KENYA CASE STUDY

Financing of NCD Prevention in LMICs: Kenya Case Study

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Abstract

Objective: The objective of this study is to estimate spending on NCD prevention in Kenya and identify the enablers, challenges and dynamics underpinning population-level NCD prevention spending, with particular focus on tobacco use, harmful use of alcohol, unhealthy diets and physical inactivity.

Methods: Primary and secondary data collection was used to examine processes and organizational contexts that shape the formulation of policy and financial frameworks for NCD prevention. The methodology was categorized into three tiers; an academic literature review, scrutiny and analysis of official policy documents and budgetary data on health and NCDs, and in-depth stakeholder interviews with key government officials leading NCD programmes. Government and government-routed donor spending on population level prevention was gauged to estimate NCD prevention spending. Where possible, impact of prevention programmes on disease incidence and risk factors was gauged through available outcome indicators.

Results: Kenya spent an estimated 2.31 billion KSh on NCD prevention in 2015-16, constituting around 1.7% of total government health spending for the year. It is among the first African countries in the WHO African region to begin re-orienting its health system to address NCDs. Enablers include regional cooperation, local and global civil society advocacy, building integrated NCD programmes, progress in alcohol and tobacco taxation and regulation and institutions for inter-sectoral coordination. Challenges include devolution and subnational capacity gaps, perception of low political salience and visibility of NCD prevention interventions, poverty-related non-behavioural risk factors and regulatory gaps in nutrition policy. Opportunities identified including earmarking of revenues, county-level investment in health promotion, food systems approach to nutrition, ensuring timely disbursement to facilities, and interagency mechanisms between national and county governments.

Conclusion: Kenya has made considerable progress in reorienting its health system towards NCD prevention and has also increased financing for NCD prevention in recent years, but it still remains less than 2% of government health spending. Increased population-level NCD prevention spending can help address the growing NCD burden and produce economic benefits.

Keywords: Noncommunicable Diseases, Tobacco, Behaviour, Employees, Incidence, World Health Organization, Risk Factors, Diet, Nutrition Policy, Tobacco, Perception, Taxes, Poverty

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Introduction

Kenya has achieved considerable social and economic development in recent decades, with its HDI rising by 0.9% per year on average since 1982, from 0.424 to 0.519 today, significantly above the regional average in Sub-Saharan Africa.[1] The country has managed to make progress in poverty reduction and achieved a remarkable increase in life expectancy from 45.[2] in 1990 to 66.70 today. It has also made impressive progress against infectious diseases; while HIV/AIDS continues to be the predominant cause of death and lost disability adjusted life years (DALYs), its prevalence is on a downward trend and is currently estimated to be 5.6%, attributable to implementation of an aggressive HIV control strategy. Similarly, mortality from Malaria and Tuberculosis (TB) has also been on a downward trend.[1]

At the same time, Kenya is facing an epidemiological transition, with a growing non-communicable disease (NCD) burden that is threatening its health gains. Coupled with a still-uncontained burden of infectious diseases, as well as significant morbidity and mortality from environmental causes, the rise of NCDs has resulted in a triple burden of disease, putting enormous strain on the health system.

NCDs are now responsible for a large share of morbidity and mortality in Kenya, resulting in 37% of the overall burden of disease and 35% of all deaths. There is now an 18% probability of dying prematurely from an NCD in

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Kenya. Unlike what is popularly assumed, NCDs in Kenya occur at younger ages and affect those in the productive years of life, with over half of the NCD disease burden and almost three-quarters of injuries occurring before the age of 40.[2] Premature mortality from NCDs, primarily among men of working age, has significant socioeconomic consequences. There is increasing evidence that points to how rising prevalence of NCDS among young people is causing a significant financial burden that is pushing individuals, households and communities into poverty and slowing economic progress.

NCDs are also placing enormous strain on the Kenyan health system – according to the World Bank (2017) NCD-related conditions account for more than 50% of total hospital admissions and a similar proportion of hospital deaths.[3] As Kenya continues on its path of growth, the prevalence of NCDs and the premature mortality from them are expected to rise absent prompt action to address them. This will constitute a major burden for Kenya's path to middle income status and its under-resourced healthcare system.

As in other countries, NCDs in Kenya are driven by forces of globalization and urbanization, which contribute to lifestyle changes like rising tobacco use, harmful use of alcohol, unhealthy diet and physical inactivity. Data from the 2015 Kenya Stepwise Survey indicates that approximately 8% of the Kenyan population smoked daily (the highest levels in Sub-Saharan Africa), nearly a quarter of the population had high blood pressure, and 17% of men and 35% of women were overweight or obese; all of these risk factors and conditions are contributing factors to NCDs.[4] There is also evidence that morbidities related to environmental risk factors account for a large part of the NCD burden in Kenya as well.

The link between NCDs and household productivity and income are now well-established. The greater expenditure associated with the long-term effects of NCDs causes catastrophic health expenditure for households. This tends to cause a lowering of household income far in excess of that experienced during infectious diseases. Care and treatment cost studies have shown that costs associated with NCDs leave families with less money to use on other vital needs and undermines the future productivity of the patients. Those hospitalized with NCDs usually end up poorer, and in many cases end up with huge debts.[5]

In an effort to address this mounting health crisis, the Ministry of Health in Kenya has initiate various programmes and interventions that aim to reduce the prevalence of NCDs in the country. These have included comprehensive NCD prevention and control policies, disease-specific strategies, inter-sectoral committees, tobacco and alcohol regulation and taxation efforts, and nutrition interventions, among others. Some of these have met with success and considerable progress has been made in expanding the focus on NCDs in the health system. However, economic, administrative, capacity and resource challenges continue to hinder implementation of NCD policies.

Limited availability and allocation of funds for financing NCD control and prevention are an important part of the reason for the continued persistence of chronic NCDs around the world. There is an established tendency for governments to provide more funding for treatment than prevention, almost in inverse proportion to potential impact – that is, while prevention is clearly the best use of limited resources it is often easier to secure resources for treatment instead. This is also the case in Kenya and will require evidence, will and innovation to address.

This study will investigate the dynamics of NCD prevention financing in Kenya to identify the key lessons, challenges and barriers from Kenya experience with implementing and financing NCD prevention and control. It will do so by first examining the socio-economic and institutional context of NCDs in Kenya, outlining the key policy responses and interventions of the Kenyan government to the NCD crisis, and understanding how, if any, financing for NCD prevention is raised and spent, and what kind of economic, social, political and institutional barriers stand in the way of its effective mobilization. The key lessons and challenges emerging from Kenya's experience will then be discussed and summarized, and a set of actionable outcomes and recommendations will be presented.

Methods

The methodology for this assessment consisted of two parts: a review of academic and grey literature and budgetary data and data collection in the form of interviews with key informants. The study adopts the critical theory approach, which acknowledges reality as contextualized and shaped by various social, cultural, economic and political factors and sees the research process as a means to bring about change and transformation. In this study, the critical theory approach was employed to question existing frameworks, organizational hierarchies and red-tape, identify impediments arising from political, economic, systemic and bureaucratic, and largely regional and global contexts, before proceeding to present a set of actionable outcomes and recommendations.

Public financing was defined as resources allocated/mobilized indigenously (revenues) at the country level. This also includes the use of catalytic official development assistance as grants/loans and/or monies from philanthropic sources predicated on the understanding that these are meant to build country capacity and are a stop gap arrangement. This implies that funds from ODA loans and grants, as well as from philanthropic sources, need to go first into the government's resources. The World Bank definition of prevention was employed, as those preventatives and "public health services … designed to enhance the health status of the population as distinct from the curative services which repair health dysfunction."[6]

The investigators used a search strategy involving Medline, Google Scholar, Embase, JStor and Web of Knowledge, databases to identify peer-reviewed articles that examined NCD prevention and financing. In addition, the first 20 pages of Google searches were examined to identify articles from the grey literature. The main search terms were 'NCD', 'prevention', 'financing' and 'Kenya'. Additional search terms related to the topic were: 'health promotion', 'non-communicable disease', and 'budget'. Additional search terms related to policy were: tax, legislation, ban, intervention, labelling, law, and standards. An additional search was also carried out for policies related to risk factors using the terms 'alcohol', 'tobacco', 'diet', 'nutrition', and 'physical activity'. Based on the information in the abstracts, those studies were selected for review that: a) were of an empirical nature; b) examined NCD prevention and its financing; and c) dated from late 20th century onward, when concerted policy efforts to counter NCDs began in the region.

The selected studies were reviewed and organized into categories of analysis that were refined based on the evidence emerging from the literature. Bibliographies of selected studies were also reviewed for relevant literature to NCD or risk factor prevention policies. Later, a specific search was undertaken for broader literature, including policy frameworks on NCDs in Kenya and the region.

The investigators then reached out to the governments and relevant departments/bodies to procure reports, budget plans, policy guidelines and similar material. This data was analysed thematically, to further refine research questions and thoroughly revise interview guides. At the end of the second tier, the investigators shortlisted potential participants to be recruited for in-depth interviews. These included key stakeholders such as officials from the Ministry of Health, Ministry of Finance, planning ministry or staff from the office of the head of state.

