

# Financing of NCD Prevention in LMICs: Kenya Case Study

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## Objective:

Prevention programs are increasingly seen as critical for tackling the rising burden of non-communicable diseases (NCDs), but tend to be under-prioritized and under-funded, particularly in low and middle income countries. 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 programs. Government and government-routed donor spending on population level prevention was gauged to estimate NCD prevention spending. Where possible, impact of prevention programs 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 programs, 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.

## 1. 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, far above the regional average in Sub-Saharan Africa. 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.<sup>1</sup> There has also been impressive progress in the country 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.<sup>1</sup>

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. The probability of dying prematurely from an NCD in Kenya is estimated as 18%. Contrary to popular belief, NCDs 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.<sup>2</sup> Premature mortality from NCDs, primarily among men of working age, has significant socioeconomic consequences and is a drain on the national economy. Evidence increasingly points to how increasing levels of NCDs among young people is causing a substantial financial burden and pushing individuals, households and communities into poverty as well as slowing down economic progress.

NCDs are also placing enormous strain on the Kenyan health system – NCD-related conditions account for more than 50% of total hospital admissions and over 55% of hospital deaths.<sup>3</sup> As Kenya continues to develop, the levels of NCDs and premature mortality will only escalate, unless immediate action is taken. The results of this will be a significant socioeconomic drag for Kenya, which is just emerging as a low-middle income country, and an additional burden for a health system that it can ill afford.

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), 17% of men and 35% of women were overweight or obese and nearly a quarter of the population had high blood pressure; all of these risk factors and conditions are contributing risk factors to NCDs.<sup>4</sup> 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 is now well-established. Although ill health nearly always lowers household income, households affected by NCDs experience greater income loss relative to households reporting general infectious diseases. This is because expenditure associated with the acute and long-term effects of NCDs is high, resulting in catastrophic health expenditure for

households. Care and treatment cost studies have shown that NCDs reduce disposable incomes, leaving families with less money to use on other vital needs and also negatively affects the future productivity of the patients. People hospitalized with chronic diseases usually end up poorer, and in many cases end up with huge debts.

In an effort to address these daunting statistics, the Kenyan Ministry of Health has unveiled various interventions aimed at reducing 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.

## 2. Methodology:

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 preventative and "public health services ... designed to enhance the health status of the population as distinct from the curative services which repair health dysfunction."

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 20<sup>th</sup> 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.

### 3. NCD 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 and now constitute 4 of the top 10 causes of death. NCDs account for 27% of deaths of Kenyans aged between 30 and 70.<sup>2</sup> Cardiovascular diseases (including ischemic heart disease and stroke) are the highest contributor to mortality among NCDs followed by cirrhosis and diabetes. Mortality due to 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. While data on cancer is known to be under-reported, existing evidence shows that the annual incidence of cancer 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.<sup>4</sup> The most common cancers in Kenya are cervical, breast, prostate, and oesophageal.

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.<sup>4</sup> However, NCD conditions are heterogeneous in Kenya, and although global targets in NCDs largely focus on four major diseases (cardiovascular disease, type 2 diabetes, asthma, and cancers), 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.<sup>2</sup> (Figure 2)

# What causes the most deaths?

- Communicable, maternal, neonatal, and nutritional diseases
- Non-communicable diseases
- Injuries

