THE CASE FOR INVESTMENT IN PALLIATIVE CARE IN KENYA

COST-BENEFIT AND AFFORDABILITY ANALYSIS FOR ITS INCLUSION IN UNIVERSAL HEALTH COVERAGE

FINAL REPORT

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TABLE OF CONTENTS

ABBREVIATION AND ACRONYMS

AIDS	=	Acquired Immune Deficiency Syndrome
APCA	=	Africa Palliative Care Association
CBA	=	Cost-Benefit Analysis
CNS	=	Central Nervous System
EHP	=	Essential Health Package
GDP	=	Gross Domestic Product
GOK	=	Government of Kenya
HIV	=	Human Immune Virus
KHSSP	=	Kenya Health Sector Strategic Plan
KShs	=	Kenya Shillings
MoH	=	Ministry of Health
NCD	=	Non Communicable Disease
SHS	=	Serious Health Related Suffering
UHC	=	Universal Health Care
WHO	=	World Health Organization

EXECUTIVE SUMMARY

Africa has the second highest (20.2 percent) adult need for palliative care in the world. More than half of children who are in need of palliative care globally are in Africa. The African Palliative Care Association (APCA) was formed in 2003 to address these palliative care needs. APCA's vision is "palliative care for all in Africa" and the mission is to ensure that palliative care is widely understood, integrated into the health system.

In 2019, APCA started to implement a program of strategic advocacy to influence the inclusion palliative care in UHC at regional and national levels, starting with Kenya, Uganda and South Africa. The aim of the strategic palliative care advocacy program is to formulate a narrative on palliative care to mobilize support from a wider network of stakeholders in the health sector, human rights and UHC movement. APCA embarked on costing and cost benefit analysis (CBA) of palliative care to build a case for investment in palliative care, starting with Kenya. This case would lead to the development of a manual for costing palliative care in Kenya that could be adopted for use in other countries. Affordability analysis was done additionally to bring the cost projections to realistic levels. Three methods were used in this assignment: 1) Review of documents, 2) Cost-modeling Technique, and 3) Affordability Analysis Approach.

We found that investment in palliative care would bring about a return on investment (ROI) of 2.14 -2.78, which is a good rate of return on any investment. This means that for every **USD 10** spent on PC, the benefits are **USD 27.** It would require an investment of KSh 19,560 per capita increasing to KShs 53,282 per capita in the fifth year. This would extend the productivity of a palliative care patient by six months, which can make a good contribution to the national economy. However, the real situation on the ground in Kenya is starkly different. The entire health care package in Kenya is funded at KSh 7,822 per capita, which is a far cry from the CBA projected ideal palliative care funding of 19,560 per capita. Moreover, there is a funding gap of 15 per cent of the national health budget. The government will fund only 52 percent of the national budget and households are expected to fund 33 percent. But if we repurpose existing resources for palliative care, target additional health budget allocation from the government and target the poor initially, the level of additional funding would be KShs 2,340 per capita. This would not be mobilized at ago, but gradually over time as the budget grows. It is projected that in five years' time, about half that funding would be additionally available for palliative care.

The case for investing in palliative care can be framed on the following principles: investment in palliative care yields positive economic and social benefits, palliative care is a continuum of EHP and should be a distinct item, Kenya's palliative care needs will grow with increasing NCDs and injury, as a middle income country, Kenya's expected level health care should include a reasonably satisfactory palliative care, and as a new entrant into the EHC, a vigorous campaign should aim at allocating much more of increased health budgets to palliative care.

We recommend that: 1) A clear policy should be developed on palliative care, with specific provisions on financing strategy, incorporation into the EHP, and guidance to private sector; 2) A five year strategic plan should be made to promote and incorporate palliative care as part and parcel of the EHP; 3) Develop a monitoring and evaluation plan for the assessment of: a) the use of palliative care services, b) availability of critical drugs and equipment, c) palliative care human resources numbers and capacities, and d) the benefits of palliative care in terms of reduction of inpatient number, reduction of hospital days, reduction in hospital visits and number of productive years, among others; and 4) Develop a five year palliative care advocacy plan with clear targets and M&E indicators.

1 INTRODUCTION

1.2 Background

Palliative care is health care given to patients to relieve severe pain and suffering from people living with serious illness such as cancer or heart failure. The core purpose of palliative care is to improve the quality of life of patients, both children and adults, who have serious or life threatening disease or condition. The Africa region has the second highest (20.2 percent) adult need for palliative care in the world. This could be associated with the high incidence rate of HIV/AIDS in this region. Furthermore, more than half of the children in need of palliative care globally are in Africa [1].

The African Palliative Care Association (APCA) was formed in 2003 to address this palliative care need. APCA's vision is "palliative care for all in Africa" and the mission is to ensure that palliative care is widely understood, integrated into the health system, and is underpinned by evidence. APCA is aware that Universal Health Coverage (UHC) plans being rolled out by African countries focus largely on health promotion and disease prevention and treatment, leaving rehabilitation and palliative care. In 2019, APCA started to implement a program of strategic advocacy to influence the inclusion palliative care in UHC at the African regional level as well as at the national level, starting with Kenya, Uganda and South Africa.

The objectives of the strategic palliative care advocacy program were to: 1) frame the inclusion of palliative care in UHC; 2) to mobilize influencers, allies and stakeholders to galvanize political will; 3) empower people in need of palliative care and their families to be at the forefront of this advocacy; 4) expand the partnership for the strategic advocacy on palliative care; 5) formulate a narrative on palliative care to mobilize support from a wider network of stakeholders from the health sector, human rights and the UHC movement; and 6) share lessons and best practices of integrating palliative care in UHC and in the health system as a whole.

