MINISTRY OF HEALTH

NATIONAL CANCER CONTROL STRATEGY 2017-2022

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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
CCCC	County Cancer Coordinating Committee
CEC	County Executive Committee
CHVs	Community Health Volunteers
COC	Clinical Officers Council
CQI	Continuous Quality Improvement
CSO	Civil Society Organization
DFID	Department for International Development
DHIS	District Health Information System
DNCD	Division of Non-Communicable Diseases
DSRU	Disease Surveillance and Response Unit
EBV	Epstein–Barr virus
EML	Essential Medicine List
EOL	End of Life
EQA	External Quality Assurance
ERC	Ethics Review Committee
FBOs	Faith Based Organizations
GAVI	Global Alliance Vaccine Initiative
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GOK	Government of Kenya
H4CK	Hope for Cancer Kids
HBV	Hepatitis B Virus
HCW	Health Care Workers
HIV	Human Immunodeficiency Virus
HCP	Health Care Provider
HIS	Health Information System
HMIS	Health Management Information Systems
HMT	Health Management Team
HCPs	Health Care Providers
H. PYLORI	Helicobacter pylori
HPV	Human Papilloma Virus
IAEA	International Atomic Energy Agency
IARC	International Agency for Research on Cancer
IEC	Information, Education and Communication
imPACT	Integrated Mission of Program for Action on Cancer Therapy
ISO	International Standards Organization
KEBS	Kenya Bureau of Standards
KEHPCA	Kenya Hospices and Palliative Care Associations
KEMRI	Kenya Medical Research Institute
KEMSA	Kenya Medical Supplies Agency
KENCO	Kenya Network of Cancer Organizations
KEPSA	Kenya Private Sector Alliance
KETCA	Kenya Tobacco Control Alliance
KESHO	Kenya Society for Haematology and Oncology
KDHS	Kenya Demographic and Health Survey
KHFA	Kenya Health Facility Assessment
KMPDB	Kenya Medical Practitioners and Dentist Board

KMLTTB	Kenya Medical Laboratory Technologists and Technicians Board
KNBS	Kenya National Bureau of Standards
KNH	Kenyatta National Hospital
KPA	Kenya Paediatrics Association
LEEP	Loop Electrosurgical Excision Procedure
LMIS	Laboratory Management Information System
MCH	Maternal Child Health
MIS	Management Information Systems
MOA	Ministry of Agriculture
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
MNCH	Maternal New-born and Child Health
M&E	Monitoring and Evaluation
MTRH	Moi Teaching and Referral Hospital
NACADA	National Authority for the Campaign Against Alcohol and Drug Abuse
NACOSTI	National Commission for Science, Technology and Innovation
NBTS	National Blood Transfusion Service
NCD	Non-communicable Diseases
NCDAK	Non-Communicable Diseases Alliance of Kenya
NCI	National Cancer Institute
NCCP	National Cancer Control Program
NCCS	National Cancer Control Strategy
NCK	Nursing Council of Kenya
NCRP	National Cancer Research Program
NEMA	National Environment Management Authority
NGO	Non-Governmental Organizations
NHIF	National Hospital Insurance Fund
NPHL	National Public Health Laboratories
NRF	National Research Foundation
OSHA	Occupational Safety and Health Administration
PACT	Program for Action on Cancer Therapy
PC	Palliative Care
PPB	Pharmacy and Poisons Board
PPP	Public Private Partnership
PSK	Population Services Kenya
QA	Quality Assurance
QOL	Quality of Life
RH	Reproductive Health
RHU	Reproductive Health Unit
TOR	Terms of Reference
TOT	Trainer of Trainers
SDGs	Sustainable Development Goals
SOP	Standard Operating Procedure
TWG	Technical Working Group
UICC	Union for International Cancer Control
UN	United Nations
WHO	World Health Organization
WHPCA	Worldwide Hospice and Palliative Care Alliance

Forward

Article 43 of the Constitution of Kenya, 2010 confers on every person the right to the highest attainable standard of health, which includes the right to health care services, including reproductive health care. Towards achieving this commitment, this second cancer control strategy builds on the achievements of the first national cancer strategy (2011-2016). It is in line with the Kenya National Strategy for the Prevention and Control of Non-Communicable Diseases 2015 - 2020 and the Kenya Vision 2030 social pillar that aims to improve the quality of life of all Kenyans.

The strategy outlines broad areas of action along the cancer continuum and will be achieved through five strategic pillars: 1. Prevention, early detection and cancer screening, 2. Cancer diagnosis, registration and surveillance, 3. Cancer treatment, palliative care and survivorship, 4. Coordination, partnership and financing for cancer control and 5. Monitoring, Evaluation and Research. Within it are stated the roles of the national, county governments and the various non-state actors in line with the multi-sectoral nature of cancer. Equally captured is the role of the private sector In line with the strategic government policy to harness the critical role of the private sector.

The implementation framework herein signals a radical departure from past approaches in addressing the health agenda by embracing partnerships and accountability of roles. It recognizes the paramount role of the county governments in the health delivery and it is my hope that this strategic document will provide the integrated road map towards reducing the preventable morbidity and mortality due to Cancer. I call upon all stakeholders to join the Ministry of Health in this noble initiative.

It is my belief that collectively we can make a difference: Let us all join hands in halting and reversing the burden of cancer in Kenya.

Dr. Cleopa Mailu, EGH
Cabinet Secretary
Ministry of Health

Acknowledgement

The Ministry of Health wishes to thank all those who contributed to the successful completion of this document. This was a multi-stakeholder effort with numerous meetings and repeated editions over a lengthy period.

We appreciate the special support from the office of the Cabinet Secretary, Principal Secretary, Director of Medical Services and the Department of Preventive and Promotive Health at the Ministry of health. The National Cancer Control Program wishes to also thank the National Cancer Institute- Kenya and the Division of Non-Communicable Diseases for their strategic support and dedication to see this document developed and implemented.

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The contribution and dedication of the following individuals is highly appreciated too; Dr. Kibachio Joseph, Dr. Alfred Karagu, Dr. Eunice Gathitu, Dr. Catherine Murithi and Dr. Simon Sutcliffe. With the launch of this strategy, their passion to see a Kenya void of the preventable burden of cancer has just but began bearing fruit.

The launch of this document is not an end in itself but the beginning of a rigorous process to prioritize cancer prevention and control to halt and reverse its burden for the present generation and secure a healthier working and prosperous nation tomorrow. We call upon all partners, stakeholders and health care workers to adopt and support the implementation of this strategy to help achieve its goal of reducing cancer incidence, morbidity, mortality and survival rate in Kenya through access to population based primary prevention, early detection, quality diagnostic, treatment and palliative care services.

Julius Korir, CBS
Principal Secretary

Executive Summary

Background

Cancer is a significant cause of morbidity and mortality worldwide with approximately 14 million new cases diagnosed in 2012. In Kenya, cancer is the 3rd leading cause of death after infectious and cardiovascular diseases. In 2012, there was an estimated 37,000 new cancer cases and 28,500 cancer deaths in Kenya. The second edition of the National Cancer Control Strategy (NCCS) is a response by the Ministry of Health and other stakeholders to provide a strategic framework on how to prioritize interventions that will lead to prevention and control of cancer in Kenya. The document covers the year 2017-2022. and is organized into five priority areas: 1) prevention, early detection and screening, 2) diagnosis, registration and surveillance, 3) treatment, palliative care and survivorship, 4) coordination, partnership and financing and 5) monitoring, evaluation and research. The strategy includes principles, goals and strategic objectives to guide existing and future actions to control cancer. It also includes broad areas for action under each strategic objective.

Overview of the process

The NCCS 2011-2016 was the first comprehensive document addressing the cancer continuum and built on the existing health system capacity in the public and private sectors. The second NCCS, 2017-2022 is informed by findings from the imPACT study, input from diverse array of stakeholders through several consultative meetings. The development of this strategy reflects a shared commitment to reducing the incidence of cancer and improving the quality of life of those who develop cancer. The next phase will involve planning implementation, defining processes to manage, monitor and review implementation and costing of the strategy.

Goal

To reduce cancer incidence, morbidity, mortality, cancer down-staging and survival rate in Kenya through access to population based primary prevention, early detection, quality diagnostics, treatment and palliative care services by the year 2022.

Key Interventions

Reducing the incidence and impact of cancer in Kenya will require a planned, systematic and coordinated approach to implement activities within the 'cancer control continuum'. Cancer control activities and services are undertaken by a wide range of government and nongovernment agencies. Their activities range from individual reducing risk of developing cancer to the

care of those who will ultimately die from the disease. To achieve the goals of this strategy, key broad priority areas of interventions will include: the following strategic areas: prevention; screening; early detection; diagnosis; registration and surveillance; treatment, palliative care , coordination and financing.

Institution and management framework

The NCCS will be operationalized at national and county levels. The goal is to provide well-co-ordinated, effective, transparent, accountable and sustainable leadership and management structures at national, and county levels to implement the strategy as well as involve other stakeholders from the public, private and civil society sectors.

Dr. Kioko Jackson K., OGW
Director of Medical Services

Introduction

Cancer is a generic term for a large group of diseases characterized by the growth and spread of abnormal cells beyond their usual boundaries that can then invade adjoining parts of the body and/or spread to other organs. Cancer arises from the transformation of normal cells into tumour cells in a multistage process that generally progresses from a pre-cancerous lesion to a malignant tumour.

The risk factors for cancer can be broadly categorized into four types namely 1) behavioural risk factors that include tobacco use, harmful use of alcohol, unhealthy diet and physical inactivity; 2) biological risk factors that include overweight, obesity, age, sex of the individual; 3) environmental risk factors include exposure to environmental carcinogens such as chemicals e.g. asbestos and aflatoxins, radiation e.g. ultraviolet and ionizing radiation and infectious agents e.g. certain viruses (Hepatitis B & C, HPV, EBV, HIV), bacteria and parasites; and 4) genetic risk factors.

Globally, 5-10% of all cancers are attributed to genetic defects and 90-95% to environmental and lifestyle factors such as cigarette smoking, diet, alcohol and physical inactivity. Additionally, of all cancer-related deaths, almost 25–30% are due to tobacco, 30–35% are linked to diet, about 15–20% are due to infections, and the remaining percentage are due to other factors like radiation, stress, physical activity, environmental pollutants etc. (Anand et al 2008). In low and middle income countries, at least 25% of cancers (WHO 2017) are also caused by infectious agents including human papilloma virus (cancer of the cervix), hepatitis B and C (cancer of the liver), and helicobacter pylori (cancer of the stomach). Together, these risk factors provide significant opportunity to decrease the incidence and burden of the disease.

The burden of cancer at the macro and micro level is huge and this is compounded by a severely limited capacity of most low-income countries to provide the necessary health care. Late-stage presentation and inaccessible diagnosis and treatment are common. In 2015, only 35% of low-income countries reported having pathology services generally available in the public sector. More than 90% of high-income countries reported treatment services are available compared to less than 30% of low-income countries (WHO 2017).

The economic impact of cancer is significant and is increasing. The economic consequences of cancer are staggering. Cancer's toll on population health is inextricably linked to the economic impact through increased medical costs, lost income, and the financial, physical, and emotional burden placed on families and caregivers. Under a "business as usual" scenario where intervention efforts remain static and rates of cancer continue to increase as populations grow and age, cumulative economic losses to low- and middle-income countries (LMICs) are estimated at US$ 1.5 trillion over the period 2011-2025 (an average of US$ 107 billion per year) (Stewart and Wild 2014). The essential package of cost-effective and feasible interventions would, if fully implemented, cost an additional $20 billion per year constituting 3 % of total public spending on health in low-income and middle income countries. (2.6 % in upper-middle-income countries, 5 % in lower-middle-income countries; but 13 % in low-income countries). In terms of annual expenditure per capita, this amounts to $5.70, $1.70, and $1.70

annually in UMICs, lower-middle-income, and LICs, respectively. Such increases are potentially feasible in all but the LICs, which would require external support (Gelband et al 2015).

Alignment with local, regional and international policies

The adoption of the global strategy for the prevention and control of non-communicable diseases in 2000, led to several Health Assembly resolutions being adopted or endorsed in support of the key components of the global strategy. The Global Action Plan for Prevention and Control of NCDs 2013-2020 builds on the implementation of those resolutions, mutually reinforcing them. They include the WHO Framework Convention on Tobacco Control (WHO FCTC) (resolution WHA56.1), the Global strategy on diet, physical activity and health (resolution WHA57.17), and the Global strategy to reduce the harmful use of alcohol (resolution WHA63.13), the Brazzaville declaration on non-communicable diseases prevention and control in the WHO African region 2011, the Moscow declaration at the first ministerial conference on healthy lifestyles and NCD control 2011, the Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases: A/RES/66/2(2011).

The 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), gives a bold yet achievable target of ensuring healthy lives and promoting well-being for all at all ages. To reach the SDG target of reducing premature mortality from non-communicable diseases including cancer by one-third by year 2030, governments with NGOs and all cancer advocates must be mobilized to collective action.

Vision 2030 seeks to make Kenya a nation that offers decent and good quality of life to all its citizens. The Kenya Health Policy 2014-2030 aims at attaining the highest possible standard of health in a manner responsive to the health needs of the population. This policy will be achieved through six strategic objectives which include halting and reversing the rising burden of NCD's, reducing the burden of violence and injuries, providing essential health care, minimizing exposure to health risk factors, eliminating communicable diseases and strengthening collaboration with health-related sectors which have a bearing on NCD prevention and control.

The development of the Kenya National Strategy for the prevention and control of Non-Communicable Disease, 2015–2020, gives directions to ensure that there will be significant reduction of preventable burden of NCDs in Kenya. The second NCCS is in line with the global documents as well as Kenyan documents and in particular, the Kenya National Strategy for the prevention and control of Non-Communicable Disease, 2015–2020,

The burden of cancer in kenya

Cancer is one of the leading causes of morbidity and mortality worldwide, with approximately 14 million new cases in 20121. The number of new cases is expected to rise by about 70% over

the next two decades. Cancer is the second leading cause of death globally, and was responsible for 8.8 million deaths in 2015. The most common causes of cancer death are cancers of Lung (1.69 million deaths), Liver (788 000 deaths), Colorectal (774 000 deaths), Stomach (754 000 deaths), and Breast (571 000 deaths). Globally, nearly 1 in 6 deaths is due to cancer. Approximately 70% of deaths from cancer occur in low- and middle-income countries.
In Kenya, cancer is estimated to be the third leading cause of death after infectious and cardiovascular diseases. Among the NCD related deaths, cancer is the second leading cause of death accounting for 7% of overall national mortality after cardiovascular diseases (WHO 2014 NCD country profile 2014). The annual incidence of cancer is close to 37,000 new cases with an annual mortality of over 28,000. The leading cancers in women are cervix uteri (40.1/100,000), breast (38.3/100,000) and oesophagus (15.1/100,000). In men, prostate (31.6/100,000), Kaposi sarcoma (16/100,000) and oesophagus (20.5/100,000) are the most common cancers (Ferlay et al 2013).

