



Ministry of Health

## RAPID EVIDENCE BRIEF

# Innovative approaches to strengthen integrated non-communicable disease management in Kenya's public health system

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### Overview

#### Key Messages

- Integrated service provision leads to medication availability, decrease in the financial resources utilised, peer support, reduced caregiver burden and effective modifications tailored to the local context.
- Interpersonal psychotherapy is an effective management option for depression
- Cancer patients suffer from psychological, social and emotional pain that is inadequately addressed by health care providers.
- Waist circumference and waist to height ratio are better measures of obesity in comparison to BMI when screening pre-diabetic patients.

#### Recommendations

- Prioritise the multi-pronged approach to ensure involvement of all partners in the management and care of patients.
- Integrate interpersonal psychotherapy in mental health care management.
- Psychological and social interventions should be an important facet in the management of cancer patients.
- Waist circumference and waist to height ratio should be integrated as measures of obesity for diabetes.

#### Objectives

- To summarise non-communicable diseases abstracts presented at the 11<sup>th</sup> KEMRI Annual Scientific Conference.
- To highlight key interventions and lessons on non-communicable diseases from the 11<sup>th</sup> KEMRI Annual Scientific Conference.

## Introduction

Kenya is experiencing an epidemiological transition in its Non-Communicable Diseases (NCDs) burden. NCDs are a major public health concern and contribute to over 50% of hospital admissions and 40% of the mortality, slowing down economic progress in Kenya. If the present trend continues, the health systems in low-and middle-income countries will be unable to mitigate the disease burden. The NCDs burden is fuelled by behavioural and lifestyles factors hence the epidemiological models and projections may not be nationally representative

or accurate. There is need to examine the magnitude of NCDs to inform the design and implementation of interventions by the Ministry of Health(MoH), government sectors and county governments.

The basis of NCDs prevention is the identification of the major common risk factors, barriers and their prevention and control. For effective management of NCDs, the plan of care must involve the entire NCD patient's journey from prevention, to health education, advocacy and care, to address specific barriers for effective control.

## NCDs related KASH conference abstracts

The 11<sup>th</sup> KEMRI Annual Scientific Conference had a total of nine abstracts that focused on NCDs. The NCDs discussed were cancer, mental health, diabetes and sickle cell disease. The following is a table that summarises the nine abstracts.

Study title	Intervention	Key findings	Recommendations
Linnet Ongeri <i>et al</i> - Interpersonal Psychotherapy (IPT) delivered by non specialists for depression and post-traumatic stress disorder among Kenyan HIV-positive women affected by gender-based violence	Use of IPT to treat depression and post-traumatic stress disorder (PTSD) vs 'treatment as usual'	IPT resulted in an improvement of mental health, functioning and decrease in intimate partner violence	Should be used to treat depression and PTSD as opposed to 'treatment as usual'
Sally N. Loronyokie, <i>et al</i> - Cancer associated opportunistic fungal infections in patients attending selected oncological clinics in Kenya	Various specimens were collected from cancer patients and innovative diagnostic techniques used for screening of opportunistic fungal infections	Filamentous fungi and yeast were found in 53% and 47% respectively in patients swabs that were collected from cancer patients undergoing treatment	Enhanced surveillance of fungal infections among cancer patients on immunosuppressive therapy
Rebecca Lwoyelo Mutembule, <i>et al</i> - Spectrum of opportunistic fungal and bacterial pathogens in cancer patients at Texas cancer centre, Nairobi, Kenya	Collection of various swabs from cancer patients who were on treatment	The main bacteria and fungi isolated from patient swabs were: <i>Escherichia coli</i> (28.0%), <i>Candida</i> spp. (18.0%), <i>Klebsiella</i> spp. (12.0%), <i>Staphylococcus</i> spp. (9.3%), <i>Pseudomonas</i> spp. (6.7%) and <i>Candida albicans</i> accounted for >90% of the yeasts isolated	There is need for constant surveillance to establish therapeutic modalities based on infection epidemiology and local resistance profiles
Anthony Muchai Manyara, <i>et al</i> - Understanding the risk factors of type 2 diabetes (T2D) and lived experiences of diabetes risk in Nairobi, Kenya	Data was collected on lifestyle factors, anthropometrics, body composition and handgrip strength. Interviews in two contrasting communities in Nairobi, one low-income and one middle-income	The risk factors for T2D highlighted are central obesity; decreased muscle mass and strength; decreased education on diabetes risk factors; lack of disclosure of condition by patients suffering from T2D; and lack of access to diabetes screening services	Understanding T2D risk factors and lived experiences of diabetes risk in Kenya are important for development of appropriate prevention interventions.
Sharon Mokuu, <i>et al</i> - Self reported symptoms and their influence on help seeking for cancer care in Kenya: A mixed methods study	Four focus group discussions with cancer survivors and 22 in-depth interviews with health workers, care-givers and policy-makers	The most common symptoms are breast lump, vaginal bleeding, general pain and abdominal discomfort. Majority of patients went to a health facility (62.2%), 23.2% of the participants did nothing	An increased understanding of the health seeking and help seeking decision-making process by patients especially in the sub-Saharan African context is needed
Nassoro J. Mwanyalu, <i>et al</i> - Treatment outcome among Medically-Assisted Therapy (MAT) clients, Mombasa, Kenya	We reviewed all the records for patients enrolled at Kisauni MAT clinic from 2017 to 2019	Opioid use for more than five years, unemployment and being uneducated are factors contributing to poor treatment outcome among MAT patients	Close monitoring of MAT clients with these characteristics and integration of Comprehensive Care Clinic (CCC) to MAT services

