Technical Report





The Evidence Ecosystem of the Ethiopian Health Sector: Current Status and Prospects for the Institutionalization of Evidence-informed Decision-making







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Current Status and Prospects for the Institutionalization of Evidence-informed Decision-making









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Abbreviations

AHRI	Armauer Hansen Research Institute
CEBHA+	Collaboration for Evidence-Based Healthcare and Public Health in Africa
EBHC	Evidence-Based Health Care
EEBH&DC	Ethiopian Evidence Based Healthcare and Development Centre
EIDM	Evidence-Informed Decision-Making
EPHI	Ethiopian Public Health Institute
EVIPNet	Evidence-Informed Policy Network
GTP	Growth Transformation Plan
IPHC-E	International Institute for Primary Health Care-Ethiopia
HSDP	Health Sector Development Plan
HSTP	Health Sector Transformation Plan
HTA	Health Technology Assessment
JBI	Joanna Briggs Institute
LMICs	Low- and Middle-Income Countries
KMD	Knowledge Management Directorate
КТ	Knowledge Translation
KTD	Knowledge Translation Directorate
МоН	Ministry of Health, Ethiopia
NDMC	National Data Management Centre
PEERSS	Partnership for Evidence and Equity in Responsive Social Systems
RAC	Research Advisory Council
RHBs	Regional Health Bureaus
RMNCAH/N-RAC	Reproductive, Maternal, Child, and Adolescent Health/ Nutrition RAC
SURE	Supporting the Use of Research Evidence
TRAC	Tuberculosis Research Advisory Council
WHO	World Health Organization
WHO	World Health Organization



Summary

Background: Evidence-informed decision-making (EIDM) is an approach that aims to ensure policy decision-making is informed by the best available evidence. It enables scarce resources to be used more efficiently, reduces research waste, and improves transparency and accountability. Thus, the formulation and adoption of effective policies and programs depend on a functional evidence ecosystem, a system reflecting the formal and informal linkages and interactions between different actors (and their capacities and resources) involved in the production, translation, and use of evidence. Apart from identifying the main challenges in EIDM, no studies have documented the evidence ecosystem of the Ethiopian health sector nor mapped the main actors involved in EIDM comprehensively. This study explored the country's health sector evidence ecosystem with a specific focus on EIDM. In addition, this study mapped the actors involved and their linkages and interactione ecosystem.

Methods: This study employed an auto-ethnographic approach along with document review and discussion with relevant resource persons from research institutions, academia, and policymaking organizations.

Results: Assessment of the evidence ecosystem in the Ethiopian health system indicated that a supportive climate for EIDM is gradually improving in the last decade. The need for evidence is underlined in national plans and strategic documents of the Ethiopian health sector. There are also EIDM practices and procedures, albeit fragmented, implemented by a few experts and evidence champions trying to bring on board the researchers, policymakers, and other stakeholders in supporting EIDM. However, mainstreaming the production and use of evidence in the EIDM processes either for policymaking or implementation is at its best negligible. Moreover, the Ethiopian health sector has no strong structural foundation for EIDM with a formal legal mandate, sustainable source of funding, and mechanisms to retain needed capacities. The EIDM process in the Ethiopian health system ends at the dissemination step, without linking the evidence to action, which can be considered as a major gap based on our observation and working in this field. In addition, there is a poor documentation process to preserve the existing institutional memory.

Conclusions: Considering the different aspects of the evidence ecosystem, the country needs systemslevel thinking, coordination of limited efforts, strategic planning, advocacy, and leadership support for a sustainable system with diversified and sustainable funding, and appropriate financial and/or non-financial incentives to attract and retain skilled workforce.

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Background



The use of evidence^a to inform policy and practice has been promoted since the 1970s. "Evidence-based policy" is a term that came to the fore in the 1990s, especially by health sector organizations such as the World Health Organization (WHO), and largely outside of Africa.¹² However, since 2010, work on evidence-based policymaking in Africa has expanded, with notable examples in South Africa, Benin, and Uganda having national evaluation systems that systematically evaluate key policies and programs.¹

More recently, and especially in the context of deliberations about the use of evidence in different sectors, there has been growing recognition of the fact that evidence is only one of several important factors which influence policymaking.^{1–3} Taking this into account, the current emphasis is on "evidence-informed" over "evidence-based" decision-making.³ "Evidence-informed" points to a more nuanced picture of evidence use, whereby different kinds of evidence with different points of view all feed into the policy development process.^{2,3}

While recognizing that policymakers may use several terminologies to describe the use of evidence in policymaking, considering the above-mentioned arguments, this study uses the term "evidence-informed decision-making" with the following definition: Evidence-informed decision-making (EIDM) is an approach that aims to ensure decisions are informed by the best available evidence from research, as well as other factors such as context, public opinion, equity, feasibility of implementation, affordability, sustainability, and acceptability to stakeholders.⁴ EIDM is characterized by a systematic and transparent approach that applies structured and replicable methods to identify, appraise, and utilize evidence in decision-making processes, including implementation.^{4,5}

EIDM can include decisions about clinical practice (programs, services, and products that target individuals), public health (programs and services that target groups, populations, and communities), and health systems (governance, financial and delivery arrangements, and implementation strategies).^{4,6} EIDM has the potential to improve the effectiveness, efficiency, and equity of health policies and interventions.⁷ It enables scarce resources to be used more efficiently,⁸ reduces research waste,⁹ and improves transparency and accountability.¹⁰

Despite the developments at the global level in the use of research evidence in the policymaking processes, linking research evidence to action has remained a challenge.^{11,12} It becomes more challenging in low-income countries where the resources are scarce.^{1,13} In Africa, where resources are more limited and social problems are pressing, the use of evidence for policy decision-making is critical.¹ However, using evidence for policy and practice remains difficult and subtle in the continent. It appears that the use of evidence to inform policymaking is challenged by a disconnect between the support for it in principle (which is widespread) and its practical application.^{14,15} Some of the reasons for why the practical application and uptake of evidence is

^{a.} Evidence is defined as factual knowledge gained through observation or experimentation in support of a conclusion. Evidence can be broadly grouped into tacit and scientific evidence. Tacit (or colloquial) knowledge is mostly informal, and often includes opinions, values, and habits of policymakers, clinicians, patients, or citizens expressed in different forms in formal deliberative dialogues, on websites, in policy documents, reports, and other. Scientific or research evidence, on the other hand, refers to knowledge that is explicit, systematic, and replicable, and can be judged by its methodological standards. Scientific evidence is produced through more formal, rigorous research processes, including primary studies such as routine data (primary research), synthesis of existing evidence (secondary research), and evidence products such as guidelines or evidence briefs for policy (EBPs) (tertiary research). (WHO. *Evidence, policy, impact. WHO guide for evidence-informed decision-making.* Geneva, Switzerland; 2021.)

low in these settings include: i) limited capacity, including experience, networking, and collaboration among researchers and policymakers to find, appraise, and use evidence for decision-making; ii) lack of access to synthesized research literature and data; iii) lack of clear questions or guidelines that clarify a question requested by policymakers; iv) lack of time availability; and v) lack of funding.¹⁶ In addition, the policy actors (such as policymakers, practitioners, knowledge intermediaries, researchers, civil society organizations, and funders) consider their own experience in ever-changing contexts of political priorities, competing interests, cultural values, and limited resources when making choices of what and how to implement.¹⁷ In Ethiopia, the desire for the use of evidence to inform policies and programs is on the rise over the decades since the 1990s. Ethiopia's current approach to health is based on the health policy that was initially promoted during a transitional government in 1993¹⁸, which clearly stated the need for maximizing the utilization of information or evidence at all levels of the health system. The country has made substantial progress in improving access to health services, particularly since 1997 when it began introducing four successive five-year health sector development plans (HSDP I - IV).¹⁹ The most recent Health Sector Transformation Plans (HSTP I and II) are also a continuation of the five-year strategic plans.^{19,20} The fourth HSDP (HSDP IV) and the consecutive HSTPs (HSTP I & II) have identified the key priorities or health sector transformation agendas. One of the transformation agendas is the "information revolution," which aims to advance evidence-informed health decision-making.^{19,20} However, the use of evidence to inform decisionmaking in the health sector is limited and many factors influence its use.²¹ For instance, the study by Tilahun et. al. (2016) identified interconnected factors influencing evidence-informed health policymaking in Ethiopia. These factors include a) difficulty in accessing existing evidence; b) limited availability of needed evidence; and c) lack of synthesized evidence for policymaking purposes.²¹

The process of evidence-informed decision-making does not occur in a vacuum. The use of evidence in the formulation and adoption of effective policies and programs depends on a functional evidence ecosystem.⁴ However, apart from identifying the main challenges in EIDM in Ethiopia, no studies have described the evidence ecosystem of the Ethiopian health sector nor mapped the main actors involved in EIDM in any way. Therefore, exploring the evidence ecosystem in the country's health sector, i.e., understanding the pathways to EIDM, the extent to which evidence is used within any given context, and how the actors interact and support the efforts to link evidence to policy, is important.²²

Understanding the evidence ecosystem in the Ethiopian health sector helps the country to inform future investments in resources that support EIDM. To describe the EIDM environment in the Ethiopian health sector, we use the term "evidence ecosystem," which was first coined in the area of environmental sciences and is now widely used in the health field.^{23,24} We define "evidence ecosystem" as a system reflecting the formal and informal linkages and interactions between different actors (and their capacities and resources) involved in the production, translation, and use of evidence.²⁴

Methods

Study context: Ethiopia is Africa's oldest independent country, the tenth-largest and second-most populous country in Africa.²⁵ The Government of Ethiopia is structured in the form of a federal parliamentary republic, whereby the Prime Minister is the head of government. Executive power is exercised by the government while legislative power is vested in the parliament. The legislature was mostly dominated by the Ethiopian People's Revolutionary Democratic Front (EPRDF), until it was succeeded by the Prosperity Party in December 2019.²⁶ Ethiopia is a country with 11 ethno-linguistic federating states or regional administrations territorially delimited based on the settlement patterns, language, and identity and two city administrations with their parliaments.²⁷

The Ministry of Health (MoH) is constitutionally mandated to ensure the health of the people at the federal level.²⁸ The ministry has two research institutes (the Ethiopian Public Health Institute, EPHI, and Armauer Hansen Research Institute, AHRI) which are meant to serve as sources of local evidence and synthesize evidence that supports evidence-based decision-making in the sector.^{29,30} The regional health bureaus (RHBs) also have constitutional mandates to develop, implement, and evaluate health policies to address problems affecting the people who are living in their respective regional states.³¹ Some of the RHBs have proceeded and established public health institutes to support the generation, synthesis, and use of evidence in their jurisdictions.