2.2 Terms of Reference

In order for this palliative care package to be successfully included in the UHC, an exhaustive investment case and a costed palliative care package needs to be developed at the country level. APCA therefore engaged E&K Consulting Firm to carry out costing and cost benefit analysis (CBA) of palliative care. The aim of building a case for investment in palliative care is to develop a manual for palliative care costing in Kenya that can be adopted for use in other countries based on their local individual needs and circumstances. The manual will cover approaches to costing the full African palliative care package and to ensure that the tools and frameworks from investigation are dynamic. E&K Consulting Firm has partially done this work.

This particular consultancy builds on the work that E&K Consulting Firm has done, which was palliative care costing and cost-benefit analysis. The specific objectives of this additional work are to: 1) demonstrate social economic benefits of palliative care; 2) assess the affordability of incorporating palliative care into the UHC package; 3) revising the costing package to suit Kenya; and 4) support the dissemination of the findings and deliverables of this consultancy.

The deliverables of this consultancy are: a) final report of the costing model for palliative care including affordability analysis plus gaps and recommendations for making it feasible to implement within the ministry of health (MOH) of Kenya; b) a policy brief on costing palliative care with details on how other countries can adapt or replicate the method in their own setting; and c) power point slides to support dissemination.

The key tasks in this consultancy are to review documents, carry out affordability analysis, and produce a final report.

2 METHODOLOGY

Three methods were used in this assignment: 1) Review of documents, 2) Cost-modeling Technique, and 3) Affordability Analysis Approach.

2.1 Review of documents

Documents consisting of grey materials and published journal articles were reviewed as follows: a) On Palliative care in general; b) On Palliative care in Kenya, particularly the policy and strategic plan; c) Kenya's development polies and plans, d) on Kenya's heath sector plans and policies; and e) on affordability of health care.

2.2 Cost-Modeling Technique

2.2.1 **Approach to computing the burden of disease**

The burden of disease includes the total prevalence, non-decedents and decedents numbers. These numbers are all sourced from the International Association for Hospice and Palliative Care (IAHPC) resource hub [2]. Based on the summation of prevalence of different diagnosis requiring palliative care, the number of people needing palliative care is estimated at 648,808 for both children and adults.

2.2.2 **Approach to computing costs**

The main costs items are grouped into five main categories, namely:

(i) Essential palliative care medicines;
(ii) Essential equipment, patient supportive devices, technologies and supplies;
(iii) Human resources;
(iv) Psychosocial interventions; and
(v) Other costs which are composed of admission costs

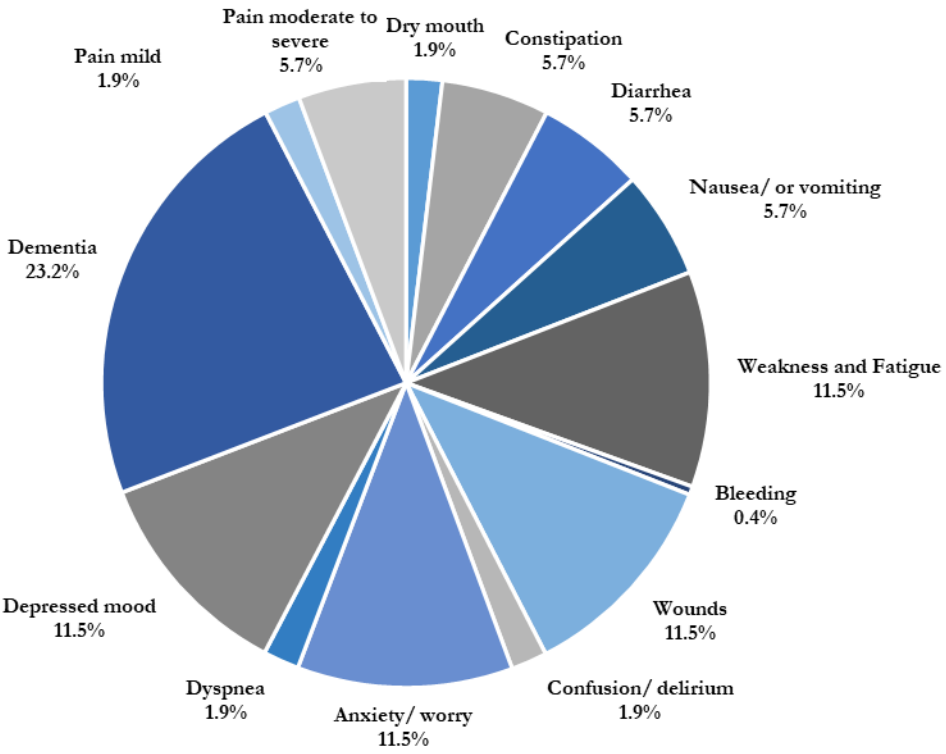
The first four categories are sourced from the essential palliative care package for universal health coverage, issued out by the Lancet Commission Report on Palliative Care and Pain which aims to relieve serious health related suffering (SHS) in the most cost-effective way in Low and Middle Income

Countries (LMICs) [3]. We include an additional cost on hospital admissions to differentiate between the three levels of care costed for in the model which are home-based, in-patient and out-patient care.