Why National cancer control strategy

A national cancer control strategy is designed to guide the country put forward specific interventions towards cancer prevention and control based on the existing cancer burden, risk factor prevalence and available resources. Kenya is experiencing a double burden of disease with infectious diseases remaining a significant cause of ill health and death coupled with a rising incidence and mortality from non-communicable conditions. The National Cancer Control Strategy 2017-2022 thus provides a strategic framework to guide the systematic approach to reduce the incidence, morbidity and mortality of cancer and to improve the quality of life of cancer patients. The key features of this systematic approach include focusing on the whole continuum of cancer care from prevention through palliation and on involving various stakeholders in the process of both developing the national cancer plan as well as implementing it. Cancer prevention and control is multi-sectoral in nature and involves feasible implementation strategies supported by a diverse set of partners. This requires a clear framework to guide this diverse group of stakeholders from government and civil society, as well as those who represent organizations who deliver cancer care, such as hospital and cancer centres, in the planning process. The document will also enhance coordination of cancer prevention and control activities thus limiting duplication of efforts while enhancing efficient use of resources. The strategy will further serve as the guiding policy document for all stakeholders and will assist in effective, efficient monitoring and evaluation of cancer interventions.

With the advent of the Kenya constitution 2010 which led to devolution of health services, counties have a bigger responsibility in prioritization, planning and allocation of resources based on their unique needs. It is therefore important that the country develops a strategic framework that will guide at all levels of governance to effectively plan and implement cancer prevention and control interventions. The strategy thus provides a road map to inform strategic initiatives in cancer prevention and control at both the national and county governments as well as among all stakeholders.

The National Cancer Control Strategy 2017-2022 will therefore serve as the blue print to reduce the incidence, mortality of cancer, down-staging and improve survival rate and quality of life of cancer patients in Kenya. It prioritizes a set of evidence-based, costed interventions covering all aspects of cancer prevention and control with an emphasis on universal coverage and effective utilization of available resources.

Who is the strategy for?

This Cancer Control Strategy is for all with particular relevance to government and non-government agencies whose work impacts on the delivery of services across the spectrum of cancer control, the wide range of individuals involved in the management and delivery of services across the spectrum of cancer control, and those with cancer and their family. By promoting an integrated approach to the control of cancer, the strategy will encourage and assist government and non-government service providers to work more closely together and enable all providers to have a common understanding of where they fit in the overall spectrum of cancer control.

Guiding principles

1. Multi-sectoral approach- need to involve both health and non-health sectors to effectively address cancer and associated risk factors. There is need to incorporate health in all sectors.
2. Ownership - involvement of all stakeholders at all stages of implementation
3. Evidence based - guided by recognized best practices
4. Equity and universal coverage- need to ensure equitable access to the entire range of cancer prevention and control services with a focus on the most vulnerable populations
5. Coordination and partnerships - based on an elaborate framework with clear definition and understanding of roles, responsibilities and mandates at all levels
6. Cost-effectiveness
7. Accountability- have a clear monitoring and evaluation framework
8. Respect of gender sensitivity and culturally appropriate interventions
9. Rights-based approach - recognizes the right to the highest standards of health care as enshrined in the Bill of Rights in our constitution. It equally recognizes the rights of cancer patients from any forms of discrimination as per the provisions of the Cancer Control Act.
10. Management of potential conflicts of interest - cancer prevention and control interventions must be protected from any undue influence arising from vested interests.

VISION, GOAL, MISSION AND OBJECTIVES OF NCCS

The vision and mission of the NCCS are informed by the overall Ministry of Health vision and mission.

Vision

A Kenyan population with low burden of cancer

Mission

To implement a coordinated and responsive cancer control framework that leads to reduction in incidence, morbidity and mortality through effective partnerships and collaborations for prevention, diagnostics, treatment, palliation and financing of cancer control activities to improve wellbeing of Kenyans.

Goal

To reduce cancer incidence, morbidity, mortality and cancer down-staging and survival rate in Kenya through access to population based primary prevention, early detection, quality diagnostics, treatment and palliative care services by the year 2022.

To achieve the goal of this strategy, there are several strategic objectives which are organized into five pillars: 1) prevention, screening and early detection; 2) early diagnosis, cancer registries and surveillance; 3) treatment, palliative care and survivorship; 4) coordination, collaboration and financing and 5) monitoring, evaluation and research.

PILLAR1:
PREVENTION, EARLY DETECTION AND CANCER SCREENING

PILLAR1: Prevention, Early Detection and Cancer Screening

Introduction

Prevention offers the most cost-effective long-term strategy for the control of cancer. Current evidence indicates that between 30% and 50% of cancer deaths could be prevented by modifying or avoiding key risk factors, including avoiding tobacco products, reducing alcohol consumption, maintaining a healthy body weight, exercising regularly and addressing infection-related risk factors. According to the World Health Organization (WHO) prevention of cancer, especially when integrated with the prevention of other related chronic diseases offers the greatest public health potential, and the most cost-effective long-term method of cancer control (WHO 2007a). There are interventions which permit the early detection (which includes screening and early diagnosis) and effective treatment of around one third of cases (WHO 2007b). Formulation and dissemination of standardized evidence based national guidelines for screening of various cancers would lead to a unified approach towards national and county specific screening programmes.

Integration of Prevention, Screening and Early Detection interventions into other programs is likely to give optimal public health benefits, with minimal cost implications and long term cancer control benefits. Areas of potential integration include but are not limited to sexual and reproductive health initiatives, existing HIV/AIDS programmes, national immunization efforts to improve uptake of HPV and Hepatitis B and C vaccinations, occupational and environmental health initiatives, maternal, neo-natal and child health programmes and lifestyle programs targeting general public. Ultimately, a multi sectoral approach involving education, public health, agriculture, and environment among others will play key roles in health promotion approaches to cancer control. To achieve the overarching goal, several activities in broad areas will be undertaken under different strategic objectives.

Overarching goal

To reduce the incidence of cancer through primary prevention and early detection in Kenya by 2022.

Strategic Objective 1.1. To reduce the incidence of cancer due to known lifestyle risk factors (alcohol consumption, tobacco use, unhealthy diet, physical inactivity)

1.1.1. Reduce Use of Tobacco / Tobacco Related Products and Exposure to By-Products

Activities

1. Advocate for implementation and enforcement of smoke free environments in all indoor workplaces and public places.
2. Advocate for finalization and implementation of tobacco cessation guidelines

and programs

3. Incorporate Tobacco Control into the community strategy
4. Incorporate tobacco control into school health program including in school curriculum
5. Conduct advocacy and targeted public awareness on health, social, economic and environmental effects of all forms of tobacco including shisha
6. Identify and implement alternative sources of livelihood for tobacco farmers
7. Initiate and sustain targeted media campaigns against tobacco use
8. Advocate for allocation of Tobacco Tax towards cancer control programs

1.1.2. Reduce risk posed by unhealthy diets and physical inactivity

Activities

1. Advocate for the implementation of national guidelines on diet, nutrition and physical activity
2. Promote educational and information campaigns about reducing unhealthy diets and encourage consumption of more fruits and vegetable, fish and whole (unrefined) grains
3. Promote safe cooking and preservation methods
4. Implement community-wide campaigns to promote physical activity and healthy diets (e.g. workplaces, schools)
5. Promote farming and storage methods that reduce cancer risks such as safe use of chemical fertilizers, herbicides and pesticides.
6. Advocate for enactment of legislation to control and / or ban advertising of unhealthy foods and drinks
7. Advocate for regulation of food industry with regard to disclosure and labelling of food content and preparation methods
8. Advocate for taxation on refined sugars / sugary drinks (sin tax) and unhealthy foods and drinks

1.1.3. Reduce alcohol consumption and eliminate exposure of alcohol to children and youth

Activities

1. Support implementation of the Alcoholic Drinks Control Act and national action plan
2. Advocate for total ban on alcohol advertisement
3. Advocate for finalization and implementation of the National strategy on prevention and control of harmful use of alcohol
4. Raise public awareness among the youth and other vulnerable populations about alcohol-related health risks
5. Incorporate information on the risks of alcohol consumption into the school health curriculum
6. Strengthen national Health Management Information System (HMIS) to provide regular data on alcohol consumption and related problems

Strategic Objective 1.2. To decrease the exposure to environmental and occupational risk factors

Activities

1. Advocate for the implementation of the tobacco control act to prevent its environmental effects.
2. Advocate for implementation of guidelines and regulations for environmental, radiation and occupational carcinogenic agents
3. Advocate for safe disposal of toxic wastes such as industrial, nuclear, cytotoxic and electronic waste
4. Advocate for the periodic screening and monitoring of individuals exposed to occupational hazards that cause cancer
5. Limit exposure and mitigate effects of exposure to carcinogens in the workplace

Strategic Objective 1.3. To reduce exposure to known infectious agents, and increase detection and treatment of cancers due to infectious agents

Activities

1. Educate parents on safety and need for universal infant immunization with the aim of increasing uptake and coverage
2. Advocate for implementation of HPV recommended immunization schedules, based on epidemiological needs and programmatic considerations
3. Advocate for improved surveillance on infectious diseases that are linked to cancer
4. Develop and integrate effective population based screening programmes for infectious agents linked to cancer (e.g. HPV, HBV, H. Pylori and Schistosoma in target populations)
5. Integrate infectious agents screening into existing HIV, MNCH, RH and FP programmes
6. Targeted promotion of healthy reproductive and sexual behaviour along the life stages

Strategic Objective 1.4. To increase access to quality and equitable prevention, screening and early diagnosis services through the continuum of life

Activities

1. Develop and implement national guidelines for cancer screening and early diagnosis including a referral and follow up mechanism
2. Advocate for inclusion of cancer screening and early diagnosis packages in the National Hospital Insurance Fund and private insurance
3. Build and expand human resource capacity for cancer screening and early diagnosis
4. Adopt scalable primary health care services and affordable technologies to meet demand
5. Develop educational strategies and low-cost media campaigns with standardized content for broad community outreach

6. Sensitize policy makers on the need to support early diagnosis programs
7. Raise awareness of cancer to empower the public and health workers to recognize early signs and symptoms of cancer
8. Strengthen genetic counselling and screening to address genetic and familial cancers
9. Support piloting of population-based cervical cancer screening for women over 30 years, in five counties where comprehensive regional cancer centres are being planned

For Childhood Cancers

Activities

10. Create awareness of childhood cancers including retinoblastoma, nephroblastoma, Burkitt's lymphoma and Acute Lymphoblastic lymphoma and integrate into public health promotion programs.
11. Integrate childhood cancers into existing public health promotion programs.
12. Sensitize healthcare workers on clinical presentation of childhood cancers and prompt referral
13. Advocate for implementation of retinoblastoma screening approach provided in the MNCH guidelines
14. Strengthen targeted screening for siblings of index retinoblastoma cases

Strategic Objective 1.5. To increase access to evidence based information on cancer prevention, screening and early diagnosis

Activities

1. Develop standardised data collection tools
2. Develop standardized cancer risk indicators.
3. Link data collection to Health Management Information Systems [HMIS]
4. Integrate cancer indicators into existing research platforms e.g. STEPS, KDHS, KHFA, SARAM, KSPA
5. Support enhancement of existing population-based and hospital-based cancer registries.

Accountability and implementation roles and responsibilities

Role of the National Government

1. To provide enabling environment for cancer control implementation in Kenya
2. Define frameworks for how to operate within the Ministry as well as in Inter-Ministerial Collaborations
3. Establish priorities in spending on cancer control and management
4. Identify and address inequalities within the system.
5. Development and review of policy documents.

Role of the various bodies within the national government

Ministry of Health

1. Responsible for development of cancer control policy to establish vision, integrate and inter-link government ministries and agencies for efficiencies and systems strengthening
2. Identify new (evidence based) innovations to steer the system to respond to new science, tests, disease knowledge and treatment options / outcomes
3. Coordination of prevention and detection through population based screening programs
4. Support and coordination of scholarships of specialized training for specialized health professionals in the whole continuum of cancer care
5. Implementation of the majority of cancer related budget measures.
6. Development of curriculum, treatment protocols and strategy on cancer control
7. Dissemination of policy documents
8. Resource mobilization for cancer control
9. Strengthening of partnerships for control of cancer
10. Capacity building and technical advice
11. Promotion of research
12. Work with Parliament to plough sin tax funds to cancer activities
13. Advocate for career paths for cancer professionals.

National treasury

1. Funding of national and county government activities for cancer control and management
2. Financing cancer systems, infrastructure, and regional cancer centres
3. Monitoring results for the resources provided

KEMSA / Pharmacy and Poisons Board

1. Procurement of cancer treatment and care medicines and drugs in the essential medicine list as provided by MOH.
2. Establish a network of storage, packaging and distribution facilities for the provision of drugs and medical supplies to health institutions.
3. Collaborate with County Governments for procurement, warehousing, distribution of drugs and medical supplies.
4. Research on cost effectiveness of procurement, distribution and value of prescribed essential medical supplies delivered to health facilities as required by stakeholders.
5. Support County Governments to establish and maintain appropriate supply chain systems for drugs and medical supplies.

National Hospital Insurance Fund (NHIF)

1. Financing of prevention, early detection and organized targeted screening e.g. annual screening for those under medical cover
2. Increase NHIF coverage as part of Universal Health Coverage and in order to incorporate additional benefits to cancer activities. (Additional resource mobilization is needed to fund national programmes in cancer control and ensure a financial protection scheme for the vulnerable populations).

Cancer Registries

1. Supporting health and medical research
2. Developing health advice for the Kenyan community, health professionals and governments [National / County]
3. Seeking opportunities for new funds for cancer research in Kenya

Ethical review committees (ERC)

1. Providing advice on ethical issues in the conduct of health and medical research
2. Safeguarding ethics of conducting research on cancer in Kenya
3. Producing yearly compilation of cancer research

Resource centres-repository

National cancer institute Kenya (NCI-Kenya)

1. Regulate players in the cancer arena to ensure ethical, equitable and efficient utilization of resources in cancer control and management
2. Monitor cancer rates and their impact and outcomes, and to identify and address priority gaps and deficiencies in population-level cancer data to improve the evidence base.
3. Advise the Cabinet Secretary on matters relating to the treatment and care of persons with cancer and to advise on the relative priorities
4. Encourage and secure the establishment of cancer care infrastructure
5. Collaborate with international and local bodies / institutions in cancer research
6. Provide access to available information and technical assistance to all institutions, associations and organizations concerned with the welfare and treatment of persons with cancer
7. Establish and support measures that seek to eradicate conditions that cause and aggravate the spread of cancer.
8. Recommend measures to prevent discrimination against persons with cancer.