Study design: This study employed an auto-ethnographic approach along with document review and discussion with relevant resource persons from research institutions, academia, and policymaking organizations. Auto-ethnography is defined as an approach to research and writing that seeks to describe and systematically analyze personal experiences to understand cultural experiences based on the authors' own observations.³² The findings presented in this study are also based on the authors' own observations made over the last decade or more.

Data collection and analysis: In this study, the authors' own observations and experience were mainly used to describe, analyze, and understand the Ethiopian health sector evidence ecosystem. In order to capture the evidence ecosystem from different perspectives, from the position of evidence users, evidence intermediaries, and evidence producers, the authors of this work include a group of researchers, knowledge translators/brokers, and policymakers/program implementers with long-term lived experience in the context of EIDM in the Ethiopian health sector and beyond. Over a decade, the authors of this work have played many roles, including champions and advocates of EIDM and its value; experts involved in evidence synthesis using methods of systematic reviews and EIDM tools such as evidence briefs for policy, health technology assessments (HTA), and rapid evidence profiles via rapid response services; evidence networkers and partnership builders at the local, regional, and global level; knowledge translators and brokers connecting evidence production and use; and policymakers and program implementers advocating the use of different types of evidence.

In addition, we have reviewed relevant documents, including proclamations/regulations, strategic plans, directives, guidelines, and EIDM-related reports or studies, to supplement the auto-ethnography and map the evidence actors (and their capacities and resources) involved in evidence-informed health decision-making within the health sector. We have also conducted discussions with five colleagues who have relevant expertise within the health system to capture their views on EIDM and the evidence ecosystem in the

Ethiopian health system. The authors have conducted three different in-person meetings and workshops to ensure that the ideas and reflections of individual members have been captured. The actors involved in EIDM in the Ethiopian health sector were also mapped.

Analytical framework: To explore the evidence ecosystem of the health sector, we have used the framework comprising six domains proposed by WHO reflecting the paths towards EIDM in a given country (see Figure 1).³³ The WHO checklist for supporting the routine use of evidence in the process of policymaking supports countries with tools for situation analysis and evidence ecosystem assessment. The tool is used when a few steps towards institutionalizing the use of evidence are already in place, but there is uncertainty about how to further develop and/or improve the processes in the country's context, which is the case in Ethiopia. It also helps to understand the domains and processes of EIDM in a given country's context. The findings from the auto-ethnography and document review were described and analyzed using these domains. The findings from the field and their feedback was addressed. The key actors involved in EIDM were also mapped, applying the concepts proposed for the education sector in the framework for the EdTech evidence ecosystem.²³



Figure 1. Framework comprising six key domains (building blocks) of EIDM^{31,32}

Ethical considerations: The protocol for this study received ethical approval from the Ethiopian Public Health Institute Institutional Review Board (Protocol number: EPHI-IRB-466-2022). Each discussant provided written consent.

Findings



This report focused on documenting the evidence ecosystem in the Ethiopian health sector and mapping different actors (and their interactions) involved in EIDM. As mentioned in the methods section, the study used a broad range of domains and processes recommended by WHO³³ to document the evidence ecosystem. The six key domains (the "building blocks" of EIDM) support governments in the use of evidence in the routine process of policymaking^{33,34}, and include: 1) governance; 2) standards and routinized processes; 3) leadership and commitment; 4) resources and capacity building/strengthening, including core competencies for EIDM; 5) partnership, collective action, and support; and 6) culture.

1) Governance of EIDM in the Ethiopian health system

Governance refers to a wide range of rule-making and steering-related functions to achieve EIDM, including institutionalized structures or platforms that promote interaction and span the boundaries between research^b and policy.^{33,34} This domain focuses on the policies and policy-development or planning units within government, pre-existence of government structures such as evidence-coordination offices, and ad hoc platforms with legal frames and mandates to link research to policy.

Proclamations/regulations and attention rendered to EIDM

According to Article 19 of proclamation No.1263/2021, the proclamation that defines the powers and duties of the executive organs of the Federal Democratic Republic of Ethiopia, each ministry has 1) the power and duty to undertake research and studies, gather, synthesize, and disseminate information; and 2) formulate study-based policies.³⁵ From this article, one can see that research and evidence synthesis is set as a basis for evidence-informed/based policies.

Of the federal organizations in the Ethiopian health sector, there are two federal health research institutes, EPHI and AHRI. These institutes operate under separate regulations where their involvement in EIDM is stated accordingly. AHRI, a biomedical research institute, in its establishment by the Council of Ministers Regulation No. 530/2023, states that one of the duties of the institute is to provide policy recommendations/ policy briefs to concerned bodies based on research findings for evidence-based decision-making.³⁰ On the other hand, one of the duties of EPHI under regulation No. 529/2023 is to undertake research on priority public health and nutritional problems. The institute is also mandated to conduct research on the country's health systems, policies, programs, and strategies, and evaluate their impact.²⁹ The mention of a response to a prioritized research agenda through policy briefs that use international evidence from systematic reviews and local evidence from local research to inform health decision/policy deliberations³⁶ shows that awareness of evidence-informed policymaking exists in the country.

National plans and attention rendered to EIDM

The national plans of the country, which are prepared by the Ministry of Planning and Development, formerly the Planning and Development Commission (PDC) and Ministry of Finance and Economic Development (MoFEC), state the importance of evidence in informing national plans and strategies.³⁷⁻⁴⁰ The two development policies and strategies that were geared toward poverty reduction in the country, the

^{b.} Research may be defined as a systematic investigative process employed to increase or revise current knowledge. For the purposes of this study, we employed a broad conceptualization of research that included not only scientifically-based research but also administrative data and statistics collected in the course of service (such as routine data and public health surveillance). (Langer L., Tripney J., Gough D. *The Science of Using Science: Researching the Use of Research Evidence in Decision-Making. London;* 2016.)

Sustainable Development and Poverty Reduction Program (SDPRP), which covered a three-year period from 2002/03 to 2004/05 and the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) for the period 2005/06-2009/10, introduced evidence-based planning to strengthen the health system, highlighting the importance attached to evidence in informing policies in the country.³⁸ The subsequent Growth Transformation Plans (GTPs),^{37,39} covering the period 2010/11 to 2019/20 have also clearly stated that evidence should be used when national plans are prepared and decisions are made. In addition, the recent 10-year development plan, 2020/21 to 2029/30, prepared by the Planning and Development Commission, gave attention to evidence generated from research to inform the country's policy decisions and future planning.⁴⁰ Sector-specific plans are developed as well based on these national plans and strategies. The country's Science, Technology, and Innovation Policy approved in 2010, for instance, also focused on adaptive research that addresses major challenges of the country and contributes to the achievement of national development objectives.⁴¹

In agreement with the overarching national plans, the health sector plans were very clear about the need for evidence starting from planning up to monitoring and evaluation. The Health Sector Development Plan IV (HSDP IV) developed in 2010 gave due attention to the extent that "improved evidence-based decision making" is one of the strategic objectives of the plan.^{19,20,42} Overall, the majority of the national plans and strategies of the health sector, past and present, in Ethiopia indicate the need for evidence use in decision-making.

Knowledge Translation (KT) Platforms in the Ethiopia health system

The KT^c platforms in the Ethiopian health system include:

a) The Knowledge Translation Directorate at the Ethiopian Public Health Institute

In 2009, a knowledge translation platform was created as one of the directorates at the Ethiopian Public Health Institute, formerly known as the Ethiopian Health and Nutrition Research Institute after a business process re-engineering (a restructuring process) of the civil service carried throughout the country. The knowledge translation platform, initially named "Technology Transfer and Research Translation Directorate" and currently named "Knowledge Translation Directorate" (KTD), was created to bridge the knowledge action gap in technology transfer or in decision/policy making by synthesizing evidence to inform deliberations of policy or decision-making. The KTD at EPHI is mandated to produce high-quality, relevant, and up-to-date synthesized evidence that supports evidence-informed policymaking and practice in the health sector. The Directorate produces evidence products using EIDM mechanisms such as evidence brief for policy (policy brief), stakeholder's dialogue (policy dialogue), rapid evidence reviews, systematic reviews, and health technology assessments (HTAs). Since its establishment, the KTD has been a focal point for some key networks and collaborations on EIDM.