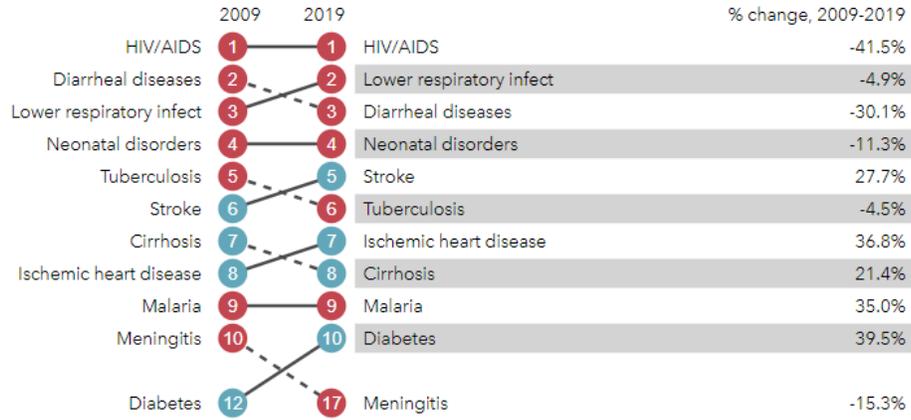


Figure 1 Top 10 causes of death and % change in Kenya<sup>5</sup>

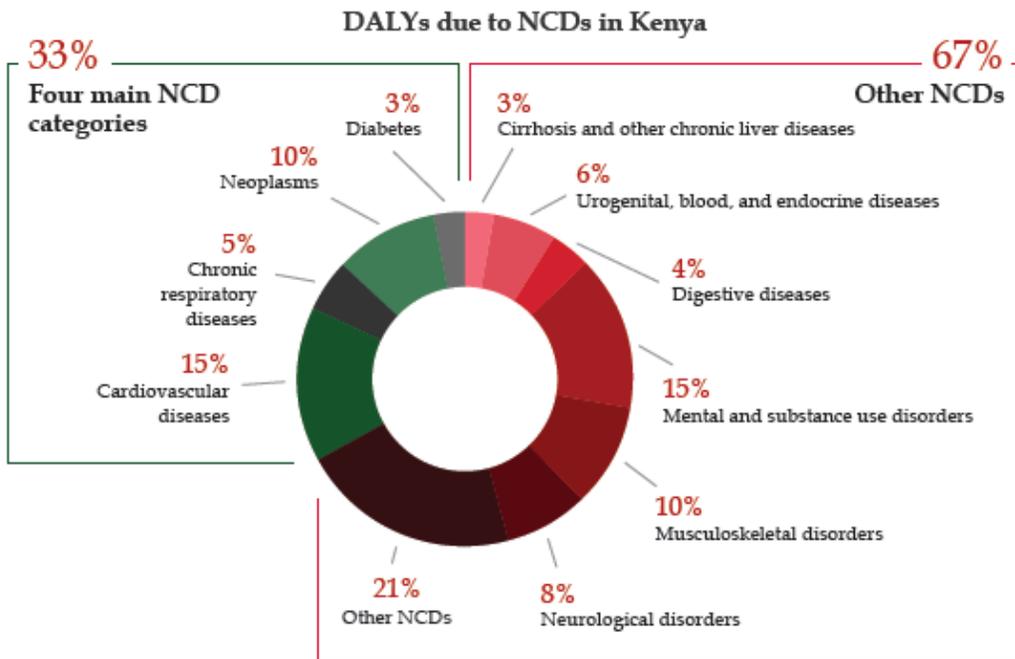


Figure 2 Disability-adjusted life years (DALYs) lost due to NCDs in Kenya<sup>2</sup>

NCDs are also having a significant economic impact on households. Household surveys in Kenya demonstrate NCDs cause a greater decrease in household income (28.6%) and a higher rate of catastrophic expenditures than communicable diseases. Households affected by NCDs are 30%-50% more likely to be impoverished than households with communicable diseases. 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.<sup>6</sup> This rising burden is increasingly impacting the health system as well with more than 50 percent of all hospital admissions attributed to NCDs.<sup>7</sup>

#### 4. 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 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, presumably through air pollution and indoor cooking.<sup>2</sup>