Role of County Government

Work with the National Government and all other stakeholders to initiate and provide comprehensive cancer prevention and population based early detection services to ensure that there is effective, coordinated work to improve cancer prevention and control across the continuum of care

1. To influence wider social determinants of health and tackle health inequalities
2. To shape cancer services that meet local needs and foster demand creation
3. To provide a population focus and address regional disparities
4. To take steps and ensure there are plans in place to protect the health of the population [Immunization and Screening]
5. To implement the policy documents
6. Research coordination, monitoring and evaluation
7. Training of community health workers / community health volunteers / support training of oncologists in other regions
8. Cancer medicines / Drugs procurement through KEMSA

Role of civil society / FBOs / NGOs / Voluntary Organizations

1. Advocacy to increase public and leadership awareness of the cancer problem
2. Develop effective partnerships to take on the responsibility of cancer planning
   i. Implement
   ii. Advise
   iii. Provide evidence
   iv. Community engagement
3. Assist the efforts of the government health system in reducing disparities in coverage within the cancer control framework / continuum
4. Conduct research on civil society engagement for cancer control
5. Act as the voice of patients and other consumers in all matters cancer.
6. Represent public interest in cancer policy formulation
7. Conduct direct public education campaigns and related cancer programs.
8. Bridge the psychosocial support needs of cancer patients between hospitals and communities.
9. Advocacy for risk reduction interventions and policies.
10. Advocacy for legislation, policy and funding.
11. Lead social accountability for strategy implementation

Role of the Private Sector / Academia / Health Care Providers / Private Insurance

1. Collaboration to mobilize and allocate additional resources / funds
2. Training of health professional
3. Technology development and testing for cancer control
4. Lead in innovations and targeted research for cancer control

5. Participate in public-private partnerships {PPP} to support the strategy
6. Contribute through capacity building and management skills transfer in cancer control
7. Implementation of standard guidelines

Role of the Public

1. Make healthy decisions and participate in healthy activities by:

i. Increasing knowledge, skills and motivation needed to maintain good health
ii. Changing attitudes and behaviours towards risk factors based on knowledge and skills gained
iii. Being active citizen participants in matters cancer

Role of Health Development Partners

a) Technical support

1. Where appropriate, provide technical assistance at national and county levels
2. Second staffs for relevant technical support

b) Financial and logistical support

1. Contribute to overall cancer agenda by aligning partner funded cancer activities to the national control strategy
2. Collaborate with the coordination mechanisms to reduce duplication
3. Support sustainability both financial and technical for partner funded cancer activities

c) Research

1. Support national cancer control research agenda by providing resources and technical support
2. Collaboratively, identify and implement research agenda aligned to national agenda with central and local governments

PILLAR 2:
CANCER DIAGNOSIS, REGISTRATION AND SURVEILLANCE

PILLAR 2: Cancer Diagnosis, Registration and Surveillance

Introduction

For purposes of this strategy, cancer diagnosis, registration and surveillance are considered within the same pillar because of their close association in terms of data flow from diagnosis to registration. Diagnosis is the entry point of cancer care. Diagnostic techniques are employed throughout all the phases of cancer management. Early diagnosis is associated with better clinical outcomes and prognosis. It is therefore important to prioritize on early, good quality and comprehensive diagnostic services. Diagnostic services should employ, where applicable, the latest technology available so as to provide the latest biological and physical characteristics of cancers to enable specific management.

Cancer diagnostic services encompass pathology, laboratory medicine and medical imaging specialties. ISO 15189:2003 defines the medical laboratory (clinical laboratory) as a "laboratory for biological, microbiological, immunological, chemical, immuno-haematological, haematological, biophysical, cytological, pathological or other examinations of materials derived from the human body for the purpose of providing information for the diagnosis, prevention and treatment of disease in, or assessment of the health of human beings, and which may provide a consultant advisory service covering all aspects of laboratory investigation including the interpretation of results and advice on further appropriate investigation." Accessible, available, affordable and effective laboratory services are crucial for early cancer diagnosis. In the country, challenges facing these aspects of diagnosis contribute to long turnaround time for cancer diagnosis. As reported in the imPACT report 2016, pathology services are also centralized in Nairobi, with limited access in most counties throughout the country. Overall, pathology services are inadequate and unevenly distributed among the private sector. Guidelines for cancer diagnostic tests including pathology are generally unavailable, and no quality control measures are applied.

Medical imaging is defined as the visualization of body parts, tissues, or organs, for use in clinical diagnosis, treatment and disease monitoring. Imaging techniques encompass the fields of radiology, nuclear medicine, optical imaging and image-guided intervention. The country lacks clinical guidelines for the use of the existing medical imaging equipment. ImPACT study found that the vast majority of the Kenyan population cannot access or afford medical imaging techniques at reasonable proximity, since most of the facilities are available in Nairobi.

Accurate and complete diagnostic data is also crucial for cancer registration and surveillance. It also forms the basis for evidence-based treatment and follow-up and to monitor patient outcomes. It is also important for research and planning. Cancer registration and surveillance remains an important process for providing scientific information. Importance of cancer registries lies in the fact that they collect accurate and complete cancer data that can be used for cancer control and epidemiological research, public health programme planning and

improvement of patient care. Ultimately, they can help understand the disease better, and use resources to the best effect in prevention and treatment.

Cancer registration is the continuous and systematic collection and maintenance of critical cancer data including patients' history, pathological characteristics of the tumour, treatment, and vital status for all cancer patients. **Cancer surveillance** is the careful monitoring of the disease occurrence and trends. The cancer registry provides basic measures of the burden of disease; numbers of deaths (mortality), new diagnoses (incidence), people living with the disease (prevalence) their probability of surviving the disease, and people living with terminal cancer. Cancer registration and surveillance in Kenya has been sub-optimal in the past. Currently, there are three established regional population based cancer registries covering an estimated 10% of the Kenyan population (WHO, IAEA, IARC 2016. The first population-based cancer registry was established in 1998 in Eldoret followed by the Nairobi cancer registry in 2001 and the Kisumu cancer registry in 2010. However, their efforts have been hindered by lack of institutionalization and funding. Efforts to establish new cancer registries have been ongoing. There is need to address inadequacies with regards to human resource, equipment and operational costs, as well as enforcing regulation of professional requirements for documenting and reporting cancer diagnoses. There is also a need to enhance efforts to support and coordinate county, national, and international cancer registration and surveillance, and cultivate public private partnerships.

Overarching goal

To establish a comprehensive and coordinated cancer diagnostic, registration and surveillance service that functions according to set standards

Strategic objective 2.1. Improve and strengthen cancer medical imaging services.

Activities

1. Institutionalize a technical working group/oversight committee that will over see the planning of imaging services for cancer diagnosis
2. Establish a network of diagnostic imaging services for cancer with clear roles and responsibilities with a referral algorithm
3. Carry out a situational analysis survey for cancer diagnostic imaging capacity for the country
4. Develop operational standards and guidelines for diagnosis of cancer imaging, including for childhood cancers
5. Design, develop and implement a common training plan based on the human resource needs/skills in cancer imaging with a focus on sustainability and retention
6. Develop, adopt and adapt guidelines and algorithms for diagnostic imaging workup of priority cancers in both children and adults for each level of care

7. Develop and conduct training programs for hospital administrators and county administrative staff on roles, responsibilities and referral algorithm in the efficient functioning of the cancer imaging diagnostic network
8. Develop and manage national QA guidelines (including safety) for various levels imaging services for cancer in collaboration with relevant regulatory bodies
9. Develop and implement national guidelines for radiology diagnostic imaging and nuclear medicine imaging (aligned to IAEA guidelines on nuclear medicine)

Strategic Objective 2.2. Improve and strengthen cancer pathology diagnostic and Laboratory medicine services

Activities

1. Institutionalize a technical working group/oversight committee that will over see the planning of cancer pathology diagnosis and Laboratory Medicine for Kenya.
2. Establish a functional comprehensive National cancer reference laboratory
3. Develop a national external quality assurance (EQA) program for cancer pathology diagnostics and laboratory medicine
4. Enroll the National Cancer Reference laboratory in an accreditation program
5. Develop, adopt and adapt guidelines and algorithms for pathology diagnostic workup of priority cancers in both children and adults for each level of care
6. Training of healthcare providers on guidelines and algorithms for pathology cancer diagnosis and laboratory medicine
7. Conduct a skills-needs situational analysis/ assessment of capacity for proper pathology identification/diagnosis of pediatric and adult cancer cases
8. Design, develop and implement a common training plan based on the human resource needs/skills with a focus on sustainability and retention
9. Develop and manage national QA guidelines (including safety) for various levels of pathology diagnosis laboratory and imaging services for cancer in collaboration with relevant regulatory bodies
10. Develop centralized medical information systems to include cancer pathology diagnosis and develop linkages with DHIS and cancer registration and surveillance
11. Develop implementation plan for pathology and laboratory data collection, compilation, utilization and reporting, using standardized IARC tools and templates, including autopsy reports
12. Develop policy and guidelines for procurement and maintenance of equipment for cancer diagnostics
13. Forge partnerships with supra national cancer institutions to support advanced pathology diagnostic tests
14. Design, develop and implement marketing, advocacy and promotional materials for cancer pathology diagnosis and laboratory medicine

15. Support clinical research pathology of cancer and treatment

Strategic Objective 2.3. Establish a framework within which planning and development of an integrated cancer registration and surveillance system will occur

Activities

1. Strengthen and expand the cancer registration and surveillance technical working group
2. Develop a monitoring and evaluation plan for surveillance of cancer registration

Strategic Objective 2.4. Create a network of cancer registration and surveillance with clearly defined roles and responsibilities

Activities

1. Establish a network cancer of registries in the country by 2018
2. Develop a document detailing the roles and responsibilities of cancer treatment and diagnostic centers both in public and private sectors in regards to reporting cancer cases to the National Population Based Cancer Registry to be established at MOH headquarters.
3. Review and update a needs assessment for proposed cancer registry sites
4. Set up 2 additional fully-functional population-based cancer registries by 2019
5. Conduct training programs for regional cancer registries.

Strategic Objective 2.5. Establish and implement operational standards and guidelines

Activities

1. Operationalize standard IARC data collection tools and ensure ICD-0 compliance
2. Training of trainers (ToT) for health workers on cancer registration and surveillance

Strategic Objective 2.6. Cancer registration and surveillance services well-staffed, trained and managed

Activities

1. Recruit and train health records and information officers(HRIOs) on cancer registration

Strategic Objective 2.7. Quality assurance (QA) and continuous quality improvement (CQI) programmes for cancer registration and surveillance services developed and implemented

Activities

1. Transition to an Electronic Data Collection and Transmission System
2. Integrate cancer registry data collection tools into existing health information systems

Strategic Objective 2.8. A marketing, advocacy and promotional programme designed and implemented to ensure quality cancer registration and surveillance services nationally

Activities

1. Conduct annual national education campaign for healthcare providers working in cancer treatment and diagnostic centers on the importance of cancer registration.

Strategic Objective 2.9. Revise legislation and regulations in support of cancer registration and surveillance

Activities

1. Review and revise current legislation on mandatory reporting of cancer
2. Establish unique cancer patient identifiers for the Kenyan population
3. Enforce laws for notification of cancer

Role of the National Government

1. Development, review and monitoring of policies that enable coordination of cancer diagnosis, registration and surveillance
2. To coordinate the provision of advanced and specialized service delivery, including referral services, in collaboration with County governments
3. Coordinate, provide leadership, and technical support/assistance to county governments in cancer diagnosis, registration and surveillance
4. Provide capacity building to health care workers in cancer diagnosis, registration and surveillance
5. Working with professional and regulatory bodies to set, monitor, evaluate and enforce standards in cancer diagnosis, registration and surveillance
6. Creating an enabling environment for resource mobilization for cancer diagnostics, registration and surveillance.
7. Assisting in forging appropriate multi-sectoral partnerships locally, regionally and globally.

Role of County Government

1. Adopt and complement the implementation of the National cancer control strategy with regards to diagnosis, registration, and surveillance
2. Ensure greater resource mobilization and allocation for cancer diagnosis, registration, and surveillance at the county
3. Integration of cancer diagnosis, registration, and surveillance into the broader county health agenda
4. Forging appropriate multi-sectoral partnerships at the county level

Role of Civil Society Organization/FBOs

1. To advocate for strengthening of coordination structures at both national and sub national levels
2. Advocate for increased resource allocation at all levels
3. Assist in forging multisectoral partnerships at all level
4. Demand for accountability for utilization for cancer diagnosis, registration, and surveillance

Role of the Partners (private sector, development and implementing partners)

1. Complement service delivery
2. Assist national and sub-national levels to improve diagnosis, registration, and surveillance by offering financial and technical support
3. Private sector health service providers to allocate resources for cancer diagnosis, registration, and surveillance
4. Create mechanism for ensuring affordability of cancer commodities (equipment, supplies, reagents etc.)
5. Create partnerships that facilitate quality diagnosis, registration and surveillance, such as partnerships in Laboratory and imaging centres accreditation

Role of the Public

1. Enrol in health insurance schemes to ensure that they access diagnosis, registration, and surveillance
2. Engage in any information sharing forums that they are called upon to participate in.
3. Participate in financing diagnosis, registration, and surveillance
4. Advocate for increased funding for diagnosis, registration, and surveillance
5. Demand for accountability for utilization for diagnosis, registration, and surveillance
6. Seek available diagnosis, registration, and surveillance

PILLAR 3:
CANCER TREATMENT, PALLIATIVE CARE AND SURVIVORSHIP

Introduction

Overarching goal

Provide optimal treatment for those with cancer

Improve standards for treatment and care for those with cancer

Improve capacity for cancer treatment and palliative services by providing infrastructure, equipment and commodities

Improve human resources for cancer treatment and palliative care services

Optimize treatment and palliative care for childhood cancer

Palliative care to improve quality of life for those living with, recovering from and dying of cancer and their families through support and rehabilitation.

PILLAR 3: Cancer Treatment, Palliative Care and Survivorship

Introduction

Treatment of cancer is one of the components of cancer control. The primary goals of cancer treatment are cure, prolongation of life and improvement of quality of life. The most effective and efficient treatment is linked to early detection programs. Type of cancer, stage at diagnosis and quality of care are important determinants of treatment outcomes. Through this strategy, it is anticipated that all cancer patients will get optimal treatment which encompasses receiving appropriate treatment and incorporation of best practices for cancer treatment which are customised to our setting.

About 80% of childhood cancers are potentially curable. However, only 20-30% of children treated at KNH experience long term disease free survival. This strategy will therefore aim to increase cure rates for childhood cancers through early detection, treatment and appropriate referral.