These include the Evidence-Informed Policy Network (EVIPNet), Supporting the Use of Research Evidence (SURE) in African Health Systems, the Partnership for Evidence and Equity in Responsive Social Systems (PEERSS), the Centre for Rapid Evidence Synthesis (ACRES) in Uganda, Africa Centre for Evidence (ACE) in South Africa, and the Ethiopian Evidence-Based Healthcare and Development Centre (EEBH&DC) at Jimma University. The Directorate is also a host for the Joanna Briggs Institute Collaboration (JBIC) called Ethiopian Knowledge Translation Centre for Health: A JBI-affiliated Group. The Group coordinates systematic

^c Knowledge translation is "the exchange, synthesis, and effective communication of reliable and relevant research results. The focus is on promoting interaction among the producers and users of research, removing the barriers to research use, and tailoring information to different target audiences so that effective interventions are used more widely." Knowledge translation is a process of increasing the systematic and transparent use of research evidence in policy- and decision-making to improve health outcomes. (Canadian Institutes of Health Research. *Guide to Knowledge Translation Planning at CIHR: Integrated and End-of-Grant Approaches* [Internet]. Cihr; 2012. 1–30 p. Available from: http://www.cihr.ca/e/45321.html)

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review training and provides training on policy briefs, rapid evidence reviews, and utilization of knowledge translation materials in decision-making and policy development. The Group also supports regional health bureaus and other research institutes and universities in capacity-building activities. These collaborations and networks have been instrumental in embracing cutting-edge approaches to knowledge translation, improving policymakers' access to and use of research evidence for decisions, and building the capacity of researchers, knowledge brokers, and policymakers on EIDM.

b) Knowledge Management Directorate at Armauer Hansen Research Institute

The Knowledge Management Directorate (KMD) at Armauer Hansen Research Institute has a similar objective to that of KTD at EPHI, which is to encourage the culture of evidence synthesis and use, but with a focus on biomedical evidence generation. It aims to bridge the know-do gap to enhance evidence-based practices of the health systems. It is staffed with civil servants (like KTD of EPHI) and produces evidence products such as policy briefs and executive summaries that are meant to support EIDM in the health sector.

c) Ethiopian Evidence-Based Healthcare and Development Centre, Jimma University

Ethiopian Evidence-Based Healthcare and Development Centre (EEBH&DC): A JBI Centre of Excellence at Jimma University strives to make use of the best evidence for health policymaking. This Centre has pioneered and played a pivotal role in the capacity building and promotion of evidence synthesis and packaging techniques among academia and health managers in Ethiopia and other African countries. It conducts training on various translational skills and clinical evidence-based practice. It also produces various types of systematic reviews, policy briefs, and clinical evidence implementation reports. EEBH&DC also engages institutions and individuals mentoring their capacity development in evidence-based health care. EEBH&DC is currently developing capacities of academics, and health program managers in research institutions in sub-Saharan Africa, particularly in Ethiopia. The EEBH&DC delivers JBI short courses to local faculty and clinical staff and other academic and stakeholders from multidisciplinary sectors.

d) Knowledge translation platforms at regional public health institutes

Regional public health institutes in Ethiopia that are answerable to the Regional Health Bureaus are mostly modeled after EPHI. Though there are no strong knowledge translation units at the regional public health institutes, the Amhara Public Health Institute (APHI) and Tigray Health Research Institute (THRI) tried to establish a team and adopt the KT tools. Hence, there is a possibility that these bureaus will establish knowledge translation units in the future.

e) Other knowledge translation platforms

Many ad hoc entities are involved in generating and synthesizing evidence to support the decision-making processes in the health system of the country. The ad hoc entities may have different names such as Research Advisory Councils (RAC), steering committees, and technical working groups (TWGs). The Tuberculosis Research Advisory Council (TRAC) and the Reproductive, Maternal, Child, and Adolescent Health/Nutrition Research Advisory Council (RMNCAH/N-RAC) are two prominent platforms established and maintained by the health system at the national level. These platforms are composed of volunteer researchers from local universities and research institutes and partner organizations. The platforms regularly receive pressing policy research questions from the health managers and policymakers to which they respond after analysis of existing data and/or synthesizing the best available evidence. The members of these platforms also organize and facilitate policy dialogue sessions to enhance the uptake of evidence to inform health policy and practice in the health system.

The Fenot Project of the University of British Columbia and Harvard University plays the role of knowledge brokering where it operates in the space between those who generate evidence and those who are supposed to use it. The Project supports the strengthening and/or establishment of knowledge translation

platforms at national and regional levels to bridge the gap between researchers and health program managers. It has initiated a monthly evidence update session at the MoH and two regional health bureaus to enable researchers to present their research findings. It also engages in building the capacity of health system staff and university researchers through its evidence-to-policy workshop. This workshop equips participants with the knowledge, skills, and attitude required to promote EIDM by orienting the participants to the policymaking processes and basics of knowledge translation.

Although not as active as it should be, the International Institute for Primary Health Care-Ethiopia (*IPHC-E*) and the Think Tank for Primary Health Care that was established in 2020 could also considered as a KT platform in the Ethiopian Health System.

Actors involved in EIDM in the Ethiopian health system

The actors involved in the Ethiopian health sector evidence ecosystem can be roughly grouped under the categories of evidence producers, intermediaries, and users, as adapted from the EdTech evidence ecosystem framework.²³ Evidence producers are individuals and/or organizations that produce evidence to inform policies. The outputs of the evidence producers could include primary research, which results from primary studies or secondary analysis of existing health information and represent the majority of research; evidence synthesis (secondary research), which synthesizes the findings of individual research studies within a larger body of evidence on the topic, based on rigorous, reproducible, and transparent methodologies (such as systematic reviews or rapid reviews); and evidence products (tertiary research), which are the most "refined" form of evidence, synthesizing secondary and, as required, primary research into evidence briefs for policy^d, health technology assessments^e, and guidelines^{f.4} Evidence intermediaries are individuals and/or organizations that store and communicate different types of evidence. Evidence intermediaries could include knowledge translators and knowledge brokers. Knowledge users are individuals and/or organizations that demand and utilize evidence to inform policy and programming decisions. Knowledge users could include policymakers, program implementers, and clinicians.

The interaction between the actors within the evidence ecosystem occurs within an operating environment comprising legal and institutional frameworks (such as policies, regulations, and procedures) and policy influences (such as resources, stakeholder interests, and expert advice) that govern how evidence production, intermediation, and use operate. The linkages and interactions between different actors in an evidence ecosystem in the health sector are presented below in Figure 2. For details on the list of actors under each category, see Annex 1.

^{d.} An evidence brief for policy (EBP) is a summary of the best available evidence to clarify the size and nature of a problem, assessment of the likely impacts of multiple key options for addressing the problem based on systematic reviews, considerations of potential barriers to implementing the options, and strategies for addressing these barriers. (The SURE Collaboration. SURE Guides for Preparing and Using Evidence-Based Policy Briefs: What is Policy brief? SURE Guid; 2011. (222881): 0–100)

^{e.} Health Technology Assessment (HTA) is an assessment of all relevant aspects of a "technology," including safety, effectiveness, and economic, social and ethical implications (technology assessment), with an evidence synthesis often contributing to the assessment of effectiveness. (Global Commission on Evidence to Address Societal Challenges. *The Evidence Commission report: A wake-up call and path forward for decision-makers, evidence intermediaries, and impact-oriented evidence producers* [Internet]; 2022. 18 p)

^c Guidelines are systematically developed statements that recommend a particular course of action, often for citizens and professionals, and sometimes for organizations and governments, with one or more evidence syntheses contributing to the development of the statements in terms of assessing the effectiveness, values and preferences, and other factors. (Global Commission on Evidence to Address Societal Challenges. *The Evidence Commission report: A wake-up call and path forward for decision-makers, evidence intermediaries, and impact-oriented evidence producers* [Internet]; 2022. 18 p)

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Figure 2. Actors and linkages within the Ethiopian health sector evidence ecosystem

2) Standards and routinized processes of EIDM in the Ethiopian health system

To ensure high-quality KT products and processes that policymakers trust and are more likely to use, standardized processes are required, including tools and protocols.³⁴ The key standardized steps in the EIDM process, as indicated in Figure 3, include: (i) prioritizing problems and understanding their causes; (ii) searching for evidence (either from primary research or evidence store/database); (iii) synthesizing evidence for selecting interventions/options and appraising implementation considerations; iv) disseminating evidence or convening deliberative dialogue; (v) supporting policy choice and implementation; and vi) monitoring implementation and evaluating impact.^{4,6,43,44}

Even though these EIDM processes are practiced in the Ethiopian health system, they are not conducted following standards and processes but rather as fragmented activities in different organizations with no feedback from one step to the other. This is demonstrated by the fact that these activities are done mostly as academic exercises, based on individual or few professionals' or experts' curiosity, and in a non-uniform manner. The Ethiopian health system does not have a well-defined structure, capacity, and incentives in place to make up a well-defined evidence ecosystem where operations and relations for EIDM are clear. Moreover, despite the indication of the need for evidence use in national policies and strategies, the interaction and governance between the different actors (evidence producers, evidence intermediaries, and evidence users) within the ecosystem are not stated with clear governing policies, regulations, and procedures. To have a closer look, each of the EIDM key steps in the Ethiopian health system context is described as follows. Concerning the first step of the EIDM process (setting priorities), the powers and duties to develop the national public health, biomedical, clinical, and biotechnology research agenda are given to EPHI and AHRI by the Council of ministries regulations. However, the two institutes are not leading the prioritization

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Figure 3. Evidence-informed decision-making processes adapted from WHO³¹

and setting of the national research agenda as deemed. The second key step in the EIDM process is seeking the best available evidence. There are various types of research conducted and evidence syntheses done to respond to health policy questions in Ethiopia. The problem, however, is the absence of enforcement of searching for the best available evidence and challenges related to accessing relevant databases. Further, there is limited capacity among researchers and policymakers to search for evidence across a wide range of resources and appraise the evidence.

