

GOVERNMENT OF KENYA



MINISTRY OF HEALTH

GUIDELINES FOR EVIDENCE USE IN POLICY-MAKING

MAY 2016

Table of Contents

List of Tables.....	IV
List of Figures.....	V
Abbreviations and Acronyms	VI
Disclaimer	VII
Foreword: About the Guidelines.....	VIII
Acknowledgements.....	IX
1. Introduction.....	12
Essentials of policy-making	12
Evidence-informed policy-making	13
Rationale for the Guidelines.....	13
Intended users of the Guidelines.....	13
Use of the Guidelines	14
The process of developing the Guidelines.....	14
Structure of the Guidelines	14
2. Foundation of public policy-making.....	17
Context of public policy-making.....	17
Key stages of the policy-making process and evidence use.....	18
Facilitators and barriers to evidence use in policy-making.....	19
3. Health policy development process.....	22
Health policy and the overarching national policy and legal framework	22
Health sector policy framework.....	22
Features of good policy-making	26
The policy cycle	28
Steps in developing a policy.....	28
4. Defining and developing a policy question.....	39
Distinction between a policy question and a research question.....	39
Types of policy questions	40
Steps in defining a policy question.....	40
5. Accessing evidence for policy-making.....	43
Sources of information for policy-makers	43
Researchers as a source of evidence: establishing and maintaining links.....	44
Online sources of evidence	44
Developing an evidence search strategy	48
Steps in conducting an evidence search.....	48
Identifying evidence search terms	50
Boolean terms and Google search operators.....	53
Google search tips: using punctuation, symbols and operators in searches	55
Assessing source credibility.....	56
When there is no documented evidence	56

6. Appraising evidence for policy-making	58
Basic research methods primer	58
Defining research	58
Research design and methods.....	58
Types of evidence	61
Levels of evidence	62
Assessing the strength of evidence.....	63
Assessing validity and reliability	64
Assessing a body of evidence	65
Systematic Reviews: Appraising the methods and interpreting the results	65
Further readings.....	67
7. Synthesising Evidence for Policy-Making.....	69
Evidence usability	69
Synthesising evidence: What is it?	70
Differences between summarising and synthesising evidence.....	71
Steps for synthesising evidence	72
Analysing evidence on policy options for tackling the policy issue.....	72
Tips for presenting evidence.....	72
Tips for writing compelling and concise syntheses	73
Format for presenting a synthesis of evidence.....	74
Writing actionable recommendations	75
Writing policy briefs	75
Function and elements of policy briefs	75
Structure of policy briefs.....	77
Benchmark for a policy brief.....	78
Writing an elevator pitch to make compelling case for policy option.....	79
Some tips for beginning to write your policy brief	79
An example of an elevator pitch: Challenge of teenage pregnancy.....	80
Tips for developing effective presentations	81
Tips for delivering an effective PowerPoint presentation.....	81
8. Optimising Opportunities for Evidence Uptake in Policy-Making.....	83
Reaching policymakers at the right time with evidence	83
The policy system	83
The human element in reaching policymakers.....	84
Developing a communications strategy	84
What are the indicators of evidence application?	89
9. Conclusion.....	91
References	92
Annexes	95

List of Tables

Table 1. Key stages of the policy-making processes.....	18
Table 2. Barriers to evidence use identified by health sector policy-makers in Kenya.....	20
Table 3. Key features and responsibilities for different levels of policy-making	25
Table 4. Features of good policy-making	26
Table 5. Synergy between steps in policy formulation outlined in the KLRC Guide and steps proposed in these Guidelines	29
Table 6. Illustrating the differences between a policy question and a research question.....	39
Table 7. Examples of policy questions at the different stages of the policy-making process.....	41
Table 8. Example of a concept table	52
Table 9. Google search operators	55
Table 10. 12 Major types of research designs	59
Table 11. Principles of research quality	63
Table 12. Assessment of applicability and transferability of evidence	69
Table 13. Differences between summarising and synthesising evidence.....	71
Table 14. Example of unpacking complex issues into simple messages	74
Table 15. Format of an evidence synthesis	74
Table 16. Structure of a policy brief.....	77
Table 17. Key ingredients of a policy brief	78
Table 18. Communication versus programme objectives	85
Table 19. Expected outcomes for communications objectives	85

List of Figures

Figure 1. Complexity of the policy-making process; adapted from ODI, undated.....	17
Figure 2. Health policy and the overarching national policy and legal framework in Kenya.....	23
Figure 3. Health Sector Policy Framework.....	24
Figure 4. The policy cycle.....	28
Figure 5. Logic model for controlling Malaria among pregnant women.....	33
Figure 6. Major sources of information for policymakers.....	43
Figure 7. Different features of a mind map.....	50
Figure 8. An example of a mind map.....	51
Figure 9. A search screen demonstrating a source of more search terms.....	52
Figure 10. Demonstrating the Boolean search operators.....	54
Figure 11. Hierarchy of evidence.....	62
Figure 12. Simulating the evidence synthesis process.....	71
Figure 13. Three Streams that couple to open a policy window.....	84

Abbreviations and Acronyms

AFIDEP	-	African Institute for Development Policy
AGORA	-	Access to Global Online Research in Agriculture
ARDI	-	Access to Research for Development and Innovation
CNHR	-	Consortium for National Health Research
DFID	-	United Kingdom's Department for International Development
ECSA-HC	-	East, Central and Southern Africa Health Community
HINARI	-	Access to Research in Health Programme
ICC	-	Inter-Agency Coordinating Committee
KHP	-	Kenya Health Policy
KHSSP	-	Kenya Health Sector Strategic and Investment Plan
KLRC	-	Kenya Law Reform Commission
M&E	-	Monitoring and Evaluation
MoH	-	Ministry of Health
MTP	-	Medium Term Plans
NCDs	-	Non-Communicable Diseases
NGO	-	Non-Governmental Organisation
OARE	-	Online Access to Research in the Environment
SECURE Health	-	Strengthening Capacity to Use Research Evidence in Health Policy
TWG	-	Technical Working Group
UN	-	United Nations
USAID	-	United States Agency for International Development

Disclaimer

© Principal Secretary, Ministry of Health, Kenya 2015

This document is not issued to the general public, and all rights are reserved by the Ministry of Health, Kenya. The document may not be reviewed, abstracted, quoted, reproduced or translated, in part or in whole by anyone outside of the Government of Kenya or the institutions acknowledged to have supported its development, without the prior written permission of the Director of Medical Services of the Ministry of Health. No part of this document may be stored in a retrieval system or transmitted in any form or by any means -- electronic, mechanical or other -- without the prior written permission from the office of the Director of Medical Services, Ministry of Health. While every effort has been made to validate the information in this document, the Ministry of Health is not liable for any issues arising from the use/misuse of the information contained herein.

Address:

Ministry of Health, Afya House, Cathedral Road, P.O. Box 30016-00100, Nairobi, Kenya.

Telephone: +254-20-2717077 Email: ps@health.go.ke

Foreword: About the Guidelines


These *Guidelines for Evidence Use in Policy-Making* have been developed to provide practical guidance to health sector stakeholders on better and more effective ways of finding, appraising, synthesising and applying research evidence in policy-making. The Guidelines therefore make an important contribution to the realisation of one of the Ministry of Health's (MoH) commitments in the Kenya Health Policy 2014-2030 of increasing use of research evidence in decision-making in the health sector.

The Guidelines are designed primarily for use by senior officials and technical staff within the MoH. They are also useful to other health workers and practitioners in the health sector. County departments of health will also find them useful and could consider adopting or adapting them for use in their work. This is an important contribution of MoH to strengthening the capacity of county departments of health in line with the provisions of Constitution of Kenya, 2010. Beyond these groups, anyone involved in policy-making in the health sector, as well as other development sectors will find them useful.

The development of these Guidelines has been spearheaded by the MoH through the leadership of the Department of Policy, Planning and Health Financing. MoH has been implementing a capacity strengthening programme for research use since February 2014 through a partnership of various institutions led by the African Institute for Development Policy (AFIDEP). It is through this partnership that the *Guidelines for Evidence Use in Policy-Making* have been developed. They are a result of in-depth consultations with a wide range of stakeholders, including the primary target users as well as other health sector stakeholders and experts in the health research-to-policy process.

The Guidelines fill an important gap identified by the MoH and stakeholders over the years on the need to have clear direction on evidence use in the policy-making processes within the health sector in Kenya. It is my hope therefore that staff within the MoH, county departments of health and other health sector stakeholders will find these Guidelines useful and enriching to their efforts to ensure decisions and policies in the health sector are driven by evidence.

Dr. Cleopa Kilonzo Mailu



Cabinet Secretary

Acknowledgements

The development of the *Guidelines for Evidence Use in Policy-Making* has been made possible through the leadership of the MoH through the Health Research & Development Division in collaboration with various partners and stakeholders. Specifically, the MoH would like to acknowledge the leadership of the Cabinet Secretary and the technical guidance of the Director of Medical Services in the development of these Guidelines.

The Guidelines have benefited from reviews and inputs from the Head of the Department of Policy, Planning and Health Financing, Dr. Peter Kimuu, as well as the staff of this department, and MoH recognises their contributions. The MoH would like to recognise specific staff from this department who have made invaluable contributions to the development of the Guidelines, who include Dr. Charles M. Nzioka, Dr. James Mwitari, Mr. Elkana Ong'uti, Dr. David Soti, Dr Ruth Kitetu, Dr. Esther Ogara, Dr. Isabel Maina, Dr. Abel Nyakiogora, and Ms. Terry Watiri.

The development of these Guidelines was made possible through the MoH's collaboration with the Strengthening Capacity to Use Research Evidence in Health Policy (SECURE Health) programme, which is a consortium of five organisations led by AFIDEP. The Ministry would like to thank AFIDEP for providing technical as well as financial assistance for the development of the Guidelines. The MoH would also like to thank other SECURE Health programme consortium partners who provided invaluable inputs into the development of the Guidelines, including FHI360, the Consortium for National Health Research (CNHR), and the East, Central and Southern Africa Health Community (ECSA-HC).

The MoH would also like to thank the members of the Technical Advisory Committee of the SECURE Health programme for their invaluable inputs into the development of these Guidelines. Committee members and all other experts who provided inputs into the development of the Guidelines are acknowledged in the List of Contributors appearing under Annex 1.

Finally, the development of these Guidelines would not have been possible without the financial support of the United Kingdom's Department for International Development (DFID) through the SECURE Health programme. The Ministry acknowledges and appreciates this support.

Dr. Nicholas Muraguri,



Principal Secretary

Chapter 1

Introduction



Introduction

- 1.1 The need for Guidelines on evidence use and policy-making for the Ministry of Health (MoH) was identified by the MoH's senior officials and staff through interactions with the Strengthening Capacity to Use Research Evidence in Health Policy (SECURE Health) programme. This was evident in the results of a study conducted by the programme in 2014 on the status of research use within the MoH and an external evaluation conducted in 2015 that revealed lack of Guidelines on evidence use in policy-making within the MoH. This meant that MoH staff lacked information and guidance on evidence use in the health policy-making process. The purpose of these Guidelines is to fill this gap, by providing clear guidance on research evidence use in health policy-making.
- 1.2 The Guidelines have been developed, and will be operationalised, within the overarching health sector legal and policy framework defined in the Constitution of Kenya, 2010, Vision 2030, and the Kenya Health Policy 2014-2030. The Constitution of Kenya, 2010 is the overarching legal framework that guides the health sector in the country and the Vision 2030 is the national development blueprint that outlines Kenya's development aspirations for all sectors, including the health sector. The Kenya Health Policy 2014-2030 provides the broad health sector policy framework for the country. The policy identifies 'research and development' as one of its eight policy orientations or investment areas. The policy's first strategic plan, the Kenya Health Sector Strategic and Investment Plan (KHSSP) 2013-2017, identifies various investment targets for enabling increased use of information and research in decision-making within the health sector. These Guidelines therefore seek to contribute to the operationalisation of the commitments made by the MoH in the Kenya Health Policy and the KHSSP 2013-2017 in terms of enabling increased use and consideration of evidence in policy development and implementation within the health sector in Kenya.

Essentials of policy-making

- 1.3 A *policy* can be defined as a course or principle of action adopted or proposed by a government, party, business, or individual. It is defined by Black's Law Dictionary (2nd Ed) as "the general principles by which a government is guided in its management of public affairs".
- 1.4 The World Health Organization (WHO) defines health policy as referring to "decisions, plans, and actions that are undertaken to achieve specific health care goals within a society. An explicit health policy can achieve several things: it defines a vision for the future which in turn helps to establish targets and points of reference for the short and medium term" (WHO. n.d.).
- 1.5 Policy-making is defined as: "The act or process of setting and directing the course of action to be pursued by a government or business" (Webster's New World Dictionary, 5th Ed).

Evidence-informed policy-making

- 1.6 Evidence-informed policy-making is an approach to policy decisions that aims to ensure that decision-making is well informed by the best available evidence. It is characterised by the systematic and transparent access to, and appraisal of, evidence as an input into the policy-making process (Oxman, Lavis, Lewin & Fretheim, 2009).

Rationale for the Guidelines

- 1.7 The MoH has a long history of supporting and providing guidance to its staff to enable them to effectively deliver their roles and responsibilities. The Constitution of Kenya (2010) bestows the role of policy development to the national Ministry of Health, and the role of policy implementation to county governments. The Constitution further provides for county governments to formulate and adopt policy in line with broad national policies.
- 1.8 The policy-making process is typically complex and often driven by interests of different actors within and outside government.
- 1.9 Weak capacity in seeking, appraising and applying evidence remains one of the major barriers to research use in policy-making and programming in the health sector in Kenya (SECURE Health, 2014).
- 1.10 All these point to the need to provide guidelines that enable better understanding by health sector stakeholders of policy and the policy-making steps, as well as, the importance and steps involved in evidence-informed policy-making. These Guidelines are therefore a resource that offers important knowledge and skills in the policy-making process and the use of evidence to ensure more effective policies and programmes. It is hoped that the guidelines will standardise the policy-making process as well as encourage the consideration of high quality standard of research evidence in policy-making processes.

Intended users of the Guidelines

- 1.11 The Guidelines are designed primarily for use by senior officials and technical staff within the MoH. They are also useful to health workers and practitioners in the health sector. County departments of health will also find them useful and may wish to adopt or adapt them for use in their work. Beyond these groups, anyone involved in decision-making processes in the health sector, as well as other development sectors, will find the Guidelines useful.

Use of the Guidelines

- 1.12 The main purpose of the Guidelines is to enhance understanding of the policy-making process and strengthen skills for increased evidence use in the policy-making process to improve the quality of policy decisions in the health sector. It is therefore hoped that the Guidelines will be used as a reference tool by technical officers involved in policy-making processes.
- 1.13 The Guidelines cannot be fully comprehensive and are not a substitute to consulting detailed guidance on aspects of the institutional framework, legislative and financial processes and statutory obligations within the MoH and within government. Reference to the *Guide to the Legislative Process in Kenya* published by the Kenya Law Reform Commission (KLRC) in 2015 (KLRC, 2015) is especially encouraged.

The process of developing the Guidelines

- 1.14 The development of these Guidelines has been spearheaded by the MoH through the leadership of the Department of Policy, Planning and Health Financing. The MoH has been implementing a capacity strengthening programme for research use since February 2014 through a partnership of various institutions led by the AFIDEP. It is through this partnership that the *Guidelines for Evidence Use in Policy-Making* have been developed. Initial drafts of the Guidelines have been discussed with a wide range of stakeholders including the primary target users (technical staff within the MoH) as well as other health sector stakeholders and experts in the health research-to-policy process. Insights from these consultations have further enriched them (see the list of contributors under Annex 1). Finally, the development of the Guidelines has been informed by the government's provisions and guidance contained in the *Guide to the Legislative Process in Kenya* (KLRC, 2015).

Structure of the Guidelines

- 1.15 The rest of this document is in two parts: Part I focuses on the policy-making process and seeks to build knowledge and understanding of the broad policy-making process and the health sector-specific policy-making process in Kenya. Part I comprises chapters 2 and 3. Chapter 2 sets out the foundation of policy-making, providing information on the complexity of the public policy-making process and the actors as well as factors that influence the process. Chapter 3 focuses on the health policy-making process in Kenya, outlining the different levels of health policy-making and the steps involved in the health policy-making process in Kenya. Part II comprises chapters 4 to 8 and focuses on evidence-informed policy-making. It provides guidance and tips on the use of evidence in the policy-making process. Chapter 4 focuses on defining a policy question, Chapter 5 outlines the steps in accessing evidence with Chapter 6 focusing on ways of appraising evidence. Chapter 7 discusses ways of synthesising evidence, and finally, Chapter 8 outlines ways of applying evidence in decision-making. Understandably, Part II (i.e. evidence-informed policy-making) is linked to Part I (i.e. the policy-making process). However, these Guidelines separate the two parts deliberately for ease of use, and also to enable a comprehensive focus on knowledge and skills required for enabling evidence use in the health policy-making process. The final chapter provides a conclusion to the Guidelines.

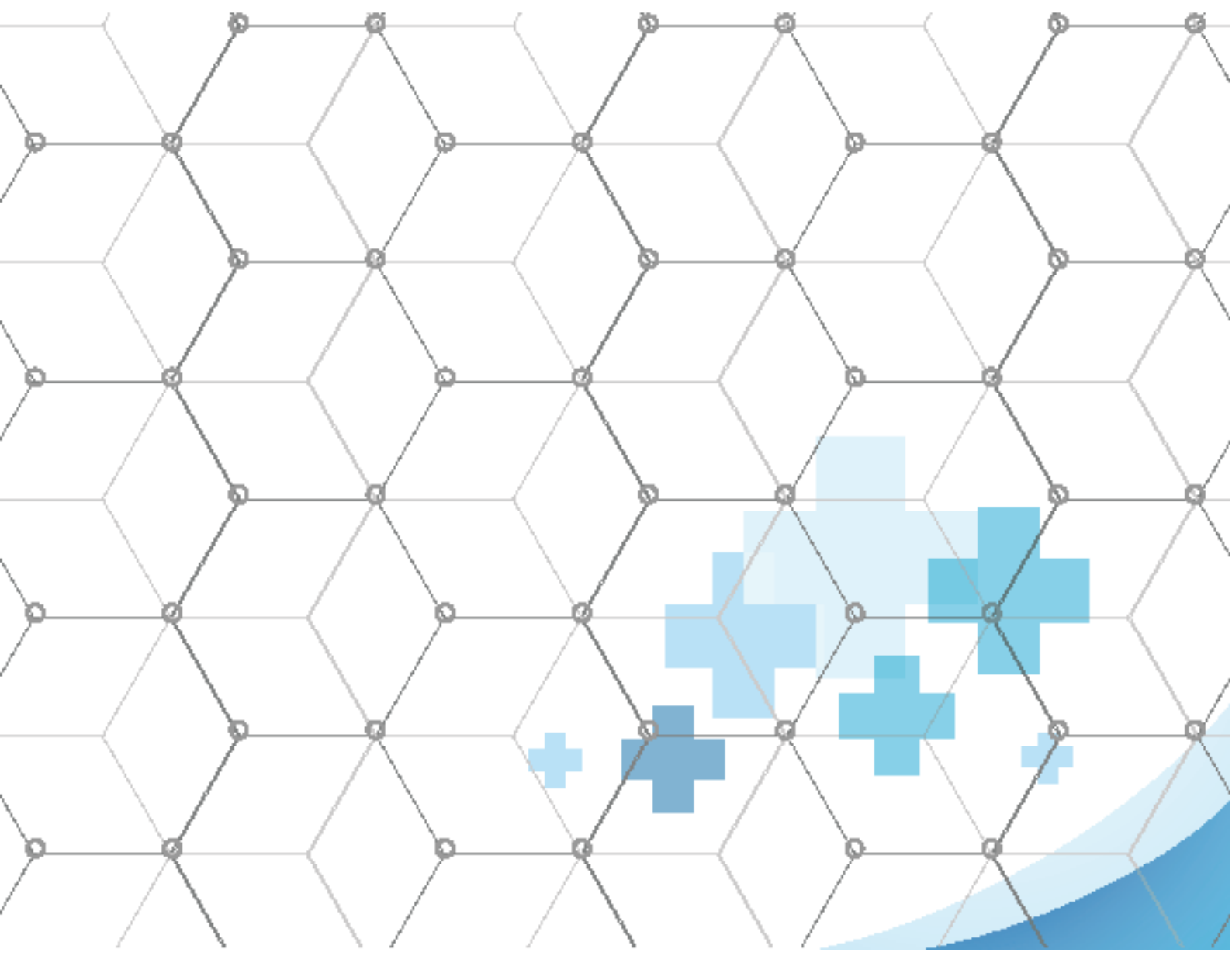
Part I.

The Policy-Making Process

Part I of the Guidelines focus on the policy-making process and comprises chapters 2 and 3. Chapter 2 sets out the foundation of policy-making, highlighting the complexity of the public policy-making process and the different factors that influence the process including research evidence. Chapter 3 focuses on the health policy-making process, highlighting the overarching legal and policy framework that guides the health sector, the differences between diverse levels of policy-making, and the steps involved in the health policy-making process. The purpose of this part is to enable a good understanding of the public policy-making process in general, and the health policy-making process in Kenya, in particular. This understanding is important in enabling the use of evidence at the different stages and levels of health policy-making. Part I of the Guidelines therefore sets the ground for Part II, which provides guidance on actual evidence use in health policy-making.

Chapter 2

Foundation of Policy-Making



Foundation of Public Policy-Making

2.1 This chapter provides an understanding of the public policy-making process, highlighting the complexity, the key stages, the different factors and actors that influence the process, and the facilitators of, and barriers to, evidence use in the policy-making process.

Context of public policy-making

2.2 Public policy-making is a political and complex process, influenced by many actors and factors and different kinds of information and priorities. Research evidence has to compete with many other factors and information to influence policy decisions. These other factors include politics, ideology, values, power dynamics, available resources, interests, habits and traditions. Figure 1 below attempts to demonstrate the complexity of the policy-making process. Scholars have identified three main factors that influence policy-making including:

- Policy actors and their networks, comprising government officials, political leaders, religious leaders, funding agencies, programme implementers, civil society and interest groups.
- Local and international contexts within which policy decisions are made, including the political context, socio-economic context, and cultural context.
- Evidence or knowledge available on the policy issue, and the prevailing framing of the issue in development discourses locally and internationally.

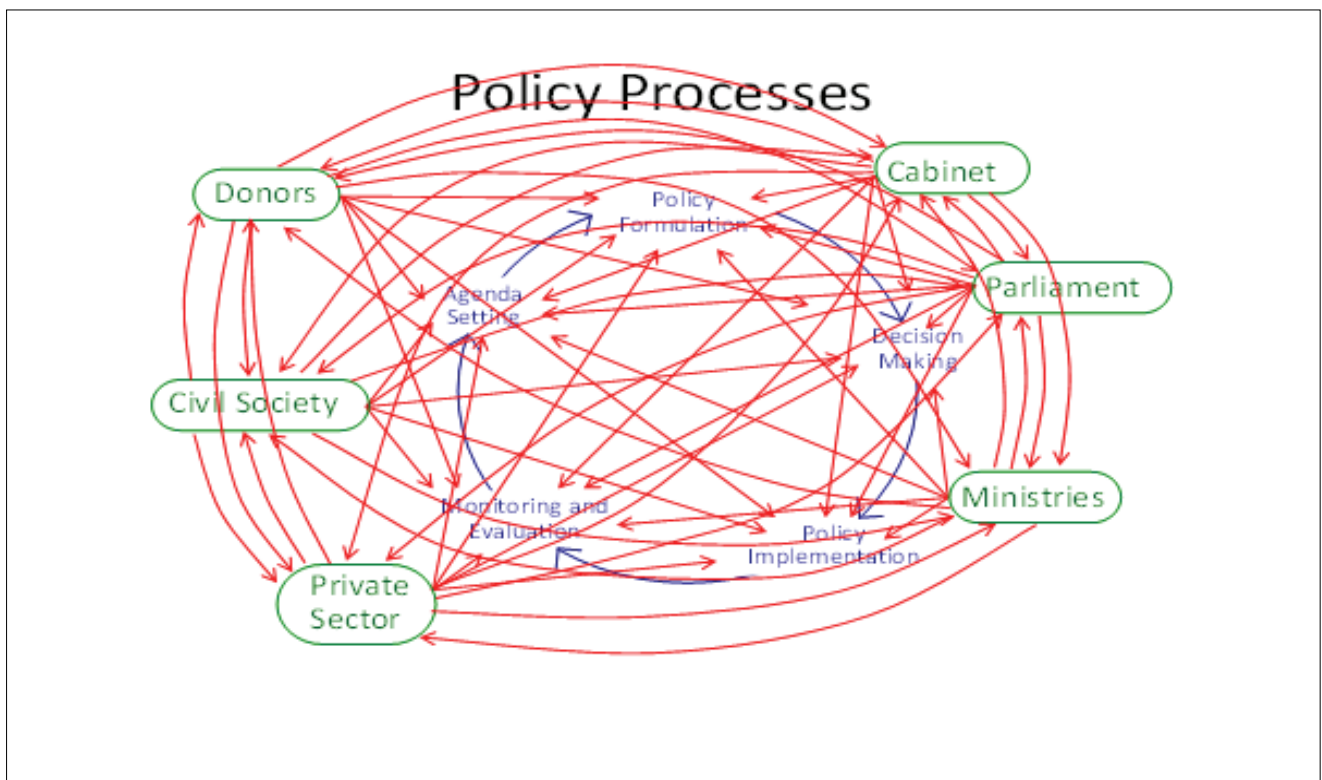


Figure 1. Complexity of the policy-making process; adapted from ODI: Policy Processes are Complex, (n.d)

Key stages of the policy-making process and their evidence needs

2.3 The complexity of policy-making has to be understood in the context of the four broad stages of policy-making, namely, agenda setting, policy formulation, implementation, and evaluation. Table 1 explains the key focus of each of these components and the different evidence needs in each of the stages.