### What risk factors drive the most death and disability combined?

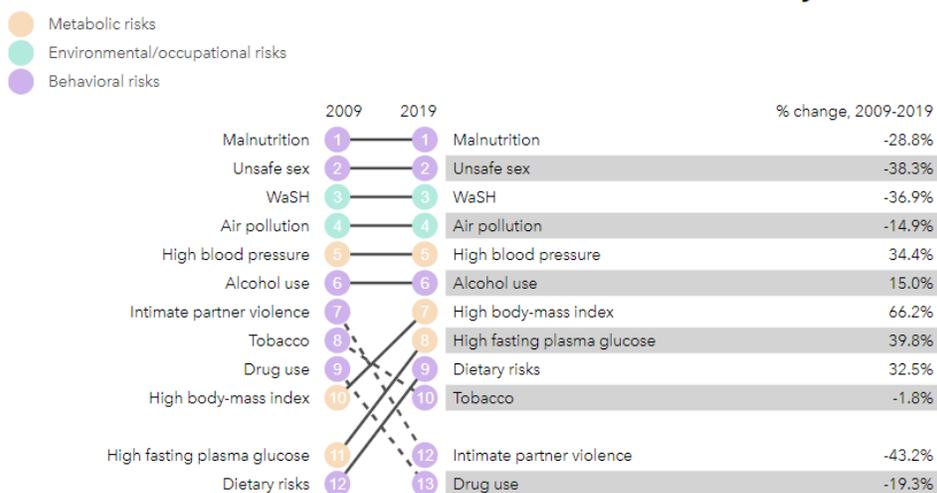


Figure 3 Top 10 risk factors contributing to DALYs in Kenya 2019 & percentage change<sup>8</sup>

#### 4.1. 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. However, three in five Kenyans are lifetime abstainers with the percentage of abstinence among women being nearly twice that among men. Heavy episodic drinking defined as drinking six or more drinks on a single occasion was reported by 12.7% of Kenyans. The overall mean number of standard drinks per drinking occasion is 9.7 standard drinks with no significant difference between the sexes. Approximately 17% of former drinkers had stopped drinking due to health reasons in the past 12 months. Consumption of unrecorded alcohol (alcoholic drink alcohol that is homebrewed alcohol or any alcohol not intended for drinking) was reported by 35.5% of adults.<sup>4</sup>

#### 4.2. Tobacco:

Thirteen percent of Kenyans currently consume some form of tobacco products with a significantly higher prevalence among men (23%) than women (4.1%). The percentage of Kenyans who are currently using

smoked tobacco products that includes manufactured cigarettes, hand rolled cigarettes, pipes and shisha is 10.1%. Eight percent of Kenyans are daily tobacco smokers with the mean number of manufactured cigarettes smoked per day being seven sticks per smoker. Current use of smokeless tobacco was reported in 3.6% of Kenyans. Twenty four percent and 20.9% of Kenyans are exposed to second-hand smoke at home and work respectively.<sup>4</sup>

#### 4.3. Hypertension:

The STEP-wise survey 2015 showed that close to a quarter of Kenyans had hypertension and among those previously diagnosed and were currently on treatment, only 4% had achieved control. Among all people with raised blood pressure, only 1 in 6 persons said they had been diagnosed in the year prior to the survey. Out of those with hypertension, only 12% were on treatment, and effective coverage was only 3.8%. Over 56% of Kenyans said they had never been measured for raised blood pressure.<sup>4</sup>

#### 4.4. Unhealthy diet:

Fruit is consumed on average on 2.5 days a week and vegetables on 5 days a week among Kenyans. The World Health Organization (WHO) recommends at least 5 servings of fruits and vegetables a day. The survey results thus show that 94% of Kenyans are consuming less than 5 servings of fruits and vegetables per day. Nearly a quarter of Kenyans always add salt often before eating 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.<sup>4</sup>

#### 4.5. Overweight/obesity:

Twenty seven percent of Kenyans are either overweight or obese with the percentage being significantly higher in women (38%) than men (17%). Twelve percent of respondents from urban settlements were obese while 7 percent of rural dwellers are obese indicating a big risk of NCDs and their complications.<sup>4</sup>

#### 4.6. 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 (PM<sub>2.5</sub>) concentrations at 38 ug/m<sup>3</sup>, higher than the WHO guideline of 10 µg/m<sup>3</sup>.<sup>9</sup>

