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Demands for Intersectoral Actions to Meet Health Challenges in East and Southern Africa and Methods for Their Evaluation

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ABSTRACT

Objectives: Focusing on the East, Central, and Southern African region, this study examines both regional and country-level initiatives aimed at promoting multisectoral collaboration to improve population health and the methods for their economic evaluation.

Methods: We explored the interventions that necessitate cooperation among policymakers from diverse sectors and the mechanisms that facilitate effective collaboration and coordination across these sectors. To gain insights into the demand for multisectoral collaboration in the East, Central, and Southern African region, we presented 3 country briefs, highlighting policy areas and initiatives that have successfully incorporated health-promoting actions from outside the health sector in Zimbabwe, Uganda, and Malawi. Additionally, we showcased initiatives undertaken by the Ministry of Health in each country to foster coordination with national and international stakeholders, along with existing coordination mechanisms established for intersectoral collaboration. Drawing on these examples, we identified the primary challenges in the economic evaluation of multisectoral programs aimed at improving health in the region.

Results: We illustrated how decision making in reality differs from the traditional single-sector and single-decision-maker perspective commonly used in cost-effectiveness analyses. To ensure economic evaluations can inform decision making in diverse settings and facilitate regional collaboration, we highlighted 3 fundamental principles: identifying policy objectives, defining the perspective of the analysis, and considering opportunity costs. We emphasized the importance of adopting a flexible and context-specific approach to economic evaluation.

Conclusions: Through this work, we contribute to bridging the gap between theory and practice in the context of intersectoral activities aimed at improving health outcomes.

Keywords: economic evaluation, East, Central, and Southern African region, healthcare, intersectoral, Malawi, multisectoral, resource allocation, Uganda, Zimbabwe.

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Intersectoral Resource Allocation in the East, Central, and Southern African Region

WHO View on Multisectoral Resource Allocation to Promote Health

Since the early 2000s, the World Health Organization (WHO) has emphasized the importance of multisectoral collaboration to improve health and recommends its member states to support synergistic actions between key health producing sectors, such as education, water and sanitation, agriculture, labor, and social development, to extend the coverage of essential interventions and improve health outcomes, especially among the poor.[1] To implement the aspirations of this call for collaboration across sectors, the WHO supported the establishment of National Commissions on Macroeconomics and Health in 20 countries, including countries from the East, Central, and Southern African (ECSA) region, such as Malawi and Uganda.[2] These were multisectoral and multistakeholder commissions jointly chaired by the Minister of Finance and the Minister of Health in each country.

The establishment of such coordination mechanisms demonstrated recognition of the potential of improved population health to contribute to the economic development. It also acknowledged how economic development and better social conditions help to improve population health, including through addressing the determinants of health, by reducing poverty and tackling poverty-related diseases. Over the years, National Commissions on Macroeconomics and Health reported successful mobilization of resources to deliver interventions outside the health sector, aimed, for example, at improving water supply and sanitation, as a key means to address endemic diseases and promote economic growth. Major outputs of these commissions included generation

of evidence, leveraging political commitment and improvement of coordination of actors, and development of costed health plans that included interventions to be undertaken in health-related sectors.[3]

In a similar vein, in 2014, the 67th World Health Assembly passed a resolution to foster sustainable actions across sectors to improve population health and health equity.[4] Relatedly, a framework for Health in All Policies (HiAP) was published to guide country-level action in establishing multisectoral collaboration related to public policies.[5] HiAP takes impetus from the challenges faced in addressing noncommunicable diseases, health inequalities, the consequences of climate change for health, and financial barriers that limit access to care and emphasizes the importance of identifying roles and responsibilities of the different sectors.

In subsequent years, the paramount importance of embracing the "whole-of-government" approach to reach health policy objectives has been widely recognized, with an intention to extend it to a "whole-of-society" level. With the support of WHO, tangible outcomes of this initiative have been, for example, the development of national action plans to combat antimicrobial resistance and national action plans for health security in member states.[6] The approaches have been also very instrumental in the response to COVID-19 pandemic.[7]

In this article, we explore the practice and the methods of economic evaluation that could be adopted to facilitate more effective and efficient multisectoral coordination for the improvement of population health in the ECSA Health Community (ECSA-HC) region. The region comprises 9 member states (Eswatini, Kenya, Lesotho, Malawi, Mauritius, Tanzania, Uganda, Zambia, and Zimbabwe). We first provide an example of cross-sectoral coordination for health at the ECSA-region level, then focus on 3 countries—Zimbabwe, Uganda, and Malawi. We look at potential actions and policy areas to improve health outside the healthcare sector, initiatives taken by the Ministry of Health (MOH) to promote coordination with national and regional stakeholders, and coordination mechanisms that have been developed for intersectoral collaboration. We then discuss the main challenges with resource allocation and priority setting for cross-sectoral programs intended to improve health. Building on this, we illustrate available methods for the economic evaluation of such actions and tools for priority setting aimed at informing multisectoral resource allocation.