Percentage of days that adults and children experience symptoms

A key assumption and driver of the model is days that adults and children experience symptoms. The duration is an important driver in calculating the demand for essential medicine and essential equipment. The types of symptoms are sourced from the 2nd edition of the World Atlas and include a total of 16 symptoms [4]. The maximum number of days a person experiences different symptom is found through consultations with Nairobi Hospice (**Figure 1**). We standardize the symptom days to fit into 365 days through finding the proportions in the given year which a patient has the symptom.

Figure 1



Essential medicine

In calculating essential medicines costs, we first standardize the costs into 1 unit cost. The units are per tablet, per millimeter or per ampoule depending on the medicine. We list down the standard daily dosage for each drug and the associated symptom based on consultations from Nairobi Hospice. In a case where more than one drugs is used to treat one symptom, we give allocative percentages. An example of this scenario is in mild pain where both paracetamol and ibuprofen are administered. We assume that 50 percent of the time a person has mild pain they will be given paracetamol while the rest of the time they will be administered with ibuprofen. This is to ensure that all of the drugs within the essential medicine list are costed.

Essential medicine cost = Cost per unit * Standard daily dosage * Percentage of time drug is issued (in the case multiple drugs treat 1 symptom) * Duration * Palliative demand size

Essential equipment costs

The cost per item is found through consultations with Nairobi Hospice. The duration in which the item is used in a given year is found through associating the different items with different symptoms. An example would be a commode which is used in cases where a patient is experiencing weakness. We then find the demand size for the item based on type of care that would need the items. The type of care is split into three categories which are: home - based care, in - patient care and out - patient care.

Essential equipment cost = Cost per unit * Duration * Demand size

Human resource

The human resource costs are found through multiplying the proportion of staff time per month allocated to palliative care by the monthly staff salary. The proportion of time allocated to palliative care is found through consultations with Nairobi Hospice. We then find the total cost by factoring in the total demand size for palliative care.

Human resource cost = Proportion of staff time spent on palliative care * Staff salary * Demand size for palliative care

Psychosocial interventions

The main cost assumption under psychosocial interventions is on subsidies given out by the government. The Government of Kenya presently gives out a KES 2000 a month subsidy through the Inua Jamii social protection program[5]. We multiply the total annual subsidy amount by total population size needing subsidies which is found through consultations with Nairobi Hospice. The assumption is that 50 percent of the palliative demand size would need subsidies.

Psychosocial intervention = Subsidy amount * Palliative demand size in need of subsidies

2.2.3 Approach to computing forecasted costs

The growth in the palliative care demand is used to forecast for the growth in costs. Growth in palliative demand is calculated from the NCD growth rate. The inflation rate and discount factor are both applied

to the annual costs to present real discounted costs adjusted for time value of money. An implementation matrix is used in the model to determine how palliative care would be scaled up in the five-year forecast period. We assume that palliative care coverage would be scaled up from the current 10 percent coverage to 25 percent in the first year and finally to 100 percent in year five.

2.2.4 Approach computing the benefits

The main benefits in the model include:

(i) Reduced in- patient stay;
(ii) Reduced mean length stay in hospital;
(iii) Reduced rate of multiple re-hospitalization;
(iv) Reduced hospital visits;
(v) Increased number of productive years; and
(vi) Reduced need of care by relatives.

Reduced in- patient stay

The benefit is applied to the palliative demand size for in - patient care whose assumption is found through primary research. Based on PubMed research journal, we assume that the overall annual rate of hospital admissions is reduced 34 percent and hence 17 percent of total palliative population is admitted instead of the present 25 percent.

Reduced in patient stay benefits = (Inpatient cost - homebased care cost) * Effective reduction in patients admitted

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Reduce length in hospital stay

The mean length of stay is reduced by six percent during periods of time patients receive palliative care compared to periods of time not receiving this care. The average time in admission is thus 28 days instead of 30 days. We multiply the total cost saved by admission rate to get the total benefit.

Reduced length in hospital stays benefits = Admission cost saving per patient * Number of patients admitted * Present Value Interest Factor

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Reduced rate of multiple re-hospitalizations

Based on Medical life sciences, there is a nine percent reduced rate in re-hospitalization when patients receive palliative care [6]. We find the benefits as the difference between costs when there is a high re-hospitalization rate versus when there is reduced re-hospitalization.

Reduced rate of multiple re-hospitalization benefits = Savings from reduction in re-hospitalization* Number of patients admitted Present Value Interest Factor

Reduced hospital visits by family members

This applies to inpatient care and is based on reduced stay in hospital and reduced rate of hospitalization. We assume that four people visit the patient every day that they are admitted. The four people are pulled out from engaging in economic activities for half a day. We factor in their GDP per capita contribution and include it as a benefit in an instance the patient was not admitted.

Reduced hospital visits by family members = Average reduction in hospital visits per patient * Discounted GDP contribution per person per day

Increased number in productive life

This applies to all types of care and is adjusted for the non-decedent adult numbers. We estimate an increased productive life of six months for every patient undergoing palliative care that is non-decedent. In a six-month timeframe, we assume that benefits do not accrue to all new palliative cases diagnosed within the year, which is found through getting the annual growth rate for non-decedent numbers. The economic benefit from the prolonged life is then estimated using the discounted GDP per capita contribution for adults.

