

# A COMPREHENSIVE REVIEW OF THE POLICY AND PROGRAMMATIC RESPONSE TO CHRONIC NON-COMMUNICABLE DISEASE IN GHANA

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## SUMMARY

**Introduction:** Chronic non-communicable diseases (NCDs) in Ghana have caused significant illness and death in Ghana for many years. Yet, until recently, they have been neglected and not considered a health priority. This paper reviews the national policy and programme response to chronic NCDs over the period 1992 to 2009.

**Methods:** Unpublished reports, documents, relevant files of the Ghana Health Service (GHS) were examined to assess programmatic response to chronic NCDs. Literature was searched to locate published articles on the epidemiology of chronic NCDs in Ghana. The websites of various local and international health institutions were also searched for relevant articles.

**Results:** Several policy and programme initiatives have been pursued with limited success. A national control programme has been established, NCDs are currently a national policy priority, draft tobacco control legislation prepared, public education campaigns on healthy lifestyles, instituted cervical cancer screening and a national health insurance system to reducing medical costs of chronic NCD care. Major challenges include inefficient programme management, low funding, little political interest, low community awareness, high cost of drugs and absence of structured screening programmes. Emerging opportunities include improving political will, government's funding of a national cancer screening programme; basic and operational research; and using funds from well-resourced health programmes for overall health system strengthening.

**Conclusions:** Although Ghana has recently determined to emphasise healthy lifestyles and environment as a major health policy for the prevention and control of chronic NCDs, low funding and weak governance have hindered the effective and speedy implementation of proposed interventions.

**Keywords:** chronic non-communicable diseases, health systems, health policy, funding, and governance

## INTRODUCTION

Although chronic non-communicable diseases (NCDs) have contributed significantly to Ghana's disease burden for more than fifty years, it is only in recent years that they have begun to capture national attention.<sup>1,2,3,4</sup> In a survey in 1950 among 255 persons aged 0-75 years (95% of them less than 50 years) in Kwan-sakrom, a village 60 miles from Accra, 14 (5.5%) were found to have cardiovascular disease with an organic cardiac murmur or a diastolic blood pressure of more than 100 mmHg.<sup>1</sup> Over the period from 1960 to 1968, strokes accounted for 6-10% of deaths in adult patient and approximately 8% of medical admissions at the Korle Bu Teaching Hospital (KBTH), Accra.<sup>5</sup> Between 1990 and 1993, the proportions increased to 17% and 11% respectively.<sup>3</sup>

The first major community-based systematic study of cardiovascular diseases was undertaken in Mamprobi, Accra in 1974-1976 by the University of Ghana Medical School with support from the World Health Organization (WHO). The study found that 25% of urban population aged 15-64 years had abnormal cardiovascular (CVD) findings.<sup>6</sup> Thirteen percent of respondents had raised blood pressure  $\geq 160/95$  mmHg and 3.4% had rheumatic heart disease. In a five year follow up survey from 1975, CVDs accounted for 48% of the adult deaths in this community.<sup>4,7</sup>

By 2003, an epidemic of chronic disease risk factor among women in Accra had emerged with 35% of them being obese, 40% hypertensive and 23% hypercholesterolaemic.<sup>2</sup> In Accra, Kumasi and rural areas, the estimated adult prevalence of hypertension is 28%-40%.<sup>2,8,9,10,11</sup> Nationally, hypertension has moved from being the ninth to tenth commonest cause of new out-patient morbidity in all ages in 1985-2001 to become the fifth since 2002. Stroke and hypertension have regularly been among the leading causes of deaths in hospitals in Ghana for more than 20 years.

The estimated 6%-7% adult prevalence of diabetes in Accra in 1998-2002<sup>2, 12</sup> and 9.5% in Kumasi in 2005<sup>13</sup>, is markedly higher than previous estimates of 0.4% in 1956.<sup>14</sup>

Consistent with the reported increases in chronic NCDs, obesity levels have been increasing<sup>2,15,16</sup> and fruit and vegetable consumption is among the lowest in Africa.<sup>17</sup> In the face of the high and increasing burden of chronic NCDs in Ghana, this paper attempts to review the national policy response, examine achievements and current challenges and recommend options available to deal with the situation.