Table 1. Key stages of the policy-making process

Policy development stage	Description	Evidence needs at the different stages
Agenda setting	Awareness and priority given to an issue	Identifying new problems or the build-up of evidence regarding the magnitude of a problem so that relevant policy actors are aware that the problem is indeed important. A key factor here is the credibility of the evidence, as well as the way the evidence is communicated.
Formulation	There are two key stages of the policy formulation process: determining the policy options and then selecting the preferred option.	For both stages, policymakers should ideally ensure that their understanding of the specific situation and the options is as detailed and comprehensive as possible; only then can they make informed decisions about which policy options to go ahead and implement. This includes the instrumental links between an activity and an outcome as well as the expected cost and impact of an intervention. The quantity and credibility of the evidence is important.
Implementation	Actual practical activities.	Here, the focus is on operational evidence to improve the effectiveness of initiatives. This can include analytic work as well as systematic learning around technical skills, expert knowledge and practical experience. Action research and pilot projects are often important. The key is that the evidence is practically relevant across different contexts.
Evaluation	Monitoring and assessing the process and impact of a policy.	The first goal here is to develop monitoring mechanisms. Thereafter, according to Young and Quinn (2002), 'a comprehensive evaluation procedure is essential in determining the effectiveness of the implemented policy and in providing the basis for future decision-making'. In the processes of monitoring and evaluation, it is important to ensure not only that the evidence is objective, thorough and relevant, but also that it is then communicated successfully into the continuing policy process.

Source: ODI 2006.

Facilitators and barriers to evidence use in policy-making

2.4 As noted earlier, evidence is not optimally used in policy-making for many reasons. This makes it important to understand the factors that enable or increase the use and consideration of evidence (i.e. facilitators) as well as those that hinder evidence use (i.e. barriers) in policy-making processes. A fair amount of research has been conducted on the facilitators and barriers of evidence use and we will draw on this.

Facilitators of evidence use

2.5 Several factors and conditions have been documented as facilitative of research use in policy-making. On the supply-side of evidence, these factors include existence of relevant and timely research that is well packaged for use by policymakers, implementers, and the general public, as well as wide dissemination of the research. On the demand-side of evidence, these factors include policymakers having interest and motivation to use research evidence, having access to research evidence, and having the institutional capacity and individual technical skills to access, appraise, interpret, synthesise and apply research evidence. At the interface of policymakers and researchers, an important facilitating factor is the existence of collaboration and relationships between policymakers and researchers. Other facilitators of evidence use include:

- Results that are congruent with existing ideologies, and that are convenient and feasible
- Policymakers who believe evidence can act as an important counterbalance to expert opinion
- Strong advocates for research and evaluation findings

Barriers to evidence use

2.6 The study conducted in Kenya under the SECURE Health programme on the status of research use in the MoH and three counties (Busia, Mombasa and Nairobi) identified various barriers to research use as captured in Table 2 overleaf (SECURE Health, 2014).

Table 2. Barriers to evidence use identified by health sector policymakers in Kenya

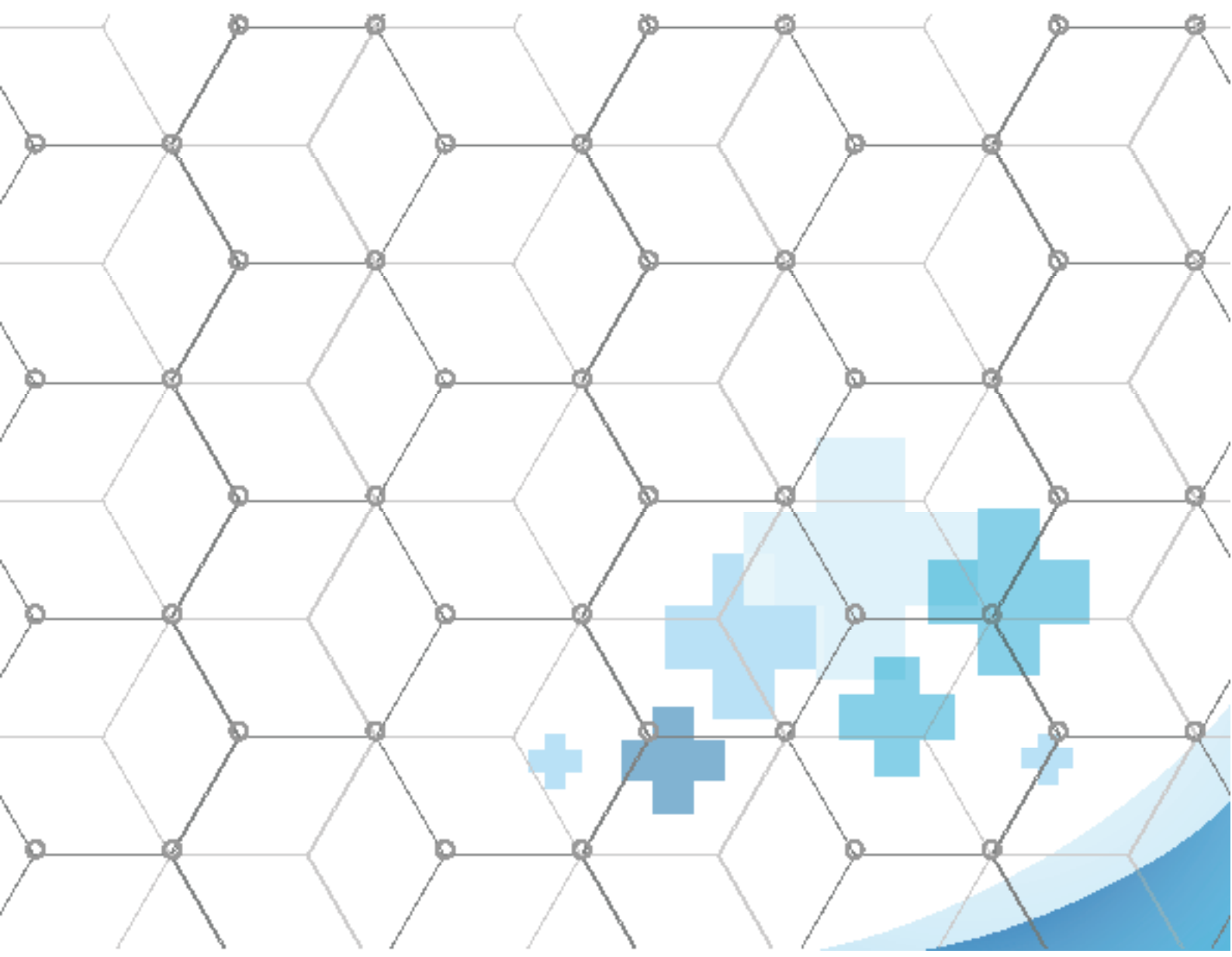
Type of Barrier	Ranking of barriers*
Access barriers	
Lack of a mechanism for accessing research evidence: <ul style="list-style-type: none"> Poor dissemination and packaging of research evidence Lack of access to research evidence Lack of or inadequate research evidence No repository No subscriptions to journals 	1
Poor data quality and a deficient health information system	2
Lack of or limited access to operations research or research in some specialised fields	3
Institutional barriers	
Inadequate funding to support the generation and use of research evidence in decision-making	1
Understaffing	2
Weak leadership for evidence use in decision-making	3
Weak institutional linkages with research institutions	3
Lack of institutional forums for communicating research evidence to top-level decision-makers	4
Lack of equipment, software and systems to support sourcing and using research evidence and data.	5
Politics and personal interests driving decision-making	6
Lack of guidelines for research evidence and data use	7
Inadequate institutional incentives for promoting evidence use in decision	8
Suspicion about motives of research funders and the validity of their research evidence	8
Individual barriers	
Inadequate technical skills	1
Inadequate time due to competing demands	2

* The barriers have been ranked within the three categories. The categories have not been ranked since they are all important in enabling increased use of evidence.

2.7 Other barriers not captured in the table above include lack of motivation by policymakers to use evidence, contextual politics and cultural interests and values, as well as supply-side barriers to research use, including research evidence being irrelevant, untimely, and not well-packaged and widely disseminated.

Chapter 3

Health Policy Development Process



Health Policy Development Process

3.1 National health policy formulation is the core mandate of the MoH. Health policies developed by the MoH have to fit within the broader legal framework as well as strategic development blueprints of the country. The Constitution of Kenya (2010) makes the implementation of health policy the main responsibility of the county governments. Nevertheless, the Constitution provides for county governments to formulate and adopt policies in line with broad national policy frameworks.

Health policy and the overarching national policy and legal framework

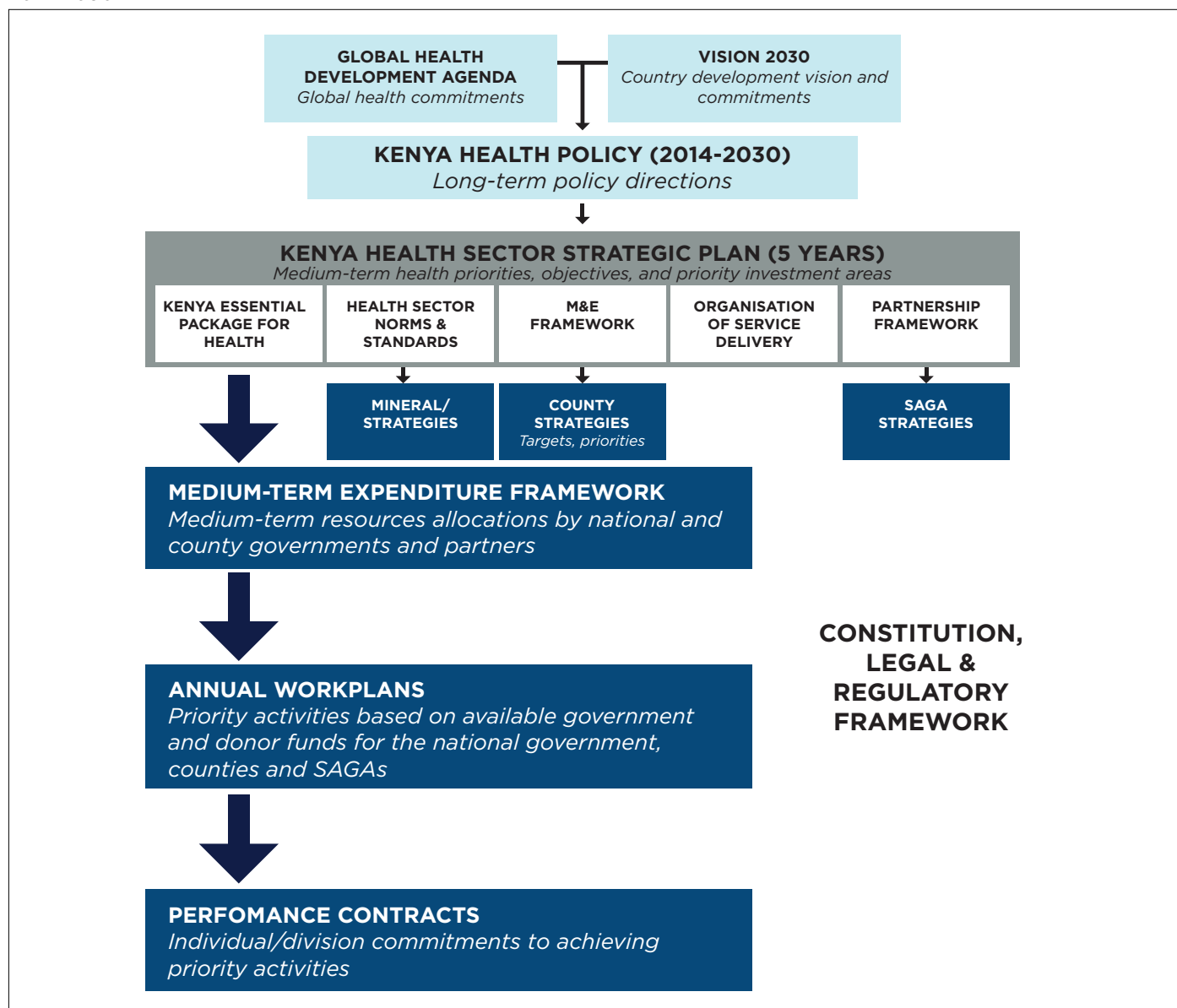
3.2 The Constitution of Kenya (2010) is the overarching legal framework that guides Kenya's health sector. The Constitution devolves healthcare service delivery, giving the mandate of health policy formulation largely to the national MoH, and the mandate of health policy implementation to the 47 county governments. The Kenya Vision 2030 also provides the broad national development policy framework within which health issues are tackled. The Kenya Health Policy 2014-2030 is the broad national health policy framework that operationalises the provisions of the Constitution of Kenya, 2010 and the Vision 2030 for addressing health challenges in the country. The Health Bill 2015 is aligned to the Kenya Health Policy 2014-2030, and seeks to provide the legal framework for the implementation of the Kenya Health Policy 2014-2030. All sectoral health policies are or should be anchored on the policy. The policy is implemented through five-year medium term plans, and the current one is the Kenya Health Sector Strategic and Investment Plan 2013-2017 (KHSSP). Sub-sectoral policies (such as the Reproductive Health Policy) are formulated and implemented within the guidance of the Kenya Health Policy framework. Sectoral health policies should have implementation plans or strategies that clearly outline how the policies will be implemented. Where necessary, sectoral policies can have operational guidelines outlining specific guidance to the various aspects of the policy relating to service provision or implementation. Figure 2 overleaf presents the Kenya Health Policy Framework.

Health sector policy framework

3.3 The overarching goal of the Kenya Health Policy 2014-2030 is “**attaining the highest possible standard of health in a responsive manner**”. To achieve this goal, the policy seeks to realise six specific objectives including:

- i. Eliminate communicable diseases
- ii. Halt and reverse rising burden of non-communicable diseases (NCDs)
- iii. Reduce the burden of violence and injuries
- iv. Provide essential healthcare
- v. Minimise exposure to health risk factors
- vi. Strengthen collaboration with private and health-related partners

Figure 2. Health policy and the overarching national policy and legal framework in Kenya; Source: Kenya Health Policy 2014-2030

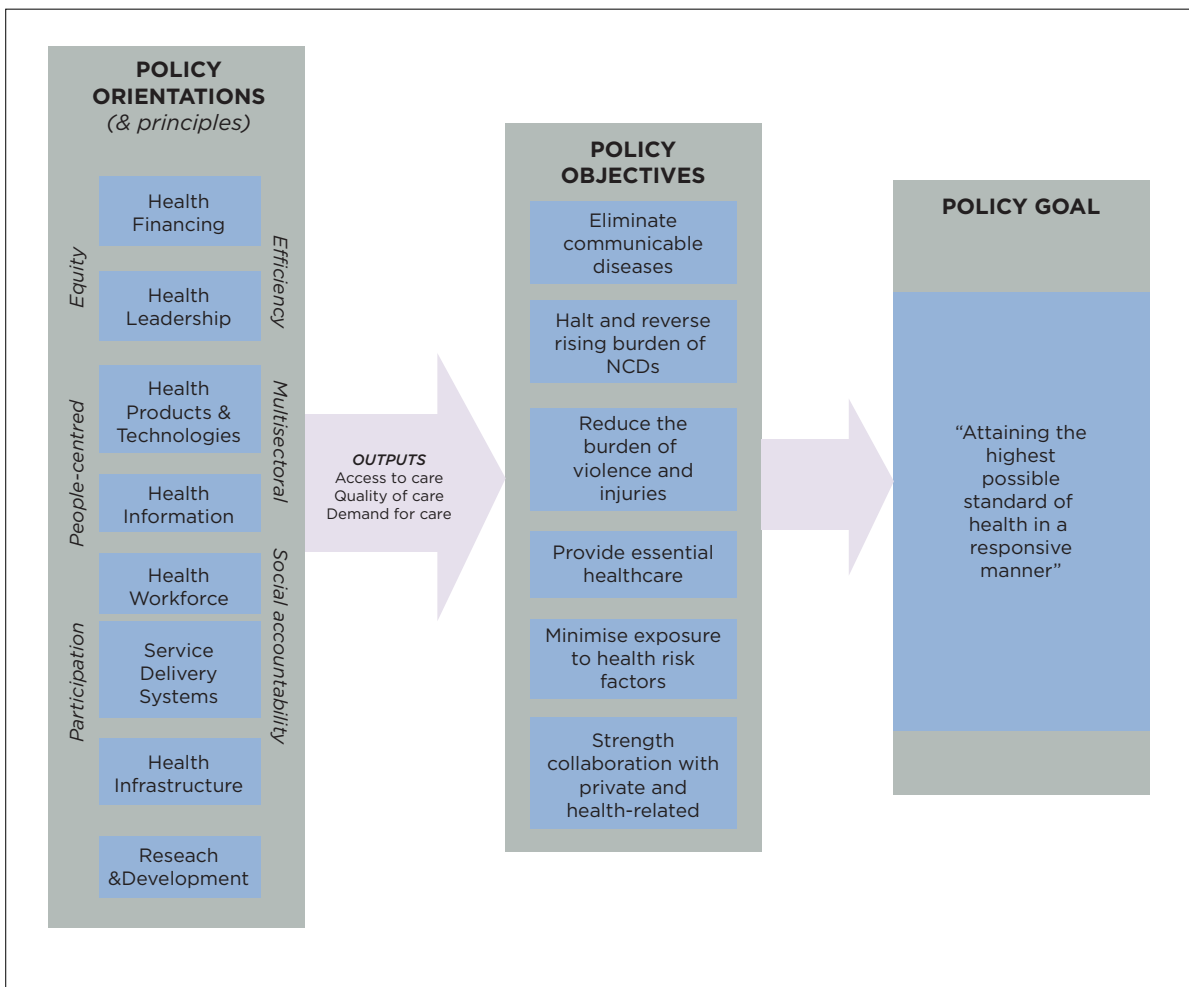


3.4 To achieve these objectives, the implementation of the policy will focus on three outputs including enhancing access to care, quality of care, and demand for care. These outputs are produced through a focus on eight policy orientations or investment areas including:

- i. Health financing
- ii. Health leadership
- iii. Health products and technologies
- iv. Health information
- v. Health workforce
- vi. Service delivery systems
- vii. Health infrastructure
- viii. Research and development

- 3.5 Six principles that guide the policy investments include:
- i. Equity in the distribution of health services and interventions
 - ii. People-centred approach to health and health interventions
 - iii. Participatory approach to delivery of interventions
 - iv. Multi-sectoral approach to realising health goals
 - v. Efficiency in the application of health technologies
 - vi. Social accountability

3.6 The policy framework described above is presented in Figure 3 below.



Levels of policy and responsibility for policy development

- 3.7 Table 3 overleaf summarises the different levels of policy in the health sector and provides guidance on the responsibility for development of the different levels of policy.

Table 3. Key features and responsibilities for different levels of policy-making

Policy type	Description	Key features	Responsibility level
Long-term (i.e. policy framework)	Provides a broad course of action (i.e. policy framework) for a sector (e.g. the Kenya Health Policy 2014-2030). Sub-sectors within the health sector may develop a policy to achieve long-term sub-sectoral goals (e.g. malaria policy, reproductive health policy, etc.)	<ul style="list-style-type: none"> • Period > 10 years • Driven by politics and desire for a common public good • Defines policy imperatives • Desired results defined by impact indicators • Resources/budget not defined 	Parliament, cabinet, top management
Medium-term (i.e. strategic plan)	Describes the approaches or means by which the course of action/policy framework (above) will be achieved in broad terms. It sets out strategic actions that will be implemented to realise the policy (e.g. the Kenya Health Sector Strategic and Investments Plan).	<ul style="list-style-type: none"> • Period between 3-5 years • Driven by policy, international and regional declarations • Defines strategies for implementing the policy imperatives • The desired results are either impact or outcome indicators • Implementation work plan based on strategies • Required resources and gap identified 	Mid-level managers
Guidelines, protocols	A guideline is a statement to assist with the determination of a course of action. A guideline aims to streamline processes according to the requirements of an expected practice and also ensure the quality of these processes. It often proposes best practices. A protocol, on the other hand, defines a set of procedures or steps to be followed for the accomplishment of a given task. Whereas a guideline provides the best practices to improve the quality of an outcome/result, a protocol has to be adhered to in order to reach the expected outcome/result.	<ul style="list-style-type: none"> • Outlines key processes of policy or strategy implementation • Reviewed regularly 	Mid-level managers, operational level
Short-term (i.e. operational annual work plans)	Provide a detailed outline of tasks and responsibilities in line with the goals and objectives contained in the strategic plan. It is therefore a one-year implementation plan for strategies outlined in the strategic plan.	<ul style="list-style-type: none"> • Period of 1 year • Driven by medium-term plans (MTP), implementation guidelines • Defines interventions/activities for the medium term strategies • Desired results defined by outputs/process 	Operational level

Features of good policy-making

- 3.8 The health policy development process includes all the activities undertaken to revise, create, and/or update a policy, through to the policy being adopted and implemented. Systematic policy development is essential to making informed and evidence-based policy decisions. It enables policymakers to identify and verify complex health sector challenges and find alternative ways to address them. It also informs political debate and improves the quality of decision-making.
- 3.9 Table 4 identifies eight features of good policy-making, including, forward looking, outward looking, evidence-informed, inclusive, joined-up, learns lessons, communication, and monitoring and evaluation. The figure provides an important threshold that should guide effective policy-making within the Kenyan health sector.

Table 4. Features of good policy-making

Feature	Description
Forward looking (clear goals and outcomes)	<p>The policy-making process clearly defines goals and outcomes that the policy is designed to achieve. Where appropriate, it takes a long-term view based on statistical trends and informed predictions of social, political, economic and cultural trends, for at least five years into the future of the likely effect and impact of the policy. The following points demonstrate a forward looking approach:</p> <ul style="list-style-type: none"> • A statement of intended outcomes is prepared at an early stage • Employs scenario building or forecasting • Takes into account the executive's long-term strategy
Outward looking	<p>The policy-making process takes account of influencing factors in the regional and international contexts; and draws on experience from other regions and countries. The following points demonstrate an outward looking approach:</p> <ul style="list-style-type: none"> • For regional level, it is informed by mechanisms and policies of the East African Community and the African Union Commission • For international level, it is informed by mechanisms and policies of UN agencies, World Bank, among other key international agencies • Looks at how other countries have dealt with the issue • Recognises variation within Kenya
Evidence-informed	<p>The advice and decisions of policymakers are based on the best available evidence from a wide range of sources; all key stakeholders are involved at an early stage and throughout the policy development process. All relevant evidence, including that from specialists, is available in an accessible and meaningful form to policy-makers. Key points of an evidence-informed approach to policy-making include:</p> <ul style="list-style-type: none"> • Reviews existing research • Commissions new research • Consults relevant experts and/or uses internal and external consultants • Considers a range of properly-costed and appraised options

Inclusive	<p>The policy-making process takes account of the impact on and/or meets the needs of all people directly or indirectly affected by the policy and involves key stakeholders directly. This includes consultations with county governments and the public, who are the beneficiaries of the policy. An inclusive approach may include the following aspects:</p> <ul style="list-style-type: none"> • Consults those responsible for service delivery/implementation • Consults those at the receiving end or otherwise affected by the policy • Carries out an impact assessment • Seeks feedback on policy from recipients and front line deliverers
Joined-up	<p>The policy-making process takes a holistic view; looking beyond institutional boundaries to the administration's strategic objectives and seeks to establish the ethical, moral and legal base for policy. There is consideration of the appropriate management and organisational structures needed to deliver cross-cutting objectives. The following points demonstrate a joined-up approach to policy-making:</p> <ul style="list-style-type: none"> • Cross-cutting objectives clearly defined at the outset • Joint working arrangements with other departments clearly defined and well understood • Barriers to effective joining-up clearly identified with a strategy to overcome them • Implementation considered part of the policy-making process.
Learns lessons	<p>Learns from experience of what works and what does not. A learning approach to policy development includes the following aspects:</p> <ul style="list-style-type: none"> • Information on lessons learnt and good practices disseminated • Account available of what was done by policymakers as a result of lessons learnt • Clear distinction drawn between failure of the policy to impact on the problem it was intended to resolve and managerial/operational failures of implementation
Communication	<p>The policy-making process considers how policy will be communicated to the public. The following contribute to effective communication of policy:</p> <ul style="list-style-type: none"> • Communications strategy prepared and implemented • Executive Information Service involved from an early stage
Evaluation	<p>Systematic evaluation of the effectiveness of policy is built into the policy-making process. Approaches to policy-making that demonstrate a commitment to evaluation include:</p> <ul style="list-style-type: none"> • Clearly defined purpose for the evaluation • Success criteria defined • Means of evaluation built into the policy-making process from the outset • Use of pilot interventions to influence final outcomes

Adapted from: Office of the First Minister and Deputy First Minister, Northern Ireland, A Practical Guide to Policy-Making in Northern Ireland (n.d.)