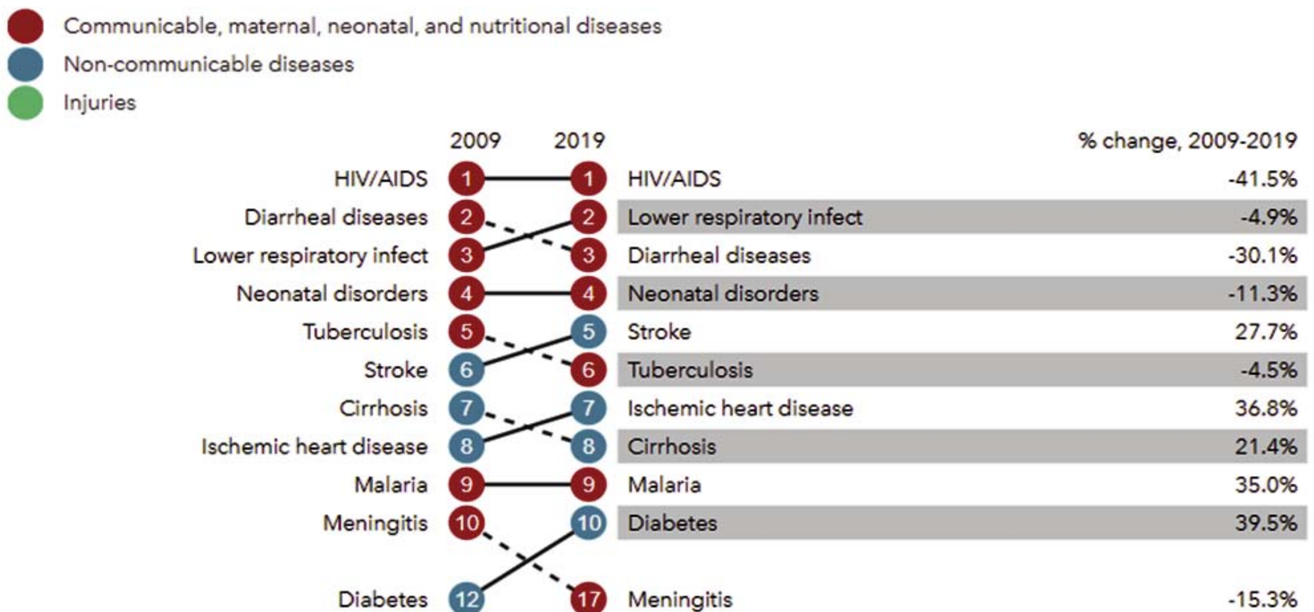

Figure-1: Top 10 causes of death and % change in Kenya (2009-2019)[8]

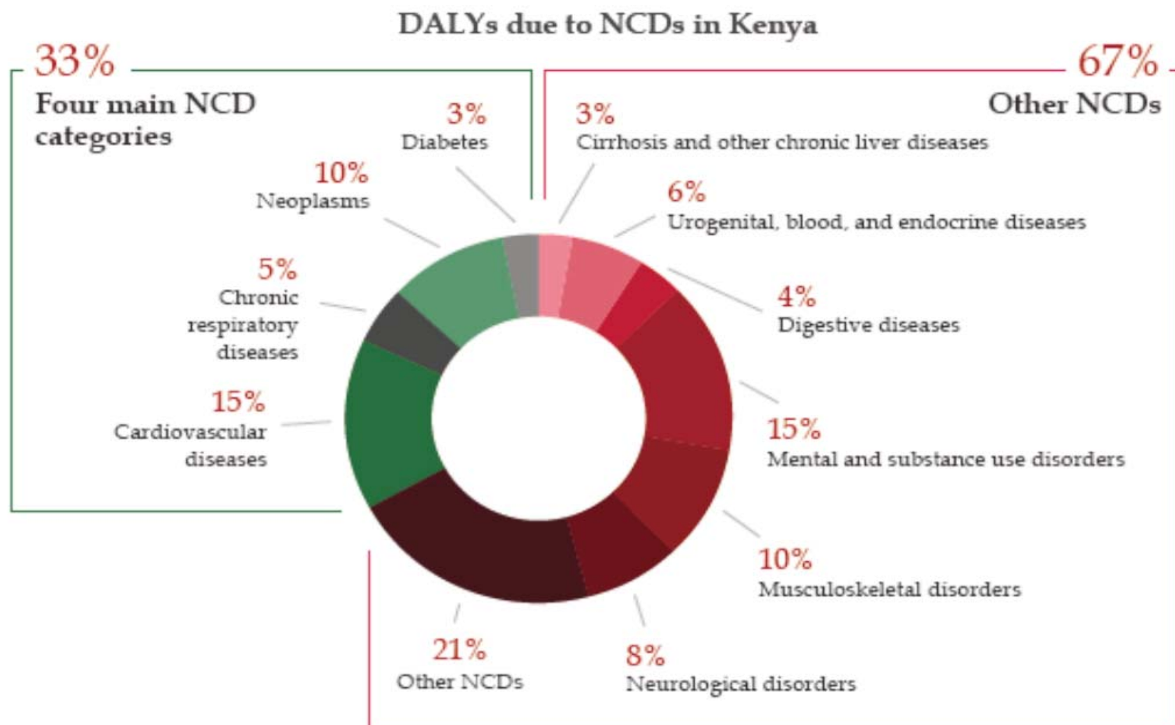

Figure-2: Disability-adjusted life years (DALYs) lost due to NCDs in Kenya (2018)[2]

Non-Communicable Disease burden in Kenya

While communicable diseases like HIV/AIDS and neonatal disorders continue to be the major causes of mortality and premature mortality in Kenya, they are on the decline whereas NCDs are increasingly gaining in prominence, now constitute four of the top ten causes of death and account for 27% of deaths of total deaths in the country.[4] Cardiovascular diseases (including ischaemic heart disease and stroke) are the highest contributor to mortality among NCDs followed by cirrhosis and diabetes. Mortality from CVD in Kenya ranges from 6.1% to 8%, while autopsy studies suggest that more than 13% of cause-specific deaths among adults could be due to CVDs.[4] Cancer is estimated to be the second leading cause of NCD related deaths in Kenya. While data on cancer is known to be under-reported, available evidence shows that the annual incidence of cancer in Kenya is close to 37,000 new cases with an annual mortality of over 28,000 making cancer the third leading cause of death after infectious diseases and cardiovascular conditions.[4] The most common cancers in Kenya are cervical, breast, and oesophageal for women and prostrate, oesophageal and Kaposi sarcoma for men.

Being diagnosed with an NCD often means years of poor health and disability, making NCDs a factor in 30.2% of all lost disability-adjusted life years (DALYs) in Kenya.[7] However, NCD conditions are heterogeneous in Kenya, and although global targets in NCDs largely focus on four major diseases (cardiovascular disease, diabetes, cancer, and chronic respiratory disease), 67% of DALYs lost due to NCDs in Kenya are related to other NCD conditions, including chronic liver conditions, urogenital, blood, and endocrine diseases digestive diseases, musculoskeletal disorders, mental disorders and neurological disorders.[2] (Figure 2)

NCDs are also having a significant economic impact on households. According to the Kenya NCDI Poverty Commission, NCDs cause a greater decrease in household income (28.6%) and a higher rate of catastrophic expenditures than communicable diseases.[2] Households affected by NCDs are 30%-50% more likely to be impoverished than households with communicable diseases.[2] Overall, for households experiencing NCDs, 29.9% of those in the lowest quintile experienced catastrophic expenditures (defined as >30% of total household income), compared to 9.2% in the highest income quintile.[9] This rising burden is increasingly impacting the health system as well with more than 50 percent of all hospital admissions attributed to NCDs.[10]

NCD risk factors in Kenya

NCDs in Kenya are driven by a host of behavioural, metabolic, and environmental risk factors. The key behavioural risks for NCDs include alcohol and tobacco

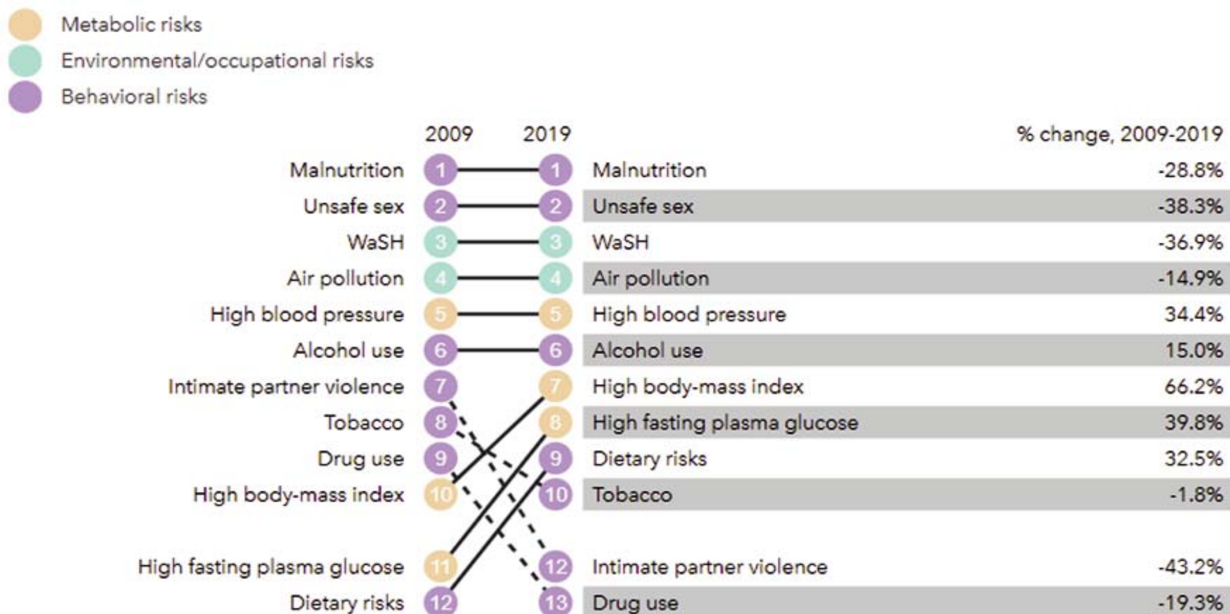

Figure-3: Top 10 risk factors contributing to DALYs in Kenya 2019 & percentage change (2009-2019).[8]

use and dietary risks, whereas the major metabolic risks relate to high fasting plasma glucose, high blood pressure (hypertension) and high body mass index (overweight/obesity). However, according to research by the NCDI Poverty Commission in Kenya, a large proportion of NCDs in Kenya (though not the majority of NCD mortality) is not directly attributable to the major behavioural risk factors but a host of other factors, including environmental risks, poverty-related risks and other disease conditions which are driving NCD growth in Kenya. For instance, chronic respiratory diseases had the largest component of risk factors attributable to the environment, primarily through air pollution and indoor cooking.[2]

