
Evidence, policy, impact.

WHO guide for
evidence-informed
decision-making

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Foreword

Strengthening the use of research evidence to advance health impact

To improve health and well-being and accelerate the achievement of the Triple Billion targets, we need better evidence for better decisions. There are moral, socioeconomic and political arguments to increase the use of research in decision- and policy-making. By leveraging the best available evidence, we can improve the effectiveness, efficiency and equity of health policies and interventions, enhance the effective use of scarce public resources, and increase the transparency and accountability of policies and interventions.

The importance of evidence-informed approaches, both in policy formulation and implementation, has long been recognized by the World Health Organization (WHO) and its Member States. With the General Programme of Work (GPW)13 and the creation of the Science Division, our Organization has reinforced its science- and evidence-based mandate. The COVID-19 pandemic additionally stressed the importance of the expeditious use of the best available scientific evidence to guide governments and practitioners in their emergency response. To achieve even better results in future, we need to further optimize our work across the evidence ecosystem and ensure that decision-makers are equipped to navigate a plethora of partially overlapping evidence and guidance of variable quality.



A handwritten signature in blue ink that reads "Soumya". The signature is fluid and cursive, with a long horizontal stroke extending from the end.

Dr Soumya Swaminathan
WHO Chief Scientist

A well-functioning evidence ecosystem with structures, capacity and incentives in place will ensure that evidence is available and accessible to all, and routinely used to inform decision-making. This ecosystem is also essential to increase countries' resilience to public health emergencies and will equip them to lead evidence-informed efforts to mount their own responses when emergencies strike.

The "evidence ecosystem for impact" framework proposed in this guidance aims to provide a conceptual structure to promote a more comprehensive, integrated approach across the Organization and with Member States and partners to create synergistic effects at the country level. Our vision for this guide is for it to serve as a matrix to capture WHO's methods and tools linked to promoting better informed decision-making in countries and globally. By doing so, it will allow greater awareness and uptake of existing tools/practices and promote collaboration between areas within the Organization and with partners.

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- Editorial Board and external peer-review

An external Editorial Board made up of eight experts in the area of EIDM oversaw the development of the guidance document and repository of EIDM tools and provided external peer-review of this guide. The Editorial Board was chaired by Mark Leys (Vrije Universiteit Brussels, Belgium) with Huda Basaleem (University of Aden, Yemen) as co-chair. Membership of the group comprised the following experts: Ansgar Gerhardus (University of Bremen, Germany), Sally Green (Cochrane Australia and Monash University, Australia), Denny John (Amrita University, India), John N. Lavis (McMaster University, Canada), Daniel F. Patiño-Lugo (University of Antioquia, Colombia), and Ruth Stewart (University of Johannesburg, South Africa)

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Abbreviations

EBP	evidence brief for policy
EIDM	evidence-informed decision-making
EIP	evidence-informed policy-making
EVIPNet	Evidence-Informed Policy Network
GPW	General Programme of Work
GRADE	Grading of Recommendations Assessment, Development and Evaluation
HALE	healthy life expectancy
HTA	health technology assessment
KT	knowledge translation
M&E	monitoring and evaluation
NGO	nongovernment organization
PICO	Population, Intervention, Comparator (Control), Outcome
SDGs	Sustainable Development Goals
UHC	universal health coverage
WHO	World Health Organization

Glossary

The definitions given below apply to the terms used in this document. They may have a different meaning in other contexts.

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.”¹ The evidence ecosystem can be thought of as the overlap between two distinct systems; namely, the research system and the evidence support system. The former is focused on all types of research, including biomedical and theoretical research. The latter is focused on all types of activities that harness the evidence that results from this research activity to support decision-making by government policy-makers, organizational leaders, professionals and citizens. Throughout this guide, the term “evidence ecosystem” is mainly used with reference to evidence support systems.

Evidence-informed decision-making: Evidence-informed decision-making (EIDM) emphasizes that decisions should be 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. It is a systematic and transparent approach that applies structured and replicable methods to identify, appraise, and make use of evidence across decision-making processes, including for implementation.

Workstreams

Behavioural research: Systematic examination of what people (citizens and professionals) do, what drives them to do it, and what can sustain or change what they do.²

Data analytics: Systematic analysis of raw data to make conclusions about that information.²

Evaluation: Systematic assessment of the implementation (monitoring) and impacts (evaluation) of an initiative for the purposes of learning or decision-making.²

Evidence briefs for policy: A summary of the best available evidence to clarify the size and nature of a problem, assessment of the likely impacts of three key

¹ Stewart R, Dayal H, Langer L, van Rooyen C. The evidence ecosystem in South Africa: growing resilience and institutionalisation of evidence use. *Palgrave Commun.* 2019;5(1):90.

² McMaster Health Forum. Global Commission on Evidence to address Societal Challenges, exhibit 4.2. Hamilton, ON: McMaster University; 2021 (<https://www.mcmasterforum.org/networks/evidence-commission>, accessed 13 August 2021).

options for addressing the problem based on systematic reviews, considerations of potential barriers to implementing the options, and strategies for addressing these barriers.

Evidence-informed policy-making supports: An approach that aims to ensure that policy decision-making is informed by the best available evidence from research. Examples of supports provided by the EVIPNet initiative are evidence briefs for policy, policy dialogues, and rapid response services.^{3,4}

Guidelines: 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 assessment of effectiveness, values and preferences, and other factors.²

Health technology assessment: 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.²

Implementation research: Study of methods to promote the systematic uptake of effective approaches into routine practices at the personal, professional, organization and government levels.²

Modelling: Use of mathematical equations and existing data and research to simulate real-world scenarios (i.e. what is likely to happen if we don’t intervene) and options (i.e. what happens if we intervene) in a virtual environment.²

Review types

Evidence and gap maps: Evidence and gap maps are systematic evidence synthesis products that display the available evidence relevant to a specific research question. Evidence and gap maps are used to identify gaps that require filling with new evidence, collections of studies for review, and increasing the discoverability and use of studies by decision-makers, research commissioners and researchers.⁵

Meta-analysis: A meta-analysis is a statistical method used to combine results from relevant studies. The larger sample size increases the ability to provide reliable estimates.⁶

³ EVIPNet Europe. Conceptual background and case studies – introduction to EVIPNet Europe. Copenhagen: WHO Regional Office for Europe; 2017.

⁴ Oxman AD, Vandvik PO, Lavis JN, Fretheim A, Lewin S. SUPPORT tools for evidence-informed health policymaking (STP) 2: improving how your organisation supports the use of research evidence to inform policymaking. *Health Res Pol Syst.* 2009;7 Suppl 1:S2.

⁵ White H, Albers B, Gaarder M, Kornør H, Littell J, Marshall Z, et al. Guidance for producing a Campbell evidence and gap map. *Campbell Syst Rev.* 2020; 16(4):e1125.

⁶ Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, et al., editors. Cochrane handbook for systematic reviews of interventions, version 6.2 (updated February 2021) (<https://training.cochrane.org/handbook/current>). Cochrane; 2021, accessed 25 September 2021).

Qualitative review: Method for integrating or comparing the findings from qualitative studies, which looks for “themes” or “constructs” that exist in individual qualitative studies.

Rapid review: A rapid review is a type of systematic review in which components of the systematic review process are simplified, omitted or made more efficient in order to produce information in a shorter period of time, preferably with minimal impact on quality. Further, they involve a close relationship with the end-user and are conducted with the needs of the decision-maker in mind.⁷

Scoping review: An overview of the available research evidence without producing a summary answer to a discrete research question.⁸ A scoping review can answer “What information has been presented on this topic in the literature?” and can be done prior to conducting a systematic review.

Systematic review: A review of the evidence on a clearly formulated question that uses systematic and explicit methods to identify, select and critically appraise relevant primary research, and to extract and analyse data from the studies that are included in the review. May include a meta-analysis or a narrative synthesis of the results.⁶

⁷ Haby MM, Chapman E, Clark R, Barreto J, Reveiz L, Lavis JN. What are the best methodologies for rapid reviews of the research evidence for evidence-informed decision making in health policy and practice: a rapid review. *Health Res Policy Syst.* 2016;14(1):83.

⁸ Munn Z, Peters MDJ, Stern C, Tufanaru C, McArthur A, Aromataris E. Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Med Res Methodol.* 2018;18(1):143.

About this guide

A close-up photograph of a person's hands writing on a document. The right hand holds a silver pen, and the left hand holds a yellow highlighter. The document is filled with text and tables, though the details are blurred. The background is a soft, out-of-focus light color.

Who is this document for?

All WHO staff, Member States and partner organizations

This document is meant to provide guidance to all staff of the World Health Organization (WHO), of Member States and in partner organizations who need to create, commission, fund, broker or apply evidence. This process is composed of two distinct but interacting components (1):

- **evidence creation**, represented as a funnel, moving from an overwhelming number of primary studies or data of variable quality towards a more concise, clear and user-friendly packaging of the research evidence (such as in guidelines, evidence briefs for policy [EBPs], and health technology assessments [HTAs]); and
- **evidence application**, represented through the policy/action cycle, outlining the steps needed for evidence to be applied in policy or practice.

This guidance, and associated repository of tools, provides WHO staff and partners with a set of methods and tools for evidence-informed decision-making (EIDM) across the clinical (or practice), public health and health system fields. It does not replace existing WHO methods and tools but brings them together in one place and shows how the different processes fit together and complement each other. Decision trees are also being developed to complement the guide and repository to support the user in applying EIDM.

Why should you use this document?

For a systematic and transparent process of using the best available research evidence in your work

As an evidence-based Organization, we need to apply rigorous systematic and transparent methods for the creation and application of research evidence in our day-to-day work, whether developing policy options, formulating new programmes or providing technical assistance to Member States. WHO, as part of its Global Programme of Work (GPW)¹³, is also committed to turning the knowledge that it produces into action to deliver the “Triple Billion” targets: a billion more people with universal health coverage (UHC), a billion more people protected from health emergencies, and a billion more people with better health and well-being (2). By applying reliable and consistent approaches to EIDM, the Organization will strengthen its unique role as a credible knowledge producer, user and broker, and optimize its own processes and performance.

WHO will be successful in driving a measurable improvement in the health of people only if the different areas within the Organization and at country level operate in a more aligned and synergistic manner to make the best use of resources and capacities. Through such an organizational shift, our capacity will be leveraged to accelerate the achievement of WHO’s Triple Billion targets and the SDGs.

What are the objectives of the guide?

To guide and support you in optimizing your use of evidence

1. to guide you in using research evidence in your day-to-day work;
2. to guide you in the process of supporting Member States to use research evidence;
3. to establish closer collaboration across the different workstreams of the evidence ecosystem.

What do we wish to see as outcomes?

To see changes at three levels

1. The work of WHO is systematically and transparently informed by the best available evidence and an evidence culture is enhanced.
2. WHO goes beyond developing global evidence products to support Member States in the adaptation and adoption of evidence in a way that contributes to its scaling up and impact.
3. The actors of the evidence ecosystem, within the Organization and at country level, operate in a more aligned and synergistic manner to make better use of resources and capacities.

How should this document be used?

This guidance allows for a flexible approach that is suited to all types of EIDM and implementation processes. It applies to both policy and practice decisions in the clinical, public health or health system fields. The document shows you where to get advice and help – whether an EBP is being developed, a formal

The EIDM-repository: tailored tools at your fingertips

Accompanying this guidance and facilitating access to key EIDM and knowledge translation (KT) resources, an online repository of EIDM tools and resources used by WHO and with Member States is available online.

The repository can be navigated and explored along the policy/action cycle or using the advance search functionality, and tools can be filtered by document type, language and publication date.

Tools included in the repository were identified and mapped using a wide consultative process with technical units and rigorous rating against inclusion and prioritization criteria. The repository is updated regularly.

> [Start exploring the world of WHO's EIDM tools](#)
(to be activated shortly)

The screenshot displays the WHO EIDM-repository interface. At the top, the WHO logo and navigation icons are visible. The main heading is 'Policy dialogue preparation and facilitation checklist'. Below this, the breadcrumb trail reads 'EIDM > Communicate and Engage > Policy Dialogue'. A thumbnail image of the checklist cover is shown on the left. To the right, a text block provides background information: 'WHO launched the Evidence-informed Policy Network (EVIDNet) as a response to the World Health Assembly resolution WHA58.34 in 2005 to build knowledge translation (KT) capacity of Member States. EVIDNet Europe was launched in October 2012 under the umbrella of the European Health Information Initiative, supporting the implementation of the European policy framework Health 2020 and the Action Plan to strengthen the use of evidence, information and research for policy-making in the WHO European Region 2016–2020. EVIDNet has been implementing policy dialogues (PDs) as key KT instruments for evidence-informed policy-making (EIP). These PDs are typically informed by an evidence brief for policy (EBP). EBPs and PDs are examples of tools used to improve the contextualization and utilization of evidence within policy-making. Evidence briefs for policy (also known as policy briefs) provide direct support to policy-making by packaging the research evidence in a way that it is accessible, relevant, easy to use and applicable at the local level. They start with the priority policy issue (not the research evidence). Thereafter, they use the best available evidence to clarify the problem and its causes, and identify and frame policy options to address the problem. They often feature issues related to governance, financing and delivery, along with important implementation considerations.'

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On the right side of the page, there are several interactive elements: a 'Direct Download' button with a 'Website' link below it, and a 'Related tools' button. Below these are filters for 'Topic area' (Communicate & Engage, Education / training, Policy dialogue, Active dissemination / comm.), 'Document type' (Technical document), and 'Evidence type' (Secondary, Tertiary).

guideline adaptation/adoption process is being set up, or an individual staff member or partner has been tasked with developing the evidence base to underpin advocacy on specific health issues.

Where to start

This Guide offers multiple access points to tried and tested tools and vetted approaches for facilitating EIDM in WHO and with Member States. Readers looking for a comprehensive background to EIDM will benefit from starting with Chapter 1 “What is EIDM and why is the use of research evidence important?” before advancing to Chapter 2. Chapter 2 “The evidence ecosystem” includes a comprehensive description of the evidence ecosystem framework, including its underlying principles and cross-

cutting approaches. Readers just looking for a quick overview of the framework are referred to Fig. 2.2. More advanced users wishing to directly access EIDM tools can do so by going directly to Chapter 3 “The EIDM treasure box: tools, evidence types, evidence sources and key forms of collaboration”, or by accessing the online repository. The organization of the tools in Chapter 3 and in the repository is guided by Fig. 2.2.

Where to find help

The Evidence to Policy and Impact Unit in the Research for Health Department/ Science Division aims to promote WHO’s science and evidence-based mandate by (i) systematically and transparently developing policies, tools and interventions based on the best available research evidence; and (ii) jointly with the regional offices, working to strengthen and institutionalize countries’ capacity to systematically and transparently use sound research evidence in decision-making. For questions and comments on this guidance document and the repository of tools, please contact EIDM@who.int.

For further information and assistance with the specific tools included in this document, you will find contact details for the responsible technical units in the repository.

01

**What is EIDM
and why is the
use of research
evidence
important?**

Focus & learning objectives

This chapter aids readers:

- **to describe the role and benefits of evidence-informed decision-making in public health;**
- **to distinguish the different types of evidence used in evidence-informed decision-making; and**
- **to identify known barriers and facilitators in knowledge translation processes, and strategies to address them.**

What is evidence-informed decision-making?

Evidence-informed decision-making (EIDM) emphasizes that decisions should be 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 (3–5). It is a systematic and transparent approach that applies structured and replicable methods to identify, appraise and make use of evidence across decision-making processes, including for implementation (4). EIDM adheres to the principles of equity, equality, and accountability (6).

EIDM has its roots in the evidence-based medicine movement and HTAs dating back to the 1980s. It has since expanded beyond clinical care and health systems to include a broader notion of evidence-based policy-making (3,7–9). The more recent emphasis on evidence-*informed* over evidence-*based* decision- and policy-making takes into account that research evidence is often but one of several factors influencing policy-making processes (3). As policy-making inherently takes place in a political context, economic interests, institutional constraints, citizen values and stakeholder needs tend to play an important and sometimes conflicting role (4,10,11).

The pivotal role of evidence for effective health policy and improved practice has been extensively documented and repeatedly emphasized in clinical care, public health, and at the health system level (12–14). EIDM has the potential to improve the effectiveness, efficiency and equity of health policies and interventions (15). It facilitates a more efficient use of scarce resources in health care (16), reduces research waste (17), and improves transparency and accountability (18).

What types of evidence are needed for evidence-informed decision-making?

Evidence is defined as factual knowledge gained through observation or experimentation in support of a conclusion (19,20). 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 policy-makers, clinicians, patients or citizens expressed in different forms in formal deliberative dialogues, on websites, in policy documents, reports, and other formats (19,21–23). *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 (19). Scientific evidence is produced through more formal, rigorous research processes, including primary studies (primary research), synthesis of existing evidence (secondary research), and evidence products such as guidelines or evidence briefs for policy (EBPs) (tertiary research) (1). (See Chapter 2 for an explanation of these types of evidence.)

EIDM has the potential to improve the effectiveness, efficiency and equity of health policies and interventions. It facilitates a more efficient use of scarce resources in health care, reduces research waste, and improves transparency and accountability.

The relationship between tacit and scientific evidence is complementary rather than competitive (19,24). In EIDM, tacit evidence is often used to support, complement or question the appropriateness of scientific evidence, and extends the evidence ecosystem (21,25). One example of tacit evidence is *expert opinion*, which combines facts, interpretation of those facts, and conclusions (26). As academic, commercial, financial and ideological factors can affect expert interpretation, factual evidence supporting an expert opinion should be distinguished and appraised separately when making official recommendations (26). This helps to avoid conflicts of interest that mislead judgements on a policy issue or new research endeavour (21).

As an additional distinction, scientific evidence can also be assessed for its relevance at global, regional or local level. *Global evidence* assembles the best available findings on a specific thematic or health issue from around the world (20), and can be synthesized in the form of a systematic review or operationalized in a tertiary research product such as a guideline. As all evidence is context-specific, global evidence is, however, not always easily transferable to a specific local context, and its applicability beyond the original contexts or settings needs to be assessed and judged carefully (27). Additional *local evidence*, including observations in a specific setting, administrative data or primary studies, needs to be consulted to take into account modifying factors such as local prevalence of a disease, local perceptions and values, or cost and available resources (20,28).

Overview of different types of evidence used in EIDM

- **Scientific (codified) evidence** is produced through formal, rigorous research processes of defined methodological standards, making it explicit, systematic and replicable (19).
- **Tacit (colloquial) evidence** often includes opinions, expertise, lessons learned, organizational tradition of policy-makers, clinicians, patients or citizens and helps to contextualize and interpret scientific evidence further (19,21-23).
- **Global evidence** assembles the best available findings on a specific thematic or health issue from around the world, e.g. through a systematic review or an established, evidence-informed guideline (20).
- **Local evidence** takes into account modifying factors in specific settings, e.g. through a primary study or programme monitoring data (20,28).