### 5. Kenya Health system and financing context:

The Kenyan healthcare system is structured into six levels: (i) level 1: household/community; (ii) level 2-3 facilities: dispensaries and health 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.<sup>3</sup> The community and primary health care system is expected to play a significant role in prevention and detection of NCDs among young people while level 4-6 facilities are expected to provide specialized treatment of NCDs.<sup>10</sup>

Kenya has a wide range of health facilities distributed all over the country, ranging from government, faith-based organizations (FBOs), nongovernmental organizations (NGOs) and private institutions. The public health care system is the major provider of health services, but non-state actors play a significant

and growing role in service delivery. 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.<sup>11</sup>

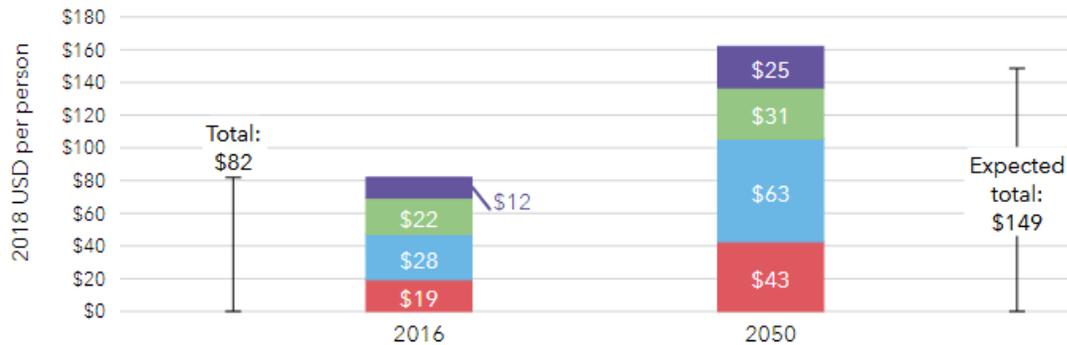
Kenya allocates about 7% of the total annual government budget on health, still well behind the target set out in the Abuja Declaration of 2001 of allocating at least 15% of the annual budget to health. Public health spending accounts for about 2% of GDP, which is below the recommended 5% of GDP, required to facilitate progress towards Universal Health Coverage; however, it is on the rise. High out-of-pocket (OOP) expenditure continues to be a major issue in Kenya, constituting 32% of total health expenditure.<sup>12</sup>

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. 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 15% allocation of total government expenditure.<sup>12</sup> The level of external financing, while still high, has declined in recent years, accounting for 22% of THE in 2015/16 down from 32% in 2009/10 (a significant share of such financing is still 'off-budget').

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. 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. While preliminary evidence indicates this had an impact on uptake of health services by the poor, persistent disparities in utilization continue across socioeconomic status and utilization, suggesting that removal of user fees without other investments in the availability and quality of services may not be sufficient to ensure universal access.<sup>13</sup> Further examples of health financing reform are free maternity, managed equipment and subsidization of health insurance for the poor.

## How much is spent on health -- now, and in the future -- and from which sources?

- Prepaid private spending
- Out-of-pocket spending
- Government health spending
- Development assistance for health



Source: Financing Global Health Database 2018

Figure 4 Sources of health expenditure in Kenya, 2018

Kenya's National Health Insurance Foundation (NHIF) 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.<sup>12</sup> NHIF now also covers certain NCDs in its inclusive list of inpatient, outpatient, and ambulatory services. While health insurance still accounts for less than 13% of 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).