Study title	Intervention	Key findings	Recommendations
Lilian. N. Nyandieka <i>et al</i> - Cancer and social pain in Kenya: Perspectives of patients, survivors and care-givers.	Four focus group discussions with cancer survivors, a survey of patients and in-depth interviews with care-givers, health workers and policy-makers	More attention was paid to financial support rather than psychological and social support	The health system should introduce psycho-social support and increase awareness among health providers to understand the vulnerabilities and the potential risk to increased social pain
Sophie Uyoga <i>et al</i> - Sickle cell disease -The patient's perspective.	Conducted four focus group discussions and two in-depth interviews with the patients attending the sickle cell clinic at Kilifi County Hospital and their care-givers to share experiences.	The discussions highlighted the challenges and successes that the affected families experience and was captured in a 28-page comic book	Comic books can be used to educate the community about diseases and help reduce stigmatisation of the affected families
Mercy Njeru <i>et al</i> - Access to cancer care in Kenya: Patients, caregivers and health provider's perspectives.	405 patients were interviewed, four focus group discussions with cancer survivors and 22 in-depth interviews with care-givers health workers and policy-makers held	The six dimensions of access to cancer care interact and cannot be addressed separately	A holistic health system approach is more desirable while emphasis should be made at enhancing diagnostic capabilities at lower levels of care in line with universal health coverage

## Integrated health interventions in NCDs management

The strengthening of the public health system can be achieved through trainings, innovative diagnostic techniques, streamlining referral mechanisms and NCDs therapeutics interventions. The data management at health facilities and NCDs registry can enhance the standards of prevention care and NCDs management practices. Collaborative efforts and personalisation of treatment services to address specific patient needs are required to improve the quality of care delivered. The benefits of integrated health care systems lead to medication availability, decrease in the financial resources utilised, peer support, reduced care-giver burden and effective modifications tailored to the local context (Leung *et al.*, 2020) (Mutisya *et al.*, 2019).

Study and year	Intervention/Exposure	Key findings	Contextualisation
Claudia <i>et al.</i> , (2020) - Human-centered design (HCD) as a guide to intervention planning for non-communicable diseases: The BIGPIC study from Western Kenya	Design team of health professionals utilised a four-step approach of synthesis, idea generation, prototyping, and creation, to develop an integrated microfinance-group medical visit model for NCDs. They tested the intervention with a 6-month pilot and conducted a feasibility evaluation using focus group discussions with pilot participants and community members	NCDs delivery model consisted of microfinance with medical visits. Benefits of the intervention included medication availability, financial resources, peer support, and reduced care-giver burden	The use of HCD to guide the development and evaluation of an innovative care delivery model for NCDs. HCD framework by engagement of local stakeholders optimises intervention design and implementation in low-resource settings. Iterative feedback informed modifications to local context
Raymond Mutisya <i>et al.</i> , (2019) - Strengthening integration of family planning with HIV/AIDS and other services: experience from three Kenyan cities	Integration of family planning in the human testing and counseling services, ante-natal clinic, post-natal clinic, and child welfare clinic	Decreased time in the provision of family planning services	Integration of health care services leads to improved quality of care delivered to patients

## Interpersonal psychotherapy as a treatment option for depression

Mental health plays a key role in determining the overall health of a population. (WHO Global Mental Health Action Plan 2013-2020). It is estimated that up to 25% of outpatients and up to 40% of in-patients in health facilities suffer from mental conditions (KNCHR, 2011). The common diagnoses of mental illnesses are depression, substance abuse, stress related and anxiety disorders (Jenkins *et al.*, 2012; D. M. Ndetei *et al.*, 2008). Interpersonal therapy (IPT) was used in one of the studies to treat major depressive disorder and post-traumatic stress disorder among women who have face gender-based violence. The results were an improvement in mental health functioning and reduced intimate partner violence. In other studies, IPT has been used to treat depression among community members resulting in improved productivity and cohesion among community members (Lewandowski *et al.*, 2016; Cuijpers *et al.*, 2011).