The distinctions of evidence discussed here are not mutually exclusive and overlap at several points. Different issues or policy problems call for different types of evidence, and different opinions may exist as to what constitutes the best available evidence for a particular question (20). EIDM and evidence-informed policy-making emphasize the use of relevant and applicable evidence to improve policies and programmes, and ensure that evidence is assessed in a systematic and transparent manner unaffected by conflicts of interest (20).

How to choose between the different types of research evidence

To address diverse health policy and practice questions at various health system or service levels, EIDM requires different types of research evidence (29). The traditional way of thinking about research evidence was based on **study design**, with the different designs arranged in order of decreasing internal validity in a hierarchy or pyramid. Fig. 1.1 shows an example hierarchy of evidence for questions related to effectiveness (30).

Fig. 1.1 Traditional evidence hierarchy for questions related to effectiveness



There is recognition, however, that the best study design varies according to the **question** that needs answering, such as “does it work?”, “how does it work?”, “is it safe?”, among others (see Table 1.1). While randomized controlled trials (RCTs) and systematic reviews of RCTs are the most useful study designs for questions of effectiveness (“does doing this work better than doing that?”), other questions require different study designs (29,31). For example, to understand how an intervention works or fails to work, qualitative studies or systematic reviews of qualitative studies are the most useful. Thus, the appropriateness of the evidence for a particular question is an important consideration in EIDM (32–34). See Table 3.1 in Chapter 3 for guidance on which type of evidence to use when.

Table 1.1. A matrix of evidence to identify priority issues and select interventions

Research question	Qualitative research	Observational studies			Experimental studies		Systematic review ^d
		Survey ^a	Case-control study	Cohort study	Randomized controlled trial	Quasi-experimental study ^b	
Questions related to the issue/problem							
Size of the problem What is the prevalence, incidence, morbidity or mortality rate from the disease or condition?		++		++		+	+++
Cause of the problem Why is it a problem?			+	+	++		+++
Questions related to selecting interventions							
Effectiveness Does doing this work better than doing that?			+	+	++	+	+++
Process How does it work?	++	+			+	+	+++
Value/importance Does it matter?	++	++					+++
Safety Will it do more good than harm?	+		+	+	++	+	+++
Resource use How much does it cost?		++					+++
Cost-effectiveness Are the benefits worth the extra costs?					++		+++
Equity What impact does it have on health equity?		+	+	+	++	+	+++
Acceptability Is it acceptable to key stakeholders, e.g. users, health-care providers?	++	+					+++
Feasibility Is it feasible to implement?	++	++			+	+	++
Appropriateness Is it the right intervention for these people?	++	++					++
Satisfaction Are users, providers, and other stakeholders satisfied with the intervention?	++	++	+	+	+	+	+

Source: adapted from Table 1 in Petticrew and Roberts 2003 (31) and Box 4 in Nutley et al. 2013 (29), with additional questions based on those included in the GRADE Evidence to Decision frameworks (35).

^a These are also known as cross-sectional studies.

^b Quasi-experimental studies are those where the investigator lacks full control over the allocation and/or timing of intervention but nonetheless conducts the study as if it were an experiment, allocating subjects to groups (36).

^c Various types of systematic reviews exist, e.g. rapid reviews, scoping reviews, mixed method reviews, overviews, qualitative reviews. While a systematic review of RCTs (with or without a meta-analysis) is most appropriate for questions of effectiveness, other types will be more appropriate for other types of questions. For example, where the use of qualitative evidence is appropriate for a particular question, a qualitative review or mixed methods review will be most appropriate.

While **evaluations** are not explicitly mentioned in the table as a type of evidence useful to inform policy- and decision-making, the research questions that can be addressed by an evaluation can implicitly be found in the table. For example, process evaluations ask questions such as “how does it work?”, which requires conducting qualitative research or surveys; and impact evaluations ask questions such as “did it work?” (effectiveness), in which case the best evidence will come from an RCT design. The main difference with evaluations is that systematic reviews may not be relevant as new data usually need to be collected to answer the relevant questions. However, a systematic review can help to inform the design of the evaluation, e.g. the type of evaluation that will be needed and the relevant indicators.

In addition to study design, when considering what is the best evidence for a particular question, the **methodological quality** (or risk of bias) of the study also needs to be taken into account as it can affect the degree of confidence that can be placed in its results (29–31). Flaws in the design or conduct of the study can result in misleading results (37). The advantage of well-conducted systematic reviews is that they include, as part of the process, an assessment of risk of bias of the included studies (38). This assessment is used in the interpretation of the included evidence. For example, we can have more confidence in a systematic review of effectiveness that includes RCTs with a low risk of bias than one in which most of the RCTs had a high risk of bias. In turn, the systematic review itself should also be assessed for its methodological quality. See Table 3.6 in Chapter 3 for tools to assess the quality of different study designs.

The quality of a body of evidence for a particular question and outcome can also be assessed using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach, which is used for the development of WHO guidelines and is included as a standard in some systematic reviews (30,38–40). The GRADE approach rates the quality of the evidence (also known as certainty of the evidence) based on study design, risk of bias, inconsistency, imprecision, indirectness, and publication bias (38,39,41). For qualitative evidence reviews, GRADE-CERQual can be used (42).

Closing the research-to-policy gap

Irrespective of how relevant, applicable or convincing a piece of evidence appears to be to address a given policy issue, it virtually never automatically drives tangible policy and practice change. A 2014 study on the use of knowledge products and policy reports at the World Bank, for example, found that more than 30% of policy reports are never downloaded, and 87% of assessed knowledge products were never cited in other research or policy documents (43). In health care and clinical research, practice change from KT activities have been reported at an equally low 8–15% (44).

This research-to-policy gap (45) or “know-do gap” (46) is often caused by a lack of institutional capacities and resources to translate knowledge into policy and practice, and further complicated by **political instability, power**

At its core, EIDM is the result of successful KT strategies to bridge the evidence-to-policy and -implementation gap, utilizing strategies to facilitate evidence uptake and overcoming known barriers.

struggles or budgetary limitations (47,48). At the same time, researchers' and policy-makers' perception of how new knowledge is being disseminated and incorporated into policy and practice can differ widely, and is often misconceived as a unilateral translation process not requiring additional effort (49). Advice on how to drive policy and practice change offered to researchers, for example, is only rarely built on empirical evidence of impact or on a clear understanding of policy-making processes and evidence use (50). From health-care providers, there have, in turn, been calls for evidence to become more practice-informed in order to facilitate effective, evidence-informed practice (51).

Successful KT works with different forms of evidence, as discussed above, and additionally builds on managerial leadership, strong organizational networks providing opportunities for strategic alliances, and strategic communication tactics (44). EIDM builds on several known facilitators for the successful uptake of evidence at policy-maker, researcher and institutional levels (Fig. 1.2). These include increased collaborative relationships or personal contact between researchers and policy-makers, timely access to good-quality and relevant research evidence, inclusion of policy implications in summaries of research, and capacity-building initiatives in EIDM strategies for policy-makers (47,52). The concept of EIDM also works to overcome barriers caused by **missing opportunity**, mutual mistrust, and lack of access, resources and managerial support for research use by policy-makers (47,48). At its core, EIDM is the result of successful KT strategies to bridge the evidence-to-policy and -implementation gap, utilizing strategies to facilitate evidence uptake and overcoming known barriers.

Fig. 1.2. Factors facilitating evidence-informed decision-making and research uptake

Organizational resources	Policy-maker and practitioner characteristics	Research and researcher characteristics	Policy characteristics	Contact and relationship between research producers and users
<ul style="list-style-type: none"> material and human resources long-term planning, including risk mitigation strategies availability of, access to and dissemination of research practical managerial support and commitment 	<ul style="list-style-type: none"> research awareness and skills support and commitment beliefs, personal experiences, and values regarding research 	<ul style="list-style-type: none"> timely, clear, high-quality multi-disciplinary research policy-/practice-relevant research user-friendly formats good understanding of policy processes and context 	<ul style="list-style-type: none"> legal mandate or guidelines/policy statement promoting EIDM complexity of the policy-making, including political influences 	<ul style="list-style-type: none"> collaboration and co-production timing and opportunity of research-to-policy processes learning about different cultures, languages, processes and practices in research and policy mutual trust and respect

Source: adapted from Oliver et al. 2014 (48).

How can knowledge translation help to close the research-to-policy gap?

Strategies to improve the use of evidence to inform policy and practice can be summarized as KT approaches and are a key tool in EIDM (4). By the definition given by WHO, *knowledge translation* is the “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” (53).

There are different models conceptualizing how evidence translates into change at policy level and in programme implementation. *Knowledge-driven* models, predominantly rooted in the natural sciences, assume that basic and applied research directly leads to the development of new technologies, which implement the relevant findings. In this model, the sheer fact that knowledge exists presses it to development and use (54). In a *problem-solving* model of evidence uptake, the assumption is that research is consulted or explicitly commissioned by decision-makers looking for a solution to an imminent policy issue (54).

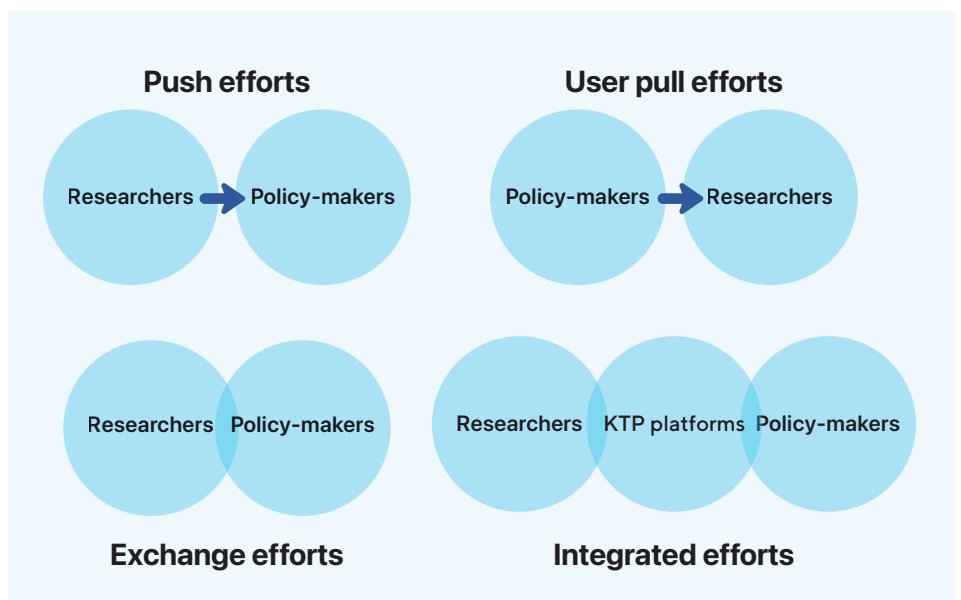
Different concepts of KT then also imply distinct ways of how evidence is applied or used. Knowledge-driven models often assume *instrumental* utilization of research, that is, the direct translation of findings into a decision or intervention (55). Problem-solving models, however, additionally frame the use of evidence as *conceptual* if it changes a stakeholder’s perception or discourse on an issue rather than directly changing a policy, and as *symbolic* or *tactical* if evidence is merely used to legitimize a political position or practice (55,56).

Building on these different models, WHO’s Evidence-Informed Policy Network (EVIPNet) classifies KT efforts into push, user-pull, exchange, and integrated efforts to close the research-to-policy gap (Fig. 1.3) (23).

- **Push efforts** – knowledge producers, i.e. researchers, actively aim to tailor and disseminate key messages from research findings to intended policy-making audiences.
 - user-friendly summaries of systematic reviews or policy briefs.
- **User-pull efforts** – supportive structures that provide decision-makers with the tools to gather knowledge as part of their decision-making process, and that enable policy-makers to request evidence from the research community. These include:
 - online repositories of high-quality, policy-relevant, systematic reviews, evidence syntheses, data monitoring or stakeholder consultations;
 - rapid-response units that form the basis for meeting policy-maker research needs.

- **Exchange efforts** – researchers and policy-makers develop partnerships and collaborative research projects, in which relevant questions are jointly asked and answered, such as
 - deliberative policy dialogues, which are structured face-to-face discussions between decision-makers, stakeholders and researchers to contextualize and interpret research and other evidence based on tacit knowledge and real-world experiences of the parties involved.
- **Integrated efforts** – bringing together various KT strategies classified in previous groups.
 - KT platforms supporting evidence-informed policy-making^a (4,23).

Fig. 1.3. Model for knowledge translation efforts/initiatives



Source: adapted from Lavis et al. 2006 (57).

The systematic use of the best available evidence allows the identification and addressing of context-specific, relevant health issues, and translates into designing and implementing more effective projects, programmes and policies.

How can EIDM help WHO and its Member States?

To reach the Triple Billion targets and health-related Sustainable Development Goals (SDGs), it is crucial to turn the latest and reliable evidence into sustainable policy and effective health programmes (58,59). At its heart, EIDM is a flexible approach that helps WHO and its Member States become more effective, transparent and accountable.

The systematic use of the best available evidence allows the identification and addressing of context-specific, relevant health issues, and translates into designing and implementing more effective projects, programmes and policies. This can be improved by closer collaboration and alignment between the different groups (workstreams) that work with research evidence and data within WHO and at country level (see Table 2.1 in Chapter 2 and the section on

^a KT platforms bring together researchers, policy-makers and other stakeholders in a formalized manner to achieve policy influence. This includes the joint creation, synthesis, dissemination and promotion of the use of knowledge to shape policy and research agendas.

Benefits of EIDM for WHO and Member States

- *Improved design and implementation* of effective projects, programmes and policies;
- *Increased accountability* to Member States and other stakeholders;
- *Better prioritization of research topics and products*;
- *More efficient commissioning* of research and synthesis work;
- *Facilitate the engagement of target audiences* with evidence-informed communication and advocacy campaigns;
- *Support for the development of well-researched funding proposals* and rallying sustainable donor support.

collaboration in Chapter 3). Going beyond developing evidence products to support Member States in the adaptation and adoption of evidence will also contribute to its scaling up and impact.

A culture of regularly accessing, selecting and evaluating evidence will additionally facilitate more targeted commissioning of additional research and evidence synthesis work (15–17). EIDM also supports creating and disseminating compelling, evidence-based communication products and advocacy campaigns with strategic stakeholders (50,60,61).

Finally, EIDM's systematic and transparent use of evidence also increases WHO's accountability to Member States and other stakeholders, and can be further leveraged for well-researched funding proposals to secure additional financial and human resources, and sustainable donor support (62).

Collaboration for EIDM in practice

Driven by data, informed by evidence: WHO's collaborative approach to reaching the Triple Billion targets



Pavel Ursu, Director, WHO Division of Data, Analytics and Delivery for Impact (DDI)

“At the Division of Data, Analytics and Delivery for Impact (DDI), we strive to use data in a systematic and coherent way to drive accelerated delivery of WHO’s Triple Billion targets and the health-related Sustainable Development Goals. Agile monitoring and regular analysis of latest programme- and country-level data are indispensable to prioritizing interventions, course correction and measuring progress. To design tailored health policies and programmes addressing the most pressing health issues and scaling the implementation of policies and programmes, evidence synthesis and stakeholder engagement used in evidence-informed policy-making (EIP) are a seamless fit. Together with WHO’s Evidence-informed Policy Network (EVIPNet), we envisage offering countries comprehensive capacity-building and a complete toolkit to use both the latest data, agile implementation approaches and the best available evidence to identify and tackle health issues with measurable impact.”

Key take-home messages

- EIDM is an approach to integrating the best available evidence into decision-making for improved policy and practice.
- There is a need for better use of evidence in decision-making to improve the effectiveness, efficiency and equity of health policies and interventions; use scarce resources more efficiently; increase transparency and accountability of decisions; and reduce research waste.
- EIDM considers different evidence types from a broad range of sources, including global and local evidence, colloquial and scientific evidence.
- The type of evidence needed for EIDM depends on the question that needs to be answered as well as the methodological quality of the evidence.
- Research evidence often does not directly or automatically inform decisions or policy (instrumental evidence use) but can lead to stakeholders thinking differently about a policy issue (conceptual use) or legitimizing a position or decision (symbolic or tactical use).
- KT approaches can be seen as the practical application of EIDM at country, regional, and global levels in strategically closing the research-to-policy or “know-do gap”.

02

**The evidence
ecosystem**

Focus & learning objectives

This chapter aids readers:

- **to explore the evidence ecosystem and its role in turning evidence into action;**
- **to understand the “evidence ecosystem for impact” framework as a key organizational framework;**
- **to understand and practically apply EIDM using the policy/action cycle and evidence funnel as a guide;**
- **to look into contextual factors of and linkages between evidence creation and evidence application; and**
- **to identify cross-cutting activities and principles in EIDM and KT.**

This chapter presents the concept of the evidence ecosystem and explains the “evidence ecosystem for impact” framework. The framework aims to provide a conceptual structure and common language for the EIDM process, thus promoting a more comprehensive, integrated approach across the Organization and at country level. It serves as a matrix to capture the Organization’s methods and tools linked to promoting better-informed decision-making.

The evidence ecosystem: turning evidence into action

An evidence ecosystem can be defined 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” (6). Health research evidence is produced and taken up in an ecosystem that includes actors from different domains and with diverse agendas. The formulation and adoption of effective policies and programmes depends on a functional evidence ecosystem. The actors that are part of the WHO evidence ecosystem include WHO staff at headquarters, regional and country offices as well as stakeholders, including governments, nongovernment organizations (NGOs), civil society, researchers, and collaborating centres.

The evidence ecosystem can conceptually be divided into two distinct but interconnected domains: evidence creation and evidence application, linked either to policy or practice (63,64). A well-functioning evidence ecosystem with structures, capacity and incentives in place ensures that relevant evidence is available, accessible and used to inform decision-making.

A mix of tools and methods, regular dialogue and in-depth understanding between the actors of the ecosystem will support communities of primary, secondary and tertiary evidence producers and evidence users to work in synergy to enhance the use of research evidence for better decisions – both within WHO and at the country level. This puts WHO and Member countries in a favourable position to achieve the Triple Billion targets and the health-related SDGs.

A framework to improve the global ecosystem for impact

The “evidence ecosystem for impact” framework includes the two domains of evidence creation and evidence application. The *evidence creation* domain is represented by the evidence creation funnel (Fig. 2.1) and the *evidence application* domain by the policy/action cycle (Fig. 2.2), which is based on Graham’s knowledge-to-action cycle (1,63). The evidence funnel is located at the centre of the policy/action cycle and both domains are enveloped by an outer layer representing the context within which decisions are made. Also featured in the “evidence ecosystem for impact” framework (as shown in Fig. 2.2) are two cross-cutting activities (capacity-building, and continuous communication) and six principles (use of systematic and transparent processes, continuous improvement processes, needs-based approaches, inclusiveness, integration, and equity) that will help to ensure the greatest impact on global health and equity.

