

Not quite yet: Stakeholder perspectives on health economic evidence use in Non- Communicable Disease priority setting in Kenya

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Abstract

Background

Reversing the rising trend in the burden of non-communicable diseases (NCDs) in Kenya requires the implementation and scaleup of prevention and control interventions. Health economics can help to inform priority setting processes by comparing the costs and outcomes from alternative interventions. However, there is limited research regarding the role played by health economic evidence in NCD priority setting in Kenya. This study explored the perspectives of Kenyan stakeholders regarding the use of, and barriers affecting the uptake of health economic evidence in NCD priority setting in Kenya.

Methods

We conducted sixteen comprehensive interviews with Kenyan stakeholders engaged in NCD policy, management and research. The study participants comprised officials from the Ministry of Health at national and county levels, representatives from civil society organisations, the private sector, health economists, and researchers. We applied an inductive thematic approach in coding and data analysis.

Results

The study found a limited and inconsistent uptake of health economic evidence for informing NCD decision making, which was described as fragmented, ad hoc, and peripheral. Investment cases and cost analyses were the most commonly applied forms of economic evidence. Key barriers to increased uptake included the low prioritisation of health economic evidence within decision-making processes, misalignment between health economic research outputs and policy priorities, and limited capacity to conduct and interpret economic analyses. The scarcity of locally relevant, high-quality economic data also emerged as a major impediment to the reliability and credibility of health economic evidence.

Conclusion

Despite growing recognition of its value, health economic evidence remains inconsistently integrated into NCD decision-making in Kenya. Addressing gaps in prioritisation, capacity, data availability, and alignment between research and policy needs may strengthen the systematic and sustained use of health economic evidence to support effective NCD policy and resource allocation. Analysts should involve the relevant stakeholders while designing and generating health economic evidence to improve uptake.

Background

Non-communicable diseases (NCDs) are the leading causes of death and disability globally, accounting for more than three-quarters of global deaths and 64% of all-cause disability adjusted life years (DALYs) [1–3]. The NCD burden disproportionately affects low- and middle-income countries (LMICs) where more than four in five premature NCD deaths (deaths before the age of 70 years) occur [4]. The Sub-Saharan

African (SSA) region has seen an increasing public health and economic burden of NCDs during the last three decades [5–7]. For instance, the proportion of all-cause mortality attributed to NCDs rose from 24.2% to 37.1% within the World Health Organization (WHO) African region between 2000 and 2019 [8]. The rising NCD burden in SSA could be attributed to urbanisation, demographic and epidemiological transition within the last few decades, which have led to an increase in NCD risk factors and a double burden of diseases [9–11]. In Kenya, NCDs account for about 40% of all deaths and 37% of total DALYs, with more than half of NCD disability occurring in individuals aged below 40 years [12].

The rising NCD burden exerts a great strain on the Kenyan health system, resulting in significant impacts on the economy [13–15]. Kenya's health system has traditionally been designed to address the high burden of communicable diseases, which has limited the prevention and early detection of NCDs [16–18]. The lack of targeted and proactive NCD screening interventions in Kenya leads to late diagnosis of most NCD patients [17–23]. Reversing and halting this NCD trend requires that Kenya adopts and scales up specific, effective, and high-impact interventions targeted at relevant population groups. Kenya must implement a specific package of interventions targeting primordial (health promotion interventions before the onset of risk factors), primary (risk factor detection and management), secondary (interventions after onset of NCDs), and tertiary (curative and rehabilitative interventions) prevention of NCDs [24]. Selecting the optimal NCD intervention package requires that Kenya applies evidence-based priority setting. The selected interventions should not only be clinically effective, but also cost-effective, equitable at scale, and align with the government priorities [25].

Health economics can play an integral role in informing NCD priority-setting practices in Kenya. Economic evaluation involves the systematic comparison of alternative interventions in terms of their costs and consequences to aid the selection of the best alternatives [26]. Performing health economic evaluation can support health technology assessment (HTA) processes by providing the relevant evidence to guide the design of essential benefit packages, strategic purchasing, and reimbursement decisions [27]. Global initiatives such as the Disease Control Priorities (DCP) and WHO-CHOICE projects have sought to support LMICs in using economic evidence to inform priority setting [28–30]. However, these initiatives are limited in the extent to which they can be institutionalized within individual countries, given the varied contextual issues.