The policy cycle

3.10 Before focusing on the steps in health policy development, it is important to reiterate the four broad stages of policy-making captured earlier in Table 1, and now depicted below in Figure 4 as a cycle. Often, the need to review or develop a new policy will be identified through the final stage of monitoring and evaluation of existing policy.

For policy-making to be effective, civil servants involved in policy development not only need all the 'traditional' attributes (knowledge of relevant law and practice, understanding of key stakeholders' views, ability to design implementation systems), but they must also understand the context within which they (and the policy) have to work. This means understanding not only the way organisations' structures, processes and culture can influence policy-making, but also understanding the priorities of government and cabinet secretaries, and the way policies will work out in practice.



Figure 4. The policy cycle

Source: SECURE Health Evidence-Informed Policy-Making Training Curriculum 2015.

Steps in developing a policy

3.11 The *Guide to the Legislative Process in Kenya* (KLRC, 2015) outlines nine steps of the policy formulation process in Kenya. The steps, which largely apply to the development of long-term broad policy framework for a sector (see Table 3 above) and development of laws, include: i) policy initiation; ii) research; iii) negotiation and public participation; iv) finalisation of the policy; v) cabinet or county executive committee approval; vi) parliamentary or county assembly approval; vii) assent; viii) publication; and ix) draft bill. For the health sector, these steps apply to the development of the overarching health sector policy framework (i.e. Kenya Health Policy 2014-2030). For the development of sub-sector policies, strategic plans, guidelines or protocols, and operational work plans, only aspects of these steps apply. In 3.12 below and in the remaining part of this chapter, we outline specific steps in developing different levels of policy documents (as captured in Table 3 above) in the health sector in Kenya. It is important to note that the development of the overarching health sector policy framework needs to follow the steps outlined in the *Guide to the Legislative Process in Kenya* (KLRC, 2015).

3.12 There are various steps in the health policy development process, starting from identifying a policy issue to evaluating policy implementation. It is important to note that sometimes the steps are iterative and may not necessarily occur in a strictly linear fashion or chronological order. The steps in the policy development process include:

- Step 1. Identify a policy issue
- Step 2. Preliminary considerations before starting the actual policy development
- Step 3. Assemble a policy development team
- Step 4. Identify/analyse problems and issues to be addressed in new/revised policy
- Step 5. Conduct an analysis of stakeholders to be involved in the policy development process
- Step 6. Set goals and objectives of the envisioned policy
- Step 7. Identify policy options to achieve the goals and objectives
- Step 8. Appraise and select policy options
- Step 9. Draft the policy
- Step 10. Deliberate draft policy with stakeholders
- Step 11. Validate and obtain official endorsement
- Step 12. Launch and implement policy
- Step 13. Monitor, evaluate, learn and revise policy as needed

3.13 There is a lot of synergy in the steps outlined in 3.12 above and those outlined in 3.11 in the *Guide to the Legislative Process in Kenya* (KLRC, 2015). Table 5 below captures these synergies to demonstrate that the two sets of steps do not contradict each other.

Table 5. Synergy between steps in policy formulation outlined in the KLRC Guide and steps proposed in these Guidelines

Steps in Policy Formulation outlined in the <i>Guide to the Legislative Process in Kenya</i> (KLRC, 2015)	Steps in health policy-making proposed in these Guidelines
I. Policy initiation	Step 1: Identify a policy issue
	Step 2: Preliminary considerations before starting the actual policy development
	Step 3: Assemble a policy development team
II. Research	Step 4: Analyse problems and issues to be addressed in the new/revised policy
	Step 5: Conduct an analysis of stakeholders to be involved in the policy development process
	Step 6: Set goals and objectives of the envisioned policy
	Step 7: Identify policy options to achieve the goals and objectives
	Step 8: Appraise and select policy options
	Step 9: Draft the policy
III. Negotiation and public participation	Step 10: Deliberate draft policy with stakeholders

IV. Finalisation of the policy	Step 11: Validate and obtain official endorsement
V. Cabinet or county executive committee approval	
VI. Parliamentary or county assembly approval	
VII. Assent	
VIII. Publication	Step 12: Launch and implement policy
IX. Draft bill	Step 13: Monitor, evaluate, learn and revise policy as needed

Step 1. Identify a policy issue

3.14 The first step in policy development is identifying an issue that requires policy attention. Sometimes policy issues are already on the public agenda and senior government officials or the public or other players are demanding for a policy to address the issue. Other times, technocrats are the ones defining the issue and making the case for a policy response. There are various sources of policy issues, including:

- Periodic policy planning exercises that benefit from data and information accumulated and analysed in the MoH and related agencies (M&E)
- Widespread public attention or awareness of the issue
- A shared concern by the public that action is required
- A shared perception that the matter requires government intervention
- Government directives
- Regional and international treaties, declarations, or agreements

3.15 Once a policy issue is identified and there is agreement to develop a policy response, the next step is to focus on preliminary considerations before starting the actual policy development process.

Step 2. Preliminary considerations before actual policy development

3.16 The important considerations before starting to develop a policy include:

- Giving adequate consideration to how the policy process will be managed and resourced
- Careful consideration of the resources that will be required, especially the team that will develop the policy, including the MoH staff and the experts who will be involved, as well as the amount of time it will take to develop the policy
- Determining the information requirements, bearing in mind that good policy-making has to be based on evidence
- Developing a clear plan of the policy development process that details all the steps and the timelines, highlighting key milestones at each stage

Step 3. Assemble a policy development team

3.17 Health policy development is steered by the MoH, but it has to involve other stakeholders. As such, Step 3 of policy development is to assemble a policy development team (i.e. taskforce). The policy development taskforce often includes MoH officials, representatives of United Nation agencies, implementing agencies and organisations, researchers, and health professionals, among others. This team should be formally assembled as the one spearheading the policy development process, and its terms of reference and timelines for completion clearly laid out and communicated. The team should be led by MoH officials who should coordinate its activities. Once formed, the policy development team should review and update the policy development plan laid out in Step 2.

Step 4. Analyse problems and issues to be addressed in new/revised policy

3.18 Identifying and analysing the policy issue(s) that needs to be addressed by a new or revised policy is the first task for the policy development team. Often, this exercise is called a situation analysis, and it involves undertaking preliminary research that includes environmental scanning, stakeholder consultations, identifying policy challenges and gaps, and possible policy priorities. This is a critical step in the policy development process and should involve in-depth and critical analysis of the current policy situation to identify specific policy gaps and potential ways in which the new policy needs to respond to them. The product of this step is the policy concept paper and it should provide:

- A definition of the issue
- The scope and severity of the issue
- The rationale for intervention
- Goals and objectives that will be pursued to address the issue
- Expected outputs
- Activities underway to address the issue
- New or adapted policy alternatives that could be considered as ways to solve the issue
- Relation of this policy issue to national development goals
- Time-frame and budget for developing the policy

Step 5. Conduct an analysis of stakeholders to be involved in the policy development process

3.19 Involving key stakeholders who will be impacted by or be influenced by the policy implementation in one way or another is critical in policy development. At this stage, the policy development team should conduct a critical stakeholder analysis to identify stakeholders who need to be involved at different stages of the policy development process. Some of the questions that the team should ask in this analysis include:

- Who are the most important stakeholders (from a power and leadership analysis – e.g. ability to affect the implementation of the policy)?
- Who are key public and private sector stakeholders? Private sector stakeholders have often been ignored or under-utilised in health policy development
- What is the stakeholder's knowledge of the policy area?

- What are the stakeholders' positions on the specific policy?
- What do the stakeholders see as possible advantages or disadvantages of the policy (interest analysis)?
- Which stakeholders might form alliances?

3.20 This analysis should culminate in a detailed matrix that outlines the stakeholders, their interests, why they matter, and how and when they will be involved in the policy development process.

Step 6. Set goals and objectives of the envisioned policy

3.21 This is a critical step that sets out the goals and objectives of the envisioned policy. The report produced in Step 4 above is an important resource for informing the development of goals and objectives. Goals and objectives will vary depending on the level of policy-making or planning (see Table 3). Long-term policy will require broad long-term goals and objectives, whereas for mid-term and short-term policies, the goals and objectives will need to be SMART:

- **Specific** – goals and objectives must precisely target the issue of concern
- **Measurable** – goals and objectives should be expressed in measurable terms. This could be numerical (e.g. a percentage improvement) or in another form (could be qualitative). It's important to note that some goals and objectives may be harder to measure than others, but not impossible. Also, some goals and objectives may take longer to realise than others
- **Achievable** – goals and objectives should be within the available resources and time so that they are achievable. Goals and objectives that are not achievable are likely to demotivate the implementers
- **Realistic** – goals and objectives should be within reach for implementing agencies
- **Time-bound** – it should be clear when each objective is to be achieved

Step 7. Identify policy options for achieving the goals and objectives

3.22 At this stage, the team should develop a comprehensive set of options for achieving the identified policy goals and objectives. This step will need a great deal of research evidence, particularly evidence from systematic reviews and best practices as well as local evidence on what works in addressing the policy issue. Each option identified should include key programme areas, activities, implementers and stakeholders who will be involved (e.g. beneficiaries), and how success will be measured.

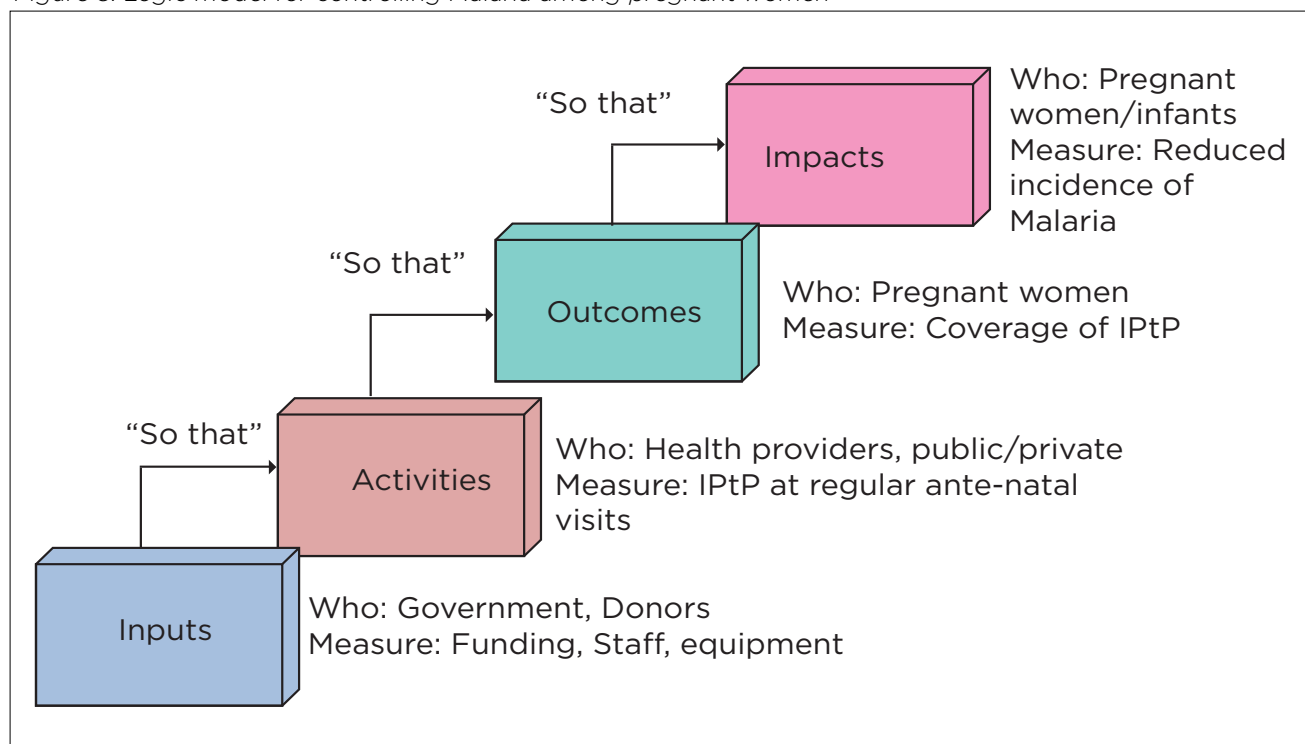
Step 8. Appraise and select policy options

3.23 Appraising each of the potential policy options is an important part of the policy-making process. It involves a critical evaluation of each of the possible policy options and comparing their relative merits, including the costs, benefits and risks that are associated with them, in order to inform selection of the best policy implementation option(s).

3.24 The initial task here is to establish evaluation criteria for assessing each policy option. The criteria focus on likely effectiveness in achieving the identified objectives; acceptability to implementing agencies, beneficiaries and other stakeholders; feasibility/realism of successful implementation in terms of human and financial resources, capabilities and capacity, and political will; sustainability of financial and other resources needed; and how well the policy options render themselves for evaluation. The criteria also involve detailing the costs, benefits, risks and other relevant impacts for each policy option.

3.25 A useful tool that could be used for evaluating policy options is the logic model, which is a widely used tool for evaluating interventions and policies. The logic model assists the user to explore the logical linkages upwards from inputs to activities to outcomes to impacts. Below is an example of a logic model for controlling malaria among pregnant women through intermittent preventive treatment of malaria in pregnancy (Figure 5).

Figure 5. Logic model for controlling Malaria among pregnant women



Source: WHO, 2012.

3.26 When appraising policy options, one should strive to answer the following questions:

- Is the option consistent with current government priorities, existing laws, regulations and policies?
- Is the option consistent with regional and international standards/policies and conventions that Kenya is a signatory?
- Does the policy option require new or revised laws or regulations?
- Is the policy option gender-sensitive? Does it cover vulnerable populations?
- Is the policy option sensitive to human rights?
- Is the policy option acceptable to key stakeholders, including political leadership, professional associations, beneficiaries, implementers, among others?
- What are the likely complexities and challenges in the timing or process of implementing the option?
- Is there requisite political will to implement the option effectively?
- Which populations are likely to benefit from the option?
- What are the financial and human resources requirements for implementing the option? And will these be available and sustainable?

3.27 The appraisal exercise should culminate into a report detailing the appraisal results for each policy option, comparisons of the different options, and recommendations of the preferred policy option(s). The preferred policy options should be discussed with key stakeholders to get their feedback. The recommended policy options should also be discussed with finance and legal units, where necessary, to get their inputs on the financial and legal implications of the proposed policy options. The policy development team should then discuss the recommended policy options with senior management within the MoH to get their views and approval. Where applicable and necessary, the recommended policy options can be piloted to assess their effectiveness in addressing the policy issue before they are adopted into policy.

Step 9. Draft the policy

3.28 Drafting of the policy document should only start once recommended policy options have been approved. Drafting of the policy should ensure that it is consistent with:

- Current government priorities
- Existing government laws, circulars, regulations and policies
- Other health sector documents covering the same or overlapping topics/issues such as strategic plans and/or guidelines
- International standards, model policies and conventions that the country is a signatory
- Human rights frameworks
- Gender sensitivity
- Appropriate roles of all relevant sectors and entities

3.29 Policy drafting is a critical and iterative process for the policy development team. Versions of the draft should be reviewed and deliberated by the team before a final document is presented for stakeholders' review and feedback (Step 10).

3.30 The policy document should follow the format below:

- Cover page – Coat of Arms for the Government of Kenya, title of policy below the Coat of Arms, and year of publication
- Foreword/preface
- List of abbreviations and acronyms
- Introduction
- Goals and objectives
- Priority areas for programme activities to achieve the objectives
- Policy implementation plan, including specific activities and detailed schedule
- Institutional arrangements – roles and responsibilities of different ministries or agencies, and non-state stakeholders
- Matrix of activities, outputs and responsibilities by responsible body
- Monitoring and evaluation (M&E) plan

3.31 The proposed M&E indicators should be:

- Valid – measure the outcome they are intended to measure
- Reliable – produce the same results when used more than once to measure the outcome
- Sensitive – reflect changes in outcomes according to changes in the interventions or programme over time
- Specific – measure only the effect of the intervention being evaluated
- Feasible – it is possible to collect the required data
- Affordable – the costs of collecting the required data are reasonable

Step 10. Deliberate the draft policy with stakeholders

3.32 Deliberating the draft policy with key internal and external stakeholders is a critical step that ensures consensus and ownership, which are critical elements for effective policy implementation. These stakeholders include the relevant technical working groups (TWGs) and inter-agency coordinating committees (ICCs), senior management within MoH, county government officials who will implement the policy, relevant political leaders, donor agencies, relevant UN agencies, implementing organisations, professional associations/networks, health service providers (including public, private and faith-based service providers), religious leaders, and beneficiaries of the policy.

3.33 At this point, the policy development team should also deliberate the policy with the finance and legal units. Deliberations of the draft policy with the finance unit should focus on discussing how the policy implementation will be funded, whereas deliberations with legal unit should focus on whether there is sufficient legal basis for the policy solutions suggested, or if there will be need for legislative reforms to enable policy implementation and their implications.

3.34 Issues and suggestions from these deliberations should be well documented by the policy development team, deliberated by the team, and the draft policy revised accordingly.

Step 11. Validation and official endorsement

3.35 Before official endorsement, the draft policy needs to be validated by a relevant high-level policy committee such as an ICC.

3.36 Depending on the level or scope of the policy (see Table 3), official endorsement is required either from the MoH's senior management or cabinet. Getting this endorsement is the responsibility of the MoH department/division/unit leading the policy development process.

Step 12. Launch and implementation of policy

3.37 Following official endorsement, the MoH should launch the policy through official stakeholders' meetings, press releases, and extensive dissemination activities. Key stakeholders should be involved in these launch and dissemination activities, including all county departments charged with implementing the policy, donors and UN agencies, private sector, service providers, implementing organisations, and beneficiaries of the policy. To be effective, policy dissemination should be accompanied with distribution of brochures/flyers summarising the policy and a popular version of the policy where necessary, in addition to the distribution of the policy documents.

- 3.38 The launch activities should also signal the start of the implementation of the policy. As such, these activities should make clear the roles and responsibilities of the different actors in implementing the policy, as well as the M&E indicators of success, and the different levels of accountability. The key milestones for the policy implementation process should also be made clear to all stakeholders. This is a critical step that should be conducted in an extensive and comprehensive manner to ensure that all stakeholders have been reached and that they understand their roles and responsibilities in implementing the policy.
- 3.39 Successful implementation of the policy will depend on various factors, key among them being:
- Ownership of the policy by implementing agencies, including county governments, service providers, and professional associations/networks. Therefore, they should be engaged throughout the policy development process
 - Allocation of the resources required to facilitate implementation – lack of resources is often the biggest hindrance to policy implementation. It is therefore the responsibility of the MoH department, division or unit leading the policy-making process to ensure adequate resource allocation (through lobbying and advocacy) and fundraising from donor agencies and other development partners.

Step 13. Monitor, evaluate, learn and revise policy as necessary

- 3.40 M&E is a critical, but often the weakest link in the policy-making process. Delivery of policy is rarely a one-off task nor a linear process; rather, this is best understood as a cyclical process involving continuous learning, adaptation and improvement, with the policy changing in response to emerging needs or issues or the changing environment. It is therefore important to build ongoing monitoring and review mechanisms into the delivery of the policy from the outset. Continuous monitoring of policy delivery will ensure that policy implementation is revised accordingly to ensure maximum results.
- 3.41 Formal evaluation of policy implementation is also important in assessing how well the policy has realised the set goals and objectives. For effectiveness, policy-making must be a learning process, which involves finding out from experience what works and what does not and making sure that others can learn from it too. Good evaluation should be systematic, analytical, study actual effects and judge success.
- 3.42 The MoH department, division or unit leading the policy development process should lead and guide the M&E process for policy implementation, in close collaboration with the county governments. It should be clear on who is collecting which information, and how the information will be used. The department, division or unit should also lead the revision of the policy based on the lessons learnt from the M&E exercises.

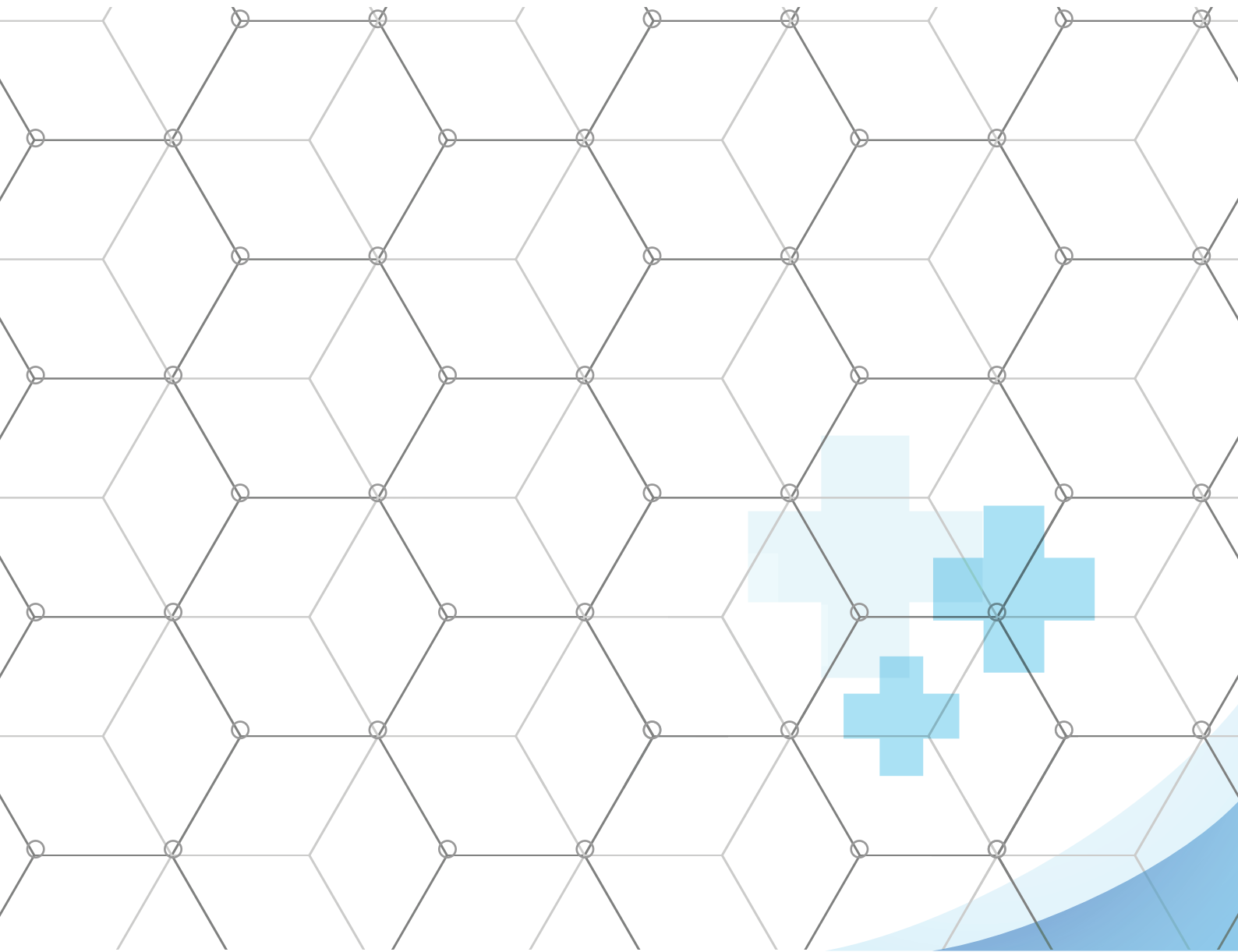
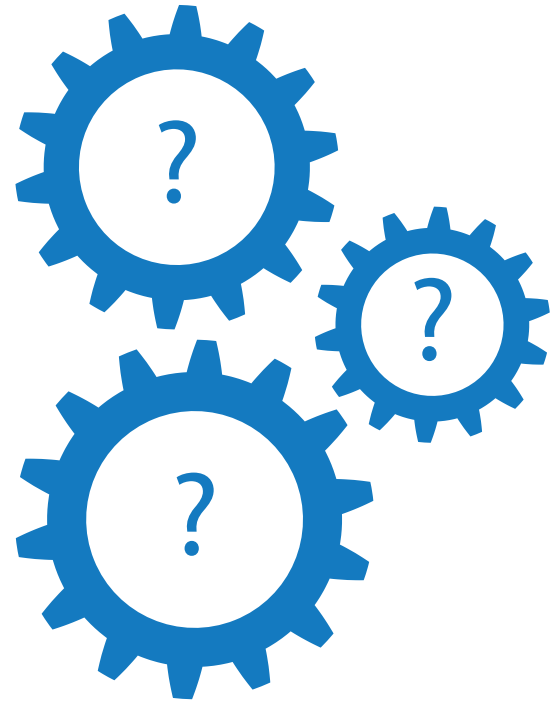
Part II.