Ideally, research producers and users work collaboratively through the processes of evidence creation and the policy/action cycle to create linkages and exchange between the two and facilitate research use.

While the phases in both the evidence creation and policy/action cycle domains appear linear, the process of KT is, in reality, rather iterative, complex and dynamic (63). The boundaries between the two domains and their phases are permeable, and phases can, at times, be omitted. For example, primary research can directly inform phases of the policy/action cycle, e.g. to determine the magnitude of the problem, assess barriers to implementation and to evaluate outcomes. Furthermore, the policy/action cycle can be used to generate new evidence (e.g. on barriers and facilitators, public perception, and innovations in implementation), and to change or refine the interpretation of evidence. In addition, evidence gaps can be identified that require further research to meet the needs of policy or practice decisions. Also, the evaluation of policies and actions, their impact and consequences, is a major source of evidence for future decision-making about interventions/solutions.

The terms policy cycle and action cycle are not interchangeable. Both terms are included here to explicitly encompass “macro decisions” (e.g. a new national health policy) and “micro decisions” (e.g. a case management recommendation for a clinician), as well as decisions of health-care organizations (such as a hospital) that operate between the micro level of clinical practice and the macro level of health policy (63, p. 212). With these nuances, the domains in the policy/action cycle help to achieve a better understanding of all of these types of decisions.

Ideally, research producers and users work collaboratively through the processes of *evidence creation* and the *policy/action cycle* to create linkages and exchange between the two and facilitate research use (48). Such a co-production approach allows tailoring of the research questions to the problems identified by users and customization of the evidence products, including choosing the right communication channels to reach specific user audiences.

Among the areas of work that are part of the evidence funnel and used in the policy/action cycle, seven workstreams within the three levels of WHO and at country level have been identified as key in view of providing complementary types of evidence and supports for decision-making (see Table 2.1). Two of these work with existing data (data analytics and modelling initiatives), three with synthesized research evidence (guidelines, HTAs and evidence-informed policy-making support such as EBPs), and two with generation of new research (implementation research and evaluation).

At the WHO level, strengthening relations between the different workstreams help to promote exchange of innovations, experiences and resources for the overall advancement of EIDM. Coordinating efforts help equally at the country

Evidence workstreams

Workstreams can be thought of as areas of work, rather than as necessarily representing a specific department or unit within WHO. They can also be thought of as types of evidence produced that are useful for EIDM. Some of the areas of work/types of evidence produced may be undertaken by more than one department or unit. See Table 2.1 and glossary for definitions of each workstream.

Table 2.1. Different workstreams involved in producing evidence for decision-making

WHO workstreams	Definition ^a	Phase(s) of the EIDM process	WHO headquarters departments working in each area
Data analytics, e.g. health information systems	Systematic analysis of raw data in order to make conclusions about that information	Clarifying problems, and monitoring implementation	Department of Data and Analytics, and Department of Delivery for Impact (Data, Analytics and Delivery for Impact Division)
Guidelines*	Systematically developed statements that recommend a particular course of action with one or more evidence syntheses contributing to the assessment of effectiveness, values and preferences, and other factors	Selecting options, and designing solutions	Quality Norms and Standards Department (Science Division)
Health technology assessment (HTA)*	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	Selecting options, and designing solutions	Health Product Policy and Standards Department (Access to Medicines and Health Products Division)
Evidence-informed policy-making supports, e.g. evidence briefs for policy (EBPs), policy dialogues*	An approach that aims to ensure that policy decision-making is informed by the best available evidence from research	Clarifying problems, selecting options, and identifying implementation considerations	Research for Health Department (Science Division)
Modelling, e.g. economic modelling	Use of mathematical equations and existing data and research to simulate real-world scenarios (i.e. what is likely to happen if we don't intervene) and options (i.e. what happens if we intervene) in a virtual environment	Selecting options, designing solutions	Health Systems Governance and Financing Department (Universal Health Coverage and the Life Course Division)
Implementation/behavioural research	Study of methods to promote the systematic uptake of effective approaches into routine practices at the personal, professional, organization and government levels (implementation research) Systematic examination of what people (citizens and professionals) do, what drives them to do it, and what can sustain or change what they do (behavioural research)	Implementation considerations	TDR, the Special Programme for Research and Training in Tropical Diseases and Alliance for Health Policy and Systems Research (Science Division) Behavioural insights
Evaluation	Systematic assessment of the implementation (monitoring) and impacts (evaluation) of an initiative for the purposes of learning or decision-making	Designing evaluations, and monitoring implementation and evaluating impact	Evaluation Unit, Director-General's Office

Source: adapted from El-Jardali et al. 2018, Lavis et al. 2018, and McMaster Health Forum 2021, exhibit 4.2 (65–67).

* May also rely on existing evidence products (versus evidence products produced de novo).

^a Definitions from the Global Commission on Evidence to Address Societal Challenges (67), exhibit 4.2 with minor modifications. Definition for evidence-informed policy-making supports adapted from EVIPNet Europe 2017 (23).

level, in particular, since these initiatives and programmes, in part, compete for the same limited local resources (financial and technical), in view of the overlap of methods and in the technical knowledge required for the development of many evidence products (69). For instance, the development and adaptation of both guidelines and HTAs require sound technical skills and a good understanding of systematic reviews and economic modelling.

WHO technical products on norms/standards, data and research

Technical products (TPs) are part of WHO's public health goods, relevant to multiple countries to drive impact and the achievement of the GPW13 "Triple Billion" targets. TPs fall into the areas of standards, data and research, innovation and horizon scanning and are developed based on rigorous processes. Examples of TPs include WHO guidelines, WHO guidance on research areas, frameworks, repositories and platforms. The selection phase of TPs takes place prior to every new biennium and is informed by the priorities included in the strategic planning for the programme budget. The related life-cycle consists of five phases: (i) selection, (ii) development, (iii) quality assurance, (iv) implementation, and (v) measurement and monitoring. The Department of Quality, Norms and Standards (QNS), Science Division, serves as focal point for all quality assurance issues. Moreover, QNS is currently working on developing a typology for these types of products and supporting better use of evidence in their development (68).

While optimizing resources, integrating complementary types of support for EIDM is also likely to offer opportunities for the different workstreams to learn from each other to fine-tune their respective products.

While optimizing resources, integrating complementary types of support for EIDM is also likely to offer opportunities for the different workstreams to learn from each other to fine-tune their respective products.

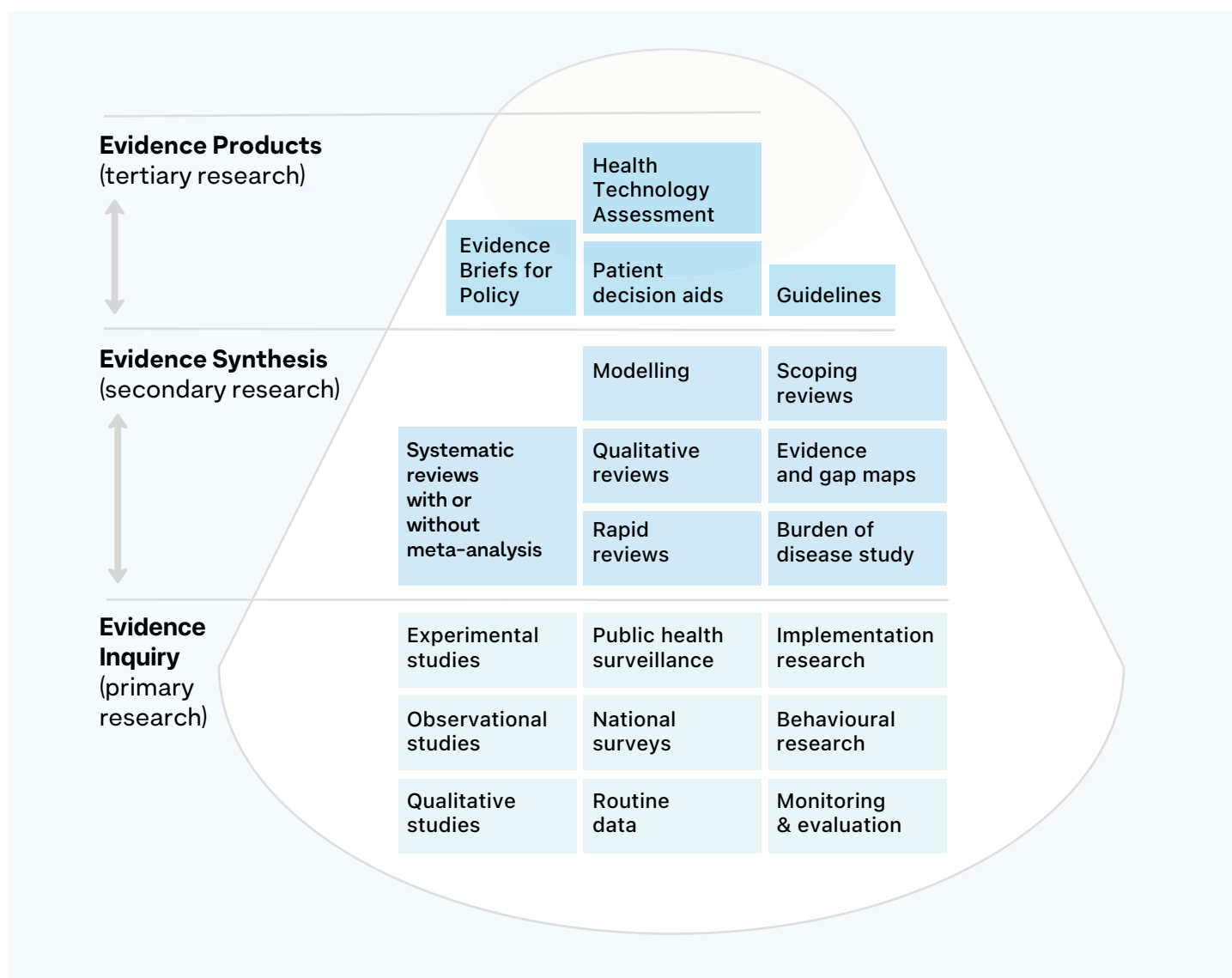
Given the overlap in methods, technical knowledge and resources required, bringing the different workstreams closer together at a national level could, depending on the context, help to optimize resources. One way of doing this is by applying an "integrated multiconcept approach" to create synergistic effects to build national institutional capacity for EIDM (69). For example, in several European countries, HTA agencies have traditionally also been involved in developing clinical practice guidelines (70).

The nascent trend to integrate different and complementary types of support for decision-making could also be further promoted, in particular, in countries embarking on setting up institutional mechanisms in this field. For example, a country embarking on HTA could reconsider establishing separate agencies for HTA, guideline development and evidence-informed policy-making (70). While optimizing resources, this integration is also likely to offer opportunities for the different workstreams to learn from each other to fine-tune their respective products (70,71). For example, the use of policy dialogues to integrate the evidence with the views, experiences, and tacit knowledge of those who will be affected by future decisions may also offer advantages for HTAs (71).

Evidence creation – the evidence funnel

On the evidence production side, there is a range of research products that enhance the systematic and transparent use of evidence. These are captured in the "evidence funnel" (see Fig. 2.1) through which evidence is refined and tailored to the needs of the evidence users.

The *evidence creation* domain consists of the three phases: (i) evidence inquiry (primary research), which feeds into (ii) evidence synthesis (secondary research) and culminates in the creation of (iii) evidence products (tertiary research), which are more user-friendly and help to translate the research into action.

Fig. 2.1. Evidence creation funnel

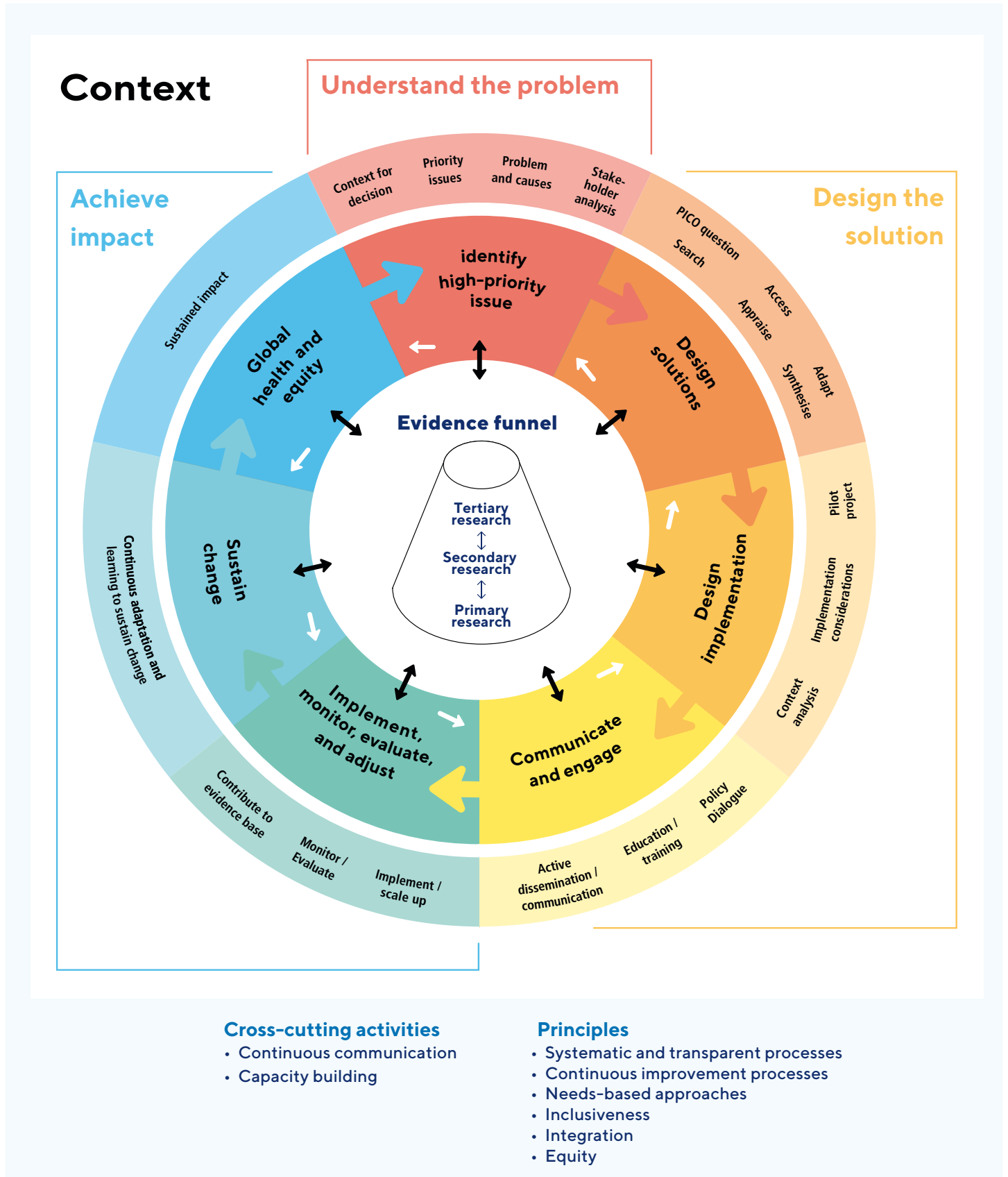
Source: adapted from Reveiz 2020 (72).

While all three phases of evidence creation (primary, secondary, and tertiary) are featured in the funnel, this guidance focuses mostly on their *use* for evidence application as part of the policy/action cycle. However, the *creation* of tertiary research (evidence products such as guidelines and EBPs) is an integral part of EIDM processes and thus features prominently in the policy/action cycle.

Evidence inquiry

Evidence inquiry (primary research) refers to primary studies or health information and represents the majority of research that is conducted worldwide. While these single studies are not best suited to be translated into policy or practice on a broad scale, they do help to determine the magnitude of the problem, assess barriers to implementation, and assess stakeholder views. They are also feed into the larger evidence base (in evidence syntheses

Fig. 2.2. “Evidence ecosystem for impact” framework*



* The framework includes the evidence funnel, the policy/action cycle, context, cross-cutting issues, and principles.

and evidence products), including for assessment of the effectiveness, cost-effectiveness and equity impacts of potential solutions (25,39,73). Primary research is also created as part of the evaluation of implemented solutions. This research is more likely to be used by decision-makers if it addresses important problems, is relevant to the decision-making context, is robust and implementable (50).

Evidence synthesis

Evidence synthesis (secondary research) synthesizes the findings of individual research studies within a larger body of evidence on the topic, based on rigorous, reproducible and transparent methodologies, to determine what is known in a given area or field and whether there are evidence gaps (74,75). Syntheses can use quantitative and/or qualitative methods. The most well-known type of evidence synthesis are systematic reviews (with or without meta-analysis) and rapid reviews of the effect of interventions, programmes or policies (40,76). Resources related to syntheses can be found in Chapter 3 and definitions for each are in the Glossary.

Evidence products

Evidence products (tertiary research) are the most “refined” form of evidence, synthesizing secondary- and, as required, primary research (25,39,77,78). They present the evidence in a concise and user-friendly format tailored to the information needs of the end-users. Frequently, evidence products also provide explicit recommendations, with the aim of guiding stakeholders in their action, and facilitate the application of evidence (39). The development of evidence products requires the involvement of key stakeholders, an interdisciplinary team of professionals, and co-production by researchers and users of the research (79). For those reasons, they are more likely to be translated into policy or action. Evidence products can, for example, be:

- targeted towards the policy cycle:
 - the development of EBPs (25) or
- the conduct of an HTA (78,80) or
 - the production of public health or health system guidelines (39);
- targeted towards the action cycle
 - clinical practice guidelines (39)
 - patient decision aids (81).

In developing evidence products, several steps of the policy/action cycle are usually covered. The overlap in “steps” covered in the development of evidence products with the steps of the policy/action cycle can be seen in Table 3.5, Chapter 3 – for EBPs, guidelines and HTAs. The steps for these three evidence products include the following: identify a high-priority issue and design solutions, and some also include the step design implementation.

Evidence application – the policy/action cycle

On the evidence user side, a range of activities are needed to enhance application of the evidence to achieve the goal of global health and equity. These are captured in the policy/action cycle (see Fig. 2.2) that represents the *evidence application* domain of the “evidence ecosystem for impact” framework. In the evidence application process, research evidence can be used both as an input (as noted in the previous section) and can also be produced as part of the process to help achieve the desired impact. The evidence produced as part of the policy/action cycle can include surveys of stakeholder views (primary research), systematic reviews (secondary research) to inform the development of an evidence product (e.g. a guideline), and the evidence product itself (tertiary research). Further, when an intervention is implemented, the evaluation results can be published to inform future systematic reviews and evidence products.

The steps included in the policy/action cycle are as follows: identify the high-priority issue; design solutions; design implementation; communicate and engage; implement, monitor, evaluate and adjust; and sustain change, with the overarching aim of achieving global health and equity. These stages are similar to those included in the different policy cycle models that represent the idealized process of policy-making (82).