Recognizing the need for evidence-based priority setting, the Africa Center for Disease Control and Prevention (CDC) established a Health Economic Programme (HEP) in 2020 [31]. The HEP was set up to build the capacity for African Union (AU) member countries to generate and use health economic evidence in priority setting. In 2023, the HEP established a continental framework to fast-track the institutionalization of Evidence-Informed Priority Setting across AU member states. In Kenya, the move to institutionalise HTA has gained traction within the last decade, driven by Kenya's quest to attain universal health care (UHC). Kenya's formal HTA journey began in 2018, with the gazetting of the first Health Benefits Package Advisory Panel (HBPA) to develop an essential UHC health benefits package and guide the framework for institutionalising HTA [32, 33]. The 2023 Social Health Insurance (SHI) Act further provided for the establishment of the Benefits Package and Tariffs Advisory Panel (BPTAP) to

review and update the existing health benefits package in line with HTA processes [34, 35]. In designing the health benefit package, the BPTAP is expected to apply multiple criteria including incorporating the evidence on the cost-effectiveness, budget, and equity impacts of selected interventions [34]. A fully institutionalised HTA process can help identify relevant NCD interventions for prioritization into the health benefit package.

Previous studies have shown that Kenya's NCD priority setting is ad hoc and affected by many factors, including the influence of external stakeholders and donors, political considerations, and historical focus on curative interventions [17, 36]. While Kenya has made various supply-side investments to formalise evidence-based priority setting [32–35], the actual use of health economic evidence for NCD priority setting remains poorly understood. Limited empirical research has examined how economic evidence is interpreted, negotiated, and applied in real-world priority setting processes in Kenya. Understanding the perspectives of relevant stakeholders involved in NCD policy making and implementation can help identify the barriers facing the uptake of evidence and strengthen institutional mechanisms for evidence-based decision-making. Therefore, this study explores how health economic evidence is used for NCD priority setting in Kenya and identifies the existing barriers to the utilisation of such evidence.

Methods

Study Design

This study employed a cross-sectional qualitative design using key informant interviews (KIIs) to explore stakeholder perspectives on the use of health economic evidence in NCD priority setting in Kenya. The study was conducted as part of a broader qualitative study that examined the barriers and facilitators to NCD prevention and decision making in Kenya [17]. This study is reported in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines [37].

Study Setting

Kenya is a lower-middle-income country in East Africa with an estimated population of 56.4 million [38]. The 2010 Kenyan constitution introduced a devolved governance structure composed of one national government and 47 semi-autonomous county governments [39]. Health service delivery is one of the devolved functions, with the national government being responsible for health policy formulation and management of national referral facilities while county governments manage primary health care and county health facilities [40]. The health system in Kenya is structured into 6 levels: level 1 comprises community health services, level 2 comprises dispensaries and private clinics, level 3 comprises public health centers, maternity and nursing homes, level 4 is made up of sub-county hospitals, level 5 comprises county referral hospitals, and level 6 comprises of the national referral hospitals [41].

Sampling and Participant Recruitment

We purposively selected key stakeholders involved in NCD policy development, planning, programming, service delivery, and research at the national and county levels. Eligible participants included senior Ministry of Health (MOH) officials involved in NCD policy and programming, clinicians, health economists, academics, researchers, civil society organisations, and patient advocacy groups. To identify the eligible participants, we consulted our focal persons at the MOH, followed by snowball sampling to identify additional relevant stakeholders. The focal person was an experienced employee at the MoH NCD department who provided a comprehensive list of relevant key stakeholders. The initial contact with participants was performed through email, followed by telephone contact for planning and scheduling the interviews. The recruitment of participants was conducted between October 2023 and January 2024. From the 40 stakeholders initially identified, the final sample included 16 participants who were successfully recruited and interviewed after data saturation was reached [17].

Data Collection

Data were collected through key informant interviews, with the aid of a semi-structured interview guide that was developed to address the study objectives. The interview guide explored each participant's perspectives and experiences regarding: 1) Broader NCD policy landscape and priority setting practices in Kenya; 2) the current role played by health economic evidence in identifying scalable and sustainable NCD interventions; 3) actors in generation and use of health economic evidence; 4) barriers to the use of health economic evidence, and; 5) recommendations for improving the use of health economic evidence in decision making. The interview guide has previously been published [17].