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The methods of treatment are surgery, chemotherapy (hormonal and targeted therapy), cryotherapy, loop electrosurgical excision procedure (LEEP), radiotherapy, brachytherapy, therapeutic nuclear medicine (targeted radionuclide therapy), stem cell transplant, palliative and supportive care, rehabilitation, end of life care and survivorship. Multidisciplinary management is more effective than sequential independent management of patients. Combined modality approaches result in better outcomes including cure, improved organ and function preservation.

In Kenya, 70 – 80% of patients are diagnosed for treatment at an advanced stage (KEMRI Registry) and this is attributed to low awareness of symptoms and of availability of cancer treatment; low rate of treatment acceptance and adherence because of challenges of geographical access and use of alternative therapy instead of conventional therapies; low index of suspicion by health providers; deficient diagnostic and treatment infrastructure; poor referral systems and the few cancer specialists are in urban town especially Nairobi and lack of effective patient navigation systems and direct and indirect costs associated with cancer treatment. Treatment should be accessible and available for children, adolescents, adults and vulnerable groups (including but not limited to pregnant women, the elderly, and people living with disabilities, prisoners, participants in clinical research, albinos, and marginalised groups).

Palliative care (PC) for both paediatrics and adults is an approach that improves the quality of life of cancer patients and their families, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual (WHO 2002). Palliative care is the active total care of the body, mind and spirit of the patient, and involves giving support to the family from

the time of diagnosis and throughout the continuum of care. There is need to improve both inpatient hospice care and community hospices to improve quality of life of patients.
Supportive care includes wound care, stoma care and incontinence, nutritional support, patient navigation (clinical, lay and physical navigators), psychosocial support, end of life care, financial support and accommodation. Effective palliative care requires a broad multidisciplinary approach that includes the family and makes use of available community resources. It can be successfully implemented even if resources are limited. Integrating PC into oncology care is clearly necessary for better patient outcomes such as quality of life (QOL) (Bakistas et al 2015, Temel et al 2015, Vanbutsele et al 2015).

Overarching goal

To reduce morbidity and mortality from cancers, and to improve the quality of life of patients undergoing cancer treatment.

Strategic objective 3.1. Provide optimal treatment for those with cancer

Activities

1. Increase number of facilities providing comprehensive cancer service
2. Establish and strengthen multidisciplinary tumour boards in facilities offering cancer services to improve patient care
3. Ensure timely access to treatment currently recognized as providing optimal outcomes
4. Systematically assessing new treatment approaches
5. Work with radiotherapy services to develop standards for the utilization, replacement and addition of radiation oncology equipment.
6. Establish a think tank composed of experts from all areas of cancer services to identify major areas of cancer services which require attention
7. Multidisciplinary and inter-disciplinary coordinated cancer patient care to ensure holistic management
8. Expand cancer specialist outreach programmes in medical oncology/chemo therapy at all levels of health care.
9. Establish mandatory guidelines aligned to international and regional guidelines (as adapted to low-resource settings) for the establishment and maintenance of cancer units with surgery treatment

Strategic objective 3.2. Improve standards for treatment and care for those with cancer

Activities

1. Develop and disseminate national guidelines and standard protocols for treatment and appropriate referral
2. Develop and implement national guidelines for palliative care, end of life care and survivorship.
3. Advocate for revision of legislation to allow other trained healthcare providers to prescribe opioids

4. Develop a referral policy specific for cancer
5. Develop guidelines for cancer centres establishment, accreditation focused on human resource, and infrastructure
6. Work with HMIS to ensure indicators are included to allow monitoring and evaluation of cancer services
7. Work with relevant government offices to address alternative healers' practice and regulation

Strategic objective 3.3. Improve capacity for cancer treatment and palliative services by providing infrastructure, equipment and commodities

Activities

1. Improve the two tertiary cancer referral centres (KNH & MTRH) infrastructure and equipment.
2. Establish at least four comprehensive regional cancer treatment centres
3. Support establishment of accommodation facilities for both patients and care givers (including paediatrics) receiving outpatient cancer treatment services
4. Empower/strengthen County/Sub-County hospitals to provide surgery, chemotherapy and palliative care, including outpatient and inpatient hospice care
5. Address ethical dilemmas in cancer care through medical legal committees as part of multidisciplinary teams
6. Ensure appropriate cancer infrastructure at facilities that offer any form of cancer care
7. Advocate for strengthening PPPs to streamline supply chain systems to ensure availability, accessibility and affordability of quality, safe and efficacious medical products and technologies for screening, diagnosis, treatment and monitoring of cancer care.
8. Provide education and support to patients diagnosed with cancer including people living with disabilities and other vulnerable groups.
9. Create awareness among healthcare providers and the community on the availability of treatment and palliative care services, including conventional, complementary and alternative medicines
10. Support establishment and maintenance of resource centres for cancer at health facilities
11. Develop IEC materials to address myths and misconceptions about cancer and customize them for the different target populations including those living with disability
12. Provide timely supportive services (Blood & blood products, infection control, Nutrition, others e.g. growth factors)
13. Advocate for all health facilities (including private and faith based facilities) to include strategies for capacity building in cancer

Strategic objective 3.4. Improve human resources for cancer treatment and palliative care services

Activities

1. Work with training institutions to support training in cancer specialities including but not limited to medical oncology, clinical/radiation oncology, medical physics, oncology nursing, oncology pharmacy, pathology, histology, cytology, palliative care, radiation safety, surgical oncology, gynaecology nursing, paediatric oncology, paediatric nursing, radiographers and biomedical engineering
2. Support training of all healthcare workers on use of opioids for pain management, breaking bad news, end of life care, bereavement, palliative care, depression in cancer and sexual issues after treatment
3. Work in collaboration with the regulatory bodies to develop career paths in cancer services that allows appropriate deployment based on skills and competencies and give incentives to retain them to provide services
4. Sensitize County Health Committees and hospital management teams at all levels on cancer management

Strategic objective 3.5. Optimize treatment and palliative care for childhood cancer

Activities

1. Advocate for the review and reorganization of existing treatment facilities / programs to incorporate paediatric cancer treatment and supportive care services
2. Advocate for paediatric chemotherapy and adjuvant formulations to be incorporated in the Kenya essential medicine list (KEML)
3. Advocate for adoption and finalization of evidence based treatment protocols for common childhood cancers customized for Kenya
4. Provide Services for palliative, rehabilitation, and survivorship for children

Strategic Objective 3.6. Palliative Care to improve quality of life for those living with, recovering from and dying of cancer and their families through support and rehabilitation.

Activities

1. Provide timely and ongoing support and rehabilitation, including early identification and appropriate intervention for all survivors of childhood, adolescent and adult cancers
2. Provide palliative care and pain relief services at all levels of care including community level (home based care) for very sick patients
3. Integrate palliative care into oncology care in all appropriately staffed facilities for cancer care
4. Undertake campaign of public education and dissemination of information to address issues relating to discrimination and other potential barriers to returning to work for cancer survivors
5. Work in collaboration with Ministry of Education and relevant key stakeholders, to develop guidelines for the support and rehabilitation of children and adolescents with cancer

PILLAR 4:
COORDINATION, PARTNERSHIP AND FINANCING FOR CANCER CONTROL

PILLAR 4: Coordination, Partnership and Financing For Cancer Control

Introduction

This pillar seeks to ensure enhanced coordination, effective partnerships and sustainable financing for cancer control. Coordination of cancer prevention and control activities ensures prudent use of available resources. This focuses efforts of all stakeholders towards a common goal, ensures smooth running of programs and limits overlaps and redundancies. Health systems need to work in partnership with other sectors to ensure social determinants are considered in service planning and provision within communities.

Financing for cancer control remains a challenge for many developing countries including Kenya. Deliberate efforts should be made to ensure adequate and sustainable funding for cancer prevention and control, by involving all players at all levels. Various global and regional declarations recognize the importance of universal health coverage, especially through primary health care and social protection mechanisms. Adequate financial mechanisms are needed to provide access to health services for all, in particular, to the most vulnerable populations. This pillar hopes to achieve the above stated functions using several strategic objectives and activities in broad areas.

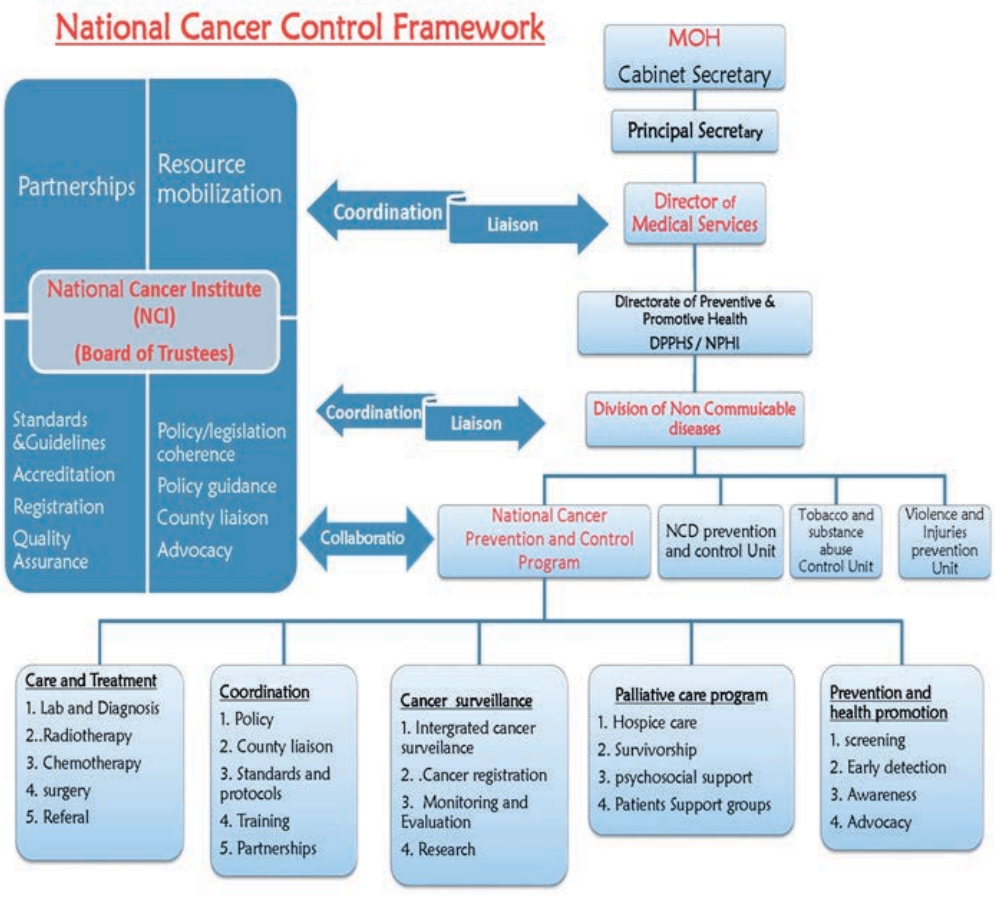

Figure 1: National Cancer Control Framework

Overarching goal

To improve coordination, partnerships and financing of cancer prevention and control in Kenya

Strategic Objective 4.1. Improve coordination structures at National, County and Sub-County levels

Activities

1. Conduct a baseline assessment of existing coordination structures
2. Establish a coordination framework for cancer services at national and subnational levels
3. Disseminate the coordination framework
4. Establish and operationalize multi-sectoral Technical Working Groups (TWGs)
5. Establish a specific TWG to coordinate childhood cancers

Strategic Objective 4.2. Strengthen National Cancer Institute (NCI)

1. Increase financial resource allocation
2. Increase human resource allocation
3. Increase infrastructure allocation-office space, vehicles, equipment etc.
4. Engage County Governments to establish County Cancer Coordinating Committees (CCCC) at county level
5. Support formation of sub-committees to bring together members from relevant sectors
6. Develop regulations to operationalise the cancer control act.

Strategic Objective 4.3. Strengthen the National Cancer Control Program (NCCP)

1. Increase financial resource allocation
2. Increase human resource allocation
3. Promote the creation of county cancer control programs at county levels
4. Provide policy guidance on integration of priority cancer services with other services at health facilities e.g. reproductive health (RH), maternal and child health (MCH), HIV, etc.
5. Build capacity of NCCP staff

Strategic Objective 4.4. Strengthen partnerships at all levels

1. Establish partnership forums with frequent meetings
2. Strengthen and regularly update information on cancer prevention and control activities within the NCD platform
3. Create a mechanism for mainstreaming cancer prevention and control in all sectors
4. Develop cancer prevention and control policies/guidelines to relevant government and private sector

Strategic Objective 4.5. Establish sustainable financing for cancer prevention and control

1. Advocate for universal health coverage for cancer services through health insurance
2. Advocate for free cancer care for children below the age of 12 years
3. Support establishment of a cancer control fund to support cancer control priority interventions within the public and private sector
4. Identify and advocate for broadening of existing opportunities for taxation and levies.
5. Advocate for access to levies accrued from taxation of products whose consumption is linked to cancer
6. Advocate to County governments to allocate budget line for cancer prevention, screening and early diagnosis
7. Fund research on occupational exposures and potential environmental conditions that lead to cancer

Strategic Objective 4.6. Strengthen Public Private Partnerships (PPP)

1. Adopt relevant regulations under the PPP Act to promote private sector investment in service delivery.
2. Work with private sector to determine the idle capacity in their institutions
3. Create and establish means of structured engagement with private sector to utilize idle capacity

Strategic Objective 4.7. Promote access to affordable essential medicines and technologies for cancer services

1. Advocate for the inclusion of essential medicines (by treatment regimen), and technologies for priority cancers in the KEML
2. Advocate for an enabling environment to lower the cost of cancer services and products

Strategic Objective 4.8. To have a strategic framework and mechanism that supports cancer advocacy, communication, and social marketing [ACSM]

Activities

1. Advocate for the development of a cancer health communication strategy
2. Mobilise resources for development, dissemination, monitoring and evaluation of the cancer health communication strategy
3. Identify and map the appropriate communication tools based on stakeholder needs and current determinants of health
4. Map and identify platforms available to disseminate cancer information for various audiences

5. Identify and engage multi-sectoral stakeholders to support cancer communication
6. Regular monitoring and evaluation of cancer ACSM activities and materials towards a standardised communication and advocacy practice.

Accountability and implementation roles and responsibilities

Role of the National Government

1. Provide leadership and stewardship in cancer prevention and control.
2. Development, review and monitoring of policies that enable coordination of cancer prevention and control activities
3. Allocate sustainable and predictable resources for cancer prevention and control.
4. Forge appropriate multi-sectoral partnerships locally, regionally and globally.
5. Integrate cancer prevention and control in sustainable development agenda f or the country.
6. Prioritize cancer prevention and control in the heath financing policy.
7. Enhance universal health coverage by:
    i. Increasing enrolment to health insurance
    ii. Extending coverage for the entire spectrum of cancer care
    iii. Reducing catastrophic out-of-pocket expenditure on cancer services

Role of NHIF

1. Increase NHIF enrolment
2. Harmonize packages for cancer treatment, palliative care including access to morphine and other opioids, screening, prevention, end of life, hospice care and survivorship support

Role of County Governments

1. Prioritize cancer prevention and control activities at the County level.
2. Allocate resources for cancer prevention and control at the county.
3. Integrate cancer prevention and control into the broader county health agenda
4. Forge appropriate multi-sectoral partnerships at the county level.
5. Implement national government policies and guidelines for cancer prevention and control.