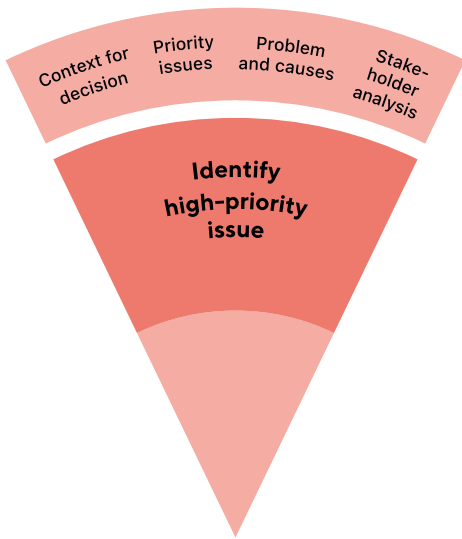
Collaboration for EIDM in practice

Individual focus, mutual benefits: knowledge translation in implementation research



Edward Mberu Kamau,
TDR Technical Officer

“Implementation research and evidence-informed policy-making are two complimentary approaches to achieving a common goal. For evidence-informed policy- and decision-making, multidisciplinary implementation research methods can serve as a tool at several stages of the policy processes, for instance, to identify the root causes of a health issue, assess whether health interventions really reach those in need, or how outcomes can be improved. The interactive knowledge translation processes used in evidence-informed policy-making, in turn, are helpful in tackling some of the technical and political barriers to research uptake and use with policy-makers and implementers. Policy briefs and deliberative dialogues, for example, are promising formats to drive implementation research evidence all the way from study design to rallying support from decision-makers to adjust a health intervention. TDR, the Special Programme for Research and Training in Tropical Disease’s Implementation Research Toolkit therefore also covers stakeholder engagement strategies and communication tools that are part of evidence-informed policy-making strategies.”



Phase 1 – Understand the problem

Identify high-priority issue

Typically, policy development and implementation to achieve impact starts off with identifying and framing a problem that needs attention. Ideally, this step should be preceded by, or accompanied with, a formal priority-setting process (25). The framing of the problem generally includes a clear/concise problem statement, a description of the magnitude of the problem, the consequences of the problem, the factors underlying the problem, and the equity considerations related to the problem (25). The understanding of the problem should be informed by research evidence, the **context** for the decision, equity considerations, and discussion with key stakeholders (e.g. decision-makers, researchers, research commissioners) (5,25,83).

When identifying a high-priority issue, it is fundamental to consider the local **context**. For this, local evidence will be needed. Local evidence is evidence that is available from the specific setting(s) in which a decision or action will be implemented (28). The word “local” can refer to municipality, state or national levels, depending on the intervention or policy issue being considered. The kind of evidence needed includes information on the characteristics of an area and those who live or work in it; the prevalence or baseline risk of the health issue;

Fig. 2.3. Identifying high-priority issues: selected tools and key considerations

Identify high-priority issue				
Sub-Step	Understand the context	Prioritize issues	Identify problems and causes	Stakeholder analysis
Selected Tools	EVIPNet Europe EBP manual, 2.1.4. Brief description and mapping of the policy and political contexts ↗	SUPPORT Tool 3: Setting priorities for supporting EIP ↗	SUPPORT Tool 4: Using research evidence to frame options to address a problem for EIP ↗	EVIPNet Europe EBP manual, 2.1.5. Stakeholder analysis ↗
		SURE Guide 2: Prioritizing topics for policy briefs ↗	SURE Guide 3: Clarifying the problem ↗	
N.B. Consult and access additional tools in the full overview of WHO EIDM tools in Table A2.1 (Annex).				
Key Considerations	<ul style="list-style-type: none"> ➢ The understanding of a health issue should be informed by research evidence, the context for the decision, equity considerations, and discussion with key stakeholders. ➢ To identify a high-priority issue, considering the local context is fundamental. ➢ Stakeholder mapping and analysis should take place early on to identify and engage the user organization(s), change agents and target audiences. 			

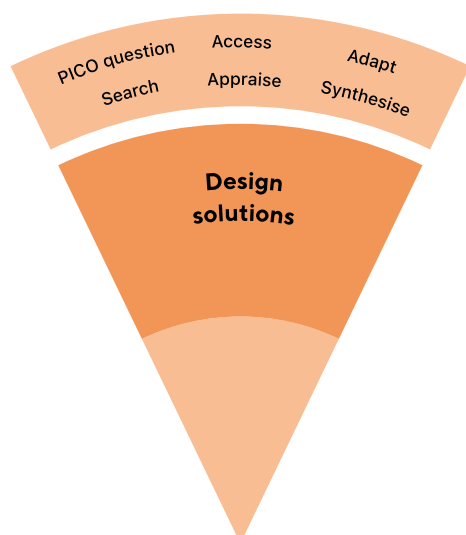
Examples of alternative framing of a scenario relating to antimicrobial resistance (AMR) include (25):

- “unavailability of laws that regulate the use of antibiotics in agriculture and animals” may resonate with NGOs and activists;
- “a rise in the AMR” may resonate with public health professionals;
- “no efforts to educate students on AMR and reasonable antibiotic use in a regular manner” may resonate with parents and stakeholders in the education system;
- comparing the country with other countries may resonate with politicians.

services available; views and experiences of local stakeholders; costs; political traditions; institutional capacity; and the availability of resources such as staff and equipment (28).

Ideally, a **stakeholder mapping and analysis** should take place early on in the process to identify the user organization(s), change agents and target audiences, and to allow for an early involvement of the relevant stakeholders into the evidence application process (25). Stakeholders can include decision-makers and policy-makers, national and international organizations, researchers in the field, civil society groups and other influencers (Fig.2.3).

It is important that the way the problem is framed resonates with the main stakeholder groups/audiences. This does not mean distorting research findings, but presenting the problem in ways that will convince key stakeholders to back change (84). The problem-framing should, for example, avoid so-called “trigger” words and phrases, which could make the issue politically challenging for stakeholders (84). Similarly, some groups will respond better to a positively framed problem (e.g. “Our country will, within five years, achieve the national health goals related to infant mortality.”) than one that is framed negatively (e.g. “Our country has the highest infant mortality rate in the region”), or to a focus on a specific risk factor rather than a disease (83).



Phase 2 – Design the solution

Design solutions

Once the problem is identified and framed as part of phase 1, relevant evidence to address the problem is searched for and critically appraised to determine its validity and usefulness in responding to the problem at hand.

To enable efficient searching of the research evidence, one or more **PICO questions** (population, interventions, comparisons and outcomes)^b will need to be developed to guide the search and inclusion criteria (39). These questions are usually discussed and agreed with key stakeholders. The **search** should start

^b Here, “intervention” is defined very broadly. It can mean anything from a new drug, a diagnostic test or other technology, to complex public health measures, to measures aimed at modifying aspects of the health-care system, to give a few examples.

at the top of the evidence funnel to identify existing evidence products (tertiary research) to address the problem. This approach saves time, human resources and costs, and minimizes the effect of bias because fewer, more synthesized evidence products will be found. If nothing is found, the search proceeds to evidence syntheses (secondary research) and finally to primary research if a new evidence synthesis is needed. The evidence is **accessed** and evaluated to ensure that it meets the inclusion criteria and its quality **appraised**. The evidence is then **synthesized**, which can include both narrative syntheses as well as meta-analysis where appropriate.

Fig. 2.4. Design solutions: selected tools and key considerations

Design Solutions			
Sub-Step	Formulate PICO question	Search evidence	Access evidence
Selected Tools	GRADE Handbook, Chapter 2. Framing the health care question ↗	WHO Handbook for guideline development, Chapter 8. Evidence retrieval and synthesis ↗	SUPPORT Tool 7: Finding systematic reviews ↗
Sub-Step	Appraise evidence	Adapt	Synthesize evidence
Selected Tools	GRADE Handbook, Chapter 5. Quality of evidence ↗	PAHO tool for adapting and implementing guidelines in the Americas ↗	Evidence synthesis for health policy and systems: a methods guide ↗
<i>N.B. Consult and access additional tools in the full overview of WHO EIDM tools in Table A2.1 (Annex).</i>			
Key Considerations	<ul style="list-style-type: none"> ➤ The search for evidence should start at the top of the evidence funnel to identify existing evidence products (tertiary research) to address the problem, then move on to evidence syntheses (secondary research) and finally to primary research if a new evidence synthesis is needed. ➤ In an emergency or to inform local policy decisions, accelerating the systematic review process and fast-tracking knowledge synthesis to enable pressing policy and systems decisions may prove valuable. ➤ When deciding on interventions/options for addressing health problems, information to support decision-making includes the anticipated benefits and harms, impact on health equity, resource implications, cost-effectiveness, acceptability and feasibility. 		

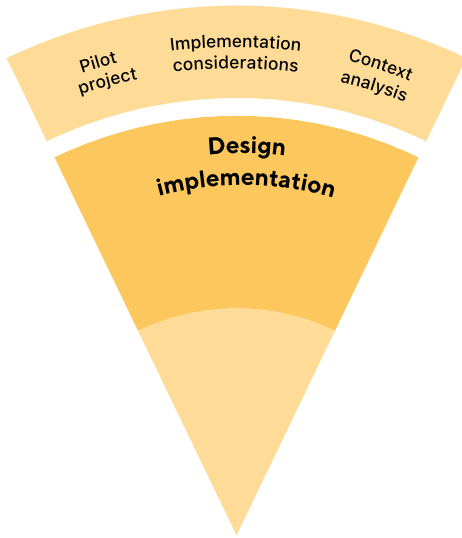
The results of the search and assessment of the evidence will guide the next steps:

1. If an existing evidence product (e.g. guideline) that addresses the problem of interest is identified, it can be assessed for its applicability and transferability (85). If the product is acceptable and recent, e.g. published in the past 2 years, no further work is needed at this step.
2. If an existing evidence product is found, which is not specific to the context or problem of interest or just needs updating, it can be considered for **adaptation**. There are a number of tools available to help. For example, if an international guideline needs to be adapted to the local context to ensure uptake and sustained use, consider the Pan American Health Organization ADAPTE or ADOLOPMENT tools (86–88). A tool also exists for the adaptation of HTAs (89). If adaptation of the evidence product is not appropriate, it still may be possible to use the same systematic reviews as a source of evidence provided that they are up to date.
3. If no useful evidence products are found but recent evidence syntheses (secondary research) are identified, they can be used to develop a new evidence product, provided that they are of sufficient quality (90) and their findings are applicable and transferrable to the problem and context of interest (27,91,92).
4. Finally, if no suitable evidence syntheses are found, there may be a need to conduct or commission a new systematic review or other type of evidence synthesis, but care should be taken to ensure that it is of high quality (90).

In times of emergency and crisis or to inform local policy decisions, accelerating the systematic review process and fast-tracking knowledge synthesis to enable pressing policy and systems decisions may prove valuable (84,93). For example, in emerging disease outbreaks, such as the COVID-19

pandemic, rapid reviews and rapid advice guidelines can provide strategic evidence to allow crucial decisions to be made about health systems responses at both global and local levels (39,84,93). In these situations, some methodological aspects and stakeholder engagement processes may need to be streamlined to ensure timeliness and relevance of evidence. Options for accelerating methodological procedures for rapid evidence synthesis include reducing the scope of the question; limiting the study types, publication dates and language of eligible studies; limiting the number of sources searched; avoiding duplicate selection or analysis of studies and synthesizing narratively rather than quantitatively (93,94). Living reviews is another methodology that can help improve timeliness and quality as they use systematic review quality methods but are frequently updated to ensure that they are also current (95,96).

When deciding on interventions/options for addressing health problems, a variety of information is needed to help decision-makers come to an informed decision, including the anticipated benefits and harms, impact on health equity, resource implications, and cost-effectiveness, acceptability and feasibility (Fig. 2.4) (35).



Design implementation

When considering how to implement an intervention or policy option, it is important to consider the local **context** using the local evidence that was gathered as part of step 1 (Identify high-priority issue). Successful implementation of an intervention/option also requires consideration of any potential **barriers** to (and **facilitators** for) the implementation of the option in the local context. These are known as **implementation considerations**. For example, potential barriers might be individuals (e.g. due to lack of awareness of a programme), health workers (e.g. due to lack of adherence to guidelines) or organizational (e.g. lack of high-level support for the intervention). There may also be facilitators or supports that can be taken advantage of. Implementation considerations can be framed using a series of five questions (97):

An assessment of the barriers to and facilitators for successful implementation of the intervention/option will allow appropriate strategies to be designed to

Fig. 2.5. Design implementation: selected tools and key considerations

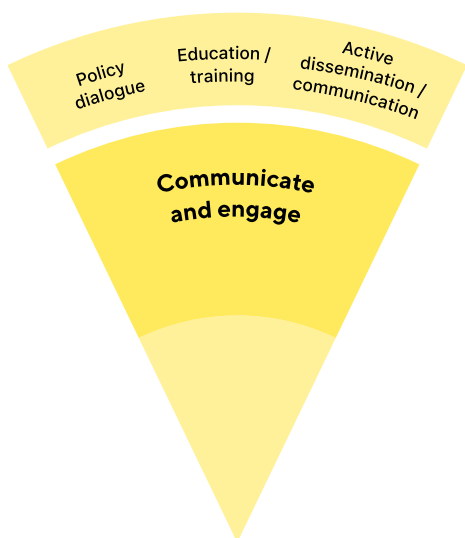
Design Implementation			
Sub-Step	Analyse context	Implementation consideration	Pilot project
Selected Tools	SUPPORT Tool 11: Finding and using evidence about local conditions for EIP ↗	SURE Guide 5: Identifying and addressing barriers to implementing the policy options ↗	ExpandNet “Beginning with the end in mind” tool ↗
	EVIPNet Europe EBP manual: 2.1.4. Brief description and mapping of the policy and political contexts ↗	EVIPNet Europe EBP manual: 2.2.9. How to identify implementation considerations ↗	ExpandNet Practical guidance for scaling up health service innovations ↗
N.B. Consult and access additional tools in the full overview of WHO EIDM tools in Table A2.1 (Annex).			
Key Considerations	<ul style="list-style-type: none"> > When considering how to implement an intervention or policy option, it is important to consider the local context using local evidence. > Potential barriers to and facilitators for the implementation of a policy option need to be considered in the local context. > For novel interventions and where there is little evidence available, a pilot project with a formal evaluation can be considered. 		

Five questions to frame implementation considerations:

1. What are the barriers to implementation?
2. What are the strategies used in planning the implementation of a new policy to facilitate behavioural changes among users?
3. ... and behavioural changes of providers?
4. ... and organizational changes?
5. ... and system changes?

address them. These strategies could include education, linkage and exchange, audit and feedback, informatics, organizational interventions, and financial incentives, among others (63).

For interventions that are implemented for the first time or where there is little evidence available, it is advisable to first conduct or commission a **pilot project** that includes a formal evaluation, which can be performed under the routine operating conditions and existing resource constraints of the health system. This allows testing of how the intervention works in the local context, and develop and evaluate potential implementation strategies (e.g. educational programmes, determine necessary equipment, assess the impact on staffing). If successful, the pilot can be scaled up. Nonetheless, the process should ideally “begin with the end in mind” (98), designing the pilot in ways that enhance its potential for sustainability and future large-scale impact. If the implementation/scaling up of the evidence-informed intervention seems feasible, the organization responsible needs to plan and design the implementation, taking into account the local context and the implementation considerations identified (Fig. 2.5).



Communicate and engage

Potential solutions to high-priority problems, however, will achieve impact only if they are adopted and implemented by policy-makers. This requires a sustained communication and engagement strategy to bring the solution to their attention and to achieve their buy-in and ownership to implement the solution. Passive dissemination of solutions, even when packaged as evidence products (e.g. as a guideline) does not always work (99). Instead, **active dissemination/communication** and **education/training** are more likely to succeed. To effectively communicate, the target audience(s) needs to be identified and analysed to tailor messages and strategically select communication channels to potential users. This can be done by considering the questions of what, to whom, by whom, how, and with what effect should the evidence product be transferred to decision-makers (100).

To foster uptake, the evidence needs to be packaged in user-friendly formats (e.g. media bytes) and strategically distributed to organizations and individuals that help with its application. This often includes advocating with donors to identify seed funding and other sources of funding for financial support to ensure implementation, scaling up and sustainability. It is also important to engage with

the media as they are often interested in EIDM and play an important role in influencing health policy processes and informing the public (101,102).

Key questions for strategic communication

- What is the objective and desired effect of communicating evidence and research findings? (With what aim should research knowledge be transferred?)
- What are the key messages to be communicated to decision-makers?
- Who is the target audience? (To whom should research knowledge be transferred?)
- What is the best format (channel, means and style) to communicate key messages to the target audience? (How should research knowledge be transferred?)
- Who is best placed (credibility, reputation and individual network) to convey and amplify the communication? (By whom should research knowledge be transferred?)

For evidence syntheses and other evidence products to be used, they will need to address the following characteristics:

Characteristics of policy-friendly synthesis

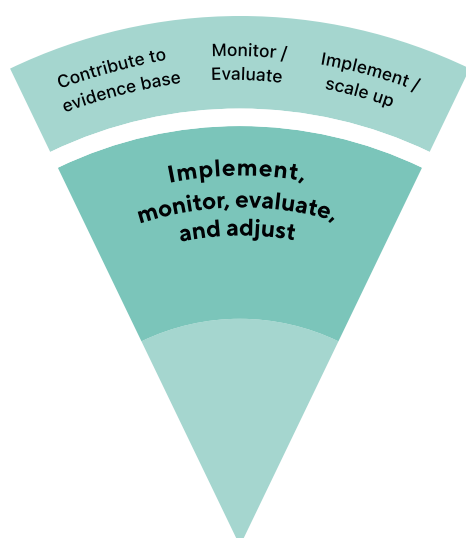
Informed by the best available evidence	Concise
In context	Understandable
Relevant	Objective
Practical	Accessible
Timely	Aesthetic

Source: adapted from Eklund Karlsson, Takahashi 2017 (103).

While linkages and exchange between evidence producers and users are encouraged along the entire evidence creation and policy/action cycle (using different KT approaches), it is particularly useful to convene all stakeholders affected or affecting the issue and deliberate the suggested way forward once the research evidence is available (84). This can take place in the form of a **policy dialogue** (25,104,105) or a citizen panel (102,106). Policy dialogues enable interactions between multidisciplinary and multisectoral stakeholders for the timely identification of the points of intersection between the research evidence, and the values and goals of the policy-makers and stakeholders (25). The active participation and collaboration of stakeholders who can mobilize resources and influence systems to change policies, programmes, and practices is crucial to ensure successful implementation and impact (Fig. 2.6).