Increased number of productive years = (Non decedent adults – Non decedent at time 0) * Discounted GDP contribution per person per day

Reduced need for care by relatives

Psychological and educational support to relatives by palliative care specialist can deliver positive outcomes which include productivity gains factored as lower caregiver hours. These gains apply to patients under home - based and out - patient care. We assume that palliative care relives the patient of a care person who can proceed to carry out economic activities. Palliative care relieves 34 percent of care givers from their duties [6]. The economic benefit from the reduced need of care by relatives is estimated using the GDP per capita contribution of the care givers.

Reduced need of care by relatives = Effective reduction in patients in need of a care giver * GDP per capita contribution

2.2.5 Approach to computing ROI

Return on investment (ROI) measures the gain or loss from an investment relative to its cost. The metric is used to assess the attractiveness of an investment alternative by computing its returns. The computation method used in the analysis is as outlined below:

$$\textbf{ROI} = \frac{\text{Total benefits}}{\text{Total costs}}$$

2.3 Affordability Analysis Approach

2.3.1 Basic figures, costs and expenditures

	Items	Amounts	Source and year
1	Per capita total health expenditure in Kenya/annum (KShs) Desired THE at 15% budget allocation to health	KShs 6,602 KShs 7822 KShs 13,037	GOK Measured in 2013 GOK Measured in 2016 KHSSP demands Abuja Declaration of 15% of national budget to health
2	Ideal palliative care cost per capita/annum (KShs)	KShs 19,560	Costing Technique by E&K Consulting 2022
3	Budget allocation to health (%)	6.1% 6.7%	GOK 2013 GOK 2016
4	Desired budget allocation for UHC	15%	WHO Abuja Declaration 2016
5	Proportion of population below poverty line	46%	GOK 2016
6	Health Budget Funding by a) GOK b) Households c) Unfunded	 53% 33% 14%	GOK KHSSP 2018-2023
7	Access to health insurance total Urban Rural	17% 27% 12%	Health Policy brief 2016
8	Population growth per annum	3%	GOK KHSSP 2018-2023

2.3.2 Assumptions

Given that the ideal expenditure on palliative care has been calculated to be far beyond the actual total health expenditure (KShs 19,560 per capita versus total health expenditure of KShs 7822 per capita) the following assumptions have been made to bring the calculated palliative care figure down to realistic levels:

a) One half of existing or planned resources (medicines, human resources and equipment) will be repurposed for joint use in palliative care. This reduces the demand of palliative expenditure from KShs 19,560 to 9,560.

b) From additional funding allocated to the health sector in subsequent years, fifty percent can be allocated to palliative care. This will be through aggressive and persistent advocacy efforts.

c) Through general advocacy and mobilization of political will, ten percent increase of the total health expenditure per annum will be achieved

d) Palliative care funding will target the poor (46 percent of the population) and the poor will be funded by government (which is 53% of total health funding).

3 FINDINGS

3.1 Review of documents

3.1.1 Palliative care

Palliative care is health care to relieve pain and suffering from people living with serious illness such as cancer or heart failure. The core purpose of palliative care is to improve the quality of life of patients, both children and adults, who have a serious or life threatening disease or condition.

It entails health care for symptoms as well as for treatment aimed at curing the serious illness. It addresses a person as a whole, as well as his/her family, and not just their disease [7]. As death approaches, the symptoms may worsen thus the patient may require more aggressive palliation. As the comfort measures intensify, so does the support provided to the dying patient's family. Once death has occurred, the crucial role of palliative care is primarily on the support of the patient's family and for bereavement [8].

Palliative care is administered to a range of diseases identified by the World Health Organization (WHO). These include: Alzheimer's and other dementias, arteriosclerosis, cerebrovascular disease, chronic ischemic heart disease, congenital malformation, degenerative CNS disease, hemorrhagic fevers, HIV, inflammatory CNS disease, injury, leukemia, liver disease, low birth weight-premature birth- birth trauma, lung disease, malignant neoplasm, malnutrition, musculoskeletal disorder, non-ischemic heart disease, renal failure and tuberculosis [9].

The aims for palliative care include pain management; treatment of symptoms; counseling and psychotherapy; provide assistance with living; and connecting with family, friends and society. Other aims are to ensure that the patient and family have the understanding that decisions are being made in their best interest; to ensure as much autonomy as possible for the patient; to help the family and loved

ones in difficult times; to provide mobility for the patient; and to provide spiritual support. Palliative care includes making death, when the time comes, free from distress and suffering for patients, family and caregivers. It ensures that when death occurs the wishes of the patient and family are complied with, and all clinical, cultural and ethical standards are followed [9].