Regional Initiatives for Prioritizing Collaboration and Coordination Across Sectors in the ECSA Region

Following the WHO's view on multisectoral resource allocation, various initiatives have been conducted in the ECSA region to set up mechanisms and processes to facilitate multisector collaboration and coordination, both within and across national boundaries, with the aim to improve population health. The prevention and management of infectious disease outbreaks is an example of one of these mechanisms. The ECSA region is at risk of a number of highly infectious disease outbreaks, including tuberculosis and viral hemorrhagic fevers. The porous borders and increased cross-border movement of humans and animals make the cross-border disease surveillance particularly difficult to be managed by member states separately. Disease surveillance requires collaboration and cooperation across sectors and countries to be successful, and it would be unlikely to work well if managed only at country level. Therefore, a number of countries have established mechanisms to coordinate and implement a joint outbreak investigation and response at a regional level.[8]

Another example is the ECSA regional food fortification initiative, which aims to address micronutrient deficiencies in the region, by increasing the consumption of foods fortified with relevant micronutrients, such as iodine, vitamin A, and iron. Standards for the fortification of the foods have been developed through the ECSA-HC, and the initiative has been implemented across the 9 ECSA member states. It involves a number of sectors, including the Ministries of Health, Industry and Trade, Local Government, Finance (Customs department), and private sector food manufacturers.[9]

Four regional Technical Working Groups (TWGs) have been composed of representatives from relevant sectors. The inspection and enforcement TWG looks at the issues of compliance to the standards and monitoring and evaluation of the implementation of the initiative, and includes Ministry of Trade and Industry and Local Government (health inspectors). The production quality assurance and food safety TWG is made up of members of private sector food production industries. The laboratory strengthening TWG focuses on capacity building of laboratories for the analysis of micronutrients and proficiency testing for the laboratories and involves the Ministry of Health and the Ministry of Trade and Industry. The consumption and impact monitoring TWG conducts population surveys on the consumption of fortified foods and its impact on the population nutrition status, and involves the Ministries of Health and of Finance/Planning and those departments responsible for the implementation of demographic and health surveys and budget surveys. Besides coordinating the work of the TWGs, ECSA-HC's role in the initiative also includes capacity building of the countries and advocacy for the increased uptake of fortified foods.

Multisector Collaboration for Health Improvement at the National Level: Examples ECSA Member States

Although regional cooperation to support multisector collaboration is necessary for many programs that address the determinants of health, most actions take place at the nation-state level. We next explore nationally led initiatives in Zimbabwe, Uganda, and Malawi and consider how value-for-money analysis using economic evaluation can guide resource allocation to these initiatives. We specifically focus on Malawi, Uganda, and Zimbabwe because of the urgent need for intersectoral resource allocation to enhance health outcomes in these countries. When compared with global averages, these nations face significant challenges in terms of health expenditure. In 2020, Zimbabwe spent $51 per capita on health, which is 3.43% of its gross domestic product (GDP). Uganda spent $34 per capita, accounting for 3.96% of its GDP, and Malawi spent $33 per capita, representing 5.43% of its GDP.[10] These figures highlight that health expenditure per capita in these countries is lower than the global average. This limited health expenditure heightens the need for effective resource allocation to improve health outcomes. This is further underscored by maternal, child, and infant mortality rates that exceed the global average, highlighting the pressing need for strategic resource allocation to tackle this critical issue, both within and outside the health sector.

Zimbabwe

Policy areas to improve health outside the health sector

Following the Alma Ata Declaration of 1978, which recognized intersectoral action as a key to improving primary healthcare (PHC), the Government of Zimbabwe adopted the PHC approach in service delivery. Through coordinated action across a range of

sectors, the country hence implemented a whole-of-government, whole-of-society approach to health aiming to ensure the highest possible level of health and its equitable distribution. In 2018, the country reaffirmed its commitment to the PHC approach by signing the Declaration of Astana to strengthen PHC and accelerate the progress toward Universal Health Coverage (UHC).

Therefore, the Zimbabwean Ministry of Health and Child Care (MOHCC) recognizes that attaining the aspiration of the highest possible health and quality of life for Zimbabweans does not solely depend on the health sector but also on broad-based social determinants of health, such as living conditions, nutrition, safe drinking water, sanitation, education, and early child development, which are beyond the purview of the health sector. To improve the health status of the nation, policies and initiatives are implemented to target the major health determinants in sectors such as agriculture, education, housing, social services, and disaster management.