Fig. 2.6. Communicate and engage: selected tools and key considerations

Communicate and Engage			
Sub-Step	Active dissemination/ communication	Education/Training	Policy Dialogue
Selected Tools	SUPPORT Tool 15: Engaging the public in evidence-informed policy-making ↗	ExpandNet Nine steps for developing a scaling-up strategy ↗	SUPPORT Tool 14: Organizing policy dialogues for evidence-informed policy-making ↗
	EVIPNet Europe EBP manuals, 2.3.3 & 2.3.4 Advocacy plan, Communication plan ↗	ExpandNet Practical guidance for scaling up health service innovations ↗	EVIPNet Europe Policy dialogue preparation and facilitation checklist ↗
<p><i>N.B. Consult and access additional tools in the full overview of WHO EIDM tools in Table A2.1 (Annex).</i></p>			
Key Considerations	<ul style="list-style-type: none"> > Active dissemination/communication and education/training are more likely to succeed than passive dissemination strategies. > For effective communication, target audiences need to be identified, messaging tailored and communication channels selected strategically. > Policy dialogues or citizen panels offer a forum convening all stakeholders to deliberate suggested ways forward once the research evidence is available. > Active collaboration of stakeholders who can mobilize resources and influence systems to change policies, programmes, and practices facilitates successful implementation and impact. 		



Phase 3 – Achieve impact

Implement, monitor, evaluate and adjust

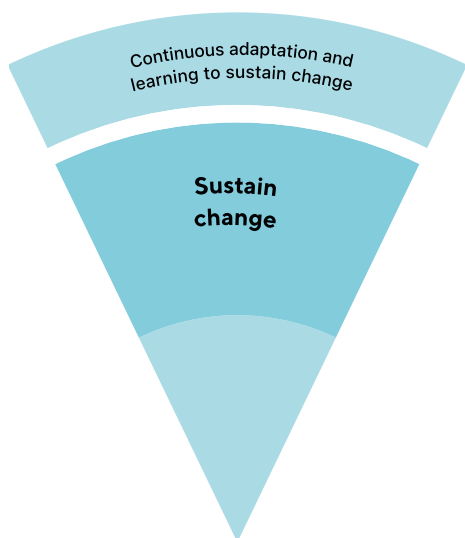
The solution designed as part of phase 2 (Design the solution) will achieve impact only if **implemented** on a large scale and as intended. The concept of **scaling up** is useful here and can be defined as “deliberate efforts to increase the impact of successfully tested health innovations so as to benefit more people and to foster policy and programme development on a lasting basis” (107).

An innovation in this context refers to a new intervention or set of interventions to achieve health impact. Implementation of an intervention requires consideration of its essential components, who will deliver it, with what outcomes and how. In addition, the implementation plan developed at the “design implementation” step should consider the resources for implementation, the need for capacity-building for implementation, and how the intervention can be integrated within the particular setting or organization (108,109).

A **monitoring** and **evaluation** (M&E) plan should be developed and put into action prior to implementation to measure whether the solution has been implemented as planned (**process** evaluation) and is resulting in the expected **outputs, outcomes and impact**. The RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, and Maintenance) is a useful model to guide the evaluation, as it considers the different stages of implementation (reach, adoption, implementation, maintenance) and multilevel (individual, setting) indicators (108,110). The M&E plan should consider indicators related to equity and cost. M&E allows early identification of problems and facilitates **adjustments** to be made to improve performance. The results of the evaluation can be disseminated/published to **contribute to the evidence base** and help others who are designing and implementing similar solutions (Fig. 2.7).

Fig. 2.7. Implement, monitor, evaluate, and adjust: selected tools and key considerations

Implement, monitor, evaluate, and adjust			
Sub-Step	Implement & scale-up	Monitor & evaluate process, outcomes and impact	Disseminate & contribute to the evidence base
Selected Tools	ExpandNet Nine steps for developing a scaling-up strategy ↗	SUPPORT Tool 18: Planning monitoring and evaluation of policies ↗	WHO evaluation practice handbook, Chapter 6. Communication, utilization and follow up of evaluation results ↗
	PAHO tool for adapting and implementing guidelines in the Americas, Chapter 3. Implementation of guidelines ↗	Implementation research (IR) toolkit, Developing an IR proposal ↗	Implementation research (IR) toolkit, IR-related communication and advocacy ↗
N.B. Consult and access additional tools in the full overview of WHO EIDM tools in Table A2.1 (Annex).			
Key Considerations	<ul style="list-style-type: none"> ➤ Solutions will achieve impact only if implemented on a large scale and as intended; they need to be scaled up. ➤ A monitoring and evaluation (M&E) plan should be developed prior to implementation to measure whether the solution has been implemented as planned (process evaluation) and is resulting in the expected outputs, outcomes and impact. ➤ The results of the evaluation can be disseminated/published to contribute to the evidence base. 		



In EIDM, sustainability describes to what extent an evidence-based intervention can deliver its intended benefits over an extended period of time after external support from the donor agency is terminated.

Sustain change

In EIDM, sustainability “describes to what extent an evidence-based intervention can deliver its intended benefits over an extended period of time after external support from the donor agency is terminated” (108). Sustainability is achieved when there is maintenance of the programme’s initial health benefits, integration of the intervention within the culture of the setting or community in which it is implemented (institutionalization) and a focus on capacity-building to ensure continued delivery of the intervention (108,109). Achieving sustainability also requires a continuing alliance of stakeholders.

Planning for sustainability is an essential component of implementation and should begin before the programme is implemented, ideally at the “design implementation” step (107). While research in the area of sustainability is limited (111), sustainability has been conceptualized as a dynamic process that involves continued learning and problem-solving, and ongoing adaptation of interventions (112). If interventions are adapted to improve the fit of the intervention within the multilevel contexts (including the practice setting and the system within which it sits), ongoing improvement as opposed to diminishing outcomes over time^c can be expected (112). However, achieving optimal fit requires consistent tracking of the characteristics of the intervention, practice setting and ecological system using valid, reliable and relevant measures.

Ideally, the M&E plan developed as part of the previous step incorporates consideration of longer-term monitoring to support the process of ongoing adaptation and achievement of optimal fit of the intervention. Further, results of the evaluation of this adjustment process should be disseminated to contribute to the evidence base for achieving sustainability.

Sustainability of interventions requires a “learning organization” that uses rapid-learning cycles to allow adaptation of evidence-based interventions followed by ongoing assessment and feedback loops (65,111,113). The characteristics of a learning health system include the following:

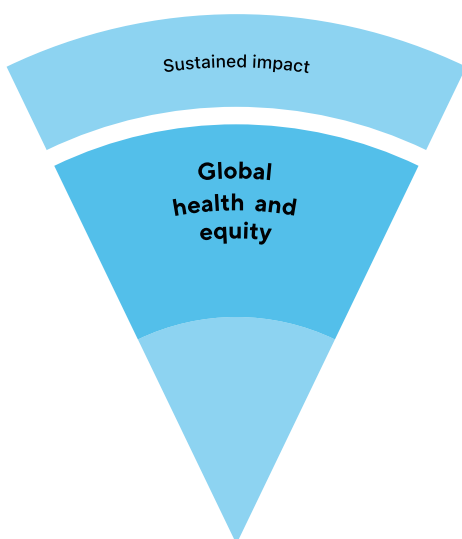
- it is data- and evidence driven (the system captures, links and shares relevant data and produces timely research evidence);
- it has the appropriate system supports (the system supports informed decision-making at all levels with appropriate data, evidence and decision-making frameworks);
- it promotes a culture and the acquisition of competencies for rapid learning and improvement (e.g. data and research literacy, co-design, scaling up, leadership) (112).

This kind of system collects data as a basis for generating new evidence, which is then transferred into practice for implementation. Data generated from practice as well as experience from implementation are again fed back into the learning cycle to change or refine policies and practice (Fig. 2.8) (114).

^c Diminishing impact of interventions can result from the implementation in “real-life” conditions and due to deviations from manualized protocols over time.

Fig. 2.8. Sustain change: selected tools and key considerations

Sustain change	
Sub-Step	Continuous adaptation and learning to sustain change
Selected Tools	Implementation research (IR) toolkit, Integrating IR into health systems ↗
	ExpandNet Nine steps for developing a scaling-up strategy ↗
	<i>N.B. Consult and access additional tools in the full overview of WHO EIDM tools in Table A2.1 (Annex).</i>
Key Considerations	<ul style="list-style-type: none"> > Planning for sustainability is an essential component of implementation and should begin before the programme is implemented, ideally at the design implementation step. > Sustainability of interventions require a “learning organization” that uses rapid-learning cycles to allow adaptation of evidence-based interventions followed by ongoing assessment and feedback loops.



Global health and equity

Achieving an impact on global health and equity is the ultimate aim of better use of research evidence in health decision-making. The WHO policy strategy to achieve impact, outlined in WHO’s Thirteenth General Programme of Work, 2019–2023 (GPW13), are the Triple Billion targets, an ambitious initiative to improve the health of billions of people by 2023 (2), with the goals of:

- 1 billion more people benefiting from UHC;
- 1 billion more people better protected from health emergencies;
- 1 billion more people enjoying better health and well-being.

The Triple Billion targets act as both a measurement and a policy strategy. The results framework includes 46 indicators, the Triple Billion targets, and healthy life expectancy (HALE) to quantify expected years of life in good health as a measure of the overall health of populations (58,59). Measurement of the targets is aligned with those of the SDGs to streamline data collection and implementation efforts, and accelerate progress towards achieving key targets (59).

Impact measurement includes a cross-cutting commitment to improving equity in health (59). Health equity is defined as the absence of unfair and avoidable differences in health (115). Monitoring health inequalities, i.e. observable differences in health, is essential for achieving health equity. It allows the identification of vulnerable groups at risk of being left behind and provides evidence for equity-oriented decision-making to close existing gaps (59). Vulnerable groups can be identified using the PROGRESS-Plus tool (116,117). Further, incorporation of equity considerations at all levels of the evidence creation funnel and policy/action cycle will be fundamental to the achievement of health equity (118,119).

The Triple Billion targets focus on the execution and delivery of significant improvements in the health of the world's population through evidence-based interventions, strengthened health information systems, and support for transformational public health policy (2).

Connecting evidence creation with evidence application

Although both domains of the “evidence ecosystem for impact” framework are described separately, they are closely interlinked. At each stage of evidence creation, it is desirable that evidence producers use communication, dissemination and engagement strategies tailored to the potential users of the evidence (120). In the same way, at each stage of the policy/action cycle, different types of evidence may prove useful and some types of evidence could additionally be created. The linkages between evidence creation and application can be conceptualized as the different KT approaches described in the literature (and previously mentioned in Chapter 1) (23,121).

Context

Because political and institutional context is a key factor affecting the interface between research and policy (122), the policy/action cycle (with the evidence funnel at the centre) is “enveloped” in an outer layer generically called context. Context is the complex environment that influences how policy decisions take place and how diverse stakeholders interact to make those decisions. Based on a recent systematic review of studies that defined and assessed context, Rogers and colleagues (123) developed the following definition: “Context is defined as a multi-dimensional construct encompassing micro, meso and macro level determinants that are pre-existing, dynamic and emergent throughout the implementation process. These factors are inextricably intertwined, incorporating multi-level concepts such as culture, leadership and the availability of resources.” Although there are a number of ways in which context can be conceptualized, there is agreement in its multidimensionality (124).

Cross-cutting activities

To effectively implement the stages of the framework and strengthen the interconnections between them, two cross-cutting activities are of vital importance.

Capacity-building

In order for research findings to be integrated into policy-making and implementation, a minimum level of capacity is needed at the individual, organizational and institutional/system level.

Individual capacity: there is a need to strengthen the capacity of evidence users to understand EIDM, obtain evidence, interrogate evidence, use and apply evidence in policy-making, engage with stakeholders in formulating evidence-informed policy, and monitor and evaluate the success of EIDM (125). Likewise, evidence producers should strengthen their skills in understanding policy and science, synthesizing research, managing expert communities, communicating scientific knowledge, advising policy-makers, engaging with citizens and stakeholders, and in M&E (126). Some strategies to increase capacity at the individual level include tailored interactive workshops supported by goal-focused mentoring and activities promoting cross-sector collaboration (127).

Organizational capacity: a number of factors at the organizational level have been identified as critical for building capacity for EIDM (128). Organizations should start with a self-assessment of their capacity (using validated tools such as the one developed by the Canadian Health Services Research Foundation [CHSRF] (129)) followed by the design of strategies aimed at strengthening organizational enablers and overcoming barriers. An example of a strategy at this level is fostering an organizational culture that supports research and learning, training and mentoring for EIDM, and creating interdisciplinary working groups to promote the integration and application of research and research evidence in decision-making and practice (128).

Institutional/systems capacity: at this level, strengthening capacity is more complex, as it usually entails long-term initiatives that go beyond any specific organization. However, initiatives can be based on experiences from countries already engaged in building capacity for promoting better use of evidence in policy-making (52). Examples of strategies at this level include the establishment of new organizational mechanisms to support the use of evidence, such as the experience of the National Institute for Health and Care Excellence (NICE) in the UK or the REACH Initiative in East Africa (130).

Continuous communication

Communication, interactions and collaboration between the different stakeholders involved in the process of EIDM is one of the factors that has been

repeatedly mentioned as a facilitator of the use of evidence (48). Therefore, it is important to strengthen continuous, strategic communication throughout the EIDM process, not only to keep stakeholders informed but also to build relationships, trust and mutual respect among them, as well as promote a culture more favourable to EIDM. Although the role of informal, unplanned contact should be recognized, the establishment of regular virtual meetings and efficient communication channels such as email or personal communication can be useful to keep all the relevant stakeholders connected (131).

Principles

There are a number of principles that are not explicitly included in the framework but that are implicit to the work of WHO in this field. As a UN organization, WHO is committed to promote health as a human right and to uphold internationally agreed ethical norms and standards as part of its core function (132,133). Two other principles have already been presented in other sections of this guide: (i) use of systematic and transparent processes (mentioned in Chapter 1), and (ii) continuous improvement processes (covered as part of the sustain and system change stage of the policy/action cycle in this chapter). Other principles that are important to this framework are presented here, including needs-based approaches, inclusiveness, integration and equity.

Needs-based approaches

Every stage of the framework (both in evidence creation and application) should consider the needs of the target audience at the national or local level. The policy and political context, the resources and other on-the-ground realities of the countries where evidence will be used should be considered when developing specific evidence products or when designing a solution and measuring its impact across the policy/action cycle. This need-based approach will allow the use of evidence by target audiences for improving their health system and the health of their populations.

Inclusive approaches

The perspectives of diverse stakeholders – both in the health sector and in other sectors such as social policy and education – should be incorporated when using the framework to develop evidence products and strategies. This diversity is not only related to the type of evidence used to address diverse types of questions (134) but also to the views of different professions regarding the use of evidence (135) and to the contribution of evidence from other fields to the understanding of problems and the design and implementation of solutions (136). This multisector/disciplinary collaboration not only has an instrumental value but also contributes to the empowerment of sectors/disciplines often not adequately considered in health policy-making processes.

Integration

The “evidence ecosystem for impact” framework” is conceived as a roadmap for any initiative aimed at promoting the use of evidence in decision-making processes. In that sense, it could be seen as a tool for integrating the work of different departments (workstreams) within WHO (at the three levels of the Organization) and at country level allowing more efficient use of resources and the creation of synergistic effects in institutional capacity for EIDM (69,130). Likewise, this integration would help to promote exchange of innovations, methods, experiences and resources for the overall advancement of the field. This can include the establishment of partnerships both within WHO and with other organizations (e.g. evidence producers such as Cochrane and Campbell) in order to benefit from their complementary roles to achieve comparative advantages in the production and use of evidence.

The integration principle is also connected to a “system-thinking” approach to the understanding of health systems and how evidence “flows” through the system (137). This approach places a high value on understanding the contextual elements of any health system and the connections between its components, actors and processes. It also makes deliberate attempts to anticipate the

Collaboration for EIDM in practice

Evidence synthesis, Evidence-to-Decision framework development, and economic evaluation teaming up at the Ministry of Health, Chile



Carolina Castillo Ibarra, Unidad de Políticas en Salud Informadas por Evidencia, Ministry of Health, Chile

“At the Department of Health Technology Assessment and Evidence-based Healthcare of the Ministry of Health in Chile, our Evidence-Informed Health Policies Unit works side by side with two partner units. While our unit conducts rapid evidence synthesis and deliberative processes for health policies, public health and health system interventions, the Clinical Evidence Unit specializes in clinical evidence syntheses and practice guidelines. Our colleagues in the Economic Evaluation Unit are experts in health economics, cost-effectiveness and budget impact analysis. By joining forces, we can apply our combined expertise to different health issues and cover a wide spectrum of complementary evidence-informed decision-making skills. In 2021, for example, we supported Chile’s national programme on nutritional preventive and recovery support for children, with evidence-informed recommendations for the reformulation of a dairy product. Following our rapid evidence synthesis, we developed a GRADE Evidence-to-Decision process, for which the Clinical Evidence Unit provided methodological support, and the Economic Evaluation Unit contributed a cost-effectiveness analysis. Through our collaboration, we were not only able to deliver a well-reasoned set of recommendations, but additionally strengthened the role and reputation of evidence-informed decision-making in our department and ministry.”

consequences of changes in the system (such as in the policy/action cycle) and to identify opportunities for leveraging such changes, despite the difficulties in predicting and controlling processes in the complex environment in which KT efforts are operating. However, this is the essence of a learning health system that is able to learn through rapid feedback loops integrated in cyclical processes (114).


Equity

The framework includes a commitment to improve equity in health as an impact measurement. However, equity should also be considered at each stage of the evidence creation and application domains. In order to have the information needed to make judgements about equity, producers of primary and secondary research should consider reporting their results following guidelines such as CONSORT-Equity and PRISMA-Equity (138,139). In the same vein, evidence products such as guidelines or EBPs should include equity considerations in their development (140). Through the policy/action cycle, issues regarding the consequences of different solutions and implementation strategies on disadvantaged populations should be highlighted and the use of specific equity-oriented frameworks should be promoted (141).

Key take-home messages

- The “evidence ecosystem for impact” framework provides a roadmap for EIDM.
- The “evidence ecosystem for impact” framework includes the two interlinked domains of evidence creation and evidence application.
- The evidence creation domain – represented by the evidence funnel – consists of three phases: (i) evidence inquiry (primary research), which feeds into (ii) evidence synthesis (secondary research) and culminates in the creation of (iii) evidence products (tertiary research), which are more user-friendly and help to translate the research into action.
- The evidence application domain – represented by the policy/action cycle – encompasses three main phases: (i) understand the problem; (ii) design the solution; and (iii) achieve impact.
- To ensure the greatest impact, cross-cutting activities are required in capacity-building at different levels, and continuous communication.
- The principles that are implicit to the work of WHO in improving EIDM include the use of systematic and transparent processes, continuous improvement processes, needs-based approaches, inclusiveness, integration and equity.

03

A close-up photograph of a person's hands holding a white measuring tape. The tape is stretched across the frame, showing measurements in centimeters. The background is a solid, muted grey color. The text is overlaid on the right side of the image.