The third step of the EIDM process is setting national norms and standards that enable synthesizing evidence. The Knowledge Translation Directorate at EPHI adopted some standard tools that were developed by Supporting the Use of Research Evidence (SURE) guides for preparing and using evidence.³⁶ The SURE guides are prepared for those who are responsible for preparing and supporting the use of policy briefs and ensuring that decisions about health systems are well-informed by research evidence.³⁶

Based on the SURE guide, the KTD at EPHI adapted knowledge translation tools or tools/processes to link research to action. These tools present evidence in a concise and user-friendly format tailored to the information needs of the end users and help to ensure high-quality products and processes.³³ These tools are also helpful to safeguard the credibility and neutrality of researchers, enhance policymakers' trust, and respect the fact that different stakeholders value different types of evidence.³³ The evidence products that the KT Directorate produces include policy briefs or evidence briefs for policy (EBP), health technology assessments (HTAs), rapid evidence syntheses via its Rapid Response Service (RRS), and products that capture the insights from stakeholder dialogues (policy dialogue). These tools/processes are designed to facilitate decision-making by using systematic and transparent approaches to access, appraise, synthesize,

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and interpret research evidence; and to integrate that evidence with other information, values, and judgments to inform decisions about practice or policy.⁴³ Other well-known types of evidence synthesis, in addition to the above-described tools adopted by the KT Directorate of EPHI, are systematic reviews (with or without meta-analysis), scoping reviews, and evidence mappings.

Some universities and health research institutes in the country can conduct training on different types of systematic reviews and evidence implementation training programs. For instance, the Ethiopian Knowledge Translation Centre for Health (a JBI affiliated group), hosted by EPHI, and the Ethiopian Evidence-Based Healthcare and Development Centre (a JBI Centre of Excellence), hosted by Jimma University, conduct a Comprehensive Systematic Review Training Program (CSRTP), Scoping Review Workshop (SRW), and Evidence Implementation Training Program (EITP). These JBI-affiliated centres are currently developing the capacity of health researchers, academicians in the health field, health experts and policymakers of research and academic institutes, and policy organizations, including the Ministry of Health of Ethiopia, in EIDM. In addition, these entities produce various systematic reviews (including quantitative and qualitative reviews) and evidence implementation case reports using JBI SUMARI⁴⁵ and JBI PACES,⁴⁶ internationally accepted evidence synthesis tools. Another evidence synthesis tool used is modelling (i.e., the use of mathematical equations and existing data and research to simulate real-world scenarios and options). This capacity to produce such an analysis is not yet established aside from some trajectories produced by a few entities, such as the National Data Management Centre (NDMC) at EPHI.

The fourth step of the EIDM process is to communicate and engage (evidence dissemination), either in the form of policy dialogue or active dissemination/communication using tailored messages that are strategically selected communication channels to potential users. In the case of the Ethiopian health system, evidence is commonly disseminated or communicated in a very traditional (publication) and unstandardized manner. This does not mean that no dissemination is happening, —rather different researchers, units, and departments disseminate their work in ways they deem to be correct. However, despite the attempts, there is a challenge of effectively/purposefully selecting the modality of dissemination and identifying the right/ targeted consumers of the evidence. The challenges are mainly linked to a lack of standards or guidelines in communicating research to policymakers and other relevant stakeholders to influence decision-making and public policies.

The EIDM process in the Ethiopian health system ends at the dissemination step, without linking the evidence to action. Thus, it is evident that there is no system for the following last two steps (supporting policy choice and implementation; monitoring the evidence implementation and evaluating the impact), which can be considered as a major gap based on our observation and working in this field. Moreover, there is a poor documentation process to preserve institutional memory.

3) Leadership and commitment in the Ethiopian health system

Leadership and commitment to EIDM can be displayed at both organizational and individual levels. Though interdependent, commitment can be seen by favorable organizational and system platforms, whereas leadership can be displayed by having leaders who can advocate for and influence organizational systems, mobilize support, and create opportunities for stronger systems and culture.^{47–49} Accordingly, highlighted in this section are conditions of the Ethiopian health system on the presence of motivated, strong, and charismatic leadership for EIDM.

The consistent presence of champions, influential experts, or passionate leaders who drive the movement and sustainability of EIDM is exhibited by a few units in Ethiopia. The KTD at EPHI is one example where for a long time a single expert/professional shouldered the responsibility and led the work of clarifying an innovative idea that emerged during the business process reengineering of the Ethiopian health system in 2009, when the Directorate was established without the necessary expertise or resources. The Directorate kept growing and was sustained by the perseverance of this leader in partnering with international organizations and bringing young and passionate professionals to the unit.

Another example is the Ethiopian Evidence-Based Healthcare and Development Centre (EEBH&DC). This Centre grew to the current state of being a centre of excellence for JBI because of the leadership and commitment of a few individuals backed by strong networking and collaboration with both national and international organizations. One of the leadership achievements includes the launching of Ph.D. training on evidence-based health care (EBHC) at Jimma University, the first of its kind in the country. The knowledge management unit at AHRI is another display of professionals and organizational commitment to advocate for EIDM in the health system.

Other ad hoc teams like the RMNCAH/N-RAC at MoH can also be mentioned. This was established in 2015 to work on seven thematic areas aligned with the work of the Reproductive, Maternal, Child, and Adolescent Health/Nutrition Directorate of MoH. The RMNCAH/N-RAC was supported by a passionate director of the maternal and child health directorate of the Ministry of Health, who advocated for its recognition and functionality. Hence, RMNCAH/N-RAC has supported the Ministry of Health on this important issue ever since its establishment. The TRAC is another voluntary network of the National TB Program (NTP) and other relevant MoH agencies, public research institutions, major national universities, and other key TB stakeholders that set TB research priorities and build national capacity to conduct TB research. Other initiatives on EIDM with leadership support include the International Institute for Primary Health Care-Ethiopia (IIPHC-E) and the Fenot Project of the University of British Columbia and Harvard University. There are also circumstances where a certain precipitating factor becomes a reason for the creation or strengthening of units that engage in and sustain EIDM. The Health Economics and Financing Analysis (HEFA) team at the MoH is an example, since the specification of its role in the health sector transformation plan II (HSTP II) was a strengthening factor for the unit. The transformation plan stated that the unit will be at the forefront in the application of evidence-based healthcare decision-making by compiling evidence and defining effectiveness measures for different health technologies and programs. Accordingly, the unit has since strengthened its work on priority-setting activities like the development of the essential health service package of the country to support decision-making.⁵⁰

While leaders certainly play a key role to foster the embedding of EIDM in the Ethiopian health system, there is a heavy reliance on individual champions or experts. With this comes the risk of faltering from the progress if experts who are driving the movement are lost.⁴⁷ One way of lessening the reliance on individuals is to strengthen institutional memory.⁴⁹ There are some efforts made to keep institutional memory by documenting activities and products on platforms such as institutional websites of both governmental and non-governmental organizations. One initiative of this kind is the NDMC at EPHI, which is being utilized to strengthen and modernize institutional memory management for the health system. Though admirable, these kinds of efforts are made in a very fragmented manner and there is no exemplary system of tracking and documenting processes and activities on/for EIDM.

Despite the presence of passionate professionals and leaders of EIDM at different structures in the health system, there is still a lack of prominent champions in higher leadership positions. Activities on EIDM in the health system can't go far in affecting the sectorial and organizational culture if there is insufficient support from the government and higher officials. This could be related to the awareness and skill gap in the general area of EIDM at all levels (researchers and policymakers). Generally, the concept of EIDM in the Ethiopian health system is weak at the national level and even weaker at sub-national levels.

4) Resources and capacity building related to EIDM in the Ethiopian health system

Resources and capacity-building activities are considered cornerstones and cross-cutting issues for a country's evidence ecosystem to function optimally.^{51,52} Human, financial, material, and information resources are essential inputs for the production and reproduction of structures over time and to be more efficient in the use of scarce resources.^{52–54} In addition, having a critical mass of people, within and outside of the organization, who are skillful about applying KT routinely and consistently, is a core pillar of EIDM.^{33,34} This section provides an overview of the resources and capacities (individual and institutional capacities and related capacity-building initiatives) of the EIDM activities in the Ethiopian health system.

Resources

With regard to resources (human, financial, material, and information resources) and capacities, countries share common challenges in the area of EIDM.^{34,51} Ethiopia is no exception to this scenario, particularly when it comes to resources required across evidence generation, translation, and use for EIDM. There is no clear state budget or source of funding for EIDM in Ethiopia. Data from the recent National Health Account (NHA, 2019/20) on government spending shows "research and development in health" as additional memorandum items to the capital account. However, the spending related to health research alone is not clearly stated. The NHA data for the year 2019/20 showed the lump sum allocated to "research and training" at only 1.5% of the total health expenditures.⁵⁵ Overall, there is no clear and consistent program budget and funding flow for health research in general and EIDM activities, in particular, in the country.

Commissioned systematic reviews and evidence synthesis works are rare or are generally limited to a few international funders as a result of networking and collaborations. The lack of a national research policy and coordinating body, such as the national research council, might be contributing to the lack of clarity on how finances are being allocated and utilized for evidence generation and use.