Initiatives of the MOH to promote multisectoral collaboration

The MOHCC has often played the role of facilitator or advisor in the deliberations of relevant institutions and working groups. Such platforms include Sustainable Development Goals committees, Health Officers Forum for Urban Authorities, National Health Consultative Forum, Civil Protection Unit, Water and Sanitation National Coordinating Unit to mention but a few.[11]

Coordination mechanisms for intersectoral collaboration

Acknowledging that the factors that influence health outcomes extend well beyond the provision of healthcare services and may fall outside the authority of the MOHCC, accountability for the progressive realization of the right to health must be shared across government. Therefore, since 2005, Zimbabwe has adopted the integrated results based management system, a management approach that shifts the attention from processes to results and related issues of accountability and transparency and hence aims to strengthen both intraministerial and multisectoral coordination.[12] Although it has not achieved the desired results of coordinated planning, implementation, monitoring, and evaluation, there are ongoing efforts to train and retrain government officials in the integrated results based management approach.[13]

Moreover, to improve the coordination mechanisms for intersectoral collaboration, the MOHCC has begun implementing the recently launched Health Sector Coordination Framework (HSCF), which seeks to strengthen both intraministerial and multisectoral coordination efforts in planning, financing, and implementing health-related interventions to maximize health outcomes.[14] The HSCF is instrumental in fostering the role of the MOHCC in both promoting and supporting health initiatives in other ministries, departments, and agencies.

Challenges for cross-sectoral resource allocation and priority setting

According to the situational analysis of the current Zimbabwe's National Health Strategy 2021 to 2025, economic evaluation methods and priority setting tools for multisectoral resource allocation are not widely used. Resource allocation in most cases does not consider scientific approaches to resource allocation. Addressing the broader determinants of health would require intersectoral actions and it is partly the responsibility of the MOHCC to enhance collaboration among the myriad of stakeholders contributing to the health of the nation. Nevertheless, there are a few formal mechanisms or guidelines to inform how various health interventions by the MOHCC are coordinated and how the ministry should interface with other sectors that contribute to improved health outcomes. Incidentally, vertical health programs, largely driven by donor funding have established disease-specific coordination structures, at the expense of an overall HSCF.[14]

Uganda

Policy areas to improve health outside the health sector

Over time, in Uganda, the national strategic documents—such as Vision 2040, the second National Development Plan (NDP) 2015/2016 to 2019/2020 (NDP II), and the third NDP 2020/2021 to 2024/2025 (NDP III)—have articulated the need for multisectoral collaboration to advance the country's health and other development goals.[15-17] These aspirations have been also expressed, over time, in sectoral development plans and issue-specific policy documents, such as the national disaster management policy.[18] For instance, both the third objective of the NDP II and the second objective of the Health Sector Development Plan 2015/2016 to 2019/2020 underscored the importance of addressing the key determinants of health by strengthening intersectoral collaboration and partnerships. The Health Sector Development Plan further elaborated the policy areas, such as environmental health and sanitation, food and nutrition services, school health, road safety, safe water, energy, and human rights, in which vital programs had to be developed and implemented. The leadership role of the MOH for this agenda has been emphasized, albeit with the understanding that some actions advancing health lie outside the health sectors and require MOH to play supportive roles.[19] The level of resources to be committed to these actions has however been unclear.

Uganda aims to enhance health education in schools and communities for health promotion through community-based services and mindset change interventions. Further, the country seeks to build a firm foundation for human capital development with early childhood development activities, promoting health-seeking behavior and physical education. Acting on environmental factors, the government is giving more emphasis and priority to climatic change management and mitigation of its adverse effects. Looking at urban planning activities, the institution of physical planning committees up to lower local governments has the objective of revitalizing the relevancy of physical planning to make cities and other human settlements safe, resilient, and sustainable. To reach its health promotion objectives, Uganda embraces the full implementation of the program-based approach and the intersectoral linkages it creates for ownership and collaboration.[17,20,21]

Initiatives of the MOH to promote multisectoral collaboration

The Ugandan MOH recognizes the importance of deliberate efforts to address the social determinants of health. The sector's goal is to accelerate progress toward UHC. The national UHC roadmap, developed through a consultative and collaborative process, recognized multisectoral action as a bedrock for UHC advancement in Uganda.[22,23] The UHC roadmap articulated the interdependence across sectors and proposed respective sectoral contributions toward population health. For example, the road and transport sector is expected to ensure road safety and reduce related morbidity and mortality. The education sector should ensure a literate, knowledgeable, and skilled workforce to contribute to national development aspirations.[22]

Following the call for the coordination of the NDP III and the adoption of the human capital development program, the MOH is collaboratively working with other ministries such as the Ministry of Education and Sports, the Ministry of Gender, Labor, and Social Development, and the Ministry of Water and Environment. Therefore, a shift has been observed from siloed planning to programmatic planning, budgeting, and development of a program implementation action plan to harness the existing synergies.[17] Furthermore, to show a clear commitment toward coordination with national and international partners, the MOH established a Department of Health Sector Partners and Multi-Sectoral Coordination.[19]

Coordination mechanisms for intersectoral collaboration

The leadership structure for the human capital development program of NDP III offers an intersectoral collaboration arrangement in which education is the lead ministry, health is a co-lead, whereas other ministries, such as the Ministry of Gender and the Ministry of Water and Environment, are members who work together under the same program of human capital development.[17] Moreover, regular engagements take place for policy discussions and information sharing under the coordination of the Office of the Prime Minister. Further, routine interfaces of the TWGs, such as the public-private partnership in health TWG, offer stakeholders a platform of dialog and policy advice.[19,24]