The EIDM toolbox: tools, evidence types, evidence sources and key forms of collaboration

Focus & learning objectives

This chapter aids readers:

- **to decide which type of evidence to use in a specific scenario;**
- **to assess and decide on reliable sources of the best available evidence;**
- **to select EIDM tools along the policy/ action cycle; and**
- **to launch collaborative efforts supporting EIDM.**

Which evidence to use when?

EIDM relies on using the best available evidence (142,143), which, in turn, depends on both the question that needs answering, the best study design for the question, the quality of the evidence, and the context for the decision (see Chapter 1 and Table 1.1 for further guidance on choosing between the different types of research evidence). For example, questions asking “what works” are best answered by systematic reviews of experimental designs. For questions related to understanding “how an intervention works or fails to work”, a mix of qualitative and quantitative designs are needed.

At the same time, the context of the question at hand will influence which type of evidence is needed. For example, when determining local priorities or the acceptability of a policy option in the specific context, local evidence is needed. To determine if an intervention works across settings, suiTable evidence includes national, regional or global research – here, systematic reviews of intervention studies will prove most useful.

Table 3.1 shows the sources of evidence often used for different questions linked to both the policy/action cycle and the evidence funnel. It lists sources of existing research evidence and mostly includes primary and secondary research. However, in the process of applying the steps of the policy/action cycle, evidence will also be created – including primary, secondary and tertiary research.

Table 3.1. Sources of evidence for different questions related to the policy/action cycle and evidence funnel

Steps of the policy/action cycle	Main question	Sources of research evidence	Levels of the evidence funnel
Identify high-priority issue	What are the main priority issues/problems for decision-making?	<ul style="list-style-type: none"> Household and facility surveys^a Surveillance studies^b Routine health information^c Burden of disease studies^d Qualitative studies Systematic reviews of prevalence, incidence, causes and qualitative studies 	Primary research Primary research Primary research Secondary research Primary research Secondary research
Design solutions	What can be done (potential policy interventions and their safety and effectiveness)? How large are the anticipated benefits and harms?	<ul style="list-style-type: none"> Systematic reviews of intervention studies Intervention studies Adverse event registers (for safety) 	Secondary research Primary research Primary research
	Are the policy options cost effective?	<ul style="list-style-type: none"> Systematic reviews of economic evaluations (include cost-benefit, cost-utility and cost-effectiveness studies) Economic evaluations Economic modelling 	Secondary research Primary research Secondary research

Steps of the policy/action cycle	Main question	Sources of research evidence	Levels of the evidence funnel
	What are the impacts on gender, health equity and human rights?	<ul style="list-style-type: none"> • Systematic reviews of intervention effectiveness that include these outcomes • Qualitative evidence synthesis • Intervention studies that include these outcomes • Qualitative studies 	Secondary research Secondary research Primary research Primary research
	How feasible are the policy options in the local context (sustainability, affordability, and acceptability)?	<ul style="list-style-type: none"> • Systematic reviews assessing the effects of the interventions may describe these factors • Systematic reviews of qualitative studies • Economic modelling and cost analyses (for affordability) • Qualitative studies • Process evaluations • User and provider surveys 	Secondary research Secondary research Secondary/primary research Primary research Primary research Primary research
Design implementation	What are the barriers to implementation? What implementation strategies might be needed?	<ul style="list-style-type: none"> • Systematic reviews assessing the effects of the chosen intervention may describe barriers to implementation • Systematic reviews assessing the effects of intervention strategies • Systematic reviews of qualitative studies on barriers to implementation • Implementation research (focusing on how well interventions could work given particular conditions) • Qualitative studies • User and provider surveys 	Secondary research Secondary research Secondary/primary research Primary research Primary research Primary research
Communicate and engage	What communication and engagement strategies might work for this intervention in this context?	<ul style="list-style-type: none"> • Systematic reviews of communication, dissemination and engagement strategies • Intervention studies • Qualitative studies 	Secondary research Primary research Primary research
Implement, monitor, evaluate and adjust		<i>Not applicable^e</i>	
Sustain and system change	What works to sustain change with this type of intervention and in this context?	<ul style="list-style-type: none"> • Systematic reviews of interventions to sustain change • Intervention studies • Qualitative studies 	Secondary research Primary research Primary research

Source: adapted from WHO Regional Office for the Eastern Mediterranean 2019 (69).

^a Household and facility surveys are a source of descriptive data about a population or health facilities. Household surveys can be used to collect a variety of information, including sociodemographic, health behaviours and health outcomes. Facility surveys can collect information such as inputs, processes of care, outputs like service utilization, and sometimes health outcomes at health facility level.

^b Surveillance studies or systems require the systematic and continuous collection, analysis, and interpretation of data, such as information about cases of notifiable diseases, and of the adverse effects of pharmaceuticals.

^c Routine health information includes data from vital registration systems, such as births and deaths, causes of death, hospital admission records, and outpatient visit records.

^d Burden of disease studies use existing data and research to assess mortality and disability from major diseases, injuries, and risk factors using the metric of the disability-adjusted life year (DALY). This metric allows comparisons between different diseases, injuries, and risk factors.

^e This step requires the creation of evidence (primary research). There is unlikely to be pre-existing evidence that will help, although the analysis of national surveys and routine health information may prove useful. Also, previous research can help to inform the methods and indicators used.

How do I deal with insufficient research evidence?

At times, policy, programme or practice decisions need to be made even when there is insufficient research evidence available on possible impacts. For EIDM, the best available research evidence should always be used, and a thorough search for available research conducted. In the absence of a systematic review about the impact of a policy option, a rapid review of the evidence (144–146) should be considered. If a rapid review is conducted, a full systematic review should be considered at a later date.

In the absence of a systematic review or rapid review of effectiveness, primary studies can be consulted. If none are available, it may be appropriate to draw on other types of evidence, such as indirect evidence^d and, as a last resort, tacit (colloquial) knowledge (see Chapter 1) (19,21). Participatory processes that involve stakeholders, such as those used for the development of recommendations within guidelines, can help to ensure due process (147–149), but the uncertainty in the decision should nonetheless be acknowledged (19,26). When decisions are made based on insufficient research evidence, a well-designed evaluation (of process, outcomes and impacts) is necessary, for example in the form of a pilot study prior to fully rolling out the policy or programme (144,150).

Often, decision-makers will face individuals or groups bringing forward various types of evidence and other information to address a specific problem. Fig. 3.1 provides an overview of the evidence types commonly considered in policy decision-making, which may be presented to decision-makers in ways that place more visibility on some types than on others (e.g., data analytics, modeling and evaluation), even when other types may be more appropriate for answering the most pressing questions at a given point in the policy-making process (i.e., a systematic review of effectiveness studies to provide information about which options are best) (see also column 2 in exhibit 4.8, and exhibit 4.13 (67)). The best evidence – in the form of evidence synthesis combined with high-quality local studies – should be distinguished from other evidence types and additional information such as tacit knowledge including expert opinions or panels, jurisdictional scans (exhibit 4.8 (67)), or outputs from citizens' panels. Nonetheless, these additional forms of evidence often offer value and can be used complementarily (see columns 3 and 4 in exhibit 4.8 (67), and Fig. 3.1).

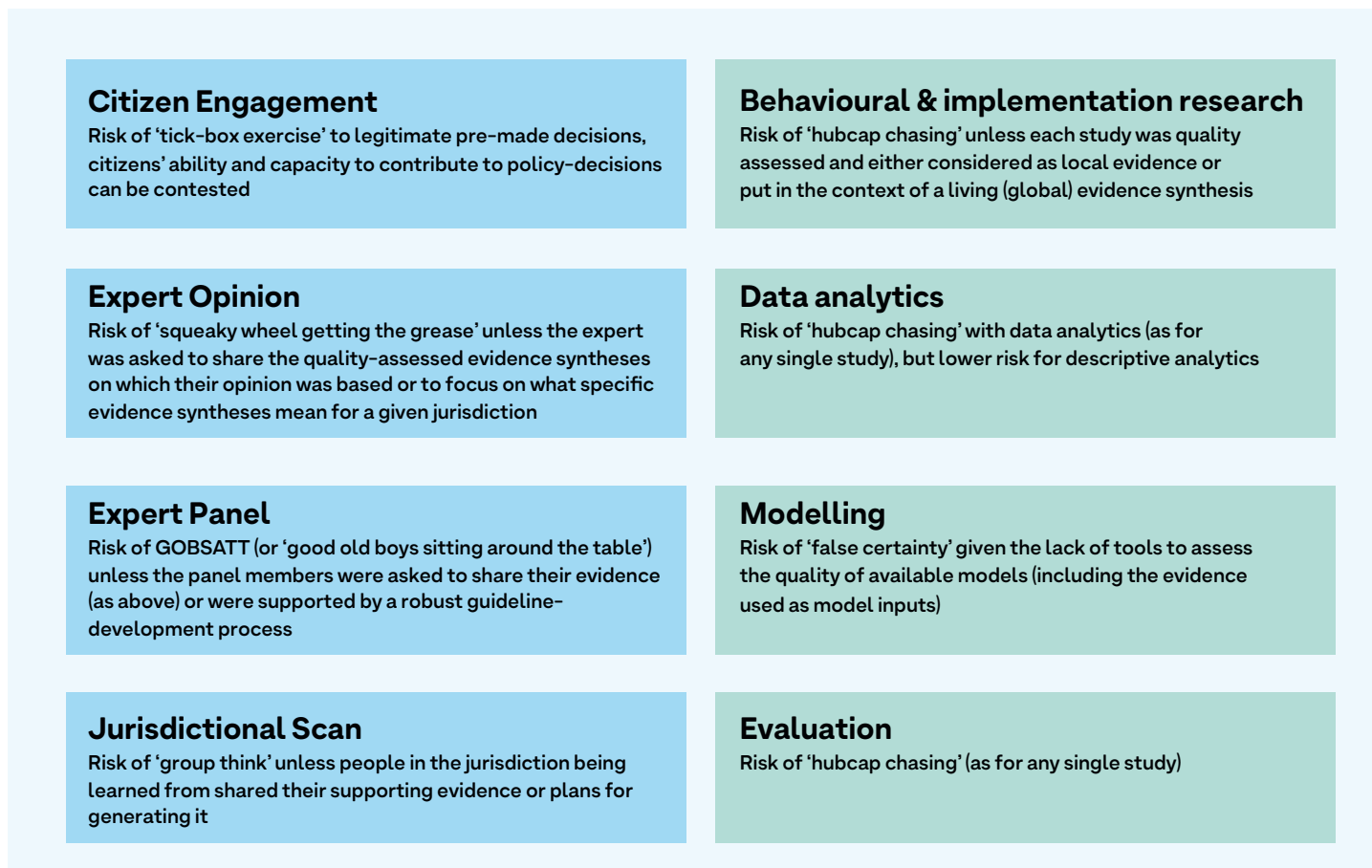
Where to find the best evidence?

I have limited time to search for and appraise evidence. Where do I start?

When searching for research evidence to answer questions along the policy/ action cycle, both efficiency in searching and the quality of the evidence found need to be considered. Table 3.2 includes sources of primary and secondary

^d Indirect research evidence is obtained from other related or similar situations (for example, information on severe acute respiratory syndrome [SARS] and Middle East respiratory syndrome [MERS] was used to inform guidance in the COVID-19 pandemic).

Fig. 3.1. Risks associated with prioritizing information (left column) other than best evidence, or prioritizing particular types of evidence over others in decision-making processes (right column).



Source: adapted from the McMaster Health Forum 2021 (67).

research evidence vetted for both criteria. Check footnotes to the table to determine which sources include a quality assessment. Table 3.3 includes sources of data (primary research) that will also help with the identification of a high-priority issue and in the M&E of interventions. Table 3.4 details sources of evidence products (tertiary research).

Being efficient in searching saves time and can be facilitated by searching for more synthesized evidence, for instance, by focusing on evidence products such as guidelines and EBPs or evidence syntheses such as systematic reviews. Searching for primary studies requires more time, skills and experience, and should generally be considered only for filling gaps when no synthesized evidence is available.

It is important to always aim for the highest-quality evidence available. Tools are available to help in the assessment of different types of research evidence, including evidence products, syntheses and primary studies – see Table 3.6 later in this chapter. There are also some evidence sources known for their high quality standards (for instance, the Cochrane Database of Systematic Reviews) or that include an expert assessment of quality (such as Health Systems Evidence).

Table 3.2. Recommended sources of the best research evidence for different questions related to the policy/action cycle

Steps of the policy/ action cycle	Main question	Sources of research evidence
Identify high-priority issue	What is the problem?*	<ul style="list-style-type: none"> Burden of disease data: http://www.healthdata.org/results/country-profiles PubMed:^a https://pubmed.ncbi.nlm.nih.gov/ EVID@Easy:^b https://bvsalud.org/evideasy/en/ National surveys, routine health information, and national censuses
Design solutions	What can be done and how large are the anticipated benefits and harms?	<p>Systematic reviews of intervention studies</p> <ul style="list-style-type: none"> Cochrane Database of Systematic Reviews^c (for clinical and public health interventions): https://www.cochranelibrary.com/cdsr/reviews ACCESSSS (for clinical interventions): https://www.accessss.org/ Health systems evidence^d (for health system issues): https://www.healthsystemsevidence.org/ Health evidence^d (for public health interventions): https://www.healthevidence.org/ Social systems evidence^d (for social interventions): https://www.socialsystemsevidence.org/ Epistemonikos^e (for clinical and health policy questions): https://www.epistemonikos.org/en/
	Are they cost effective?	<p>Systematic reviews of economic evaluations</p> <ul style="list-style-type: none"> Health systems evidence^d (for health system issues): https://www.healthsystemsevidence.org/ Health evidence^d (for public health interventions): https://www.healthevidence.org/ Epistemonikos^e (for clinical and health policy questions): https://www.epistemonikos.org/en/ <p>Economic evaluations</p> <ul style="list-style-type: none"> Pediatric Economic Database Evaluation (for health decision-making for children <19 years):^f http://pede.ccb.sickkids.ca/pede/search.jsp NHS Economic Evaluation Database (NHS EED)^g (health and social care interventions): https://www.crd.york.ac.uk/CRDWeb/HomePage.asp Health systems evidence^d (for health system issues) – select document type: “Economic evaluations and costing studies”: https://www.healthsystemsevidence.org/ PubMed (use the costs or economics hedges in footnote a):^a https://pubmed.ncbi.nlm.nih.gov/
	What are the impacts on gender, health equity and human rights?	<ul style="list-style-type: none"> Systematic reviews of intervention effectiveness that include these outcomes – see systematic review sources above, according to the type of intervention for which each source is relevant (e.g. clinical, public health) Qualitative evidence syntheses – see systematic review sources above
	How feasible are the policy options in the local context (sustainability, affordability, and acceptability)?*	<ul style="list-style-type: none"> Systematic reviews assessing the effects of interventions may describe implementation factors related to the interventions being tested – see systematic review sources above Systematic reviews of qualitative studies – see systematic review sources above PubMed:^a https://pubmed.ncbi.nlm.nih.gov/ EVID@Easy:^b https://bvsalud.org/evideasy/en/ National surveys, routine health information, and national censuses
Design implementation	What are the barriers to implementation? What implementation strategies might be needed?*	<ul style="list-style-type: none"> Systematic reviews assessing the effects of the chosen intervention may describe barriers to implementation – see systematic review sources above Systematic reviews of qualitative studies – see systematic review sources above Systematic reviews assessing the effects of intervention strategies – see sources above Rx for change (for behaviour change interventions for clinical practice):^d https://www.cadth.ca/rx-change PubMed:^a https://pubmed.ncbi.nlm.nih.gov/ EVID@Easy:^b https://bvsalud.org/evideasy/en/ National surveys, routine health information, and national censuses

Communicate and engage	What communication and engagement strategies might work for this intervention in this context?	<ul style="list-style-type: none"> Systematic reviews of communication and engagement strategies – see systematic review sources above
Implement, monitor, evaluate and adjust		Not applicable ^h
Sustain and system change	What works to sustain change with this type of intervention and in this context?	<ul style="list-style-type: none"> Systematic reviews of interventions to sustain change – see systematic review sources above

* Question where primary research is likely to be needed.

^a For more efficient searching of PubMed, use the specialized searches function (hedges), available here: <https://www.nlm.nih.gov/nichsr/hedges/search.html>. However, studies will still need to be evaluated for quality.

^b The EVID@Easy tool (<https://bvshalud.org/evideasy/en/>) helps users locate the scientific evidence available in the Virtual Health Library of the Pan American Health Organization according to the stage of the decision-making process: (i) understanding the health problem; (ii) identifying and selecting options to face the problem; (iii) analysing aspects and considerations for implementing options; and (iv) monitoring and evaluating the impact of the (decision) implementation. However, studies will still need to be evaluated for quality.

^c Only high-quality systematic reviews included.

^d Includes a quality assessment of the systematic review.

^e Does not include a quality assessment of the systematic review.

^f Has not been updated since December 2019.

^g Has not been updated since March 2015.

^h This step requires the creation of evidence (primary research). There is unlikely to be pre-existing evidence that will help, although the analysis of national surveys and routine health information may prove useful. Also, previous research can help to inform the methods and indicators used.

Primary studies may serve as a valuable source of evidence when synthesized evidence is not available. They can also help to gain an understanding of the local context, to assess whether the problem is important at the local level (e.g. in a specific country or state), and to understand implementation issues (e.g. acceptability and affordability). These primary studies should always be critically evaluated for quality – see Table 3.6 later in this chapter). High-quality data also helps with the identification of a high-priority issue and in the M&E of interventions (Table 3.3).

What if I don't have a paid subscription to academic journals?

[Hinari Access to Research for Health Programme](#) provides free or very low cost online access to the major journals in biomedical and related social sciences to local, non-profit institutions in many low- and middle-income countries. It is accessible to WHO staff and eligible countries. If your institution is not eligible for access to journals through Hinari, you may be eligible through [other initiatives](#).

Which EIDM tools to use all along the stages of the evidence funnel and policy/action cycle?