We pretested the interview guide on two participants not part of the sample and revised the guide to improve its flow and clarity. The revised interview guide was then used during the KIIs, which were led by JOO and assisted by EW. Interviews were conducted in English due to participants' preferences, either face-to-face or online, and lasted between 45 and 90 minutes. Upon administering and obtaining participants' informed consent, the interviews were audio recorded and interview notes taken alongside the audio recordings. Data collection continued until data saturation was attained. The KIIs were conducted between February and April 2024.

Data analysis

Trained research assistants performed verbatim transcription of the interview audio recordings, with quality assessment conducted by JOO and EW. NVivo 14 qualitative data analysis software was used to support data management and coding [42]. An inductive thematic analysis was then performed to identify the emerging themes following the six-step process outlined by Braun and Clarke [43]. First, the team (JOO, EW, CA, and RA) familiarised themselves with the data by reading and rereading the transcripts to attain complete immersion.

An iterative process was applied in developing the initial codebook, which was subsequently discussed and refined by the research team. JOO and EW then independently coded the first five transcripts using

the initial codebook, which was then reviewed and revised through team discussions. The final codebook was subsequently applied to the remaining transcripts, with additional codes added as new insights emerged. We then grouped related codes and excerpts into higher-order themes reflecting the status of health economic evidence use and barriers affecting the uptake. To enhance the analytical rigor, the emerging themes, patterns, and interpretations were regularly discussed among the research team. We validated themes (member checking) by sharing them alongside corresponding anonymised excerpts with five participants to confirm the credibility of the interpretations.

Reflexivity

The principal investigator (JOO) moderated the interviews while EW took comprehensive notes and recorded the interviews. The research team comprised a diverse team with expertise in health economics, public health, epidemiology, and qualitative research, which provided multidisciplinary perspectives throughout the analysis. JOO is a Kenyan health economist with extensive experience in health policy, health economics, health financing, quantitative and qualitative research, and clinical practice. The familiarity of the research team with the Kenyan setting and their contextual knowledge facilitated their engagement with the participants and interpretations of the findings. Reflexivity was addressed through the maintenance of analytical memos, regular team discussions, and a critical reflection on how the disciplinary backgrounds of the researchers could influence their interpretation of the data. Efforts were made to set aside prior knowledge of NCD priority setting in Kenya and to present the views of the participants and not those of the researchers through bracketing.

Ethical considerations

Ethical approval

for this study was obtained from the Moi Teaching and Referral Hospital (MTRH)/Moi University Institutional Scientific and Ethical Review Committee (approval number 00046773) and the ethics committee of the University of Sheffield School of Medicine and Population Health. A permit for conducting the study was also obtained from the National Council for Science, Technology, and Innovation (License Number- NACOSTI/P/24/33160), Kenya. The study procedures were explained to all the study participants before administering a written informed consent form before the interviews. We adhered to the strict information governance policies of the University of Sheffield when handling all the study data and notes from the interviews.

Results

Participants characteristics

We interviewed 16 participants, with the majority (10/16) being female. The participants were drawn from the Ministry of Health at the national level (4/16), a national parastatal (1/16), county government (2/16), universities (2/16) and non-governmental organisations (7/16). The majority of participants

(11/16) described themselves as public health specialists with a medical or pharmaceutical background (Table 1).

Table 1
Characteristics of the study participants

Participant characteristic	Frequency
Occupation	
Public Health specialist (medical background)	9
Academic	2
Public Health specialist	1
Public Health specialist (pharmacist)	1
Clinician	1
Policy-level advocate	1
Health economist	1
Gender	
Female	10
Male	6
Involvement in policy making	
Yes	6
No	10
Affiliation	
Ministry of Health (National level)	4
National parastatal	1
Non-governmental organisation	7
University/research institution	2
County department of health	2
Total	16

1. Status of health economic evidence utilization

a. Limited and fragmented use of health economic evidence in decision making

Across the interviews, participants reported that health economic evidence was not systematically embedded in Kenya's NCD decision-making architecture. The application of health economic evidence in decision-making processes was described as ad hoc, limited, peripheral, and fragmented. Participants also reported that while economic arguments were sometimes invoked during discussions, decisions were often driven by resource constraints, donor priorities, expert opinions, and political priorities rather than formal economic evaluation.