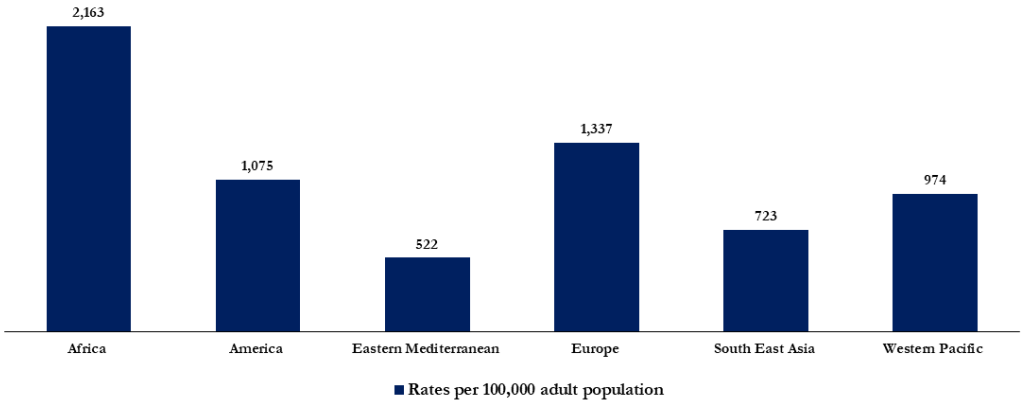
Anyone with serious illness regardless of age, prognosis, disease-stage, or treatment choice is entitled to palliative care. This means that anyone is a potential candidate for getting palliative care. Palliative care should start early and should run throughout the course of the illness, with life prolonging treatment. Palliative care provides many benefits. It meets the desires, goals and decisions of the patient. It supports the patient and his or her family. It enables the patient and the family to understand the whole treatment and management plan. It improves the quality of life of patients. Palliative care controls pain and other symptoms of the serious illness. It addresses the body, mind and spirit as a whole. It reduces frequent hospital visits and admissions [10].

Palliative care has five stages: Stage I: Active monitoring of the illness; Stage II: Management of symptoms; Stage III: Disease progression; Stage IV: End of life; and Stage V: Bereavement. In palliative care life is protected and supported, and dying is regarded as normal. Palliative care neither hastens nor postpones life. It provides relief from pain and distress. It integrates psychological and spiritual support. And it provides support systems until death. There are four types of palliative care: 1) Hospital Nursing, under a specialist team; 2) Care Home Nursing, which is more comfortable than the real home; 3) Hospice day care which includes nursing and rehabilitation on out-patient basis; and 4) Home based care, with family and for the end of life management [8].

3.1.2 Palliative care in Africa

The African region has the second highest (20.2 percent) adult need for palliative care in the world. However, as depicted in (**Figure 2**) this same region accounts for the highest number of adults in need of palliative care per 100,000 adult population, this could be associated to the high incidence rate of HIV/AIDS in this region. Furthermore, more than half of the children in need of palliative care globally reside in the Africa region [1].

Figure 2



One of the reasons palliative care remains quite underdeveloped in African countries is due to the substantial gap in funding within this region. This lack of funding leaves the palliative care services per population significantly low in African countries compared to the rest of the world. For instance, Swaziland has merely 10.88 palliative care services per million inhabitants and this low figure accounts for the highest within the African region. This great disparity of palliative care services in the African region can to be resolved with more funding and incentives to provide palliative care to its inhabitants [1].

Moreover, availability to palliative care services is more likely the case in countries where operational non-communicable disease (NCD) policies integrate palliative care (45 percent) than in those without palliative care (32 percent) within their policies. As such, we find that palliative care is significantly less available to patients in low-middle-income and low-income countries where most policies do not integrate palliative care as an essential service and this is essentially the case for majority of African countries [1].

According to WHO, about 89 percent of African countries thus made more that 20 percent out of pocket health payments [9]. Out of pocket healthcare by patients and families who are experiencing pain and suffering due to diseases is an injustice and a human rights violation that needs to be addressed by taking action to ensure that universal health coverage (UHC) is a certainty for all citizens.

3.1.3 Status of palliative care in Kenya

From an estimated 1.5 million patients in need of palliative care as a result of both communicable and non-communicable diseases less than 10 percent actually have access to it. Cancer is the third highest cause of death in Kenya, preceded by cardiovascular and infectious disease. While non-communicable disease rates remain significantly high, the burden to the patient and the family continues to rise [10].

Many Kenyans are unaware of cancer signs and have limited access to diagnostic and treatment centres. This leads to an increase in morbidity and mortality rates yearly. Palliative care is thus a key component to handling cancer and many other non-communicable diseases and, will be beneficial for both children and adults once integrated.

However, palliative care is not explicitly addressed or mentioned as a key component of the EHP or UHC.

3.1.4 Health in Kenya's Development Policy

Kenya's Constitution 2010 enshrines the right to health and the highest possible standard of living. Much of this is to be facilitated and / or delivered by the government. It has provided for devolved government and service delivery roles. The constitution provides for public participation in policy and planning, and for equity in service provision. Kenya's Vision 2030 is that Kenya will be globally competitive and prosperous, and health is to be a key driver in achieving this vision. As such Kenya's Health Policy 2014-2030 is to attain the level and distribution of health services commensurate with the status of a middle income country. The overall national strategy is summarized by the Big Four: manufacturing; food security; affordable housing; and equitable, affordable and high quality health care [11].

The health situation is characterized by high level of HIV/AIDS, malnutrition, and rising cases of non-communicable diseases, notably cancer, diabetes and hypertension. There also high incidences of injury due to road traffic accidents, and gender based violence. According to the KHSSP 2018-2030, there are about 10,000 health facilities in the country making it 2.2 facilities per 100,000 persons. Kenya is striving to improve leadership and governance through legislation, standards and norms, partnership, accountability mechanisms, and capacity development. But many challenges remain. These include non-involvement of some health sector stakeholders, and lack of tools, standards and mechanisms for various aspects of the health system. As of 2015, Kenya's annual health expenditure was at KShs 3.5 billion, which is 6.7% of the national budget. Kenya's health policy 2014-2030 has four cardinal objectives: 1) eliminate communicable diseases, 2) reduce NCDs, 3) reduce violence and injury, 4) provide the EHP, 5) minimize health risks, and 6) promote public private partnership [11].