## METHODS

Unpublished reports, documents, files, letters were studied to identify programmatic issues at the Non-Communicable Disease Control Programme of the Ghana Health Service. Data extracted included the epidemiology of NCDs, the policy and programmatic responses and recommended strategies for prevention and management of NCDs. Data on the policy implications of chronic NCDs in Ghana were obtained from a search of the PubMed electronic database of published articles on from 1970 to August 2009. In addition, the websites of various institutions such as the WHO Headquarters, WHO Regional Office for Africa, the Ministry of Health and the Ghana Health Service as well as media agencies were searched for relevant articles.

## RESULTS

### *Establishment of the Non-Communicable Diseases Control Programme*

The establishment of the Burkitt's Lymphoma Centre at the Korle-Bu Teaching Hospital (KBTH) with support from the National Institute of Health, USA, was followed by attempts to establish a cancer registry in the early 1970s. However, these efforts were only partially successful due partly to leadership problems and the exodus of skilled practitioners. The efforts to address cancers and evidence of the growing importance of cardiovascular diseases in Ghana influenced the establishment of the Non-communicable Diseases Control and Prevention (NCDCP) Programme in 1992 by the then Ministry of Health (MOH). The objectives of the programme were to reduce the incidence of NCDs, to reduce their morbidity, to prevent complications and disability from NCDs and to prolong the quality of life of individuals and populations.

The diseases covered by the NCDCP in Ghana include chronic NCDs with shared risk factors (cardiovascular disease, diabetes, cancers and chronic respiratory diseases), genetic disorders (sickle cell disease) and inju-

ries. Tobacco control is not an integral part of the NCDCP, and is managed by the Health Research Directorate. There is also good collaboration with the Health Promotion Department and the Family Health Directorate with respect to health promotion programmes and the control and prevention of breast and female reproductive cancers.

The functions of the NCDCP include planning, advocacy, training, coordinating NCD-related activities, research, health communication, development of clinical practice guidelines, mobilizing resources for NCD prevention and control. There are only few Focal Persons - for cancer, tobacco control and sickle disease. The programme structure at the regional and district level is not as well defined. A pertinent problem is that the peripheral health priority actions are determined more by the availability of dedicated funds from 'vertical' programmes such as HIV, TB, and immunization than by local disease profile.

### *Policy Initiatives for NCDs: 1995-2008*

Although NCDs were included in several health policy documents during the mid-1990s, practical attention to their control was hindered by low political will and limited funding. In 1994, MOH identified the development of more effective and efficient systems for the surveillance, prevention and control of communicable and non-communicable diseases of socio-economic importance as one of the main strategies to achieve its health service targets by the year 2000.<sup>18</sup> In 1995, MOH developed a major health strategy paper towards achieving the Government's long-term developmental agenda, called Vision 2020, after a series of national consultations which started in September 1993.

A package of priority health services including treatment of hypertension, diabetes, asthma, sickle cell disease, malnutrition and cancer was listed which should be accessible to the majority of Ghanaians.<sup>19</sup> Despite the inclusion of NCDs in the priority list of diseases, the specific health strategies drawn for Vision 2020 excluded control of NCDs<sup>20</sup>. Moreover, except for the year 2000, the external annual independent reviews of the health sector performance of 1997 - 2003 hardly mentioned NCDs or proposed any recommendations for their prevention and control.

During the mid-term review of the Programme of Work (POW) 1997-2001 in 2000 the burden of NCDs was finally discussed in the Health of the Nation Report.<sup>21</sup> One background report catalogued interventions such as the development of a draft policy and programme document, the activities of the Ghana Diabetes Advisory Board inaugurated in 1997, the implementation of a comprehensive diabetes management pro-

gramme in many hospitals in Ghana, screening programmes for breast cancer, cervical cancer and neonatal sickle cell disease in parts of Ghana, and the activities of NCD-specific peer non-governmental organizations (NGOs).<sup>22</sup>

The establishment of the Ghana Health Service (GHS) and the Teaching Hospitals under Act 525 in 1996, provided service agencies as well as the regulatory bodies some administrative and financial autonomy to undertake their tasks. During the period of the POW 1997-2001, the major achievements in the prevention and control of NCDs included intense promotion of exclusive breast feeding, passage of a legislative instrument on breastfeeding, introduction of smoking ban in public health facilities, development of a strategy paper for NCDs, and the introduction of user fee exemption policy for persons older than 70 years of age.