An example of a successful mechanism for intersectoral collaboration is the Uganda Nutrition Action Plan (UNAP). Launched in 2011 under the theme of "scaling up multisectoral efforts to establish a strong nutrition foundation for Uganda's development", the plan aimed at reducing the magnitude of malnutrition in the country. Constitutionally, the MOH and the Ministry of Agriculture, Animal Industries, and Fisheries are mandated to develop relevant policies to ensure quality nutrition and food services. Although many of the actions needed to address malnutrition are already within the mandates of the various sectors, malnutrition is a crosscutting issue with political, biomedical, and socio-cultural dimensions interacting in complex ways. It requires a multisectoral approach that prioritizes cross-sectoral interagency collaboration. The development and implementation of the UNAP followed a participatory, collaborative, and consultative manner. The UNAP further proposed multisectoral management and governance, as well as monitoring and reporting systems to support the plan implementation.

The One Health (OH) agenda serves as another stand-out multisectoral coordination effort to bring together players from human, animal, and environmental health to address challenges such as epidemics and antimicrobial resistance.[25,26] The OH platform brings actors across government and nonstate institutions to support OH efforts through joint planning, implementation, monitoring and evaluation and other capacity-building efforts. Leadership rotates quarterly across the MOH, Ministry of Agriculture, Animal Industries, and Fisheries, and Ministry of Water and Environment.

Challenges for cross-sectoral resource allocation and priority setting

In Uganda, the coordination challenges are both technical and political.[24,27] Technical challenges relate to insufficient technical resources to guide resource allocation, inadequate and fragmented funding streams, and the limited functionality of coordinated mechanisms to support harmonized planning and implementation arrangements. These deficiencies lead to inefficiencies because of duplications and overlaps in development initiatives, funding fragmentation caused by planning silos, and limited utilization of synergies. There is also a lack of harmonized information systems across sectors to track resource allocation and programmatic results. The political economy challenges to coordination include incongruent interests, power dynamics within and across sectors, historically constraining context of fragmentation in government systems, and conflict and contestation over resources, such as fights over budgets.[24,27]

Evidence from the country shows that working across sectors is suboptimal, leading to uncoordinated government efforts. The NDP III highlighted that "government institutions continue to operate in 'silos' with little integrated thought as to how to deliver on pledges and policies of government. All aspects of the NDPs require national buy in, and this starts with (the) government. It is unsustainable and counter-productive to have the planning of major development projects undermined by a lack of coordination. This is true, both within and between sectors."[17] Only a few sectors (such as Health, Education, and Justice, Law and Order) had fully functional sector working groups.[27] Within the health sector, institutions such as the TWGs that are meant to facilitate intersectoral coordination are functioning suboptimally, and how best the health sector can collaboratively work with nonhealth sectors is a serious governance challenge. The challenges above, in turn, greatly undermined the government's ability to address crosscutting complex policy issues that require synergies and coherence across sectors.

Malawi

Policy areas to improve health outside the health sector

Malawi's nutrition outcomes are some of the worst in the world,[28] and addressing such poor outcomes would be a key factor to improve health in the country. Tackling malnutrition requires an effective multisectoral approach. Although the MOH is in charge of treating malnutrition, the main determinants lie outside the health sector, such as the access to clean water and sanitary facilities, the production and fortification of food, and nutrition in schools.[29] Other factors outside of the health sector include socioeconomic factors, such as household income, education, location, and occupation, as well as social protection and individual and household level characteristics, such as number of children, weight, age, and sex.[30-32]

The National Multi-Sector Nutrition Strategic Plan (NMNSP) 2018 to 2022[33] takes a multisector approach that focuses on the provision of nutrition specific interventions and programs conducted within the health sector, such as maternal dietary supplementation, treatment of severe acute malnutrition, and disease prevention and management, and outside the health sector, such as micronutrient fortification. Furthermore, the NMNSP incentivizes the implementation of nutrition sensitive programs and approaches conducted in other sectors, such as agriculture and food security, social safety nets, early child development, women's empowerment, child protection, education, water and sanitation, and family planning services.

Initiatives of the MOH to promote multisectoral collaboration

At national level, the MOH has overall policy and coordination mandate for the nutrition sector. It does this through the Department of Nutrition, HIV, and AIDS (DNHA), which is mandated to coordinate the national multisector nutrition response.[33] The DNHA is overseen by the Cabinet, Parliamentary, and Principal Secretaries' committees on nutrition, HIV, and AIDS. The department coordinates multisectoral implementation

through nutrition units that are operational in sector ministries, including health, agriculture, education, gender, and welfare. It also oversees implementation of nutrition interventions by development partners, civil society organizations, and academic institutions.