Alcohol

According to the Kenyan STEP-wise survey 2015, 19.3% of Kenyans currently drink alcohol with 13% of them consuming alcohol on a daily basis.[4] Heavy episodic drinking (drinking six or more drinks on a single occasion) was reported by 12.7% of Kenyans. However, there is also a high degree of abstinence, with three in five Kenyans being lifetime abstainers and around 17% of former drinkers in Kenya having stopped drinking due to health reasons over the last year. The overall consumption of alcohol might be significantly higher than current drinking statistics indicate, as consumption of unrecorded alcohol (alcoholic drink alcohol that is homebrewed alcohol or any alcohol not intended for drinking) was reported by 35.5% of Kenyan adults.[4]

Tobacco

Thirteen percent of Kenyans currently consume some form of tobacco products and 8% are daily smokers, according to the Kenya STEP-wise survey 2015.[4] As in other contexts, men tend to smoke at higher rates (23%) than women (4.1%). Over 10% of Kenyans use smoke. The percentage of Kenyans who are currently using smoked tobacco products that includes manufactured cigarettes, hand rolled cigarettes, pipes and shisha is 10.1%. The mean number of manufactured cigarettes smoked per day per smoker in Kenya is seven sticks. 3.6% of Kenyans use smokeless, while 24% and 20.9% are exposed to second-hand smoke at home and work respectively.[4]

Hypertension

The STEP-wise survey 2015 showed that around 23.8% of Kenyans reported raised blood pressure (defined as having SBP ≥140 mmHg and/or DBP ≥90 mmHg or on medication for raised blood pressure).[4] Very few sufferings from hypertension are receiving treatment for it; out of those who had been previously diagnosed with hypertension, only 22.3% were currently on medication. Eight percent of Kenyans have severe hypertension (defined as having SBP ≥160 mmHg and/or DBP ≥100 mmHg) and 7% among them were not currently taking

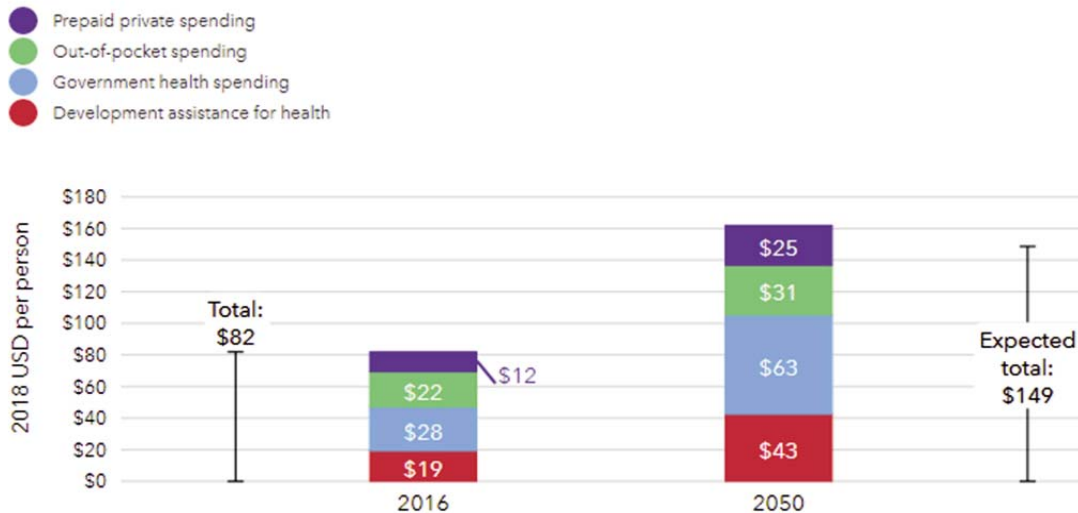

Figure-4: Sources of health expenditure in Kenya, 2018.[8]

medication.[4]

Unhealthy diet

According to the Kenya STEP-wise survey 2015, Kenyans consume fruit 2.[5] days a week on average and vegetables 5 days a week and 94% of Kenyans are consuming less than the WHO recommendation of at least 5 servings of fruits and vegetables a day.[4] Around 25% of Kenyans always add salt often before or when eating and a further 4.3% admitted to always or often consuming processed food high in salt. Twenty eight percent of Kenyans always add sugar to beverages.[4]

Air pollution

Indoor air pollution from Solid Fuel Use (SFU) continues to be a problem with a high 63% of households using SFU, which causes 14,300 deaths per year. Outdoor air pollution also continues to be at moderately unsafe levels, with annual average fine particulate matter (PM2.5) concentrations at 38 ug/m3, higher than the WHO guideline of 10 µg/m^3.[11]

Kenya Health system and financing context

The Kenyan healthcare system is structured into six levels: (i) level 1: household/community; (ii) level 2-3 primary facilities: dispensaries, medical clinics, health centres and nursing centres, serving a population of 5,000 to 20,000; (iii) level 4 facilities: sub-county hospitals that serve 500,000-1,000,000; and (iv) level 5 and 6 facilities: counties and national referral centers.3 Of these, the community and primary health care system is geared toward playing a significant role in prevention and detection of NCDs among young people while level 4-6 facilities are structured to provide specialized treatment of NCDs.[12]

Health facilities in Kenya range from government facilities to those run by non-government organizations (NGOs), faith-based organizations (FBOs), and private facilities. While the public health care system is the major provider of health services, the non-government actors play an increasingly significant role in healthcare.[1] The average facility density per 10,000 persons is 2.04, but wide disparities exist across the country. with a range of 1 to 3.5 facilities per 10,000 persons and widespread shortages in infrastructure and human resources.[1]

Total Health Expenditure (THE) from all sources in Kenya in 2015/16 was KSh 346 billion (USD 3,476 million), up from KSh 271 billion (USD 3,188 million) in 2012/13. Total health spending in 2015/16 accounted for 5.2% of GDP down from 6.8% in 2012/13. High out-of-pocket (OOP) expenditure continues to be a major issue in Kenya, making up 32% of total health expenditure (THE).[13] Government expenditure accounts for 34% of THE while development assistance accounts for around 23% of THE (Figure 4), down from 32% in 2009/10, though a

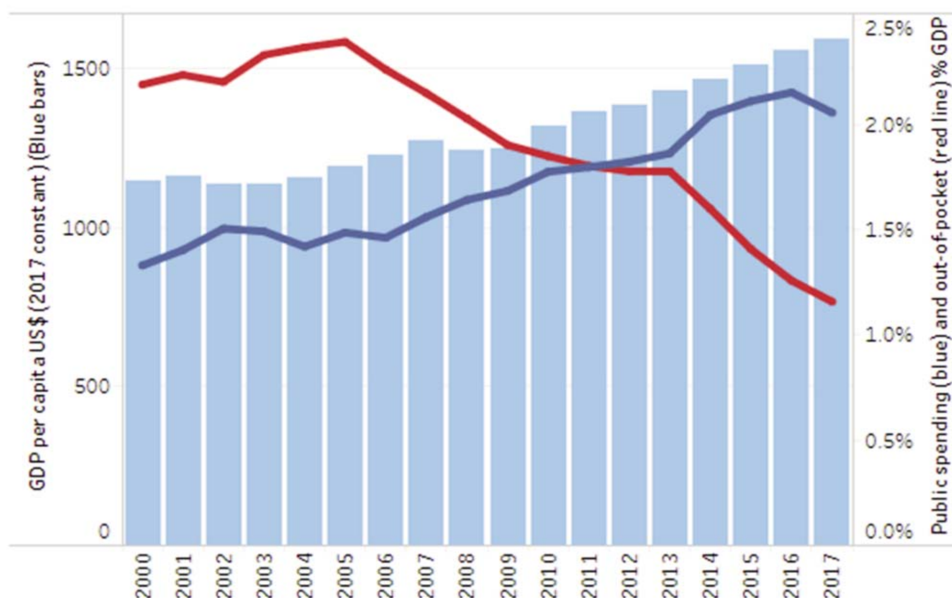

Figure-5: Government health spending vs OOP health spending in Kenya 2000-2017.

significant share of development assistance is still off-budget.

