



THE THREAD THAT RUNS THROUGH AFRICA

FABRIC OF AFRICA TRENDS REPORT

A Focus on Non-Communicable Diseases (NCDs), Maternal & Child Health, and Strengthening Healthcare Systems in Africa

March 2013



TABLE OF CONTENTS

I. Background and Objectives.....	5
II. Introduction	5
III. Women’s Health – Non-Communicable Diseases.....	6
III.a – Breast Health	7
III.b – Breast Health in Selected Countries	9
Egypt.....	9
Ethiopia	9
Ghana	10
Kenya.....	10
Nigeria.....	10
South Africa.....	10
III.c – Cervical Health	11
III.d – Cervical Health in Selected Countries.....	12
Egypt.....	12
Ethiopia	12
Ghana	12
Kenya.....	13
Nigeria.....	13
South Africa.....	13
Uganda.....	13
III.e – Cardiovascular Health	14
III.f – Cardiovascular Health in Selected Countries.....	14
Egypt.....	14

Ethiopia	15
Ghana	15
Kenya.....	15
Nigeria	15
South Africa.....	15
Uganda.....	15
IV. Maternal, Newborn and Child Health	16
IV.a – Maternal Health	17
IV.b – Maternal Health in Selected Countries	19
Egypt.....	19
Ethiopia	19
Ghana	20
Kenya.....	20
Nigeria	21
South Africa.....	21
Uganda.....	21
IV.c – Newborn and Child Health	22
IV.d – Newborn and Child Health in Selected Countries	25
Egypt.....	25
Ethiopia	25
Ghana	25
Kenya.....	26
Nigeria	26
South Africa.....	26



Uganda.....	27
V. The Need for Skilled Health Workers.....	27
VI. Looking Forward: The Role of Industry	28
VII. Conclusion	29
VIII. References	30
VIII. Appendix.....	32

I. Background and Objectives

Fabric of Africa is a collaborative campaign to drive public-private partnerships and improve healthcare access across the continent. The campaign focuses on women as the ‘fabric’ of Africa and uses this theme to highlight the importance of healthy women and the positive impact they have on the continent. The initiative reflects the post-2015 Millennium Development Goals (specifically goals 4 and 5), focusing on three key areas: Non-Communicable Diseases (NCDs) (specifically breast, cervical & cardiac health), Maternal and Child Health (MNCH) and healthcare systems including infrastructure rehabilitation and clinical training.

With a presence in Africa for over 100 years Philips is committed to providing effective, sustainable and value-based healthcare solutions to the continent’s diverse markets. Philips has a proven track record in delivering solutions in the area of NCDs, MNCH and strengthening healthcare systems, and a wealth of experience working on large scale projects across Africa and globally. We understand the complex health challenges and constraints to access to healthcare that many women in Africa face. Through this understanding, Philips aims to bring innovative, low-resource setting, appropriate health technologies and diagnostic solutions to the African market through engagement with Ministries of Health, donors and other key national and international stakeholders to provide financing solutions, technical assistance and long-standing expertise in the sector.

The following report has been commissioned to highlight current trends in relation to Non-Communicable Diseases (NCDs), Maternal, Newborn and Child Health (MNCH) and healthcare systems in Africa, with a specific focus on Kenya, Ghana, South Africa, Uganda, Nigeria, Ethiopia and Egypt.

II. Introduction

In recent decades, there has been a noticeable shift in the underlying causes of disease and death worldwide. While infectious disease is declining, in many cases due to the current economic crisis, countries are struggling with a double burden of disease i.e. NCD and infectious disease.

NCDs, which include cancer, diabetes, cardiovascular disease, and chronic respiratory disease, are projected to account for a quarter of all deaths in Africa by 2015 and by 2030 are expected to result in 1.6 million new cases with 1.2 million deaths. According to the World Health Organization (WHO), deaths from NCDs in Africa will surpass deaths from other conditions, including communicable diseases, by 2030.

NCDs – typically viewed as “Western diseases” and, therefore, overshadowed by more sensational, headline-grabbing illnesses such as HIV/AIDS, Tuberculosis and Malaria – have become increasingly problematic in Africa yet have received low priority and few resources until very recently [3]. In 2010, NCDs were responsible for 40% of all deaths in the WHO African Region¹ and about half of all NCD-

¹ The WHO African Region includes the following countries: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda,



related deaths in the region occurred in persons under the age of 70 [2]. Furthermore, the region had the highest age-standardized NCD mortality rates for all ages: 844 per 100,000 for males and 724 per 100,000 for females. While global NCD-related deaths were projected to increase by 17% over the next 10 years, Sub-Saharan Africa (SSA) is expected to see the greatest increase (27%). If current trends continue, the WHO projects that NCDs will exceed communicable, maternal, perinatal, and nutritional diseases as the most common cause of death in Africa by 2025 [2].

Now, with the increasing emergence of NCDs, health systems in SSA have begun to operate on what the WHO calls a “double burden of disease”: high mortality and morbidity rates due to both communicable and NCDs. The most common and modifiable risk factors linked to NCDs – high blood pressure, high cholesterol levels, tobacco use, excessive alcohol use, inadequate intake of fruit and vegetables and being overweight, obese or physically inactive – have increased in the WHO African Region (WHOAFRO) and can be attributed to urbanization and globalization [3].

Overall, the health and well-being of African men, women and children has been cause for concern. According to World Bank statistics, Sub-Saharan Africa (SSA) has continued to suffer the highest levels of mortality in the world, with an overall life expectancy at birth of 46 years. While all other regions have experienced uninterrupted increases in life expectancy since the 1960s, life expectancy in SSA peaked in the early 1990s at 50 years and has fallen back by 4 years [4].

Women’s health, in particular, has represented a challenge for the region. WHO Director-General Margaret Chan, commenting on the findings of the Organization’s 2009 “Women and Health: Today’s Evidence, Tomorrow’s Agenda” report, said that the health status of girls and women in SSA was the lowest in the world. For women aged 20 to 60 years in the region, the risk of premature death is 42%, seven times higher than that of their counterparts in affluent countries. In addition, she noted that maternal health issues such as complications due to pregnancy and childbirth were the leading cause of death and disability among 15 to 19 year old girls in developing countries [5].

In the past 20 years, continent-wide health sector reforms in Africa have prioritized primary healthcare in attempts to provide accessible healthcare to rural communities while containing costs. While such strategies have been primarily focused on MNCH, the provision of acute care remains a challenge in all areas [4].

As Philips Healthcare is committed to improving the health of women in Africa, the following report provides a review of trends in maternal and child health as well as women’s health issues related to NCDs such as breast cancer, cervical cancer, and cardiovascular disease.

||| • Women’s Health – Non-Communicable Diseases

The urbanization and globalization of African countries in recent decades have led to increasing levels of incidence in risk factors typically associated with NCDs, including obesity, physical inactivity, and tobacco smoking.

Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, South Africa, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia, and Zimbabwe.

- Breast and cervical cancers are the leading forms of cancers for women in Africa, and associated mortality rates are high.
- Cardiovascular diseases (CVDs) have become the second most common cause of death after infectious diseases.

The key challenges in tackling these health issues include low levels of awareness and the taboo nature of breast and cervical cancer in most African countries. Poverty and rural living also compound these health issues. To overcome these challenges, efforts to raise awareness and promote early screenings for women are needed.

Current Status and Key Issues

Beyond the pressing maternal health issues, women worldwide are faced with several other health challenges, particularly NCDs. These issues are further compounded for women living in low- and middle-income countries. According to the UN Inter-Agency report of 2011,² “Knowledge Summary 15: Non-Communicable Diseases”, there were more NCD-related deaths among women aged 15 to 59 years in Africa in 2004 (2.2 deaths per 1,000 women) than in high-income countries (1.1 deaths per 1,000 women)³ [23].

Certain NCDs specifically affect women. One such NCD is breast cancer, the leading cause of cancer death among women worldwide. Despite the availability of methods for early detection and treatment, breast cancer caused an estimated 458,000 deaths in women in 2008. Of the 1.4 million new cases of breast cancer identified in 2008, about half were in low- and middle-income countries.

Cervical cancer is another NCD affecting female mortality rates. Certain types of human papillomavirus (HPV) have led to both pre-cancer and cancer of the cervix. Around 88% of the 275,000 women who died from cervical cancer in 2008 were living in low- and middle-income countries.

The risk factors associated with cardiovascular health have also been shown to contribute to the onset of other NCDs, such as cervical and breast cancer.

The following section reviews trends in breast, cervical and cardiovascular health for women in Africa [23].

III.a – Breast Health

Current Status and Key Issues

Among women worldwide, breast cancer has become the most common cause of cancer mortality, accounting for 16% of cancer deaths in adult women [25]. It has become the most common cancer in both developed and developing regions with around 690,000 new cases estimated in each region. Incidence rates have varied from 19.3 cases per 100,000 women in Eastern Africa to 89.7 cases per 100,000 women in Western Europe, and are high (greater than 80 cases per 100,000) in developed regions of the world (except Japan) and low (less than 40 cases per 100,000) in most of the developing regions [25].

² Compiled by the United Nations, the Partnership for Maternal, Newborn & Child Health, World Health Organisation (WHO), International Diabetes Federation, Family Care International, and the Gavi Alliance.

³ Source: World Health Organisation (WHO). *Combating NCDs: protecting health, promoting development*. 2011. (Fact 9, pg 14).



Despite a higher prevalence in developed regions, breast cancer has become the second most common cancer among women in SSA, accounting for 16.8% of all female cancers, and is a growing issue. In its 2006 “Disease and Mortality in Sub-Saharan Africa” report, the World Bank noted that Central, West, and East Africa appeared to have lower incidence rates than Southern Africa, the latter estimated at 33.4 cases per 100,000 women, and an estimated total of 48,600 cases occurred in Sub-Saharan Africa in 2002.

Risk factors for female breast cancer have included menstrual and reproductive factors, high body mass index (BMI), family history of breast cancer, and certain genetic mutations. Reproductive and hormonal factors appear to be the most important, with risk being increased by early menarche, late menopause, late age at first birth, and low parity [4]. In addition, the risk of developing breast cancer tends to increase as one ages. About 1 in 8 invasive breast cancers were found in women younger than 45 globally, while about two of three invasive breast cancers are found in women age 55 or older [24].

Challenges and Potential Solutions

In SSA, higher incidence rates and relative frequencies of breast cancer have been reported more often in association with urban rather than with rural residence, but data has been sparse. Breast cancer risk has been associated with socioeconomic status, with women of higher social class (as measured by education, income, housing, etc.) having a higher risk⁴. Once again, such differences are most likely a reflection of different prevalence of risk factors among social classes and wealth quintiles [4].