"If there was a scale of one to five, I would give it maybe one... where one is poor... because as I said earlier, not very many people link economics and well-being, especially health promotion" (KII 004)

"A lot of this decision making is still dependent on expert opinion... as opposed to hard evidence." (KII 011)

The participants also acknowledged missed opportunities in performing economic evaluation of interventions and programmes as a key hindrance to their policy relevance.

"We haven't had a lot of studies around cost-effectiveness of interventions and I think this is something that we really need to embrace. I think it should be important before we roll out programs or after two years, three years of roll out...and I think it is important to evaluate whether they are cost-effective so that we can invest in the best interventions." (KII 009)

"So basically, and that I think has been the missing link for the projects that we've done in the past. There has never been that economic aspect included to now make a case as to why we need to do it. Because it makes economic sense or whatever." (KII 010)

b. Investment cases and costing as the dominant economic tools

Despite the limited use of economic evidence, investment cases of NCDs prevention or control, and costing exercises were identified as the most popular forms of economic evidence, frequently cited by respondents. Respondents highlighted that costing exercises and investment case reports have previously informed decisions on prioritising chronic disease interventions, especially during the design of the health benefit package. The transition from the National Health Insurance Fund (NHIF) to the Social Health Insurance Fund (SHIF) was cited as a significant policy shift that used the previous investment case reports.

"There is an investment case for cardiovascular disease that has been done, and we are planning to do one for diabetes soon." (KII 001)

"... in restructuring NHIF to SHIF, where we have the three components in SHIF..., it was crucial for us to pick some of the learnings from the investment case reports to inform us in coming up with the chronic care package for NCDs." (KII 013)

Moreover, respondents shared instances where specific costing evidence led to actionable policy changes, such as adopting community health promoters (CHPs) for home-based screening.

"...so in PIC4C we were able to show the cost of screening using a CHP... and we were able to show that if you screen using a CHP at home, you save 50 percent, ... that has changed things because between our report and the new health policies that have been passed, they fully adopted the CHP and they were equipped and they are able to do door to door screening." (KII 008)

2. Barriers to the uptake of health economic evidence

a. Limited capacity in health economic evidence generation and interpretation

Respondents highlighted systemic capacity constraints, both in generating and interpreting health economic evidence within government, counties, and implementing institutions, as important barriers to the uptake of health economic evidence. This was attributed to the shortage of trained health economists and a weak understanding of cost-effectiveness concepts among decision makers. The limited institutional expertise in economic evaluation leads to reliance on external consultants. Moreover, respondents highlighted a gap in the translation of the available economic evidence into practice. The lack of expertise of most policymakers further hampers the uptake of the already limited economic evidence available.

"We don't have a lot of capacity so we rely on consultants outside the government...like the one (investment case) for cardiovascular was done with consultants together with NHIF." (KII 001)

"If you ask me today to give the economic evidence, I will have a huge challenge... that's not what I do every day." (KII 004)

"Policy makers need to be sensitised... sometimes the evidence is there but they don't know how to use it." (KII 009)

Respondents emphasised the need for targeted capacity building of key stakeholders within the NCD space to promote the translation of economic data into usable formats for advocacy and planning.

"I also think capacity building us in the NCD space to ensure we understand what it is ... like when we talk about cost-effectiveness, what exactly is the definition of that? Making us also understand the importance of trying to go into those details will be a great step... and then helping us to package this information nicely so that we can talk to parliamentarians who control the purse for counties." (KII 001)

1. Lack of prioritisation of health economics.

Another dominant barrier to the uptake of economic evidence was its low prioritisation within the Ministry of Health and broader decision-making structures. Respondents highlighted that health

economics was not yet institutionalised as a core component of planning or program development, with decisions on disease management often made without reference to economic analysis.

"I know we have a plan in the ministry but ... statistics are usually not for health economics and not very well prioritised ..., again if it's made a culture that people are able to do that," (KII 001)

"Maybe you are not many and the economic aspects of disease management and prevention were never a focus area." (KII 010)

Respondents emphasised that the economic considerations have historically been sidelined, limiting their influence on prevention and control strategies. This disconnect has contributed to a gap between evidence generation and application.