While government health expenditure increased from 6.1% of total government expenditure in 2012/13 to 6.7% in 2015/16, it has remained low relative to global commitments like the Abuja Declaration of the African Union in 2001 which committed Member states to commit at least 15% of their annual budgets to health.[13]

Over the last decade, Kenya's strong economic growth has led to tripling of government expenditures across all sectors. There has been an increase in government investment in public health as the country attempts to move toward universal health coverage. This has led to the introduction of new mechanisms of financing and attempts to reduce the financial burden of healthcare on the poor and vulnerable groups.[13] Kenya removed most user fees at public facilities in 2004, except for a registration fee of either KSh 10 or KSh 20. In 2013, the government completely abolished fees in public dispensaries and health centres. Subsequent studies indicate that while this had an impact on uptake of health services by the poor, disparities of utilization based on socioeconomic status still persist, suggesting that removal of user fees without investments in the infrastructure and quality of public services may not be adequate for ensuring universal access.[14] Further examples of health financing reform are free maternity, managed equipment and subsidisation of health insurance for the poor.

Kenya's National Health Insurance Foundation (NHIP) has expanded benefits coverage over the years with lower rates for the poor, leading to an additional 2 million additional members recruited (resulting in a total of 7 million enrolled households), an expanded benefits package that includes outpatient services, chronic diseases such as NCDs (cancer, diabetes and hypertension), and increased access to health services through subsidies (social health protection) to the current 219,200 beneficiaries from poor households and 21,000 elderly.[14] NHIF now also covers certain NCDs in its list of inpatient, outpatient, and ambulatory services. While health insurance still accounts for less than 13% of THE, the expansion of insurance in addition to increased government spending on healthcare has meant a sustained reduction in OOP expenditure on health over the past decade (Figure 5).

Kenya also devolved fiscal resources for healthcare in 2013 as part of a constitutional decentralization of authority following the new Kenyan constitution of 2010, handing primary responsibility for delivering primary and secondary health services to the counties.[14,15] Post-devolution, most funds for primary and secondary healthcare, along with those for other needs under county jurisdiction, have to be disbursed from the pool represented by the county revenue funds (CRFs). CRFs receive general transfers from the 'national treasury, locally generated tax revenues, and for health, conditional grants as transfers from the national level for special programmes such as those for user fee removal, and NHIF payments to county-operated facilities'.[14]

Non-Communicable-Diseases prevention in government policies and plans

Kenya has had a robust and evolving approach to developing a health systems response to NCDs and has pioneered NCD policies in the region, with several

Figure-6: Central and Country health expenditures in Kenya 2002-2018[14]

concrete interventions to address the NCD threat. These interventions are guided both by regional frameworks like the Brazzaville Declaration on NCDs by the WHO African Region in 2011 and national health frameworks like the Kenya Health Policy 2014-2030, Health Sector Strategic Plan (HSSP), and national Non-communicable Diseases Strategy 2017-2020. NCD-related laws, which include Tobacco Control Act 2007, Alcoholic Drinks Control Act 2010, Cancer Prevention and Control Act 2012, among others, have developed a solid foundation to enable a healthy environment and reduce key risk factors for several major NCDs.

Regional efforts to address NCDs

In April 2011, the 47 member states of the WHO African Region adopted the Brazzaville Declaration which called for the 'development and implementation of strategies, policies, guidelines, legislation and regulatory framework for the prevention and control of NCDs'.[16effective national actions] Member States were called upon to 'strengthen their health systems including health financing, training and retention of health workers and further urged to allocate resources commensurate with the burden of NCDs'. In Resolution AFR/RC62/R7, the WHO Regional Committee for Africa in November 2012 endorsed the Brazzaville declaration and further urged member states to 'strengthen monitoring and surveillance systems for NCDs to generate reliable data and use evidence to raise awareness of NCDs and strengthen political commitment for effective national actions'.[16] Such regional efforts have been critical to placing NCDs at the centre of the health reform agenda in Africa and Kenya.

Division of Non-Communicable Diseases

The response to NCDs has been housed within the Ministry of Health (MoH), in the Division of NCDs (DNCD). The DNCD was established in 1998; however, according to Kenyan health officials interviewed "*it remained dormant and without a budget for over a decade, owing to a lack of local evidence on NCDs and their importance.*" This changed with the 2008-09 budget, with the NCD agenda finally gaining recognition and being included in the Ministerial Annual Operating Plan (AOP).[17] The Division currently has 17 technical staff, who oversee the areas of cancer, cardiovascular diseases, diabetes and other metabolic diseases, violence and injury prevention, risk factor reduction, and wellness and aging, among other conditions.

This Division is responsible for formulating and strengthening legislation, policies and plans, reducing modifiable risk factors, strengthening health systems for the NCDI response, sensitizing and building capacity for county governments, promoting operational research and surveillance, developing local and international partnerships, drive advocacy and communication, and building capacity and providing technical assistance for NCDIs.[2]

The DNCD is comprised of five functional units, including the NCD Control Unit, Cancer Control Programme, Tobacco Control and Substance Abuse Unit, Violence and Injury Prevention Unit, and Health and Ageing Unit. The NCD Division has gone on to develop key policies, clinical guidelines, and training materials in many areas of NCDs, including the National Diabetes Control Strategy (2010),

National Cancer Control Strategy (2017), Tobacco Control Action Plan (2010), Violence and Injury Prevention and Control Action Plan (2017), National Palliative Care Guidelines (2013), and National Nutrition Action Plan 2012-2017.

The Kenya Health Policy (2014-2030)

The Kenya Health Policy (2014-2030) defines the country's long-term intent in health and is anchored on a health systems framework, broken down in terms of six policy objectives to be achieved through investments across seven policy orientations. Its defined goal is 'attaining the highest possible health standards in a manner responsive to the population's needs'.[1] The second policy objective of the Policy is to 'halt and reverse the rising burden of noncommunicable conditions by implementing clear strategies to address all the identified noncommunicable conditions'.[18] The policy establishes a focus on primary healthcare and aims to achieve better distribution of health comparable to middle income country status. Specific impact targets include: a 16% improvement in life expectancy; a 50% reduction in annual all-cause mortality; and a 25% reduction in time spent in ill-health.[1]

The health policy is implemented through medium-term (five-year) strategic plans that outline the strategic directions and investments that are required to attain the policy imperatives. The five-year plans are aligned with the Government's Medium-Term Plan (MTP) which is the implementation framework for Vision 2030.

Health Sector Strategic Plan 2014-2018

The Kenya Health Sector Strategic and Investment Plan (KHSSP III, 2014-2018) was the first medium-term plan under the Kenya Health Policy 2014-2030 and includes the elimination of communicable conditions and halting and reversing the rising burden of NCDs as strategic objectives. The KHSSP provided a framework for implementation of strategies aimed at improving the health status of the Kenyan people. The impact targets included halving maternal and neonatal deaths; reduction by 25% of time spent in ill-health, and improvement by at least 50% of client satisfaction with health and related services by 2018.[1] The KHSSP outlined an Essential Package for Health Services (KEPH) with inclusion of NCDIs at all levels of the health system, from awareness, education, occupational safety and NCD case detection at the community level to disease screening, risk factor modification, and management of NCDs at the primary care level to referral and management of complex cardiac diseases, specialized cancer care, and management of acute severe illness at the county and referral levels.

Kenya Non-Communicable Diseases Strategy 2015-2020

The National NCD Prevention and Control strategy 2015-2020 was a successor to the Kenya Non-communicable Disease Strategy 2010-2015 and signified a move away from a disease-specific approach to a broader, integrated approach focusing on risk factors. The goal of the new strategy was to 'reduce the preventable burden of morbidity, mortality and disability due to NCDs through multi-sectoral collaboration at the county and national levels, to ensure the highest attainable standards of health and productivity throughout the life cycle for sustainable socioeconomic development'.[19]

The strategy aligns with the targets of the WHO Global NCD Action plan which aims to reduce premature mortality from NCDs by 25% by 2025, as well as 30% reduction in tobacco use, 10% reduction in harmful alcohol use, 25% reduction in raised blood pressure, 80% availability of essential medicines and technologies for NCDs, 10% reduction in physical inactivity, 30% reduction in salt intake, 0% increase in diabetes/obesity, and 50% of eligible people receiving therapy and counselling for prevention of heart disease and stroke.[19]

Within this strategy, the Ministry of Health aims to: '1) Establish mechanisms to raise the priority accorded to NCDs at national and county levels and to integrate their prevention and control into policies across all government sectors; 2) Formulate and strengthen legislations, policies and plans for the prevention and control of non-communicable diseases at both county and national government levels; 3) Promote healthy lifestyles and implement interventions to reduce the modifiable risk factors for NCDs: unhealthy diets, physical inactivity, harmful use of alcohol, tobacco use and exposure to tobacco smoke; 4) Promote and conduct research and surveillance for the prevention and control of non-communicable diseases; 5) Promote sustainable local and international partnerships for the prevention and control of non-communicable diseases; 6) Establish and strengthen effective Monitoring & Evaluation (M&E) systems for NCDs and their determinants; 7) Promote and implement evidence-based strategies and interventions for prevention and control of violence and injuries; 8) Put in place interventions to reduce exposure to environmental, occupational and biological risk factors; 9) Strengthen health systems for NCD prevention and control across all levels of the health sector; and 10) Promote and strengthen advocacy, communication and social mobilization for NCD prevention and control'.

While the strategy outlined outputs, indicators for M&E, responsibilities, and stakeholders, it was not costed and

did not contain any specific budgetary allocation for implementation.