The University of Ghana Medical School developed national treatment guidelines and trained multidisciplinary teams in regions and districts to improve the care of diabetes from 1995-1998 with funding from Eli Lilly Company and MOH Ghana.<sup>23</sup> In 2001, a national conference was held to highlight the emerging epidemic of NCDs. A national NCD policy was drafted in 2002.<sup>24</sup> A national stakeholder's conference was also held to discuss the establishment of a National population-based cancer registry. Study visits were undertaken to Lyons and Banjul to understudy cancer registration.

During the second GHS POW 2002-2006, NCDs became more nationally visible and were prioritized in the national health interventions due in part to the interests of the Director General, GHS and the Minister of Health. National and international events such as the World Diabetes Day, World No Tobacco Day, World Heart Day, national asthma day, were regularly celebrated during this period. Hepatitis B vaccine was introduced into the national immunization programme in 2002 to prevent virus-related liver cancer.

The GHS lobbied Parliament to ratify the Framework Convention on Tobacco Control (FCTC) in 2004. Anti-tobacco activities were intensified buoyed up by the ban in public smoking in several European Union countries. A draft tobacco bill was presented to the Cabinet in 2005. Risk factors surveys were conducted by various groups in Accra and Kumasi to provide a better understanding of risk factors associated with hypertension.<sup>10, 11, 25, 26</sup> The Demographic and Health Survey (DHS) in 2003 provided nationwide data on childhood and adult female obesity and tobacco use in males.<sup>27</sup> The GDHS 2008 provided information on alcohol, fruit and vegetable consumption.<sup>15</sup>

Inspired by the new Government of Ghana's vision to transform Ghana into a middle income country by the year 2015, the then Minister of Health, Major (rtd) Courage Quashigah determined to create wealth through health. Following a visit to Dimona, Israel in June 2005 and the observation of zero NCD cases or deaths among 4,000 African Hebrews Israelites in about 40 years, the Minister instituted a programme to re-orient Ghana's health policy to emphasise health promotion. In 2006, an agreement was signed requesting the African Hebrew Development Agency (ADHA) to work with MOH to design, pilot and scale up the implementation of a Regenerative Health and Nutrition Programme (RHNP).<sup>28</sup>

MOH established the RHNP in 2006 and has since been managing it. The strategic plan 2007-2011 of RHNP has four key strategic areas: behaviour change communication, creating enabling environments, capacity building and training, and partnership and networking.<sup>29</sup> The four priority RHN interventions are promoting healthy largely plant-based diets, exercise, rest, water intake and environmental cleanliness. RHNP was initially piloted in ten districts in seven regions and was favourably evaluated in 2007.<sup>29</sup> More than 200 Ghanaians including traditional rulers, actors, musicians and journalists have visited Dimona, to enable them promote regenerative health care.

In June 1995, the NCDPCP organized a national seminar with the aim of creating awareness of NCDs and fostering better collaboration between clinicians and public health practitioners.<sup>30</sup> In June 2005, the NCDPCP organized a follow-up national stakeholders conference covering the public health and social dimensions of cardiovascular diseases, diabetes, cancers, sickle cell diseases, asthma and injuries.<sup>31</sup> The objectives of the conference were to begin a process of developing a strategic framework for the control of NCDs, to design a plan to halt NCD in Ghana and to review current strategies to prevent and control NCD.

There was a consensus that an integrated approach and partnerships were essential strategies to the prevention and control of NCDs. Following the 2005 conference, five technical working groups were constituted to develop draft strategic frameworks for the prevention and control of cardiovascular diseases, diabetes, cancers, asthma and sickle cell disease.

The current health sector POW 2007-2011 themed 'Creating Wealth through Health' has been most the NCD-relevant.<sup>32</sup> The development of the third health sector POW was more consultative and engaged many GHS disease control programmes.