Role of Civil Society Organization/Faith Based Organizations

1. Advocate for increased resource allocation at all levels
2. Participate in knowledge exchange and share best practices
3. Forge multi-sectoral partnerships at all levels
4. Demand for accountability for utilization of cancer prevention and control funds
5. Be proactive in improving access to cancer prevention and control services
6. Align themselves to the interventions outlined in this strategy

Role of private sector, development and implementing partners

1. Offer technical and financial support for coordination of cancer prevention and control.
2. Allocate resources for cancer prevention and control activities
3. Subsidize the cost of cancer commodities (drugs, equipment, supplies, prosthesis etc.)
4. Facilitate the provision of health insurance for the most vulnerable population

Role of the Public

1. Enrol in health insurance schemes to ensure that they access cancer prevention and treatment services
2. Engage in any information sharing forums
3. Participate in financing cancer prevention and control activities
4. Advocate for increased funding for cancer prevention and control
5. Demand for accountability for utilization of cancer prevention and control funds

PILLAR 5: MONITORING, EVALUATION AND RESEARCH

PILLAR 5: : Monitoring, Evaluation And Research

Introduction

Monitoring and evaluation (M&E) will form an essential component of the NCCS and will seek to build on existing systems. A high-level M&E framework is presented as an appendix for this strategy. Detailed M&E plan will be elaborated as part of the documents to operationalize this strategy. The NCCP will establish an overall evaluation protocol, as well as develop and oversee implementation of an evaluation plan. It will determine the needs, questions, methods, measures of effectiveness, and framework for evaluation of the strategy activities and outcomes. Using routinely available data as well as data from research, the NCCP will generate on a regular basis reports covering the five pillars for this strategy.

Research agenda for cancer can include different approaches from basic science, intervention/operational research, or use of routine data for surveillance. Research will contribute key inputs to knowledge synthesis, and the production of the evidence needed for effective prevention and control of cancer.

There is need for increased social, behavioural, environmental, and psychological and health services research to determine and evaluate better methods of preventing cancer; encouraging timely access to screening, diagnosis, treatment and palliative care services; and improving rehabilitation and support activities. Such research has great potential to substantially reduce the incidence and impact of cancer. Training as well as funding will be needed to stimulate research in fields that are presently under-investigated as detailed in the imPACT report 2016 (WHO, IAEA, IARC 2016).

Cancer control research seeks to identify and evaluate the means of reducing cancer morbidity and mortality and of improving the quality of life of people living with, recovering from or dying of cancer. Research is needed across the spectrum of cancer control to provide the basis for continual improvement.

Overarching goal

To improve the effectiveness of cancer control through monitoring, evaluation and research

Strategic objective 5.1. To ensure effective coordination of cancer research

Activities

1. Create a coordinated cancer research structure
2. Develop a research agenda for cancer control and prevention
3. Work with ERCs to develop and maintain a repository of ongoing and completed research work

4. Create channels for dissemination of research on cancer e.g. annual cancer symposiums
5. Work with relevant stakeholders to increase implementation science capacity for cancer control in the country
6. Work with other research units to develop a strategic and regular process for facilitating research relevant to cancer control
7. Advocate for government funding for cancer research

Strategic objective 5.2. Strengthen research and use of research data

1. Strengthen the cancer research technical working group and promote use of the cancer registry for research
2. Establish a research fellowship program at the NCI-K and promote linkages with research and academic institutions

Strategic objective 5.3. Improve the effectiveness of cancer treatment and palliative care through research and surveillance

Activities

1. Advocate for inclusion of cancer treatment and palliative care services indicators in national surveys such as demographic and health survey, STEP etc.
2. Support research activities at all levels of cancer services delivery
3. Support testing of new technologies and treatment protocols in clinical cancer management
4. Work with relevant institutions to support research on alternative medicine use in cancer services

Strategic objective 5.4. Monitoring and evaluation

1. Develop documents to operationalize the strategy
2. Develop detailed M&E plan
3. Produce on yearly basis progress reports on implementation of the strategy, process and outputs where possible

Strategic objective 5.5. Priority research agenda for different pillars

Pillar 1. Prevention, Early Detection and Cancer Screening

1. Epidemiological (environmental or human behavioural factors)
2. Effectiveness (impact assessment) of the awareness campaigns for prevention and treatment of cancers.
3. Study to obtain baseline data on each of the known cancer risk factors (alcohol consumption, tobacco use, unhealthy diet, physical inactivity)
4. To investigate the contribution of known environmental and occupational risk factors to development of cancer in Kenya

5. To investigate the contribution of infectious agents to development of cancers in Kenya
6. Study to understand the performance of preventive, screening and early diagnostic services for cancer (including infrastructure and human resource)
7. Cost benefit analysis of the various interventions in prevention, screening and early diagnosis of cancer
8. Operational research on utilisation of standardized research tools / HMIS system: [whether or how?]
9. Investigate the impact of the standardised communication tools and platforms on cancer prevention, early diagnosis and screening

Pillar 2. Cancer Diagnosis, Registration and Surveillance

1. Laboratory based research on biological mechanisms underlying cancer, etc.
2. Detailed study of the pathology system in Kenya to better understand its nature, pathway of specimen referral, points of weakness in the system, and extent of the problems to derive workable short- and long-term solutions.
3. Detailed study of the medical imaging in Kenya to better understand its nature, pathway of referral, points of weakness in the system, and extent of the problems to improve access and use
4. Undertake a national mapping study on infrastructure, human resource and equipment for cancer diagnosis.

Pillar 3. Cancer Treatment, Palliative Care and Survivorship

1. Clinical research to determine the most effective treatment, palliative care approaches and role of end of life care
2. Psychosocial and behavioural (e.g. factors impacting on prevention, the response to screening, and the impact of diagnosis and treatment)
3. Effectiveness of medicinal plants and traditional treatments and ways of integrating them into the conventional health system

Pillar 4. Coordination, Partnership and Financing For Cancer Control

1. Health systems and health policies (e.g. how services can best be implemented and organized).
2. Effective ways to improve access to quality cancer health care services e.g. ways to decrease the healthcare costs associated with cancer prevention and treatment
3. Low-cost research mainly for evaluation of epidemiological and treatment results of different diseases
4. Conduct cost analysis including potential financial impact to patients, to formulate essential package for NCD/cancer control services, as per level of health care and in line with evidence-based guidelines

5. Carry out feasibility study to allow creation of more specialized posts in cancer services to achieve safe and effective delivery of cancer care.
6. Support publication of research on cancer as part of capacity building

Accountability and implementation roles and responsibilities

Role of the National Government

1. To provide enabling environment for monitoring, evaluation and research on cancer in Kenya
2. Identify and address inequalities within the system.

Role of the various bodies within the national government

Ministry of Health (Research unit, NCCP, NCI)

1. Prioritise cancer research as part of cancer control
2. Mobilise resources for cancer research and ensure appropriate utilisation.
3. Dissemination of cancer research agenda
4. Capacity building on cancer research
5. Engagement with international agencies and groups dealing with cancer research and funding
6. Coordination and collaboration for M&E and research
7. Hosting Cancer symposiums

National treasury

1. Fund national and county government activities for cancer M&E and research

Pharmacy and Poisons Board

1. Contribute to repository of clinical trials on cancer in Kenya

National Hospital Insurance Fund (NHIF)

1. Promotion of operational research and submission of cancer related data

Cancer Registries

1. Collection and collation of data for cancer research

Ethical review committees (ERC)

1. Annual compilation of cancer research proposals approved

Role of County Government

1. To facilitate and support cancer M&E and research activities

Role of civil society / FBOs / NGOs / Voluntary Organizations

1. Advocacy to increase public and leadership awareness on cancer research
2. Advocacy for increased resources for cancer research
3. Lead social accountability for cancer M&E and research

Role of the Private Sector / Academia / Health Care Providers / Private Insurance

1. Collaboration with public sector on cancer M&E and research
2. Facilitate identification of cancer research agenda
3. Implementation of research at all levels: basic, medical, epidemiological, clinical trials, operation research

Role of the Public

1. Participation in cancer research

Service delivery units

1. Conduct operations research
2. Contribute data to cancer registries and other national health information systems (e.g. DHIS2)

Role of Health Development Partners

Technical support

1. Where appropriate, provide TA at national and county levels on M&E and research
2. Support human resource for M&E and research

Financial and logistical support

1. Align funding for cancer research and M&E activities to the NCCS.

IMPLEMENTATION MATRIX

IMPLEMENTATION MATRIX

Activity	Timeframe					Responsible partner	Indicators	Expected outputs
	Year1	Year2	Year3	Year4	Year5			
Strategic Objective 1.1: To reduce exposure to known lifestyle risk factors (alcohol consumption, tobacco use, dietary, physical inactivity, by the year 2022								
1.1.1. Reduce Use of Tobacco / Tobacco Related Products and Exposure to By-Products to 10% from a baseline of 13.1% (STEP Survey 2015)								
1. Advocate for implementation and enforcement of smoke free environments in all indoor workplaces and public places	x	x	x	x	x	MOH, NACADA, NEMA. COUNTY HEALTH MINISTRY, Tobacco Control Board, CSO's involved	Biannual advocacy forums addressing implementation and enforcement at county level	New Smoke free environment/ spaces established
2. Advocate for dissemination and implementation of tobacco cessation guidelines	x	x	X	X	X	MOH-Tobacco control unit. Tobacco Control Board, COUNTY HEALTH MINISTRY,	No. of facilities implementing guidelines	Cessation guidelines available and utilized
							No. of health care providers trained	Health care providers trained on cessation guidelines
							No. of peer educators trained	Peer educators trained on tobacco cessation
							% of institutions implementing tobacco cessation programs	Support services to current smokers provided
3. Incorporate Tobacco Control into the community health strategy	x	x	x	x	x	MoH, Tobacco control unit, County Level Community Focal Person	No. of CHEWS trained	Community health workers and Volunteers trained on Tobacco control
						CHEWS, CSO	No. of CHVs trained.	Tobacco control education tools for CHVs developed
						County Level Community Focal Person	No. of CUs incorporating tobacco control activities	

4. Incorporate tobacco control into school health program including in school curriculum.	x	x	x	x	x	MoH,	% of schools with tobacco control initiatives	Tobacco control initiatives introduced into schools
						MoE,	No. of teachers trained, % of schools incorporating tobacco control in their health clubs	Tobacco control activities incorporated into school health clubs
5. Conduct advocacy and targeted public awareness on health, social, economic and environmental effects of all forms of tobacco including shisha	X	X	X	X	X	MoH,	No. of IEC materials developed	Population targeted tobacco control messages developed and disseminated
							No. of materials disseminated	Public awareness forums conducted
							No.of campaigns conducted on appropriate platforms for the targeted population e.g. Social media	
6. Identify and implement alternative sources of livelihood for tobacco farmers	x	x	x	x	x	MoH,	No. of sensitization forums held	Tobacco farmers sensitized on alternative livelihoods
						Ministry of Agriculture,	% of farmers practicing alternative farming	
							No. of counties sensitized on alternative livelihoods	
7. Initiate and sustain targeted media campaigns against tobacco use	x	x	x	x	x	MOH	No. of media houses utilizing tobacco control messages	Media specific Tobacco control messages developed
8. Advocate for allocation of Tobacco Tax towards cancer control programs	X	X	X	X	X	MOH, KENCO, TREASURY	No. of advocacy forums with legislative bodies	

1.1.2. Reduce risk posed by unhealthy diets from 94% to 62% and physical inactivity from 46% to 23% by 2022 (STEP Survey 2015)								
1. Advocate for the finalization and implementation of national guidelines on diet, nutrition and physical activity	x	x	x	x	x	MOH, Ministry of Agriculture	No. of Advocacy forums organized	Advocacy forums on National dietary guidelines organized
2. Promote educational campaigns about healthy diets and physical activity	x	x	x	x	x	MOH, AIHD, NCDAK, KEBS	No. of IEC developed	IEC materials developed and disseminated
							%age of IEC materials disseminated	Media campaigns held
							% of the population reached	Community education sessions
							No. of Community sessions held	
3. Promote safe cooking and food preservation methods	X	X	X	X	X	MOH, Ministry of agriculture	%. of population reached	community education sessions
4. Promote farming and storage methods that reduce cancer risks such as safe use of chemical fertilizers, herbicides and pesticides	x	x	x	x	x	Ministry of agriculture	% of farmers reached	community education sessions targeting farmers
5. Advocate for enactment of legislation to control and/ or ban advertising of unhealthy foods and drinks	X	X	X	X	X	MOH, KENCO, WHO	No of advocacy forums held	Advocacy forums held
7. Advocate for regulation of food industry with regard to disclosure and labelling of food content and preparation	x	x	x	x	x	MOH	No. of advocacy forums held	Advocacy Forums held
8. Advocate for taxation on refined sugars /sugary drinks (sin tax) and unhealthyfoods and drinks	X	X	X	X	X	MOH	No.of advocacy forums held	Advocacy forums held

1.1.3. Reduce alcohol consumption from 19% to 13% and eliminate (100%) exposure of alcohol to children and youth by 2022								
1.Support implementation of the Alcoholic Control Act and national action plan	x	x	x	x	x	MOH	Survey, reports	Alcohol action plan implementation increased
2. Advocate for total ban on alcohol advertisement						MOH		
3. Advocate for Finalization and implementation of the National strategy on prevention and control of harmful use of alcohol.						MOH	No.of advocacy forums held	Advocacy forums held
4. Raise public awareness among the youth and other vulnerable populations about alcohol-related health risks	x		x	x	x	MOH	No. of sensitization sessions held	Targeted messages for youth developed and disseminated
						MOH	No. of IEC materials developed	Public awareness campaigns conducted
						MOH	% of young people reached	
5.Incorporate information on the risks of alcohol consumption into the school health curriculum.	x	x	x	x	x	MoH, Ministry of Education, NACADA	No. of meetings held	Information on alcohol incorporated in school curriculum
							No. of hours allocated for alcohol content in curriculum	
6.Strengthen national Health Management information system (HMIS) to provide regular data on alcohol consumption and related problems	x	x	x	x	x	MoH	No. of health facilities reporting	Accurate, timely, comprehensive and complete data generated
Strategic Objective 1.2: To decrease the exposure to environmental and occupational risk factors								
1. Advocate for the implementation of the tobacco control act to prevent its environmental effects.						MOH Tobacco Control Unit, Tobacco Control Board	No.of advocacy forums held	Advocacy forums held
2. Advocate for implementation of guidelines for environmental and occupational carcinogenic agents	x	x	x	x	x	MoH, Ministry of Labour	No. of institutions utilizing guidelines	Guidelineson environmental and occupational hazards implemented
							Surveys	Relevant Officers trained on guidelines
							No. of Officers trained on guidelines	