Obesity in post-menopausal women has been identified as a significant risk factor in SSA⁵. Although traditional diets in Africa were typically low in animal products, especially fat, and high in fiber⁶, this pattern has been modified by urbanization and the Westernization of lifestyles, which may lead to an increase in breast cancer incidence in African populations over time [4].

The effect of oral contraceptive hormones on the risk of breast cancer has been the subject of much research. There appears to be a small but detectable risk in women using oral contraceptives, but this diminishes when contraception ceases, and after 10 years, none of the excess risk remains⁷ [4].

Overall, breast cancer’s taboo nature in Africa has proven to be one of the continent’s greatest challenges. According to a breast cancer in Africa exposé by Newsweek Magazine in 2008, thousands of African women died because they had not been screened, did not recognize the early signs of the disease or were afraid to tell anyone about the lump they could feel in their breast. Hala Modellmog, President and CEO of Susan G. Komen for the Cure, noted that many African women with breast cancer have been “afraid her husband will leave her and that she will be ostracized by society and even lose her children if she admits she has breast cancer” [53].

⁴ Kogevinas, M., N. Pearce, M. Susser, and P. Boffetta, eds. 1997. *Social Inequalities and Cancer*. IARC Scientific Publications 138. Lyons: IARC Press.

⁵ Adebamowo, C. A., and O. O. Adegunle. 1999. “Case-Controlled Study of the Epidemiological Risk Factors for Breast Cancer in Nigeria.” *British Journal of Surgery* 86 (5): 665–68.

⁶ Labadarios, D., A. R. Walker, R. Blaauw, and B. F. Walker. 1996. “Traditional Diets and Meal Patterns in South Africa.” *World Review of Nutrition and Diet* 79: 70–108.

⁷ Reeves, G. 1996. “Breast Cancer and Oral Contraceptives—The Evidence So Far.” *Cancer Causes and Control* 7: 495–96.

Within the same article, Ben Anderson, chair and director of the Breast Health Global Initiative at the Fred Hutchinson Cancer Centre and a professor of surgery at the University of Washington in Seattle, noted that early detection has been a challenge. “It is commonly believed that breast cancer is associated with things you did wrong. It's a 'dirty' disease that happens from wearing dirty clothing or putting money inside a bra or sucking on a nipple”, he said. Moreover, Anderson said many African women believe that if they see a doctor, he will cut off their breast and they will be dead in two years' time. There's some truth in that, Anderson said; as many women come in after their cancer has already started to progress and they frequently get no additional therapy after a mastectomy [53].

The Newsweek Magazine article concluded that as African women's breast cancer becomes more severe, they often find that treatment options are limited, extremely expensive, and for those countries with Health Insurance Schemes – not included. However, early detection and treatment has proven to be a critical first step in lowering breast cancer incidence and mortality rates in Africa. Screening mammograms – standard within the developed world – have been far rarer in Africa. Instead, as equipment and trained technicians are scarce, mammography has been mainly used to diagnose cancers in advanced stages [53].

III.b – Breast Health in Selected Countries

Egypt

According to the Breast Cancer Foundation of Egypt (BCFE), the percentage of breast cancer among female cancer cases is currently 37.5% in 2012 [27]. In addition, WHO's GLOBOCAN statistics from 2008 showed that the country's breast cancer mortality rate was 20.1% (6,546 deaths) [26].

In a 2011 article by the Egyptian Gazette, Dr Mohamed Shaalan, President of BCFE, noted that a lack of awareness about breast cancer in the country has led his organization to hold regular events to promote breast cancer awareness. He added that the risk factors, which increase the incidence of breast cancer, include: old age, obesity, lack of exercise and sport, not breastfeeding, family history, exposure to certain hormones and late pregnancy age [26].

The majority of breast cancer patients in Egypt are said to be diagnosed at advanced disease stages, affecting treatment and potential recovery. Specifically, in 2006, 46% and 16% of Egyptian breast cancer cases were diagnosed at stages III and IV, respectively. A study on the delay in breast cancer patients seeking medical care in the country noted that advanced stages at presentation may be due to patient-mediated factors, health provider related factors, and/or barriers in the health care system [26].

Other factors included patients' lack of knowledge regarding screening tests such as breast self-examination, clinical examination, mammography, and mistrust of primary care physicians in the local community. Although factors due to health providers and health system issues are less studied, patients' lack of access to hospitals and physicians' lack of knowledge regarding proper breast cancer diagnosis and treatment have been linked to late-stage presentation in Egypt [29].

Ethiopia

Due to a lack of private and NGO efforts to increase breast cancer awareness, little has been factually known about the incidence, severity and prevalence of breast cancer in Ethiopia. GLOBOCAN statistics from 2008 noted that the breast cancer incidence rate in the country is 18.8% (4,648 cases) while the mortality rate is 19.5% (4,935 deaths) [26].



Routine mammogram screening for breast cancer for the vast majority of Ethiopian women has remained unheard of, not accessible, or simply unaffordable. Instead, when the disease manifests itself, the vast majority of Ethiopian women have been more likely to seek the aid of herbalists and shamans for traditional medicine. Chemotherapy and radiotherapy continue to be beyond the means of most, except those in the higher wealth quintile who will often travel outside the country to receive treatment [29]. This is the norm for the more affluent African women.

Ghana

Ghanaian women are at risk of developing breast cancer 10 to 15 years earlier than their counterparts in developed countries. The average age of breast cancer detection in Ghana is 43 years and a study on breast cancer in Ghana indicated that out of over 47,000 women screened nationwide and confirmed with the disease, 55% of those diagnosed were in the pre-menopausal stage and 45% were in the post-menopausal stage. Juliana Azumah–Mensah, Minister of Women and Children's Affairs, announced during a press briefing on the Breast and Cervical Cancer Fund in 2011 that the prevalence rate for breast cancer in Ghana was between 0.41% and 1.11% among women between 15-80 years while women aged 35 to 45 years were most affected [31].

Women in Ghana have primarily linked the disease to superstitious beliefs and, in that regard, efforts have been made to raise awareness of the disease and teach Ghanaian women that it is curable. In 2010 alone, 2,062 women were diagnosed with the disease in Ghana [32]. According to GLOBOCAN, Ghana is ranked 10th among countries burdened with the disease in Africa, with a breast cancer incidence rate in the country of 25.8% (2,062 cases) and a related mortality rate of 16.6% (1,144 deaths) [26].

Kenya

The Nairobi Cancer Registry (NCR) has noted that breast cancer is the number one killer of women aged 35 to 55 in Kenya.

According to the NCR, breast cancer has been the most diagnosed cancer among women in Nairobi since 2000 and 51% of cases were in women below the age of 50. Although Kenya's breast cancer incidence rate has remained relatively low in comparison to that of developed countries, its breast cancer mortality rate is higher. Screening utilizing mammography has not been widespread in the country [36]. As with other African countries, awareness of early detection measures has proven to be a key issue. The Kenya Breast Health Program, aimed at promoting breast cancer awareness, estimated that some 95% of women in Kenya have never had a clinical breast examination. This may be changing, however, as the Minister of Public Health and Sanitation recently completed treatment for breast cancer in the United States.

Nigeria

GLOBOCAN statistics 2008 showed a breast cancer incidence rate in Nigeria of 33% (14,550 cases) with a related mortality rate of 23% (9,659 deaths) [26]. Available reports showed that cancer cases have increased by 21% in the country. At the Lagos University Teaching Hospital (LUTH) alone, the cancer register revealed that 5 in 10 cancer cases are breast-related [33].

South Africa

According to GLOBOCAN, South Africa's breast cancer incidence rate was 41% (8,649 cases) in 2008 while its related mortality rate was 20.7% (4,286 deaths) [26]. A case-control study in the country found that combined oral contraceptives may result in a small increase in risk, confined to women below the age of 25 years.

III.c – Cervical Health

Current Status and Key Issues

According to World Bank figures, cancer of the cervix has become a leading cancer in women in SSA with roughly 70,700 new cases occurring in 2002 (the total in the whole continent was 78,900 cases). According to WHOAFRO, Sub-Saharan Africa has the highest incidence of cervical cancer in the world and cervical cancer is the most common cancer among Africa women⁸. The highest incidence rates are in East Africa followed by Southern Africa. Estimated rates for Eastern and Southern Africa of 30 to 60 deaths per 100,000 women were higher than those found in the rest of SSA (20 to 35 deaths per 100,000 women), mainly due to HIV. The HPV vaccine (which should be given to teenage boys and girls) is an effort to control cervical cancer.

Disease-control and descriptive studies on cervical cancer in Africa have shown associations with the disease similar to those observed in Western countries with respect to number of partners, level of education, high parity, and steroid contraceptives. However, genital hygiene, vaginal discharge, alcohol, and male circumcision were also found to be important in certain studies⁹. HIV was found to be associated with cervical cancer in case-control and cohort studies in South Africa and Uganda¹⁰ with odds ratios (odds of HIV leading to cervical cancer) between 1.6% and 2.4% [4].

Overall, cervical cancer offers a unique public health opportunity: unlike most other cancers, it is cost-effective to screen for precursor lesions and then treat them before they develop into cancer. The highest-risk lesions were most common among women in their 30s and 40s, with the cancer that develops when the lesions are left untreated being most common among women in their 40s and 50s [26].

Challenges and Potential Solutions

Despite the long-term cost benefits of screening, the organization of screening programs has been complex due to a lack of good quality cytology services, difficulty of long-term follow-up in many communities, lack of education, and lack of postal facilities and infrastructure [4].

20-60% of HIV positive women show signs of pre-cervical cancer. Utilizing the "Screen and Treat Method" which includes a low-cost, low-tech process called Visual Inspection using Acetic Acid (VIA), will allow more diagnosis to take place. Once the diagnosis is confirmed, results are provided and an on-the-spot cryotherapy treatment is implemented. Advanced cases are referred for further evaluation and treatment. While telemedicine was a component, no details were provided. Out of 560 people

⁸ Commission Report 2012, p34

⁹ Parkin, D. M., J. Ferlay, M. Hamdi-Cherif, F. Sitas, J. O. Thomas, H. Wabinga, and S. L. Whelan. 2003. *Cancer in Africa—Epidemiology and Prevention*. IARC Scientific Publications 153. Lyons: IARC Press.