At service delivery level, the District Executive committee of the district councils oversee the District Nutrition Coordination committee which coordinates the implementation. At the community level, the Area Nutrition Coordination committee, subcommittee of the Area Development committee, provides oversight of implementation at the traditional authority level, whereas the Village Nutrition Coordination committee of the Village Development Committee manages implementation at the village level. The nutrition services delivery structure explicitly incorporates care groups and households at the operational level.[33]

To strengthen coordination at the district level, the government has been deploying senior level nutrition officers to district councils. These coordinate planning, implementation, and monitoring and evaluation of nutrition activities across all sectors that affect nutrition outcomes at the district level. Currently, funding for nutrition at the council still represent sectoral fragmentation and scope for cross-sector allocation as sector resources are approved and ring-fenced at the sector level in the district council budget. At the national level, nutrition sector resources from central government are negotiated directly by each sector, whereas the DNHA engages government in mobilizing resources for central polity oversight and coordination activities. However, Malawi's nutrition sector is currently heavily donor dependent with negligible government budget allocations made through the health sector.

Coordination mechanisms for intersectoral collaboration

Two structures coordinated by the DNHA support the resource allocation mechanism for all key stakeholders within and outside government allocation. First, the Government-Development Partners committee, which is chaired by the Principal Secretary responsible for nutrition and where development partners indicate their medium to long-term contributions to the NMNSP. Second, the biannual nutrition monitoring and evaluation coordination review meetings at the national level.[33]

Challenges for cross-sectoral resource allocation and priority setting

Resource allocations mechanisms in Malawi are weak, and the country lacks effective frameworks aside from policy and strategy. Ideally, in preparation for an upcoming fiscal year, the DNHA ought to develop a needs-based budget, which should form the basis for negotiation with the Ministry of Finance during the budget preparation period. The needs-based budget would also serve as a tool for mobilizing partner support toward the financing gap. However, this process is weak because of lack of needs-based allocation frameworks for transferring funds to sectors and districts, as well as low funding to respond to the needs.[34]

Presently, the nutrition strategic framework is incorporated into the District Development Plan with principal nutrition officers supposed to provide overall coordination of implementation and ensure alignment between the NMNSP and District Development Plan. In practice, the health, agriculture, and gender sectors at council-level have sector coordinators who develop sector specific nutrition plans, but these are funded through sector specific resource allocation mechanisms. A budget process mapping study for nutrition revealed that this fragmented resource allocation and planning process has resulted in diffusion of responsibility, with MOH allocating negligible funds for nutrition activities between 2011/2012 and 2019/2020, and in fact no funding for nutrition supply chain management between 2016/2017 and 2019/2020.[34]

Economic Evaluation Methods and Priority Setting Tools for Multisectoral Resource Allocation

Key Principles of Economic Evaluation in a Simple Single-Sector Decision Context

Decision makers operate under the constraint of limited resources, and economic evaluation can inform investment decisions and indicate how to obtain the best value from scarce resources. To conduct an informative economic evaluation, it is first necessary to define what is the perspective of the analysis, that is, define what outcomes and costs are relevant. In the economic evaluation of healthcare programs, it is typically assumed that a single decision maker controls the budget that is required for the implementation of the program, and the main benefits of the intervention are within its remit. The economic evaluation is hence conducted with a one-sector approach, which considers the impacts on health and healthcare costs and aims to inform a unique healthcare decision maker.

Second, the objective of the policy must be defined. Traditionally, it is assumed that healthcare programs aim to improve health. Impacts on health are typically measured in quality-adjusted life-years or disability-adjusted life-years, to facilitate comparisons. Once the ultimate policy goal is established, the economic evaluation requires the assessment of the change in outcomes induced by alternative programs (i.e., benefits) and their costs. If benefits outweigh costs, the program represents "value for money," and it is justifiable to invest the resources necessary to implement it.

Third, when looking at the costs of the program, the economic evaluation must consider the lost opportunities to have used the resources required by the program for other beneficial activities (i.e., opportunity costs). When the economic evaluation is conducted from the healthcare perspective, the health opportunity costs depend on the characteristics of the health system. A certain quantity of resources invested in the program will be associated with forgone health benefits that could have been obtained by investing the same resources elsewhere in the health system.

Departures From the Single-Sector and Single Decision-Maker Context: Challenges in the Economic Evaluation

The previous examples from the ECSA region show that coordinated and intersectoral action to improve health, including collaboration between ministries, different levels of government, and with stakeholders outside government, is necessary to address persistent health challenges but is complex. Multisectoral activities involve a wide range of heterogeneous stakeholders and may generate wider costs and benefits in the economy than those relating to health alone. Therefore, several departures emerge from the single-sector and single decision-maker perspective that underpin most applied cost-effectiveness analyses. Here, we briefly outline what are the main challenges for economic evaluation of multisectoral policies using real-world examples from ECSA regional and country contexts and propose some approaches that might help to resolve these challenges.

Multiple decision makers with overlapping tasks and shared funds

Governments may have multiple pieces of legislation that overlap and share common goals but are administered across several ministries. In such circumstances, one potential solution to simplify the decision-making context is to merge the overlapping tasks mandated under the different pieces of legislation within a single ministry. Stakeholders hence would share a common budget and would be linked by formal agreements that ensure a consistent set of values to be agreed and common objectives to be reached. The more traditional methods for economic evaluation would be, therefore, consistent with the decision-making structure.