Several resources needed during the evidence creation and application, including personnel such as graphic designers/layout experts, KT specialists, and knowledge brokers, as well as consumables such as publishing fees, web-related costs, access to databases (that need subscriptions like EMBASE, Web of Science, CINAHL, etc.), workshops, and networking costs, are not budgeted by the government. Funding of research activities and EIDM-related projects is mostly reliant on external sources and partner organizations, which does not guarantee sustainability.

Capacity

Aside from a structure, EIDM requires individual and organizational capacity (with adequate knowledge, attitudes, skills, personality traits, goals, motivations, and preferences as well as sufficient personnel implementing the work of EIDM) to push forward the EIDM agenda in a given context.^{33,37} However, the Ethiopian health sector evidence ecosystem does not have a clear structure or coordinating body for EIDM and a set of capacities along with it, apart from only a few individual champions who stand out for their leadership in and commitment to the use of evidence in decision-making.

Much of the health research personnel are located in various organizations in the country, including universities, research institutions, private sectors, and professional associations. However, the set of skills among this group of researchers in the evidence products that can support EIDM is generally lacking. The practice of policy-relevant research activities such as systematic reviews are limited to very few universities, units within the ministry, and research institutes with KT platforms. If such work is done, it is always in a fragmented way in which it cannot fully support the system. However, there is scalable capacity among evidence-producers at some of the research institutes, universities, and a few private organizations.

The currently implemented skill transfer and capacity-strengthening initiatives in evidence synthesis have played an important role in upholding awareness and understanding among researchers in the country. These capacity-building activities are partly due to the global movement to EIDM, global networking and collaborations, and peer learning at the local level. For instance, the EVIPNet and SURE project and other partnerships and networking helped Ethiopia to have few researchers with know-how in EIDM, though it is far from bridging the gap.

Recently, there has been increasing investment in the training of personnel in EIDM in the country. The commencement of Ph.D. training in EBHC at Jimma University is an example of such commitment. The KTD of EPHI has also taken important steps to transfer knowledge and skills locally. Following the "learning by doing" principle, and trying to influence the ecosystem, the unit has now started to realize decentralized evidence centres throughout the country as most regional administrations are establishing their respective KT units, most of which are located at regional public health institutes.

5) Partnership, collective action, and support for EIDM

Partnerships are essential, as they can foster EIDM by providing a mechanism for continued engagement and involvement of multiple stakeholders for the same cause, joint problem-solving, identification of resources for ongoing KT, and continued technical support.^{56–59} They promote friendly interactions between research and policymakers from the public and private sectors through regular communication and the identification of shared priorities, gradually boosting trust, reducing fragmentation, and fortifying interorganizational ties.⁶⁰ Collective action enhances government involvement in local, national, and international networks, events, and organizations that place a priority on knowledge translation and may offer funding and opportunity for capacity-building.^{57,59,60} This approach maintains EIDM through cooperative initiatives or networks, such as pooling resources or establishing new partnerships that share learning and practice communities.⁶¹ In this section, we discuss the international and local partnership, collective action, and support for EIDM in the Ethiopian health system as per the above conditions.

The EIDM partnership in the Ethiopian health system dates back to the time when EVIPNet was launched and Ethiopia became a member country. EVIPNet was launched in 2005 by WHO, in response to the resolution WHA58.34 Ministerial Summit on Health Research, which urged Member States "to establish mechanisms to transfer knowledge in support of evidence-based public health and healthcare delivery systems, and evidence-based health-related policies." EVIPNet Africa became one of the beneficiaries of the collaborative project funded by the European Commission-Research Seventh Framework Program called Supporting the Use of Research Evidence (SURE) for policy in African Health Systems in 2009.

SURE, involved an excellent partnership between Low- and Middle-income Countries (LMICs), European and Canadian scientists, WHO, and two LMIC networks (EVIPNet and the Regional East African Community Health [REACH]) that promote EIDM. Its scientists were at the cutting edge of international research into how best to transfer research into policy, and its LMIC policymakers were in a position to both influence and adopt SURE's methods, tools, and best practices.

Ethiopia was one of seven African partner countries brought into the SURE project via EPHI. This created an opportunity to establish the KT platform within EPHI (the current KTD at EPHI) using the knowledge translation tools, specifically the evidence briefs for policy and policy dialogues. The financial support provided by the SURE project was also significant in sustaining the KTD at its fledgling stage.

During the lifetime of the SURE project, the Ethiopian KTD managed to produce evidence briefs and lead stakeholder dialogues. Since then, the Ethiopian KTD has continued its efforts in synthesizing evidence

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through policy briefs and stakeholder dialogue. The policy dialogues and deliberative discussions have allowed linking researchers with policymakers. For more than a decade, policymakers from the House of People's Representatives, MoH, development partners (WHO, UNICEF, USAID, etc.), local and international NGOs, researchers from universities and public health institutes, civic society organizations and professional associations, community representatives, and media have been engaged in different stakeholder's dialogues. The dialogues were not only a good platform to get input for a particular policy brief but also helped to increase awareness of stakeholders on the techniques and tools that later increased collaboration among stakeholders.

Other international collaborations and partnerships, such as Collaboration for Evidence-Based Healthcare and Public Health in Africa (CEBHA+) and PEERSS, have also played a great role in the continued engagement and involvement of multiple stakeholders in the health sector and beyond, in which it has created awareness about EIDM among different actors. The EEBH&DC could also be mentioned as the instrumental centre for synthesizing policy-relevant evidence for the health system in the form of rapid reviews and systematic reviews. The EEBH&DC currently supports knowledge translation platforms in the country through networking, co-creation, and collaboration. The centre's engagement in mentoring knowledge translation platforms is promising for the sustainability of EIDM in the Ethiopian health system.

Regarding research dissemination, the Ethiopian health system has different platforms that link researchers, knowledge brokers, and policymakers. Health professionals' associations like Ethiopian Public Health Association have well-known annual platforms for knowledge dissemination, though they are not well coordinated. The two government health research institutes (EPHI and AHRI) and universities also organize dissemination workshops annually in addition to targeted dissemination workshops organized at any point in time. The lunchtime research output dissemination platform created by MoH in collaboration with Fenot Project is also one of the creative platforms that enhance EIDM in the health system.

6) Culture

Culture refers to basic values, assumptions, artifacts, and beliefs that are considered valid and are being disseminated and promoted as daily practices.⁶² Culture allows for a common understanding of what KT is, what value it can bring about, and what is to be expected in terms of activities and benefits.³⁴ However, in countries such as Ethiopia, evidence is not a major input into health-related decisions. This is exacerbated by the fact that research is often not aligned with national priorities and that policymakers are not in the habit of using evidence in the policymaking process. A technical brief produced by Jimma University (2021)⁶³ and a study by Tilahun et. Al. (2016)²¹ revealed that evidence plays less than the optimal role in informing health policy and practice in Ethiopia, with several critical barriers affecting the demand, generation, and use of evidence. These barriers include:

a) Limited interaction between researchers and policymakers/program implementers:

Policymakers and researchers operate in their own spheres and do not come together consistently around key issues. Such disconnect leads to different styles of communication, varying orientations and priorities, and finally a lack of focus on the translation of evidence into practice. Researchers, particularly from universities, lack sufficient orientation to the policymaking process, undermine the importance and have limited potential of creating collaborative linkages with health system managers, and are naive to the complex nature of health systems and how decisions are made in there.

b) Absence of coordinating body or unit: Though there are some EIDM initiatives and KT platforms in the Ethiopian health systems, there is no central body with a legal mandate and funding to coordinate the fragmented EIDM activities.

c) Lack of focus on EIDM: Research institutions like EPHI are tasked with too many competing priorities to fully support evidence-informed health policy, while the Ministry of Health focuses on routine, pressing, and programmatic work. Thus, generating rigorous evidence by research institutions and the capacities to engage in and use them by policy organizations is limited.

d) Problems related to individual and organizational capacity and staff retention: The Ethiopian health system has limited individual and organizational capacities in relation to the knowledge, attitude, and skills to implement EIDM activities. There are only a few individual champions in the field and there is no system to incentivize and retain those skilled champions.

e) Inadequate packaging and dissemination of research in formats appropriate for policy audiences: The limited available existing evidence is not consistently and properly analyzed or synthesized for translation purposes. Universities and research institutes rely on more traditional avenues to publicize their work, such as academic publications and annual research conferences. Only a few initiatives package their research into different KT tools, such as evidence briefs for policy/policy briefs, to promote evidence uptake by policymakers or program implementers.

f) Poor infrastructure: The lack of infrastructure for EIDM activities is a profound problem in the Ethiopian context. Access to databases (especially databases that require a subscription), journals, printed materials like books, the internet, and office materials could be mentioned as challenges for the EIDM processes.

Discussion

The need for evidence for decision-making is mentioned in the national plans, strategies, proclamations, and regulations of Ethiopia, yet there are few indications of improving awareness among different actors. Apart from indications in the documents, our findings reveal that the ecosystem of EIDM in Ethiopia does not have a strong structural and functional foundation. Moreover, the demand for evidence for decisions is suboptimal in the central government and even worse at sub-national levels.

With regard to institutionalizing the EIDM process, there are some practices in a few organizations that are conducted in a fragmented manner. This entails a lack of national norms and standards adaptive to changing contexts for synthesizing evidence, disseminating them to decision-makers, actively supporting their implementation, evaluating their impacts, and incorporating lessons.