Evidence-Informed Policy-Making

Part II of these Guidelines provides guidance on research evidence use in health policy-making, and comprises chapters 4 to 8. Chapter 4 focuses on defining a policy question, Chapter 5 outlines the steps in accessing evidence, Chapter 6 focuses on ways of appraising evidence, Chapter 7 discusses synthesising of evidence, and Chapter 8 outlines ways of applying evidence in policy-making.

Chapter 4

Defining and Developing a Policy Question



Defining and Developing a Policy Question

- 4.1 The first step in evidence-informed policy-making is to clearly define a policy question or problem. This is also the first step in developing an evidence search strategy as we will see in the next chapter. Think of it this way: before one can proceed to find evidence to inform a policy decision, one must have a clear idea about what the decision point or policy objective is. Although evidence is an important part of the policy equation, one cannot start looking for the relevant evidence without being clear on what the evidence is needed for. In other words, **what is the question that one is trying to answer by seeking out evidence?**

Distinction between a policy question and a research question

- 4.2 Before going any further on developing a policy question, it is important to first clarify the differences between a policy question and a research question. There is a thin line between a policy question and a research question. Both questions are seeking information. Even then, a research question seeks to generate information for understanding/explaining a phenomenon, whereas a policy question generates information for addressing or responding to a specific public policy issue/concern. Public policymakers are charged with tackling public or developmental issues, and so their search for information is geared towards not just understanding the issue, but also finding solutions to addressing the issue. As such, policy questions are often broader than research questions; indeed, a policy question often has more than one research question. A policy question moves the research question to the next level, i.e. what are the research findings telling us about tackling this particular policy issue (the 'so what' question).
- 4.3 There are some marked differences in the way policy questions are posed compared to research questions as captured in Table 6 below.

Table 6. Illustrating the differences between a policy question and a research question

	Research Question	Policy Question
1.	What factors explain the lack of progress in reducing maternal mortality in Kenya?	In what ways can the maternal health programme in Kenya be improved to reduce maternal deaths?
2.	Why is community X susceptible to frequent cholera outbreaks?	How can we address the frequent cholera outbreaks in community X?
3.	What is the nexus between policy and practice when implementing community health strategy?	How effective is the implementation of the community health strategy/guidelines?
4.	How are communities and non-state actors contributing to TB control in Kenya?	How can we improve the involvement of communities and non-state actors in TB control?

Types of policy questions

- 4.4 Questions in public health policy can be related to one or more of the following:
- A risk factor, disease or condition
 - The programmes, services or drugs currently being used to address a risk factor, disease or condition
 - The current health system arrangements within which programmes, services and drugs are provided
 - The current degree of implementation of an agreed upon course of action (e.g. a policy or guideline)
- 4.5 Evidence can be helpful in answering these questions by:
- Explaining the need for certain decisions or impetus for action
 - Showing the reasons for choosing one of many competing arguments
 - Increasing confidence in decisions that are eventually made
 - Helping to build consensus

Steps in defining a policy question

- 4.6 The first place to start in defining a policy question is to be clear on the issue that the MoH would like to tackle. This calls for a good understanding of where the issue lies in the policy-making process/cycle. For instance:
- Is the issue on the political agenda or does one need evidence to propel the issue onto the political agenda (i.e. agenda-setting stage)?
 - If the issue is already on the political agenda, does one need evidence to demonstrate how the issue can be tackled (i.e. policy formulation stage)?
 - If there is already a policy to tackle the issue but it is not being implemented or the implementation is ineffective, does one need evidence on the more effective ways of implementing the policy or does one need evidence to convince Treasury to allocate resources or increase resource allocation for effective implementation? (i.e. policy implementation stage)
 - If the policy on the issue has already been implemented, does one need evidence to determine how well the implementation of the policy tackled the issue, what worked and what did not in order to revise the policy or put in place a new policy to effectively address the issue (i.e. policy evaluation stage)?
- 4.7 Being clear on where the issue lies in the policy-making process is critical as it helps to determine the way one poses the policy question. It also helps define the nature and type of evidence that one looks for. This is because evidence is incorporated into policy-making at each of these different points, and the specific stage involved will determine how the question is formulated, and therefore, also point toward different types of evidence needs. Table 7 details the different policy stages and the types of policy questions that can be asked as well as the types of evidence needed at these different stages.
- 4.8 It is important to note that the policy question will likely be in only one of these stages, i.e. it is unlikely that one will have a policy question that focuses on an issue that lies in all the four stages of the policy-making process.

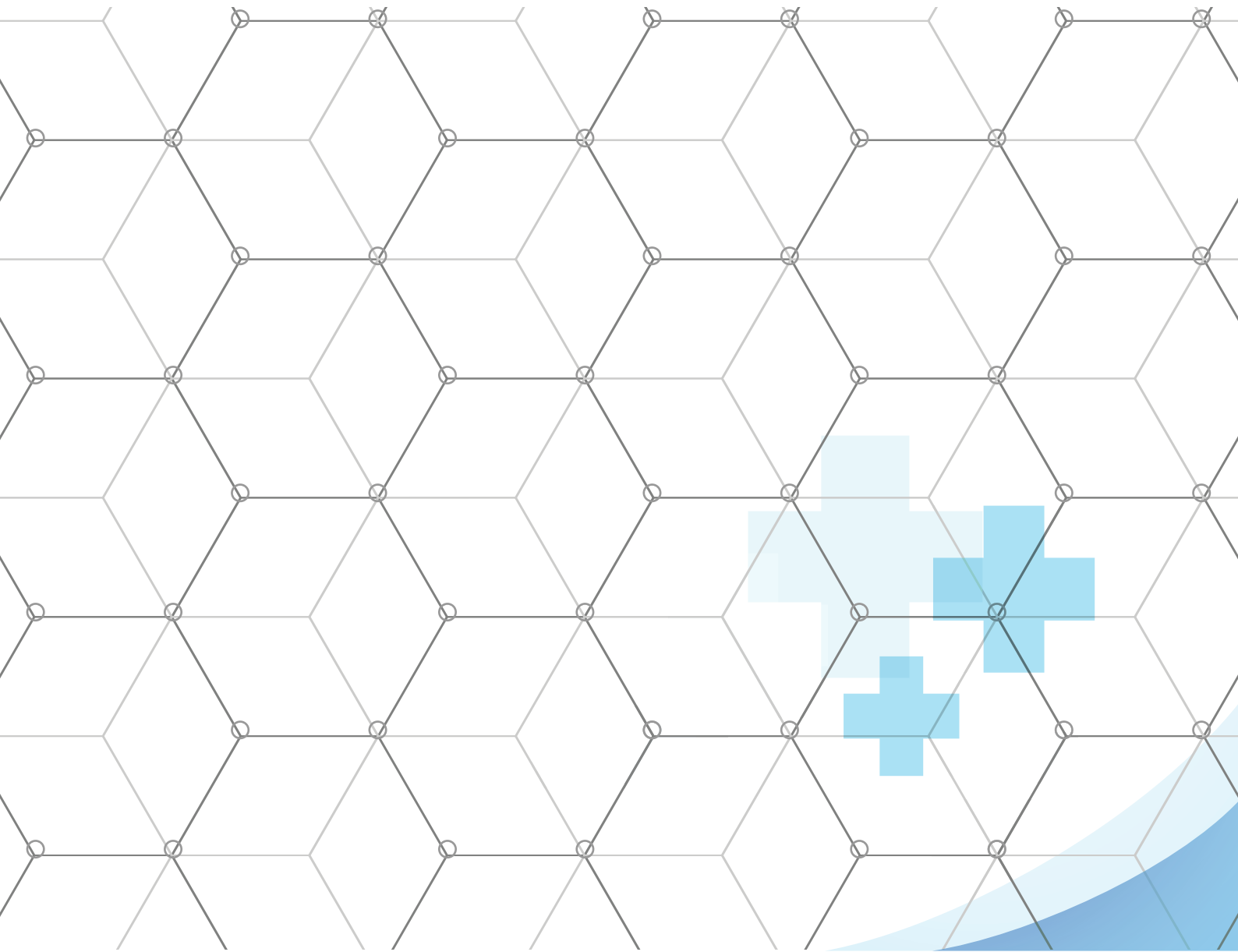
Table 7. Examples of policy questions at the different stages of the policy-making process

Policy-making stage	Examples of policy questions	Examples of types of evidence needed
<p>Agenda-setting stage: need to create awareness and raise priority for the issue</p> <p><i>A policy question is in this stage if policymakers are not aware of the problem, the extent of the problem, or the need to consider the problem important.</i></p>	<ul style="list-style-type: none"> • What is the magnitude of the problem? • Which sections of the population are most affected by the problem? • Which are the geographic areas of highest need? 	<ul style="list-style-type: none"> • Burden of disease – quantitative evidence that reveals the extent of the problem • Evidence that shows the costs borne by the government for not tackling the policy issue • Evidence that shows the development implications of the policy issues
<p>Policy formulation stage: determining and selecting policy options</p> <p><i>A policy question is in this stage if there is a general consensus that an issue needs a policy response, but the best policy options to address the issue are not known.</i></p>	<ul style="list-style-type: none"> • Which services would make the greatest impact? • Which interventions are most effective in responding to the issue? • What are the costs associated with the delivery of the different interventions? 	<ul style="list-style-type: none"> • Systematic reviews • Cost-effectiveness analyses
<p>Policy implementation: actual delivery of interventions</p> <p><i>A policy question is in this stage if there is a general understanding of the best policy options to address the problem, but there are challenges in their effective implementation.</i></p>	<ul style="list-style-type: none"> • How effective is the implementation of the programme X in tackling this issue? • How can we improve the delivery of programme X? 	<ul style="list-style-type: none"> • Action research • Evaluations of pilot projects
<p>Policy evaluation: M&E and impact</p> <p><i>A policy question is in this stage if programmes are being implemented to address the problem, but they lack adequate documentation of their effectiveness or impact, and/or there is a lack of communication of that information to the people who need it.</i></p>	<ul style="list-style-type: none"> • To what extent has the implementation addressed the policy issue? • Is the programme meeting its set objectives? • What lessons can we draw from the implementation to inform policy reforms? • Was the policy effective in tackling the problem? 	<ul style="list-style-type: none"> • Evaluation and impact assessment studies

Adapted from Pollard and Court (2005).

Chapter 5

Accessing Evidence For Policy-Making



Accessing Evidence for Policy-Making

5.1 Once a policy question has been defined, the next step is to find the evidence that can answer the policy question. This chapter thus focuses on getting information or finding the evidence to answer a policy question. It covers where to look (top, reputable sources and databases); how to look (Boolean terms and Google modifiers); and the information search strategy (how to do your own search, strategy steps and structure).

Sources of information for policy makers

5.2 The SECURE Health Study 2014 on the status of evidence use in Kenya's health sector revealed that technical staff in the MoH get information and evidence for informing their work from conferences and seminars, MoH's health management information systems, colleagues and MoH's programmatic technical working groups (TWGs).

5.3 Figure 6 below shows the common sources of research evidence for policymakers as documented in the literature.

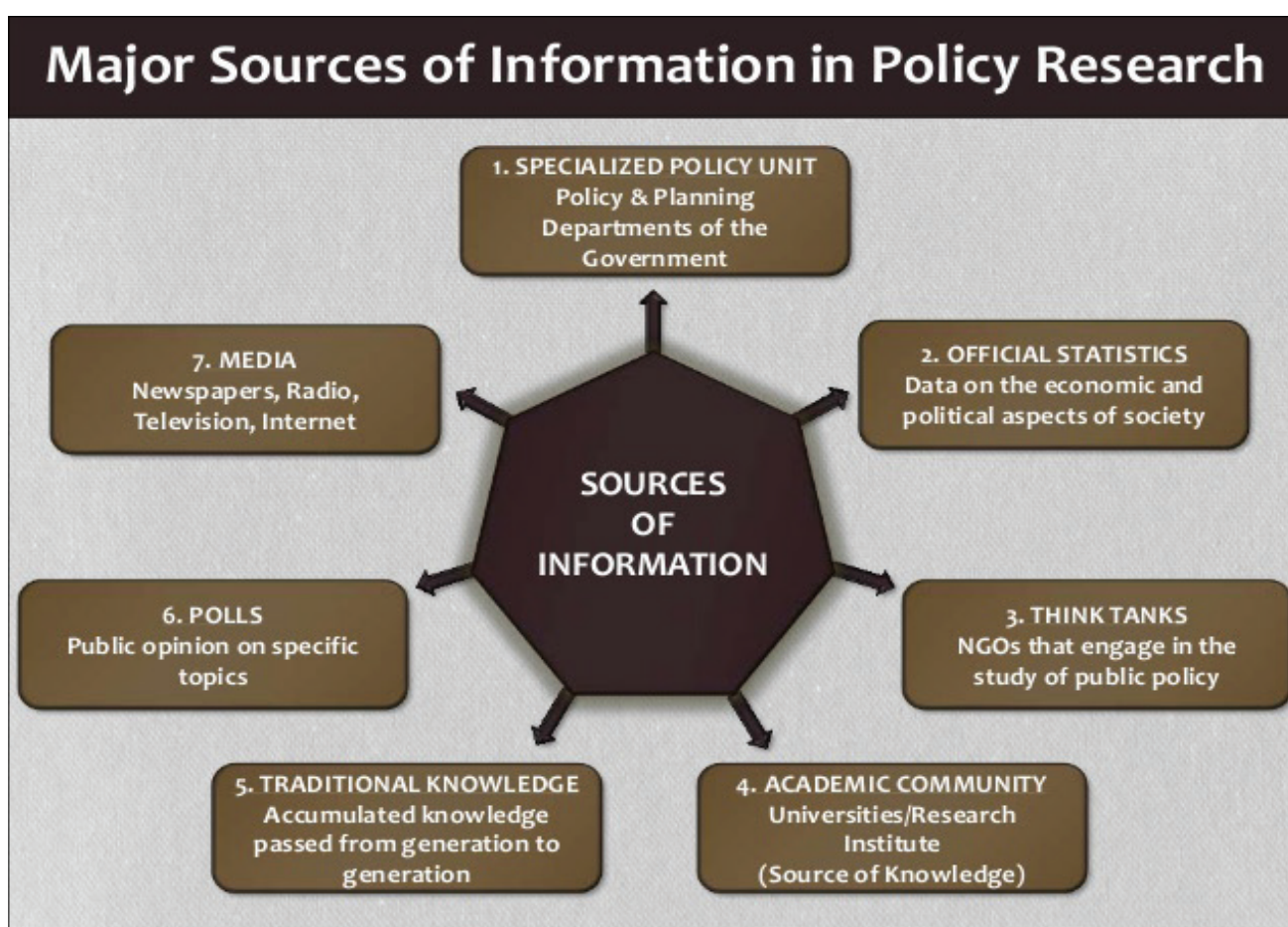


Figure 6. Major sources of information for policymakers
Source: Gurung, 2014.

Researchers as a source of evidence: establishing and maintaining links

5.4 As noted in Chapter 2, one of the factors that enable use of evidence in policy-making is meaningful relationships and trust between policymakers and researchers (Innvaer, Vist, Trommald, & Oxman, 2002; Oliver, Innvaer, Lorenc, & Woodman, 2014). Researchers can enrich the policy-making process by:

- Ensuring policy decisions are based on the most up to date information
- Enabling innovation in policy by bringing on board a range of valuable external viewpoints and fresh perspectives
- Bringing extra rigour to decisions, as they can ask and answer difficult questions and challenge and defend complex answers
- Bridging skills gaps in specialist analytical and data handling roles

5.5 These Guidelines recommend the need for policymakers to identify and sustain contact with researchers and research institutions in their area of focus. It proposes some ways in which policymakers can ensure a sustained contact with relevant researchers and research institutions including:

- Make an effort to know the main researchers in one's area of interest – their names, institutions where they work and their positions, telephone numbers, and email addresses
- Make initial contact – drop them an email requesting them to share any new research evidence they are generating, and to keep you abreast of their new findings
- Inform them of urgent or key policy issues that their research needs to answer
- Involve them in policy-making processes
- Request to be involved in their conferences, meetings and research studies
- Attend key scientific conferences in areas of interest
- Subscribe to receive regular newsletters and other publications of the research institutions in areas of interest

Online sources of evidence

5.6 The Internet has become an important but overwhelming source of information. Therefore, working with or through a librarian or knowledge management specialist can be beneficial to not only one's time, but also the quality of the information generated from Internet searches. Such experts also have more knowledge and experience with searching and literature repositories, and may in addition have access to databases that require fees or subscription costs. Apart from experts, some databases may have online technical support in searching and accessing documents.

5.7 These Guidelines highlight 10 commonly used databases or search engines as the go-to repositories for evidence for the health sector. Note that all these databases or engines have frequently asked questions (FAQs), how to search, and tutorials. These databases are listed in alphabetical order and not in order of importance. Note, however, that the list is not exhaustive and that there are many more top-tier databases depending on what one is looking for. The words “database” and “search engine” are used interchangeably although they have different meanings.

5.8 **African Index Medicus (AIM)** (<http://indexmedicus.afro.who.int/Journals/Indexj.htm>) --The WHO, in collaboration with the Association for Health Information and Libraries in Africa (AHILA), has produced an international index to African health literature and information sources. This index is called African Index Medicus (AIM). Printed knowledge generated in African countries is given global exposure in the AIM. It promotes African publishing by encouraging writers to publish in their country or regional journals, whereas new scientists and researchers in developing countries are competing for publication space in the few worldwide “prestigious” journals.

5.9 **The Cochrane Library** (www.Cochrane.org) is published on behalf of the Cochrane Collaboration and strives to improve healthcare decision-making through systematic reviews of research on the effects of healthcare interventions. For a definition of systematic reviews and why they are preferred in evidence-informed policy-making, please see Text Box 1 on page 46.

The Cochrane Collaboration identifies the strongest studies addressing a given issue, helping researchers and policymakers to separate reliable information in properly done studies from less reliable or rigorous information. Cochrane Collaboration Library’s five databases include:

- Database of Systematic Reviews – extremely rigorous
- DARE (Database of Abstracts of Reviews of Effectiveness) – well-done reviews by others
- Controlled Trials Registry – database of controlled trials, much smaller than Medline
- National Health Service (NHS) Health Technology Assessment Database – summaries of health Technology Assessments
- NHS Economic Evaluation Database – appraised summaries of economic evaluations

5.10 **HINARI** (<http://www.who.int/hinari/en/>)-- HINARI Access to Research in Health Programme provides free or very low cost online access to major journals in biomedical and related social sciences to local, not-for-profit institutions in developing countries. Up to 13,000 journals (in 30 different languages), 29,000 e-books, 70 other information resources are now available to health institutions in more than 100 countries, areas and territories, benefiting many thousands of health workers and researchers.

5.11 **POPLINE**[®] (www.popline.org) -- contains the world’s most comprehensive collection of population, family planning and related reproductive health and development literature. An international resource, POPLINE helps programme managers, policymakers, and service providers in low and middle income countries in development-supportive agencies and organisations gain access to scientific articles, reports, books, and unpublished documents. POPLINE is a free resource, maintained by the Knowledge for Health (K4Health) Project at the Johns Hopkins Bloomberg School of Public Health/ Centre for Communication Programmes and is funded by USAID.

From a librarian: “Information searches in Pubmed and Popline are great but can be overwhelming. Have patience!”

5.12 **PubMed** (www.pubmed.gov) -- comprises more than 24 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher web sites. National Centre for Biotechnology Information, US National Library of Medicine host PubMed.

- 5.13 **Research4Life** (<http://www.research4life.org/>) -- is the collective name for four programmes – HINARI, AGORA, OARE and ARDI– that provide developing countries with free or low cost access to academic and professional peer-reviewed content online. Eligible libraries and their users benefit from online access to over 44,000 peer-reviewed international scientific journals, books, and databases; full-text articles which can be downloaded for saving, printing or reading on screen; searching by keyword, subject, author or language; resources available in several languages; training in information literacy and promotional support. Research4Life is a public-private partnership of the WHO, Food and Agriculture Organisation, UN Environmental Programme, World Intellectual Property Organisation, Cornell and Yale Universities and the International Association of Scientific, Technical and Medical Publishers.

Textbox 1. What are systematic reviews and why are they preferred in evidence-informed policy-making?

A systematic review is defined as “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.” (NHS Centre for Reviews and Dissemination 2001).

Systematic reviews are preferred in evidence-informed policy-making (EIPM) because they not only provide a meticulous way of finding relevant, high quality studies, but also integrate the findings of these studies to give a clearer and more comprehensive picture of an issue than any single study can do (Gough et al 2013). Systematic reviews enable policy-makers to establish what is known from research, but also what is not known from research (ibid).

Evidence generated by a systematic review is much stronger than evidence generated from the traditional literature review since systematic review focus on ensuring a comprehensive review of all existing literature on the issue, and they also appraise the evidence.

Advantages of a systematic review include that they:

- Reduce bias
- Enable replicability
- Resolve controversy between conflicting studies
- Identify gaps in current research
- Provide a reliable basis for decision-making

Limitations of a systematic review include that:

- The results may still be inconclusive
- There may be no evidence
- Existing evidence may be of poor quality

Given their comprehensiveness, systematic approach, and critical appraisal of evidence, systematic reviews are preferred in EIPM as opposed to single studies. Policymakers are therefore encouraged to prioritise systematic reviews where they are available in informing policy decisions.

Meta-analyses are often confused with systematic reviews. Meta-analysis (see Table 10) is a method of statistically combining results from several selected studies in order to develop a single conclusion that has greater statistical power. If the individual studies utilized randomized controlled trials (RCT), combining several selected RCT results would be the highest-level of evidence on the evidence hierarchy (see Figure 11 on page 62), followed by systematic reviews, which analyze all available studies on a topic.

5.14 **World Health Organisation (WHO)** resources (<http://www.who.int/en/>) -- The WHO has a wide range of information resources on global and country-specific health issues. Specific resources can be found in WHO's Global Health Observatory (<http://www.who.int/gho/en/>) and Publications pages. The Observatory contains disease statistics, data repository, and analytical reports on global priority health issues.

5.15 **Google Search** (www.google.com) -- commonly referred to as Google Web Search or just Google, is a web search engine owned by Google Inc. It is the most-used search engine on the World Wide Web, handling more than three billion searches each day. The order of search on Google's search-results pages is based, in part, on a priority rank called a "PageRank". Google Search provides many different options for customised search, using Boolean and other options specified in a different way on an advanced search page.

- The main purpose of Google Search is to hunt for text in publicly accessible documents offered by web servers, as opposed to other data, such as image or database search. Google Search provides several features beyond searching for words.

From a librarian: "Using general Internet search engines such as Google to identify potential studies may be a good resource as these may be used to retrieve current (both published and unpublished) studies. Google will have more grey literature."

5.16 **Google Scholar** (<https://scholar.google.com/>) -- is a freely accessible web search engine that indexes the full text of scholarly literature across an array of publishing formats and disciplines. Google Scholar index includes most peer-reviewed online journals of Europe's and America's largest scholarly publishers, plus scholarly books and other non-peer reviewed journals. It is estimated to contain roughly 160 million documents.

From a librarian: "Google Scholar is good because it is peer reviewed. Both Google and Google Scholar will give you a lot (neither is indexed, that is read by staff who apply index terms to the articles) - and you'll have duplicates between them. These two are simply matching your terms - so you may have to put in a lot of different terms. That is, you can't assume 'vaccine' will get everything vaccine related term (e.g. vaccines, immunise, immunisations). You have to put in all possible alternatives."

5.17 **Development Experience Clearinghouse (DEC)** (<https://dec.usaid.gov/dec/home/Default.aspx>) -- USAID's DEC is the largest online resource for USAID-funded technical and project materials; makes nearly 200,000 items available for review or download, and continuously grows with more than 1000 items added each month. The DEC holds USAID's institutional memory, spanning over 50 years; including documents, images, video and audio materials. The DEC collects research reports, evaluations and assessments, contract information, tutorials, policy and planning documents, activity information sheets, and training materials.

5.18 The idea of evidence-informed is to look at everything. Conducting searches in multiple databases ensures that one gets all sides of the issue.

Developing an evidence search strategy

- 5.19 An evidence or information search strategy refers to the systematic steps undertaken to find the most appropriate information/evidence for answering a policy question. This strategy is especially critical since Internet and database searches can generate a large amount of potentially useful and non-useful information. The search strategy can be a formal or a less formal tool.
- 5.20 Developing a search strategy is an iterative process in which the terms that are initially used may be modified based on what has already been retrieved. There are diminishing returns for search efforts, that is, after a certain stage, each additional unit of time invested in searching returns fewer references that are relevant to the review. One can limit a search by dates, language, and/or country area. Generally, one should not limit a search at the beginning of the information search process so as to be able to capture a wide range of information sources/documents. If one really wants to be comprehensive, then one should not limit to language, but may have to translate.
- 5.21 Note that one can get more credible and useful evidence if one searches for literature that is tagged as “review” or “systematic review”. In this way, one can access information that has already been compiled and evaluated. Similarly, one can prioritise databases comprised only of systematic reviews like Cochrane or Campbell.