The four strategic objectives of the POW are to promote an individual lifestyle and behavioural model for improving health and vitality by addressing risk factors and by strengthening multi-sectoral advocacy and actions; rapidly scale high impact interventions and services targeting the poor, disadvantaged and vulnerable groups; invest in strengthening health system capacity to sustain high coverage and expand access to quality of health services; and to promote governance, partnership and sustainable financing.

Consistent with the POW 2007-2011, the current health policy of Ghana clearly emphasises the promotion of healthy lifestyles and healthy environments and the provision of health, reproduction and nutrition services as two of seven priority areas of action.<sup>33</sup> The policy further identifies six programme areas which will be resourced in order to achieve the health sector objectives. Two of these programme areas are promoting good nutrition across the life span; and reducing NCD-related risk factors such as tobacco and alcohol use, lack of exercise, poor eating habits and unsafe driving.

Policy measures to be implemented towards achieving the healthy lifestyles and healthy environments include developing standards and programmes for promoting healthy settings, as in healthy homes, schools, workplaces and communities.<sup>33</sup> Healthy schools will be promoted through fostering collaborating among the MOH, GES and private schools to facilitate the adoption of healthy lifestyles among students through the curriculum, physical education, environmental sanitation and the promotion of healthy eating. Ensuring food safety requires developing and enforcing standards for the production, storage, sale and handling of food and drink in markets, restaurants and through other vendors.

#### ***Strategies for prevention and control of NCDs – international context***

There have been more than 50 resolutions on chronic diseases prevention and health promotion since 1948. They cover issues such as tobacco control, diet, physical activity, nutrition, alcohol and sickle cell disease (Table 1). Notable among these are the Framework Convention on Tobacco Control (FCTC) of 2003 and the Global Strategy on Diet, Physical Activity and Health (DPAS) of 2004.

In May 2008, the Sixty-first World Health Assembly endorsed a six-year Global Action Plan 2008-2013 which provides Member States and the international community with a roadmap to establish and strengthen initiatives for the surveillance, prevention and management of NCDs (WHA61.14).<sup>34</sup>

Since 2000, the WHO Regional Committee for Africa has, since the year 2000, also produced continent-specific guidelines for the prevention and control of NCDs.<sup>35,36,37,38,39,40,41</sup> In 2006, the tenth ECOWAS Nutrition Forum acknowledged the ‘double burden’ of over- and under-nutrition in the sub-region, even in the same households.<sup>42</sup> The Ouagadougou Declaration of 2008 affirms that the overall health system strengthening provides the enabling environment for the prevention and control of NCDs<sup>43</sup>. Despite the useful recommendations in these international resolutions, Ghana, like other countries, does not have an institutional framework to monitor the implementation of these international provisions.

#### ***National Strategies for prevention and control of NCDs***

Ghana has prepared a number of strategy papers. In 1993, the NCDCP described general strategies for the prevention and control of chronic NCDs as well as disease-specific strategies.<sup>44</sup> The paper proposed a two-phase implementation of the programme, from January 1994 to December 1998 and from January 1999 to December 2004, with specified targets for each phase. The roles and responsibilities of the national, regional, district sub-district and community levels were specified.

In 1998, another strategy paper was prepared with the view to document the burden of the problem, identify the risk factors and design the most appropriate intervention packages relevant to the Ghanaian situation.<sup>45</sup> The strategies outlined, were to form a national NCDs Technical Advisory Board and expert technical sub-committees on the various NCDs; develop health educational materials and methodologies for NCDs; establish counselling, consultation units for NCDs in all Regional and District Hospitals; strengthen the capacity of health workers in NCD surveillance; strengthen the capacity of health teams in the knowledge, diagnosis, management and control of NCDs; develop and produce standardized management guidelines and protocols for NCDs; and conduct baseline research on the targeted NCDs.

In March 2002, a technical team prepared a draft national policy framework for NCDs with technical support from WHO but it was not formally adopted.<sup>46</sup> The policy framework covered the justification for NCD prevention and control, strategic objectives, strategies, capacity building, drugs, health care costs and risk sharing and monitoring and evaluation.

Between 2006 and 2007, strategic frameworks for the control of the major NCDs were developed. Finalization of these strategy documents is in progress.