¹⁰ Mbulaiteye, S. M., E. T. Katabira, H. Wabinga, D. M. Parkin, P. Virgo, R. Ochai, M. Workneh, A. Coutinho, E. A. Engels. Forthcoming. "Spectrum of Cancers among HIV-Infected Persons in Africa: The Uganda AIDS-Cancer Registry Match Study." *International Journal of Cancer*.



screened, 16% were found with lesions. 62 were diagnosed with further testing and 26 with referrals. Of those, 24 completed treatment.¹¹

III.d – Cervical Health in Selected Countries

Egypt

Cervical cancer has slowly become a challenge in Egypt. GLOBOCAN statistics from 2008 showed a cervical cancer incidence rate for the country of 1.6% (514 cases) and a mortality rate of 1% (299 deaths) [26]. In 2012, the Egyptian Government launched a nationwide campaign to raise awareness of cervical cancer and offer free HPV immunization to 15,000 unmarried women. Omar Abdel Aziz, a gynecologist from Cairo University, told top media outlet IRIN that 80% of women in Egypt were at risk for cervical cancer and there were 100,000 new cases each year, making it the second most widespread form of cancer in women after breast cancer. Specialists like Mohamed Ismail, a leading Egyptian cancer specialist and the former Director of Cairo's Al Galaa Hospital for Women, noted that half of newly diagnosed women die because of the disease [35].

Ethiopia

In Ethiopia, cervical cancer has become the leading cause of cancer mortality among women. Pathfinder International Ethiopia reported that most women do not seek screening services if they are in advanced stages of the disease. Hospital records have shown that of the nearly 22 million Ethiopian women over the age of 15, approximately 7,600 were diagnosed with cervical cancer and roughly 6,000 women will die of the disease each year. These figures may have been significantly lower than the actual number of cases, given the low level of awareness, cost, limited access to screening services, and lack of a national cancer registry [37].

The Pap smear test has significantly reduced cervical cancer incidence and mortality in developed countries, although this is not the case for on the spot cryotherapy treatment. However, it has had limited success in Ethiopia and other resource-poor countries as it requires repeated testing, laboratory analysis, and proper diagnostic, treatment, and follow-up protocols. Ethiopia has invested little in the infrastructure, training, and laboratory capacity required for successful Pap smear screening. As a major public health concern, the disease disproportionately affects Ethiopia's most vulnerable population: poor, rural, and HIV-positive women [37]. The 534,000 women over age 15 living with HIV in Ethiopia are among the most vulnerable to cervical cancer [37].

Ghana

According to GLOBOCAN 2008, Ghana's cervical cancer incidence rate was 39.5% (3,038 cases) and its mortality rate was 27.6% (2,006 deaths) [26]. Dr. Peter Baffoe, a gynecologist at the Bolgatanga Regional Hospital, said that 90% of cervical cancer cases associated with women in Ghana could not be treated in the country's health facilities because of the advanced stage of the disease at the time of screening [38]. "Most of the cases we get are so advanced, they are at a stage where you are not able to cure it" he said, adding that the country does not have enough capacity to treat very advanced conditions. While he noted that radiotherapies were available in Kumasi or Accra, he stressed the importance of early cervical screening for prevention.

¹¹ <http://www.psi.org>

Kenya

As of 2008, GLOBOCAN figures show that Kenya's cervical cancer incidence rate is 23.9% (2,660 cases) while the mortality rate is 14.6% (1,491 deaths) [26]. A recent survey by Ipsos Synovate of 2,000 Kenyans found that 92% of Kenyan women have never been tested for cervical cancer. Findings also showed that the Northeastern, Western, Rift Valley and Eastern regions had the highest proportion of people who had never tested for cervical cancer while women in Central and Nairobi had the lowest proportion of those who have never been tested for breast and cervical cancer. In addition, the study found that women aged 25 to 44 years were the most likely to have been tested for these two cancers. Urban women were more likely to have been tested compared to their rural counterparts, which could be attributed to higher access to health facilities in urban areas [40].

Although some projects in Kenya offer the HPV vaccine, Kenya's national reproductive health strategic plan has addressed cervical cancer largely through the roll-out of a low-cost screening tool - visual inspection of the cervix using acetic acid. For the past two years, the government has aggressively trained healthcare workers to use this "see and treat model".¹²

Nigeria

In Nigeria, cervical cancer is the second most common cancer in women after breast cancer, particularly among those aged 15 and 44 years. The WHO estimated that Nigeria has a population of over 40 million women aged 15 years and above who are at risk of developing cervical cancer. Going by current estimates, 14,550 women have been diagnosed and 9,659 will die from the disease each year. Available statistics have shown that the disease accounts for 15% of female cancer cases in Nigeria as compared to just about 3.6% in developed countries. By the time 80% of women in Nigeria have discovered that they have cervical cancer, it has reached advanced stages and cannot be treated successfully [40]. According to GLOBOCAN figures, the cervical cancer incidence rate in the country is 38.7% (18,935 cases) and the mortality rate is 22.8% (10,469 deaths) [26].

South Africa

South Africa's incidence and mortality rates for cervical cancer are on par with other African countries. GLOBOCAN 2008 figures showed an incidence rate of 26.6% (5,743 cases) and a mortality rate of 14.5% (3,027 deaths) [26]. A study conducted in Tshwane from 2008 to 2009 found that 4% of women targeted for cervical screening were in fact screened. In addition, it found that cervical cancer screening uptake could be improved when breast and cervical screening were combined [42].

Uganda

Cervical cancer has become a leading cancer for women in Uganda, claiming over 2,400 lives. Nearly 3,500 women have been diagnosed with it each year [43]. According to GLOBOCAN, the country had an incidence rate of 27.8% (2,035 cases) in 2008 and a mortality rate of 16.6% (1,144 deaths) [26]. In an effort to tackle these issues, the Uganda Women's Health Initiative has been offering health education, cervical and breast cancer screening in and around Kampala, Uganda since 2006. All services were provided free of charge and included screening for pre-cancerous lesions on the cervix and preventative treatment by cryotherapy. To date, a total of 11,130 women have benefited from the Initiative's free cervical screenings. In addition, nearly 440 cases of cervical cancer have been prevented by diagnosing and treating pre-cancerous lesions and 62 cases have been diagnosed before becoming more advanced [43].

¹² <http://womennewsnetwork.net/2012/07/19/kenya-hpv-vaccine-roll-out/>



III.e – Cardiovascular Health

Current Status and Key Issues

In most African countries, CVD has become the second most common cause of death after infectious diseases, accounting for 11% of total deaths of both men and women. WHOAFRO's Commission 2012 report specifies CVD as the 2nd leading cause of HIV/AIDS for women over 45 and the leading cause of death for women over 60.¹³ Projections from the Global Burden of Disease Project have suggested that from 1990 to 2020, the burden of CVD faced by African countries will double. A large proportion of the victims of CVD will be middle-aged, and the poor will suffer disproportionately as a consequence of their higher disease risk and limited access to health care. The financial and social costs of a CVD increase will likely have a negative impact on development as well as the eradication of poverty^[4].

Challenges and Potential Solutions

Changes have occurred in the environmental and behavioral determinants of CVD, such as increasing tobacco use, increasing fat and calorie consumption, and decreasing exercise. The current impoverished state of much of SSA may paradoxically result in an epidemic of CVD in middle age for those who survive the ravages of poverty associated communicable diseases, such as HIV/AIDS, tuberculosis, pneumonia, and malaria. Since fetal growth retardation is associated with chronic under-nutrition among women, improvement in the nutrition and health of girls and young women may be important in preventing CVD in developing countries, particularly in Africa^[4].

Rheumatic heart disease (RHD) – a poverty-linked disease related to overcrowding, poor housing, and under-nutrition – was once the most common form of cardiac disease in SSA and still remains prevalent^[4]. In addition, hypertension was highly prevalent in SSA and was often undetected or poorly controlled. It was consistently similar among men and women, but women were more frequently obese and less frequently current smokers. However, domestic pollution has become another risk factor to be taken into consideration. Women spend much of their time cooking indoors and are exposed to high concentrations of solid fuel smoke (biomass and coal), particularly in the rural and peri-urban areas. Women are therefore at risk of progressing to pulmonary hypertension, which appears to be more severe than that found in other forms of interstitial and tobacco-related chronic obstructive pulmonary disease^[44]. Overall, there is a lack of CVD-related data on women within Africa.

III.f – Cardiovascular Health in Selected Countries

While data on the prevalence of CVD in women in Africa is very limited, in 2008 the WHO published age-standardized mortality rates for women with cardiovascular diseases and diabetes in a number of African countries¹⁴.

Egypt

In Egypt, the CVD mortality rate in women is 384 deaths per 100,000 women. In terms of behavioral risk factors, women have showed 0.5% prevalence in daily smoking habits. In addition, with regard to

¹³ WHOAFRO Commission 2012 Addressing the Challenge of Women's Health in Africa *Report of the Commission on Women's Health in the African Region*

¹⁴ See Appendix for table on statistics across select countries.

key metabolic risk factors, an estimated 34.5% of women in Egypt had raised blood pressure, 75.3% were overweight, and 43.7% had raised cholesterol [48].

Ethiopia

Ethiopia had a much higher mortality rate than Egypt, with an age-standardized death rate of 530.3 per 100,000. While Ethiopia's behavioral risk factors for CVDs have been lower than Egypt's (about 0.2% of women smoked tobacco on a daily basis, while an estimated 33.2% had raised blood pressure and 8.6% were considered overweight), the disparity in death rates may point to a lack of access to quality healthcare in Ethiopia [48].

Ghana

The WHO reported that mortality from CVD and diabetes in Ghana was at a rate of 343.5 deaths per 100,000 women in 2008. When compared to the other selected countries, women in Ghana showed a higher estimated prevalence of daily tobacco smoking, at 1.7%. Additionally, an estimated 35.2% of women in the country had elevated blood pressure, 34.9% were considered overweight, and 19.8% registered raised cholesterol levels [48].

Kenya

Age-standardized mortality rates in Kenya were on par with other African countries in 2008 (326.4 deaths per 100,000 women). While prevalence of daily tobacco smoking among women in the country was fairly low at 0.7%, 17% of women put themselves at risk for CVD and diabetes due to physical inactivity. Twenty-four % were categorized as overweight, while 35.1% demonstrate a marked increase in blood pressure [48].

Nigeria

As is true in Ethiopia, the female cardiovascular disease and diabetes mortality rate in Nigeria was high, at 475.7 deaths per 100,000 women in 2008. Prevalence of daily tobacco smoking was on par with Ghana at 1.7%. In addition, an estimated 44% of women in Nigeria had raised blood pressure, 29.3% were overweight, and 18.5% had raised cholesterol [48].

South Africa

According to the WHO, South Africa was on par with most other countries with a CVD and diabetes prevalence of 315.2 deaths per 100,000 women. However, daily tobacco smoking habits were much higher, as an estimated 7% South African women were regular smokers. In addition, 41.4% of women in the country had raised blood pressure, 71.8% were classified as overweight, and 36.5% registered raised cholesterol levels [48].

Uganda

Uganda's mortality rate was 383.7 deaths per 100,000 women in 2008. About 1.5% of women were regular tobacco smokers, while an estimated 19.8% were considered overweight [48].