Steps in conducting an evidence search

- 5.22 There are **7 basic steps** of conducting evidence search:
- 5.23 Formulate what one is looking for into **a question** because that will focus the need and define relationships. In other words, what is one really trying to find out? The structure of a search strategy should be based on the main concepts being examined in a review. Generally speaking, a search strategy to identify studies will typically have three sets of terms: 1) terms to search for the condition of interest, i.e. the population; 2) terms to search for the intervention(s) evaluated; and 3) terms to search for the outcomes (optional).
- 5.24 **Brainstorm all the terms** that could be used in the question. Look at any references that appear to be right on target and see what terms they use. Group terms and decide how to **put terms together**, that's where the question will help. What Boolean operators should be used and how should they be logically arranged? (Boolean terms are discussed in the next section).

Decide whether to **“start wide”** and narrow down (see what is out there and refine) or “start narrow” and then widen (start with pre-conceived ideas and build). There is no right or wrong way; it is dependent on how different brains work. But, starting narrow can limit what one gets because one is essentially using pre-conceived ideas and may have missed something.

Decide whether data from **unpublished studies** are to be included. There are many definitions of grey literature, but it is usually understood to mean literature that is not formally published in sources such as books or journal articles. Conference abstracts and other grey literature have been shown to be sources of approximately 10 percent of the studies referenced in Cochrane reviews (Mallett, Hopewell & Clarke, 2002).

Remember, nearly anyone can publish information on the Internet; as such, it is common to find academic journals sitting next to comics and presidential speeches next to gossip. Focus on databases of credible academic journals.

5.25 **Brainstorm the databases** relevant for the search. Once decisions have been made regarding which databases will be searched, the following key decisions will need to be made as well:

- The limiting features available to target primary studies only (for example, use of document type codes). Keywords such as “study” or “studies” or “control group” may be used to limit the results to empirical research
- The study designs that will be included, if that is a need
- Any geographic considerations
- The time period that one is interested in (keeping in mind that retrieval tools have different beginning dates and may not index very old material)
- Language of publication that is to be included

5.26 **Launch** the database search.

5.27 **Evaluate** the results of the search. If nothing is helpful, there may be a couple reasons: there may not be much out there, the search terms could be wrong, or the relationships are not right. Go back, refine search terms, and try the search again.

5.28 **Record the search strategy**. Recording the search strategy is a good practice even if one is not writing a manuscript or conducting a systematic review (where it would be a requirement). Recording the basic fields of information in the strategy is not necessarily for reporting, but to help one know what one has already done and what still needs to be done. This helps avoid repeat work and is particularly helpful if the search effort extends over many months or is done by more than one person. The following can be used to guide the recording of the search strategy:

- List search terms
- List all databases searched
- Note the dates of the last search for each database AND the period searched
- Note any language or publication status restrictions
- List grey literature sources
- List individuals or organisations contacted
- List any journals and conference proceedings specifically hand-searched for the review
- List any other sources searched (e.g. reference lists, the Internet)

5.29 **Document the references**. One can use an Excel spreadsheet or even a MS Word document to collect and organise references. Reference manager software makes this task much easier and enables one to add notes to references, cite references and create bibliographies more easily. There are many programmes available. Some free ones are Zotero, Mendeley, and basic versions of Endnote (Endnote Online).

Identifying evidence search terms

Step 1. Using mind-maps

- 5.30 A great tip for brainstorming and organising terms is to use a mind-map to structure the information. Mind-maps were championed by Tony Buzan as a flexible organisational tool that uses a visual format to link words, ideas, tasks or other concept items together. Usually, mind-maps are developed around a central theme, with linked words arranged radially around the central theme. It is an image-centred diagram that represents the semantic connections between portions of information (see Figure 7 below).
- 5.31 By presenting these connections in a radial, non-linear graphical format, it encourages a brainstorming approach, eliminating the hurdle of initially establishing an intrinsically appropriate or relevant conceptual framework to work within. Mind maps record the information in the same way that our brains structure and store information through linked associations. A mind-map may help to define the search question, as well as help in identifying the terms associated with the chosen topic. Mind-maps are flexible, so one can include different branches for alternative spellings or related terms.

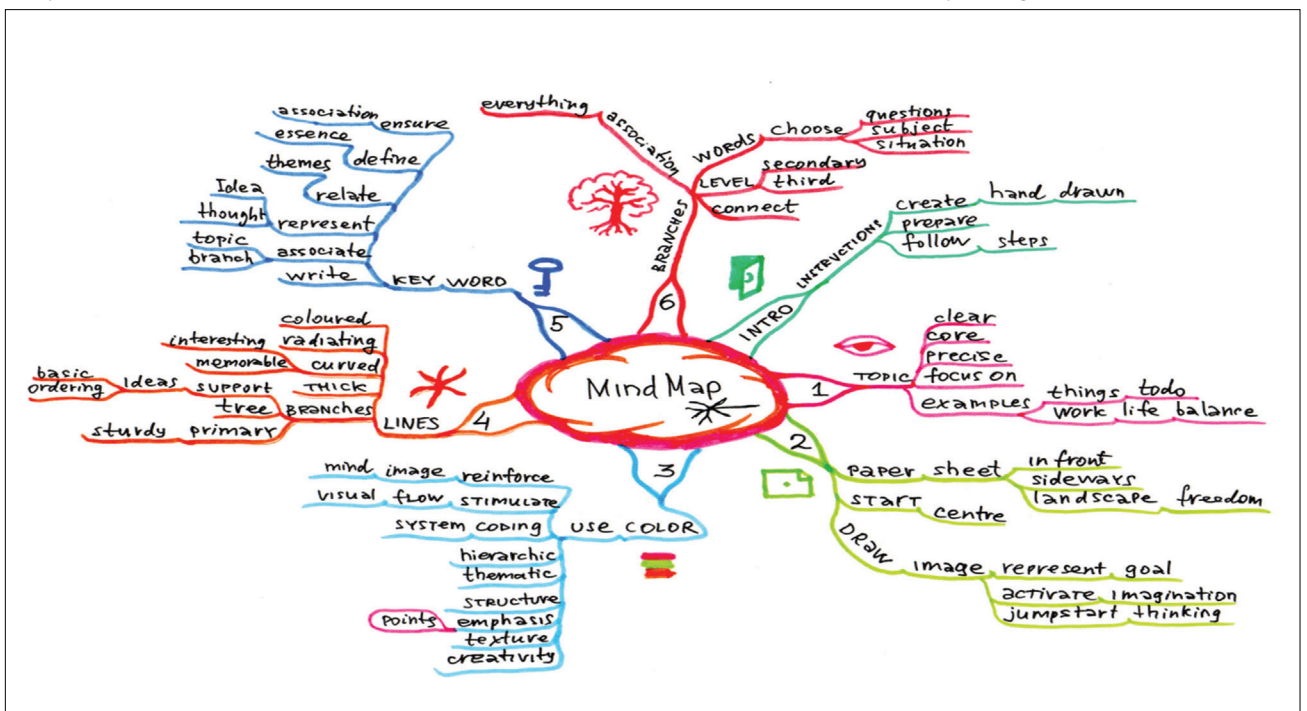


Figure 7. Different features of a mind map

Source: Kolsnik, 2012.

- 5.32 Figure 7 above shows the different features of a mind-map, e.g. one can use color or images to represent concepts; keywords radiate out from the central theme (i.e. mind-maps) to show the association/relationship between terms (e.g. a mind-map has lines, colour or other distinguishing elements).

5.33 Mind-maps are a great way of identifying what one already knows about a given topic, and can expand in detail as one's understanding of a specific domain increases. Once one has mapped the information landscape around a specific topic or research question, one can transfer this information into a concept cluster and then concept tables. Figure 8 overleaf provides an example of a mind-map.

MIND MAP EXAMPLE: REPRODUCTIVE HEALTH BENEFITS OF HIV SERVICES IN KENYA

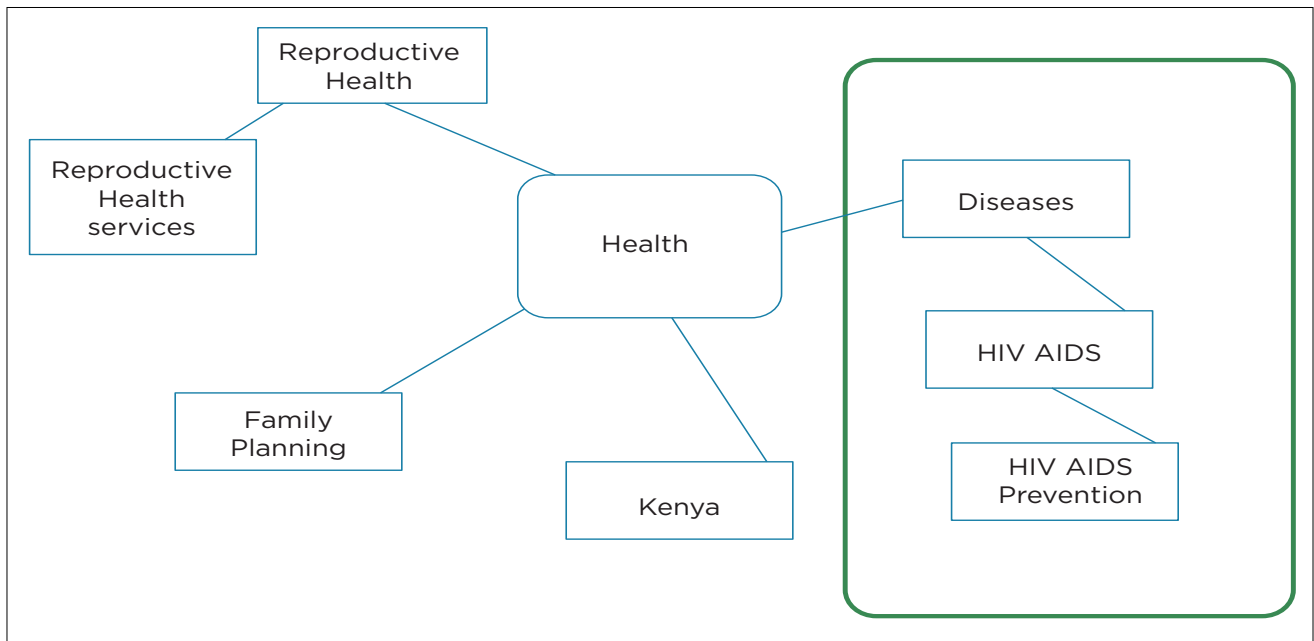


Figure 8. An example of a mind map

Step 2: Concept clusters

- 5.34 Once one knows the areas of interest taken from the mind-map, the next step is to cluster these into specific areas and also look for other terms that could be used to describe these areas. These terms are the search keywords, which one will eventually use to formulate a search strategy for locating information.
- 5.35 Concept clusters enable one to group related terms around a specific theme. These may be concepts or terms that are taken from one branch of the mind-map. For instance, the example of terms related to the research issue “reproductive health benefits of HIV services in Kenya” has been provided. These terms include concepts that one would look for in a search such as disease and more specifically HIV/AIDS. One would also include variants such as “HIV/AIDS”, “Women”. Concept clusters are collections of related concepts, ideas or terms.

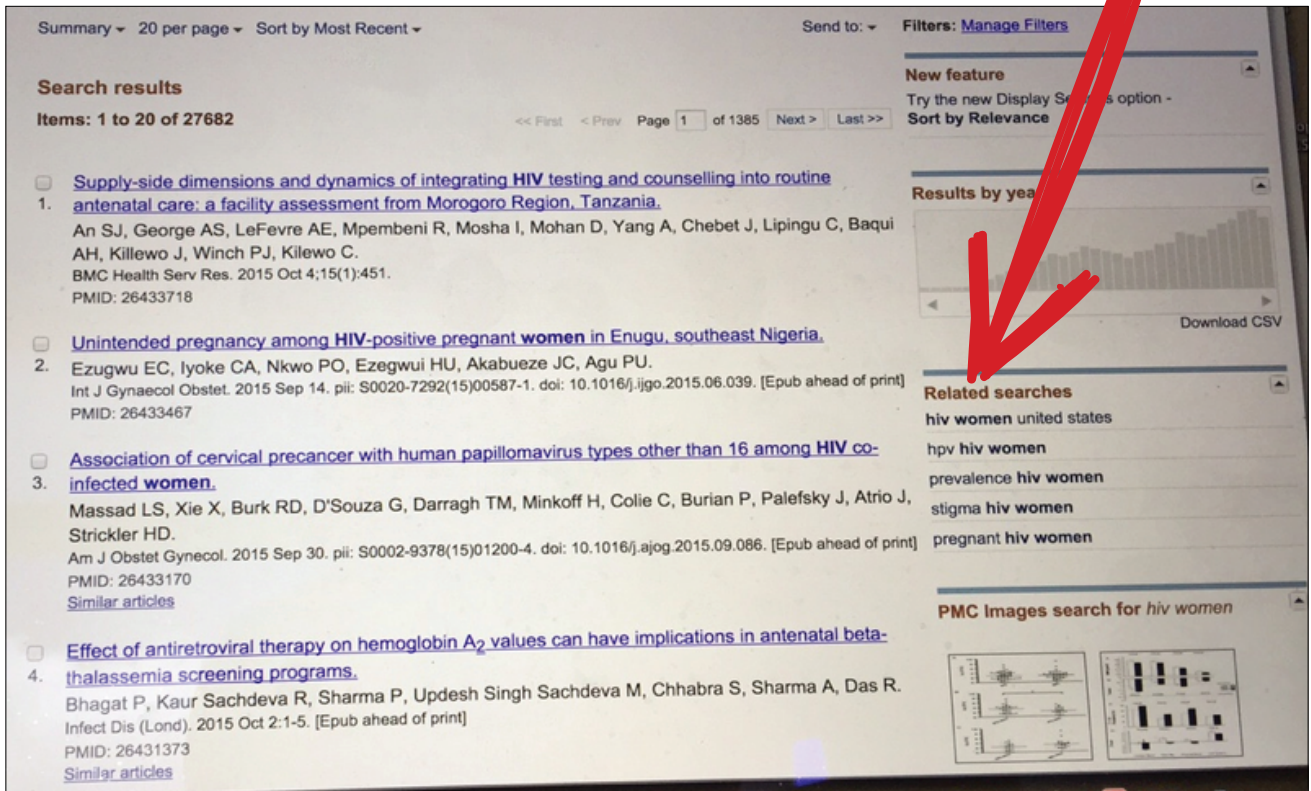


Figure 9. A search screen showing a source of more search terms

Step 3. Concept tables

5.36 The next step is to transfer clustered terms into concept tables:

- Transfer clustered terms/phrases into concept tables to create a list of terms that one will use for searching
- List associated terms under an 'umbrella' concept - e.g. disease, Kenya
- Clusters form key terms for search strategy or search table
- Take the concept 'clusters' and place them into a search/concept table as shown below

Table 8. Example of a concept table

Key Concept 1: Health	Key Concept 2: Kenya	Key Concept 3: Family planning
Diseases	Nairobi	Family Planning Methods
HIV/AIDS	Republic of Kenya	Natural Family Planning
HIV/AIDS Prevention	Eastern Africa	Family Planning Services

5.37 Clustered terms positioned within a concept table will help one to formulate a search strategy. By listing the concepts in a separate cell (under an umbrella term), one can begin to combine terms to create a search strategy. This technique is a great way to systematically record the combination of terms used in the search strategy.

- 5.38 To expand and enrich the search terms, one should also look at related search terms or subject terms in online databases. Figure 9 above points to the part of the online page/database where one will find related search terms or subject terms.
- 5.39 Once all the concepts have been gathered together in the table, one can begin to combine terms to create 'meaningful' search queries that respond to one's search question. In this example, the terms "HIV/AIDS", "Nairobi" and "family planning services" have been combined. Note that combinations of keywords e.g. "HIV/AIDS" have been enclosed in speech marks. This may or may not be necessary in all databases or search engines, but it is good practice as it ensures that the search limits only to documents with these terms following each other.

Boolean terms and Google search operators

- 5.40 Boolean terms are logical operators used in expanding or limiting an Internet information search. The operators include: AND, OR, and NOT. Figure 10 demonstrates how Boolean terms can be used in conducting an Internet search.
- 5.41 Some specialists think that as search engines like Google are becoming more sophisticated, Boolean terms are becoming a thing of the past. Still, some repositories use Boolean terms so we include them here along with some Google search tips.
- 5.42 Boolean operators can provide a powerful way of entering a search as they allow one to specify how the search terms are combined. To do this, one needs to use Boolean logic operators, namely: AND, OR, and NOT or their equivalents on the system that one is using (see Figure 10 below for demonstration). It is important to find out how the particular resource one is using uses these commands: some use symbols such as "+" (for AND), "-" for NOT), "*" (truncating terms), etc. There is almost always a 'help' section, which will explain how that particular resource works. Although different symbols may be used to represent the Boolean commands or operators, what the operators do is the same.
- 5.43 Tip: AND, OR and * (truncation/pluraliser) are the three most important. Use NOT sparingly since it will exclude a potential source if the term is mentioned.
- 5.44 Truncation: place a symbol at the end of the word so you search for variant endings of that word, e.g. *litera\$* would look for *literature*, *literacy*, and *literal*.
- 5.45 Wildcards: place a symbol within a word to find variations on it: e.g. *analy*e* would find *analyse* or *analyze*.
- 5.46 Different symbols are used by different search engines.
- 5.47 Inserting search phrases in speech marks ("") ensures a search for the exact phrase. For example, entering the phrase "knowledge uptake" into a search engine will only generate documents that have the phrase "knowledge uptake".

- 5.48 Boolean operators must be entered in capital letters (e.g. Synergy AND Conflict).
- 5.49 Different search tools may use “OR” or “AND” as a default setting, which means one may not need to enter these operators between the search terms or phrases. Google search engine is such an example.
- 5.50 A search strategy should build up the controlled vocabulary terms, keywords, synonyms and related terms for each concept at a time, joining together each of the terms within each concept with the Boolean ‘OR’ operator.
- 5.51 From a librarian: *“When using web search engines, search strategies should be entered into the advanced search screen as this allows the searcher to easily use Boolean logic and limiting commands through the use of menus.*

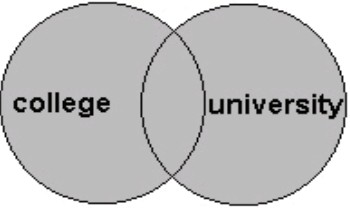
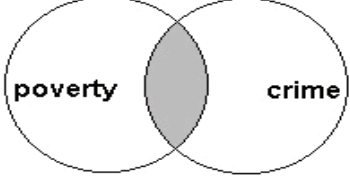
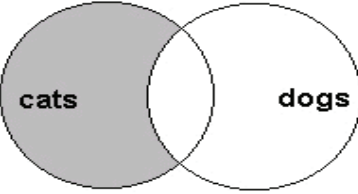
<p style="text-align: center;">OR</p>  <p style="text-align: center;">college OR university</p>	<p>I would like information about ‘college’ or ‘university’.</p> <p>OR expands your search.</p> <p>In this example, the search will return documents that have both the terms ‘college’ and ‘university’.</p>
<p style="text-align: center;">AND</p>  <p style="text-align: center;">poverty AND crime</p>	<p>I would like information about both ‘poverty’ and ‘crime’.</p> <p>AND refines your search.</p> <p>In this example, the search will return documents that have both the terms ‘poverty’ and ‘crime’, but leave out documents that only have one of these words ‘poverty’ or ‘crime’</p>
<p style="text-align: center;">NOT</p>  <p style="text-align: center;">cats NOT dogs</p>	<p>I would like information about ‘cats’ and not ‘dogs’</p> <p>NOT limits your search.</p> <p>In this example, the search will return documents that have the word ‘cats’ and leave out documents that have the word ‘dogs’.</p>

Figure 10. Demonstrating the Boolean search operators

Source: Adapted from DeVry University South Florida Camous Community Website, n.d.

Google search tips: using punctuation, symbols and operators in searches

5.52 Google is a sophisticated search engine that uses a number of punctuation and search operators to help one discover information more efficiently and get more specific results. The punctuation, symbols and operators used in making Google searches more effective are described in more detail overleaf.

Punctuation

5.53 Google and Google Scholar recognise a number of special characters that can improve the quality of the search results. These special characters are represented in Table 9.

Table 9. Google search operators

Symbol	What it is used for
+	Include terms in the search results e.g. +Malaria and +Polio
-	Remove or exclude these words from search results e.g. '+Malaria', '-Vaccine'
" "	A combination of words or a phrase in quotation marks, the results will only include pages with these words in the same order

Google search operators

5.54 Google has several search operators that can improve the efficiency and speed with which one can search a whole site.

5.55 The "Site" operator is a powerful search prefix that will enable one to search a specific site or type of site (e.g. ac.uk) for content. One can also combine a key word or search terms with the operator to locate specific information. For example, **Site: who.int "malaria control" report** - will look for reports that contain the keywords "malaria control" within the WHO website. The formula for the search query is as follows:

- Use the site: tag and follow it with the website address (i.e. URL). There should be no space between the colon and the website address. This is very important point, because if one leaves a space between 'site:' and the website address, the search query will not work
- Also note that one does not need the "www" in front of the website address
- One can list terms after the website (leave a space between the website address and terms)
- Google will understand that keywords placed beside each other are combinations of terms, in other words the Boolean AND
- If a keyword must be included in the results, one can use a "+" symbol before the term (this applies with or without the site: tag) e.g. no space e.g. +vaccines)
- If one wants to exclude a term, one should use the "-" symbol in front of the keyword (no space e.g. -vaccines)
- To combine keywords in a particular order, enclose them in speech marks e.g. "immunisation programmes".

Assessing source credibility

5.56 An important aspect of searching for evidence on online databases is to be able to assess the source credibility so that one is assured that the evidence found is sound. Note that the next chapter will address assessing the quality and credibility of studies and content. In this section therefore the focus is only on assessing the source of the evidence.

Proxy for quality #1: Reputation

5.57 The source of the evidence is sometimes as important as the evidence itself. Another way to assess quality is knowing whether or not the manuscript comes from a reputable source. For instance, if the source is Cochrane, one can have a certain amount of confidence about the credibility of the evidence.

Proxy for quality #2: Journal rankings

5.58 Journal ranking systems can provide an indicative proxy guide regarding the scrutiny with which an academic study has been subjected prior to publication. The principal journal ranking system is the **'Impact Factor'** rating. Journals often publish their Impact Factor ranking somewhere on their website. The higher the Impact Factor, the better the journal. The Impact Factor is the measure of how many times the average article in the journal has been cited in the last two years. It therefore shows if people are using the journal to write about other things. It is important to note, however, that a new journal may be great, but it will not have an Impact Factor because it is not on the playing field yet (remember the Impact Factor is calculated using a two-year time period of measurement).

5.59 Not all well-designed and robustly applied research is to be found in peer-reviewed journals and not all studies in peer reviewed journals are of high quality. Journal rankings do not always include publications from southern academic organisations or those that feature in online journals, so a broad and inclusive approach is required to capture all relevant studies.

