



Kitui County Referral Hospital Continuing Medical Education Report
Theme: Industrially Produced Trans Fatty acids and Heart Health.

Prepared By:

Monicah Ndunda and Simon Aloo, PhD

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Executive Summary

According to WHO Industrially produced trans fats are contained in hardened vegetable fats, such as margarine and ghee, and are often present in snack food, baked foods, and fried foods. Manufacturers often use them as they have a longer shelf life than other fats. But healthier alternatives can be used that would not affect taste or cost of food. The Alliance for Cardio-Metabolic Health and Research – Kenya (ACMHR-K) conducted a Continuing Medical Education (CME) session at Kitui County Referral Hospital in Kitui County. The session was aimed at increasing awareness among healthcare professionals on heart health, cardiovascular disease prevention and the health effects of industrial trans fats. The discussion also covered dietary fats, cholesterol, healthy dietary choices, lifestyle practices and the role of healthcare professionals in providing nutrition and health education to patients. A total of 51 participants were recorded in the attendance register. The participants included healthcare professionals and health-related trainees from the hospital and surrounding health facilities. The CME provided an opportunity for participants to discuss common issues related to cardiovascular health and dietary practices and to consider the importance of information on healthy diets and cardiovascular disease prevention.

Background

Kitui County is located in Eastern Kenya and is one of the counties identified as an operational county for ACMHR-K activities. The selection of Kitui County provides an opportunity for ACMHR-K to engage healthcare professionals directly within the county and to promote awareness and professional education on cardiometabolic health. The CME was organized in recognition of the growing importance of cardiovascular disease prevention and the need for healthcare professionals to have practical information on dietary and lifestyle factors that

affect heart health. Particular attention was given to industrially produced trans fats and their associated health risks, as well as the role of healthy dietary practices in cardiovascular disease prevention.

The activity was attended by a multidisciplinary group of healthcare professionals, including medical officers, clinical officers, nurses, nutritionists, physicians and other health professionals. The multidisciplinary participation reflected the understanding that heart health is a collective responsibility and that prevention and management of cardiovascular diseases require contributions from different healthcare disciplines. The CME was planned well in advance, with communication made to the relevant authorities in Kitui County and the management of the referral hospital. This early engagement was intended to facilitate coordination, obtain the necessary support and allow adequate communication to healthcare professionals to encourage good participation.

The CME team was led by Monicah Ndunda, ACMHR-K Secretary (Figure 1), alongside Rhoda Willy and Tonny Muthembwa, both ACMHR-K Ambassadors. The team coordinated the activity and supported engagement with the healthcare professionals who attended the session. The activity aimed to strengthen healthcare professionals' knowledge of cardiovascular health, the health risks associated with industrially produced trans fats, and the importance of dietary and lifestyle interventions in preventing cardiovascular diseases. It also provided an opportunity for different cadres of healthcare professionals to discuss how heart-health messages can be incorporated into routine patient care, counselling and health promotion.

Objectives

- Increase healthcare professionals' awareness of heart health and cardiovascular disease prevention which will eventually create awareness to the public.
- Improve understanding of industrial trans fats and their effects on cardiovascular health to ensure health workers adopt front of package reading before purchase.
- Highlight the relationship between dietary fats, cholesterol and cardiovascular disease.
- Promote evidence-based nutrition and lifestyle interventions for the prevention of cardiometabolic diseases.
- Encourage healthcare professionals to incorporate heart-health education into routine patient counselling to ensure patients make informed decisions.



Figure 1: ACMHR-K team was led by Monicah Ndunda, Organization secretary



Figure 2: Mr. James Muthui, a student mentor, delivered a welcome speech to the ACMHR-K team at the beginning of the CME session.

Key Areas Covered

- **The burden of Non communicable diseases in Kenya and Africa.**

This section highlighted the rapid rise in the burden of non-communicable disease (NCDs) in African communities and how it has resulted in a considerable mortality, disability, and economic burden to households. NCDs have led to a bigger economic loss worldwide, with a bigger percentage being attributed to cardiovascular illnesses, cancer, chronic lung diseases, and diabetes. The majority of NCD-related mortality, occurs in low-income and middle-income countries, such as those in Africa. In addition to the ongoing burden of communicable, maternal, and child health issues, African countries are undergoing rapid transitions in epidemiological, socioeconomic, and demographic contexts. These transitions are projected to shift the profile of disease burden, with NCDs progressively emerging as the primary health concern, overtaking communicable diseases. To address the increasing burden of NCDs, there has been a coordinated global and regional endeavor to create and execute methods with the goal of decreasing the incidence and consequences of these illnesses one of them being creation of awareness in health facilities. Non-communicable diseases (NCDs) are an important and increasing public health concern in Kenya. Current Ministry of Health and WHO sources report that NCDs account for approximately 39% of all deaths in Kenya and contribute to more than half of inpatient hospital admissions. The Ministry of Health has also reported that NCDs account for approximately 11% of health expenditure, demonstrating their impact not only on health outcomes but also on the health system. It is within this context that ACMHR-K organized the CME on Heart Health and Industrial Trans Fats at Kitui County Referral Hospital. The session focused on one component of the broader NCD prevention agenda: improving understanding of cardiovascular health and the dietary factors that can contribute to cardiovascular risk, including industrially produced trans fats