### When Public Resources Spend more on Health, Do Households Spend less?

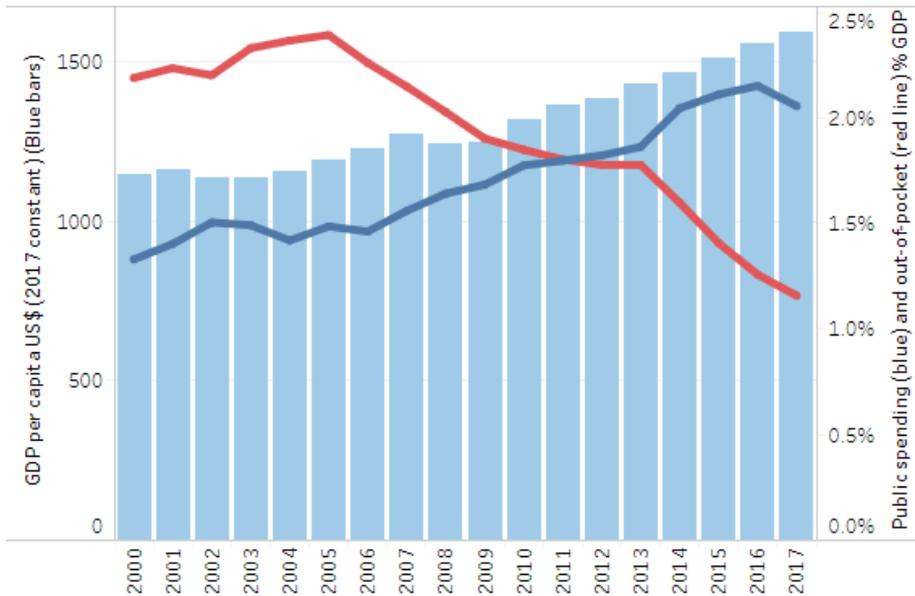


Figure 5 Government health spending vs OOP health spending in Kenya 2000-2017<sup>14</sup>

Kenya also devolved fiscal resources for healthcare in 2013 as part of a constitutional decentralization of authority following the new Kenyan constitution of 2010. Primary responsibility for delivering primary and secondary health services now falls to the counties. Post-devolution, most funds for primary and secondary healthcare, along with those for other needs under county jurisdiction, must be derived from the pool represented by the county revenue funds (CRFs). These accounts receive general transfers from the national treasury, locally generated tax revenues, and for health, conditional grants as transfers from the national level for special programs such as those for user fee removal, and NHIF payments to county-operated facilities.<sup>13</sup>



Figure 6 Central and Country health expenditures in Kenya 2002-2018<sup>13</sup>

## 6. NCD 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 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.

### 6.1. 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. 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. African Health Ministers attended a meeting jointly convened by the African Union Commission and WHO in April 2014 in Luanda, Angola. The meeting adopted the Luanda commitment on NCDs in Africa: policies and strategies to address risk factors. The commitments and undertakings made by ministers is included in Annex 7.<sup>15</sup>

### 6.2. 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). 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.<sup>16</sup>

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.<sup>2</sup>

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.

### 6.3. The Kenya Health Policy (2014-2030):

The Kenya Health Policy (2014-2030) defines the country's long-term intent in health. It is anchored on a health systems framework, defined 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'. It is designed to take the country beyond the traditional health services approach towards a focus on health, using a primary health care approach. The target of the policy is to attain a level of distribution of health commensurate with that of a middle-income country, with specific impact targets of attaining a 16% improvement in life expectancy; a 50% reduction in annual mortality from all causes; and a 25% reduction in time spent in ill-health. 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'.<sup>17</sup>

The health policy is implemented through medium-term (5-year) strategic plans outlining the strategic directions and investments required to attain the overall policy imperatives. The five-year plans are aligned with the Government's Medium-Term Plan (MTP) which is the implementation framework for Vision 2030. The Kenya Health Sector Strategic and Investment Plan (KHSSP III, 2014-2018) is the first medium-term plan of the Kenya Health Policy (2014-2030)

### 6.4. Health Sector Strategic Plan 2014-2018:

The strategic objectives of the health sector as set out in the KHSSP 2014 - 2018 include both the elimination of communicable conditions and halting and reversing the rising burden of NCDs. The KHSSP provides a framework for implementation of strategies aimed at improving the health status of the Kenyan people. The Plan is aligned with the Kenya Vision 2030 blueprint, the second Medium Term Plan II, and the Kenya Health Policy (2012-2030). It outlines an Essential Package for Health Services (KEPH) with inclusion of NCDs 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.