A variety of tools to support the process of EIDM were identified and reviewed as part of the process of developing this guidance document. The tools included in this guidance document and the repository are linked to the steps of the policy/

Table 3.3. Sources of global-, regional- and country-level data for evidence-informed decision-making, including for identifying problems and for monitoring and evaluation

Source	Description & URL
World health data platform	A centralized platform for collating and making available WHO's key data tools, datasets and databases. It includes links to the data sources below, among others. https://www.who.int/data
Triple Billion dashboard	A data platform that allows WHO, countries, regions and partners to track progress towards the Triple Billion targets and health-related Sustainable Development Goals https://portal.who.int/triplebillions/
Global Health Estimates	Comprehensive and comparable time-series data from 2000 onwards for health-related indicators, including: life expectancy, HALE, mortality and morbidity – globally, by region and country; and by age, sex, and cause https://www.who.int/data/global-health-estimates
World Health Statistics	WHO's annual report presenting the most recent health statistics for Member States, including data dashboard. Data are available at global, WHO region and country levels. https://www.who.int/data/gho/publications/world-health-statistics
Health Equity Monitor database	Data compendium for more than 30 indicators for reproductive, maternal, newborn and child health interventions, disaggregated by six dimensions of inequality https://www.who.int/data/gho/health-equity/health-equity-monitor-database
Health Equity Monitor	The Health Equity Monitor site includes a link to the Health Equity Monitor database as well as to other resources related to health equity, including the Health Equity Assessment Toolkit and Handbook https://www.who.int/data/gho/health-equity Health Equity Assessment Toolkit (HEAT), HEAT+ – a software application that facilitates the assessment of within-country health inequalities using disaggregated data and summary measures in a variety of graphs, maps, and tables https://www.who.int/data/gho/health-equity/assessment_toolkit Handbook on health inequality monitoring with a special focus on low- and middle-income countries https://www.who.int/data/gho/health-equity/handbook

Abbreviations: HALE – healthy life expectancy; HEAT – health equity assessment toolkit

action cycle (see Table A2.1 in the Annex) and to the different evidence products being produced by WHO and Member countries (Table 3.5). A systematic process was undertaken to identify, screen and prioritize tools (Appendix 1). Preference was given to tools produced by WHO or external tools that were being widely used in EIDM processes across the Organization. In addition, tools for assessing the quality (risk of bias) of different types of research evidence are provided in Table 3.6.

While the steps included in Table 3.5 suggest a systematic process along the policy/action cycle, this is an ideal scenario that often does not apply in practice. More frequently, the process starts at any of the intermediary steps and moves backwards to fill any gaps before moving forwards. At times, only part of the process is undertaken before stopping or changing track. EIDM generally requires a high degree of flexibility across processes.

Tools can be chosen based on the stage that you wish to address in the policy/action cycle (Table A2.1 in the Annex) or depending on the required evidence products that you need to develop (Table 3.5). When developing an evidence product (e.g. a WHO guideline), the relevant guide indicated in Table 3.5 may be supplemented by other tools from the mapping exercise to complete the policy/action cycle. To develop a WHO guideline, for example, the relevant guide is the WHO *Handbook for guideline development* (39); yet other tools can be used to communicate and engage; implement, monitor, evaluate and adjust; or to sustain system change.

Table 3.4. Recommended sources of evidence products (tertiary research)

Type of product	Sources	Comments
Evidence briefs for policy (EBPs)	Health systems evidence: https://www.healthsystemsevidence.org/?lang=en	EBPs can be found by selecting document type "Evidence brief for policy" and then using the other filters available. For example, a free text search using EVIPNet will find the EBPs produced by EVIPNet
	Evidence-informed policies ^a (PIE): https://sites.bvsalud.org/pie/en/biblio	EBPs can be found by selecting collection "Policy briefs"
Guidelines	Guidelines International Network ^a (GIN): https://guidelines.ebmportal.com/	The open access GIN library contains links to over 3000 guidelines, published or endorsed by GIN members, as well as health guidelines from non-member organizations
	International database of GRADE guidelines ^b (BIGG): https://sites.bvsalud.org/biggen/biblio/	Includes only GRADE guidelines. Can be searched in English, French, Spanish and Portuguese
	WHO Guidelines approved by the Guideline Review Committee: https://apps.who.int/iris/	Click Search to activate the advanced filters. Then use the filter Subject – WHO guideline. The collection can then be searched using free text words and other filters
	ECRI Guidelines Trust repository: https://guidelines.ecri.org/	Includes clinical practice guidelines that meet four inclusion criteria, including being based on a verifiable systematic review of the evidence
Health technology assessments (HTAs)	International Network of Agencies for HTA (INAHTA) database: https://www.inahta.org/hta-database/	This database provides free access to bibliographic information about ongoing and published HTAs commissioned or undertaken by HTA organizations internationally. This includes INAHTA members and non-INAHTA members. The database was previously maintained by the Centre for Reviews and Dissemination, University of York, England (until March 2018)

Abbreviations: EBP: evidence brief for policy; EVIPNet: Evidence-informed Policy Network; GRADE: Grading of Recommendations Assessment, Development and Evaluation; HTA: health technology assessment; INAHTA: International Network of Agencies for HTA; PIE: Políticas informadas por evidencia

^a The Guidelines International Network is a global network supporting evidence-based guideline development and implementation – it currently has 113 organizational members and 172 individual members from 59 countries (<https://g-i-n.net/>).

^b Produced by the Pan American Health Organization/WHO and BIREME (Latin American and Caribbean Center on Health Science Information).

WHO library services in support of evidence-informed decision-making (for WHO staff only)

To facilitate access to the latest scientific information and evidence in the medical and biomedical fields, WHO provides its staff with worldwide online access to subscribed journals and databases via the **Global Information Full Text (GIFT) database**. WHO-published information material and technical documents are publicly available in the **Institutional Repository for Information Sharing (IRIS)** in several languages. The **WHO library** additionally offers tailored individual support to WHO staff with consultations and thematic database searches, as

well as a range of online and on-site training opportunities on search strategies, major evidence databases, and referencing tools.

- > [Global Information Full Text \(GIFT\) database](#) (for WHO staff only)
- > [Institutional Repository for Information Sharing \(IRIS\)](#) (for WHO staff only)
- > [WHO library training resources](#) (for WHO staff only)

Table 3.5 Links between the policy/action cycle and WHO evidence products produced in the different workstreams^a

Steps of the policy/action cycle	Data analytics ^b	Modelling ^b	EIP/EBP	Guidelines	HTA	Implementation research	Evaluation
Guiding manual			EVIPNet Europe EBP manual (30), SURE guides (156), SUPPORT tools (167)	WHO handbook for guideline development (45), PAHO tool for adapting and implementing guidelines (92)	HTA handbook (83,84)	WHO Implementation research in health: a practical guide (161)	WHO evaluation practice handbook (165)
Identify high-priority issue	✓	✓	✓	✓	✓		
Design solutions		✓	✓	✓	✓		
Design implementation		✓	✓	✓	✓	✓	
Communicate and engage			✓		✓	✓	
Implement, monitor, evaluate and adjust	✓	✓				✓	✓
Sustain and system change	✓					✓	✓

Abbreviations: EBP – evidence brief for policy; EIP – evidence-informed policy-making; HTA – health technology assessment; PAHO – Pan American Health Organization

^a See glossary for definitions of each of the workstreams.

^b No manual or guide that represents the process could be identified.

While using any of the tools included in this guidance document and repository, contacting the issuing team or contact person for support and advice is highly encouraged. Several of the tools mentioned in this document include training and capacity-building resources or dedicated support mechanisms. Where available, the EIDM repository lists accessible support and training links.

When best to reach out and collaborate with each of the seven workstreams of the evidence ecosystem?

The focus in this section is on collaboration between the different workstreams of WHO, including WHO staff at headquarters, regional and country offices as well as its collaborating centres – all key actors in the WHO evidence ecosystem.^e Multisectoral and intra-organization collaboration is a key success factor for EIDM, and a facilitator of research uptake (48). Due to the synergies that exist across disciplines, regions and units, collaboration is a cornerstone to delivering substantial progress towards the Triple Billion goals.

^e While collaboration with researchers, policy-makers, nongovernment organizations, civil society, and other stakeholders is also important, it is not addressed here.

Table 3.6 Quality (risk of bias) assessment tools

Study design	Quality assessment tools	Comments
Evidence products		
Evidence briefs for policy	<i>None available</i>	No tool currently exists for assessing the quality of EBPs. However, SUPPORT tool 13 (155) suggests six questions that can be used to guide those preparing and using policy briefs to support evidence-informed policy-making.
Guidelines	AGREE II (Appraisal of Guidelines, Research and Evaluation) (156)	Revised version of the original AGREE tool. This new version comprises 23 items and a user's manual. https://www.cmaj.ca/content/182/18/E839.long
Health technology assessments	Tool 6, AdHopHTA checklist for good-quality HB-HTA reports (157)	The tool was developed for hospital-based HTA reports but may also be useful for other types of HTA. http://www.adhophta.eu/toolkit/assets/tools/AdHopHTA_toolkit_tool6_document.pdf
Evidence syntheses		
Systematic reviews of interventions	AMSTAR (A MeaSurement Tool to Assess systematic Reviews) (158,159)	Designed for reviews, including randomized trials, but is also useful for other kinds of reviews, including reviews of qualitative studies. It applies to reviews of interventions. The tool consists of 11 items for which the possible responses are Yes/No/Can't answer/Not applicable. Only questions with a "yes" response receive a point. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0001350
	AMSTAR 2 (90)	Revised version of AMSTAR that includes both randomized and non-randomized trials – applies to reviews of interventions. The revised tool consists of 16 items in total, includes a more comprehensive user guide, and has an overall rating based on weaknesses in critical domains. It is not intended to produce an overall score. Reviews may receive a rating of high, moderate, low or critically low confidence in the results. https://www.bmj.com/content/358/bmj.j4008.long
	ROBIS (160)	ROBIS is a sophisticated three-phase instrument that focuses specifically on the risk of bias introduced by the conduct of the review. It covers most types of research questions, including diagnosis, prognosis, and etiology. Reviews may receive a rating of low, high, or unclear risk of bias. https://www.jclinepi.com/article/S0895-4356(15)00308-X/fulltext
Economic evaluations (of interventions)	Choice of instrument depends on the study design for the health outcomes (161)	When using the GRADE approach, it is recommended "that the confidence in effect estimates for each important or critical economic outcome should be appraised explicitly using the same criteria as for health outcomes" (161). This recommendation is consistent with that of the Cochrane handbook (40) – see Chapter 20.
Studies of interventions		
Randomized controlled trials	RoB (162)	Cochrane tool for assessing risk of bias in randomized trials https://training.cochrane.org/handbook/archive/v5.1/
	RoB 2.0 (40,163)	Revised Cochrane tool for assessing risk of bias in randomized trials. See also: https://www.riskofbias.info/welcome/rob-2-0-tool
Non-randomized studies of interventions	ROBINS-I (164)	A tool for assessing risk of bias in non-randomized studies of interventions. See also: https://www.riskofbias.info/welcome/home/current-version-of-robins-i
For both controlled and uncontrolled studies of interventions	Cochrane Effective Practice and Organisation of Care (EPOC) risk of bias criteria for EPOC reviews (165,166)	Recommended by EPOC when uncontrolled studies included, e.g. interrupted time series https://epoc.cochrane.org/resources/epoc-resources-review-authors (see resources under "Risk of bias")
Studies of exposures		
Cohort studies	Newcastle-Ottawa Quality Assessment Scale: cohort studies (167)	http://www.ohri.ca/programs/clinical_epidemiology/oxford.asp

Study design	Quality assessment tools	Comments
Case-control studies	Newcastle-Ottawa scale: case-control studies (167)	http://www.ohri.ca/programs/clinical_epidemiology/oxford.asp
Cross-sectional studies	RTI item bank (168,169)	For use in analytical cross-sectional studies for assessment of causes – see Appendix C of Viswanathan et al. 2013 (169) https://www.ncbi.nlm.nih.gov/books/NBK154461/
Observational studies of interventions or exposures	RTI item bank instruments, Agency for Healthcare Research and Quality (AHRQ) (168,169)	https://www.ncbi.nlm.nih.gov/books/NBK154461/
Diagnostic test accuracy	QUADAS-2 (Quality Assessment of Diagnostic Accuracy Studies) (170)	https://www.bristol.ac.uk/population-health-sciences/projects/quadas/quadas-2/
Various – The Joanna Briggs Institute for Evidence Based Nursing (JBI) tools		
For a range of study designs, including systematic reviews, randomized trials, non-randomized trials, cohort studies, case-control studies, analytical cross-sectional, prevalence, diagnostic test accuracy, and qualitative research	JBI critical appraisal tools, JBI Manual for evidence synthesis (171)	See the following appendices in the JBI Manual for evidence synthesis for the respective tool for each study design https://synthesismanual.jbi.global/ : <ul style="list-style-type: none"> • Systematic reviews – Appendix 10.1 • Randomized trials – Appendix 3.1 • Non-randomized trials – Appendix 3.3 • Cohort studies – Appendix 7.1 • Case-control studies – Appendix 7.2 • Analytical cross-sectional studies – Appendix 7.5 • Prevalence – Appendix 5.1 • Diagnostic test accuracy – Appendix 9.1 • Qualitative research – Appendix 2.1

Source: Pan American Health Organization 2021 (172).

Abbreviations: AdHopHTA – a toolkit for hospital-based Health Technology Assessment; AGREE – Appraisal of Guidelines, Research and Evaluation; AMSTAR – A Measurement Tool to Assess systematic Reviews; QUADAS – Quality Assessment of Diagnostic Accuracy Studies; ROB – Risk Of Bias; ROBINS-I – Risk Of Bias In Non-randomized Studies of interventions; ROBIS – Risk Of Bias In Systematic reviews

Why collaborate?

The literature on collaboration and co-production of knowledge between researchers, policy-makers and civil society (48,53,173–175), and on teamwork and interprofessional collaboration between health-care professionals (176) suggests that collaboration has the potential to improve policy and health outcomes, as well as improve research quality and relevance. Likewise, collaboration between the different workstreams of WHO is expected to improve EIDM and population health outcomes by making better use of limited resources and available expertise and capacity. Collaboration also provides opportunities for networking and individual learning, gives colleagues the opportunity to gain new perspectives on a given challenge, and inspires intrinsic motivation (177,178).

Principles of effective collaboration

Effective collaboration requires efficiency, mutual respect and trust, clarity, and taking responsibility (173,176,177,179–181). Collaboration is also encouraged when collaborative behaviour is modelled at the executive management level (181).

- **Efficiency:** meet in person only when necessary, ensure that there is a meeting agenda and, at the end of the meeting, set action items for those involved (179).

- **Mutual respect and trust:** collaboration requires mutual respect for each other and understanding of each other's roles (176). People need to feel safe to give and receive effective feedback (177,179). Trust can be built by working together over time (173).
- **Clarity:** identify everybody's priorities and agendas upfront, from which a common understanding of the purpose of, and agenda for, the collaboration can be agreed (177,179,181).
- **Taking responsibility:** while collaboration is about equal participation, it can be helpful to elect *someone to lead the collaborative project and to assign roles within the group*. This encourages people to take responsibility, and avoids time being wasted on negotiating responsibilities or "protecting turf" (177,181).

When to strategically invest in collaboration?

There are some key opportunities for collaboration between the different WHO workstreams to improve existing methods and processes, and to fill gaps in methods and tools. From Table 3.5 above, several common interests and specializations in relation to the policy/action cycle are visualized between the different workstreams. The mapping of EIDM tools (see Table A2.1 in the Annex) additionally highlights substantial gaps in available tools to support some steps in the EIDM process across the policy/action cycle. Collaborative approaches between different workstreams provide a unique opportunity to fill these gaps (Table 3.7).

For example, there are three workstreams (EIP, Guidelines, HTA) producing evidence products that include the steps: identify high-priority issue, design solutions, and design implementation. Collaboration between the workstreams

Collaboration for EIDM in practice

Pairing modelling and knowledge translation to accelerate COVID-19 vaccination efforts in Lebanon



Fadi El Jardali, Knowledge to Policy (K2P) Centre, American University of Beirut, Lebanon

"The first phase of the COVID-19 vaccination campaign in Lebanon was challenged by a slow rollout and vaccine hesitancy. At the Knowledge to Policy (K2P) Center, we developed an evidence brief on modelling the COVID-19 vaccine roll-out as part of a larger rapid response series. Bringing together evidence synthesis, modelling and epidemiology, K2P collaborated with an epidemiologist at the American University of Beirut and a team of modellers at Weill Cornell Medical College, Qatar. This allowed us to simulate infection rates, hospitalization and deaths under various vaccination roll-out scenarios specific to the Lebanese setting, and helped in identifying strategies to overcome supply, demand, and administration constraints. Combining knowledge translation and modelling directly created the knowhow for greater impact, and helped to accelerate vaccine roll-out efforts" (182,183).

could help to check for consistency in methods, share learning in the application of existing methods and processes, and make improvements in methods and processes where needed. These three workstreams may also benefit from collaboration to help countries adapt the evidence products to their country context.

Given the overlap in methods, technical knowledge and resources required, converging the different workstreams at a national level could help to optimize resources. Joining forces between workstreams at headquarters and regional offices when working with countries would also be beneficial. For instance, the development and adaptation of both guidelines and HTAs require sound technical skills and a good understanding of systematic reviews and implementation issues.

Table 3.7. Opportunities for collaboration across the policy/action cycle to improve methods and processes, and to fill gaps in methods and tools

Steps of the policy/action cycle	Lead workstream/s	Workstreams that could benefit from collaboration
Identify high-priority issue	Data analytics	EIP/EBP, Guidelines and HTA
Design solutions	EIP/EBP, Guidelines and HTA	Modelling
Design implementation	Implementation research	EIP/EBP, Guidelines and HTA
Communicate and engage	EIP/EBP	Guidelines and HTA
Implement, monitor, evaluate and adjust	Implementation research, Evaluation and data analytics	EIP/EBP, Guidelines and HTA
Sustain and system change	Implementation research, Evaluation and data analytics	EIP/EBP, Guidelines and HTA

Abbreviations: EBP – evidence brief for policy; EIP – evidence-informed policy-making; HTA – health technology assessment

Key take-home messages

- The best source of research evidence depends on the question that needs answering.
- For EIDM, the best available research evidence should always be sought and used.
- When searching for research evidence to answer questions along the policy/action cycle, both efficiency in searching and the quality of the evidence found need to be considered.
- A variety of vetted tools are available to support the process of EIDM, and these can be linked to the steps of the policy/action cycle and to the different evidence products being produced by WHO and Member countries
- Collaboration between the different workstreams of WHO and Member countries is expected to improve EIDM and population health outcomes by making better use of limited resources and available expertise and capacity.
- Collaboration between workstreams can help to improve existing methods and processes, and to fill gaps in methods and tools.

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Annexes



Annex 1: Methods for the development of the guide and repository of tools

Process

To develop this guide, the Evidence to Policy and Impact Unit of the Research for Health Department, Science Division engaged a wide range of experts and stakeholders. Overall, the methodology consisted of the following steps:

- Conduct of a cross-Organizational consultative meeting in November 2020 to establish a WHO Working Group to strengthen the use of research evidence for health impact. The heads of departments identified as closely linked to EIDM were invited to attend. The consultative meeting agreed that an Organizational framework and guidance were needed for staff on good EIDM practices and principles. It was decided to create a cross-Organizational Working Group on Evidence-to-Action to initiate a mapping exercise of existing EIDM tools and approaches, identify good practices and gaps, and to develop a related guidance for WHO staff.
- The internal WHO Working Group on Evidence to Action, with representation from departmental focal points, facilitated and led by the Evidence to Policy and Impact Unit of the Research for Health Department, was formed in February 2021. The Working Group met on a number of occasions to review and guide progress, and also contributed expertise outside of formal meetings.
- An external Editorial Board made up of eight experts in the area of EIDM was convened in May 2021 to oversee the development of the guidance document and repository of EIDM tools, and to provide external peer-review of the guidance document. They met monthly until September 2021.