IV. Maternal, Newborn and Child Health

In 2000, the United Nations and its Member States set out a series of eight time-bound targets with a deadline of end-2015, known as the Millennium Development Goals (MDGs). Two of the eight Goals relate to MNCH issues: MDG 4 – reduce child mortality and MDG 5 – improve maternal health. The aim of MDG 4 is to reduce by two-thirds the under-five mortality rate (U5MR)¹⁵; the aim of MDG 5 is to reduce by three-quarters the maternal mortality ratio (MMR)¹⁶ and achieve universal access to reproductive healthcare¹⁷. In 2000, African countries were among those that committed to achieving the MDGs. Understanding progress of African countries in achieving the MDGs is key to understanding the current state of MNCH, challenges, and gaps. In light of this, the following section will examine the continent's progress to date in achieving goals related to MNCH with the focus on a number of countries.

Overview

To date, progress on achieving MDG 4 and MDG 5 by end-2015 has varied across the continent. Greater progress has been made on MDG 4.

- Maternal death rates continue to be driven by preventable issues arising during labor, which could be addressed with access to appropriate health professionals.
- Complications during birth affect the infant mortality rate (IMR); however, maternal health and access to services are also important factors.

The major challenges in making progress toward achieving MDG 4 and MDG 5 include the cost of providing access to high-quality healthcare across the large rural areas within many African countries, shortages and equitable distribution of skilled health workers, and social issues affecting women's propensity to use health services when available.

A 2006 World Health Organization survey reveals that SSA accounts for more than 24% of the global disease burden, it has only 3% of the world's health workers and spends less than 1% of total global resources dedicated to health, even after loans and grants from abroad are taken into account. In contrast, the Americas region, which covers Latin America and the Caribbean along with North America, has only 10% of the global burden of disease but commands 37% of the world's health workers and spends more than 50% of global resources allocated to health.

Countries that have had successes in reducing MNCH mortality rates have benefited from government initiatives to increase the number of skilled health workers and immunization programs for children under five. These programs also benefitted due to increased governmental resources.

¹⁵ United Nations Millennium Development Goal 4; Target 4.A.

¹⁶ United Nations Millennium Development Goal 5; Target 5.A. The 2011 UN High Level Meeting on NCDs and efforts like Pink Ribbon Red Ribbon are starting to draw attention and resources.

¹⁷ United Nations Millennium Development Goal 5; Target 5.B.

IV.a – Maternal Health

Current Status and Key Issues

According to the United Nations (UN) Inter-Agency¹⁸ report, “Trends in Maternal Mortality: 1990 to 2010”, an estimated 287,000 maternal deaths¹⁹ occurred globally in 2010, a decline of 47% from 1990 levels [6,7]. SSA accounted for 56% of the global total (161,412 maternal deaths) that year. Of the 40 countries with the highest maternal mortality ratios (MMR) in the world, 36 were in Africa [8]. Overall, SSA has the highest MMR at 500 maternal deaths per 100,000 live births in 2010 and is, as a region, not considered by the UN to be “on track” to achieve the MDG 5 target of reducing maternal death by 75% from 1990 to 2015 [6,7].

Maternal deaths have mainly been the result of issues such as severe bleeding (hemorrhage) (24%), infection (sepsis) (15%), unsafe abortion (13%), eclampsia²⁰ (12%), and obstructed labor (8%). In the 1970s and 1980s, a decline in maternal deaths was observed across Africa as countries began establishing primary healthcare systems, including antenatal services and emergency obstetric care. However, there has been little progress in the last 15 years, and many African women are faced with a 1 in 6 risk of dying due to pregnancy or childbirth compared to a 1 in 2,800 risk in developed countries. Additionally, African women are more likely to suffer debilitating complications linked to pregnancy and childbirth. A study conducted in West Africa showed that for each maternal death, a further 30 women may suffer long-lasting disabilities due to a range of conditions, such as chronic anemia, infertility and obstetric fistula²¹ [3].

In some parts of Africa, roughly one-third of pregnant women are adolescents aged 15-19. Adolescent mothers have faced a greater risk of death in pregnancy and childbirth than women aged 20 or over. Their babies are particularly vulnerable to premature birth, low birth weight and risk dying in the first month of life. In some African countries, adolescents have represented 40% to 60% of mothers who die in pregnancy and childbirth. WHOAFRO noted that many of these adolescent deaths could have been avoided if there was better access to family planning services [3].

The WHO Commission on Women’s Health in Africa²² declares antenatal care is “essential” for screening and treating pregnancy risks. The regional average for having a skilled birth attendant is only around 47%, which is very low compared to the rest of the globe.

In May 2010, the World Bank announced the Reproductive Health Action Plan, which aims to increase funding for maternal health-related needs (expanding access to contraception, antenatal care and education). Overall, there have been numerous pledges and commitments but maternal health remains highly underfunded.

¹⁸ Compiled by the World Health Organization (WHO), United Nations Children’s Fund (UNICEF), United Nations Population Fund (UNFPA), and the World Bank.

¹⁹ In the *International statistical classification of diseases and related health problems*, 10th revision (ICD-10) (9), WHO defines maternal death as: the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

²⁰ Eclampsia: seizures (convulsions) in a pregnant woman that are not related to a pre-existing brain condition (A.D.A.M. Medical Encyclopedia, 2012).

²¹ Obstetric fistula: a hole in the vagina or rectum caused by labor that is prolonged without treatment (United Nations Population Fund, 2012).

²² Addressing the Challenge of Women’s Health in Africa. *Report of the Commission on Women’s Health in the African Region* WHO Regional Office for Africa, 2012



A major factor behind maternal mortality is the failure of district hospitals to provide sufficient emergency obstetric care. Lack of female doctors is also a major issue as there are cultural barriers for women in seeing a male doctor, especially on maternal / reproductive health issues.

SSA has the highest number of cervical cancer cases in the world and it is the most common cancer among African women. A recent study in West Africa revealed only 1% of women had ever been screened for cervical cancer.

Return on investment from funding hospital upgrades for emergency obstetrics is considerable, since capabilities to support emergency obstetrics are transferable to a wide range of emergencies, thereby strengthening the overall health system.

Potential Solutions and Progress Made

Ultimately, access to high-quality healthcare is essential to the prevention of maternal mortality. Dr. Babatunde Osotimehin, Executive Director of the United Nations Population Fund (UNFPA), noted that there is an urgent need to improve access to voluntary family planning, invest in health workers with midwifery skills, and ensure access to antenatal care as well as emergency obstetric care when complications arise as these interventions have proven to “save lives and accelerate progress towards meeting MDG 5” [8].

Considerable progress has been made across Africa in the level of access to antenatal care. In the 1990s, access to antenatal care rose by 4% to an estimated 70% of women in SSA receiving at least one antenatal consultation. Despite these improvements, millions more lives could be saved if health systems were developed and strengthened to ensure access to high quality services and extended to those in need. This would mean providing the necessary level of access to ensure more African women receive four antenatal visits as recommended by the WHO, and providing every woman with skilled care during childbirth and emergency obstetric and neonatal care should complications arise [3].

According to the WHOAFRO, countries in the region have faced a number of obstacles in providing the necessary quality healthcare. Weak health systems and a shortage of skilled health workers have been major direct factors. However, other societal obstacles such as poverty, inadequate education, illiteracy and women's lack of economic power compounded by their low social status also exist. These factors have all contributed significantly to women's low utilisation of health services that are already available. According to the latest estimates, skilled attendants have assisted in only 43% of deliveries in SSA. The remaining births have been assisted by traditional birth attendants²³, relatives and neighbors, while some mothers give birth alone [3].

Regarding family planning, programs in SSA have shown varying success in reaching all social segments. Wealth-related inequalities have affected access to contraception and ultimately access has decreased in most countries, particularly in Mozambique. However, access has increased in Kenya, Uganda and

²³ Traditional Birth Attendants (TBAs) are generally older women who were respected by their communities that assist women during delivery and immediately post-partum. The majority are illiterate and had learned their skills through working with other TBAs. Most TBAs considered themselves to be private practitioners who responded to requests for service and received some compensation, mostly in kind. Typically, TBAs go to the woman's house to deliver although some may arrange a delivery area in their own house or compound. The majority of the TBAs reside in poor rural areas, far from health facilities. Also, TBAs often serve as a bridge with the formal health system, sometimes accompanying women to health facilities (UNFPA, *Support To Traditional Birth Attendants*, 1996).

Zambia with regard to birth spacing²⁴ and in Malawi, Senegal, Uganda, the United Republic of Tanzania, and Zambia with regard to limiting childbearing. After adjustment for fertility intention, women in the richest wealth quintile tended to practice long-term contraception more than those in the poorest quintile [9].

IV.b – Maternal Health in Selected Countries

Egypt

While Egypt has made tremendous progress in becoming “on track” to meet MDG 5, gaps remain, particularly in its historically impoverished Upper Egypt region (located in Egypt’s geographical south). Despite recognized progress, women in the Upper Egypt region have received regular antenatal care for only 49% of births, and only 59% of deliveries were medically assisted. In recent years, the neonatal mortality rate in Upper Egypt has been the highest in the country²⁵.

According to UNFPA, Egypt’s Sharkia, Kalyoubia, Beni Suef, and Minya governorates – unlike most others in the country – are not “on track” to meet MDG 5 due to an inequitable distribution of medical services. This has highlighted the need for UNFPA to work with Egypt’s Ministry of Health and Population (MoHP) to strengthen the Maternal Mortality Surveillance System²⁶ established in 2001 in cooperation with the United States Agency for International Development (USAID). In addition, the country was expected to initiate a national launch of the African Union (AU) “Campaign to Accelerate the Reduction of Maternal Mortality in Africa” – a campaign aimed at improving African women’s access to healthcare and family planning services – with the government’s support in 2011. However, the launch remains on hold due to the recent political transition²⁷.

Ethiopia

Some of the main causes of maternal death in Ethiopia are preventable with access to the necessary care, particularly during labor. Key causes include obstructed/prolonged labor (13%), ruptured uterus (12%), and severe pre-eclampsia/eclampsia (11%) [11]. However, one of Ethiopia’s major challenges in accelerating progress toward the health MDGs has been its human resource shortage. In particular, the Ministry of Health (MoH) cited the shortage of skilled midwives as one of the major constraints hindering progress on maternal mortality. Health worker density in Ethiopia has varied from 0.24 to 2.7 per 1,000 individuals in rural and urban areas respectively in recent years. Moreover, Ethiopia has pointed to gaps in its capacity to deliver emergency obstetric care. It has lacked the referral networks, transport, and specialized medical personnel required to manage and respond to complex cases²⁸.

According to the UN, Ethiopia has been “making progress” toward meeting the target for MDG 5. This status was largely due to a decrease in its MMR, currently at 590 deaths per 100,000 live births [7].