- **Industrially produced trans fats and their sources.**

This section highlighted the major sources of Industrial Trans fatty acids (ITFAs). They are referred to as *trans* configuration of unsaturated fatty acids that occur during the commercial manufacturing processes such as partial hydrogenation, deodorization and refining, and naturally in ruminants' fats due to their biohydrogenation process. ITFAs are crucial in the food industry due to their significant role in enhancing the taste, texture, and overall palatability of food products. On the other hand, the consumption of ITFA has been linked to several adverse health effects such as non-communicable diseases, including cardiovascular disease, type 2 diabetes, obesity, and certain cancers. TFA in food can originate from natural or industrial sources. Naturally occurring TFAs are found in meat, milk, milk products, and other animal-derived foods.

The session emphasized that the public health concern is particularly related to industrially produced trans fats. High intake of industrial trans fats is associated with an increased risk of cardiovascular disease because trans fats adversely affect blood lipid profiles, including increasing Low Density Lipoprotein cholesterol and lowering High Density Lipoprotein cholesterol. This contributes to atherosclerosis and increases the risk of coronary heart disease and related cardiovascular events. Excessive consumption of trans fats has also been associated with other adverse metabolic health outcomes.

The discussion also highlighted that trans fats are often present in foods that may be consumed regularly without consumers being aware of their presence. Processed and commercially prepared foods may therefore contribute to trans-fat intake where partially hydrogenated oils or other sources of industrial trans fats are used. Healthcare professionals were encouraged to consider dietary patterns when counselling patients on cardiovascular disease prevention and to support the selection of foods with healthier sources of fat.

The session further emphasized the importance of reducing or eliminating industrial trans fats from the food supply as part of broader non-communicable disease prevention efforts. This includes encouraging the use of healthier oils and fats, promoting minimally processed foods, reading food labels where available, and supporting awareness among healthcare professionals and the wider community about the sources and health implications of industrial trans fats.

- **Policy and Public Health Measures for Industrial Trans Fat Elimination**

This section was meant to introduce the progress that countries, including Kenya are making to eliminate ITFAs in the market. Countries have adopted different approaches to reducing exposure to industrially produced trans fatty acids (TFA), including voluntary industry reformulation, mandatory labelling, restrictions on specific food products, and national regulatory limits. However, evidence from international experience has shown that mandatory regulatory approaches are more effective than voluntary measures in reducing industrially produced trans fats in the food supply. WHO therefore recommends legally enforceable national measures as the preferred approach for achieving population-level elimination.

In line with WHO best practice, countries can adopt either of two regulatory approaches: (1) a mandatory national limit of no more than 2 g of industrially produced TFA per 100 g of total fat in all foods, or (2) a mandatory national ban on the production or use of partially hydrogenated oils (PHOs) as an ingredient in all foods. WHO notes that, depending on the sources of trans fats within a country's food supply, implementing both approaches may provide additional protection.

WHO's REPLACE action package provides a framework for countries to progressively eliminate industrially produced trans fats from the food supply. The six recommended areas of action are: REview dietary sources of industrially produced TFA and the policy environment; Promote the replacement of TFA with healthier fats and oils; Legislate appropriate regulatory measures; Assess and monitor TFA levels in foods and population exposure; Create awareness among policy-makers, food producers, suppliers and the public; and Enforce compliance with established regulations.

The WHO approach places particular emphasis on replacement rather than simply restriction. Industrially produced trans fats can be replaced with healthier sources of fat without compromising the availability, taste or cost of foods when appropriate alternatives are selected. WHO recommends replacing partially hydrogenated oils with oils rich in polyunsaturated or monounsaturated fatty acids, taking into consideration local availability, cost and the capacity of the food industry to reformulate products.

Monitoring and enforcement are also important components of effective TFA elimination. Countries need systems to assess trans-fat levels in the food supply and monitor compliance with regulatory limits. WHO has developed laboratory protocols to support countries in measuring fatty-acid profiles in foods, including industrially produced trans fats.

