provided by mining companies to ferry sick labourers back to their places of origin.<sup>16</sup> It also thrived in the labour-intensive commercial farming sector, and this continues to be the case in the region.<sup>17</sup>

The incidence of TB has been rising in Africa at alarming levels since the mid-1990s as the prevalence of HIV and AIDS also increased. The dramatic explosion of the AIDS epidemic in Africa, making the continent its epicentre, diminished body resistance of many to this infectious disease. In some cases, HIV infection accounts for as much as a 60% rise in the incidence of TB. As much as 30% of AIDS-related deaths are caused by TB.<sup>18</sup> This renders control of any one of the two lethal health problems in Africa futile if not linked to the policy responses of the other. This also makes response to TB too expensive for most African countries badly affected by the twin problem of TB and AIDS.

## The Evolving African Responses

The inter-connectedness of these epidemics is one reason why the African Union (AU) has tried to focus equally on HIV and AIDS, TB and malaria since 2001. After much discussion on the real and potential impact of these epidemics on Africa's health status, economic development and political stability, the African Heads of State/government meeting in Abuja, Nigeria, in April 2001 adopted a declaration committing them to collective action to arrest and reverse the acceleration of HIV, TB, and malaria infection in Africa.<sup>19</sup> Two years later, African governments meeting in Maputo, Mozambique,

discussed progress made since Abuja and re-committed to integrate responses to the triple-crisis.<sup>20</sup>

However, when the AU Assembly reviewed Abuja commitments in 2005, it found that African governments had not done much to fulfil their commitments. It advised that regional economic communities (REC) should have a strong role in achieving the Abuja goals. It also called for greater co-operation with international agencies seized with the matter, resulting in the announcement late in 2005 of a joint initiative to reduce HIV, TB, malaria and polio infections by WHO, United Nations Programme on HIV/AIDS (UNAIDS), United Nations Development Programme (UNDP), United Nations Education, Scientific and Cultural Organisation (UNESCO), United Nations Development Fund for Women (UNIFEM), (United Nations Population Fund (UNFPA), and United Nations Children's Fund (UNICEF). An AU Conference of Ministers of Health meeting in Gaborone, Botswana, in October 2005 asked states to make far-reaching decisions in favour of better delivery of health services, with special emphasis on increased access to essential medicines necessary to prevent and treat these infections.<sup>21</sup> The same group was joined by UN agencies in a meeting in Brazzaville, Congo Republic, in March 2006, where concrete steps and milestones were adopted as part of a joint strategy to realise the Abuja goals.<sup>22</sup> This series of meetings culminated in the Special Summit of the AU on the three epidemics in Abuja, May 2006.

The Abuja summit reflected on continental responses to its health challenges and found the following:

- There was greater awareness and express political will to exalt health issues in Africa;
- Fifty per cent of African countries had declared HIV and AIDS as a state of emergency;
- Most African countries had developed multi-sectoral policies and strategies to fight these epidemics;
- In many countries, active civil society, donor and private sector institutions had some role in national responses;
- AU regions had developed regional response frameworks to guide member states; and
- There had been increased and better co-ordinated donor funding for the fight against the triple-crisis.<sup>23</sup>

## Conclusion

The World Health Report 2008 makes the point that four factors conspire to keep Africa's health burden higher than that of any other region of the world.<sup>24</sup>

These factors are unequal growth and unequal outcomes; globalisation of health challenges; weak health systems and failure of health reforms; and changing values and rising expectations. We have seen that many of Africa's health challenges are preventable and controllable. Many diseases that continue to blight millions of Africans have been defeated in other parts of the world, especially in high-income countries, using existing medicines and vaccines as well as sanitary control measures.

While Africa is beginning to respond in a concerted and open fashion to the major health challenges, such as the triple-epidemics, the continent is far from effectively dealing with the complex interplay of the four factors mentioned. As a result, the health challenges persist and, in some cases, actually grow. This does not require express political commitment only, but firm political action to strengthen health systems, improve health service delivery and eradicate conditions that render their populations susceptible to infections.

## Recommendations

The following measures are recommended:

- The AU and REC must put systems in place to monitor and evaluate action on Abuja and post-Abuja commitments;
- The AU must push for formalisation of the co-operation between Africa and the seven UN agencies;
- The AU and REC must prioritise better in order not to try to achieve everything at the same time. Strengthening primary health care systems and improving sanitary conditions would have positive long-term effects on the health status of Africa;
- African governments must develop cordial and effective partnerships with non-state actors that are already providing a lot of health services; and
- The co-operation with the private sector should be regularised so that Africa can begin to rely on domestic resources to fund the fight against disease.

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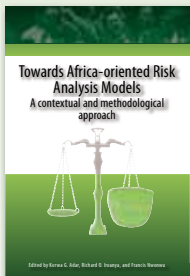
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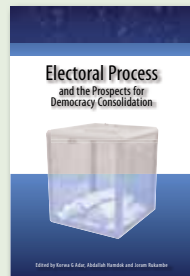
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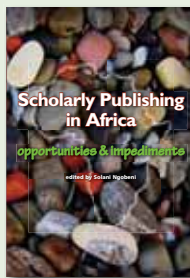
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