²⁴ Birth spacing: the length of time between births to women in the population; the time elapsed between marriage and first birth.

²⁵ United Nations Population Fund (UNFPA) 2012 http://egypt.unfpa.org/english/Staticpage/f648798a-22a1-4165-9edb-617d4c0d7a33/Maternal_Health.aspx

²⁶ Egypt’s National Maternal Mortality Surveillance System (NMMSS) is a system developed in cooperation with USAID to identify maternal deaths, determine the maternal mortality ration (MMR) at the national and governorate levels, determine the causes of maternal deaths, and aid in the development of improvement plans to take action against further deaths.

²⁷ Department of health, Republic of South Africa. <http://www.doh.gov.za/show.php?id=3573>

²⁸ The United States Global Health Initiative Ethiopia Global Health Initiative Strategy



Ghana

Like Ethiopia, Ghana has also been “making progress” toward MDG 5 [7]. Between 1990 and 2005, the country’s MMR reduced from 740 deaths per 100,000 live births to 503 deaths per 100,000 live births. The MMR then fell to 451 deaths per 100,000 live births in 2008. Despite this drop, there have been disparities country-wide in progress. Ultimately, if the current trend continues, Ghana’s overall MMR will be reduced, but only to 340 deaths per 100,000 live births by 2015. Consequently, Ghana is likely to miss the MDG 5 target of 185 deaths per 100,000 live births [17].

The progress on reducing the MMR in Ghana has coincided with the MoH’s decision to provide free maternity services to all Ghanaian women along with the introduction of the National Health Insurance Scheme (NHIS). Since the introduction of the new policy in 2003, the number of women delivering in a health facility has increased by 11%. The availability of appropriately-equipped rural facilities for emergency obstetric cases as well as difficulties recruiting and retaining sufficient human resources, particularly midwives, have been key challenges for Ghana in meeting MDG 5 [12].

The Ghanaian NHIS was introduced to provide access to adequate healthcare regardless of ability to pay. By law the NHIS is mandatory but because the informal sector has to make premium payment before they are enrolled, the authorities are unable to enforce the mandatory nature of the scheme. The ultimate goal of the NHIS is to provide all residents with access to adequate healthcare at affordable cost. In other words, the scheme intends to achieve universal coverage. An important factor for the achievement of universal coverage is that revenue collection be equitable. The purpose of this study is to examine the vertical and horizontal equity of the premium collection of the scheme. The Kakwani index method as well as graphical analysis was used to study the vertical equity. Horizontal inequity was measured through the effect of the premium on redistribution of ability to pay of members. The extent to which the premium could cause catastrophic expenditure was also examined. The results showed that revenue collection was both vertically and horizontally inequitable. The horizontal inequity had a greater effect on redistribution of ability to pay than vertical inequity. The computation of catastrophic expenditure showed that a small minority of the poor were likely to incur catastrophic expenditure from paying the premium, a situation that could impede the achievement of universal coverage. The study provides recommendations to improve the inequitable system of premium payment to help achieve universal coverage.

Antenatal care is another aspect of maternal health where geographical disparities persist. Overall, antenatal care from health professionals increased from 92% in 2003 to 95% as of 2008. However, inconsistencies remain in the type of care available [12].

Kenya

Despite numerous strategic plans, Kenya has made little progress on maternal health, and is considered by the UN to be making “insufficient progress” toward MDG 5 [7]. The country’s MMR has remained at 488 deaths per 100,000 live births. The percentage of skilled birth attendance has declined over the past 10 years, with only 44% of total births being assisted by a doctor, nurse or midwife [13]. Accordingly, it is widely considered that special attention is required to address the worsening maternal mortality rates [21]. In October 2011, Kenya, in partnership with the U.S. Global Health Initiative (GHI) (recently reorganized and renamed to the Office of Global Health Diplomacy), kicked off a campaign called “Let’s Live” which aimed to reduce preventable maternal deaths in Kenya by 50% by December 2012. The campaign sought to accomplish its objectives by delivering sustainable outcomes in HIV/AIDS and associated illnesses, high-mortality cancers, maternal health issues, and child health issues. Methods included improving the quality and efficiency of community-based health services, increasing access to health facilities, supporting the Kenyan Government’s pro-poor policy, establishing comprehensive

training programs, developing innovative processes, protocols, and technical applications, and addressing leading causes of mortality in a comprehensive and integrated manner. [13].

While insufficient progress has been made in reducing MMR, the United Nations Development Program Kenya (UNDP) has noted an increase in contraceptive use, from 39% of married women using any method in 2003, to 46% in 2008-09.

Nigeria

Recent progress towards MDG 5 has been promising and, if the latest improvements can be sustained at the same rate, Nigeria is projected to reach the target by end-2015. UNDP Nigeria noted that maternal mortality fell by 32%, from 800 deaths per 100,000 live births in 2003 (at the time one of the highest MMRs in the world) to 545 deaths per 100,000 live births in 2008 due to advancements in the quality of healthcare provided. However, the proportion of births attended by a skilled health worker has remained low and threatens to hold back further progress. An innovative “Midwives Service Scheme,”²⁹ which will recruit recent midwifery graduates and retired midwives into one-year of public health service in rural communities in Nigeria is expected to contribute substantially to ongoing shortfalls, but its impact has yet to be reflected in the data. If the scheme is expanded in proportion to the national gap in the number of midwives, this will further accelerate progress. In addition, more mothers will be covered by antenatal care as access to quality primary healthcare improves and incentives attract health workers to rural areas.

South Africa

Of the countries in Africa, South Africa has made the least strides toward achieving MDG 5 as the UN has stated that it has made “no progress” [7]. The Human Rights Watch report, called “Stop Making Excuses: Accountability for Maternal Health Care in South Africa”, noted that 4,500 mothers die each year, despite the fact that 87% of women give birth in clinics or hospitals, maternity care is free and the government spends \$748 per person, per year on public health. According to government figures, South Africa's MMR increased from 150 deaths per 100,000 live births in 1998 to 625 deaths per 100,000 live births in 2007 [15].

The report conceded that more accurate data collection and South Africa's high HIV prevalence might have played a role [15]. Complications in pregnancy resulting from infections in HIV-positive mothers have caused 43% of maternal deaths. Other major factors include hypertension (15.7%), obstetric hemorrhage (12.4%), sepsis (9%) and pre-existing disease (6%) [14].

Additionally, through interviews with 157 women in the country's poorest province, the Eastern Cape, Human Rights Watch found widespread evidence of unprofessional practices. Some women had been chastised for being pregnant, made to clean up their own blood, or denied services because they were foreign. One South African woman delivered a stillborn baby after waiting for three hours to see a doctor at a district hospital; nurses had told her she was lying about being in labor [15].

Uganda

In 2010, Uganda's Ministry of Finance, Planning and Economic Development (MoFPED) noted in its “Millennium Development Goals Report” that while there was stagnation in progress in maternal health

²⁹ Nigeria's National Primary Health Care Development Agency (NPHCDA) established the Midwives Service Scheme (MSS), a public sector collaborative initiative designed to mobilize midwives, including newly qualified, unemployed and retired midwives, for deployment to selected primary healthcare facilities in rural communities. The aim is to facilitate an increase in the coverage of Skilled Birth Attendance (SBA) to reduce maternal, newborn and child mortality (World Health Organization, 2012).



between 1995 and 2001, accelerated progress was observed in 2006. According to the data collected in the Uganda Demographic Health Survey (DHS), the MMR stagnated at 506 deaths per 100,000 live births in 1995 and 505 deaths per 100,000 live births in 2001, but had declined to 435 deaths in 2006. This suggested that the incidence of maternal mortality was declining. However, such a decline might not be enough to ensure that Uganda is on track to meet MDG 5. A decline in the MMR would be accelerated, the Ministry reported, by improvements in other related indicators, such as coverage of antenatal care, delivery in health facilities, and medical assistance at delivery, all of which have seen only marginal improvement over the decade [20].

The MoFPED report also noted that the share of births that were attended by skilled health personnel had increased from 35% to 44% in the decade after 1995. However, this national average masked great inequality across the population: among the poorest 20% of the population, the share of births attended by skilled health personnel was 29% in 2005/2006 compared to 77% among the wealthiest 20% of the population. There had been a slight improvement in the situation for the poorest households, though, and the Ministry noted that the government remained committed to sustaining and accelerating this progress [20].

IV.c – Newborn and Child Health

Current Status and Key Issues

Newborn and child health is a major concern worldwide, as reflected in MDG 4. While progress was made in improving the health of children aged one month to five years in the 1970s and 1980, the health of infants in their first 28 days of life (neonates) has remained a neglected area of public health globally. Recent data show that neonates represent about 40% of children who die before their fifth birthday and that 29% of global neonatal deaths occur in Africa [3]. According to the most recent assessments by the UNDP, although the regional child mortality rate for Africa is "declining," it is doing so too slowly and the region is "off-track" for meeting MDG 4.³⁰

Child Health

Progress toward achieving MDG 4 – reduce child mortality³¹, is measured by three indicators: the under-five mortality rate (U5MR), the infant mortality rate (IMR) and the proportion of one year-old children immunized against measles. According to the UNDP, Chad, the Central African Republic, the Democratic Republic of Congo (DRC), Mauritania, Lesotho, Cameroon, Burkina Faso and Zimbabwe had the slowest rates (less than 10%) of reduction in U5MR (MDG Report 2012 p60).

Overall, the highest rates of under-five mortality remain in Sub-Saharan Africa—where 1 in 8 children die before age five, more than 17 times the average for developed regions (1 in 143). As U5MRs have fallen more sharply elsewhere, the disparity between SSA and the rest of the world (excluding Southern Asia, which faces similar issues) has grown. Under-five deaths are increasingly concentrated in SSA, while the share of the rest of the world dropped from 31% in 1990 to 18% in 2010 [16].

³⁰ MDG Report 2012.

³¹ United Nations Millennium Development Goal 4; Target 4.A: reduce by two-thirds the 1990 level of mortality of children aged under five by 2015.

The vast majority of deaths of children under five in Africa have been due to preventable causes: neonatal conditions (26%), acute respiratory infections (21%), malaria (18%), diarrheal diseases (16%), HIV/AIDS (6%) and measles (5%), all complicated by malnutrition [3].

Newborn Health

According to the WHO, neonatal mortality – covering deaths in the first 28 days after birth – is tantamount because the health interventions needed to address the major causes of neonatal deaths generally differ from those needed to address other under-five deaths. Additionally, neonatal mortality has become increasingly important because the proportion of under-five deaths that occur during the neonatal period has increased as U5MRs decline. For the period of 1990-2010, the share of neonatal deaths among under-five deaths increased from about 37% to slightly above 40% worldwide and is expected to further increase as U5MRs decline. While the relative increase was modest at the global level (9%), there were differences across regions. The largest increases were in Northern Africa (37%). SSA, which accounts for more than a third of global neonatal deaths, has had the highest IMR (35 deaths per 1,000 live births in 2010) and has shown the least progress in reducing that rate over the last two decades [3].