National Food and Nutrition Security Policy 2017-2020

Introduced in 2017, the overall goal of the National Food and Nutrition Security policy is "to ensure that all Kenyans throughout their lifecycle enjoy at all times safe food in sufficient quantity and quality to satisfy their nutritional needs for optimal health."[20] The Policy provides an overarching framework covering all the four dimensions of food security— availability, accessibility, utilization and stability (as recognized by the World Food Summit). It also links food security and nutrition with poverty eradication.[20]

One of the objectives of the policy is to halt and reverse the prevalence of diet-related NCDs. The strategic interventions it proposes include 'developing national nutrition guidelines for management of NCDs, promotion of routine screening of diet-related NCDs, increasing support to programmes for screening, assessment, prevention and management of diet-related NCDs, supporting research and monitoring prevalence and trends of NCDs using the life cycle approach to create healthy lifestyles and effective nutrition interventions, promotion of increased production and utilization of nutrient-dense indigenous foods to prevent common nutrition related NCDs, and enhancing public sensitization on healthy diets and lifestyles to reduce diet related diseases conditions'.[20]

NCD Intersectoral Coordinating Committee (NCD-ICC)

While the NCD strategy 2015-2020 established an NCD inter-agency coordinating committee on paper, it did not become operational until a few years after. In the lead-up to the 2018 UN High Level Meeting on NCDs, the Kenyan government established the NCD Intersectoral Coordinating Committee (NCD-ICC) to bring together technical expertise across sectors to drive implementation and identify and act on cross-cutting issues, as envisioned in the NCD strategy 2015-2020. The ICC is led by Director of Medical Services at the Ministry of Health, who serves as the chair, with the NCD Alliance Kenya as co-chair. The NCD-ICC is composed of a number of Technical Working Groups (TWG) for various diseases, including cancer, CVD and diabetes. Counties are also expected to establish multi-sectoral NCD Technical Working Groups that mimic the NCD-ICC.[19]

Alcohol harm control policies

Kenya has undertaken concerted efforts at reduction of harmful alcohol use since 2010, following the country's adoption of its new constitution. The bulk of alcohol harm prevention efforts have taken place under stewardship of the National Authority for the Campaign against Alcohol and Drug Abuse (NACADA), a dedicated institution aimed at prevention of alcohol and substance misuse established in 2012.

In 2010, the Kenyan Parliament passed the Alcoholic Drinks Control Act, which regulates production, sale and consumption of alcohol.[1] The law established a nationwide minimum age for off-premise and on-premise sale of alcohol (18 years), restricted opening hours and points of sale in supermarkets, established a system of alcohol licensing, and reduced alcohol advertising times from 8.30pm on TV and from 2 pm on radio.[21] While the regulations have been stringent, their implementation has been hampered by a concurrent devolution of licensing and regulation authority to the counties, which lacked the necessary legislative frameworks and legislative capacity. In the years since the passage of the Act, the government has attempted to successively increase alcohol tax rates.

Tobacco control policies

Kenya became a Party to the WHO Framework Convention on Tobacco Control (FCTC) on February 27, 2005 and has since taken a series of steps to enact tobacco control regulations. The Tobacco Control Act of 2007 is the principal law governing tobacco use in Kenya, which defines key terms and covers topics including restrictions on public smoking; tobacco advertising, promotion and sponsorship; and packaging and labelling of tobacco products. The Tobacco Control Regulations of 2014 regulates selected provisions under the Tobacco Control Act including public smoking restrictions, tobacco product and tobacco industry disclosures, which came into effect in September 2016.[22]

The tobacco control act prohibits 'virtually all forms of advertising and promotion of tobacco products and places restrictions on tobacco sponsorship and publicity of such sponsorship. Labelling requirements include rotating, text-only health warnings that cover 30% of the front and 50% of the back of the package and must be displayed in English and Kiswahili languages.'[23] The Kenyan law also includes Article 5.3 of the FCTC, which requires disclosure of any persons or entities with direct or indirect association with or interests in the tobacco industry and their exclusion from such policy-making bodies. The tobacco industry has attempted to challenge this in court as well and its unsuccessful appeal is currently pending in the Supreme Court.[23]

In June 2015, Kenya tried to simplify the cigarette excise tax structure by enacting a uniform specific rate of KSh.

2500 per 1000 cigarettes or KSh. 50 per pack but the government opted for a two-tiered system where it separated taxes for filtered and unfiltered cigarettes. Tobacco control advocates have been pushing for a single tiered system with the KSh. 2500 per 1000 cigarettes rate. Kenya is also among the first countries in Africa to tax e-cigarettes and has imposed a tax of KSh 3,787 per e-cigarette device and Sh 2,525 per cartridge.[24] However, many including the World Bank have argued high taxes on e-cigarettes could encourage people to switch back to cigarettes.

The government also plans to use revenue from tobacco taxes to aid its efforts at achieving Universal Health Coverage; however, no hypothecation of taxes has taken place yet by law.

Kenya NCDI Poverty Commission

In December 2016, Kenya established a national NCDI Poverty Commission, focused on national priority-setting for NCDs in settings of poverty, under the aegis of the Lancet Commission on Reframing NCDs and Injuries for the poorest billion. Commissioners for the Kenya NCDI Poverty Commission were tasked with exploring the relationship between NCDs and poverty in both rural and urban regions.

The Kenya NCDI Poverty Commission is co-chaired by the Executive Director and co-founder of the African Institute for Health and Development (AIHD) and the head of the NCD Division in the Kenya Ministry of Health. It also includes fifteen experts from a wide array of backgrounds across the Kenya government and partner organizations.[26]

Among other conclusions, the Commission found that more investment was needed to address the NCD crisis in Kenya that was commensurate with the disease burden. It outlined a series of interventions from community based prevention to tertiary level care, which would cost roughly 17% of total health expenditure, (up from the current 5.7%) or $11.97 per capita annually.[2] Although this represents an almost three-fold increase in current NCD expenditure, the identified interventions include not only inpatient and outpatient services for NCDs, but also comprehensive mental health, surgical, palliative care, rehabilitation services, as well as community and population-based prevention efforts.

The Commission pointed to a need to expand fiscal space for such investments via increases in direct funding through capitation, insurance revenues, and innovative financing mechanisms and partnerships. It further held that increased efficiencies in the health system could result through integration of NCDs in existing disease platforms and resources (See 8.7). The Commission held that these investments have economic externalities as while they protect individuals from ill health and premature mortality (resulting in thousands of averted premature deaths annually), they would also improve people's social developmental capacity and wellbeing vital for national building.

The Commission further called for a broadening of NCDI focus in Kenya beyond the traditional behavioural risk factors towards a more comprehensive approach. It selected 14 NCDI disease conditions across the life span on which to increase health sector interventions including 'asthma, chronic obstructive pulmonary disease, hypertensive heart disease and stroke, rheumatic heart disease, diabetes (type 1 and 2), cervical cancer, non-Hodgkin lymphoma, breast cancer, major depressive disorder, epilepsy, sickle cell disease, cirrhosis, motor vehicle road injuries, and interpersonal violence/assault'.[26]

Preventive healthcare spending

According to the last published Kenya National Health Account (NHA) 2015/16, total health expenditure in Kenya from public, private and external sources of financing was KSh 346 billion (US$3,476 million), while current health expenditure (total health expenditure – capital health expenditure) was KSh 326 billion (US$ 3,267 million). Government health spending amounted to approximately KSh 136 billion, about 6.7% of total government expenditure and about 42% of current health expenditure. Out of total government health spending, KSh 60 billion was spent by the Ministry of Health while roughly the same amount, KSh 59 billion was allocated to the county health department, KSh 15 billion was spent through social insurance and another KSh 1.5 billion spent through other government ministries. Preventive care accounted for KSh 52 billion (or 15% of total current health expenditure) – however, the vast majority of this was for infectious diseases.[27]

Table-1: Health and NCD spending snapshot Kenya 2015-16

Area	Kenyan Shillings (KSh.)
Total Health Expenditure	345,746,685,197
Current Health Expenditure	325,690,079,566
Government Health expenditure	136,000,000,000
NCD health expenditure	19,700,000,000
NCD prevention expenditure	1,770,000,000
NACADA (alcohol and substance abuse prevention)	539,000,000

Expenditure on NCDs in 2015/16 was KSh 19.7 billion or US$198,568,740 USD, which represented 5.7% of total health expenditure. Of this expenditure on NCDs, 45% of revenue for financing schemes was from the government, 31% from employers, 20% from households, and 5% from international sources. Two-fifths (40%) of the expenditures for NCDs occurred in government health facilities and 34% in in private health facilities. The overwhelming majority of NCD spending (77%) was on patient care - about half (48%) of NCD expenditures were for outpatient curative care services, 29% for inpatient curative care. Only 9% of NCD spending – about Ksh 1.77 billion – was for preventive care, including health promotion, which accounts for less than 1% of the public health budget and less than 0.3% of total health expenditure.[2]

In addition, approximately $US 5 million (KSh 539 million) is spent on the NACADA, which works on prevention of alcohol and substance abuse, which can also be counted under population-level prevention (addressing NCD risk factors) as per our methodology.[28] As per this estimate, NCD prevention spending amounts to 1.7% of the public health budget.

Discussion

Kenya has been a leader on NCDs in the WHO African region and has been among the first countries in region to begin the re-orientation of its health system to address the NCD threat. There have been creditable efforts to bring the NCD agenda to the centre of health policy from both government and civil society. NCD policies have evolved from a disease-specific approach to an emphasis on multi-sectoral and addressing the risk factors common to NCDs. There has been success in the area of tobacco and alcohol regulation, with consumption falling over the past decade. The government has also attempted to understand the impact of NCDs on the poorest Kenyans and tailor its interventions accordingly. However, NCDs and their prevention continue to be under-financed and there remains a great deal to be done in terms of effective surveillance, operationalizing NCD response at the devolved county level, ensuring surveillance and monitoring, integration of NCDs within the existing prevention, response and information infrastructure and strengthening food system regulation.

