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Increasing burden of chronic diseases in the Ghanaian population: need for behavioural interventions with effective implementation to support the WHO PEN programme

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Approximately 74% of global deaths are caused by noncommunicable diseases (NCDs), including cardiovascular diseases, diabetes, cancer, chronic respiratory illnesses, and mental health disorders [1]. Sub-Saharan Africa (SSA) historically had low rates of NCDs but is now experiencing a more rapid increase in deaths from NCDs than anywhere else in the world [2]. In Ghana, NCDs contributed to 43% of all deaths in the latest survey, with cardiovascular diseases being the most common condition [3-6]. Other NCDs of growing concern in Ghana include diabetes mellitus [7], chronic kidney diseases (CKDs) [8], and cancers [9]. NCDs are increasingly burdening health care services, which were already challenged with other ailments common to low- and middle-income countries, including child undernutrition and infectious diseases. The major underlying causes of the increasing prevalence of NCDs in Ghana are obesity and unhealthy diet. 43% of the adult Ghanaian population was overweight or obese in a recent survey [10], and with the anticipated continuing increase in prevalence, we are now at risk of overtaking many high-income countries. Women living in urban areas are especially at risk of obesity [11], with 25.1% affected in the recent survey in Accra [10]. In addition, in their analysis of the Global Ageing and Adult Health (SAGE Wave 1) conducted by the World Health Organization, Oduro and Okyere [12] reported that older adults in Ghana exhibit a very high prevalence (94.0%) of NCD risk factors. Multiple underlying mechanisms are responsible for the increased risk of NCDs with obesity, including impaired insulin resistance, decreased physical activity, systemic inflammation, and alterations in neural food reward systems [13]. Several factors have already been associated with the increasing prevalence of obesity and NCDs in Ghana, including alcohol consumption [14], an unhealthy diet and insufficient physical activity [15-17].

Ghana's healthcare system employs a strategy that integrates clinical care and health promotion efforts. Over the past three decades, Ghana has implemented multiple interventions aimed at reducing the incidence and prevalence of NCDs, minimising exposure to risk factors, decreasing NCD-related morbidity, and enhancing the overall quality of life for individuals affected by NCDs. These interventions include the establishment of the NCD

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Control and Prevention Programme (NCDCP) in 1992, the introduction of a draft national NCD policy in 2002, later adopted with modifications in 2012, the initiation of the Regenerative Health and Nutrition Programme (RHNP) in 2006, and the incorporation of essential medicines for certain NCDs into the National Health Insurance Scheme (NHIS) [18,19]. In addition, there was an expansion of the World Health Organization's Package of Essential Noncommunicable Disease (WHO-PEN) sites in the country, among other initiatives [19].

The WHO PEN programme offers a framework for addressing chronic diseases in resource-limited settings such as Ghana. It comprises a range of cost-effective, evidence-based interventions and aims to enhance access to preventive services, early detection, and management of chronic conditions. Key components of the program include screening, detection, and treatment protocols customised to local contexts [20]. Despite considerable progress in the effective implementation of key policies and programmes [21], the current trends in NCD mortality and morbidity arising from NCDs reveal limited success in addressing the burden of NCDs, suggesting that additional and more effective measures are needed. Given that obesity is a major underlying cause of most NCDs and that the development of the latter, subsequent to obesity, often takes ten years [22], prevention and treatment of obesity at the community level could be a very effective way to reduce NCDs in Ghana.

While countries like the US have national weight management programmes that have been refined in research studies [23], these programmes have not yet been adapted for use in Ghana. Adaptation of these globally recognised obesity-treatment programmes for appropriate cultural use in Ghana to synergise with the WHO PEN programme, combined with the development of effective implementation plans, would provide much-needed emphasis on NCD prevention rather than just treatment [24]. This approach holds promise for reversing current disease trends and addressing the numerous challenges that have hindered the effectiveness of past interventions in Ghana. Furthermore, because community engagement will be so central to implementation success, involving experts in community participatory endeavours will help ensure that effective and sustainable programmes are developed that can then support a national NCD policy in the country [18]. As NCDs overtake child malnutrition as the dominant health crisis in Ghana, research to develop interventions that are effective in the Ghanaian cultural context will be vital to supporting the health of all.

We conclude that strategies for managing NCDs in Ghana should now increasingly focus on the individual level, utilising behavioural interventions and effective implementation strategies guided by the WHO PEN programme. This approach provides a pathway to improve health outcomes and mitigate the impact of chronic diseases on individuals and communities.

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All authors agreed on the content of the final paper.

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II participated in the original manuscript draft. SR and JNF participated in conceptualising the study. II, SR, JNF, JK and SAB participated in the review and editing of the final manuscript.

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