3.1.5 Kenya's Health Sector Strategic Plan 2018-2023

Kenya's priorities are maternal-child health, some specified infectious diseases, NCDs and the overall health system [11]. This is the One Health Model. The infectious diseases of priority are: malaria, TB, and HIV/AIDS. Other priorities include nutrition, NCDs, water and sanitation and hygiene, mental health (neurological conditions and substance abuse), adolescent health, and neglected tropical diseases (NTDs) such as filariasis and trachoma. It is envisaged that government will fund 52% of the health budget and households 33%, but 15% remains unfunded. It is expected to cost KShs 2,666 billion over five years. Under the health sector, universal health coverage is the main focus. Kenya's UHC aspirations are 100% of health facilities provide the essential health package (EHP), 100% of the population is within 5km of a health facility, and 80% of hard-to reach areas are covered by EHP, 100% of people are insured; and house hold expenditure of health is less than 40% of total house hold budget.

The strategic plan's objectives are to: 1) increase the essential health service coverage, 2) increase the pre-paid coverage, 3) increase the scope of the benefit package, 4) improve quality of health care, 5) protect people from catastrophic expenditure, 6) provide supplies for health care, and) improve leadership and governance. The strategic plan has mapped out ten major health risks that need to be acted upon. These include: unsafe sex, short gestation, low birth weight, child wasting, unsafe water, alcohol and substance abuse, house hold pollution, and lack of handing washing facilities.

The strategic plan has a UHC Roadmap summarized into 5 Phases: Phase 1: 3 million people are covered; Phase 2: All secondary students are covered with EHP; Phase 3: Free maternity for 1 million mothers; Phase 4: Abolition of user-fees targeting 7 million children; Phase 5: Health insurance for 181,000 households, and Phase 6: Cover the elderly with EHP, targeting 42,000 households. There are four key strategic actions. **First**, to eradicate polio and guinea worms; **second**, eliminate HIV/AIDS, malaria, newborn tetanus, measles , NTDs and leprosy; **third**, focus on special groups who experience socio-cultural barriers to health care: women, people with disabilities, the elderly, children and youth, marginalized groups, commercial sex workers, prisoners, refugees, displaced people, and people in army barracks; and **fourth**, ensure health security through early warning systems, surveillance, rapid response emergency teams, referral services, and a standby emergency fund [11].

However health financing in Kenya faces emerging issues. These include low insurance coverage of only 19.5%. Forty six percent of the population is in absolute poverty. There is been no real health budget/ health expenditure increase for a long time. Health sector items receive low or stagnating allocations. The management of multiple sources of financing is inefficient. There is over-dependence on out-of-pocket payment and on donors. Resource pooling through various pre-payment mechanisms is inefficient. Generally, health care cost is expensive in Kenya, where a survey has shown that 28 percent of the people who fall sick do not seek for health care because it is too expensive. New policy recommendations made through a policy brief (REF) include reducing the out-of-pocket burden. Other recommendations are: Kenya should take advantage of the current economic growth to invest in health by increasing its health expenditure from 6.7 percent to 15 percent of the national budget as per Abuja Declaration; implement high impact interventions; implement community-based health care system; and address the human resource gaps in the health sector [12].

3.1.6 Affordability of health care

Affordability refers to the ability of a person or an organization to pay for or provide health care. In the United States affordability of health care refers mainly to the ability of individuals and families to pay for health care. In most cases the service available somewhere in the country. But in Kenya a service that is needed may not be available. The country cannot afford it or it is not a priority for the government. Zavras D [13] defines affordability of health care as the degree of fit between the full costs (price and other costs) and the capacity to pay within their budget and other demands. Affordability implies unmet need among financially disadvantaged groups. Thus, the proof of affordability of health care is the use of a service, not merely the presence of a health care facility or service.

Factors that determine affordability include: a) financing system (out-of-pocket bars out many patients, private health insurance); b) demography (age, sex and gender); c) structural (income and occupation,

etc); d) health status (eg chronic diseases); e) structural (eg coverage and content of the essential package). Therefore, the health policy has to address all factors relating to affordability so as to reduce disparity in utilization of health care and in health outcomes. Understanding health care barriers is important in formulating this kind of health policy. Some barriers are due to patient characteristics such as age and income. Other barriers are health system based such inadequate EHP content and coverage.

3.2 Cost Benefit Analysis

3.2.1 Costing of palliative care

Palliative costs in Kenya are approximated at KES 12 billion in year one and KES 34 billion in year five. The higher costs for palliative care in year five are as a result of cumulative inflationary rates and increased demand for palliative care. The total number of patients in need of palliative care in Kenya is 648,808 from the WHO hub.

Ideal total cost of palliative care for year 1

Category of cost	Total cost per annum	Cost per patient	Percentage contribution
Essential medicine	751,214,023	1,158	6%
Essential equipment	2,032,636,540	3,133	16%
Human resource	4,440,282,886	6,644	35%
Psychosocial support	1,946,425,375	3,000	15%
Other costs	3,649,547,578	5,625	28%
Total	**12,826,166,401**	**19,760**	**100%**

Five year ideal palliative cost projection based on the assumptions above

	Year 1	Year 2	Year 3	Year 4	Year 5
Total PC costs in KShs	12,454,625,794	17,763,441,812	26,554,704,387	35,209,623,714	34,944,806,829
PC cost per capita in KShs	19,196	31,999	43,992	55,130	53,282

3.2.2 Productivity benefits of palliative care

Kenya expects productivity gains ranging from KShs 26 billion in year one to KShs 105 billion in year five. The key driver for benefits is due to the number of productivity years gained per patient. That is, access

to palliative care enables patients to increase their productivity years by at least 6 months, which contributes to the increased contribution of palliative patients towards GDP.