5.60 For more information on this, read the two publications below:

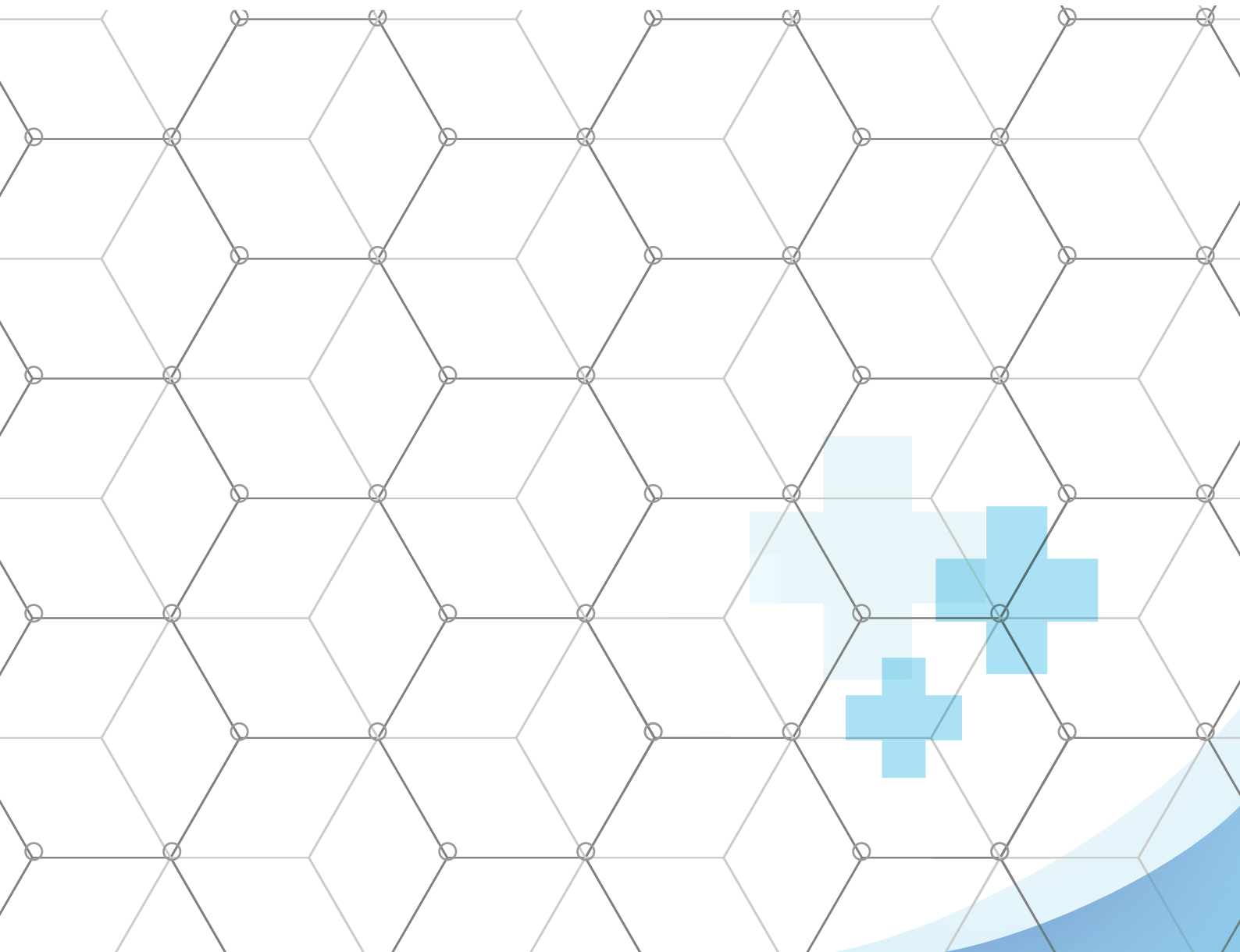
- DfID's How to Note: Assessing the Strength of Evidence (available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/291982/HTN-strength-evidence-march2014.pdf)
- Searching for Studies: Information Retrieval Methods Group Policy Brief (available at: http://www.campbellcollaboration.org/artman2/uploads/1/C2_Information_retrieval_policy_brief_new_draft.pdf)

When there is no documented evidence

5.61 Sometimes there is no documented evidence for informing a policy or programme decision. In this case, a policymaker could assemble a team of experts (including top scientists, practitioners, and programme implementers) to advise the MoH. Given the importance of the views of the beneficiaries of the policy decision, the policymaker could gather public views on the issue. The policymaker could also recommend that the MoH commissions research on the issue in order to obtain credible evidence to inform the selection of a viable policy option for tackling the issue.

Chapter 6

Appraising Evidence For Policy-Making



Appraising Evidence for Policy-Making

6.1 The goal of evidence-informed policy-making is not simply to increase reliance on research results, but to increase reliance on “good” (i.e., rigorous) research. This Chapter focuses on developing knowledge and skills to critically assess the strength of evidence. It starts with a primer on basic research methods in order to build knowledge and skills on the type and quality of evidence generated by the different research methodologies. It then deliberates the criteria for assessing the quality and rigor of research evidence.

Basic research methods primer

Defining research

6.2 Research is:

- Process of discovering new knowledge
- A **systematic** investigation
- Designed to produce new **generalisable** knowledge/or test a hypothesis
- “Research” comes from the French word “recherche”, which means “to go about seeking”

6.3 Research is different from other forms of discovering knowledge (like reading a book) because it uses a systematic process called the Scientific Method.

6.4 A **systematic** investigation means that a careful plan is followed to gather and analyse information. It means information gathering is done according to an established plan or system; or in a methodical way, and that it can be replicated.

1.5 **Generalisable** means the information gathered can be applied to other populations, and has been published and disseminated.

Research design and methods

6.6 No matter what topic is being studied, the value of the research depends on how well it is designed and carried out. A research design is a framework in which a research study is undertaken. A research employs one or more research techniques to collect and analyse data. One may ask: **why is research design so important?**

- The design is the logical structure that gives direction and systemises the study
- Serves to ensure that relevant information is obtained to answer the research question in a convincing way
- Choice of study design is critical:
 - Affected by type of research question
 - Dictates the type of conclusions drawn
 - Influenced by availability of resources and time needed to accomplish the task

- 6.7 Table 10 summarises 12 major research designs. Note that Annex 2 provides a detailed table on these designs, including the information the research designs generate and how it can be used in policy-making.
- 6.8 It is important to note that some designs are better suited for **demonstrating** the presence of a causal relationship, others are more appropriate for **explaining** such causal relationships, while some are more useful for **describing** political, social and environmental contexts.
- 6.9 It is also important to note that in reality, the most rigorous evidence is not always available. In such cases, the available less rigorous evidence is often used to inform policy decisions.

Table 10. 12 major types of research designs

<p>Action Research Design</p> <p>Action research aims to contribute both to the practical concerns of people in an immediate problematic situation and further the goals of social science simultaneously. Thus, there is a dual commitment in action research to study a system and concurrently to collaborate with members of the system in changing it in what is together regarded as a desirable direction. Accomplishing this twin goal requires the active collaboration of researcher and client, and thus it stresses the importance of co-learning as a primary aspect of the research process. (Gilmore, Krantz & Ramirez 1986).</p>
<p>Case Study Design</p> <p>A case study is an in-depth study of a particular research problem (as opposed to a wide statistical survey or comprehensive comparative inquiry). It is often used to narrow down a very broad field of research into one or a few easily researchable areas. The case study research design is also useful for testing whether a specific theory and model actually applies to phenomena in the real world. It is a useful design especially when not much is known about an issue or phenomenon.</p>
<p>Causal Design</p> <p>Causality studies may be thought of as understanding a phenomenon in terms of conditional statements in the form, "If X, then Y." This type of research is used to measure what impact a specific change will have on existing norms and assumptions. Most social scientists seek causal explanations that reflect tests of hypotheses. Causal effect (nomothetic perspective) occurs when variation in one phenomenon-- an independent variable -- leads to or results, on average, in variation in another phenomenon -- the dependent variable.</p>
<p>Cohort Design</p> <p>Often used in the medical sciences, but also found in the applied social sciences, a cohort study generally refers to a study conducted over a period of time involving members of a population, which the subject or representative member comes from, and who are united by some commonality or similarity. Using a quantitative framework, a cohort study takes note of statistical occurrence within a specialised sub-group, united by same or similar characteristics that are relevant to the research problem being investigated, rather than studying statistical occurrence within the general population. Using a qualitative framework, cohort studies generally gather data using methods of observation. Cohorts can be either "open" or "closed."</p>
<p>Cross-Sectional Design</p> <p>Cross-sectional research designs have three distinctive features: no time dimension; a reliance on existing differences rather than change following intervention; and, groups are selected based on existing differences rather than random allocation. The cross-sectional design can only measure differences between or from among a variety of people, subjects, or phenomena rather than a process of change. As such, researchers using this design can only employ a relatively passive approach to making causal inferences based on findings.</p>
<p>Descriptive Design</p> <p>Descriptive research designs help provide answers to the questions of: who, what, when, where, and how associated with a particular research problem; a descriptive study cannot conclusively ascertain answers to why. Descriptive research is used to obtain information concerning the current status of the phenomena and to describe "what exists" with respect to variables or conditions in a situation.</p>

Experimental Design

A blueprint of the procedure that enables the researcher to maintain control over all factors that may affect the result of an experiment. In doing this, the researcher attempts to determine or predict what may occur. Experimental research is often used where there is time priority in a causal relationship (cause precedes effect), there is consistency in a causal relationship (a cause will always lead to the same effect), and the magnitude of the correlation is great. The classic experimental design specifies an experimental group and a control group. The independent variable is administered to the experimental group and not to the control group, and both groups are measured on the same dependent variable. Subsequent experimental designs have used more groups and more measurements over longer periods. True experiments must have control, randomisation, and manipulation.

Exploratory Design

An exploratory design is conducted about a research problem when there are few or no earlier studies to refer to or rely on to predict an outcome. The focus is on gaining insights and familiarity for later investigation or undertaken when research problems are in a preliminary stage of investigation. Exploratory designs are often used in establishing an understanding of how best to proceed in studying an issue or what methodology would effectively apply in gathering information about the issue.

Historical Design

The purpose of a historical research design is to collect, verify, and synthesise evidence from the past to establish facts that defend or refute a hypothesis. It uses secondary sources and a variety of primary documentary evidence, such as, diaries, official records, reports, archives, and non-textual information [maps, pictures, audio and visual recordings]. The limitation is that the sources must be both authentic and valid.

Longitudinal Design

A longitudinal study follows the same sample over time and makes repeated observations. For example, with longitudinal surveys, the same group of people are interviewed at regular intervals, enabling researchers to track changes over time and to relate them to variables that might explain why the changes occur. Longitudinal research designs describe patterns of change and help establish the direction and magnitude of causal relationships. Measurements are taken on each variable over two or more distinct time periods. This allows the researcher to measure change in variables over time. It is a type of observational study sometimes referred to as a panel study.

Meta-Analysis Design

Meta-analysis is an analytical methodology designed to systematically evaluate and summarise the results from a number of individual studies, thereby, increasing the overall sample size and the ability of the researcher to study effects of interest. The purpose is to not simply summarise existing knowledge, but to develop a new understanding of a research problem using synoptic reasoning. The main objectives of meta-analysis include analysing differences in the results among studies and increasing the precision by which effects are estimated. A well-designed meta-analysis depends on strict adherence to the criteria used in selecting studies and the availability of information in each study to properly analyse their findings. Lack of information can severely limit the type of analyses and conclusions that can be reached. In addition, the more dissimilarity there is in the results among individual studies [heterogeneity], the more difficult it is to justify interpretations that govern a valid synopsis of results.

Observational Design

Observational research design draws a conclusion by comparing subjects against a control group, in cases where the researcher has no control over the experiment. There are two general types of observational designs. In direct observations, people know that they are being watched. Unobtrusive measures involve any method for studying behaviour where individuals do not know they are being observed. An observational study allows a useful insight into a phenomenon and avoids the ethical and practical difficulties of setting up a large and cumbersome research project.

Types of evidence

- 6.10 **Primary research studies** empirically observe a phenomenon at first hand, collecting, analysing or presenting 'raw' data. They tend to employ the following designs:
- Experimental
 - Quasi-experimental
 - Observational
- 6.11 **Secondary review studies** interrogate primary research studies, summarising and cross-examining their data and findings. They tend to employ the following designs:
- **Systematic reviews** - A systematic review is defined as "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." (NHS Centre for Reviews and Dissemination 2001). See page 46 for more details on systematic reviews.
 - **Non-systematic reviews** - Non-systematic or traditional literature reviews use informal, unsystematic and subjective methods to collect and interpret information (Klassen et al 1998). And the information is often summarised subjectively and narratively (ibid). Processes such as searching, quality appraisal and data synthesis are not usually described in the reviews and as such, these reviews are prone to bias. An advantage of these reviews is that they are often conducted by 'experts' who may have a thorough knowledge of the research field, but they are disadvantaged in that the authors may have preconceived notions or biases and may overestimate the value of some studies (Hedin and Kallestal 2004).
- 6.12 **Theoretical or conceptual studies**: most studies (primary and secondary) include some discussion of theory, but some focus almost exclusively on the construction of new theories rather than generating, or synthesising empirical data.
- 6.13 **Qualitative and quantitative**: data collection can be either quantitative or qualitative. Data analysis methods can also be quantitative (using mathematical techniques to illustrate data or explore causal relationships) or qualitative (collating i.e. assembling and comparing) 'rich' textual data and inferring meaning).
- 6.14 **Qualitative data** are usually text-based and can be derived from in-depth interviews, observations, analysis of written documentation or open-ended questionnaires. Qualitative research aims to gather an in-depth understanding of human behaviour and the reasons that govern such behaviour. The discipline investigates the why and how of decision-making, not just the what, where and when. It allows researchers to explore the thoughts, feelings, opinions and personal experiences of individuals in some detail, which can help in understanding the complexity of an issue. Qualitative research uses smaller but focused samples rather than large random samples.
- 6.15 **Qualitative research** is also highly useful in policy and evaluation research, where understanding why and how certain outcomes were achieved is as important as establishing what those outcomes were. Qualitative research can yield useful insights into programme implementation such as: Were expectations reasonable? Did processes operate as expected? Were key players able to carry out their duties?

6.16 **Quantitative data** are numerical data that can be manipulated using mathematical procedures to produce statistics. Quantitative research is the systematic scientific investigation of quantitative properties, phenomena and their relationships. The objective of quantitative research is to develop and employ statistical models, theories and/ or hypotheses pertaining to phenomena and relationships. The process of measurement is central to quantitative research because it provides the fundamental connection between empirical observation and statistical expression of quantitative relationships.

Levels of evidence

6.17 Figure 11 depicts the different levels of grading the quality of evidence in the health sector. It is important to note that while the pyramid presents systematic reviews as the best possible evidence, if a systematic review is based on studies that used cross-sectional case series, it may not present the most rigorous evidence on an issue.

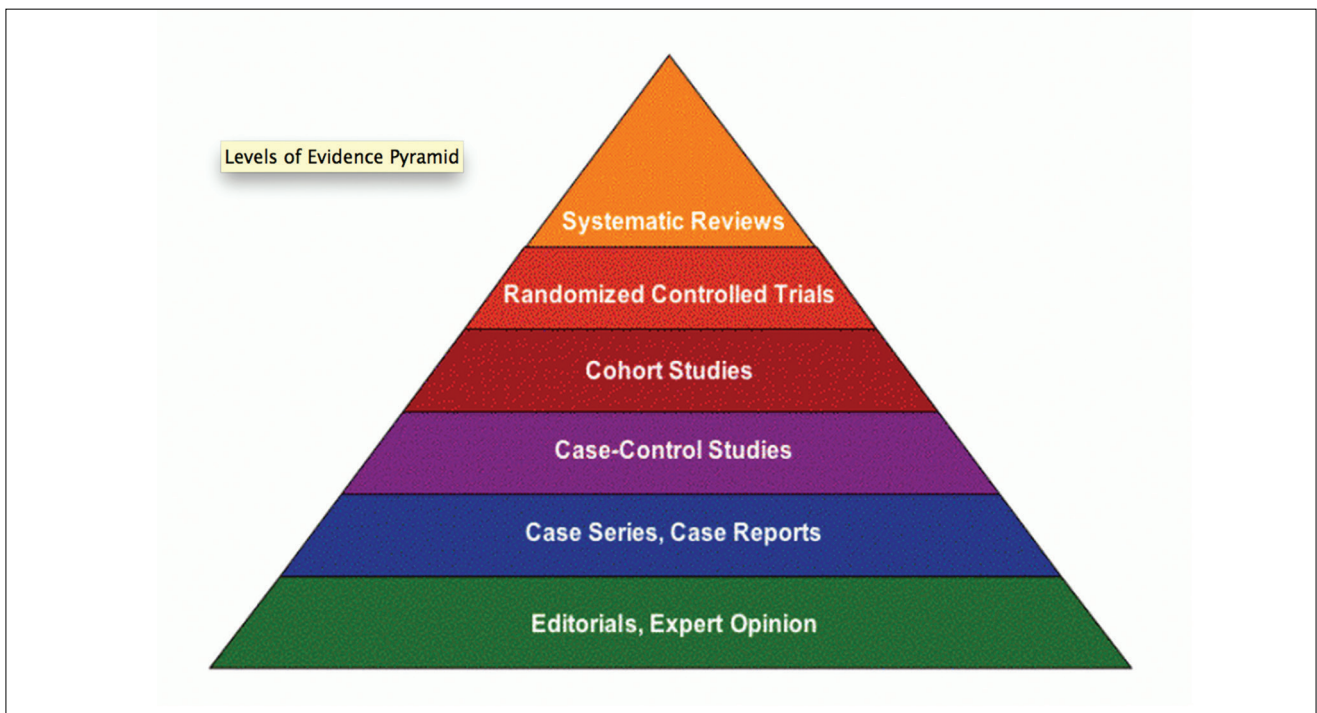


Figure 11. Hierarchy of evidence

Source: University of Illinois at Chicago, undated.

Assessing the strength of evidence

6.18 An important step in evidence-informed policy-making is learning how to objectively examine information to determine its value as evidence. It is also important to look at content quality criteria in appraisal, besides strength of evidence, such as:

- Uniqueness – is it original?
- Completeness – is any information missing?
- Coverage – what depth does it go into?
- Timeliness – is it up-to-date?

6.19 Other key questions to ask to enable you examine evidence quality include:

- What makes the study important?
- Do the findings make sense?
- Who conducted the research and wrote the report?
- Who published the report?
- Did the researcher select an appropriate group for study?
- If comparison groups are used, how similar are they?
- What has changed since the information was collected?
- Are the methods appropriate to the research purpose?
- Does the study establish causation?
- Is the time frame long enough to identify an impact?
- Could the data be biased as a result of poor research design?
- Are the results statistically significant?

6.20 Table 11 provides important principles that one can use to assess the quality of research evidence.

Table 11. Principles of research quality

Principles of quality	Associated questions
Conceptual framing	<p>Does the study acknowledge existing research?</p> <p>Does the study construct a conceptual framework?</p> <p><i>Conceptual framework refers to a visual or written product that “explains, either graphically or in narrative form, the main things to be studied—the key factors, concepts, or variables—and the presumed relationships among them.” Miles and Huberman (1994: p.18).</i></p> <p>Does the study pose a research question or outline a hypothesis?</p>
Transparency	<p>Does the study present or link to the raw data it analyses?</p> <p>What is the geography/context in which the study was conducted?</p> <p>Does the study declare sources of support/funding?</p>
Appropriateness	<p>Does the study identify a research design?</p> <p>Does the study identify a research method?</p> <p>Does the study demonstrate why the chosen design and method are well suited for the research question?</p>

Cultural sensitivity	Does the study explicitly consider any context specific cultural factors that may bias the analysis/findings?
Validity	<p>To what extent does the study demonstrate measurement validity?</p> <p><i>Validity refers to the degree to which a measurement method or instrument actually measures the concept in question.</i></p> <p>To what extent is the study internally valid?</p> <p><i>Internal validity is only relevant in cause-effect studies, or studies that try to establish a causal relationship. Internal validity refers to how well the study was run (i.e., research design, operational definitions used, how variables were measured, what was/wasn't measured, etc.), and how confidently one can conclude that the change in the dependent variable was produced solely by the independent variable and not extraneous ones.</i></p> <hr/> <p>To what extent is the study externally valid?</p> <p><i>External validity is the extent to which results of a study can be generalised to the world at large.</i></p> <p>To what extent is the study ecologically valid?</p> <p><i>Ecological validity refers to the extent to which the findings of a research study are able to be generalised to real-life settings.</i></p>
Reliability	<p>To what extent are the measures used in the study stable?</p> <p>To what extent are the measures used in the study internally reliable?</p> <p><i>Internal reliability refers to the consistency of data collection, analysis, and interpretation.</i></p> <p><i>On the other hand, external reliability refers to the extent to which independent researchers can reproduce a study and obtain results similar to those obtained in the original study.</i></p> <p>To what extent are the findings likely to be sensitive/changeable depending on the analytical technique used?</p>
Cogency	<p>Does the author 'signpost' the reader throughout?</p> <p>To what extent does the author consider the study's limitations and/or alternative interpretations of the analysis?</p> <p>Are the conclusions clearly based on the study's results?</p>

Source: Adapted from DFID (2014). *How To Note: Assessing the Strength of Evidence*.

Assessing validity and reliability

- 6.21 Internal and external validity and reliability are key concepts in evaluating the strength of evidence.
- 6.22 **Internal validity** is the approximate truth about inferences regarding cause-effect or causal relationships. Thus, internal validity is only relevant in studies that try to establish a causal relationship. It is not relevant in most observational or descriptive studies, for instance: **Is the intervention actually causing the desired outcome? Are the changes observed due to the intervention or due to other possible factors?** Internal validity means that we are able to rule out competing explanations for observed changes, and are confident that the observed changes are due to the intervention.

- 6.23 **External validity** is the validity of generalised (causal) inferences in scientific research, usually based on experiments as experimental validity. In other words, it is the extent to which the results of a study can be generalised to other situations and to other people. For instance: Is the programme replicable? Will it produce similar results in different settings?
- 6.24 **Reliability** of a research instrument concerns the extent to which the instrument yields the same results on repeated application. Although unreliability is always present to a certain extent, there will generally be a good deal of consistency in the results of a quality instrument gathered at different times.

Assessing a body of evidence

- 6.25 Assessment of the overall strength of a **body** of evidence with reference to a particular policy issue is directly linked to the quality, size, consistency and context of the body of the evidence. Where you are not able to assess all the individual studies that constitute a body of evidence due to inadequate time or expertise, you should:
- Seek to use evidence synthesis products which **have** assessed the quality of individual studies
 - Commission evidence synthesis products which assess the quality of individual studies
 - Seek to make a judgement about a body of evidence based on the criteria outlined above

Systematic Reviews: Appraising the methods and interpreting the results

- 6.26 As noted in Chapter 4, systematic reviews can be invaluable for evaluating available evidence in a methodical manner and providing a critical summary of strength and direction of evidence. It is critical to interpret the results of a systematic review in the light of the quality appraisal of the included studies, and the differences between the study settings and populations and your own. The hierarchy of evidence varies depending on the nature of the question to be investigated. For example, for interventional studies, systematic reviews of randomized-controlled trials are at the top of the hierarchy of evidence. They are therefore regarded as the best source of evidence (see Figure 11).
- 6.27 To appraise the methods, interpret the results and use the evidence for recommendation, the following methodologies are used:
- The AMSTAR checklist to rapidly appraise the methods of a systematic review.
 - The GRADE approach as a framework for appraising the results of a systematic review.
 - The DECIDE framework for moving from evidence to recommendations.

AMSTAR checklist for appraising the methods of a systematic review

- 6.28 The Assessment of Multiple Systematic Reviews (AMSTAR) is measurement tool to assess the methodological quality of systematic reviews. The tool consists of 11 items and has good face and content validity. AMSTAR has only been tested for systematic reviews of interventions. It enables clinicians to assess effectively and efficiently results from systematic reviews as reliable, questionable or unreliable. The tool aims to highlight the aspects of systematic review methodology that influence its overall quality.

6.29 It comprises 11 concise criterion items; each item is given a score of 1 if the specific criterion is met, or a score of 0 if the criterion is not met, is unclear, or is not applicable. An overall score relating to review quality is then calculated (the sum of the individual item scores). AMSTAR characterises quality at three levels: 8 to 11 is high quality, 4 to 7 is medium quality, and 0 to 3 is low quality. Although, scoring systems are controversial, the principles of the AMSTAR tool can be used to demonstrate aspects of systematic review methodology that influence the overall quality of a review. For complete and step-by-step AMSTAR measurement tool for assessing the methodological quality of systematic reviews see Shea et al, 2007.

GRADE approach as a framework for appraising the results of a systematic review

6.30 The Grading of Recommendations Assessment, Development and Evaluation (GRADE) was developed as a common, sensible and transparent approach to grading quality of evidence and strength of recommendations.

6.31 Judgments about evidence and recommendations in healthcare are complex. For example, those making recommendations must decide between recommending treatment A or treatment B for the treatment of a disease/condition. They must agree on which outcomes to consider, which evidence to include for each outcome, how to assess the quality of that evidence, and how to determine if A will do more good than harm compared to B. Because resources are always limited and money that is allocated to treating the disease/condition cannot be spent on other worthwhile interventions, they may also need to decide whether any incremental health benefits are worth the additional costs.

6.32 Therefore, a systematic and explicit approach to making judgments such as these can help to prevent errors, facilitate critical appraisal of these judgments, and can help to improve communication of this information. The GRADE Working Group suggested a criteria which can assist in making such judgements.

- i. "Quality of evidence" should be defined consistently with one of the two definitions (for guidelines or for systematic reviews) used by the GRADE Working Group.
- ii. Explicit consideration should be given to each of the GRADE criteria for assessing the quality of evidence (risk of bias/study limitations, directness, consistency of results, precision, publication bias, magnitude of the effect, dose - response gradient, influence of residual plausible confounding and bias "antagonistic bias") although different terminology may be used.
- iii. The overall quality of evidence should be assessed for each important outcome and expressed using four (e.g. high, moderate, low, very low) or, if justified, three (e.g. high, moderate, and very low and low combined into low) categories based on definitions for each category that are consistent with the definitions used by the GRADE Working Group.
- iv. Evidence summaries (narrative or in table format) should be used as the basis for judgements about the quality of evidence and the strength of recommendations. Ideally, full evidence profiles suggested by the GRADE Working Group should be used and these should be based on systematic reviews. At a minimum, the evidence that was assessed and the methods that were used to identify and appraise that evidence should be clearly described. In particular, reasons for upgrading and downgrading should be described transparently.