3. Advocate for safe disposal of toxic wastes such as industrial, nuclear, cytotoxic and electronic waste.	x	x	x	x	x	MoH	No. of forums held	Advocacy forums held
4. Advocate for the periodic screening and monitoring of individuals exposed to occupational hazards that cause cancer	x	x	x	x	x	MoH, Ministry of Labour	No. of forums held	Advocacy forums held
5. Limit exposure and mitigate effects of exposure to carcinogens in the workplace	x	x	x	x	x	NEMA, MOH, OSHA	survey reports	Policies at work place implemented
Strategic Objective 1.3: To reduce exposure to known infectious agents, and increase detection and treatment of cancers due to infectious agents to 16% from baseline of 33% [Cancer atlas- WHO, AIARC 2008] * baseline data based on cervical cancer data from STEPS Survey 2015								
1. Advocate for Education of parents and caregivers on safety and need for universal immunization with the aim of increasing uptake and coverage	X	X	X	X	X	MOH-NVIP	No. of forums held	Advocacy forum held
							No of CHV's trained.	
							No of CHEWS trained	CHV's and CHEWS trained on importance of immunization schedules.
							% of children vaccinated increased.	Children presented for vaccination at the right time.
2. Advocate for implementation of HPV recommended immunization schedules, based on epidemiological needs and programmatic considerations	X	X	X	X	X	MOH-NVIP	No. of advocacy meetings/ sessions held	Advocacy sessions held
3. Advocate for improved surveillance on infectious diseases that are linked to cancer	X	X	X	X	X	MOH-DHIS 2	No of advocacy sessions held	Advocacy sessions held
						MoH-DSRU, KEMRI- CVR	No of health facilities reporting on Hep B and HPV infections.	Raw data on active Hepatitis B and HPV infections available at DHIS.
4. Develop targeted screening programs for HPV and HBV	x	x	x			MOH-RHU	% of individuals screened for HPV	Targeted HPV primary screening program rolled out.
						MOH-Communicable Disease, KEMRI-CVR	% individuals screened for HBV	Targeted HBV screening programs rolled out.

5.Integrate HPV and HBV screening into existing HIV, MNCH, RH and FP programs	x	x	x			MOH, County Govts	Proportion of health facilities integrating screening services for HPV and HBV	HPV and HBV Screening Integrated at all health facilities
6.Promote healthy reproductive and sexual behavior through provision of appropriate information						MOH -Health Promotion Unit	No of people aware of healthy sexual behavior.	Appropriate information developed.
								Information on healthy sexual behaviors practices disseminated.
Strategic Objective 1.4: To increase access to quality and equitable prevention, screening and early diagnosis by increasing screening from 16%* baseline to 25% and down staging from 80% to 40% *using cervical cancer data as a reference point								
1.Develop and adopt national guidelines for cancer screening and early diagnosis including a referral and follow up mechanism	x	x	x			MOH	No. of health care providers sensitized on guidelines	Guidelines developed and disseminated
							No. of health facilities utilizing guidelines, Reports, surveys	Effective referral and follow up mechanism implemented
2. Advocate for inclusion of cancer screening and early diagnosis packages in the NHIFand private insurance	x	x	x	x	x	MOH,	No. of services included in the reviewed NHIF package	Cancer screening and early detection included in NHIF package
							No. of beneficiaries of reviewed NHIF package	NHIF service package expanded to different categories of the population
							No. of health facilities offering reviewed NHIF service package	
3.Build and expand human resource capacity for cancer screening and early diagnosis						MOH, County Governments	No. of health care providers trained by cadre	Health care providers trained in cancer screening and early detection
							Proportion of health workers providing quality services	
							No. of institutions providing quality services, surveys, reports	

4. Adopt scalable primary health care services and affordable technologies to meet demand	x	x	x	x	x	MOH	No. of primary health care facilities offering quality timely services	Health care facilities well equipped to meet demand for services
							% of CHVs equipped to provide timely services	
							Proportion of clients satisfied with quality of services, surveys, reports	
5.Develop educational strategies and low-cost media campaigns with content for broad community outreach	x	x	x	x	x	MOH, Ministry of Information, Ministry of Education	% of people reached with key messages	Key messages developed and disseminated through appropriate communication channels
							% increase in people adopting screening and early detection services	
							Survey Reports	
6.Sensitize policy makers on the need to support early diagnosis programs.	x	x	x	x	x	MOH,	No. of policy makers sensitized	Sensitization tool kit developed
							Support provided by policy makers by type	Sensitization sessions held with key policy makers
7.Raise awareness of cancer to empower the public and health workers to recognize early signs and symptoms of cancer.	x	x	x	x	x	MOH, Ministry of Education, Ministry of ICT	No. of sensitization sessions /meetings /campaigns held	Key messages developed and disseminated through appropriate media
8. Strengthen genetic services to address familial cancers.	x	x	x	x	x	MOH	No. of counsellors trained	Genetic counsellors trained
							No. of health facilities providing genetic services.	Laboratory services expanded
9. Support piloting of population-based cervical cancer screening for women over 30 years, in five counties where comprehensive regional cancer centers are being planned	x	x	x	x	x	MOH		

CHILDHOOD CANCERS								
10. Create awareness of childhood cancers	X	X	X	X	X	MOH- Child Health Unit , NCCP , Health Promotion Unit, County governments	No. of messages developed	Messages developed
							No. of campaigns held	campaigns held
							% of individuals reached	
11. Integrate childhood cancers into existing public health promotion programs.	X	X	X	X	X		% of program with childhood cancers integrated	Childhood cancers messages integrated into existing health promotion programs
12. Sensitize healthcare workers on clinical presentation of childhood cancers and prompt referral	X	X	X	X	X		No. of materials developed	Sensitization materials developed
							% of health workers reached	health care workers sensitized
13. Advocate for utilization of retinoblastoma screening approach provided in the MNCH guidelines	X	X	X	X	X		%. of facilities utilizing screening approach in the MNCH guidelines	Advocacy forums held
14.Targeted screening for siblings of index retinoblastoma cases	X	X	X	X	X		no. of siblings screened	Siblings of retinoblastoma cases screened
Strategic Objective 1.5: To increase access to data on cancer prevention, screening and early diagnosis from 30% to 70% by 2022								
1.Develop standardized data collection tools	x					MOH	No. of tools developed	
2.Develop standardized cancer risk indicators.	x					MOH	No. of indicators developed	
3. Link data collection to Health Management Information Systems [HMIS]	x	x	x	x	x	MOH, civil society	No. of indicators developed.	Accurate, timely, comprehensive and complete data generated
							No. of Meetings held	Cancer risk related indicators developed and incorporated in the HMIS
4. Integrate cancer indicators into existing research platforms e.g. STEPS, KDHS, KHFA	x	x	x	x	x	MoH	No. of health facilities reporting	Cancer indicators integrated into existing research platforms.
						MoICT	Proportion of facilities collecting and reporting complete and comprehensive data	Survey reports conducted

5. Enhance existing population-based and hospital-based cancer registries	X	X	X	X	X	MoH Ministry of planning	No. of Institutions involved Number of surveys conducted	
Strategic objective 2.1. Improve and strengthen cancer medical imaging services								
1. Institutionalize a technical working group/oversight committee that will oversee the planning of imaging services for cancer diagnosis	X					NCI-K, NCCP	A TWG for cancer diagnostic imaging with TORs	Cancer diagnostic imaging TWG with TORs
2. Establish a network of diagnostic imaging services for cancer with clear roles and responsibilities with a referral algorithm		X				NCI-K NCCP	an established network with a referral algorithm	Diagnostic imaging network with a referral algorithm
3. Carry out a situational analysis of medical imaging capacity in Kenya	X	X				Cancer diagnostic TWG NCI-K	Publication of report	Publication and dissemination of report
4. Develop operational standards and guidelines for cancer imaging, including for childhood cancers	X	X				Cancer diagnostic imaging TWG and NCI- K	Publication of standards and guidelines	
5. Design, develop and implement a common training plan based on the human resource needs/skills in cancer imaging with a focus on sustainability and retention	X	X	X	X	X	MoH cancer program	Publication of training plan, and implementation of recommendations	Publication of training plan, and implementation of recommendations
6. Develop, adopt and adapt guidelines and algorithms for diagnostic imaging workup of priority cancers in both children and adults for each level of care.	X	X				MoH cancer program	Publication and dissemination of diagnostic guidelines and algorithms	Publication and dissemination of diagnostic guidelines and algorithms
7. Develop and conduct training programs for hospital administrators and county administrative staff on roles, responsibilities and referral algorithm in the efficient functioning of the cancer imaging diagnostic network.		X	X	X	X	MoH cancer program	50% of all counties, 100% of national referral hospitals and comprehensive cancer centers trained	50% of all counties, 100% of national referral hospitals and comprehensive cancer centers trained

8. Develop and manage national QA guidelines (including safety) for various levels imaging services for cancer in collaboration with relevant regulatory bodies	X	X	X			NCI-K	Published national guidelines for QA	Published national guidelines for QA
9. Develop and implement national guidelines for radiology diagnostic imaging and nuclear medicine imaging (aligned to IAEA guidelines on nuclear medicine),		X	X	X	X	Radiation protection Board/Moh	National guidelines	
Strategic Objective 2.2. Improve and strengthen cancer pathology diagnostic and Laboratory medicine services								
1. Institutionalize a technical working group/oversight committee that will oversee the planning of cancer pathology diagnosis and Laboratory Medicine for Kenya.	X	X	X	X	X	NCI-K	Expanded multi-sectoral cancer diagnostic TWG with TORs	Cancer pathology diagnosis and laboratory medicine TWG with TORs
2. Establish a functional comprehensive National cancer reference laboratory	X	X	X			MOH	A functional cancer reference laboratory, Cancer diagnostic reports	A functional cancer reference laboratory, Cancer diagnostic reports
3.Develop a national external quality assurance (EQA) program for cancer pathology diagnostics and laboratory medicine	X	X	X	X	X	NCI-K	50% of medical laboratories and imaging centers in cancer diagnostics accredited	50% of medical laboratories and imaging centers in cancer diagnostics accredited
4. Enroll the National Cancer Reference laboratory in an accreditation program		X	X	X	X	MoH	ongoing accreditation program	Quality improvement reports
5. Develop, adopt and adapt guidelines and algorithms for pathology diagnostic workup of priority cancers in both children and adults for each level of care.	X	X				MoH cancer program	Publication and dissemination of pathology diagnostic guidelines and algorithms	Publication and dissemination of diagnostic pathology guidelines and algorithms
6. Training of healthcare providers on guidelines and algorithms for pathology cancer diagnosis and laboratory medicine		X	X	X		MoH cancer program	50% of all counties, 100% of national referral hospitals and cancer comprehensive centers	50% of all counties, 100% of national referral hospitals and cancer comprehensive centers

7. Conduct a skills-needs situational analysis/ assessment of capacity for proper pathology identification/diagnosis of pediatric and adult cancer cases	X	X				MoH cancer program	Publication of report	Publication of report
8. Design, develop and implement a common training plan based on the human resource needs/skills with a focus on sustainability and retention	X	X	X	X	X	MoH cancer program	Publication of training plan, and implementation of recommendations	Publication of training plan, and implementation of recommendations
9. Develop and manage national QA guidelines (including safety) for various levels of pathology diagnosis laboratory and imaging services for cancer in collaboration with relevant regulatory bodies	X	X				NCI-K	Published national guidelines for QA	Published national guidelines for QA
10. Develop centralized medical information systems to include cance pathology diagnosis and develop linkages with DHIS and cancer and registration surveillance	X	X	X	X	X	MOH - HIS	Established LMIS cancer information system linked to DHIS and national cancer registry & surveillance	Established LMIS cancer information system linked to DHIS and national cancer registry & surveillance
11. Develop implementation plan in data collection, compilation, utilization and reporting, using standardized IARC tools and templates, including autopsy reports	X	X				MOH - HIS	All laboratories at level 3 and higher equipped with computers by the end of year 1-2	All laboratories at level 3 and higher equipped with computers by the end of year 1-2
12. Develop policy and guidelines for procurement and maintenance of equipment for cancer diagnostics	X	X				NCI-K,NCCP	Published national guidelines for procurement and maintenance	Published national guidelines for procurement and maintenance
							80% decrease in service and equipment downtime for cancer diagnostics	80% decrease in service and equipment downtime for cancer diagnostics
13. Forge partnerships with supra national cancer institutions to support advanced pathology diagnostic tests	X	X	X	X	X	MoH	Approved partnerships	Advanced pathology diagnostic reports for cancer

14. Design, develop and implement marketing, advocacy and promotional materials for cancer pathology diagnosis and laboratory medicine	X	X	X	X	X	MOH	Creation of tools and materials	Creation of tools and materials
15. Support clinical research pathology of cancer and treatment	X	X	X	X	x	NCI-K KEMRI MoH	ongoing research	
Strategic Objective 2.3. Establish a framework within which planning and development of an integrated cancer registration and surveillance system will occur								
1. Strengthen and expand the cancer registration and surveillance technical working group.	X	X	X	X	X	NCI-K	TORs and quarterly meeting minutes	TORs and quarterly meeting minutes
2. Develop a monitoring and evaluation plan for surveillance of cancer registration	X	X				NCI-K, NCCP/KEMRI	Publication of plan	Publication of plan
Strategic Objective 2.4. Create a network of cancer registration and surveillance with clearly defined roles and responsibilities.								
1. Establish a network of cancer registries in the country	X	X				NCI-K, NCCP, NCRP/KEMRI	Network created	High quality Network created
2. Develop a document detailing the roles and responsibilities of cancer treatment and diagnostic centers both in public and private sectors in regards to reporting cancer cases to the National Cancer Registry	X	X				NCI-K, NCCP, NCRP/KEMRI	Document outlining roles and responsibilities	Document outlining roles and responsibilities
3. Review and update a needs assessment for proposed cancer registry sites	X	X	X	X	X	NCI-K,NCCP, NCRP/KEMRI	Assessment report	Assessment report
4. Set up additional fully- functional population-based cancer registries	X	X	X	X	X	NCI-K, NCCP, NCRP/KEMRI	Ten additional population- based cancer registries	Ten additional population- based cancer registries
5. Conduct training programs for regional cancer registries.	X	X	X	X	X	NCI-K, NCCP, NCRP/KEMRI	100% of regional cancer registry personnel trained	100% of regional cancer registry personnel trained
Strategic Objective 2.5. Establish and implement operational standards and guidelines								
1. Operationalize standard IARC data collection tools and ensure ICD-0 compliance	X	X				NCI-K, NCCP, NCRP/KEMRI	100% of population based cancer registries using tool and ICD-0 compliant	100% of population based cancer registries using tool and ICD-0 compliant
2. Training of trainers (ToT) for health workers on cancer registration and surveillance	X	X	X	X	X	NCI-K, NCCP, NCRP/KEMRI	20 additional TOTs trained	20 additional TOTs trained