Palliative care benefit projection over 5 years

	Year 1	Year 2	Year 3	Year 4	Year 5
PC benefits in KShs	26,750,399,257	55,315,810,748	82,376,957,359	107,942,863,376	105,175,496,030

3.2.3 Return on investments in palliative care

The ROI associated with investments in palliative care in Kenya is estimated at 2.148x and 2.677x over a one-year and five-year timeframe respectively. This means that for every one KES invested in palliative care, Kenya can expect to realize KShs 2.148 and KShs 2.677 over a one-year and five-year timeframe respectively.

	1-year scenario	5-year scenario
Total costs (billion)	12.5	141.1
Total benefits (billions)	26.8	377.6
ROI	**2.148x**	**2.677x**

For every **USD 10** spent on PC, the benefits will be **USD 27**

3.3 Affordability Analysis and Revised Costs

3.3.1 Projected palliative care costs

a)Repurposing half of the existing resources for palliative care amounting to KShs 9,780 per capita. The unfunded amount remains KShs 9,780.

Unfunded palliative care from existing resources = KShs 19,560 X 50% = KShs 9,780

b) Targeting only government funds which is 53% of total health expenditure. This brings the figure down to KShs 5086 per capita per annum.

Government Expenditure on Palliative Care = KShs 9780 X 53% = 5086

c) Target only the poor who constitute 46% of the population. This brings level of funding required for palliative care to KSh 2340 per capita per annum.

Target the poor for palliative care = KShs 5086 X 46% = KShs 2340

d) The growth of total health expenditure and that of palliative care is projected as follows over the next five years:

3.3.2 Realistic palliative care cost projections over five years

Years ahead	**Total Health Expenditure per capita annual growth at 10% in KShs**	**Per capita funds allocated to palliative care at 30% of additional THE**	**Deficit in desired palliative care funds per annum**	**Per capita funds allocated to palliative care at 50% of additional THE**	**Deficit in desired palliative care funds per annum**
Base year	***KShs 7,822***	***KShs 0***	***Baseline need is KShs 2,340 per capita***	***KShs 0***	***Baseline need is KShs 2,340 per capita***
Year 1	8,213	117	2223	196	2144
Year 2	8,624	241	2099	401	1939
Year 3	9,055	369	1971	617	1723
Year 4	9,508	506	1834	843	1506
Year 5	9,983	648	1692	1081	1259

4 DISCUSSION

4.1 Ideal situation in CBA

The Cost-Benefit Analysis technique used here simply expresses an ideal situation. The overall message is that under certain conditions, investment in palliative care would bring about a return on investment (ROI) of 2.14 -2.78, which is a very good rate of return on any investment [14]. It is assumed that this will be an entirely new and additional investment on the current total health care package. The palliative care investment would be KSh 19,560 per capita. This would increase to KShs 53,282 per capita in the fifth year. It does not say how such funds can be raised or whether it is even feasible to mobilize such funding. All factors remaining constant, it assumes efficient and equitable distribution of palliative services in the country. And this would extend the productivity of a palliative care patient by six months, which can make a good contribution to the national economy.

4.2 Real situation in affordability analysis

The real situation on the ground is starkly different. Most assumptions in the CBA actually fall away. The entire health care package in Kenya is funded at KSh 7,822 per capita, which is a far cry from the CBA projected ideal palliative care funding of 19,560 per capita. Moreover, the national health budget, inadequate as it is, cannot be fully funded from available sources. There is a funding gap of 15 per cent of the national health budget. The government will fund only 52 percent of the national budget and households are expected to fund 33 percent.

That is not all. The definition of the EHP does not explicitly mention or include palliative care as a separate and distinct service. But it is known that about 10 percent of palliative care needs are currently being met in Kenya [5]. This means that palliative care is subsumed in the existing EHP. In addition, the

entire Kenya Health Policy is geared to support economic production. Therefore, the policy principle is to choose high impact health interventions for the highest possible return on economic productivity. Obviously this means palliative care may not be an attractive choice for the list of priorities. For palliative care to be prioritized, it has to be based largely on human rights, not just on economic productivity arguments.

Furthermore, Kenya's track record of health budget increases is not particularly impressive. There has not been a significant real increase in the health budget. Health expenditures have remained with minimal increases or stagnant for a long time. The actual national budget allocation to health has remained around 6-7 percent and yet the aspiration for better health requires a 15 percent allocation as per the Abuja Declaration [12]. At 15 percent national budget allocation to health, the per capita health expenditure would be around KShs 13,070, much better than the current KSh 7822. Also notable in Kenya is the fact that 46 percent of the population is in absolute poverty, and low national health insurance coverage of 17 percent (12 percent for rural and 27% for the urban). Without a firm national policy directive, palliative care may not be on the radar of most health insurance organizations. What is more is that the current global economic slow-down does not provide a good prospect for big increases in health spending.

If we repurpose existing resources for palliative care, we could mobilize about half of palliative care needs. If we target additional health budget allocation from the government and target the poor initially, the level of additional funds needed would come down to KShs 2,340 per capita. This would not be mobilized at ago, but gradually over time as the budget grows. It is projected that in five years' time, about half that funding would be additionally available for palliative care. This assumes a realistic annual health budget growth rate of 10%. Through vigorous advocacy and inclusion of palliative care in the EHP, half of that increase in the health budget would be allocated to palliative care.