- v. Explicit consideration should be given to each of the GRADE criteria for assessing the strength of a recommendation (the balance of desirable and undesirable consequences, quality of evidence, values and preferences, and resource use) and a general approach should be reported (e.g. if and how costs were considered, whose values and preferences were assumed, etc.).
- vi. The strength of recommendations should be expressed using two categories (weak/conditional and strong) for or against a management option and the definitions for each category should be consistent with those used by the GRADE Working Group. Different terminology to express weak/conditional and strong recommendations may be used, although the interpretation and implications should be preserved.
- vii. Decisions about the strength of the recommendations should ideally be transparently reported. For complete and step-by-step guidelines on how to use GRADE approach as a framework for appraising the results of a systematic review, go to: http://www.gradeworkinggroup.org/publications/Minimum_criteria_for_using_GRADE_web.pdf

The DECIDE frameworks for moving from evidence to recommendations

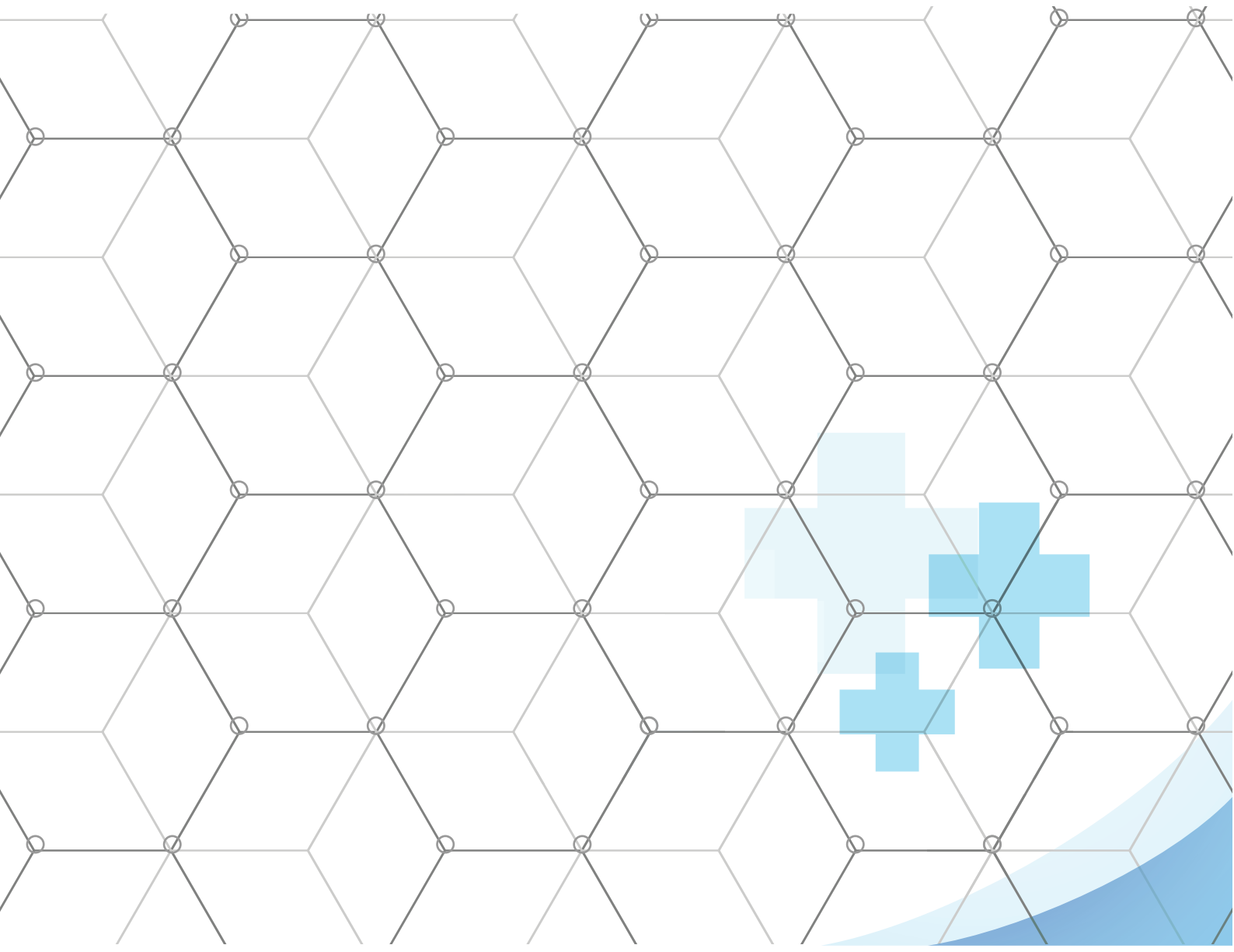
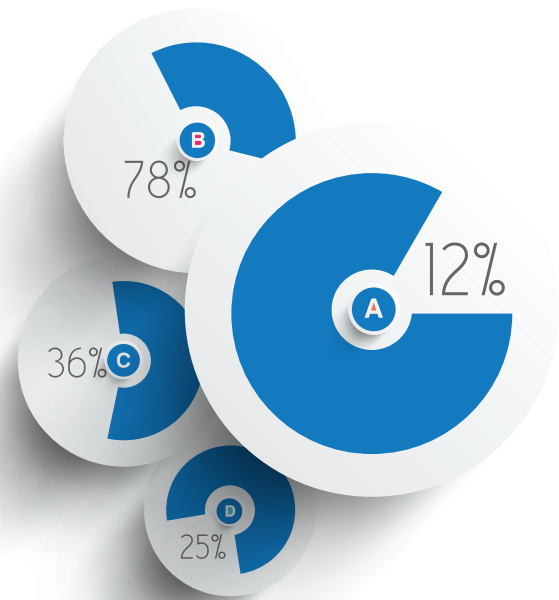
- 6.33 Organizations and public health professionals worldwide compile results from scientific studies, and grade the evidence of interventions, in order to assist policymakers. However, quality of evidence alone is seldom sufficient to make a recommendation. Over the past decade, an international collaboration of methodologists and guideline developers have produced the Developing and Evaluating Communication Strategies to Support Informed Decisions and Practice Based on Evidence (DECIDE) framework for formulating evidence-informed policy recommendations. The framework aims to facilitate decision-making and to improve dissemination and implementation of recommendations in the healthcare and public health sector. More information on DECIDE framework can be found here: <http://www.decide-collaboration.eu/>.

Further Readings

- 6.34 DFID's 2014 How to Note: Assessing the Strength of Evidence provides detailed criteria for assessing the strength of a body of evidence. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/291982/HTN-strength-evidence-march2014.pdf
- 6.35 Another important reading on assessing the strength of evidence is Nutley et al (2013)'s What counts as good evidence? Available at: <http://www.alliance4usefulevidence.org/assets/What-Counts-as-Good-Evidence-WEB.pdf>

Chapter 7

Synthesising Evidence For Policy-Making



Synthesising Evidence for Policy-Making

7.1 The objective of this chapter is to develop knowledge and skills in critical review of multiple sources of evidence, synthesising these evidences into one new whole that provides clear policy options, implications and recommendations for tackling a policy issue. The chapter covers the skills in determining the usability and applicability of evidence to a different context from where it is generated, steps in conducting evidence synthesis, developing actionable recommendations, and writing effective policy briefs.

Evidence usability

7.2 Take a moment to reflect on your own experience or actions when deciding if a particular piece of evidence is usable to you and your situation. There are two main considerations to make when determining whether to use specific evidence within a particular institution or geography, namely, **applicability** and **transferability**. Usability therefore refers to the **applicability** and **transferability** of evidence.

7.3 **Applicability** refers to the **feasibility** of an innovation in a particular setting. In other words, is it possible to implement it in your context?

7.4 **Transferability** refers to the extent of generalisability of an innovation. In other words, is the innovation relevant to your context, and is it likely to generate the same type of impact in your setting as it did where it was tested? Another word for this is replicability.

7.5 Table 12 below provides criteria for assessing the applicability and transferability of evidence generated elsewhere to your context.

Table 12. Assessment of applicability and transferability of evidence

Construct	Factors	Questions to Ask
Applicability (feasibility)	Political acceptability or leverage	<ul style="list-style-type: none"> Will the intervention be allowed or supported in current political environment? Will there be public relations benefit for local government? Will this programme enhance the stature of the organisation? Will the public and target groups accept and support the intervention in its current format?
	Social acceptability	<ul style="list-style-type: none"> Will the target population be interested in the intervention? Is it ethical?
	Available essential resources (personnel and financial)	<ul style="list-style-type: none"> Who/what is available/essential for the local implementation? Are they adequately trained? If not, is training available and affordable? What is needed to tailor the intervention locally? What are the full costs (supplies, systems, space requirements for staff, training, technology/ administrative supports) per unit of expected outcome? Are the incremental health benefits worth the costs of the intervention?

Applicability (feasibility) ...Continued	Organisational expertise and capacity	<ul style="list-style-type: none"> • Is the current strategic plan/operational plan in line with the intervention to be offered? • Does this intervention fit with the organisation's mission and local priorities? • Does it conform to existing legislation or regulations (either local or county?) Does it overlap with existing programmes or is it symbiotic? • Any organisational barriers/structural issues or approval processes to be addressed? • Is the organisation motivated (learning organisation)?
Transferability (generalisability)	Magnitude of health issue in local setting	<ul style="list-style-type: none"> • Does the need exist? • What is the baseline prevalence of the health issue locally? • What is the difference in prevalence of the health issue (risk status) between study and local settings?
	Magnitude of the "reach" and cost effectiveness of the intervention above	<ul style="list-style-type: none"> • Will the intervention broadly "cover" the target population?
	Target population characteristics	<ul style="list-style-type: none"> • Are they comparable to the study population? • Will any difference in characteristics (ethnicity, socio-demographic variables, number of persons affected) impact intervention effectiveness locally?
Other considerations	Safety, efficacy, sensitivity and specificity in the case of results from a random controlled trial, sustainability, etc.	

Source: Adapted from Buffet, Ciliska, and Thomas., 2007.

Synthesizing evidence: What is it?

- 7.6 "Synthesis is the process of ordering, recalling, retelling, and recreating into a coherent whole" (Zimmermann & Hutchins, 2003).
- 7.7 Synthesising evidence brings information from multiple sources together in new ways and helps to interpret it for an audience. A synthesis consolidates summaries of several sources and points out their relationships. It enables one to provide background, explore causes and effects, contrast explanations, or consolidate support for an argument.
- 7.8 It is important to synthesise evidence because by using multiple sources one can:
- Provide more than one opinion
 - Validate other sources
 - Validate research
 - Defend research
 - Increase understanding
- 7.9 Figure 12 overleaf attempts to depict the process of synthesising evidence from multiple sources into a new whole.

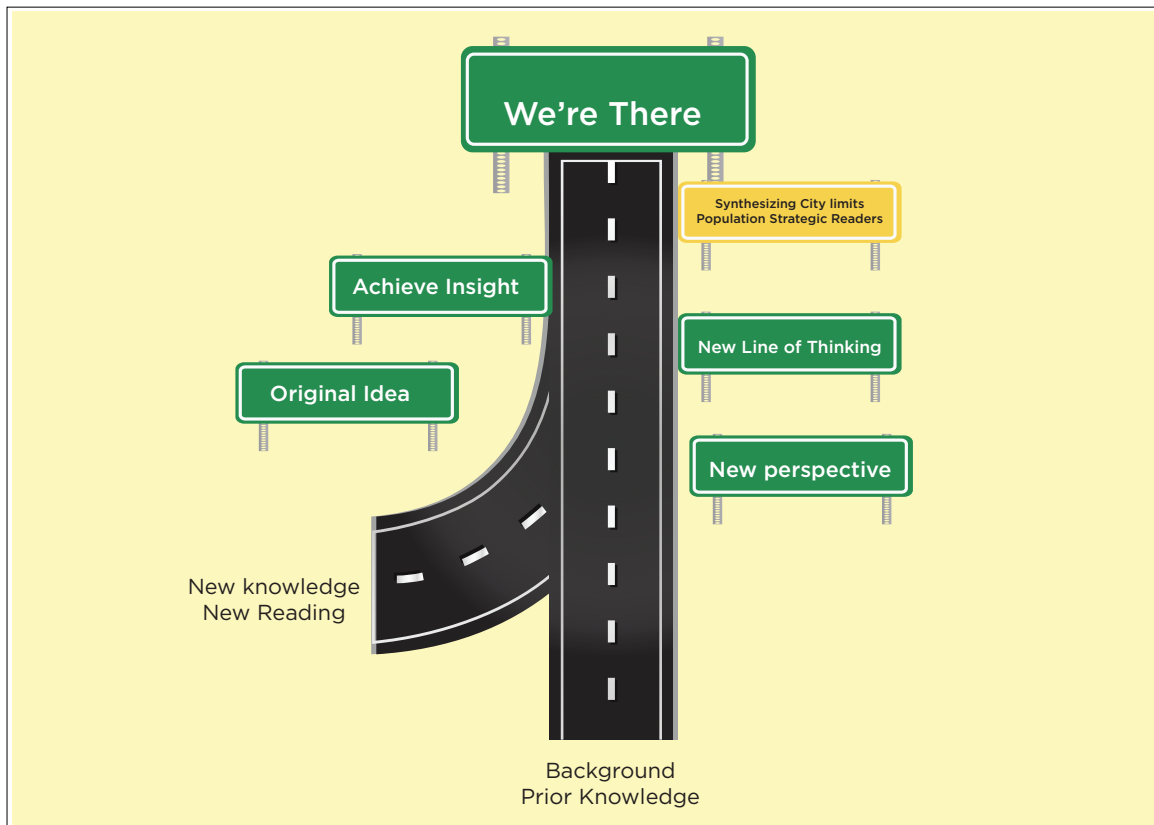


Figure 12. Simulating the evidence synthesis process

Source: CADRE Project at the University of Nebraska-Omaha (n.d.).

Differences between summarising and synthesising evidence

Table 13. Differences between summarising and synthesising

Summary	Synthesis
Basic reading technique	Advanced reading technique
Pulls together information in order to highlight the important points	You pull together information not only to highlight the important points, but also to draw your own conclusions
Re-iterates the information	Combines and contrasts information from different sources
Shows what the original authors wrote	Not only reflects your knowledge about what the original authors wrote, but also creates something new out of two or more pieces of writing
Addresses one set of information (e.g. article, chapter, and document) at a time. Each source remains distinct.	Combines parts and elements from a variety of sources into one unified entity
Presents a cursory overview	Focuses on both main ideas and details
Demonstrates an understanding of the overall meaning	Achieves new insight.

Source: Sarah Elaine Eaton, 2010.

Steps for synthesising evidence

- 7.10 **Identify** the role of a synthesis in one's writing as well as the kind of information readers will need. One needs to be clear on how synthesis will help in providing the information needed by the audience.
- 7.11 **Read** each of the information sources found from the searches and prepare a summary of each. Find the important ideas in all pieces of evidence.
- 7.12 **Focus** - decide on the purpose of the synthesis, and draft a summary of the conclusions about how the sources relate. Summarise before synthesising.
- 7.13 **Think** about what one already knows about these important ideas. Can one add something the authors have not mentioned? What are one's own ideas about the information? What observations can one make about this information?
- 7.14 **Arrange** - select a sequence for the sources in the synthesis. Think about how to rearrange or reorganise the information in a new way.
- 7.15 **Write** the synthesis, combining the summaries of the sources with the conclusions about their relationships. Combine them in one summary.
- 7.16 **Visualise** - diagrams are especially helpful tools for synthesising data. By visually representing relationships that one is seeing, one can communicate many concepts on one page.
- 7.17 **Revise** so that the synthesis is easy to read and readers can easily identify the sources of the various ideas.
- 7.18 **Document** - indicate clearly the sources for the synthesis using a standard style of documentation.

Analysing evidence on policy options for tackling the policy issue

- 7.19 Critical analysis of the evidence on the potential policy options for tackling the policy issue is an important step in the synthesis process. Basically, if one is going to propose policy solutions/options for tackling the problem, one needs to have a good understanding of the current options being implemented and why they are not working, and strong evidence on other policy options, explaining clearly why these are likely to work compared to the current options. This is why systematic reviews come in handy as noted earlier. Where there are no systematic reviews, results from single studies must be critically analyzed and appraised before informing policy decisions.

Tips for presenting evidence

- 7.20 There are several ways of presenting evidence from multiple sources. Besides synthesis as text in the body of the paper, one can use as quotes or paraphrase information. Sometimes one might include graphs, charts, or tables; excerpts from an interview; or photographs or illustrations with accompanying captions.

7.21 Using quotes means one is reproducing another writer's words exactly as they appear on the page. Here are some tips to help in deciding on when to use quotations:

- Quote if one can't say it any better and the author's words are particularly brilliant, witty, edgy, distinctive, a good illustration of a point you are making, or otherwise interesting
- Quote if one is using a particularly authoritative source and one needs the author's expertise to back up a point
- Quote if one is analysing diction, tone, or a writer's use of a specific word or phrase
- Quote if one is taking a position that relies on the reader understanding exactly what another writer says about the topic

7.22 To paraphrase implies taking a specific section of a text and putting it in one's own words. This does not mean just changing or rearranging a few of the author's words. To paraphrase well and avoid plagiarism, try setting one's source aside and restating the sentence or paragraph that one has just read, as though one is describing it to another person. Paraphrasing is different from summary because a paraphrase focuses on a particular, fairly short bit of text (like a phrase, sentence, or paragraph). One has to indicate when paraphrasing someone else's text by citing the source correctly, just as one does with a quotation.

7.23 When might one want to paraphrase?

- Paraphrase when one wants to introduce a writer's position, but his or her original words aren't special enough to quote
- Paraphrase when one is supporting a particular point and needs to draw on a certain place in a text that supports one's point. For example, when one paragraph in a source is especially relevant
- Paraphrase when one wants to present a writer's view on a topic that differs from their own position or that of another writer; one can then refute the writer's specific points in their own words after paraphrasing
- Paraphrase when one wants to comment on a particular example that another writer uses
- Paraphrase when one needs to present information that is unlikely to be questioned

Tips for writing compelling and concise syntheses

7.24 Present an **evidence-based message** by complementing quantitative and qualitative evidence, i.e. using statistics (facts) as well as stories. Also:

- Simplify complex evidence
- Present it in a compelling manner

7.25 Keep the **message short** by:

- Focusing on the policy problem
- Presenting only three main findings/points
- Presenting a conclusion/implication and recommendations to address the problem

7.26 Keep the message simple by unpacking complex issues into simple messages. Table 14 below gives some examples of complex versus simplified messages.

Table 14. Example of unpacking complex issues into simple messages

58% of Kenyans cannot afford maize flour	OR	Nearly six in ten Kenyans cannot afford maize flour
There exists a positive correlation between the level of education and the number of times a woman attends antenatal care clinics; the correlation is especially significant for women who have attained secondary school education and above	OR	Education helps improve the health of mothers; women with secondary school education or higher are more likely to seek care during pregnancy than women with lower levels of education

Format for presenting a synthesis of evidence

7.27 Table 15 proposes a possible format for presenting a synthesis of evidence. Essentially, the synthesis should include introduction (background to the policy issue), methods (brief indication of how you gathered the evidence and mention of key document/research you drew from), policy options (critical analysis of the potential policy options for tackling the issue – the evidence that you found and conclusions), policy recommendations (based on the evidence presented in policy options, one identifies a few recommendations of what should be done to tackle the issue).

Table 15. Format of an evidence synthesis

Component	Description
1. 1. Introduction (Background)	<ul style="list-style-type: none"> • A clear statement of the problem or issue • A short overview of the root causes of the problem • A clear statement of the policy implications of the problem that clearly establishes the current importance and policy relevance of the issue
2. Methods	<ul style="list-style-type: none"> • A brief highlight of how one gathered the information being presented in the synthesis • It can also list some of the key research documents that one reviewed, e.g. a list of the five recent systematic reviews that one read
3. Policy options	<ul style="list-style-type: none"> • A critical overview of the policy options, including the current and proposed options • Should explain why current option is failing, and present other potential policy options • It is the critical presentation of the evidence on how the policy issue should be tackled
4. Policy recommendations	<ul style="list-style-type: none"> • Gives the policy recommendations informed by the discussion in the Policy Options section
5. References	<ul style="list-style-type: none"> • Lists all the references used in the synthesis

Writing actionable recommendations

- 7.28 A policy recommendation is simply written policy advice prepared for some group or individual that has the authority to make decisions, whether that is the cabinet, council, committee or other body. Policy recommendations are in many ways the chief product of the work of government managers to create and administer public policy.
- 7.29 The impact of policy recommendations partly depends on how well the issue and the arguments justifying the recommended course of action are presented. Therefore, in addition to keeping the recommendations short/concise and readable (simple), they need to have the highest level of **accuracy**. One therefore needs to review findings from systematic reviews and elsewhere before making recommendations for policy change.
- 7.30 When thinking about recommendations for responding to a policy issue, one needs to critically ask themselves the following:
- What specifically needs to be changed?
 - How will this change come about?
 - What resources will be needed?
 - Where will these resources come from?
 - What is the overall benefit to the policymaker and to society?
- 7.31 The word '**actionable**' suggests that the recommendations should be active. Therefore, use active language - words like **use, engage, and incorporate**, among others.
- 7.32 Examples of policy recommendations:
- As a global public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health
 - Require hospitals to establish representative medicines and therapeutics committees with defined responsibilities for monitoring and promoting quality use of medicines

Writing policy briefs

Function and elements of policy briefs

- 7.33 Policy briefs are concise, stand-alone documents focusing on a particular issue requiring policy attention. They can be particularly effective in bridging the research and policy divide. Typical policy briefs have four main functions to:
- Explain and convey the urgency of the issue
 - Present policy recommendations or implications on the issue
 - Provide evidence to support the reasoning behind those recommendations
 - Point the reader to additional resources on the issue

- 7.34 Policy briefs remain an important research product for use by policymakers. In the 2014 SECURE Health study on status of research use within the health sector, many technical staff within MoH and parliament indicated that they required skills in developing policy briefs to be able to synthesise evidence and present it to senior policymakers in a more effective way.
- 7.35 A policy brief needs to strike a balance between a **convincing problem description**, which highlights the relevance of the policy issue, an **analytical, evidence-driven section explaining policy options for tackling the issue**, and the recommendations for tackling the issue (Global Debate and Public Policy Challenge, n.d.). A policy brief should feature five key elements:
- i. **Focused on tackling a policy problem:** A policy brief is practical and action-oriented. Its content must focus on the problem and centred on the policy and/or political dimensions of the issue, as well as the practical solutions that can be offered based on evidence
 - ii. **Analysis-driven:** Building on facts and evidence, a policy brief demonstrates analytical thinking on the range of possible solutions for the given problem. The arguments put forward for and against different options should be the result of a measured and balanced consideration of the possible solutions. They should take into account the impact and feasibility of the alternate policies in a variety of ways, one of which is by considering the potential costs and benefits of suggested policy options.
 - iii. **Evidence-based:** A policy brief must be evidence-based in order to convince policymakers. For this, one needs to provide and cite convincing examples such as data, comparisons, and effects of inactions or policies taken in other countries on this issue. One needs to provide evidence from multiple reputable sources and cite these sources properly
 - iv. **Offers viable recommendations:** The goal of a policy brief is to persuade a decision-maker to address a specific issue and implement the policy recommendations that one has devised. One therefore needs to promote one's ideas from the evidence. The recommendations should take centre stage, but one should also show the audience why proposed recommendations provide the best option for tackling the issue (i.e. the recommendations should be driven by the evidence)
 - v. **Appealing layout:** A professional looking layout helps make a favourable impression on the target audience. The layout and polished look of a policy brief serves to catch the eye of the audience and draw them into reading it. It shows that the ideas and recommendations should be taken seriously. Paragraphs and sub-headings can make the structure clearly visible at first glance. Recommendations can be numbered or listed using bullet points. An easy to read graph can help to illustrate the major argument or trend. Subtle use of images might also be considered. Keep in mind that a well-designed layout reinforces the substance of the message and does not distract the reader from the arguments

Structure of policy briefs

7.36 Table 16 describes the structure and content of policy briefs.

Table 16. Structure of a policy brief

Title of policy brief	<ul style="list-style-type: none"> • Focus on the issue; make title memorable by choosing a provocative or surprising title, so that it sticks in the reader's mind • It is often best to communicate your key message and the need for change in the title
Executive summary or key messages	<ul style="list-style-type: none"> • The executive summary aims to convince the reader further that the brief is worth reading • It is especially important for an audience that is short of time to clearly see the relevance and importance of the brief in reading the summary. Keep executive summary to just one to three statements • Instead of executive summary, some people use a 'Key Messages' section or text-box on the first page. This should not have more than five messages; in fact, just a list of three to five messages is ideal
Introduction (context and importance of problem)	<p>The purpose of this element of the brief is to convince the target audience that a current and urgent problem exists which requires them to take action. The context and importance of the problem is both the introductory and first building block of the brief. As such, it usually includes the following:</p> <ul style="list-style-type: none"> • A clear statement of the problem or issue in focus. What is the problem? What is the magnitude of the problem? Who is affected by the problem? Why is the problem important? • A short overview of the root causes of the problem • A clear statement of the policy implications of the problem that clearly establishes the current importance and policy relevance of the issue
Critique of the policy options – present the options and discuss their impact (based on evidence)	<ul style="list-style-type: none"> • The main part of your brief should provide a critical analysis of the potential policy options for tackling the issue – this is an evidence-driven section • Highlight the shortcomings of the current policy • Illustrate both the need to change and focus of where change needs to occur • Provide an overview of the potential policy options for tackling the issue and discuss their justification of why these options can address the issue
Recommendations	<ul style="list-style-type: none"> • Based on the evidence in the preceding section, propose three to five specific and feasible recommendations required to address the most pressing issues outlined at the beginning of your policy brief • Your recommendation should make it clear in detail what policymakers have to do to adopt your recommendations and why it is in their best interest to do so
Reference list	<p>At the end of the brief, include a list of references to the materials that you cited in the main text</p>

Adapted from *Global Debate and Public Policy Challenge* (n.d.) and *Community-Based Monitoring System (CBMS) Network Coordinating Team* (n.d.)