**Table 1** Recent WHO Resolutions on Non-Communicable Diseases and Health Promotion

| Year     | Strategy or initiative  | Code     | Thematic Area       |
|----------|---|----------|---------------------|
| May 1998 | WHA request for a global strategy for NCD prevention and control                                      | WHA51.18 | NCDs                |
| May 2000 | Reaffirmation of global strategy for prevention and control of NCDs                                   | WHA53.17 | NCDs                |
| May 2001 | Transparency in tobacco control process   | WHA54.18 | Tobacco             |
| May 2002 | development of a Global Strategy on Diet, Physical Activity and Health (DPAS)                         | WHA53.23 | DPAS                |
| May 2003 | Adoption of WHO Framework Convention on Tobacco Control (FCTC)  | WHA56.1  | Tobacco             |
| May 2004 | Endorsement of DPAS   | WHA57.17 | DPAS                |
| May 2004 | Health promotion and healthy lifestyles   | WHA57.16 | Health promotion    |
| May 2005 | Cancer prevention and control   | WHA58.22 | Cancers             |
| May 2005 | Public-health problems caused by harmful use of alcohol   | WHA58.26 | Alcohol             |
| May 2006 | Sickle-cell anaemia   | WHA59.20 | Sickle cell disease |
| May 2007 | Prevention and control of NCDs: implementation of the global strategy. Call to prepare an action plan | WHA60.23 | NCDs                |
| May 2008 | Endorsement of a six-year Global Action Plan 2008-2013  | WHA61.14 | NCDs                |
| 2008     | MPOWER policies on tobacco control  | -        | Tobacco             |

In 2008, the NCDCP prepared a position paper which assessed the current situation of NCDs in the country, the national response and proposed recommendations for improving the situation.<sup>47</sup> Implementation of the recommendations has been very slow, largely due to financial constraints and low resolve. There is no national coordinating body to push for their implementation.

A combination of population-based (e.g. smoking ban in or around health facilities) and high risk-based strategies (low salt intake in hypertensives) are currently employed. Primary prevention strategies include advocacy for political support, legislation and health promotion emphasizing healthy lifestyles. Secondary prevention strategies include educational campaigns and screening for early detection (of overweight, raised blood pressure, raised cholesterol, and selected cancers) and development of clinical practice guidelines.

Tertiary prevention aims to improve the quality of lives of those with complications of NCDs and so involves the use of prostheses, occupational therapy, speech

therapy and palliative care. Cross-cutting strategies include training, human resource mobilization, research, supervision, partnerships and intersectoral collaboration. Priority interventions are preventive and are implemented through an integrated approach which targets major risk factors.<sup>34</sup>

#### **Status of Recent Policy Implementation on NCDs and Related Challenges in Ghana**

One of the main achievements has been the ratification of the FCTC and subsequent drafting of a national tobacco bill under the leadership of the Food and Drugs Board. Since 2005, the bill has been before Cabinet but there are indications that the current government would like to revise and pass it into law.<sup>48</sup> There are no clear laws on labelling of processed foods in Ghana and so the content of most processed foods are not labelled. Interestingly, products exported to Europe tend to be labelled.

Laws against exaggerated health benefits (including aphrodisiac properties) of products such as alcoholic 'bitters', herbal products in advertisements are in place

but are hardly enforced. Neither is the law banning the sale of alcohol to under-aged persons.

Sensitization of the general public on healthy lifestyles has been improving from health sector campaigns at all levels using the mass media. The NCD Control Programme has over the past five years organized sensitization workshops for regional health teams, media persons, and NGOs. Radio and TV talk shows have been organized at all levels of health care delivery. The RHNP has trained 1,000 change agents. Health walks have been increasingly organized by the general public, corporate bodies, civil service organizations and religious organizations for its health benefits or to draw attention to various social issues.<sup>49</sup>

Some of the health walks have been accompanied by free HIV/AIDS testing and counselling, blood pressure and weight checks and eye care. Despite these efforts, general awareness of problems of NCDs, their causes, effect, prevention and treatment remains low<sup>50,51</sup> even among medical professionals.<sup>52</sup> The situation is compounded by the paucity of educational materials on NCDs in health facilities.