Matching NCD spending with the disease burden

Despite the fact that NCDs account for 37% of the disease burden, 35% of deaths and 50% of hospitalizations, their treatment, NCD spending accounts for only 5.7% of total health expenditure in Kenya. Further, the bulk of NCD spending is concentrated in outpatient care (48%) and inpatient care (29%); funding for NCD prevention still barely registers and amounts to less than 9% of NCD expenditure and 1% of government health expenditure. This suggests that most NCDs are being diagnosed late, leading to expensive specialized treatments (particularly for cardiovascular disease and cancers) instead of more cost-effective primary care services.

A lack of priority to NCD financing is also true for external donors. Despite the increased international interest in NCDs in Kenya, NCD programming receives the smallest amount of donor funding of all health areas. Further, NCD donor funding has been skewed towards general health services and tobacco control.[12] Officials interviewed point to limited resources as among the main challenges of financing NCDs, with "*much of the health resource pool still dedicated to infectious diseases*."

Hence, though the Kenyan government has been proactive in policy formulation, government and donor funding for NCD prevention has not been prioritized at the national or county levels. This results in gaps in the NCD response from human resources to financial resources to physical facilities. There evidence from Kenya points toward a need to allocate a greater proportion of resources towards prevention and health promotion that can address underlying and variegated causes of the disease burden.

Delayed results for NCD interventions

Among the main factors identified by officials as obstacles in increased resource allocation to NCDs is the time required for the materialization of results for NCD interventions, particularly those related to prevention. "*Given that NCD prevention efforts can be difficult and time-consuming to be registered at a population level (unlike, say, the inauguration of new health facilities) and can even be unpopular (such as the introduction of new taxes on tobacco and alcohol), this limits their appeal for politicians.*" Most politicians tend to prefer interventions with rapidly visible results which appeal more to the public whereas it takes long periods of time, even decades, for the tangible results of NCD prevention and control measures to become apparent. This points to the need for strengthening advocacy and civil society efforts for demand generation for NCD services, particularly in the context of devolution (see 8.5).

Moving from disease-specific to integrated NCD programming

Kenya's initial policy approach to NCDs was disease-specific, with separate programmes for cancer, diabetes, cardiovascular disease, among others. This led to fragmentation of the response with NCDs split into different components with separated prevention and

care plans for different diseases, including separate cancer, asthma, diabetes, and CVD action plans that didn't treat them as a connected problem. This was evident in the slow progress registered in the early years of Kenya's NCD policy; in the 2014 WHO NCDs Country Profiles, Kenya did not report having any of the nine national systems to respond to NCDs.[29] The 2013 Kenya Service Availability and Readiness Assessment Mapping (SARAM) found that overall 'only 5% of facilities offered all NCD services defined in the Kenya Essential Package of Health (KEPH) and only 25% of health facilities had different tracer commodities for NCDs with significant regional variations'.[30]

However, according to health officials interviewed, with the Health Sector Strategic Plan (HSSP III) 2014-2018 and new national NCD prevention and control strategy 2015-2020, "*this approach was changed into one focusing on multi-sectoral action and promotion of healthy lifestyles and interventions to reduce NCD risk factors*". The HSSP III included a larger set of elements of NCD prevention and care in Kenya's Essential Package for Health (KEPH) at multiple levels from awareness, education, occupational safety and NCD case detection at the community level to disease screening, risk factor modification, and management of NCDs at the primary care level to referral and management of complex cardiac diseases, specialized cancer care, and management of acute severe illness at the county and referral levels.

The new NCD strategy aims to 'promote healthy lifestyles and implement interventions to reduce the modifiable risk factors for NCDs, promote and conduct research and surveillance for the prevention and control of non-communicable diseases, promote sustainable local and international partnerships for NCDs and establish effective Monitoring & Evaluation (M&E) systems for NCDs and their determinants.'[19] The national NCD intersectoral coordinating committee is an important step in the realization of this new approach.

Results from the recent Kenya Health Facilities Assessment (KHFA) 2018-19 survey demonstrate the effectiveness of the new approach in improving NCD care, with a marked improvement in NCD service availability from previous years. According to the KHFA, 62% of all facilities offered CVD services, 58% provided diabetes services, 61% provided chronic respiratory disease services, and 22% offered cervical cancer services.[31] However, prevention services continue to be missing at the level of community and primary care and more work needs to be done for integrated surveillance and monitoring, and multisectoral planning and response on NCDs.

The impact of global and local civil society advocacy

The NCD response in Kenya has benefitted from international, regional and local efforts and pressure from civil society and international institutions. Officials interviewed described how the build-up for the UN High Level Meeting on NCDs as well as the new Global Monitoring Framework was a strong driving force for legislative and policy action on NCDs and risk factors in Kenya.

Highly visible and vocal non-state actors such as the global NCD Alliance, the apex agency formed as a unification of four key international non-governmental organizations: the International Diabetes Federation, World Heart Federation, International Union against Tuberculosis and Lung Diseases, and the Union for International Cancer Control, along with an informal collaboration of academics, practitioners, and civil society organisations like the Lancet NCD Action Group, have worked hand-in-hand with local organisations like the NCD Alliance Kenya and its dozens of members to promote a unified message to policymakers on NCDs, which has had considerable impact.[17]

This has been accompanied by pressure from the WHO and support from international NCD-related bodies such as the ICDRC, the World Diabetes Foundation, the Centre for Disease Prevention and Control, and others, the agenda for NCDs was set in Kenya, gaining the them recognition and focus. A good example of this is laws like the Tobacco Control Act, which received a lot of support from the Framework Convention on Tobacco Control (FCTC), International Development Research Centre (IDRC) and the Bloomberg Initiative.[17]

The challenge of devolution

One of the major challenges to effective NCD risk factor prevention has been the devolution of administrative and fiscal responsibility to counties in 2013 onward. The most prominent example of this has been the implementation of Kenya's alcohol control law, enforcement of which shifted to Kenya's 47 county governments in 2013 in a rushed process. For a year following devolution, counties, often under pressure from the alcohol industry, struggled to enact the necessary legal stipulations and regulations, which led to alcohol outlets and sellers flouting regulations. This led to spikes in alcohol-related morbidity and mortality in multiple counties (including hundreds of deaths from consumption adulterated alcohol).

Following this, a National Inter-Agency committee was established under the leadership of NACADA which was to coordinate all matters relating to alcohol control so as to ensure effective regulations and policies at the county

level. NACADA took up the coordination of the devolution process, developing a model law for alcohol control for county assemblies, working on transfer of responsibility of implementation functions to counties as well as capacity building of county authorities. Since then, multiple counties have begun enacting their own versions of the Alcohol Control law and enforcing regulations – however, implementation remains uneven.[32]

Studies on devolution of healthcare in Kenya has also found that the rapidity of the devolution process combined with limited technical capacity and guidance has meant that 'decision-making and prioritization have been captured and distorted for political and power interests'.[33] In many counties, politicians strongly prefer curative interventions that are highly visible (such as hospital building and facility provision), over and above preventive health services, including community health actions. Thus, less visible community health services that focus on health promotion, disease prevention and referral have been neglected within the prioritization process in favour of more tangible curative health services. While about half of counties have invested and/or innovated community health service delivery by expanding coverage and/or providing stipends for community health workers, others have done little more than 'continue to pay salaries for CHEWs already in post, leading to stagnation or deterioration of these services since devolution'.[33]

Officials interviewed spoke of the "*need for institutional frameworks for NCD response at county-levels like those at the national level, including coordinating committees with representation from all major departments to enable multi-sectoral collaboration between health and other government departments for joint action*." To address this, a Kenyan Health Ministry official said that '*financial decentralization was key. It was necessary to ensure financial autonomy for primary healthcare teams doing preventative work at the community level and remove the bureaucratic obstacles in the way of disbursement of funds*.'

According to McCollum et al (2018), opportunities for national government to encourage county investment in pro-equity health promotion services, e.g. through conditional grants, should also be explored as a solution.[33] Further, an NCD-specific forum for national and country government representatives could help ensure constructive coordination between the different tiers of government.

Beyond behavioural risk factors

Much of the global and local focus of the prevention and control of NCDs has been on four major diseases and four risk factors leading to those diseases, as encouraged by the World Health Organization (WHO) in the Global Action Plan for the Prevention and Control of Noncommunicable diseases in 2013. Recent research by the Lancet has suggested that 'a large proportion of the global DALYs due to NCDs may be due to risk factors and conditions other than those represented in this framework, particularly for the poorest billion of the world's population'.[34] This body of work has put forward the idea that the 'NCDs afflicting the poorest populations are more likely to be the result of infections and harmful environments than behavioural risk factors'. This differential burden of NCDs and risk factors may be particularly pronounced in younger populations and those living in extreme poverty, as is present in a large proportion of the Kenyan population.