"There is a gap there...this is an area that still needs to be developed and accepted, particularly by policy makers. Most decisions...are taken without necessarily considering the available economic evidence." (KII 005)

It was also pointed out that even when economic evidence is available, it often fails to influence decision-making due to misalignment with policymakers' interests and priorities. Researchers are sometimes seen as failing to tailor their messages to resonate with the policy context.

"That is the key problem with us researchers...at times we generate evidence and present it but not really understand the policy makers we are speaking to...even with strong evidence, we must understand them or what is important to them...make it important to them." (KII 008)

To support long-term integration of economic evidence into policy, respondents called for institutional reforms to embed health economics within government systems. Suggestions included formally integrating health economists into technical working groups and making economic evaluation a routine component of the decision-making process.

"We need that health economics to be a deciding factor when making decisions...It should be entrenched in the whole ministry...we have disease specific technical working groups like for example diabetes and all that. So making health economics part and parcel of this would be really important." (KII 001)

c. Misalignment between research outputs and policy priorities

Participants repeatedly highlighted a disconnect between academic research and policy needs. Economic studies were sometimes perceived as addressing issues that were not considered priorities by decision-makers.

"...you need to define the gap as per the gap that actually exists. Don't do a study for the sake of it...when the government has well defined gaps. So define the gaps, that, if at all something comes up, then the

decision maker would want to take up this evidence because there is a clearly defined gap in the section. So your gap really needs to be in line with the actual gap.” (KII 003)

“Sometimes, a researcher will see a problem...but does the policy maker also see it as a problem? because otherwise you may do an analysis...and we have done that before ...and then we present it to the government and then they are like maybe it was not a priority for them or they don't see why you did this...” (KII 006)

Particularly, the respondents highlighted a shortage of implementation-focused economic studies, describing the existing evidence as too academic or disconnected from practical application.

“We have very weak research...mostly it comes from learning institutions so not necessarily that they are implementing...I would call it classroom research as opposed to implementation research or research that can lead to policy changes.” (KII 012)

The disconnect reduced the credibility of economic arguments in policy circles, particularly when negotiating with finance ministries that control budgets.

“If you go and talk to the Ministry of Health you tell them about outcomes...they will go to the Ministry of Finance ... ‘So what’s it going to cost us? Why should we do it?’ Unless we can convince them that it makes economic sense...they won’t support it.” (KII 010)

Extensive stakeholder engagement through the evidence generation pipeline was identified as a critical factor for enhancing uptake and ownership of the research outputs. Participants highlighted the need to identify and include all relevant stakeholders from national and county governments, NGOs, patients, payers, and healthcare providers at every stage of the research process. Better communication and effective dissemination of outputs from health economic analyses also emerged as a key enabler to the uptake of evidence.

“Align with the gaps, with the priorities, and involve the right people all the way to dissemination.” (KII 003)

“...by partnering with partners or organisations or stakeholders that is how that is what they do so that they co-own the process and they can be able to help to disseminate and even use that information...” (KII 006)

“...Work closely with the key stakeholders and...distil [findings] for policy makers...invest a lot in dissemination...Use various platforms to bring to light where the issues are.” (KII 014)

“They need to engage the stakeholders before they undertake their analysis, even when they are designing their economic tools...We first asked MOH, what costing do you want? What disease do you want?...Do you want the societal perspective or...the health system perspective?” (KII 015)

d. Data deficiencies and modelling limitations

Poor quality or incomplete data was also cited as a major barrier across multiple interviews. Respondents highlighted the lack of reliable and localised data for economic modelling, particularly when attempting to build economic models that reflect the complex realities of NCDs. The data gaps were reported to impact the credibility and relevance of economic analyses, given that models often relied on assumptions rather than country-specific evidence.

"When we did that economic (cost-effectiveness) analysis, a lot of the information was modelling. And that was a challenge because even when the findings were presented, there's already that Western mark because the foundation was modelling and lack of data" (KII 011)

"NCDs are not like any other conditions. They have drivers which are background factors. So if we don't bring these background factors into these models, then we might not get the right numbers." (KII 013)

"we need proper routine data so it has to deal with what is being collected by the HMIS and all that cause you need quality data" (KII 014)

Respondents emphasised the importance of generating robust and policy-relevant economic data. Clear, credible evidence, especially when linked to patient and population outcomes, is essential in influencing decision makers and justifying investments.