The media-visibility of health screening programmes has also been increasing. Screening programmes for weight, height, blood pressure, breast and cervical cancers have generally been led by NGOs although female parliamentarians have also contributed to raising awareness. The increased availability of equipment (e.g. ultrasound, weighing scales, mammography) and laboratory tests (e.g. Pap smear, prostatic surface antigen) in both the public and private sector favours screening programmes.

An aide memoire signed between MOH and development partners in November 2007 called for the introduction of structured programme of health screening as a priority in 2008.<sup>53</sup> Accordingly, the Government of Ghana, in its 2008 budget, planned to promote greater awareness of early detection of breast and prostate cancer; and introduce a programme for breast and prostate cancer screening. Further, the Government decided to subsidize mammograms done in private and public hospitals for all Ghanaian women from the age of 40 years and above and for prostate cancer screening for men of 50 years and above who are registered under the NHIS.<sup>54</sup> This plan is yet to be implemented due to funding constraints.

The chronic shortage of equipment, logistics and drugs before the introduction of the Cash and Carry user fee scheme in the early 1990s is no longer an issue. Following some GHS quality assurance training programmes, many regional and district hospitals now use

sphygmomanometers, weighing scales and height measures in open spaces in outpatient departments. Missed opportunities still exist. It is not uncommon for an obese patient with malaria or a smoker with diarrhoea to receive treatment for the acute illness without any counselling or care of their NCD risk factors. This is even more pertinent as clinicians are effective in achieving risk factor reduction.

A Newborn Screening for Sickle Cell Disease (NSSCD) project was started in Kumasi and Tikrom in the Ashanti Region in April 2003 with funding from the National Institute of Health.<sup>55</sup> The project officially ended in March 2008 and has contributed to early detection of SCD and improved clinical outcomes. Based on the success of the project, the Ghana Health Service, in collaboration with the Sickle Cell Foundation of Ghana, has started to scale up the neonatal screening to other parts of the Ashanti Region and to the rest of the country.

Clinical management challenges include the general absence of national treatment guidelines, multiplicity of treatment of regimens, high cost of treatment, low compliance with treatment, high defaulter rate, recourse to unlicensed herbal products and shortage of specialist care. Several studies have shown that treatment and control of hypertension is low.<sup>8, 9</sup> The implementation of a National Health Insurance Scheme (NHIS) in Ghana in March 2005 has provided substantial financial relief for the growing list of scheme registrants.

The benefit package includes common medications for outpatient and inpatient care, ultrasound and laboratory investigations, physiotherapy and some surgical operations.<sup>56</sup> It however, excludes some cardiac investigations (e.g. echocardiography, angiography), some anti-hypertensives (e.g. candesartan, ramipril), therapy for cancers other than for breast and cervical cancers and prosthetic devices.<sup>57</sup>

For tertiary prevention, Limb Fitting Centres, occupational and physiotherapy centres in the few public facilities where they are available, are chronically underfunded and so lack modern equipment. However, since 1998, the three newer regional hospitals in the Central, Brong-Ahafo and Volta Regions as well as the teaching hospitals have modern physiotherapy equipment. Palliative care is sub-optimal with few trained physicians. There appears to be a general reluctance to use morphine and other narcotics for pain relief probably due to fear of addiction.

There are several other cross-cutting challenges. Recent national assessments of care services in health facilities in Ghana have excluded NCDs.<sup>58,59</sup>

The last review of capacity for NCD care was undertaken in five regional hospitals for diabetes in 1995.<sup>60</sup> The NCDCP has not formally been evaluated since it was established in 1992. In comparison, the National Tuberculosis Programme which was established in 1994 has been evaluated at least five times. The RHNP was the focus of in-depth review during the health sector review of 2007.<sup>61</sup> Funding for NCDs has been woefully inadequate though that for RHNP is relatively good. Many development partners are not interested in NCDs, preferring to support infectious diseases and programmes with quicker impact.