4.3 Framing the case for investing in palliative care

The principles

Therefore, the following principles could be used to put a case for investment in palliative care in Kenya:

1The economic benefits of investment on palliative care are quite positive and worthy.

2 Palliative care should be seen and treated as a continuum of care of all serious illnesses and injury

3 NCDs and injury constitute a major and growing component of palliative care needs in Kenya and so should be incorporated into EHP

4 Africa has the highest need for palliative care in the world and, as such, a particular focus should be put on it so that it can be addressed

5 Kenya is a middle income country and its Vision 2030 envisages a health care level at par with the status of a middle income country, which includes providing for most of the country's palliative care needs

6 The budget outlook is slow and difficult health budget growth, so the targeted palliative care budget must be implemented in a well phased manner.

7 Because there are many competing priorities, an aggressive and comprehensive advocacy program should be set up to show the merits of palliative care to decision-makers and other stakeholders
8 Palliative care costs should be realistic so that they can be incorporated into the health budget and EHP
9 Repurpose the existing resources as much as possible to integrate palliative care into routine health services
10 A special focus should be put on the poor accessing palliative care

Recommendations

1 A clear policy should be developed on palliative care, with specific provisions on financing strategy, incorporation into the EHP, and guidance to private sector
2 A five year strategic plan should be made to promote and incorporate palliative care as part and parcel of the EHP
3 Develop a monitoring and evaluation plan for the assessment of: a) the use of palliative care services, b) availability of critical drugs and equipment, c) palliative care human resources numbers and capacities, and d) the benefits of palliative care in terms of reduction of inpatient number, reduction of hospital days, reduction in hospital visits and number of productive years, among others.
4 Develop a five year palliative care advocacy plan with clear targets and M&E indicators

5 CONCLUSION

While the economic benefits of palliative care can be clearly demonstrated through cost-benefit analysis, the ideal levels of funding for effective palliative care services are currently not feasible in Kenya. The reality on the ground is that the Government of Kenya is working within a far smaller overall health resource envelope. Palliative care is not a visible priority in the EHP. So, palliative care stakeholders ought to embark on sensitizing decision makers and other stakeholders on palliative care. They need to develop and implement a full program of advocacy. The government should be urged to incorporate palliative care as a distinct element in the continuum of health care services under the EHP. The incorporation palliative care in EHP should be in phases at a realistic and affordable pace with set targets. The advocacy should include the development or revision of the palliative care policy, a five year palliative care advocacy strategic plan, and a palliative care advocacy monitoring and evaluation plan.

References

1APCA Atlas of palliative care in Africa, 2017 https://www.africanpalliativecare.org/images/stories/pdf/APCA_atlas.pdf
2 World Health Organization, Palliative care for Non-communicable diseases,2019. https://www.who.int/docs/default-source/ncds/web-60609-oms-ncd-palliativecare-20200817.pdf?sfvrsn=1ec05d5_2
3 LANCET. Alleviating the access abyss in palliative care and pain relief— an imperative of universal health coverage. 2018. https://www.thelancet.com/commissions/palliative-care
4 World Health Organization and Worldwide Hospice Care Alliance, Global Atlas of Palliative Care, 2020. http://www.thewhpca.org/resources/global-atlas-on-end-of-life-care

5 IAHPC. Global data platform to calculate SHS and palliative care need. https://hospicecare.com/what-we-do/resources/global-data-platform-to-calculate-shs-and-palliative-care-need/database/
WHPCA. World Atlas Second Edition. 2020. http://www.thewhpca.org/resources/global-atlas-on-end-of-life-care
6 Ministry of Labour and East African Affairs. Towards a more effective national safety net for Kenyan. 2016. https://www.socialprotection.or.ke/images/downloads/NSNP-Progress-Report_March_2016.pdf
7 KPMG. The economics of increased investment in palliative care. 2020. https://apo.org.au/sites/default/files/resource-files/2020-05/apo-nid305285.pdf
8 African Palliative Care Association, Essential palliative care package for universal health coverage, 2019. https://www.africanpalliativecare.org/images/stories/pdf/PC_in_UHC_package.pdf
9 Spillsbury K. et al. The impact of community- based palliative care on acute hospital use in the last year of life. 2017. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5608395/
10 Medical Life Sciences. The benefits of palliative care for heart failure patients. 2020. https://www.news-medical.net/news/20200527/Study-highlights-benefits-of-palliative-care-for-heart-failure-patients.aspx
11 GoK 2018 Kenya Health Sector Strategic Plan: Achieving UHC BY 2022; Nairobi Kenya
12 Njuguna D and Wanjala P 2018 Policy Brief: A case for increasing public investments in health: Raising public commitments to public sector. Ministry of Health, Nairobi Kenya
13 Zavras D 2020 Health care affordability during economic recession: The case of Greece: Int'l Jnl of Enviro Research and Public Health (17) 1790
14 Investopedia: A guide to calculating return on investment (ROI)", 2020 https://www.investopedia.com/articles/basics/10/guide-to-calculating-roi.asp
15 APCA 2021 An investment case for palliative care in Kenya: a return on investment analysis for the inclusion of an essential package of palliative care in the Essential Health Package. African Palliative Care Association