Study and year	Intervention/Exposure	Key findings	Contextualisation
R. E. Lewandowski <i>et al</i> (2016) - Local perceptions of the impact of group interpersonal psychotherapy in rural Uganda	Interviews with 22 key informants and six group interpersonal psychotherapy facilitators	Improved school attendance for children; improved productivity; improved sanitation in communities; greater cohesion among community members; and reduced conflict in families	Group Interpersonal psychotherapy can be used to treat patients suffering from depression
Pim Cuijpers <i>et al</i> (2011) - Interpersonal psychotherapy for depression: A meta-analysis	Searched bibliographical databases for randomised controlled trials comparing IPT with no treatment, usual care, other psychological treatments, and pharmacotherapy as well as studies comparing combination treatment using pharmacotherapy and IPT	IPT efficaciously treats depression, both as an independent treatment and in combination with pharmacotherapy	IPT should be used as one of the key treatment options for treating patients suffering from depression

## Patients' perspective on cancer treatment in Kenya

A cancer diagnosis causes a great strain on the patient and care-givers emotionally, financially and socially. Social pain is often as a result of social conflict and a lack of understanding of the diagnosis they have received and the way forward. Health care providers and care-givers pay more attention to the physical treatment and financial support, often neglecting the psychological and social aspect of care. Studies done on the patients' perspective on the treatment they have received have shown that cancer patients struggle with psychological, emotional and social pain (D. Ndetei *et al.*, 2018; Hajian *et al.*, 2017). Health care providers thus need to increase the psychological interventions that are given during the care and treatment of cancer patients so as to improve the overall outcome and treatment experience of the patients.

Study and year	Intervention/exposure	Key findings	Contextualisation
David Ndetei <i>et al.</i> , (2018) - Psychological well-being and social functioning across the cancer stages: Implications for palliative care	Various measures to assess different facets of respondent's life and psychological well-being	Cancer status was negatively associated with social and occupational functioning and psychological well-being	Social and psychological support should be a key treatment facet for cancer patients
Sepideh Hajian <i>et al</i> (2017) - Coping strategies and experiences in women with a primary breast cancer diagnosis	Data collection was conducted by semi-structured, in-depth interviews	Importance of addressing psycho-oncology intervention programs to address the unmet psycho-social and palliative care needs of patients suffering from breast cancer	Psychosocial interventions should be a key part in the treatment of cancer patients

## Screening tools for diabetes

In Kenya, Type 2 diabetes is on the rise with a current prevalence of 3.3% which is expected to rise to 4.5% by 2025 (MoH, Kenya National Bureau of Statistics; WHO, 2015). As a result, there need for improved efforts in identifying risk factors for the disease that can be addressed by public health interventions. One study highlighted that central obesity rather than Body Mass Index (BMI) was a key factor for risk stratification of type 2 diabetes patients. This is supported by other studies that have shown that waist circumference is a better screening tool for diabetes than BMI. In addition to waist circumference, the waist to hip ratio can also be used as better screening tool for diabetes as compared to BMI. (Browning, Hsieh, and Ashwell, 2010; Thomas *et al.*, 2020).

Study and year	Intervention/exposure	Key findings	Contextualisation
Lucy Browning <i>et al</i> (2010) - A systematic review of waist-to-height ratio as a screening tool for the prediction of cardiovascular disease and diabetes: 0.5 could be a suitable global boundary value	Exploring waist-to-height ratio and waist circumference or BMI as predictors of diabetes and Cardiovascular disease (CVD)	Waist to height ratio and waist circumference are therefore similar predictors of diabetes and CVD, both being stronger than, and independent of, BMI	Waist circumference and waist to height ratio should be used as predictors of diabetes
Ronnie Thomas <i>et al</i> (2020) - The accuracy of anthropometric measurements of general and central obesity for the prediction of impaired glucose tolerance among the adult population of South India	Anthropometric measures of individuals with glycosylated hemoglobin (HbA1c) in the range for IGT were compared with age- and gender-matched controls with HbA1c in the normal range	In both genders, waist circumference, waist-to- height ratio and neck circumference had better predictive accuracy for pre-diabetes as compared to BMI and waist-to-hip ratio	Adaptation of waist circumference and waist-to-height ratio as a screening tool for diabetes

## Conclusion

The conference had interactive sessions that discussed a myriad of NCDs. These abstracts represent the great advancements in medicine that are being realised due to the increase in research in the country. It is important that with the realisation of these advancements, we incorporate these practices in our daily patient reviews so as to improve the quality of health care and the overall patients outcomes.



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