"I think we need to do a lot to get data so that even as we're doing these economic models, we have confidence that whatever is being generated is true, you know, is actually a true reflection of the current situation" (KII 011)

"I think first of all you need to generate data, good data. I have given you an example, recently when we did the cost of the illness of diabetes, the government really liked it." (KII 015)

Discussion

This study examined the extent to which health economic evidence informs NCD priority setting in Kenya through qualitative interviews with relevant stakeholders. The study found a limited and inconsistent uptake of health economic evidence for informing NCD decision making often described as fragmented, ad hoc, and peripheral. Investment cases and cost analyses were the most common economic analyses used to inform decisions. The lack of prioritisation of health economic evidence in decision making, misalignment between health economic research outputs and policy priorities, limited capacity for conducting and interpreting economic analyses, and data limitations were highlighted as the main barriers to the uptake of health economic evidence for decision making.

Participants consistently described the limited use of health economic evidence in NCD priority setting in Kenya. There was a lack of institutionalisation of health economic evidence use, with economic evidence playing a marginal rather than a foundational role in health policy formulation. Decisions were often made based on other criteria, including expert opinion, donor priorities, and political considerations [17], after which economic arguments were applied retrospectively to rationalise the selected options.

Previous studies in SSA have highlighted the limited use of economic evidence in decision-making [44, 45]. Kumar and colleagues reported the lack of a formal process that institutionalises the use of economic evidence in community health policy and financing decision-making in Kenya, Ethiopia, Malawi, and Mozambique [44]. The absence of formalised processes mandating the application of health economic evidence in priority setting results in a missed opportunity for optimising the use of limited resources during policy-making processes. Kenya's recent quest for institutionalising HTA provides a good opportunity for embedding health economics in routine decision-making processes [32].

Where economic evidence was used, investment cases and costing exercises were the most commonly highlighted by the study participants. For instance, the development of NCD investment cases informed the design of the chronic disease care package within the new structured SHIF. This implies that decision makers are often concerned about immediate budgetary questions like 'how much' health interventions and programs would cost, as opposed to comparative efficiency questions that explore whether particular investments amount to the best use of the limited resources. Whereas short-term and pragmatic partial economic evaluations are important, especially in resource-limited settings like Kenya, they create a risk of prioritising affordability over technical and allocative efficiency, resulting in suboptimal decisions in the long-term. In another mixed-methods study done in South Africa, stakeholders highlighted the need for 'making more efficient use of limited financial resources' as the most important reason for integrating health economic evidence into clinical practice guidelines [45]. It is important to consider the long-term implications of investing in alternative interventions or policy options to maximise the outputs from health sector investments.

Limited capacity to generate and interpret health economic evidence emerged as a main barrier to its use, mainly attributed to a shortage of trained health economists and lack of institutional expertise within government structures. Previous studies in SSA found that suboptimal skills in evaluation and interpretation, use of jargon, and poor dissemination impede the uptake of evidence from economic evaluation [45, 46]. This finding highlights the need for building capacity for health economic evaluation not only at the national Ministry of Health, but also at the 47 county departments of health to improve efficient use of the limited resources. Kenyan institutions offering training in health economics should also focus on equipping their learners with practical technical skills in economic evaluations to increase the capacity for generating health economic evidence in the country. Policy makers also require targeted training programs to strengthen their capacity to interpret and use the available health economic evidence. Kenya can explore collaborations with established HTA bodies and training institutions to further strengthen the capacity in health economics [46–48]. Kenya has an ongoing collaboration with Thailand's Health Intervention and Technology Assessment (HITAP), which is a key enabler to the institutionalisation of HTA [32].