Research by the NCDI Poverty Commission confirms this, finding that of all DALYs lost from NCDs in Kenya, 67% were related to conditions other than cardiovascular disease, diabetes, neoplasms, and chronic respiratory diseases (notably higher than in high-income countries, where 53% of NCD DALYs are due to conditions other than these four disease areas). Further, it found that the vast majority of neoplasms and almost half of cases of cirrhosis were caused by non-behavioural risk factors, such as chronic infections (human papilloma virus, Epstein Barr virus, hepatitis B and C) or genetic predispositions. Similarly, chronic respiratory diseases had the largest component of risk factors attributable to the environment, presumably through air pollution and indoor cooking, pointing towards the urgent need for mitigation of these risk factors and their incorporation into NCD prevention and control interventions.[35]

This distinctive epidemiology of NDCs, in Kenya, and among the poor globally, highlights the limitations of the traditional behavioural risk factor model, and underlines the need for emphasis both on the role of material poverty and on integrated health service interventions to address a range of diseases.[34]

Building on alcohol regulation successes

Despite challenges associated with implementation and devolution, alcohol control policies in the past decade appear to have brought fruit in Kenya. According to a study on the effect of Kenya's alcohol regulation policy, consumption of alcohol per capita (age 15+) in litres of pure alcohol went down from 4.6 litres in 2010 to 3.4 litres in 2016. The decrease was particularly pronounced among men, whose consumption went down from 8 litres to 5.8 litres on average.[21]

Other than regulating the sale of alcohol, the success of Kenya in preventing and reducing alcohol harm is also

Alcohol per capita (15+) consumption (in litres of pure alcohol)

	2010*		2016*	
Recorded	1.9		1.9	
Unrecorded	2.7		1.5	
Total**	**4.6**		**3.4**	
Total males / females	8.0	1.3	5.8	0.9
WHO African Region	6.3		6.3	

* Three-year averages of recorded and unrecorded for 2009–2011 and 2015–2017; **adjusted for tourist consumption.

Figure-7: Alcohol per capita (15+) consumption in Kenya (WHO 2018: Global Alcohol Status Report)

due to effective taxation.

In 2017, the government 'increased the tax on liquor by 14.3% and duty on low-cost beers such as East African Breweries Limited's Senator Keg. The increase led to Sh39 billion tax revenue to the government, a 105% increase from 2012. Beer accounted for 71% of excise duty on alcohol while wine and spirits accounted for 29%'.[36]

Given the enormous revenue potential of alcohol, there is a need for considering the hypothecation of revenue from alcohol for use in NCD prevention and care, potentially through the use of the Health Promotion Foundation model successfully implemented in several other countries.

Unrecorded alcohol use or homebrew continues to be a major problem in Kenya, where 'current alcohol production countermeasures have yet to make substantial inroads in preventing the manufacturing, distribution, and consumption of unrecorded alcohol or its harm'.[37] According to a study on unrecorded alcohol consumption in Kenya, solutions to prevent contamination of homebrew could include 'regulating the brewing process by introducing brewing kits that would include water purification equipment and clean and easy to maintain brewing containers that include lids to avoid contamination. Further, these kits need to include clear guidelines on specific ingredients that cannot be added to adulterate the alcohol. Finally, there needs to be regular testing of the alcohol potency and toxicity to ensure its safety'.[37]

Leveraging existing disease infrastructure for NCDs

Kenya is among those countries with extensive experience in infrastructure and services for dealing with infectious disease, particularly HIV/AIDS. Many researchers have suggested that leveraging existing infrastructure and human resources for other diseases, including antiretroviral therapy for HIV/AIDS, may facilitate effective integration of services for chronic NCDs. An HIV/NCD modelling study in Kenya estimated that integration, population-based screening and treatment for HIV and NCDs could avert more than 43,000 CVD-related deaths over 15 years (in addition to averting 64% of new HIV infections and 284,000 HIV related deaths). At a commonly used threshold for cost-effectiveness (less than per capita GDP per DALY averted), this intervention was found to be 'more than 90% likely to be cost-effective'. However, the study found that the cost of fully scaling-up the intervention 'would require a 12% increase in Kenya's total health budget'.[38]

The Kenya NCDI Poverty Commission made similar proposals for HIV/AIDS infrastructure and other services, such as: Utilization and strengthening of existing antenatal care or family planning services could improve screening and management of hypertension and diabetes, as well as cancer screening, among women of reproductive age, and current childhood services (such as IMCI or outpatient departments) could be strengthened to include cancer and sickle cell disease screening. Surgical units with access to anaesthesia and blood transfusion at first-level hospitals routinely providing emergency caesarean sections could be foundational for expanded surgical services for trauma and burns.[2]

Specific research and planning for integration of expanded NCD services in the health sector, including

decentralization of referral services and capacity building for task-shifting/ sharing of key responsibilities, is required and is currently underway by a joint team of governmental and non-governmental partners.

Strengthening tobacco regulations

Tobacco control is one of the areas in which Kenya has witnessed success in recent years, with current tobacco smoking among men falling from 28% in 2000 to 20% in 2016 (Figure 7).[39]

Despite progress in regulation and taxation of tobacco in Kenya, much remains to be done as tobacco smoking prevalence remains among the highest in Sub-Saharan Africa.[40] Implementation of tobacco control regulations continues to face fierce opposition from the tobacco industry, which has led legal challenges to tobacco control policies for the last 10 years, on matters ranging from taxation to size of warning labels. In 2015, British American Tobacco (BAT) filed a case against the Tobacco Control Regulations 2015 in the High Court. The case and subsequent appeals process in the Appeals court and Supreme Court delayed the implementation of the tobacco regulations for several years. Finally, On 26 November 2019, more than four years after BAT first challenged the 2014 bill, the Kenyan Supreme Court finally ruled to uphold the regulations.[40]

Weak enforcement continues to be a problem; despite continuing high levels of smoking in public, no one has been arrested and charged in the court of law because he/she has smoked in public.[12] Further, cigarette makers have resorted to 'underhanded ways to advertise, bypassing the law banning promotion of tobacco products'. Outdoor advertisements on billboards and buildings still occur in several parts of the country despite being banned by the Tobacco Control Act.[41]

Advocates in Kenya have also been pushing for a uniform excise tax on tobacco, rather than the differential rates currently in place for different categories. They argue that the tiered specific excise system (which reduces the tax burden for poor smokers) results in a greater health cost burden from increased cigarette smoking and substantially lowers revenue potential by enabling loopholes for tobacco companies.[42] A uniform excise tax should be accompanied by annual tax increases to reach the WHO-recommended level of 75% of retail prices from the current 52% level.

Scaling up nutrition interventions

Kenya's food and nutrition security policy provides a promising starting point for a healthier food environment. Kenya has begun to establish nutrient declarations for food labelling, food composition targets for processed foods, regulatory systems for assessment of

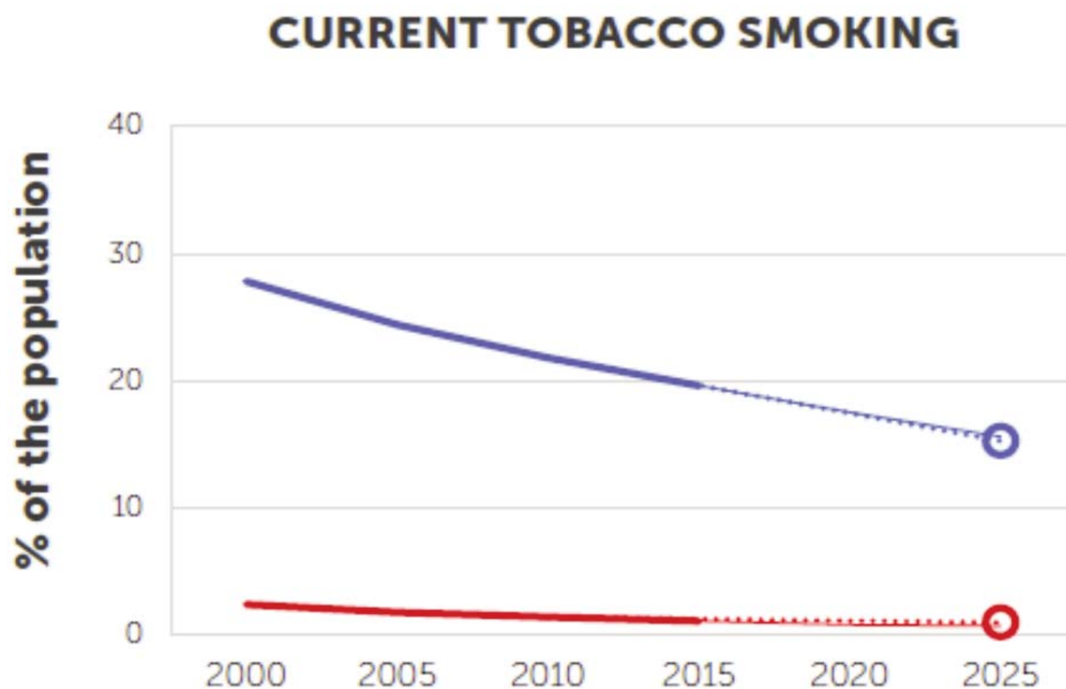

Figure-8: Current tobacco smoking Kenya (WHO 2018: NCD Country Profiles: Kenya)

nutrient claims, dietary guidelines for healthy eating, and periodic monitoring of nutritional status and intake.[12] However, multiple gaps in policy remain, including an absence of regulatory provisions for the food industry, ensuring that food labelling is standardized and explicit to the nutrition profile of the processed food; ensuring that food standards for processed foods include information on the energy density for different target