Despite an encouraging presence of passionate professionals and leaders of EIDM in a few structures in the Ethiopian health system, there is still a lack of prominent champions in higher leadership positions that can commit to the allocation of resources (human and material) and provide empowerment and support. In the past decade, there have been several international collaborations and networking in EIDM in different capacities. Nevertheless, the mechanism for continued local engagement and involvement of multiple stakeholders toward joint problem-solving, identification of resources, and continued technical support is very limited.

Further, the trust in evidence by policymakers and program implementers in the Ethiopian health system could be deemed low considering the very few requests of evidence from decision-makers and limited use of the same for problem-solving. Though evidence is not the only consideration for decision-making, there is no transparent and systematic approach that indicates evidence to be a major input into health-related decisions in the Ethiopian health system.

Though the need for evidence is clearly underlined in national plans and strategic documents of the Ethiopian health sector, mainstreaming the production and use of evidence in the EIDM processes either for policymaking or implementation is, at best, negligible. The limited EIDM initiatives that are supported by international collaborations and networks in the last decade are not yet well embedded within the existing government systems and are performed in an isolated manner. Such fragmented approaches to EIDM and poor connections between policy and research within the evidence ecosystem could be due to the following four reasons.

First, the absence of a coordinating body or unit with legal frameworks and mandates that clearly link evidence to policy translation in the sector. Second, the absence of clarity among the evidence-producers and users about the roles and responsibilities related to evidence production and use, which affects the independence and autonomy of EIDM. Third, the absence of nationally contextualized, transparent tools and protocols that can avoid partiality and conflict of interest and ensure high-quality products and processes. Fourth, lack of strong charismatic research and policy leaders at the highest level in the health sector with the commitment to allocate resources and create systems and procedures to avoid organizational collapse

when key people leave, and project-based EIDM initiatives come to an end. The awareness of the need for evidence to inform policy and practice by policymakers could be an indication of organizational openness and readiness to change in this endeavor. However, a lot of work is needed by diverse stakeholders, including high-level decision-makers, toward the buy-in and institutionalization of EIDM.

The inconsistent system for the production and dissemination of evidence is a fueling factor for the mistrust by policymakers. This is shown by the very few instances where policymakers request evidence for a decision to solve conflicting interests among themselves. However, there is a common trend of not using the provided evidence when the evidence stands against the preferable direction of decision-making. The issue of trust in evidence is worse both among decision-makers and researchers in such instances.

Policy decisions require locally generated, reliable, and robust data on the progress of interventions, but international evidence is also required. There is, however, a mismatch of production and need where most data come from surveys and surveillances, which, due to their nature, are far from being instrumental to solving existing health system problems. Moreover, researchers are reluctant to engage and support government policymakers due to a lack of incentives to conduct policy- and practice-relevant research. Overall, other than circumstantial and a few exceptional requests in instances like the COVID-19 pandemic, there is no culture of evidence use in the Ethiopian health system.

There are challenges with access to evidence and skills to make use of EIDM among both researchers and policymakers in the Ethiopian health system. Access to relatively routine data and research, even when produced within the system, remains a major problem. The lack of access to global databases and the skills to access them and search for evidence therein is another major limitation among not only policymakers, but also many researchers. The capacity to synthesize evidence considering the local context and appraise evidence are additional skill gaps on both sides. The health information management systems and EIDM processes are poorly resourced and managed. Thus, there is a need for robust, wider, and tailored training and support for those within the health system. In the few instances where evidence is used for decision-making, implementation, monitoring, and evaluation aspects remain unfulfilled.

The EIDM processes and its institutionalization depends on a well-functioning evidence ecosystem, i.e., with the interrelations between the six domains and the interaction between actors within the ecosystem.^{4,23,34} Countries could achieve this when system equilibrium is established between the components, meaning that the domains are aligned and connected, even if some of the domains could have been further developed than others. In Ethiopia, great progress was made in the domain of standards and routinized processes achieved through international collaborations with EVIPNet and SURE projects. Another domain that is progressing well recently is the partnership-building and co-creating knowledge translation activities with the help of a few passionate experts and evidence champions that bring together policymakers, stakeholders, and researchers to support EIDM. Thus, the path to institutionalize and embed the EIDM processes in Ethiopia could be difficult but achievable if more action is taken in the other domains, including structures, leadership, commitment, culture, capacity, and incentives.

Other countries from resource-constrained settings are also on the path toward EIDM institutionalization with some dominant domains. For instance, in Kenya, institutional partnership⁶⁴ was more dominant, whereas in Brazil partnership and capacity building were the main dominant domains that played a role in EIDM institutionalization.⁶⁵ In Burkina Faso, leadership and commitment, together with human resource capacity, were the domains with the most substantial effect on the institutionalization process where rapid response service had an official government mandate and policy focus in the country.⁶⁶ Other countries have found financial resources and leadership from foreign countries to be the driving forces behind the

institutionalization of EIDM.²⁴ In South Africa, the evidence ecosystem has become gradually resilient despite some limitations. The networks, trusting relationships, partnerships, and capacity-building efforts were the domains of high importance for institutionalizing EIDM in South Africa. The value placed on EIDM by the government indicated that South Africa's evidence ecosystem has a strong structural foundation for EIDM.²⁴

The EIDM approach has long been recognized by the WHO and member counties.⁴ The COVID-19 pandemic also stressed the importance of the prompt use of the best available evidence to guide governments and practitioners in their emergency responses. The COVID-19 pandemic exhibited significant shifts in the elements and the linkages in the evidence ecosystem (using evidence in informing policies and practices) across different countries, including Ethiopia.²³ Therefore, an operating ecosystem with all the components (domains) in place is important to enhance the use of evidence for better decisions both in developed and developing countries. However, in developing countries where the resources and capacities are constrained, EIDM approaches have particular importance in avoiding the waste of resources on ineffective interventions and programs of the developed world.

Strengths and Limitations

In preparing this report, we recognize that there are strengths and limitations to our approach. To mention some of the strengths of this work, this paper was written by several authors representing all the evidence actors (evidence producers, intermediaries, and users) who have been actively engaged in their respective fields within the Ethiopian health system in the last decade and more. Including all those stakeholders in this auto-ethnography helped to incorporate different perspectives of the evidence ecosystem.

This work has also benefited from document review and discussions with broad stakeholders involved in the Ethiopian health system to reflect the reality on the ground regarding the evidence ecosystem in general and EIDM in particular. The evidence ecosystem comes from our particular disciplines and approaches; however, the scope is limited specifically to EIDM processes and is not conclusive of the whole evidence generation activities within the Ethiopian health system.

The study reflects developments of the past and presents the existing situation and does not consider the currently ongoing reforms in the health sector. As a result, we have not included recent developments like the newly established office at MoH (Policy, Strategy, and Research Lead Executive Office). The situation may change with this new structure and other institutional reforms in the future. The internal structural reforms and global trends of EIDM could be an opportunity for the evidence ecosystem and EIDM institutionalization in the Ethiopian health sector to change for the better.

Conclusions

In conclusion, the evidence ecosystem in the Ethiopian health system indicates that the supportive climate for EIDM has improved in the last decade and continues to do so through the awareness created by capacity-building workshops, the presence of individual champions, and international partnerships. There are also fragmented EIDM practices and procedures implemented by a few experts and evidence champions trying to bring both policymakers and researchers along with other stakeholders in supporting EIDM in the health system.

However, the Ethiopian health sector has no strong structural foundation for EIDM with a formal legal mandate, sustainable source of funding, and mechanisms to develop and retain needed capacities. The main barriers and limitations that the Ethiopian health sector is facing regarding EIDM include gaps between the researchers and policymakers or program managers; inconsistent engagement and coordination of stakeholders (i.e., including the limited understanding of the role of a diverse set of players in EIDM); the focus of the sector only on routine works (i.e., the MoH is mainly focused on pressing and routine work and evidence is not a major input into health-related decisions in the health sector, while research institutions like EPHI, which are responsible to fully support evidence-informed health policymaking in the health sector, are tasked with too many other competing priorities); problems related to staff retention and lack of capacity among decision-makers to access, appraise, and apply evidence; and challenges with data quality and integration of linked data sources.

Therefore, it is necessary for the Ethiopian health system to have an embedded EIDM process as a core principle with actionable commitment. Strengthening the different aspects of the evidence ecosystem of EIDM in the country should be a priority, through systems-level thinking; coordination of limited efforts; strategic planning, advocacy, and support for a sustainable system with defined and diverse funding; and appropriate financial and/or non-financial incentives to attract and retain a skillful workforce.