The Guide

The Guide was developed based on a review of the literature in the area and the experience and expertise of the author group (see Acknowledgements section). The development was led by Tanja Kuchenmüller, who also constructed the evidence ecosystem framework and wrote the first draft of the document. The framework was modelled based on Graham's knowledge-to-action cycle¹ and initial exchanges with the EVIPNet Europe Steering Group. The original detailed funnel came from Ludovic Reveiz, Pan American Health Organization.

The Guide was reviewed by the Editorial Board and by an internal review group, which was a subgroup of the WHO Working Group on Evidence to Action. After each revision, the document was updated and strengthened based on their review.

¹ Graham ID, Logan J, Harrison MB, Straus SE, Tetroe J, Caswell W, et al. Lost in knowledge translation: time for a map? *J Contin Educ Health Prof.* 2006; 26(1):13–24.

Mapping of EIDM tools

A systematic process was applied to develop the repository that included clear inclusion and priority-setting criteria; a process of assessment and data extraction (mapping) undertaken by two reviewers independently; and use of an external expert group to oversee the process and for referral of discrepancies in assessments. Tools from across the Organization and workstreams (including guideline development, evidence briefs for policy, etc.) within the evidence ecosystem were eligible. For the first round, tools were suggested by technical areas, which also undertook the preliminary mapping/data extraction. Further updates are planned with wider searching for tools.

Process

The process undertaken can be summarized as follows:

- Tools were suggested by technical areas within the WHO head office or regional offices.
- These tools were assessed against the inclusion criteria by two independent reviewers from the project team (Evidence to Policy and Impact Unit with the assistance of consultants working on the guidance). Any discrepancies in assessment were discussed, with consultation of a third reviewer where needed.
- Tools that met the inclusion criteria were mapped against the evidence ecosystem framework (Fig. 2.2) that includes the evidence creation funnel and the policy/action cycle. This involved checking (and updating if necessary) the initial mapping plus completion of more detailed mapping.
- The data extracted included whether: the tool was targeted at the funnel or cycle or provided general support/capacity-building for EIDM; the level of the funnel or step/s of the cycle targeted; focus on clinical, public health and/or health system interventions; capacity-building strategies being implemented in relation to the tool (Yes/No); plus details if “yes” to the previous question; focus on the co-production of research between researchers and decision-makers (Yes/No/Partially); focus on practice (patient-provider) or policy (policy-maker) or both; whether it is a general tool that applies across topic areas/health issues or to a specific topic area; and the target audience for the tool. For tools that focused on one or more steps of the policy/action cycle, data were extracted on the specific substeps covered.
- For tools that met the inclusion criteria and were mapped, the priority-setting criteria were applied to help choose which tools to promote where more than one tool covered the same step or process.
- The results of the mapping of tools and application of the priority-setting criteria were shared with the technical areas for checking and feedback.

Inclusion criteria for tools

The tool must fulfil all five of these criteria to be included in the repository.

1. Documents described as a guidance, handbook, manual, method or tool that outline a methodology or process for creating or applying research evidence; AND
2. Relevant to the policy/action cycle OR to the creation of tertiary research OR to the processes or actions of linkage and exchange between researchers and decision-makers; AND
3. A WHO tool or an external tool that is used by WHO in the process of knowledge translation/evidence-informed decision-making; AND
4. Document available in English; AND
5. Published in the year 2005 or after.

Priority-setting criteria for tools

These criteria will help to choose between tools that meet the inclusion criteria. For example, to achieve the label of “recommended” or “good practice”, the tool must achieve a higher score than the alternatives. For the first three criteria we are interested in the process of development of the tool rather than its application.

1. The tool is supported by research evidence in its development.
2. Decision-makers, researchers and other stakeholders were involved in its development (e.g. through consultation, on a working group).
3. The tool was piloted/evaluated in the process of its development.
4. The tool is used by Member States.
5. The tool is of high quality, in that the method described supports the use of the best available evidence from research, while recognizing that other factors such as context, acceptability to stakeholders, etc. also play an important role in EIDM (see Chapter 1 for full definition). The tool covers a range of steps from the policy/action cycle.

Criteria were scored 0, 1 or 2 – where 0 = “not at all” (or “not specified”); 1 = “partly” and 2 = “mostly/yes”. Given the importance of criterion 5, this was weighted more heavily than the other criteria. Thus, the corresponding scores for criterion 5 are: 0, 2, or 4 – where 0 = “not at all” (or “not specified”); 2 = “partly” and 4 = “mostly/yes”.

Maximum total score = 12

Annex 2: WHO EIDM Tools

Included tools to support evidence-informed decision-making – linked to the policy/action cycle

Table A2.1 Tools to support evidence-informed decision making, linked to the policy/action cycle

Tool, reference and URL	Description/application
Identify high-priority issue	
• Prioritize issues	
SUPPORT Tool 3 (184) https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-7-S1-S3	Tool 3. Setting priorities for supporting EIP
SURE Guide 2 (151) https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/SURE-Guides-v2.1/Collectedfiles/sure_guides.html	Guide 2. Prioritizing topics for policy briefs
EVIPNet Europe EBP manual (25) https://apps.who.int/iris/handle/10665/337950	Section 2.1.1. Setting priorities for EBP
WHO Research priority-setting guidance (185) https://apps.who.int/iris/handle/10665/334408	Focuses on priority-setting for research
The SPARK tool to prioritize questions for systematic reviews in health policy and systems research (186) https://health-policy-systems.biomedcentral.com/articles/10.1186/s12961-017-0242-4	Focuses on prioritizing questions for systematic reviews in health policy and systems research
• Identify problem and causes	
SUPPORT Tool 4 (83) https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-7-S1-S4	Tool 4. Using research evidence to clarify a problem
SURE Guide 3 (151) https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/SURE-Guides-v2.1/Collectedfiles/sure_guides.html	Guide 3. Clarifying the problem
EVIPNet Europe EBP manual (25) https://apps.who.int/iris/handle/10665/337950	Section 2.2.7. How to frame the problem
WHO Handbook for guideline development, second edition (39) https://www.who.int/publications/i/item/9789241548960	Chapter 4. Preparing the planning proposal for a WHO guideline
• Stakeholder analysis	
EVIPNet Europe EBP manual (25) https://apps.who.int/iris/handle/10665/337950	Section 2.1.5. Stakeholder mapping and analysis (for EBPs)
• Context analysis	
EVIPNet Europe EBP manual (25) https://apps.who.int/iris/handle/10665/337950	Section 2.1.4. Brief description and mapping of the policy and political contexts (for EBPs)
Design solutions	
• PICO question	
WHO Handbook for guideline development, second edition (39) https://www.who.int/publications/i/item/9789241548960	Chapter 7. Formulating questions and selecting outcomes
GRADE handbook (187) https://gdt.gradepro.org/app/handbook/handbook.html	Chapter 2. Framing the health care question
Evidence synthesis for health policy and systems: a methods guide (73) https://www.who.int/alliance-hpsr/resources/publications/hsr-synthesis/en/	Section 2.4. Translating a policy issue into a synthesis question; Section 2.5. Structuring the synthesis question (for evidence syntheses for HPSR)
Cochrane handbook (40) https://training.cochrane.org/handbook/current/chapter-03	Chapter 3. Defining the criteria for including studies and how they will be grouped for the synthesis
• Search	
WHO Handbook for guideline development, second edition (39) https://www.who.int/publications/i/item/9789241548960	Chapter 8. Evidence retrieval and synthesis
SURE Guide 4 (151) https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/SURE-Guides-v2.1/Collectedfiles/sure_guides.html	Guide 4. Deciding on and describing policy options – What is known about the impacts of the different policy options?

Tool, reference and URL	Description/application
EVIPNet Europe EBP manual (25) https://apps.who.int/iris/handle/10665/337950	Section 2.2.4. Search strategy (for EBPs)
Cochrane handbook (40) https://training.cochrane.org/handbook/current/chapter-04	Chapter 4. Searching for and selecting studies
<i>For sources of evidence also refer to Tables 3.2 and 3.4 in this chapter</i>	
• Access	
SUPPORT Tool 7 (188) https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-7-S1-S7	Tool 7. Finding systematic reviews
<i>WHO staff can seek help from the WHO Library to access literature that may not be available through open access arrangements</i>	
• Appraise	
GRADE approach for assessing certainty (quality) of a body of evidence	
GRADE handbook (187) https://gdt.gradeapro.org/app/handbook/handbook.html	Chapter 5. Quality of evidence
WHO Handbook for guideline development, second edition (39) https://www.who.int/publications/i/item/9789241548960	Chapter 9. Evidence assessment – includes GRADE approach for assessing certainty
SURE Guide 4 (151) https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/SURE-Guides-v2.1/Collectedfiles/sure_guides.html	Guide 4. Deciding on and describing policy options – how confident can we be about the likely impacts of each of the options? – includes GRADE approach for assessing certainty
EVIPNet Europe EBP manual (25) https://apps.who.int/iris/handle/10665/337950	Section 2.2.5. How to critically appraise evidence
<i>For tools to assess the risk of bias/quality of a range of evidence types, see Table 3.6.</i>	
• Adapt	
PAHO tool for adapting and implementing guidelines in the Americas (86) https://iris.paho.org/handle/10665.2/49145	Chapter 2. Adaptation of guidelines
The ADAPTE process: resource toolkit for guideline adaptation (88) https://g-i-n.net/wp-content/uploads/2021/05/ADAPTE-Resource-toolkit-V2.1-March-2010-updated-disclaimer.pdf	For adaptation of guidelines
Toolkit for adaptation of HTA reports (89) https://www.journalslibrary.nihr.ac.uk/hta/hta13590/#/abstract	For adaption of HTA reports
WHO Handbook for guideline development, second edition (39) https://www.who.int/publications/i/item/9789241548960	Section 1.8.3. Adaptation of existing WHO guidelines; section 13.1 Adaptation
SUPPORT Tool 9 (91) https://health-policy-systems.biomedcentral.com/track/pdf/10.1186/1478-4505-7-S1-S9.pdf	Tool 9. Assessing the applicability of the findings of a systematic review
SURE Guide 4 (151) https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/SURE-Guides-v2.1/Collectedfiles/sure_guides.html	Guide 4. Deciding on and describing policy options – What is known about the impacts of the different policy options? Box 4.2: Judgements about the applicability of the results of systematic reviews
Evidence synthesis for health policy and systems: a methods guide (73) https://www.who.int/alliance-hpsr/resources/publications/hsr-synthesis/en/	Chapter 4. Understanding context in reviews and syntheses of HPSR
• Synthesize	
WHO Handbook for guideline development, second edition (39) https://www.who.int/publications/i/item/9789241548960	Chapter 8. Evidence retrieval and synthesis
GRADE Handbook (187) https://gdt.gradeapro.org/app/handbook/handbook.html	Chapter 4. Summarizing the evidence
EVIPNet Europe EBP manual (25) https://apps.who.int/iris/handle/10665/337950	Section 2.2.6. How to synthesize the critically appraised included literature
Evidence synthesis for health policy and systems: a methods guide (73) https://www.who.int/alliance-hpsr/resources/publications/hsr-synthesis/en/	Section 3.3. Methods for synthesizing HPSR evidence
Cochrane handbook (40) https://training.cochrane.org/handbook/current	Chapters 6, 9, 10–12, 14, 15
Design implementation	
• Context analysis	
PAHO tool for adapting and implementing guidelines in the Americas (86) https://iris.paho.org/handle/10665.2/49145	The importance of contextual factors in adapting and implementing guidelines is covered throughout the tool

Tool, reference and URL	Description/application
SUPPORT Tool 11 (28) https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-7-S1-S11	Tool 11. Finding and using evidence about local conditions for EIP
Evidence synthesis for health policy and systems: a methods guide (73) https://www.who.int/alliance-hpsr/resources/publications/hsr-synthesis/en/	Chapter 4. Understanding context in reviews and syntheses of HPSR
EVIPNet Europe EBP manual (25) https://apps.who.int/iris/handle/10665/337950	Section 2.1.4. Brief description and mapping of the policy and political contexts (for EBPs)
Implementation research in health: a practical guide (153) https://www.who.int/alliance-hpsr/resources/implementationresearchguide/en/	Analysis of context is integral to implementation research – and is considered throughout the guide
ExpandNet Practical guidance for scaling up health service innovations (189) https://expandnet.net/tools/	See pages 11, 21–22, 24 that talk about the context and environment
• Implementation considerations (barriers/facilitators)	
SUPPORT Tool 6 (97) https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-7-S1-S6	Tool 6. Using research evidence to address how an option will be implemented
SURE Guide 5 (151) https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/SURE-Guides-v2.1/Collectedfiles/sure_guides.html	Guide 5. Identifying and addressing barriers to implementing the policy options – also includes strategies to address the barriers
EVIPNet Europe EBP manual (25) https://apps.who.int/iris/handle/10665/337950	Section 2.2.9. How to identify implementation considerations
PAHO tool for adapting and implementing guidelines in the Americas (86) https://iris.paho.org/handle/10665.2/49145	Section 3.3.3. Identification of barriers and facilitators – also includes strategies to address the barriers
WHO Handbook for guideline development, second edition (39) https://www.who.int/publications/i/item/9789241548960	Section 13.2. Implementation
GRADE handbook (187) https://gdt.gradeapro.org/app/handbook/handbook.html	Addressed as part of section 6.5. The Evidence-to-decision framework
Implementation research toolkit http://adphealth.org/irtoolkit/	Online toolkit focused on how to conduct implementation research
Implementation research in health: a practical guide (153) https://www.who.int/alliance-hpsr/resources/implementationresearchguide/en/	Focused on how to conduct implementation research
• Pilot project	
ExpandNet “Beginning with the end in mind” tool (98) https://expandnet.net/tools/	Focuses on planning pilot projects for successful scaling up
ExpandNet Practical guidance for scaling up health service innovations (189) https://expandnet.net/tools/	Emphasizes the importance of a successful pilot for success in scaling up
Communicate and engage	
• Active dissemination/communication	
Implementation research toolkit http://adphealth.org/irtoolkit/	See section in yellow – Communication and advocacy
SUPPORT Tool 15 (102) https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-7-S1-S15	Tool 15. Engaging the public in evidence-informed policy-making
SURE Guide 8 (151) https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/SURE-Guides-v2.1/Collectedfiles/sure_guides.html	Guide 8. Informing and engaging stakeholders
EVIPNet Europe EBP manual (25) https://apps.who.int/iris/handle/10665/337950	Section 2.3.3. Advocacy plan, 2.3.4 Communication plan
EVIPNet Europe Communication and advocacy checklist (190) https://www.euro.who.int/_data/assets/pdf_file/0019/323155/EVIPNET-communication-advocacy-checklist.pdf	The whole guide is related to communication and advocacy
ExpandNet Practical guidance for scaling up health service innovations (189) https://expandnet.net/tools/	See pages 31–32 Dissemination and advocacy
• Education/training	
ExpandNet Nine steps for developing a scaling-up strategy (191) https://expandnet.net/tools/	Emphasizes the importance of education and training for successful scaling up
ExpandNet Practical guidance for scaling up health service innovations (189) https://expandnet.net/tools/	See pages 32–34

Tool, reference and URL	Description/application
• Policy dialogue	
SUPPORT Tool 14 (105) https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-7-S1-S14	Tool 14. Organizing and using policy dialogues to support evidence-informed policymaking
EVIPNet Europe EBP manual (25) https://apps.who.int/iris/handle/10665/337950	Section 2.3.1. Policy dialogue
EVIPNet Europe Policy dialogue preparation and facilitation checklist (104) https://www.euro.who.int/en/data-and-evidence/evidence-informed-policy-making/evidence-informed-policy-network-evipnet/evipnet-europe-policy-dialogue-preparation-and-facilitation-checklist-2016	Accompanying tool to the EVIPNet Europe EBP manual for conducting a policy dialogue
SURE Guide 7 (151) https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/SURE-Guides-v2.1/Collectedfiles/sure_guides.html	Guide 7. Organising and running policy dialogues
Implement, monitor, evaluate and adjust	
• Implement/Scale up	
ExpandNet Nine steps for developing a scaling-up strategy (191) https://expandnet.net/tools/	Provides step-wise guidance to develop a scaling-up strategy
ExpandNet Practical guidance for scaling up health service innovations (189) https://expandnet.net/tools/	Facilitates systematic planning for scaling up
PAHO tool for adapting and implementing guidelines in the Americas (86) https://iris.paho.org/handle/10665.2/49145	Chapter 3. Implementation of guidelines
Implementation research (IR) toolkit http://adphealth.org/irtoolkit/	Online toolkit focused on how to conduct IR to inform the implementation of an intervention
• Monitor, evaluate process, outcomes and impact	
WHO evaluation practice handbook (154) https://apps.who.int/iris/handle/10665/96311	This handbook provides step-by-step practical guidance to evaluation in WHO
SUPPORT Tool 18 (192) https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-7-S1-S18	Tool 18. Planning monitoring and evaluation of policies
SURE Guide 6 (151) https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/SURE-Guides-v2.1/Collectedfiles/sure_guides.html	Guide 6. Clarifying uncertainties and needs for monitoring and evaluation
Implementation research toolkit http://adphealth.org/irtoolkit/	See section in green – Developing an IR proposal
PAHO tool for adapting and implementing guidelines in the Americas (86) https://iris.paho.org/handle/10665.2/49145	Sections 3.3.8 to 3.3.10 – evaluation of implementation
WHO Handbook for guideline development, second edition (39) https://www.who.int/publications/i/item/9789241548960	Section 13.2. Implementation
• Disseminate and contribute to the evidence base	
Implementation research toolkit http://adphealth.org/irtoolkit/	See section in yellow – IR-related communication and advocacy, and section in green – Developing an IR proposal
WHO evaluation practice handbook (154) https://apps.who.int/iris/handle/10665/96311	Chapter 6. Communication, utilization and follow-up of evaluation results
Sustain change	
• Continuous adaptation and learning to sustain change	
Implementation research toolkit http://adphealth.org/irtoolkit/	See section in orange – Integrating IR into health systems. Sustainability is one of the key outcomes of IR
ExpandNet Nine steps for developing a scaling-up strategy (191) https://expandnet.net/tools/	Sustainability is one of the four key principles of the ExpandNet framework (page 8)
ExpandNet Practical guidance for scaling up health service innovations (189) https://expandnet.net/tools/	Sustainability is one of the four key principles of the ExpandNet framework

Abbreviations: EBP – evidence brief for policy; EIP – evidence-informed policy-making; HPSR – health policy and systems research; HTA – health technology assessment; IR – implementation research; PAHO – Pan American Health Organization; SUPPORT – SUPporting POLICY relevant Reviews and Trials

Note: tools shaded in grey are not included in the repository.

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