WHO/AFRO's IMR has been the highest in the world: for every newborn baby that dies, another 20 are faced with illness or disability from conditions such as birth injury, infection and the complications of premature birth. The first global estimates for infant deaths were made as late as 1983, while more rigorous estimates were made in 1995 and 2000, there were scant vital data on newborn babies. Even less is known about stillborn babies. The WHO estimated that SSA had the highest proportion of stillbirths in the world: 30% of an estimated 3.3 million stillborn babies globally in 2000 [3].

Severe infections (27%), birth asphyxia (the inability to breathe normally after birth) (24%), preterm birth (23%), neonatal tetanus (9%), congenital anomalies (6%), and diarrheal diseases (3%) are the main causes of infant death. However, a major contributing factor to newborn and infant mortality has been maternal health, which Africa is also addressing with varying levels of success. In developing countries, the children of mothers who die during the first six weeks of their babies' lives are up to 10 times more likely to die within two years than children with two living parents. The reason is that the babies have not been breastfed, the family food supply has been threatened or there has been no direct care for those children. Likewise, children who have lost their mothers are also less likely to get adequate healthcare and education as they age [3].

Potential Solutions and Progress Made

As of 2010, Northern Africa was “on track”³² with regards to progress toward the MDG 4 target, based on a decline in U5MR of 67% in the preceding 20 years. Its average annual rate of reduction in U5MR from 1990 to 2010 was 5.6%. Conversely, SSA has made “insufficient progress”³³, with only a 30% decline in U5MR [3]. However, the region has managed to double its average annual rate of reduction in U5MR from 1.2% per year over 1990–2000 to 2.4% per year over 2000–2010 [2].

³² “On track” indicates that under-five mortality is less than 40 deaths per 1,000 live births in 2010 or that the average annual rate of reduction is at least 4% over 1990-2010.

³³ “Insufficient progress” indicates that under-five mortality is at least 40 deaths per 1,000 live births in 2010 and that the average annual rate of reduction is at least 1% but less than 4% over 1990-2010.



The WHO finds that children from rural and poorer households remain disproportionately affected by deaths among children under five. Analyses based on data from household surveys for a subset of countries have indicated that children in rural areas are about 1.7 times as likely to die before their fifth birthday than those in urban areas and that children from the poorest 20% of households are nearly twice as likely to die before their fifth birthday as children in the richest 20% of households. Similarly, mothers' education remains a powerful determinant of inequity. Children of educated mothers – even mothers with only a primary education – are more likely to survive than children of mothers with no education [16].

With the proportion of under-five deaths occurring during infancy remaining stagnant or even increasing, there is an urgent need for systematic action by governments and partners to reach women and infants with effective care. Highly cost-effective interventions are feasible even at the community level, and most can be linked with preventive and curative interventions for mothers and their infants. For example, early post-natal home visits are effective in promoting healthy behaviors such as breastfeeding and clean cord care as well as in reaching new mothers. Case management of infant infections can be provided alongside treatment of childhood pneumonia, diarrhea and malaria. Care at birth prevents stillbirths and saves mothers and newborns [16].

An example of a Non-Government Organization (NGO) working in this space is PSI.³⁴ In countries with a high proportion of home births, delivery can be made safer by preventing infection through the use of a clean delivery kit (CDK). A CDK provides the necessary tools and instructions to achieve the World Health Organization's "Five Cleans" throughout the birthing process:

1. *Clean hands.* Wash hands with clean water and soap, once before delivery, and once before cord cutting.
2. *Clean delivery surface.* A plastic sheet for mothers to lie on during delivery maintains a clean birth canal and perineum, and protects the newborn from potential sources of infection.
3. *Clean cord cut.* A new razor blade in its original packing is sterile, and can prevent the transmission of tetanus-causing spores and other pathogenic organisms via the umbilicus to the infant.
4. *Clean cord ties.* Additionally, the use of clean thread or narrow tape to tightly tie the umbilicus helps keep the stump healthy.
5. *Clean cord stump care.* Keeping the umbilical stump dry and clean is the best care. If soiled, the umbilical stump may be washed with soap and clean water.

UNICEF, UNFPA, and other development partners have recently launched the UN Commission on Life-Saving Commodities for Women and Children. As part of the Every Woman Every Child movement and efforts to meet the health-related MDGs, the Commission will champion efforts to reduce barriers that block access to essential health commodities.

Led by Co-Chairs President Good luck Jonathan of Nigeria and Prime Minister Jens Stoltenberg of Norway, commissioners will advocate at the highest levels to catalyze change in the way essential but under-used commodities for women's and children's health are produced, distributed and used. UNICEF Executive Director Anthony Lake and UNFPA Executive Director Dr. Babatunde Osotimehin will serve as Vice-Chairs. The Commission's work focuses on the needs of countries where the most women, newborns, and children under five die from preventable causes.

³⁴ <http://www.psi.org/our-work/healthy-lives/child-survival>

IV.d – Newborn and Child Health in Selected Countries

Egypt

According to UNFPA Egypt, significant progress has been made toward MDG 4. At the national level, the UN expects that the targeted U5MR of 20 deaths per 1,000 births by 2015 will be reached in Egypt based on the current annual rate of decline in U5MR. The projected U5MR for 2015 is 15.3 deaths per 1,000 births. The national IMR is projected to reach 9.9 deaths per 1,000 live births by 2015, which means that Egypt's IMR is expected to decline more than the targeted rate of 14.7 children per 1,000 live births by 2015 ^[18]. Egypt has attributed its success in progress toward achieving MDG 4 to its continued political commitment to improving maternal and child health: it was one of six countries that supported the 1990 Summit Conference for the Protection and Development of Children which strongly endorsed safe motherhood programs and strategies.

Ethiopia

Ethiopia has made some progress on U5MR and is expected by the UN to come close to meeting its MDG 4-related targets. From 2009 to 2010, the U5MR had decreased to 101 deaths per 1,000 live births and the IMR to 45 deaths per 1,000 live births. These figures reflected respective decreases of 28% and 23% over the last 6 years. This progress can be attributed to the Federal Ministry of Health's Health Sector Development Program (HSDP), which has been supported by a range of donors including the World Bank, the UK's Department for International Development (DFID) and others, and which focuses on increased coverage of maternal, newborn and child health, nutrition and Water Supply, Sanitation and Hygiene (WASH)-related interventions.

Despite progress on U5MR, neonatal mortality – death in the first 28 days of life – has remained a challenge. As of 2011, neonatal mortality rates showed only a modest 5% reduction since 2006 ^[11].

Ghana

Ghana has lagged behind on its progress toward MDG 4. According to UNDP Ghana, the regions with significant reduction in the U5MR between 1998 and 2008 were the Upper East Region (reduction of up to 77.6 deaths per 1,000 live births), and the Western, Brong Ahafo and Volta Regions (reduction of up to 52.7 deaths per 1,000 live births). The regions that recorded the least improvement over the same period were Ashanti (increased by 1.8 deaths per 1,000 live births), and Eastern, Greater Accra and Upper West (only reduced by up to 13.3 deaths per 1,000 live births). Accordingly, thus far, the Upper East, Western, Brong Ahafo and Volta Regions have been on track to achieving the MDG 4 target on U5MR, while the rest are off-track ^[17].

On the other hand, IMR – which increased from 57 deaths per 1,000 live births from 1994 to 1998 to 64 deaths per 1,000 live births from 1998 to 2003 – declined even further to 50 deaths per 1,000 live births by 2008. Immunization of under one year-olds against measles improved from a low of 61% in 1998 to 90.2% in 2008. Similarly, the regions with the significant reduction in IMR from 1998 to 2008 are the Brong Ahafo Region (up to 40.3 deaths per 1,000 live births) and 24.6 deaths per 1,000 live births in the Western, Upper East and Volta Regions. The Ashanti, Eastern and Upper West Regions experienced worsening IMR from 1998 to 2008, registering a decline of less than 15.5 deaths per 1,000 live births ^[17].



Overall, UNDP Ghana asserted that MDG 4 might not be achieved unless there is “an effort to scale-up and sustain child survival interventions³⁵, which had brought about improvements in MDG 4 indicators. In order to do so, in November 2009 Ghana launched a “Child Health Policy” and “Child Health Strategy” which outlined the key interventions to be scaled up along the continuum of care and focused on improving access to, quality of, and demand for essential services. The strategy also included new technologies such as low osmolarity ORS and zinc for the management of diarrhea and introduction of new vaccines such as 2nd dose measles vaccine, pneumococcal vaccine and rotavirus vaccine through the national Expanded Program on Immunization (EPI) [17]. Reports in 2012 by UNICEF suggested that while such efforts have resulted in progress on U5MR, Ghana’s neonatal mortality rate has remained stubbornly high and will prevent Ghana from achieving MDG 4 by 2015 if improvements are not accelerated.³⁶

Kenya

Kenya’s IMR also faces gaps. Of all deaths of children under-five in Kenya, close to 35% are infant deaths. The country’s neonatal mortality rate remains static at 31 deaths per 1,000 live births, although this is better than the African average of 45 deaths per live births [13]. Achieving the MDG 4 targets for U5MR and IMR by 2015 will be a challenge for Kenya unless neonatal care – which is closely linked to maternal care – receives more attention. [54].

Nigeria

According to UNDP Nigeria, progress in reducing the U5MR has been rapid. With sustained effort and improvement in related and lagging sectors, such as water and sanitation, there is a strong possibility of obtaining MDG 4 by 2015. Under-five mortality has fallen by over a fifth in five years, from 201 deaths per 1,000 live births in 2003, to 157 deaths per 1,000 live births in 2008. In the same period, the IMR fell even faster, from 100 to 75 deaths per 1,000 live births [19].

Recent interventions that reflect the underlying causes of child deaths – including the “Integrated Management of Childhood Illnesses” initiative – have contributed to these successes. However, there has been a call to rapidly expand and accelerate such programs. UNDP Nigeria noted that access to primary healthcare must be improved by more investment in infrastructure, human resources, equipment and consumables, and better management. Implementation arrangements must target local needs, which have varied hugely from community to community and state to state. Routine immunization has been insufficient but can be rapidly improved by building upon the successes of the near-eradication of polio [19].

South Africa

In its “South Africa MDG Report 2010”, UNDP South Africa noted that the country had done “extremely well” since the turn of the century in increasing the proportion of one year-old children immunized against measles and the general immunization coverage of infants (under one year of age). Projecting current trends, both of these initiatives will reach their respective MDG 4 targets by 2015 [22].