References

- Goldman I, Parabi M. Using evidence in policy and practice: Lessons from Africa [Internet]. First edit. Goldman I, Parabi M, editors. Vol. 1999, Routledge. 52 Vanderbilt Avenue, New York, NY 10017; 2021. 1–6 p. Available from: www.taylorfrancis.com
- 2. INASP. Informed-informed Policy Making Toolkit. Cambridge Terrace, Oxford OX1 1RR, UK; 2016.
- 3. Clark R, Haby M. Evidence-based policy: why and how. In 2016. p. 98–112.
- **4.** WHO. Evidence, policy, impact. WHO guide for evidence-informed decision-making. Geneva, Switzerland; 2021.
- **5.** Oxman AD, Vandvik PO, Lavis JN, Fretheim A, Lewin S. SUPPORT Tools for evidence-informed health Policymaking (STP) 2: Improving how your organisation support the use of research evidence to inform policymaking. Chinese J Evidence-Based Med. 2010;10(3):247–54.
- 6. Partridge ACR, Mansilla C, Randhawa H, Lavis JN, El-Jardali F, Sewankambo NK. Lessons learned from descriptions and evaluations of knowledge translation platforms supporting evidence-informed policy-making in low- and middle-income countries: a systematic review. Heal Res Policy Syst. 2020;18(1):1–22.
- 7. Langlois E V., Montekio VB, Young T, Song K, Alcalde-Rabanal J, Tran N. Enhancing evidence informed policymaking in complex health systems: Lessons from multi-site collaborative approaches. Heal Res Policy Syst [Internet]. 2016;14(1):1–11. Available from: http://dx.doi.org/10.1186/s12961-016-0089-0
- **8.** Brownson RC, Fielding JE, Maylahn CM. Evidence-based public health: A fundamental concept for public health practice. Annu Rev Public Health. 2009;30:175–201.
- Chalmers I, Bracken MB, Djulbegovic B, Garattini S, Grant J, Gülmezoglu AM, et al. How to increase value and reduce waste when research priorities are set. Lancet [Internet]. 2014 Jan 11;383(9912):156–65. Available from: https://doi.org/10.1016/S0140-6736(13)62229-1
- **10.** Oliver K, Pearce W. Three lessons from evidence-based medicine and policy: Increase transparency, balance inputs and understand power /4014/4012 /4014/4045 /4014/523 article. Palgrave Commun [Internet]. 2017;3(1):1–7. Available from: http://dx.doi.org/10.1057/s41599-017-0045-9
- **11.** Langer L, Tripney J, Gough D. The Science of Using Science: Researching the Use of Research Evidence in Decision-Making. London; 2016.
- **12.** Buffardi AL, Sharp S, Hadley S, Archer RA. Measuring evidence-informed decision-making processes in low- and middle-income countries. 2020;
- **13.** Rosenbaum SE, Glenton C, Wiysonge S, Abalos E, Mignini L, Young T, et al. Evidence summaries tailored to health policy-makers in low- and middle-income countries. Bull World Health Organ. 2011;(89):54–61.
- **14.** Stewart R, Langer L, Erasmus Y. An integrated model for increasing the use of evidence by decisionmakers for improved development. Dev South Afr. 2019;36(5):616–31.
- **15.** Friebel R, Silverman R, Glassman A, Chalkidou K. On results reporting and evidentiary standards: spotlight on the Global Fund. Lancet [Internet]. 2019 May 11;393(10184):2006–8. Available from: https://doi.org/10.1016/S0140-6736(18)33055-1

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- **16.** Stewart R, Nduku P, Langer L. Capacity in Africa : the results of a survey on support for and production of evidence maps and evidence syntheses , including systematic reviews. 2017;21.
- **17.** Mphande J. Evidence-informed policymaking: Understanding and tracking the outcomes we seek. African Institute for Development Policy. 2020.
- **18.** Transitional government of Ethiopia. Health policy of the transitional government of Ethiopia. 1993.
- **19.** FMoH. HSTP: Health Sector Transformation Plan (2015/16-2019/20). 2015.
- **20.** FMoH. Health Sector Translaformation Plan II (HSTP II): 2020/21-2024/25. Ethiopian Ministry of Health. 2021.
- **21.** Tilahun H, Flannery J, Berman P. Review of Local and Global Practices On Evidence- Informed Health Policy : Recommendations for Ethiopia. Harvard T.H. Chan School of Public Health: Boston, Massachusetts. Boston; 2016.
- **22.** Lavis JN, Lomas J, Hamid M, Sewankambo NK. Assessing country-level efforts to link research to action. 620 Bull World Heal Organ |. 2006;84(8).
- **23.** Pellini A, Nicolai S, Mcgee A, Sharp S, Wilson S. A Political Economy Analysis Framework for EdTech Evidence Uptake [Internet]. 2021. Available from: https://creativecommons.org/licenses/by/4.0/.'POLICYBRIEF
- **24.** Stewart R, Dayal H, Langer L, van Rooyen C. The evidence ecosystem in South Africa: growing resilience and institutionalisation of evidence use. Palgrave Commun [Internet]. 2019;5(1). Available from: http://dx.doi.org/10.1057/s41599-019-0303-0
- 25. Medeiros L. World Facts: The Most Populated Countries In Africa. 2020.
- 26. Ezega News. "The EPRDF Officially Ends; The Prosperity Party Begins". 2019;
- 27. Wikipedia. Regions of Ethiopia. In 2022.
- **28.** Federal Government of Ethiopia. Proclamation Number 1097/2018. A proclamation to provide for the definitions of the powers and duties and the executive organs of the Federal Democratic Republic of Ethiopia. 2018.
- **29.** Federal Democratic Republic of Ethiopia. Ethiopian Public Health Institute establishment: Council of Ministers: Federal Negarit Gazette (Regulation No. 529/2023). Addis Ababa, Ethiopia; 2023.
- **30.** Federal Democratic Republic of Ethiopia. The Armauer Hansen Research Institute establishment: Council of ministers: Federal Negarit Gazette (Regulation No. 530/2023). Addis Ababa, Ethiopia; 2023.
- **31.** Federal Democratic Republic of Ethiopia. Constitution of the Federal Democratic Republic of Ethiopia. Proclamation No. 1/1995. Fed Negarit Gaz [Internet]. 1995;1(1):21 August 1995. Available from: http://www.wipo.int/edocs/lexdocs/laws/en/et/et007en.pdf
- **32.** Adams, T., Holman Jones, S and E. Introduction to Autoethnography. Oxford University Press. 2015.
- **33.** WHO. Supporting routine use of evidence during the policy-making process : a WHO Checklist. Geneva; 2023.
- **34.** Kuchenmüller T, Boeira L, Oliver S, Moat K, El-Jardali F, Barreto J, et al. Domains and processes for institutionalizing evidence-informed health policy-making: a critical interpretive synthesis. Heal Res Policy Syst [Internet]. 2022;20(1):1–18. Available from: https://doi.org/10.1186/s12961-022-00820-7
- **35.** Federal Democratic Republic of Ethiopia. Definition of powers and duties of the executive organs of the federal democratic republic of Ethiopia: Federal Negarit Gazette (Proclamation No. 1263/2021). Addis Ababa, Ethiopia; 2021.

- **36.** The SURE Collaboration. SURE Guides for Preparing and Using Evidence [Internet]. 2011. (Vesrion 2.1). Available from: http://epoc.cochrane.org/sure-guides
- **37.** National Planning Commission. Federal Democratic Republic of Ethiopia: Growth and Transformation Plan II (GTP II) (2015/16-2019/20). Vol. I. 2016.
- **38.** Ministry of Finance and Economic Development. A Plan for Accelerated and Sustained Development to End Poverty (PASDEP) 2005/06-2009/10. Vol. I. 2006.
- **39.** Ministry of Finance and Economic Development. Federal Democratic Republic of Ethiopia Growth and Transformation Plan (GTP-I) 2010/11-2014/15. 2010.
- **40.** Planning and Development Commission. Federal Democratic Republic of Ethiopia ten years development plan: A pathway to prosperity (2021-2030). 2021.
- **41.** Federal Democratic Republic of Ethiopia. National Science, Technology and Innovation Policy: Building Competitiveness through Innovation [Internet]. 2010. Available from: https://sidama.gov.et/Uploads/ Organizations/1/downloadables/national-science-technolgy-and-innovation-policy.pdf
- **42.** FMoH. Health Sector Development Programme IV (2010/11-2014/15) [Internet]. Vol. 29. Hoboken: Wiley Subscription Services, Inc.; 2010 Nov. Available from: https://bd.univalle.edu.co/scholarly-journals/table-contents/docview/1613961491/se-2?accountid=174776
- **43.** Oxman AD, Lavis JN, Lewin S, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP)1 : What is evidence-informed policymaking? Heal Res Policy Syst. 2009;7:1–7.
- **44.** PAHO. A guide for Evidence-informed Decision-making, including in Health Emergencies [Internet]. Washington D.C; 2022. Available from: https://www.ptonline.com/articles/how-to-get-better-mfiresults
- **45.** Aromataris E, Munn Z. JBI Manual for Evidence Synthesis [Internet]. 2020. Available from: https://synthesismanual.jbi.global
- **46.** Porritt K, Lizarondo L, Lockwood C, McArthur A, Moola S, Munn Z. JBI Handbook for Evidence Implementation. 2020.
- **47.** Itad. How to institutionalize evidence-informed priority setting: Rapid Literature Review for the International Decision Support Initiative (iDSI). 2017.
- **48.** Peirson L, Ciliska D, Dobbins M, Mowat D. Building capacity for evidence informed decision making in public health : a case study of organizational change. BMC Public Health [Internet]. 2012;12(1):137. Available from: http://www.biomedcentral.com/1471-2458/12/137
- **49.** Newhouse RP. Creating Infrastructure Supportive of Evidence-Based Nursing Practice: Leadership Strategies. Worldviews Evidence-Based Nurs. 2007;4(1).
- **50.** FMoH. Essential Health Services Package of Ethiopia [Internet]. Vol. 0397. Addis Ababa, Ethiopia; 2019. Available from: https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/ documents/files/essential_health_services_package_of_ethiopia_2019.pdf
- **51.** Jones CM, Ankotche A, Canner E, Habboubi F, Hadis M, Hedquist A, et al. Strengthening national health research systems in Africa: lessons and insights from across the continent. 2021;92.
- 52. Swaminathan S. Evidence, policy, impact. World Health Organization (WHO). 2021.
- **53.** Stewart R. Do evidence networks make a difference ? J Dev Eff [Internet]. 2018;00(00):1–8. Available from: https://doi.org/10.1080/19439342.2018.1425734