The persistent misalignment between health economics research outputs and policy priorities was also reported as a main barrier to the uptake of economic evidence in Kenya. Economic studies were often perceived to focus on research questions that did not address the priority needs of the policy makers. Previous studies in LMICs have highlighted the disconnect between health research outputs with the

existing disease burden [49], with the mismatch largely driven by priorities of research funders who are mostly external. This disconnect affects the relevance, credibility, and the extent to which the generated evidence can influence routine decision making processes. A systematic review of model-based economic evaluations of cardiovascular disease prevention in SSA found that most economic models were developed without engaging local stakeholders [50]. It is important for researchers to establish a collaboration with policymakers and other relevant stakeholders throughout the evidence generation process [48]. Effective engagement with decision-makers and stakeholders throughout the research cycle and aligning it with the national agenda improves relevance and uptake. Some best practices include co-designing the study, joint interpretation of findings, and strategic dissemination of evidence [51]. Moreover, studies have highlighted how aligning evidence to context and using a holistic economic approach in producing evidence can enhance evidence use [52].

Participants also highlighted the scarcity of locally relevant, high-quality economic data as a major impediment to the reliability of health economic evidence. Most available evidence comes from externally funded projects or academic institutions, often not designed with implementation in mind. Similar findings have been reported in studies in LMICs where challenges with the availability and quality of the relevant data were the main technical issues facing the uptake of evidence [53, 54]. Systematic reviews of economic evaluations of NCD interventions in SSA also revealed the scarcity of locally relevant data, which leads to the use of model parameters drawn from international settings to inform SSA models [50, 55]. The lack of quality data reduces the credibility and policy relevance of the evidence, impeding the translation of research findings into practical solutions. Investing in data systems that support cost and outcomes tracking, developing localized unit cost databases, and ensuring economic models reflect Kenya's health financing context are possible ways to improve uptake of evidence [56]. Kenya can learn from initiatives such as the Global Health Cost Consortium (GHCC), which offers best practices in standardizing cost data for health programs [57] and from countries like Thailand that have demonstrated the utility of a national cost database to support priority setting [58].

Strengths and Limitations

The study's strength lies in its qualitative approach to explore stakeholder perspectives regarding the use of health economic evidence in NCD priority setting in Kenya. The inclusion of a diverse range of stakeholders in the study involved in NCD policy, research, programming, and implementation provided a rich perspective to the study findings. However, most of our study participants were drawn from the national level, with limited perspectives from county governments, where the majority of health service delivery happens. Moreover, the study only focused on NCD programs and may not be generalisable to the overall health sector decision-making processes. Nevertheless, the findings highlight the status and barriers facing the uptake of health economics evidence in Kenya.

Conclusion

This study examined the uptake of health economic evidence in NCD priority setting in Kenya. The study found limited but increasing use of health economic evidence, with preferences for partial economic evaluations. The key barriers to the uptake of health economic evidence included the peripheral role of health economics in decision making, limited capacity to generate and interpret economic evidence, misalignment between the available economic evidence and policy priorities, and data limitations. The findings underscore the need to institutionalise health economics in national and county-level planning, strengthen data systems, and promote inclusive engagement to bridge the gap between research and policy.

Abbreviations

CVD Cardiovascular disease

LMICs Lower and Middle Income Countries

GHCC Global Health Cost Consortium

HITAP Health Intervention and Technology Assessment Program

HBTAP Health Benefit Package and Tariffs Advisory Panel

HTA Health Technology Assessment

NCD Non-communicable Disease

NHIF National Health Insurance Fund

PHC Primary Healthcare

SHIF Social Health Insurance Fund

SSA Sub-saharan Africa

UHC Universal Healthcare

Declarations

Ethics approval and consent to participate

Ethical approval for this study was obtained from the Moi Teaching and Referral Hospital (MTRH)/Moi University Institutional Scientific and Ethical Review Committee (approval number 00046773) and the ethics committee of the University of Sheffield School of Medicine and Population Health. A permit for conducting the study was also obtained from the National Council for Science, Technology, and

Innovation (License Number- NACOSTI/P/24/33160), Kenya. The study procedures were explained to all the study participants before administering a written informed consent form before the interviews. We adhered to the strict information governance policies of the University of Sheffield when handling all the study data and notes from the interviews.

Competing interests

The authors declare no competing interests

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Data Availability

The qualitative interview transcripts analysed in this study were generated as part of JOO's doctoral project at the University of Sheffield and are securely stored in the institutional repository. Access is restricted to the research team in line with institutional policy. Ethical approval from the Moi Teaching and Referral Hospital/Moi University Institutional Scientific and Ethical Review Committee and the University of Sheffield SCHARR Ethics Committee does not permit public sharing due to the risk of participant identification. The data will be destroyed at project completion.

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