From a policy perspective, UNDP South Africa has stated that the country had been proactive in ensuring that the necessary policies and implementation strategies were in place to reduce U5MRs in

³⁵ Ghana’s Ministry of Health adopted the United Nations Children’s Fund (UNICEF)-supported Accelerated Child Survival and Development (ACSD) initiative as one of the main strategies for scaling up existing strategies to save children’s lives in Ghana. ACSD was a child-survival initiative that started in 2001 in four countries in the West and Central Region of Africa (Mali, Benin, Senegal and Ghana). The objective of the accelerated approach was the reduction of mortality and malnutrition in children under five years of age in areas with very high mortality rates, through scaling up of cost-effective child survival interventions.

³⁶ <http://ghanahealthnest.com/ghana-may-not-meet-mdg4/>

the form of prevention of malnutrition and the intensification of immunization coverage, as well as access to free healthcare facilities. However, while the interventions in health were strong and held promise for stabilizing infant mortality, they alone were not sufficient in reducing under-five mortality rates as issues such as the prevalence of HIV/AIDS, diarrhea and pneumonia are significant contributing factors to child mortality in the country. Consequently, evidence pointed to a near doubling of the U5MR in a space of nine years and a constant, albeit at a high plateau, IMR over a six-year period. The target set for South Africa of 20 deaths per 1,000 live births or lower by 2015 compares adversely with the current level of 104 deaths per 1,000 live births [22]. Furthermore, the in-hospital mortality rate for neonates (children dying within the first 28 days after birth) is increasing, reaching a high of 6.8% in 2009. The majority of these deaths have been caused by infections³⁷.

Uganda

Indicators of child health and mortality in Uganda have shown mixed progress over the past decade and the rate of progress in both areas has shown that acceleration is needed to reach the target for MDG 4. The MoFPED reported that the U5MR fell from 156 deaths per 1,000 live births in 1995 to 152 deaths per 1,000 live births in 2001 and further to 137 deaths per 1,000 live births in 2006. The IMR has been less stable, as it rose between 1995 and 2001 from 81 to 88 deaths per 1,000 live births, and fell again to 76 deaths per live births in 2006. These declines have been attributed to governmental investments in full vaccination coverage as well as increased access to basic health services for mothers and their children [20].

Overall, U5MRs were much higher in rural areas than in urban areas. Kampala had the lowest level of mortality compared to the North, West Nile and Southwest, which had the highest levels. Among those classified as internally displaced persons (IDPs)³⁸ in a 2006 survey, both U5MR and IMR were much higher than the national average. The inequality in child health outcomes was also clear across different wealth categories. The levels of both infant and child mortality are about 40% lower in the wealthiest 20% of households in Uganda compared to the poorest 20%. While the gap between the wealthiest and poorest households has narrowed in recent years, the gap remains wide relative to the MDG 4 target [20].

V • The Need for Skilled Health Workers

Recognizing the persisting health challenges and what is needed to tackle them, many governments and inter-governmental organizations in Africa are taking action to bring about improvements in MNCH and NCDs. One issue of particular importance is the urgent need for skilled health workers. The East, Central and Southern Africa Health Community (ECSA HC) – a regional inter-governmental health organization that fosters and promotes regional cooperation in health among its Member States³⁹ – notes that many African countries are facing a “human resource crisis” [55].

³⁷ NDOH, “National Department of Health Strategic Plan 2010/11-2012/13.”

³⁸ IDPs are people displaced by fighting between the Ugandan army and the rebel Lord's Resistance Army. At the conflict's peak in 2005, there were 1.84 million IDPs living in 251 camps across 11 districts of northern Uganda (Office of the United Nations High Commissioner for Refugees (UNHCR), 2012).

³⁹ Member States of the ECSA Health community include Kenya, Lesotho, Malawi, Mauritius, Seychelles, Swaziland, United Republic of Tanzania, Uganda, Zambia and Zimbabwe.



There is wide variation in the doctor-population ratios among countries, with countries like Tanzania, Uganda and Zambia having less than one doctor per 10,000 population (persons) and Kenya, Malawi and Zimbabwe having about two doctors per 10,000 population (persons). These figures are very low when compared to developed countries; for example, a recent report by the WHO states that in the U.S.A. there are 24 doctors per 10,000 population. However, the doctor-population ratio of many countries in the ECSA region, including Malawi, could be attributed to more emphasis on non-degree level professionals such as nurses. Countries in the region have a higher nurse-population, as six of the 10 ECSA member states report six or more nurses per 10,000 population (persons). However, the organization warns that such data may include either double counting in some countries where nurses might hold two or more jobs or under-reporting in others where some nurses are working outside the health sector [55].

With regard to MNCH, ECSA HC underscores the need for more skilled midwives and increased midwifery capacity. During its 56th Health Ministers' Conference held in Tanzania from December 13-14, 2012, health ministers from its 10 member states acknowledged that less than half of all births in Africa are attended by skilled personnel and that many ESCA countries do not have adequately qualified midwives or other staff with midwifery competencies to manage pregnant women throughout the maternity cycle. Furthermore, many of these countries do not have the midwifery educators' programs needed to teach those who will train the required skilled birth attendants [56].

Given that, health ministers of the ECSA HC – in cooperation with the East, Central and Southern Africa College of Nursing (ECSACON) and the Commonwealth Secretariat – agreed to implement a five-year initiative to scale up midwifery educator training. The initiative's main goal is to provide a cross-national educational program that will promote women's health and reduce maternal and infant mortality and morbidity in the ECSA region. In addition, the training program seeks to increase the number and capacity of nurses/midwives in teaching and clinical skills and offer clear collaborative roles for multiple partners [57].

VI. Looking Forward: The Role of Industry

In an effort to advance its Global Strategy for Women's and Children's Health, the UN launched Every Woman, Every Child in 2010. The strategy, which aims to save 16 million lives by 2015, required commitments from all stakeholders at all levels – governments, civil society, community organisations, global and regional institutions, donors, philanthropic foundations, the UN and other multilateral organizations, development banks, the private sector, the health workforce, professional associations, academics and researchers [2].

UN Secretary-General Ban Ki-moon's 2010 report on the Global Strategy outlined key areas in which redoubled stakeholder efforts are needed. These areas included integrated care⁴⁰ and innovations to increase the efficiency and impact of healthcare systems for women and children. The Secretary-General noted that integrated care improves health promotion and helps prevent and treat diseases, including NCDs. In addition, and in regard to innovation, he stressed the importance of innovative leadership, financing, tools and interventions, service delivery, monitoring and evaluation [49].

⁴⁰ Integrated care is the concept bringing together inputs, delivery, management and organization of services related to diagnosis, treatment, care, rehabilitation and health promotion. Integration is a means to improve services in relation to access, quality, user satisfaction and efficiency (World Health Organization, 2002). Source: World Health Organization. World Health Statistics, a snapshot of Global Health. 2102.

The Secretary-General's report also pointed to how public-private partnerships can make good use of the private sector's willingness to innovate and take risks, to provide information and improve the quality of services, and to accelerate the development of new vaccines, drugs and technologies. Technological innovations, the report stressed, can also play a critical role. They can simplify expensive, hard-to-use technologies, such as ventilators and tools for administering treatments, making them more affordable and usable in the home or community, where most babies are born ^[49].

The report urged healthcare businesses to review their product lines (e.g. analyzing the number of units they manufacture, their ease of use, pricing, and integration with distribution networks) and ensure they can be used in a home or community environment. Such new interventions and tools, the report noted, can aid in tackling challenges such as pre-term births and creating vaccines for HIV/AIDS and other diseases. Lastly, the report urged the private sector – particularly companies and organizations in the healthcare industry – to scale up best practices and engage in partnerships with the public sector to improve service delivery and infrastructure, develop affordable technologies and interventions, reduce prices of current products, and ensure community outreach and mobilization in coordination with healthcare workers ^[49].

VII. Conclusion

The status quo of health in Africa has been rapidly changing, particularly for women. Already faced with issues such as poverty, malnutrition, HIV/AIDS, and a lack of access to quality healthcare that affects both their personal health and well-being and that of their children, African women are now facing a new burden in the increasing prevalence of NCDs. Originally viewed in the developing world as “Western diseases”, NCDs such as breast/cervical cancer and various cardiovascular diseases have begun to plague across the continent with high incidence and mortality rates. Overall, awareness levels on these issues are low and thousands of women lose their lives to preventable and treatable NCDs every day.

In addition, maternal, newborn and child health remains an issue of global concern. While some African countries have made strides toward achieving the targets for MDGs 4 and 5 by 2015, many have made little to no progress due to inefficient healthcare systems and lack of access to voluntary family planning, skilled health workers, and quality emergency obstetric and antenatal care. With regard to the health of children and infants, disparities in the U5MR of countries in Africa compared to that of other regions have grown. The highest U5MRs in the world are still in SSA, with the health of infants and neonates (babies who die in the first 28 days after birth) remaining a neglected public health issue.

Governments, donors, non-governmental organizations and international organizations such as the UN are taking steps to improve the health of women and children in Africa, however, there is also a need for businesses to deliver healthcare innovations and technologies as well as coordinate efforts with partners to ensure that such technologies can be effectively used in both rural and urban areas.