### 6.5. 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.

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.

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.<sup>18</sup>

While the strategy outlines outputs, indicators for M&E, responsibilities, and stakeholders, it was not costed and did not contain any specific budgetary allocation for implementation.

#### 6.6. 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.” 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.

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 programs 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.<sup>19</sup>

#### 6.7. 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.<sup>20</sup>

#### 6.8. 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. 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.<sup>21</sup> 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 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 which is a 105% increase from 2012. Beer accounted for 71% of excise duty on alcohol while wine and spirits accounted for 29%.<sup>22</sup>

#### 6.9. 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 further 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.<sup>23</sup>

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. 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.<sup>24</sup>

In June 2015, Kenya attempted to simplify the cigarette excise tax structure by introducing 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.<sup>25</sup> 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.

### 6.10. 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

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.<sup>2</sup> 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. These conditions build on the existing Kenya NCD Strategic Plan, and include 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.

### 7. 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.<sup>26</sup>

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 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.<sup>2</sup>

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.<sup>27</sup> As per this estimate, NCD prevention spending amounts to 1.7% of the public health budget.

*Table 1 Health and NCD spending snapshot Kenya 2015-16<sup>i</sup>*

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

## 8. 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.

### 8.1. 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

<sup>i</sup> Tabulated from Ministry of Health. Kenya National Health Accounts 2015/2016. Nairobi, Kenya and NACADA. 2017.

(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 NCD programming in Kenya, NCD programming receives the smallest amount of donor funding of all health areas. Most significantly, and despite the rising burden they present, NCD donor funding has been skewed towards general health services and tobacco control.<sup>28</sup> 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, funding from both government and donors to the prevention of NCDs 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.

### 8.2. 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 years, even decades, for the results of NCD prevention and control measures to produce tangible results. 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).

### 8.3. Moving from disease-specific to integrated NCD programming:

Kenya’s initial policy approach to NCDs was disease-specific, with separate programs 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 reported negative to having any of the nine national systems to respond to NCDs. The 2013 Kenya Service Availability and Readiness Assessment Mapping (SARAM) showed 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 huge regional variations.<sup>29</sup>

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 the modifiable risk factors for NCDs”*. 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. 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.<sup>30</sup> 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**.

#### 8.4. 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<sup>ii</sup> along with an analogous informal collaboration of academics, practitioners, and civil society organizations like the Lancet NCD Action Group, have worked hand-in-hand with local organizations like the NCD Alliance Kenya and its dozens of members to promote a unified message to policymakers on NCDs, which has had considerable impact.

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 them recognition and focus. As an example, legislations such as the Tobacco Control Act received a lot of support from the Framework Convention on Tobacco Control (FCTC), International Development Research Centre (IDRC) and the Bloomberg Initiative.<sup>16</sup>

#### 8.5. 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

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<sup>ii</sup> 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.

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.<sup>31</sup>

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.<sup>32</sup> In many counties, there is a strong preference by politicians for high visibility curative interventions 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 stipend for community health workers, the remaining counties have done little more than continue to pay salaries for CHEWs already in post, leading to stagnation or deterioration of these services since devolution.<sup>32</sup>

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 intersectoral collaboration for health promotion and disease prevention between health and other departments within the county to address social determinants of health.”* Further, they said that *“removal of bureaucratic hurdles for timely decentralization of funds to health facilities could provide the financial autonomy required for the community-based primary health care teams, mediated through community health workers (CHWs), to address the prevention needs of their catchment communities.”*

Opportunities for national government to **encourage county investment in pro-equity health promotion services**, e.g. through conditional grants, should also be explored. Further, an NCD-specific forum for national and county government representatives could help ensure constructive coordination between the different tiers of government.