Strategic Objective 2.6. Cancer registration and surveillance services well-staffed, trained and managed.								
1. Recruit and train health records and information officers(HRIOs) on cancer registration	X	X	X	X	X	NCI-K, NCCP, NCRP	Number of HRIOs recruited and trained on cancer registration	Number of HRIOs recruited and trained on cancer registration
Strategic Objective 2.7. Quality assurance (QA) and continuous quality improvement (CQI) programmes for cancer								
1. Transition to an Electronic Data Collection and Transmission System	X	X	X	X	X	NCI-K, NCCP, NCRP/KEMRI	EMR system in place	EMR system in place
2. Integrate cancer registry data collection tools into existing health information systems	X	X	X	X	X	NCI-K, NCCP, NCRP/KEMRI	Cancer registration variables integrated into DHIS	Cancer registration variables integrated into DHIS
Strategic Objective 2.8. A marketing, advocacy and promotional programme designed and implemented to ensure quality cancer registration and surveillance services nationally.								
1. Conduct annual National education campaign for healthcare providers working in cancer treatment and diagnostic centers on the importance of cancer registration...	X	X	X	X	X	NCI-K, NCCP, NCRP/KEMRI	Number of health care providers reached	Number of health care providers reached
							Number of national education campaigns conducted	Number of national education campaigns conducted
Strategic Objective 2.9. Revise legislation and regulations in support of cancer registration and surveillance.								
1. Review and revise current legislation on mandatory reporting of cancer.	X	X				NCI-K, NCCP, NCRP/KEMRI	Report on proposed revision to legislation.	Report on proposed revision to legislation.
2. Establish unique cancer patient identifier for the Kenyan population	X	X	X	X	X	MoH, NCI-K	75% of births registered.	75% of births registered.
3. Enforce laws for notification of cancer	X	X	X	X	X	MoH cancer program, CEC for health	50% increase in reporting facilities and 100% increase of facilities reporting	50% increase in reporting facilities and 100% increase of facilities reporting
Activities	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Responsible**	**Indicators**	**Expected Outputs**
Strategic Objective 3.1: Provide optimal treatment for those with cancer								
1. Increase number of facilities providing comprehensive cancer service	X	X	X	X	X	MOH, County governments	No of facilities providing comprehensive care	Functional facilities

2.Establish and strengthen multidisciplinary tumor boards infacilities offering cancer services to improve patient care	X	X	X	X	X	MoH NCI Training Institutions County Govts	Functional tumor boards List of attendance of tumor board meetings	Improved treatment outcomes and improved quality of life
3.Ensure timely access to treatment currently recognized as providing optimal outcomes	X	X	X	X	X	MoH Professional Associaons (including KPA) County govt Community Support groups NHIF Cancer Stakeholders	Number of patients with improved quality of life	Improved cancer patient outcomes More survivors Improved knowledge base of the team
4.Systematically assessing new treatment approaches	x	x	x	x	x	NCI-K MOH Profes-sional bodies Teaching institutions Regulatory bodies County govt Research Institutions	Clinical trials Guidelines on Changes int reatment regimen	Increased research-es on effectiveness of treatment modalities
5.Work with radio therapy services to develop standards for the utiliza-tion,replacement and addition of radiation oncology equipment	X	X				MoH, NCI, NHIF Training Institutions Radiation Protection Board Professional Bodies	Standards for radiation oncology equipment	Availability of radiation oncology equipment in more health facilities
6.Establish a think tank composed of experts all areas of cancer services to identify major areas of cancer services which require attention	X	X	X	X	X	MoH,NCI,Cancer stakeholders, Professional associa-tions, development partners,NHIF	Utilizing idle capacity in the private sector, referrals between private and public facilities for patient management	Improved cancer patient care, improved diagnosis and referrals where applicable
7.Multi disciplinary and inter-disciplinary coordinat-ed cancer patient care to ensure holistic management	X	X	X	X	X	MOH,NCI,Training Institutions,Regulatory bodies,Professional Associations,Con-cerned health facilities	Team work within the cancer teams	Improved cancer patient care, improved diagnosis and referrals where applicable
8.Expand cancer specialist outreach programs in medical oncology/chemo-therapy at all levels of healthcare	X	X	X	X	X	MoH,NCI,Private sector, NHIF,Count govts, health facilities	Availability of cancer services beyond the current few facilities	Better treatment outcomes,capacity building of more healthcare workers by visiting special-ists,less referrals to the referral facilities for manageable treatment modalities
9.Establish mandatory guidelines aligned to international & regional guidelines (as adapted to low-resource settings) for the establishment and maintenance of cancer units with surgery treatment	x	x				NC-KMOH Professional bodies (KEHPCA, KESHO, KPA,Kenya Oncology Nurses Chapter)Teaching institutions,National referral hospitals, Regulatory bodies County govt Cancer Stakeholders Private-hospitals and FBO	Guidelines devel-oped Adopted and Disseminated	Guidelines inplace, Adopted,Improved patient outcome

Strategic objective 3.2: Improve standards for treatment and care for those with cancer								
1. Improve the two-tertiary cancer referral centers (KNH&MTRH) infrastructure,equipment	X	X				NCI-K,MoH,KEHPCA, KESHO,KENCO, Teaching Institutions, Regulatory bodies, Cancer Stakeholders, Private Hospitals and FBO's	Guidlines developed	Guidelines inplace, disseminated and adopted
2. Establish 4 comprehensive regional cancer treatment centers	X	X	X			NCI-K,MoH,KEHPCA, KESHO,KENCO, Teaching Institutions, Regulatory bodies, Cancer Stakeholders, Private Hospitals and FBO's	Guidlines developed	Guidelines inplace, disseminated and adopted
3. Support establishment of accommodation facilities for both patients and caregivers (including pediatrics) receiving outpatient cancer treatment services			X	X	X	MOH, KEHPCA Nursing council Regulatory bodies	Advocacy on legislation in progress Legislation in place	Legislation in place and adopted Good paincontrol Improved quality of life
4. Empower/strengthen County/Sub-County hospitals to provide surgery,chemotherapy and palliativecare,including outpatient and inpatient hospice care	X					NCI-K,MoH,KEHPCA, KESHO,KENCO, Teaching Institutions, Regulatory bodies, Cancer Stakeholders, Private Hospitals and FBO's	Referral Policy and guidelines developed	Policy and guidelines in place,disseminated and adopted
5.Address ethical dilemmas in cancer care through medical legal committees as part of multidisciplinary teams	X	X	X	X	X	NCI-K,MoH,Counties and Stakeholders	Guidelines for Cancer centers developed	Guidelines inplace and adopted
6.Appropriate cancer infrastructure at facilities that offer any form of cancer care			X	X	X	MoH–incl. M&E, NCI-K,Regulatory bodies	M&E tools developed National reference standards of practice developed	M&E tools in place and adopted, National reference standards of practice developed and in place

7.Work with relevant government offices to address alternative healers' practice and regulation	X	X	X	X	X	MoH NCI KEMRI Parliament Alternative medicine practitioners PPB Other Govt Ministries & agencies Media	Regulation on alternative practice developed	Legislation on alternative medicine
Strategic objective 3.3. Improve capacity for cancer treatment and palliative services by providing infrastructure, equipment and commodities								
1.Improve the two-tertiary cancer referral centers (KNH&MTRH) infrastructure,equipment		X				MOH,NCI NHIF KNH,MTRH Other funding partners and agencies Treasury/MOF	Comprehensive cancercare,Updated treatment & equipment, Patient navigation, Patient hostel,Blood banking,Bone marrow transplant,Nuclear treatment,Reduced-waiting time,Appropriate Referrals, Histopathology	Availability of radiotherapy machine in MTRH Improvement of histopathology lab in KNH Comprehensive cancer care
2.Establish 4 comprehensive regional cancer treatment centers						MOH,NCI County Governments Development partners.Ministry of finance/Treasury	Number of accommodation facilities established	Timely and quality cancer management
3.Support establishment of accommodation facilities for both patients and caregivers (including pediatrics) receiving outpatient cancer treatment services			X	X	X	MOH,NCI,NHIF KNH,MTRH Other funding partners and agencies Treasury/MOF	Number of Centers established	Available accommodation facilities-for both patient and relatives
4.Empower/strengthen-County/Sub-County hospitals to provide surgery, chemotherapy and palliative care,including outpatient and inpatient hospice care	X	X	X	X	X	County governments KNH MTRH MOH NCI Development partners Treasury/MoF Private sector	Number of county/ subcounty hospitals providing cancer care, Number of Surgeon strained,Number of HCP strained on cancer Management /palliative care	Patients receiving cancer treatment at county level

5. Address ethical dilemmas in cancer care through medical legal committees as part of multidisciplinary teams	X	X	X	X	X	MOH,NCI, KEHPCA County Cancer Stakeholders Individual health facilities	Establishment of ethical committees Schedule of meetings of committee members List of cases deliberated on	
6.Appropriate cancer infrastructure at facilities that offer any form of cancer care	X	X	X	X	X	MoH NCI Counties Private partners Individual facilities Community PPP	No of facilities with appropriate structures	Better patient care
7. Advocate for strengthening PPPs to streamline supply chain systems to ensure availability,accessibility and affordability of quality, safe and efficacious medical products and technologies for screening,diagnosis,treatment and monitoring of cancer care	X	X	X	X	X	MoH NCI Counties Private partners Community PPP Development agencies NGOs Pharmacy and Poison Board FBO	Availability of affordable,accessible, safe health products	Improved supply chain systems
8. Provide education and support to patients diagnosed with cancer including people living with disabilities and other vulnerable groups	X	X	X	X	X	NCI MOH KEHPCA County govt HMT KENCO Professional Associations Support groups	Number of IEC material developed, Number of patients counselled by healthcare providers, Number of active support groups	Appropriate education materials developed for patients and families
9. Create awareness among healthcare providers and the community on the availability of treatment and palliative care services,including conventional,complementary and alternative medicines	X	X	X	X	X	MoH NCI County Govt Training Institutions KEHPCA Media Cancer stakeholders The community Pharma Industry Other Govt Ministries Alternative & Complimentary medicine	Number of people aware of services Improved cancer patient care	Timely commencement of treatment and referrals of patients,Increased utilization of services,improved QOL,Survivorship

10. Support establishment and maintenance of resource centers for cancer at health facilites	x	x	x	x	x	Health facilities, Development Partners, Cancer Stakeholders	Available resource centers	Improved knowledge base, improved clinical outcomes
11. Develop IEC materials to address myths and misconceptions about cancer and customize them for the different target populations including those living with disability	x	x	x	x	x	MoH NCI Counties Cancer Stakeholders Support groups Media	Customized IEC materials suited for various targeted populations	Appropriate IEC materials on cancer
12. Provide timely supportive services (Blood & blood products,infection control,Nutrition,others e.g. growth factors)						MoH,NBTS, Counties, Facilities,Community	Availability of supportive services	Improved patient care,services & QOL
13. Advocate for all health facilities(including private- and faith based facilities) must include strategies for capacity building in cancer	x	x	x	x	x	MOH NCI Training Institutions Facilities Regulatory bodies	Personnel in training	Improved skills & competencies of HR,Better patient cancer management
Strategic objective 3.4. Improve human resources for cancer treatment and palliative services								
1.Work witht raining institutions to support-training in cancer specialties including but not limited to medical oncology,clinical/radiation oncology,medical physics,oncology nursing,oncology pharmacy,pathology, histology,cytology, palliative care,radiation safety,surgical oncology, gynecology nursing, pediatric oncology,pediatric nursing,radio graphers and biomedical engineering	x	x	x	x	x	MoH County Govts Facility Training institutions KEHPCA MoH KMPDB NCK PPB KMLTT BCOCT (allrelevant regulatory bodies) Accredited Training institutions	Curricula developed staff trained Appropriate staff distribution Training centers established Number of curricula that have cancer-treatment and Pc integrated	HCWs better empowered to provide comprehensive caref or cancer patient
2.Support training of all healthcare workers on use of opioids for pain management,breaking bad news,end of life care,bereavement, palliative care,depression in cancer and sexual issues after treatment	x	x	x	x	x	MoH NCI Counties Health Facilities Training institutions Cancer Stakeholders	Empowered healthcare workers on issues related to cancer and appropriate communication of messages to the public	Provision of better cancer services to patients

3.Work in collaboration with the regulatory bodies to develop career paths in cancer services that allows appropriate deployment-based on skills and competencies and give incentives to retain them to provide services	X	X	X	X	X	MoH NCI Counties PSC SRC Health facilities Regulatory bodies Professional Associa-tions	Careerprogression Deploymentbase-donskills&competen-cies BetterRemunera-tionpackages	Motivated HR Improved service delivery
4.Sensitize County health Committees and hospital management teams at all levels on cancer manage-ment	X					MoH NCI County govts KENCO FBO & privatefacilities	Number of sensitized counties/facilities	Support and goodwill toward cancer Mgt and PC
Strategic objective 3.5. Optimize treatment and palliative care for childhood cancers								
1.Advocate for the review and reorganization of existing treatment facilities/programs to incorporate pediatric cancert reatment and supportive care	X	X	X	X	X	MoH NCI Counties Health facilities	Number of pediatric cancer treatment sites	Reduced medica-tion errors, Improved pediatric treatment outcomes
2.Advocate for pediatric chemotherapy and adjuvant formulations to be incorpo-rated in the Kenya essential medicine list (KEML) (Color coding and different packaging for the pediatric formulations)	X	X	X	X	X	MoH NCI KEMSA Pharmal ndustry PPB Professional associa-tions services	Incorporation of the pediatric formulation in the KEML	Improved patient-care and treatment outcomes
3. Advocate for adoption-and finalization of evidence based treatment protocols for common childhood cancers customized for Kenya	X	X	X	X	X	MoH NCI Counties Cancer Stakeholders Referral hospitals Training Institutions	Protocols developed,adopted and finalized	Improvedp atient care and treatment outcomes
4.Provide servicesf or palliative,rehabilitation,and survivorship for children	X	X	X	X	X	MoH NCI Counties Health facilities Cancers takeholders Support groups	Number of support groups for children,Inclusion of other HCW e.g. psychologists in the care team	Improved quality of life