VIII. References

- [1] World Health Organization. Women and Health: Today's Evidence, Tomorrow's Agenda. 2009.
- [2] United Nations. 2011 Commitments to advance the Global Strategy for Women's & Children's Health. New York, United Nations, 2011.
- [3] World Health Organization (WHO) Regional Office for Africa. The health of the people: the African regional health report. Brazzaville, Republic of Congo: World Health Organization; 2006.
- [4] World Bank. Disease and Mortality in Sub-Saharan Africa, Second Edition; 2006.
- [5] Chan, Margaret. Launch of the Report on Women and Health: Today's Evidence, Tomorrow's Agenda. Geneva, World Health Organization, 2009.
- [6] United Nations Population Fund (UNFPA), United Nations Children's Fund (UNICEF), World Bank, and World Health Organization (WHO), Trends in Maternal Mortality: 1990 to 2010 – WHO, UNICEF, UNFPA and The World Bank estimates. 2012. http://countryoffice.unfpa.org/uganda/drive/Trends_in_maternal_mortality_A4-1.pdf
- [7] United Nations Population Fund (UNFPA). Sub-Saharan Africa's maternal death rate down 41 per cent. New York, United Nations Population Fund. 2012.
- [8] United Nations Population Fund (UNFPA). Maternal Deaths Halved in 20 Years, but Faster Progress Needed. 2012. <http://www.unfpa.org/public/home/news/pid/10730>
- [9] World Health Organization (WHO). Low use of contraception among poor women in Africa: an equity issue. Bulletin of the World Health Organization. Geneva, World Health Organization, 2011.
- [10] United Nations Population Fund (UNFPA) 2012 http://egypt.unfpa.org/english/Staticpage/f648798a-22a1-4165-9edb-617d4c0d7a33/Maternal_Health.aspx
- [11] Ethiopia United Nations Development Assistance Framework 2012-2015. UN Country Team 2011
- [12] Ghana Statistical Service, Ghana Health Service and ICF Macro, "Ghana Demographic and Health Survey 2008," (2009), p.154.
- [13] The Partnership for Maternal, Newborn and Child Health (MNCH), "Maternal and Child Health: Kenya," (2011), available online at http://www.who.int/pmnch/media/membernews/2011/20121216_kenyaparliament.pdf.
- [14] Human Rights Watch, "Stop Making Excuses: Accountability for Maternal Health Care in South Africa," (2011), available online at http://www.hrw.org/sites/default/files/reports/sawrd0811web_wcover.pdf.
- [15] Smith, Alex Duval. South Africa's maternal mortality increases fourfold. The Guardian UK Online, 2011. <http://www.guardian.co.uk/global-development/2011/aug/12/south-africa-maternal-mortality-health>
- [16] United Nations Children's Fund (UNICEF), World Bank, and World Health Organization (WHO), and United Nations Department of Economic and Social Affairs (DESA) Population Division. Level and Trends in Child Mortality Report 2011 – Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation. 2011. http://www.who.int/maternal_child_adolescent/documents/childmortality_booklet_2011.pdf
- [17] United Nations Development Program (UNDP) Ghana. 2008 Ghana Millennium Development Goals Report. 2010.
- [18] United Nations Development Program (UNDP) Egypt. Statistics: MDG 4. Reduce child mortality. http://egypt.unfpa.org/english/Staticpage/51d8ea90-41f7-4377-84e5-ccea04e7175/MDG_4_Reduce_Child_Mortality.aspx
- [19] United Nations Development Program (UNDP) Nigeria. MDGs in Nigeria: Current Progress. <http://www.ng.undp.org/mdgsngprogress.shtml>
- [20] Uganda Ministry of Finance, Planning and Economic Development. Millennium Development Goals Report for Uganda 2010. http://planipolis.iiep.unesco.org/upload/Uganda/UgandaMDG_Report2010.pdf
- [21] United Nations Development Program (UNDP) Kenya. The State of MDGs in Kenya. 2012. <http://www.ke.undp.org/index.php/the-s>
- [22] United Nations Development Program (UNDP) South Africa. MDGs in South Africa. 2012. <http://www.undp.org.za/millennium-development-goals/mdgs-in-south-africa>
- [23] United Nations, the Partnership for Maternal, Newborn & Child Health, World Health Organization (WHO), International Diabetes Federation, Family Care International, Gavi Alliance. Knowledge Summary 15: No communicable diseases. 2011. <http://portal.pmnch.org/downloads/high/KS15-high.pdf>
- [24] American Cancer Society. Breast Cancer: Early Detection – the Importance of Finding Breast Cancer Early. Atlanta: American Cancer Society; 2011.
- [25] World Health Organization (WHO). World Health Statistics 2008 – Part I: Ten Highlights in Health Statistics. Geneva, World Health Organization, 2010.
- [26] International Agency for Research on Cancer. GloboCan 2008 – Cancer Fact Sheet. <http://globocan.iarc.fr/factsheet.asp>
- [27] Delf, Ingy. Breast Cancer Week educates Egypt on main cause for women's death. Ahram Online. 2012. <http://english.ahram.org.eg/NewsContent/7/48/55317/Life--Style/Health/Breast-Cancer-Week-educates-Egypt-on-main-cause-fo.aspx>
- [28] Samir, Salwa. Another revolution needed against breast cancer. The Egyptian Gazette. 2012. <http://213.158.162.45/~egyptian/index.php?action=news&id=21911&title=Another%20revolution%20needed%20against%20breast%20cancer>
- [29] Mousa SM, et al., Patterns of seeking medical care among Egyptian breast cancer patients: Relationship to latest age presentation, The Breast (2011), doi:10.1016/j.breast.2011.07.001
- [30] Mariam, Alemayehu G. Ethiopia: Breast Cancer Awareness Month. Nazaret.com. 2012. <http://nazret.com/blog/index.php/2012/10/21/ethiopia-breast-cancer-awareness-month?blog=15>
- [31] GNA. Ghanaian women at risk of developing breast cancer early. ModernGhana.com. 2011. <http://www.modernghana.com/news/333289/1/ghanaian-women-at-risk-of-developing-breast-cancer.html>
- [32] Zakari, Aljaji Bashiru. Ghana: Don't Link Breast Cancer to Superstition - Dr Wiafe Addai. AllAfrica.com. 2012. <http://allafrica.com/stories/201207060740.html>

- [33] Chikwe, Azoma. Cancer cases increase by 21 percent in Nigeria – COPE. Nigerian Health Journal. 2011. <http://nigerianhealthjournal.com/?p=1424>
- [34] Cancer Association of South Africa (CANSA). Fact sheet on breast cancer. 2011. http://www.givengain.com/cause_data/images/1056/Breast_Cancer_Fact_Sheet_24Nov2011.pdf
- [35] IRIN. Egypt: Poverty, culture undermine cervical cancer treatment. 2012. <http://www.irinnews.org/report/95649/EGYPT-Poverty-culture-undermine-cervical-cancer-treatment>
- [36] Kabura, Stella. Breast angels aims to curb Kenya's top women killer. African Laughter. <http://www.webaraza.com/webaraza2/about-us/141-breast-angels-aims-to-curb-kenyas-top-women-killer>
- [37] Pathfinder International Ethiopia. Combating Cervical Cancer in Ethiopia. 2010. <http://www.pathfinder.org/publications-tools/pdfs/Combating-Cervical-Cancer-in-Ethiopia.pdf>
- [38] GNA. 90 per cent of Cervical Cancer cases cannot be treated. VibeGhana.com. 2012. <http://vibeghana.com/2012/05/16/90-per-cent-of-cervical-cancer-cases-cannot-be-treated/>
- [39] N-Janjerborr Jalulah, William. Ghana: Practice Safe Sex to Prevent Cervical Cancer - Gynecologist Advises Women. AllAfrica.com. 2012. <http://allafrica.com/stories/201205220307.html>
- [40] Ipsos Synovate survey, as reported in 90 Percent of Women Never Tested for Cancer, All Africa. 2012.
- [41] AllAfrica.com. Nigeria: The Problem of Cervical Cancer. 2011.
- [42] Maree J.E et al. Combining breast and cervical screening in an attempt to increase cervical screening uptake. An intervention study in a South African context. European Journal of Cancer Care. 2012.
- [43] The Uganda Women's Health Initiative. Cervical Cancer Fact Sheet. http://www.uwhi.org/?page_id=53
- [44] Mocumbi, A.O. and Silwa, K. Global burden of cardiovascular disease: Women's cardiovascular health in Africa. 2011. Heart 2012;98:6 450-455 doi:10.1136/heartjnl-2011-301025
- [45] World Health Organization (WHO) Regional Office for Africa. Fighting non-communicable diseases: Africa's new silent killers. Africa Health Monitor, 2008. 8(1).
- [46] Institute of Medicine (US) Committee on Preventing the Global Epidemic of Cardiovascular Disease: Meeting the Challenges in Developing Countries; Fuster V, Kelly BB, editors. Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health. Washington (DC): National Academies Press (US); 2010. 2. Epidemiology of Cardiovascular Disease. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK45688/>
- [47] Gersh, B. J. et al. The epidemic of cardiovascular disease in the developing world: global implications. 2010. European Heart Journal. doi:10.1093/eurheartj/ehq030
- [48] World Health Organization (WHO). NCD Country Profiles-2011. Geneva, World Health Organization, 2011. <http://www.who.int/nmh/countries/en/index.html>
- [49] United Nations Secretary-General Ban Ki-moon. Global strategy for women's and children's health. New York, United Nations, 2010.
- [50] United Nations Children's Fund (UNICEF), World Health Organization (WHO), United Nations Population Fund (UNFPA) and the Joint United Nations Program on HIV/AIDS (UNAIDS). Health in the post-2015 UN Development Agenda. 2012
- [51] World Health Organization (WHO) Regional Office for Africa. The Work of WHO in the African Region 2010-2011: Biennial Report of the Regional Director. Brazzaville, Republic of Congo: World Health Organization; 2012.
- [52] World Health Organization (WHO) Regional Office for Africa. The health of the people: the African regional health report. Brazzaville, Republic of Congo: World Health Organization; 2006.
- [53] Newsweek Magazine. Sisters in Need. 2008. TheDailyBeast.com/Newsweek. <http://www.thedailybeast.com/newsweek/2008/10/01/sisters-in-need.html>
- [54] United Nations Development Program (UNDP) Kenya. Statistics: MDG 4. Reduce child mortality. <http://www.ke.undp.org/index.php/mdgs/goal-4-reduce-child-mortality>
- [55] East, Central and Southern Africa Health Community (ECSA HC). State of Health in the ECSA Region. ECSA. 2011.
- [56] East, Central and Southern Africa Health Community (ECSA HC). Resolutions of the 56th Health Ministers' Conference – Accelerating and Scaling up Best Practices in the ECSA region. United Republic of Tanzania. 13-14 December 2012.
- [57] Commonwealth Secretariat, the East, Central and Southern Africa Health Community (ECSA HC), and the ECSA College of Nursing (ECSACON). Enhancing Midwifery Capacity to Reduce Maternal and Neonatal Mortality in East, Central and Southern Africa Region by Scaling Midwifery Educator Training. April 2012.



VIII. Appendix

Cardiovascular Health Statistics – Women

2008 estimates	Egypt	Ethiopia	Ghana	Kenya	Nigeria	South Africa	Uganda
NCD Mortality Rates: cardiovascular diseases and diabetes*	384.0	530.3	343.5	326.4	475.7	315.2	383.7
Behavioral risk factors							
Current daily tobacco smoking	0.5%	0.2%	1.7%	0.7%	1.7%	7.0%	1.5%
Physical inactivity	...	20.4%	19.3%	17.0%	...	55.7%	...
Metabolic risk factors							
Raised blood pressure	34.5%	33.2%	35.2%	35.1%	44.0%	41.4%	...
Raised blood glucose	6.9%	...	9.0%	...	10.0%	11.0%	...
Overweight	75.3%	8.6%	34.9%	24.0%	29.3%	71.8%	19.8%
Obesity	44.5%	1.5%	10.9%	6.2%	8.4%	41.0%	4.7%
Raised cholesterol	43.7%	...	19.8%	...	18.5%	36.5%	...

*Age-standardized death rate per 100,000

...= no data available

Source: World Health Organisation NCD Country Profiles 2011