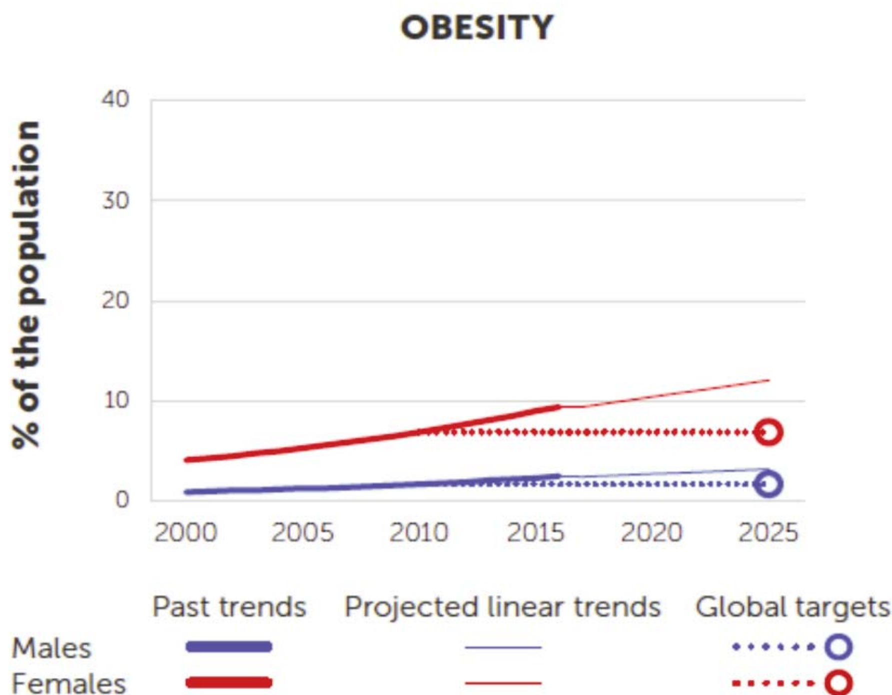

Figure-9: Obesity prevalence in Kenya over time (WHO 2018: NCD Country Profiles: Kenya)

lack of a strategic focus for young people (with much of the focus on elderly and under-five children), absence of front of pack labelling and weak enforcement. There are other areas related to diet, specifically salt and sugar consumption, which currently have no legislation.[23] Nutrition policy gaps are reflected in the rising rates of obesity, particularly for women (Figure 8).

In 2017-18, an expert panel identified and prioritized 23 actions for creating healthier food environments in Kenya using the Food-Environmental Policy Index (EPI) approach.[43] The priority actions included: 'incorporating a food systems approach, anchored in the SDGs and with a focus on sustainable diets and healthy and diverse consumption (SDG12) in Kenya's food policy going forward; developing a policy framework of engagement on advertising and marketing with commercial processed food producers to ensure regulation and standards that should be enforced and punitive measures legislated against; ensuring that food policy includes international best practices to eliminate trans fats and where some percentage is included to label (in line with recommendations) and issue "traffic lights" warnings; groups; establishing tax policies that favour production and consumption of healthy foods and discourage unhealthy foods, (e.g. offer tax relief or reductions to farmers and traders of healthy foods, especially fruits and vegetables); and ensure Health in all policies (HiaP) by integrate health and nutrition in all stages of government planning and budgeting to ensure that there is a high impact on nutrition'.[43]

Conclusion

Kenya has made considerable progress in improving the health, living standard and life expectancy of its population in recent decades and has considerably reduced its infectious disease burden as well as improving under-nutrition and maternal and child mortality. At the same time, its NCD burden is growing rapidly and is projected to become the principal cause of mortality and morbidity in the coming years. The Kenyan government has taken a number of policy steps to tackle its changing disease burden, many of which have resulted in demonstrable success. However, many challenges remain

as the burden and associated risk factors continue to grow, while financing and health systems have yet to fully adapt to the evolving burden.

Domestic health financing in Kenya continues to be incommensurate with the disease burden, comprising just 5.7% of total health expenditure and 15% of government health expenditure. Nearly 80% of the focus of NCD spending continues to be on treatment and curative care, with NCD prevention amounting to 9% of NCD spending and less than 1% of total health expenditure. Given the significant role of risk factors in contributing to the NCD burden, it is essential that investment on population-level prevention is made that is commensurate with the returns and cost-savings that will result.

Kenya has gradually moved from a disease-specific approach to NCDs to a broader approach involving multi-sectoral action and integration of NCDs at multiple levels of the health system. Kenya's new HSSP III, NCD prevention and control strategy for 2015-2020 and other disease strategies all illustrate this new approach, with inclusion of NCDs in the KEHP, a new national NCD coordination committee and marked improvements in NCD services at health facilities. However, much remains to be done in terms of operationalizing NCD prevention and health promotion services and deployment of effective governance and coordination mechanisms for NCD response at the local/county level.

Part of the reason for continued under-financing of NCD prevention and health promotion is the fact that their results take a long time to materialize and are difficult to visualize for constituents, unlike concrete infrastructure or service delivery improvements. This makes it unappealing as an investment avenue for politicians, who prefer to invest in facilities or services that register immediately in the public eye.

This is found to be a particular challenge at the local county level, where, in many regions, community health promotion initiatives have taken a back seat as neither local politicians nor communities appear to see them as a priority. This points to the urgent need for both local advocacy to build demand for health promotion as a policy priority and centre-led efforts to build the capacity and resources of local councils to engage in active health promotion.

Devolution has also presented other challenges, including an absence of institutional/governance frameworks for local NCD response and coordination between health, other departments and civil society, and delays in transfer of funds to health facilities. An inter-agency mechanism with national and county government and civil society representation to address these issues, as was established for alcohol regulation may be an effective way to begin to address remaining devolution challenges.

Kenya's NCDI Poverty Commission has done creditable work to establish a local evidence base on NCDs in Kenya's context, particularly its relationship to poverty. The Commission's findings about the need for increased investment in NCD prevention and care and broadening the scope of Kenya's NCD response beyond traditional behavioural factors are critical and need to be incorporated into upcoming policies and plans in the country. The Commission also identifies potential sources of financing NCD prevention and care - including capitation, insurance revenues, and innovative financing mechanisms and partnerships - on which further research and advocacy is needed to better define the potential sources and plans for investments.

Kenya has made significant progress in improving alcohol and tobacco regulation, despite serious challenges of industry interference and devolution. Kenya's high levels of smoking prevalence have seen a decline in recent years despite the industry's attempts to block tobacco regulation and taxation through time-consuming litigation. However, resistance to a uniform tax on all cigarette brands as well as circumventing of advertising regulations by the industry could stymie further progress and unravel gains. Weak enforcement continues to be an obstacle in the way of bringing down tobacco consumption.

Alcohol consumption per capita has also seen a decline in the past decade during which alcohol control laws were tightened and taxes increased. The most significant challenges the implementation of alcohol regulation came from devolution of alcohol licensing and regulation responsibilities to counties starting 2013, which briefly led to a period of chaotic deregulation during which alcohol consumption and mortality spiked. However, this led to a concerted nationwide effort to create local legislative and enforcement systems for alcohol harm prevention, with effective stewardship provided by NACADA, resulting in multiple counties creating effective frameworks in the following years. Unrecorded alcohol consumption of homebrew continues to be a challenge and requires a nuanced policy approach that both addresses the problem without raising formal alcohol consumption.

Both tobacco and alcohol are significant sources of revenue, contributing tens of billions annually to tax

revenue in Kenya. If annual tax increments are carried out to raise taxes to WHO-recommended levels, their revenue potential stands to increase further. However, none of the resources from these products have as yet been earmarked for use for health or NCD prevention efforts. The Health Promotion Foundation model, employed with success in multiple countries from Jamaica, to Tonga, to Mongolia, can be studied as a possible mechanism for hypothecation of revenue from alcohol and tobacco and increasing financing for health promotion.

Kenya has taken effective preliminary steps towards a food regulation framework that facilitates healthy diets, through food labelling, food composition requirements, and dietary guidelines among other measures. However, much progress remains to be made; a comprehensive food systems approach to nutrition with a focus on sustainable diets and healthy and diverse consumption is as yet missing. The key areas for action in the coming years include a policy framework on food advertising and marketing, enforcing best practice on labelling for processed foods, tax policies for healthy production and consumption and implementation of food composition guidelines to ensure healthy consumption.

Recommendations

1. Allocate a greater proportion of resources towards prevention and health promotion that can enable the health system to tackle the shifting disease burden.

2. Incorporate population-level risk factor prevention for NCDs in the primary healthcare system.

3. Strengthen civil society participation and advocacy for demand generation for NCD services and for government oversight, including at county levels.

4. Establish institutional frameworks for NCD response at local (county) levels like those at the national level, including coordinating committees with representation from all major departments.

5. Develop an inter-agency mechanism with national and county government and civil society representation for health and NCD coordination.

6. Remove bureaucratic hurdles to ensure timely disbursement of funds to health facilities to ensure timely utilization for NCD care and prevention.

7. Encourage county investment in pro-equity health promotion services, e.g. through conditional grants for NCD risk factor related projects.

8. Adapt and integrate health services and prevention interventions to incorporate poverty-related NCD risk factors.

9. Earmark revenue from alcohol and tobacco taxation to finance NCD prevention and control.

10. Develop integrated population-based screening and treatment for HIV and NCDs to make cost-effective use of existing infectious disease infrastructure.

11. Replace tiered system of tobacco taxation with a uniform excise tax, accompanied by annual tax increases to reach the WHO-recommended level of 75% of retail prices.

12. Incorporate a food systems approach to nutrition that fiscally incentivizes healthy food production, distribution and affordability (e.g. offers tax relief or reductions to farmers and traders of healthy foods, especially fruits and vegetables)

13. Institute standardized best practice food labeling regulations that contain nutrition profiles, energy densities and traffic-light warnings

14. Engage commercial processed food producers on advertising and marketing to ensure enforcement of regulations and standards

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