Strategic Objective 3.6:Provide palliative Care to improve quality of life for those living with, recovering from and dying of cancer and theirFamilies								
1.Provide timely and ongoing support and rehabilitation,including early identification and appropriate interven-tion for all survivors of childhood,adolescent and adult cancers	Ongoing					MoH KPA Community Support groups NHIF Stakeholders KENCO H4CK Numbers of survivors receiving appropriate follow up and support	Number of survivors receiving appropriate followup and support	Improved adult and childhood cancer survivorship and quality of life
2.Provide palliativecare and pain reliefservices at all levels of care including community level (home basedcare) or very sickpatients	all Cou nty hosp		Sub-coun ty hosp		Com mu-nity level	MoH NCI Counties KEHPCA Private partners Treasury Community	Facilities that have integrated PC & pain relief	Patients in need receiving palliative care and pain relief
3.Integrate palliative care into oncology care in all appropriately staffed facilities for cancer care	x	x	x	x	x	MOH, NCI KEHPCA County CancerStake Holders	Palliative care integrated in to oncology	Integrated pallia-tive care,Improved cancer care
4.Undertake campaign of public education and dissemination of informa-tion to address issues relating to discrimination and other potential barriers to returning to work for cancer survivors	x	x	x	x	x	MoH,NCI,Media, Cancer stakeholders Advocacy groups, Employer Organizations,patient support groups,NHIF	A more informed and empowered public on cancer issues	Better employee retention
5.Work in collaboration with Ministry of Educa-tion and relevant keystakeholders,to develop guidelines for the support and rehabili-tation of children and adolescents with cancer	x	x	x	x	x	MoH,NCI,Ministry of Education,cancer-stakeholders,develop-ment partners	Guideline for rehabilitation of cancer for children & adolescents	Guideline developed, disseminated and in use

Strategic Objective 4.1. Improve coordination structures at national, county and sub county levels								
1. Conduct assessment of existing coordination structures	x					NCCP,NCI	No.of structures assessed	Assessment report
2.Establish a coordination framework for cancer services at national and county levels	x	x				NCCP,NCI, County Governments	Availability of acoordination framework	Coordination frame work and structure
3.Disseminate the coordination framework	x					NCCP,NCI	No.of dissemination meetings	Dissemination report
4.Establish and operationalize multi-sectoral TWGs	x					NCI,NCCP	No.of active TWGs	Formalized TWGs TWG progress reports
5. Establish a specific TWG to coordinate childhood cancer services	x					NCI,NCCP	Availability of a childhood cancers TWG	Childhood cancer services TWG inplace TWG progress reports
Strategic Objective 4.2. Strengthen National Cancer Institute (NCI)								
1.Increase financial resource	x	x	x	x	x	Treasury,Parliament,	Percentage	Increased
2.Increase human resource allocation	x	x	x	x	x	NCCP,NCI,Partners	Percentage increase in no.of staff	Increased staffing
3.Increase infrastructure allocation 1-Office equipment	x					NCCP,NCI,Partner	% increase in equipment	Increased infrastructure
4.Office space							% increase in office space	
5.Engage County Governments	x					County Government,	No. of county	County
6.Develop regulations to operationalize the Cancer Control Act	X					NCI	Cancer Control Act regulations	Enforcement of Cancer Act provisions enhanced
7.Support formation of sub-committees in NCI board to bring together members from relevant sectors	x	x				NCI	No. of sub committees formed	NCI sub committees

Strategic Objective 4.3. Strengthen National Cancer Control Program (NCCP)								
1.Increase financial resource	x	x	x	x	x	Treasury Parliament,	Percentage	Increased
2.Increased human resource allocation	x	x	x	x	x	MOH,Partner	Percentage increase in no.of staff	Increased staffing
3.Promote the creation of county cancer control programs	x	x	x	x	x	County Government, NCCP	No.of Counties sensitized	Counties sensitized
4.Build the capacity of NCCP staff	X	X	X	X	X	NCCP	No.of staff trained on program management	NCCP staff cap a city enhanced
5.Provide policyguidance on integration of priority-cancer services with other services at health facilities e.g.reproductive-health(RH),maternal and childhealth (CH),HIV,etc.	x	x	x	x	x	NCCP,NCI,County Government,Partners	No.of policies developed and disseminated.	integration policies
Strategic Objective 4.4 Strengthen Partnerships at all levels								
1.Establish partnership forums with frequent meetings.	x	x	x	x		NCI,NCCP	No.of meetings held	Stakeholders meetings
2.Establish and regularly update information sharing on cancer prevention and control activities within the NCD platform.	x	x	x	x	x	MOH,partners	No.of visits to the plat form	Information sharing platform in place
3.Create a mechanism for main streaming cancer-prevention and control in all sectors platform.	x	x	x	x	x	MOH, CountyGovernments	Number of sectors with cancer main streaming	Cancer prevetion-and control main streaming in all sectors
4.Provide cancer prevetion and control advisory policies to relevant government and private sectors	x	x	x	x	x	MOH	No.of sectors reached No.of policies that include cancer prevention and control	Policy guidance enhanced in all sectors
Strategic Objective 4.5. Establish Sustainable Financing for Cancer Prevention and Control								
1.Advocate for universal health coverage for cancer services	x	x	x	x	x	NCCP,NCI,County governments partner	No.of insurance schemes offering-comprehensive cancer Care	
2.Advocate for free cancer-care for children below the age of 12 years	x	x	x	x	x	NCCP,NCI,Child health,County Governments	Proportion of children with cancer receiving free care	
3.Support establishment of a cancer control fund to support cancer control priority interventions within the public and private sector	x					NCCP,NCI,Partners	No.of meetings	

4. Identify and advocate for broadening of existing opportunities for taxation- and levies	x	x	x	x	x	MOH,Treasury	Proportion change-intaxation and levies towards cancer control	
5. Advocate for access to levies accrued from taxation of products whose consumption is linked to cancer						MOH,Treasury,Civil society	Proportion changein cancer control funding from taxes and levies	
6. Advocate to County governments to allocate budget lines for cancer prevention	X	X	X	X	X	NCK,NCCP,County Governments	No.of county governments with specific budgetline for cancer	
7.Fund research on occupational exposure and potential environmental conditions that lead to cancer	X	X	X	X	X	No.of funded research proposals on occupational exposure	No.of funded research proposals on occupational exposure	
Strategic Objective 4.6. Strengthen Public Private Partnerships								
1.Adopt relevant regulations under the PPP Act to promote private sector investment in service delivery.	x					NCCP,NCI,County governments,Partner	No.of meetings held	
2.Determine level of idle capacity in private sector	x	x	x	x	x	NCCP,NCI,partners, county governments	No.of facilities Proportion of idle capacity	
3.Establish means of structured engagement for utilizing idle capacity.	x	x	x	x	x	NCCP,NCI,partners, county governments	Percentage reduction in idle capacity	
Strategic Objective 4.7 Promote Access to Affordable Essential Medicines and Technologies for Cancer Services								
1.Advocate for the inclusion of essential medicines (according to existing treatment regimens) and technologies for priority cancers in the EML	x	x				NCCP,NCI,partners, county governments	Proportion of first line chemotherapy drugs listed	
2.Advocate for an enabling environment to lower the cost of cancer services and products	x	x	x	x	x	NCCP,NCI,partners,	No.of forums	
Strategic Objective 4.8: To have a strategic framework and mechanism that supports cancer advocacy, communication, and social marketing [ACSM] for prevention, screening and early detection.								
1.Advocate for the development of a cancer health communication strategy	x	x	x	x	x	NCCP,NCI	Strategy Document launched	cancer communication strategy developed

3.Identify and map the appropriate communication tools based on stakeholder needs and current determinants of health	x	x	x	x	x	NCCP,NCI	No.of tools identified	Appropriate tools identified.
4.Map and identify platforms available to disseminate cancer information for various audiences	x	x	x	x	x	NCCP,NCI	No.of platforms identified	Appropriate platforms identifed
5. Identify and engage multi- sectoral stakeholders to support cancer communication	x	x	x	x	x	NCCP,NCI	No.of stakeholders identified	
6. Regular monitoring and evaluation of cancer ACSM activities and materials towards a standardized communication and advocacy practice.	x	x	x	x	x	NCCP,NCI	No of reports	
Strategic objective 5.1. To ensure effective coordination of cancer research								
1.Create a coordinated cancer research structure	X					NCCP,NCI	No of coordination structures	Functional cancer programs
2.Develop a research agenda for cancer control and prevention	x					NCCP,NCI	No of research agendas	Guided research on cancer
3. Work with ERCs to develop and maintain a repository of ongoing and completed research work	x	x	x	x	x	NCCP,ERCs	No of research repositories	Retrievable repository
4.Create channels for dissemination of research on cancer e.g. Annual cancer symposiums	x					NCCP,NCI	No of channels of dissemination	Guided disseminations
5. Work with relevant stakeholders to increase implementation science capacity for cancer control in the country	x	x	x	x	x	NCCP,Researchinstitutions,service delivery facilities	No of institutions who capacity is built	Improved capacity for research

6.Work with other research units to develop a strategic and regular process for facilitating research relevant to cancer control	x	x	x	x	x	NCCP,NCI,Research institutions,NACOSTI	No of research coordination units	Guided research responsive to country needs
7.Advocate for government funding for cancer research	x	x	x	x	x	NCCP	Percent of national budget allocated for research on cancer	Funds available for cancer research
Strategic objective 5.2. Strengthen research and use of research data								
1. Strengthen the cancer research technical working group and promote use of the cancer registry for research	X	X	X	X	X	NCI-K	5 publications in peer reviewed journals and 5 presentations in national or international conferences per year.	5 publications in peer reviewed journals and 5 presentations in national or international conferences per year.
2. Establish a research fellowship program at the NCI- K and promote linkages with research and academic institutions	X	X	X	X	X	NCI-K	Establishment of fellowship, and 5 joint publications between NCRP, NCI-K and research and academic institutions.	Establishment of fellowship, and 5 joint publications between NCRP, NCI-K and research and academic institutions.
Strategic objective 5.3. Improve the effectiveness of cancer treatment and palliative care through research and surveillance								
1. Advocate for inclusion of treatment and palliative care services indicators in national surveys such as demographic and health survey, STEP etc.	x	x	x	x	x	MoH, NCI, KNBTS, other MoH bodies	Inclusion of cancer information in national and other surveys	More available and good quality national cancer data
2. Support research activities at all levels of cancer services delivery	x	x	x	x	x	MoH NCI Counties KEMRI Cancer Stakeholders Development Partners	Published articles, Funding Proposals developed	Evidence based practice, Improved clinical outcomes

3. Support testing of new technologies and treatment protocols in clinical cancer management	X	X	X	X	X	MoH NCI Research Institutions Development partners NHIF	Availability of new technologies and treatments	Better clinical outcomes for cancer patients
4. Work with relevant institutions to support research on alternative medicine use in cancer services	X	X	X	X	X	MoH NCI KEMRI/ Research Institutions Alternative practitioners Ministry of Gender & Culture	Publications on research done	Better clinical outcomes for cancer patients
Strategic objective 5.4. Monitoring and Evaluation								
1.Develop documents to operationalize the strategy	X					NCCP,NCI	No of operation documents developed	Implementation of the strategy
2.Develop detailed M&E plan	X					NCI,NCCP	No of M&E plans	Strategy easily monitored
3.Produce on yearly basis progress reports on implementation of the strategy, process and outputs where possible	X	X	X	X	X	NCCP	Annual reports	Informed cancer community
Strategic objective 5.5. Priority research agenda for different pillars								
Pilar1.PREVENTION,EARLYDETECTIONANDCANCERSCREENING								
1.Epidemiological (environmental or human behavioral factors) research	X	X	X	X	X	NCCP, Research institutions, service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
2.Effectiveness (impact assessment) of the awareness campaigns for prevention and treatment of cancers.	X	X	X	X	X	NCCP, Research institutions, service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
3.Study to obtain baseline data on each of the known cancer risk factors (alcohol consumption, tobacco use, unhealthy diet, physical inactivity)	X					NCCP, Research institutions, service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs

4.To investigate the contribution of known environmental and occupational risk factors to development of cancer in Kenya	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
5.To investigate the contribution of infectious agents to development of cancers in Kenya	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
6. Study to understand the performance of preventive,screening and early diagnostic services for cancer(including infrastructure and human resource)	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
7. Cost benefit analysis of the various interventions inprevention, screening and early diagnosis of cancer	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
8. Operational research on utilization of standard-ized research tools/HMIS system:[whetherorhow?]	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
9. Investigate the impact of the standardized communication tools and platforms on cancer prevention,early diagnosis and screening	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
Pilar2. Cancer Diagnosis, Registration and Surveillance								
1.Laboratory based research on biological mechanisms underlying cancer,etc.	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
2.Detailed study of the pathology system in Kenya to better understand its nature, pathway of specimen referral,points of weakness in the system, and extent of the problems to derive workable short-and long-term solutions.	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs

3.Detailed study of the medical imaging in Kenya to better underst and its nature, pathway of referral,points of weak-ness in the system,and extent of the problems to improve access and use	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
4.Undertake a national mapping study on infrastructure,human resource and equipment for cancer diagnosis						NCCP,NCI,Research institutions	Report	Scientific papers ers
Pilar3.Cancer Treatment,Palliative Care and Survivorship								
1.Clinical research to determine the most effective treatment, palliative care approaches and role of end of life care	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
2. Psychosocial and behavioral (e.g.factors impacting on prevetion,the response to screening, and the impact of diagno-sis and treatment)	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
3. Effectiveness of medicinal plants and traditional treatments and ways of integrating them into the conventional health system	x	x	X	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
Pilar4.Coordination, Partnership and Financing for Cancer Control								
1.Health systems and health policies (e.g.how services can best be implemented and organized).	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
2. Effective ways to improve access to quality cancer healthcare services e.g.ways to decrease the health care costs associated with cancer prevention and treatment	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs

3.Low-cost research mainly for evaluation of epidemiological and treatment results of different diseases	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific paper published	Research questions answered to inform cancer programs
4.Conduct cost analysis including potential financial impact to patients,to formulate essential package for NCD/cancer control services,as per level of health care and in line with evidence based guidelines	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific paper published	Research questions answered to inform cancer programs
5. Carry out feasibility study to allow creation of more specialized posts in cancer services to achieve safe and effective delivery of cancer care.	x	x	x	x	x	NCCP,Research institutions,service delivery facilities	No of scientific papers published	Research questions answered to inform cancer programs
6.Hosting annual symposium for cancer	x	x	x	x	x	NCCP,NCI	No of symposia	Dissemination of cancer research
7.Support publication of research on cancer as part of capacity building	x	x	x	x	x	NCCP,NCI	No of publications	Dissemination of cancer research

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Roche

KENCO
Kenyan Network of Cancer Organizations

Takeda

WORLD HEALTH ORGANIZATION

PATH

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