## DISCUSSION

### What Ghana needs to do

*Ghana has to implement the recommendations of the sixtieth WHA resolution of 2007<sup>62</sup>:*

1. strengthen national and local political will to prevent and control NCDs
2. establish and strengthen a national multisectoral coordinating mechanism for prevention and control of NCDs
3. finalize and implement a national multisectoral evidence-based action plan for prevention and control of NCDs that sets out priorities, a time frame and performance indicators,
4. increase resources for programmes for the prevention and control of NCDs;
5. implement existing global initiatives and the Framework Convention on Tobacco Control
6. strengthen the capacity of health systems for prevention, to integrate prevention and control of NCDs into primary health-care programmes
7. strengthen monitoring and evaluation systems, including country-level epidemiological surveillance mechanisms
8. strengthen the role of governmental regulatory functions in combating NCDs
9. increase access to appropriate health care including affordable, high-quality medicines
10. implement public health interventions to reduce the incidence of obesity in children and adults

### Opportunities

While the challenges may seem daunting, there are a number of opportunities that the health sector could exploit. The current government has determined to process nine health-related bills including the tobacco bill for passage into law. There is also public support for ban in public smoking – a recent survey showed that 80% of workers in smoking and non-smoking es-

tablishments were in favour of smoke-free laws.<sup>63</sup> Health promotion campaigns should take advantage of the changing cultural perceptions of Ghanaian women on the preferred body size and shape. Overweight Ghanaian women are interested and willing to reduce their body size for health and cosmetic reasons.<sup>64</sup>

Increased funding provides facilities with opportunity expand their services. For example, the uptake of clients screened for cervical cancer using visual inspection with acetic acid (VIA) at the Ridge Hospital in Accra increased five-fold from 161 to 818 within the second quarter of 2007 and 2008 following an educational programme on VIA on one television network.<sup>65</sup> Funding from better-resourced 'vertical' programmes should be managed horizontally towards health system strengthening (e.g. for health promotion, training and surveillance) for the benefit of less-endowed programmes.

The recently introduced District Health Information Management System (DHIMS) as an integral tool to capture preventive and clinical service output in private and public health facilities in Ghana should provide more timely and accurate NCD-related data at the district and regional levels.<sup>66</sup> The recent introduction of selected NCDs into the national integrated disease surveillance and response (IDSR) system, although not fully implemented, could help to improve surveillance on NCDs and garner health worker interest in NCDs. Periodic national surveys such as the DHS and the Multiple Indicator Cluster Survey generate accurate data on nutritional status and tobacco useful for monitoring risk factor trends in adults and in children.

There are other opportunities to improve clinical care. The recent developed clinical protocols for diabetes by the International Diabetes Federation African Region, cardiovascular risk assessment guidelines and a Package of Essential NCD (WHO-PEN) interventions for the prevention and control of four major NCDs at the primary care level could be adapted for national use.<sup>67,68</sup> Unlike the medical associations of UK and US, the Ghana Medical Association has not recently developed any monographs or scientific papers on NCDs although it has the capacity to do so.<sup>69</sup>

Since 2007, the new requirement by the Ghana Medical and Dental Council for doctors and dental officers to accumulate 20 credit points for re-licensure each year has enabled a large number of doctors to receive training updates in some NCDs. Where specialists are not available, outreach specialist sessions could improve the clinical management of NCDs at the periphery.

Besides expanding the coverage and benefit package of the NHIS, medicinal plant research could potentially reduce the cost of medicines.<sup>70</sup> More NCD-related research is needed – and so the recently formed research consortium – UK Africa Academic Partnership on Chronic Disease is commendable.

In the health sector performance review 2008, the independent team concluded that the running of parallel NCD programmes - the RHNP by the MOH and the NCDPC by the GHS is inefficient.<sup>66</sup> There is scope for the two programmes to be integrated for more effective use of resources. A proposed restructuring of disease control programmes within the Ghana Health Service to elevate the status of the NCDPC and appoint Focal Persons to the NCDPC should serve to attract more funding for more effective programme management.

## CONCLUSION

Non-communicable diseases have increased substantially in Ghana and they are likely to continue to do so. Ghana has had a chequered history of several laudable policy initiatives which have not been fully followed through for implementation and evaluation. Several opportunities exist to improve the policy and programmatic response to NCDs using a multisectoral and integrated approach.

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