- **54.** Zida A, Lavis JN, Sewankambo NK, Kouyate B, Ouedraogo S. Evaluating the process and extent of institutionalization: A case study of a rapid response unit for health policy in Burkina Faso. Int J Heal Policy Manag [Internet]. 2018;7(1):15–26. Available from: https://doi.org/10.15171/ijhpm.2017.39
- 55. FMoH. Ethiopia National Heath Accounts Report, 2019/20. Addis Ababa, Ethiopia; 2022.
- **56.** Aarons GA, Hurlburt M. Advancing a Conceptual Model of Evidence-Based Practice Implementation in Public Service Sectors. Adm Policy Ment Heal. 2011;4–23.
- **57.** Aikins A, Arhinful DK, Pitchforth E, Ogedegbe G, Allotey P, Agyemang C. Establishing and sustaining research partnerships in Africa : a case study of the UK-Africa Academic Partnership on Chronic Disease. Global Health. 2012;1–13.
- **58.** Côté-boileau É, Denis J Iouis, Callery B, Sabean M. The unpredictable journeys of spreading , sustaining and scaling healthcare innovations : a scoping review. Heal Res Policy Syst. 2019;6:1–26.
- **59.** Sriram V, Bennett S, Raman VR, Sheikh K. Developing the National Knowledge Platform in India : a policy and institutional analysis. Heal Res Policy Syst. 2018;1–14.
- **60.** Sabahi S Al, Wilson MG, Lavis JN, El-jardali F, Moat K, Vélez M. Examining and Contextualizing Approaches to Establish Policy Support Organizations A Critical Interpretive Synthesis. Kerman Univ Med Sci [Internet]. 2022;11(5):551–66. Available from: https://doi.org/10.34172/ijhpm.2020.181
- **61.** Borst RAJ, Id RW, Id RB. Sustaining Knowledge Translation Practices : A Critical Interpretive Synthesis Systematic Review Sustaining Knowledge Translation Practices : A Critical Interpretive Synthesis. Int J Heal Policy Manag. 2022;(February).
- **62.** Weyrauch V, Echt L, Suliman S. Knowledge into policy : Going beyond ' Context matters ' 2016;(May):1–73.
- **63.** WHO. Health policy and systems research in Ethiopia:Current trends and key lessons on how to improve the use of evidence in health policy. Technical Brief [Internet]. 2021. Available from: https://apps.who.int/iris/bitstream/handle/10665/342844/9789240030305-eng.pdf?sequence=1&isAllowed=y
- **64.** Jessani N, Kennedy C, Bennett S. Enhancing evidence-informed decision making: Strategies for engagement between public health faculty and policymakers in Kenya. Evid Policy. 2017;13(2):225–53.
- **65.** de Oliveira SM do VL, Bento A de L, Valdes G, de Oliveira STP, de Souza AS, Barreto JOM. Institutionalizing evidence-based policies in Brazil Institucionalización de las políticas informadas por evidencia. Rev Panam Salud Publica. 2020;44(e165).
- **66.** Zida A, Lavis JN, Sewankambo NK, Kouyate B, Moat K. The factors affecting the institutionalisation of two policy units in Burkina Faso's health system: A case study. Heal Res Policy Syst. 2017;15(1):1–15.

Annexes



Annex I. Components of the Evidence Ecosystem Map in the Ethiopian Health Sector

Regulations, Ethics Laws, and Guidelines

- Constitution of the Federal Democratic Republic of Ethiopia, 21 August 1995, available at: https:// www.refworld.org/docid/3ae6b5a84.html
- Proclamation No. 1263/2021: Definition of Powers and Duties of the Executive Organs
- Establishment proclamations: Ethiopian Public Health Institute and Armauer Hansen Research Institute (14 February 2023)
- Higher Education Proclamation and its several amendments
- Health Sector Transformation Plans
- National Health Policy of Ethiopia (1993)
- National Science and Technology Policy of Ethiopia (2010)
- National Science, Technology, and Innovation (STI) Policy of Ethiopia
- National Health Ethics Review Guidelines

Research Ethics

- National Research Ethics Review Committee, Ministry of Science and Technology
- Ethiopian Bioethics Initiative
- Institutional review boards: Universities and research institutes

Research Funders

Government of Ethiopia

- Armauer Hansen Research Institute (AHRI): Grand Challenges Ethiopia
- Ministry of Health (MoH): National Research Council of Ethiopia
- Ministry of Innovation and Technology (MinT): Local research and development grant
- MOST: National Science and Technology Council of Ethiopia

Public and private universities Development partners

- Clinton Foundation
- GAVI
- Global Fund to Fight Tuberculosis, AIDS, and Malaria (GFTAM)
- International Development Research Institute (IDRC)
- NORAD
- SIDA- SAREC
- UN agencies: WHO, UNICEF, UNFPA
- US agencies: CDC, USAID
- Seventh Framework Programme of the European Union
- Bill and Melinda Gates Foundation

Knowledge/Evidence Generators

Government ministries and agencies

- Ministry of Health and its agencies and directorates
 - AHRI
 - EPHI
- Ethiopian Statistics Service (formerly known as Central Statistics Service)

Research institutes

- Ethiopian Public Health Institute
- Armauer Hansen Research Institute
- Demographic and Research Training Institute, Addis Ababa University
- Ethiopian Evidence Based Healthcare and Development Centre (EEBH&DC)
- Ethiopian Centre for Child Research
- Policy Studies Institute (PSI)
- Institute of Health, Jimma University
- International Institute of Primary Health Care: Implementation research
- Jimma University Rapid Review Response Centre

Local public university colleges/faculties/departments

- College of Health Sciences, Addis Ababa University
 - Medical faculty
 - School of Public Health
 - School of Pharmacy
 - School of Nursing
- College of Medicine and Health Sciences, University of Gondar
- College of Public Health and Medical Sciences, Jimma University
- Colleges of medical and health sciences in other universities.
- Other colleges and universities: e.g., Colleges of social sciences, faculties of natural sciences

Demographic and surveillance sites

- Addis Ababa Mortality Surveillance Program /AAMSP
- Arba Minch Zuria DSS Site (Arbamich University)
- Butajira DSS Site (Addis Ababa University)
- Dabat DSS Site (University of Gondar)
- Gilgel Gibe Field Research Centre (Jimma University)
- Kersa DSS Site (Haramaya University)
- Kililte Awlalo DSS Site (Mekelle University)

Professional Associations

- Ethiopian Public Health Association
- Ethiopian Medical Association
- Ethiopian Pediatrics Society
- Ethiopian Society of Obstetricians and Gynaecologists
- Ethiopian Midwives Association
- Ethiopian Academy of Sciences
- Ethiopian Society of Emergency Professionals

Regional health bureaus

Regional public health institutes and laboratories

- Adama Regional Laboratory
- Addis Ababa Regional Laboratory
- Bahir Dar Regional Laboratory
- Hawassa Regional Laboratory
- Mekele Regional Laboratory
- Nekemte Regional Laboratory

Hospitals (university, federal, regional, zonal, and district hospitals) Private teaching and research institutes

- Miz-Hasab Research Centre (MHRC)
- Addis Continental Institute of Public Health

International collaborations

- Emory University the Maternal and Newborn Health in Ethiopia Partnership
- Fenot Project of the University of British Columbia and Harvard University
- Vital Strategies' Data Impact Program
- Yale Institute School of Public Health University of Gondar

UN agencies, international organizations, and other NGOs

- David and Lucile Packard Foundation
- Pathfinder International
- Christian Relief and Development Agency
- US CDC
- UN agencies
- Other NGOs

Private consultants Knowledge Translators and Evidence Stores Knowledge translators

- **Professional Associations** (see list above)
- National Research Councils
 - National Health Research Council of Ethiopia, Ministry of Health
 - Reproductive, Maternal, Child, and Adolescent Health/Nutrition RAC (RMNCAH/N-RAC), MoH, Ethiopia

– EPHI

- Knowledge Translation Directorate (KTD)
- AHRI
 - Knowledge Management Directorate
 - National TB Research Advisory Council (TRAC)
- Universities and colleges: Associate vice presidents and deans for research and publication
- International research collaborations (see list above)

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Evidence stores

– Ethiopian Public Health Institute

- National Data Management Centre (NDMC)
- EVIPNet

Research Journals

- Ethiopian Medical Journal
- Ethiopian Journal of Health Development
- Ethiopian Journal of Reproductive Health
- Ethiopian Journal of Pediatrics
- Ethiopian Journal of Health Sciences
- Ethiopian Journal of Health & Biomedical Sciences
- Other international journals

Annual conferences

- Annual conferences by professional associations
 - Ethiopian Medical Associations
 - Ethiopian Public Health Association
- Annual conferences by universities
 - Annual Research Conference of the University of Gondar
 - Annual Research Conference of Jimma University

Disease-based conferences

- National TB research conferences
- National Neglected Tropical Diseases Conference

Proceedings and extracts

- Extracts of MPH Thesis (EPHA)
- Conference proceedings
- Biographies of research done in Ethiopia

Digests and newsletters

- Harar Bulletin of Health Sciences
- EPHA's Public Health Digest

Evidence Users

- Parliament of Ethiopia and its Social Affairs Standing Committee
- Different directorates of the ministry of health, particularly the Policy and Plan Directorate
- Ministry of health agencies
 - Ethiopian Health Insurance Service
 - Ethiopian Public Health Institute
 - Ethiopian Food and Drug Agency
 - Ethiopian Pharmaceutical Supplies Service
 - Ethiopian Blood and Tissue Bank Services
- Regional health bureaus
- Development partners, including UN agencies
- Researchers
- Universities and research institutes





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