Overall, the WHO best-practice approach demonstrates that elimination of industrially produced trans fats is primarily a population-level policy intervention, rather than a responsibility placed solely on individual consumers. Healthcare professionals nevertheless have an important role in creating awareness, supporting healthy dietary choices and incorporating cardiovascular disease prevention messages into routine patient education. These actions complement regulatory measures aimed at creating a food environment in which healthier choices are more readily available

Participants

The CME was attended by healthcare professionals and health-related trainees from Kitui County Referral Hospital and different departments. The attendance register included 51 participants whose names are listed in Table 1 below.

Table 1: List of participants for 2026 ACMHR-K Continuous Medical Education conducted at Kitui County Referral Hospital

No.	Name
1	Ambrose Murithi
2	Sharon Chepkorir
3	Brenda Jeptekenya
4	Victor Mwenda

No.	Name
5	Carlos Junior
6	Senewa Marian
7	Cheruiyot Sigen
8	Murithi Michelle
9	Warighe Brenda Wanude
10	Maragia Winfred
11	Monicah Kithuka
12	Grace Mutethya
13	Tom Salaash
14	Emmanuel Kibet
15	Jibilich Sammy
16	Justus Mboya
17	Zainab Hamisi
18	Winfred Muli
19	Caroline Nkirote
20	Mercy Mutheu
21	Magdalene Koki
22	Sylvia Muuli
23	Peter Mulinge
24	Georgina Muasya
25	Juliana Njuguna
26	Martha Nzioka
27	Lucy Mutia
28	Faith Joseph
29	Peris Mutito
30	Ruth M. Kitaka
31	Abigail Mulinge
32	Veronica Syombua
33	Esther Musyoka
34	James Muthui
35	Rhoda Willy
36	Hive Ndandi
37	Elizabeth Kisini
38	Lydia Orebe
39	Mary Joseph
40	Teresia Kithae
41	Lilian Muthui
42	Catherine Kyalo
43	Rose Wandia
44	Andriana Makenzi
45	George Manase
46	Teresia Jonathan
47	Tracy Musyoka
48	Cynthia Mueke

No.	Name
49	Ann Sharon Makena
50	Cecilia Malonza
51	Rosemary Mwanzia

Key Outcome

The CME provided an opportunity for healthcare professionals to strengthen their understanding of heart health and the relationship between dietary fats and cardiovascular disease. The session also highlighted the importance of educating patients on healthier food choices, reducing exposure to industrial trans fats and adopting lifestyles that support cardiovascular health and the overall well-being of every individual. Healthcare professionals were able to understand sources of good oils and methods of food preparation that do not pose a risk to the heart.



Figure 3: Ms. Monicah explaining the importance of food labelling in preventing exposure to industrial trans fatty acids.

Conclusion

The CME at Kitui County Referral Hospital provided an important opportunity to promote awareness of heart health and the health risks associated with industrial trans fats. Through continued professional education and collaboration



Figure 4: Question and answer session

with healthcare institutions, ACMHR-K seeks to support healthcare professionals in promoting healthier dietary practices and preventing cardiovascular diseases. The CME highlighted the important role of dietary factors in cardiovascular disease prevention, with particular attention to industrially produced trans fatty acids. Evidence from systematic reviews indicates that higher consumption of trans fatty acids is associated with increased cardiovascular risk, while replacing trans fats with healthier unsaturated fats can improve important cardiovascular risk markers. The discussion therefore emphasized that reducing exposure to industrially produced trans fats should form part of the broader prevention of cardiovascular disease and other non-communicable diseases. This requires action at both individual and health-system levels, including appropriate dietary counselling, increased awareness of food sources of trans fats, use of healthier fats and oils, and support for measures that reduce industrial trans fats in the food supply. For healthcare professionals, understanding the health effects and sources of industrial trans fats is important because dietary counselling is part of routine prevention and management of cardiovascular risk. The CME therefore reinforced the need for continued professional education and practical engagement on heart health, healthy dietary practices and NCD prevention. Avoiding industrially produced trans fats, while promoting healthier dietary fats, represents an important component of a wider approach to reducing cardiovascular disease burden.

Funding

The funds to support this program was kindly provided by ACMHR-K Executive Board Members. These funds supported:

- Snacks provided to the attendees
- Over 30 printed pens, with organization logo
- Transport for support team
- Other associated costs

Acknowledgement

ACMHR-K appreciates the management and healthcare professionals of Kitui County Referral Hospital for their participation and support in the CME activity.

ANNEX: Other session photos



Figure 5: Other CME photos

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