#### 8.6. 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.<sup>33</sup> 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.

This distinctive epidemiology of NCDs, 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.

### 8.7. 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.<sup>21</sup>

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

	2010*		2016*	
Recorded	1.9		1.9	
Unrecorded	2.7		1.5	
<b>Total**</b>	<b>4.6</b>		<b>3.4</b>	
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)

Other than regulating the sale of alcohol, **the success of Kenya in preventing and reducing alcohol harm is also 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 for the government which is a 105% increase from 2012. Beer accounted for 71% of excise duty on alcohol while wine and spirits accounted for 29%. 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. According to a study on unrecorded alcohol consumption in Kenya, opportunities 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. Moreover, 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.<sup>34</sup>

#### 8.8. 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 personnel for other diseases, such as 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 required to fully scale-up the intervention would require a 12% increase in Kenya's total health budget.<sup>35</sup>

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.<sup>2</sup>

**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.

#### 8.9. 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).<sup>36</sup>

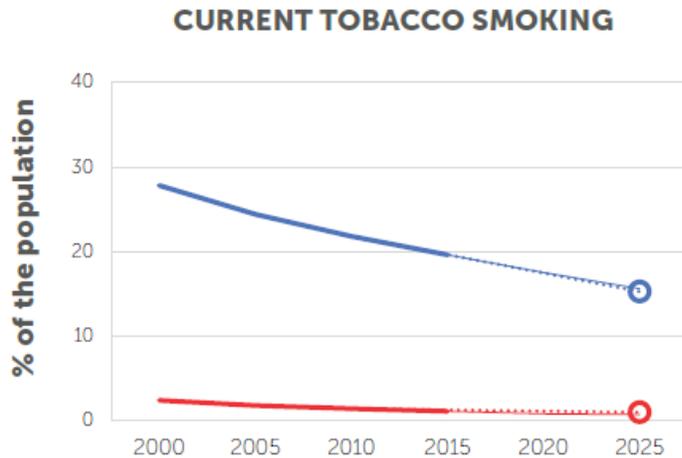


Figure 8 Current tobacco smoking Kenya (WHO 2018: NCD Country Profiles: Kenya)

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.<sup>37</sup> 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.<sup>37</sup>

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.<sup>28</sup> 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.<sup>38</sup>

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.<sup>39</sup> 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.

#### 8.10. 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 nutrient claims, dietary guidelines for healthy eating, and periodic monitoring of nutritional status and intake.<sup>28</sup> However, multiple gaps in policy remain, including an absence of regulatory provisions for the food industry, 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.<sup>40</sup> Nutrition policy gaps are reflected in the rising rates of obesity, particularly for women (Figure 8).

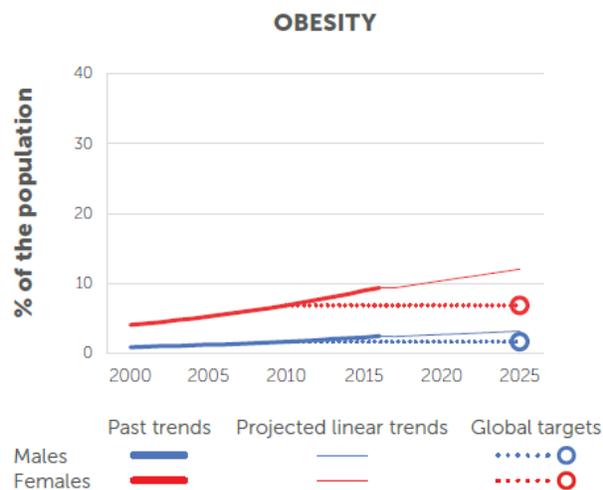


Figure 9 Obesity prevalence in Kenya over time (WHO 2018: NCD Country Profiles: Kenya)

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. 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; 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 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.<sup>41</sup>

## 9. 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 center-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 behavioral 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.

## 10. 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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