Alternatively, budget can be allocated to the specific program, and each relevant ministry is assigned responsibilities to contribute toward attaining the results within its remit. For example, in 2017/2018 Uganda adopted the program-based budgeting with the aim to introduce reforms to strengthen the link between government strategic objectives, budget allocations, and service delivery outcomes. However, such transitions have not been without challenges.[20]

Collaboration among stakeholders with different objectives and remits

Collaboration among stakeholders in the public and private sector can leverage knowledge, expertise, reach, and resources, benefiting from their combined and varied strengths as they work toward the shared goal of producing better health outcomes. However, the different stakeholders are likely to have different interests and remits and may look at the same policies from different perspectives. For example, in Uganda, the Department of "Health Sector Partners and Multi-Sectoral Coordination" engages with donor agencies and private sector and has to balance competing views and interests around multisectoral policies to promote health. Similarly, the supraministerial agencies, such as the National Planning Authority and Office of the Prime Minister, which is charged with coordination of government ministries, have been also instrumental in coordinating the planning and implementation of the multisectoral nutritional plan with varied successes. In Zimbabwe, forums and meetings are held between the MOHCC and health development partners to align and harmonize development assistance with national priorities. In such scenarios, the economic evaluation would need to consider the various perspectives and objectives of all the disparate stakeholders involved.

This may become even more challenging when multisectoral and multistakeholder mechanisms are based on more informal collaborations, and it is less likely for decision makers to agree on common set of values. For example, in Malawi, any attempts to improve nutrition through multisectoral strategies and the activities of the nutrition units in various sector ministries face the very different practices adopted to measures costs and outcomes in sectors such as health, agriculture, and education.

Multiple decision makers with more than one budget

Different decision makers with contrasting objectives and remits may still operate using a pooled budget or shared funds. In such a scenario, when conducting an economic evaluation, the opportunity costs (i.e., the forgone benefits due to missed opportunities of alternative investments of the same resources) would be common for all decision makers. By contrast, when multiple stakeholders with separate budgets are involved in funding or implementing a program, funds for the program may come from different sources. Therefore, the economic evaluation should also take into consideration the different opportunity costs of investment depending on the different budget used to finance the policy.

For example, in Malawi, the response to road safety involves various stakeholders that include the Directorate of Road Traffic and Safety Services' (DRTSS), the Roads Authority (RA), the Malawi Police Service, and the MOH. Each institution has a designated mandate and own budget to carry out their operations. The DRTSS holds the overall mandate to ensure road safety and its roles include traffic law enforcement, conducting road safety awareness and education, and development of road safety policies. The operations of DRTSS are funded through their own generated revenues from activities such as vehicle registration, driving schools, and penalties from erring road users, supplemented by contributions from the government and contributions through motor premiums from insurance companies.[35] The efforts of DRTSS in ensuring road safety are complemented by the RA, an autonomous agency, responsible for managing the national road network through the construction, maintenance, and rehabilitation of public roads, including the installation of road safety features, such as speed bumps.[36] The RA receives funding from the government through the road fund administration agency and cooperating partners. Both DRTSS and RA serve as implementing agencies under the Ministry of Transport and Public Works which guides the overall transport policy formulation, coordination, and implementation. Outside the Ministry of Transport and Public Works, the MOH is responsible for emergency response, trauma treatment, and rehabilitation of road traffic injuries, whereas the Malawi Police Service under the Road Safety and Traffic Services' is responsible for enforcement of road traffic rules and regulations and also act as first aid responders.[37] Road safety activities under health are financed through the MOH budget, whereas police operations fall under the Ministry of Homeland Security budget, both budgets have competing needs in their respective ministries.

Multisectoral collaboration across countries

As illustrated through the ECSA regional food fortification initiative and the actions for prevention and management of infectious disease outbreaks, regional collaboration represents an additional layer of complexity to conduct an economic evaluation that can inform real-world decision making. For example, the TWGs that aim to address micronutrient deficiencies in the ECSA region involve not only stakeholders from public and private sectors, but also from various member states. In such scenario, it may become particularly challenging to find agreement on objectives of the policies, and shared values among stakeholders as priorities could be different between countries (e.g., specific micronutrient deficiency to address or preferences on the target food to be fortified).

Consideration of equity concerns

In some cases, multisectoral actions and public policies focus not only on improving population health, but also on tackling health equity. For example, the HiAP framework of the WHO, which looks at health aspects in all policies, considers also impacts on environment and poverty and hence aims not only to address various cross-sectoral challenges related to determinants of health, but also reducing unfair health inequalities and removing barriers in accessing care. Economic evaluation must hence include equity concerns among the decision-making criteria to ensure that recommended actions are in line with the values of the stakeholders that the analysis aim to assist.

Available Tools to Address Multisectoral Challenges

The ultimate goal of an economic evaluation is to determine whether one policy is better than another. Different tools are available to assist decision makers and could fit the various situations and challenges related to multisectoral collaboration previously illustrated. Below we briefly outline what we believe could be the most appropriate approaches to address the challenges that emerged from the real-world examples.

Informing multiple decision makers with shared values and pooled budget

In the presence of a common agreed objective of the policy and multiple stakeholders with a shared budget and an agreed set of values across each outcome, cost-benefit analysis (CBA) can provide useful information for decision making. CBA aims to capture all benefits and costs of the program and generate an overall benefit-cost ratio or return on investment from a single perspective, in which outcomes are valued in monetary terms using their consumption values and aggregated. CBA can hence inform a group of decision makers with ultimate responsibility for allocating resources to intersectoral programs. However, adding these monetary values to calculate a combined outcome assumes willingness to pay is an appropriate way to value different outcomes. Moreover, in current CBA practice, budgetary constraints and opportunity costs are typically overlooked.[38]

A step-by-step approach to inform multisectoral resource allocation with disparate decision makers

Stakeholders may have competing views of what determines social value, it may not be possible to agree on the relevant set of outcomes to consider. Further, resources required by the program may be provided by diverse sources, such as ministry budgets, central government funding, or donations from international agencies. The different budgetary and resource constraints between stakeholders can mean that varying how the program is resourced has different implications in terms of value forgone from alternative activities. In such situations, to be useful in informing decision makers, economic evaluation must accommodate the different responsibilities and outcomes of interest of the potentially heterogeneous stakeholders, be flexible to how stakeholders value the impacts of the policy, and capture appropriately the different opportunity costs (i.e., what could have been obtained if the resources would have been used for other activities) in different sectors.

The framework by Walker et al[39] illustrates a step-by-step approach to conduct and report economic evaluations in a way that brings together evidence on the impacts on outcomes and populations of interest to the various stakeholders involved in the implementation of the policy, the resources needed to implement the program, and the potential alternative use of the same resources (i.e., the opportunity costs of the investment). Therefore, the economic evaluation can accommodate multiple stakeholders' objectives, reflects their different remits and constraints, and enables the estimation of the value of the policy from alternative points of view. Analyses grounded in this approach can be used to guide decisions that require multisectoral collaboration and to indicate potentially valuable alternative funding arrangements through compensation payments or transfers of funding responsibilities between stakeholders. More details on the approach can be found elsewhere.[39] In the Appendix in Supplemental Material found at https://doi.org/10.1016/j.vhri.2023.09.001, we provide a brief description of the main stages of the approach, namely, the following: (1) identification of stakeholders, (2) definition of population subgroups and outcomes valued by stakeholders, (3) estimation of costs and consequences, and (4) aggregation of the impacts. A case study based on a cash transfer program in Malawi has been developed using this approach.[40]

Methods to incorporate equity concerns

Extended cost-effectiveness analysis (CEA) and distributional CEA can be used to address equity or distributional issues. These tools can be used to reflect decision makers' priorities for giving outcomes to some groups more than others, for example, based on inequality concerns.[41,42]

Discussion and Conclusions

Main Findings and Recommendations

Multisectoral resource allocation and priority setting requires mechanisms and initiatives for articulating interdependencies, harmonizing strategies and elaborating pathways to change. In literature, there is evidence highlighting the role of local governments worldwide in promoting health through intersectoral action. Key factors such as political commitment, leadership, and governance have been identified as the driving forces behind successful intersectoral action for health. Additionally, there is a recognized need for capacity building, resource allocation, and the establishment of robust monitoring and evaluation systems to ensure the effectiveness of such actions.[43] Intersectoral collaboration and interorganizational partnerships have been consistently identified as crucial factors in achieving effective integrated health promotion actions.[44] Of note, the impact of intersectoral action has been studied not only on the social determinants of health, but also on health equity.[45] However, the literature reveals limited evidence on the impact of intersectoral action on both aspects, emphasizing the need for more rigorous evaluations to enhance the evidence base supporting this public health practice. This is echoed by a recent scoping review that highlighted the lack of detailed descriptions and evaluations of intersectoral efforts.[46] Moreover, existing guidelines and standards for economic evaluation, typically applied to healthcare interventions, may not be suitable for assessing intersectoral actions because of the diverse sectors involved, varying methodologies, and differing degrees of interest and perceived relevance of equity concerns.[46]

In light of the existing literature, our study makes a significant contribution by illustrating real-world examples of intersectoral actions to improve health and demonstrating the value of economic evaluation in supporting decision-making processes. By illustrating how appropriate health economic evaluation methods can be applied, we aim to provide insights into how the impact, value for money, and potential trade-offs associated with different resource allocation strategies can be evidenced for intersectoral initiatives. Our research fills a gap in the limited body of literature on the economic evaluation of intersectoral actions and serves as a practical guide for decision makers seeking to effectively prioritize and allocate resources.

With this work, we argue that economic tools can provide an opportunity for a systematic approach for distributing scarce resources, even considering the layers of complications related to intersectoral decision-making contexts. We argue that economic evaluation should be grounded on 3 fundamental principles: defining the perspective of the analysis, identifying policy objectives, and considering opportunity costs. We do not recommend a one-size-fits-all approach to economic evaluation. Instead, we emphasize the importance of tailoring the methodology based on the specific context and the nature of the decision makers involved. For instance, when informing multiple decision makers

who share common values and have a pooled budget, CBA can be an appropriate approach. In contrast, in situations which decision makers have competing objectives and separate budgets, we propose a step-by-step approach that not only aims to inform national-level policies, but also provides evidence that is relevant from the perspectives of various stakeholders.

Furthermore, if equity concerns are relevant in the evaluation, we emphasize the need to incorporate them into the analysis. By considering equity as a factor, we can ensure that the economic evaluation analysis captures and reflects the broader societal impact of the policy under consideration. For example, if the distribution of resources between different income and racial groups is considered important by decision makers, one approach is to introduce disaggregation in the analysis. This involves breaking down the evaluation results to specifically examine the impact and allocation of resources among various population subgroups. By disaggregating the data, we can better understand how different income and racial groups are affected by resource allocations and identify any disparities or inequities that may exist. Furthermore, when aggregating the results, it may sometimes be appropriate to consider different weights based on the priorities of the evaluation. For example, if the priority is on addressing the needs of low-income households or other specific population subgroups, assigning higher weights to their outcomes can help ensure a more equitable distribution of resources. This can be achieved through using approaches such as distributional CEA,[41,42] which could become more widely applied within the ECSA region.

Finally, we emphasize the importance of considering whether programs are locally sourced or funded by international donors. When programs are funded by international donors, the allocation of funds may be specifically targeted toward certain interventions or sectors, rather than being applicable to the entire economy. This means that the opportunity costs associated with investments can vary significantly compared with local funding, even being borne by populations in other countries. It would be necessary to reflect this when considering potential alternative funding arrangements, such as compensation payments or transfers of funding responsibilities between stakeholders.

Limitations

We recognize the crucial role of political will in the effective implementation of intersectoral actions to improve health. We also acknowledge that increasing expenditure alone is not a sufficient condition for improving health outcomes. The quality of institutions within a country is crucial in determining the effectiveness of investments to improve health.[47] This is particularly relevant in countries that are heavily reliant on natural resource wealth because they are prone to governance failures that can negatively affect public health.[48,49] However, our focus is on the role of economic evaluation as a tool to inform decision making based on transparent use of evidence. We believe there is value in demonstrating how trade-offs in resource allocations can be justified with robust evidence, and alternative analytical tools for economic evaluation can assist decision makers and help to address the challenges associated with multisectoral resource allocation.

We emphasize the importance of involving policy makers from the earliest stages of economic evaluation. In this way, the economic evaluation process is more likely to reflect their priorities and objectives, as well as foster their ownership of the findings of the analysis. This article itself has resulted from a collaboration between researchers and policymakers and this enhances the relevance and applicability of the economic evaluation to the specific settings of concern. Nevertheless, intersectoral action is inevitably a political process that can suffer from contestation and competition over ideas, resources, and interests. For the economic tools to work, deliberate efforts must shape a common vision and understanding among various sectors for their rationale and added value. The differences in appreciation of economic principles across sectors are likely to be a constraint.

We acknowledge the limitations of the available evidence to inform such economic evaluations. For example, the estimation of the opportunity costs requires consideration of what would alternatively be done with the same resources if the policy is not introduced. However, ministries and other decision makers may not know how much improvement in outcomes they could expect from additional funding. Some evidence required to estimate the opportunity costs of using health sector resources in low- and middle-income countries is available. Recent research has provided estimates of the additional health system spending necessary to avert 1 additional disability-adjusted life-years in various developing countries,[50,51] but evidence is scarce for sectors other than healthcare. Nevertheless, alternative methods based on assumptions, benchmarking, or expert opinion can be employed to overcome the potential lack of data. Available estimates of donor agencies' activities can also be used as proxy to estimate the outcomes forgone elsewhere when resources are used to fund a specific program.[52]

This article includes focus on countries in the ECSA region and some intersectoral investments can best be managed at a regional level. However, cross-country partnership and funding arrangements can raise particular challenges. These include differing priorities, varying levels of infrastructure, and different financial conditions. Although we acknowledge that the proposed step-by-step approach may not completely resolve all the challenges associated with cross-country collaboration, we believe it provides a framework for considering and addressing these issues within the economic evaluation process.

Conclusions

With this work, by bridging the gap between theory and practice, we contribute to the body of knowledge on intersectoral approaches to health improvement and provide evidence to support informed decision making in resource allocation for intersectoral initiatives. We emphasize the importance of adopting a flexible and context-specific approach to economic evaluation, which adheres to the principles of defining perspective, identifying policy objectives, and considering opportunity costs. By considering country-specific priorities, appropriate opportunity costs, and adopting a broader view, economic evaluations can contribute to informed decision making in diverse settings and facilitate regional collaboration.

Author Disclosures

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