7.37 In addition, a policy brief may contain the following:

- Boxes and sidebars
- Tables
- Graphics
- Photographs
- Authors
- Acknowledgements
- Publication details
- References

7.38 The length of a policy brief depends either on who the audience is or the type of briefing or both. For instance, a memo, which is a type of a briefing, is often just one page. Generally, policy briefs should not be more than four pages.

Benchmark for a policy brief

7.39 To guarantee the quality and effectiveness of a policy brief, one needs to ensure that the brief has critical ingredients outlined in Table 17 below.

Table 17. Key ingredients of a policy brief

Evidence	Persuasive argument	<ul style="list-style-type: none"> • Clear purpose • Cohesive argument • Quality of evidence • Transparency of evidence underpinning policy recommendations (e.g. a single study, a synthesis of available evidence, etc.)
	Authority	<ul style="list-style-type: none"> • Messenger (individual or organisation) has credibility in eyes of policymaker
Policy context	Audience context specificity	<ul style="list-style-type: none"> • Addresses specific context > national and sub-national • Addresses needs of target audience > social vs economic policy
	Actionable recommendations	<ul style="list-style-type: none"> • Information linked to specific policy processes • Clear and feasible recommendations on policy steps to be taken
Engagement	Presentation of evidence-informed opinions	<ul style="list-style-type: none"> • Presentation of author's own views about policy implications of research findings • But clear identification of argument components that are opinion-based
	Clear language/writing style	<ul style="list-style-type: none"> • Easily understood by educated, non-specialist
	Appearance/design	<ul style="list-style-type: none"> • Visually engaging • Presentation of information through charts, graphs, pictures

Source: Jones and Walsh, 2008.

Some tips for beginning to write your policy brief

- 7.40 Use these questions to begin thinking about your policy brief's purpose, audience, and contribution:
- What problem will your brief address?
 - Who is the audience? Why is the problem important to them? What do you know about the audience (e.g., technical knowledge, political or organizational culture or constraints, exposure to the issue, potential openness to the message)?
 - What other policy or issue briefs already exist? How will your brief differ (e.g., different information, perspective, aim, or audience)?
- 7.41 Use these questions to lay out the outline and basic content of your policy brief:
- What is the aim of the policy brief? Write one or two sentences from which the rest of the brief will follow.
 - What is the best hook for the audience?
 - What background information does the audience need?
 - What data are most important to include for your audience?
 - How will you present the data so it best conveys its message (e.g., in text, bar graph, line graph)?
 - What are the policy options based on the evidence that you have reviewed (if appropriate to your topic/aim)?

Writing an elevator pitch to make a compelling case for policy option

- 7.42 An elevator pitch is a brief, persuasive speech used to spark interest in a policy issue that one is concerned about. Elevator pitch is commonly used in the business and corporate world, but it can also be drawn upon by professionals in the public and NGO sectors to give a compelling case for a policy option. Some may know this type of speech to be called “a pitch, snapshot or one-minute message”. A good elevator pitch should last no longer than a short elevator (lift) ride of one minute, hence the name. An elevator pitch should be **interesting**, **memorable**, and **succinct**. An important point to bear in mind when developing an elevator pitch for a health policy issue of concern is to focus on three main messages:
- The problem
 - Supporting evidence
 - Request (either for a meeting to discuss issue in detail, or appeal to audience to act on the issue)
- 7.43 An elevator pitch should be relevant to the audience it is intended. For instance, one needs to think about the hook that will get the target audience interested in the issue. One should ask themselves a number of questions: Why should the audience listen? What is in it for the audience?

- 7.44 An elevator pitch should be:
- Concise: contains as few words as possible, but no fewer than one minute
 - Credible: explains why you are qualified/best placed to see the problem and to build your solution
 - Compelling: explains the problem your solution solves
 - Consistent: every version of an effective elevator pitch conveys the same basic message
 - Conversational: instead of the intention being to close the deal, the goal of an elevator pitch is to just set the hook; to start a dialogue with the audience for your pitch
- 7.45 An important aspect of developing an effective elevator pitch is to practice. The textbox below provides an example of an elevator pitch. Note that an elevator pitch is delivered orally; preparing a written one is only meant to help one thrash out the key message or the hook they want to use to capture the attention of the target audience, and for practicing purposes
- 7.46 An elevator pitch should be:
- Concise: contains as few words as possible, but no fewer than one minute
 - Credible: explains why you are qualified/best placed to see the problem and to build your solution
 - Compelling: explains the problem your solution solves
 - Consistent: every version of an effective elevator pitch conveys the same basic message
 - Conversational: instead of the intention being to close the deal, the goal of an elevator pitch is to just set the hook; to start a dialogue with the audience for your pitch
- 7.47 An important aspect of developing an effective elevator pitch is to practice. The textbox below provides an example of an elevator pitch. Note that an elevator pitch is delivered orally; preparing a written one is only meant to help one thrash out the key message or the hook they want to use to capture the attention of the target audience, and for practicing purposes

An example of an elevator pitch: Challenge of teenage pregnancy

Target audience is the Principal Secretary for Health, and the data provided is hypothetical for illustration and does not represent actual statistics.

Problem and evidence

In the recent past, we have witnessed an exponential rise in the number of teenage girls seeking pregnancy-related services in our health facilities. This poses a huge challenge to our health system that is already overwhelmed with complex challenges. Our assessment of information coming from health facilities around the country for the last 12 months has revealed that 40% of all hospital admissions are of teenage girls seeking pregnancy-related services. This means that in every 10 admissions, four are young girls aged between 12-19.

Implications of this evidence

The MoH needs to move fast to address this worrying trend. We have in mind winning interventions that the MoH could implement to address this issue. These have worked in resource limited settings like .., where the number of teenage girls admitted in hospital for pregnancy-related complications have been significantly reduced from 50% in 2013 to only 10% in 2015.

The ask

How may I contact you to discuss these data and interventions further? Could I have your business card? Here is my card. I will contact you in a week to follow-up on this issue.

Tips for developing effective presentations

7.48 PowerPoint presentations are commonly used to share evidence with decision-makers. For these presentations to be effective, they need to be presented in a clear and compelling manner. Here are some tips for preparing effective presentations:

- Keep the number of slides to a minimum; for example, if one has 15 minutes of presentation time, keep slides to a minimum of 10-12
- Limit the information on the slide to a single point or idea - no more than six lines, and not more than six words per line (i.e. the 6 by 6 rule)
- Keep slides simple with plenty of open space - avoid complicated figures, complex animations, or long and complex chunks of text
- Use “powerful” titles that communicate the point of the slide
- Use ‘power-points’ not sentences - present one point per line
- Use visuals - graphics, pictures
- Use large readable type
- Use strong colour contrast
- Use slide master to create consistent slides

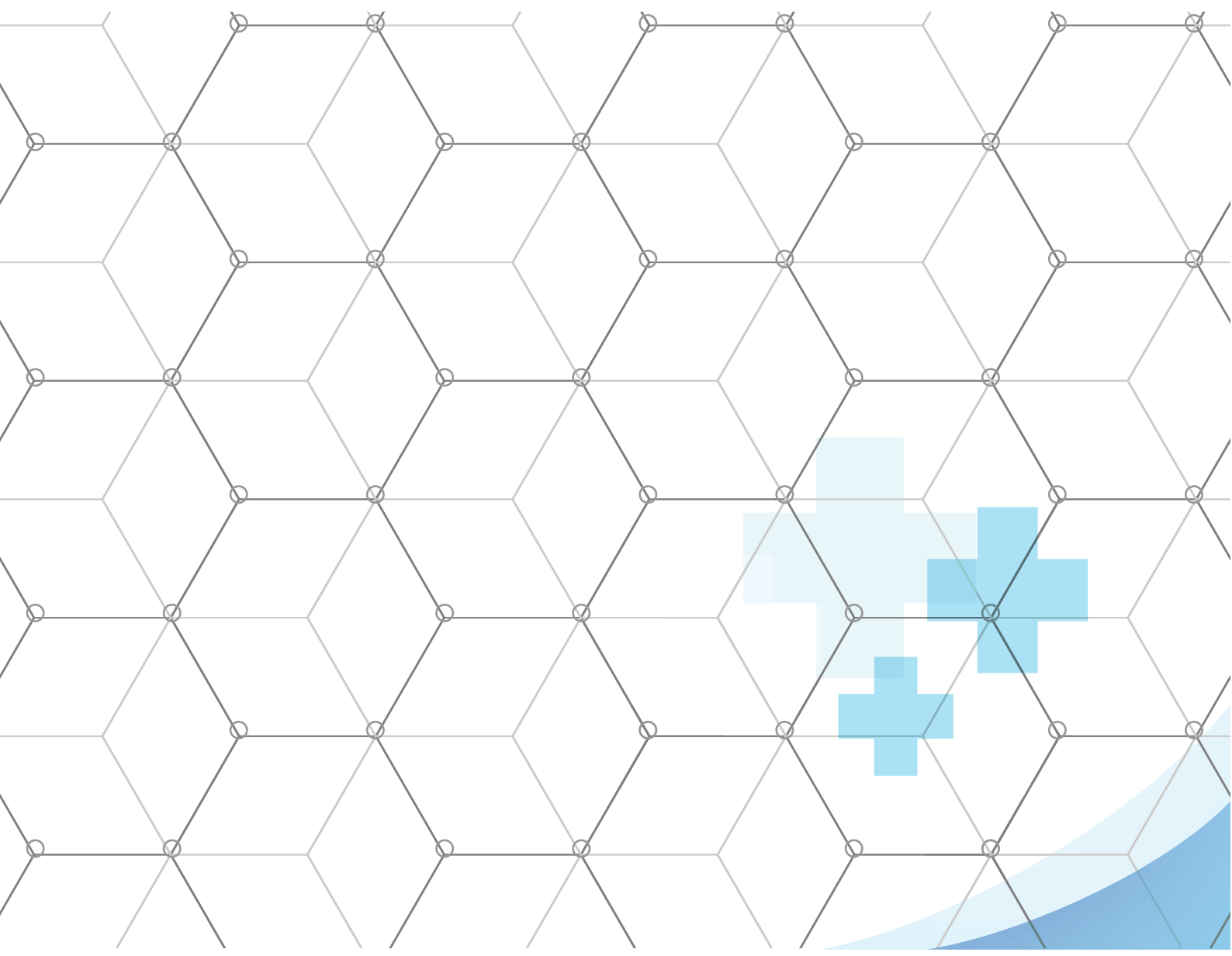
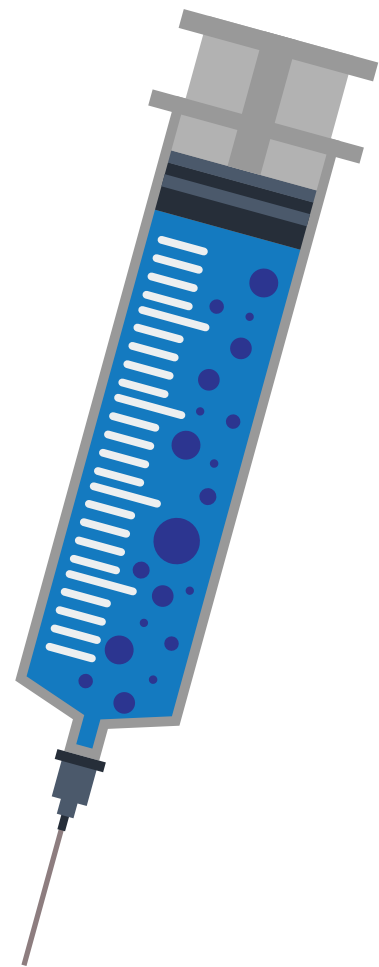
Tips for delivering an effective PowerPoint presentation

7.49 When delivering a PowerPoint presentation:

- Practice is critical. Do not read the presentation verbatim; rather practice so as to deliver from the ‘power-points’ without reading word by word
- Show up early to ensure your equipment works
- Test the presentation on the actual presentation computer - don’t assume it will work
- Spend about one minute on every slide
- Stay on time
- Turn off screen saver (if any)
- Monitor the audience’s behaviour/body language to gauge their reaction
- Avoid moving the pointer unconsciously
- Ask the audience to hold questions till the end

Chapter 8

Optimising Opportunities for Evidence Uptake in Policy-Making



Optimising Opportunities for Evidence Uptake in Policy-Making

8.1 Chapter 8 focuses on developing knowledge and skills on optimising opportunities for evidence uptake in policy-making as well as understanding the indicators of evidence use. Application of evidence is the final stage in the evidence-informed policy-making process. These Guidelines look at application of evidence broadly as including reach, use, capacity building, and collaboration.

Reaching policymakers at the right time with evidence

8.2 There are two important domains to consider when reaching policymakers, namely:

- The policy system
- The human element

The policy system

8.3 A first step in reaching policymakers at the right time is to **understand the basics of the political system** where one intends to have influence. This includes the differing roles of parliament compared to government, how laws are made, and the role of the civil service. It is also important to **understand how policy on the topic of interest is made** and what relevant policy processes are ongoing. There may be a special team responsible for the topic or that responsibility is devolved to county government bodies. Therefore, a first step in knowing how to reach policymakers at the right time is to identify the “policy window” in the policy-making process.

8.4 Kingdon (2003) argues that a “policy window” for influence opens when three streams flowing independently merge or align – the problem, politics, and policy (the solution) (see Figure 13). Some of the things that one can do with evidence to couple the three streams in order to open a policy window of influence include:

- Networking
- Talking one-on-one
- Engaging with the system
- Writing documents and strategies
- Preparing a document for a technical working group (TWG)
- Serving on steering committee or task group for TWG
- Getting on the agenda/presenting at TWG or other key audience
- Better packaging of the evidence

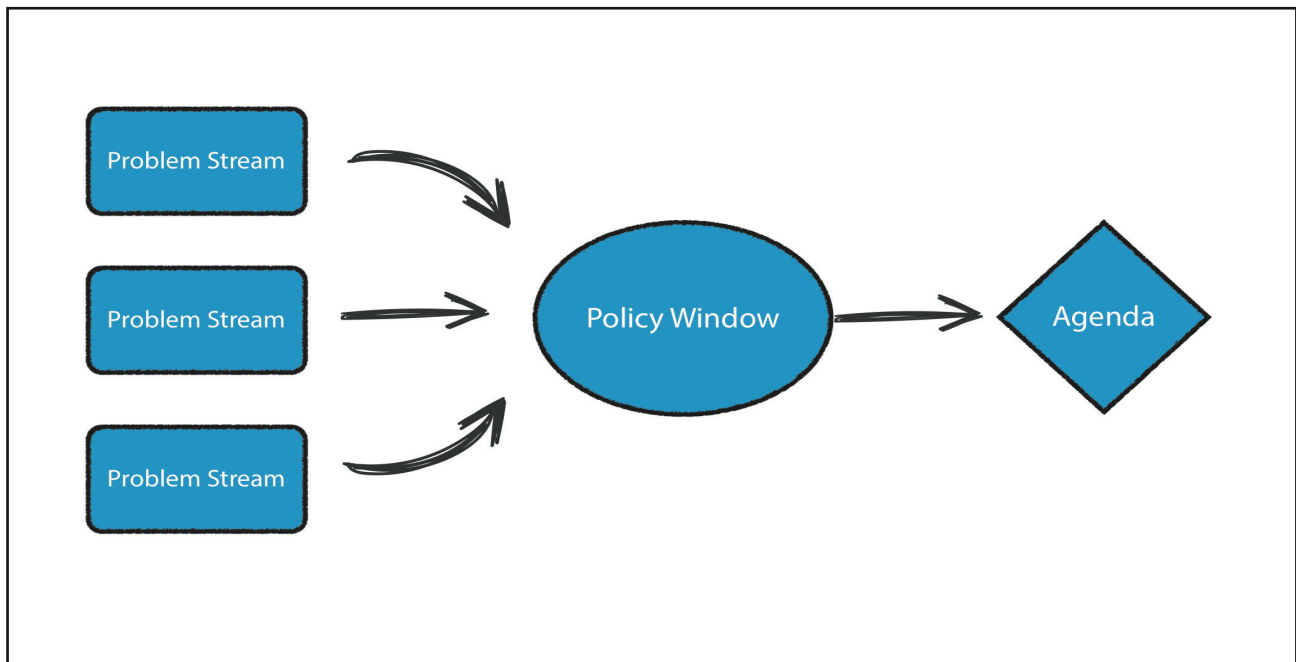


Figure 13. Three Streams that couple to open a policy window

Source: Galligan and Burgess, 2003.

The human element in reaching policymakers

- 8.5 Besides understanding the policy system, it is essential to cultivate relationships with the policymakers that you are seeking to influence with the evidence. Two systematic reviews (conducted in 2002 and 2014) of how evidence influences decision-makers, found that **the absence of personal contact** between researchers and policymakers and **the lack of timeliness** or relevance of research were the most common constraints (Innvaer et al., 2002; Oliver et al., 2014).
- 8.7 The important take-aways from the findings of the two systematic reviews are:
- Each policymaker has different ways they like to be contacted. Take time to check how they prefer to receive information. Knowing the background of policymakers informs communication strategies
 - Timeliness is a critical element in influencing policymakers

Developing a communications strategy

- 8.8 Building on the foregoing section, it is important to have a clear strategy on how one will communicate the evidence to a targeted policymaker to facilitate its uptake in decision-making.
- 8.9 'Policy communications' is defined as the exchange of information that is relevant to policy audiences. Information exchange can be either formal or informal (like during coffee with an influential leader), but whatever form it takes, communication is an integral part of influencing the policy process. Below is an outline of steps in developing a communications strategy.

Step 1: Define the communication objectives

8.10 What does one want to achieve with communications activities? Define this in simple, clear and measurable terms. Communication objectives will be informed by the issue that one is seeking to address. For instance, if the issue that one is seeking to address is not on the policy agenda, then the communication objectives will focus on setting the agenda for the issue, and this will largely involve increasing awareness and understanding of the issue and its implications for development. On the other hand, if the issue that one is seeking to address is already on the agenda but there is no policy response, then the focus should be on communicating clear policy options for addressing the issue. The communication objective for such an issue will seek to generate support for implementing certain policy options in response to the issue. Often, people confuse communication objectives and programme objectives, especially if communications activities are part of a specific programme. Table 18 below illustrates examples of communication objectives versus programme objectives. What is most important is to think critically about what can actually be achieved by communication activities. This process helps one refine the communication objectives only to what can be achieved by communications activities.

Table 18. Communication versus programme objectives

Communications objectives	Programme objectives
Raise awareness among policymakers about the need for increased resources for maternity services	Increase the number of women who receive free maternity services by 30% in 2016
Increase support for the revision of the current free maternity health services guidelines	Revise the current free maternity health services guidelines
Increase understanding among health policymakers about the need to prioritise community health workers	Increase funds allocated to the community health worker programme in the country
Promote the increase of resource allocations to health research	Increase resource allocation to health research

8.11 After defining the communications objectives, the next important thing to do is to define the specific outcome(s) for each communication objective. The outcome(s) will demonstrate success that a specific communication objective has to achieve. Table 19 below provides some examples of communication objectives and their potential outcomes.

Table 19. Expected outcomes for communications objectives

Communications Objective	Expected Outcome
Help the Principal Secretary and Director of Medical Services better understand what works in reducing child deaths	Adoption of effective interventions for reducing child deaths
Increase understanding among health policymakers about the need to prioritise community health workers	Increased resource allocations to the community health worker programmes

8.12 An important point to bear in mind is that policy change is an incremental process, and so the communications objectives will need to be informed by this reality. Being realistic on what one can actually achieve with communications activities means that one does not set himself/herself up for failure.

Step 2: Identify and analyse the target audiences

- 8.13 An important first step in analysing the target audience is categorising them so that one is clear on:
- Who is the Primary Audience? - The policymaker who can directly affect policy on the issue in question
 - Who is the Secondary Audience? - Policymakers and other actors who can influence the primary audience (allies)
 - Who are the Opponents? - Policymakers and other actors opposed to the policy reform suggestions
- 8.14 The next step in analysing the target audience is to find out:
- What do they know about the topic?
 - Are they interested in the topic?
 - Who do they listen to?
 - What are their information needs about the topic?
 - What are their current sources of information?
 - What are the best ways to reach them? (formats and channels)
- 8.15 A good understanding of the target audience will inform the next steps of communication, i.e. developing compelling messages for each of the different audiences and choosing effective formats and channels for reaching them.

Step 3: Developing Messages

- 8.16 These Guidelines have already covered a lot of important elements in developing compelling messages, especially under development of actionable recommendations, policy briefs and elevator pitch. Here is a recap of four tips for developing effective messages.
- Keep the number of key messages for each group to a maximum of two to three messages, and deliver those same messages consistently to that group. One can certainly use different spokespersons - but everybody should be reading from the same script.
 - Tailor the message to fit the audience - it is the audience that should drive message content. The policymaker is likely to be most interested in how the message can help him/her achieve the goals of the MoH or department
 - Make sure the message is delivered by a credible source: The messenger is often as important or (sometimes) more important than the message itself
 - Keep the message at the level of the audience: avoid technical jargon, use words or phrases that conjure positive images - better to say 'family planning' or 'child spacing' than 'population control', for instance
- 8.17 Effective policy messages often incorporate phrases that are in vogue in the popular culture or that are framed in terms of people's values or conjure positive images in people's minds about an issue.

Step 4: Select the channels to use

- 8.18 There are multiple channels that one can use for reaching the target audience, including:
- Face-to-face (interpersonal) - workshops, seminars (are there upcoming 'focus-generating events')
 - Reports or policy memoranda, or letters and emails
 - Mass media - press, broadcast (Radio & TV), mass mailings, and the Internet (websites, blogs)
 - Social media - Twitter, Facebook and others
- 8.19 Select formats that are the most appropriate for the target audiences. This requires a good understanding of the target audience and their preferred sources of information.

Step 5: Create a work plan

- 8.20 Key questions to bear in mind when creating a work plan:
- For whom
 - By when
 - By what means
 - By whom
 - How often
 - How many
- 8.21 The work plan should specify:
- Communication activities and the timelines
 - The resources needed (human and financial)
- 8.22 The work plan should also factor in upcoming 'focus-generating events' that one can take advantage of in order to communicate the evidence to influence policy decisions. Such events may include:
- Global or national conferences
 - Legislation for laws/regulations
 - Annual budgeting process
 - Periodic programme reviews/evaluations
- 8.23 Pretest the messages - this can dramatically improve the effectiveness of materials, and can be low cost and require minimal effort. For instance, one can use colleagues to pretest the message and receive feedback.

Step 6: Implement your communications activities

- 8.24 Nothing will be achieved unless one implements their communications work plan. Specifically:
- Guide and work with your team in designing and delivering interventions.
 - Establish and sustain important relationships with external actors needed for the successful delivery of planned communications activities. These could be relationships with other government agencies, civil society, researchers and media among others

Step 7: Monitor and evaluate your communication activities

- 8.25 Monitoring and evaluating communication activities is critical for understanding their impact as well as drawing lessons for informing future communications activities. M&E activities should assess:
- Performance: Were all the activities implemented, delivered, and on time?
 - Evidence that the issue has gained the attention of policymakers (are senior policymakers talking about the issue, or starting initiatives to tackle the issue, e.g. setting up a task-force or TWG to draft a policy on the issue)
 - Impact: Did activities bring about the desired change? (Is there a new policy or programme tackling the issue?)
 - Evidence that the interventions have enhanced coalition efforts to increase the saliency of the issue
 - Evidence of use of the information provided for policy learning
- 8.26 In summary, effective communication strategies rely on:
- Audience-centred approach
 - Ongoing communications/engagement activities
 - Disseminating information at the right time, for the right length of time
- 8.27 If well designed, communications activities will create demand for more information on the issue and/or trigger a change in policy or programme.
- 8.28 Note that one can learn more on this through an online tutorial that addresses health communication with these objectives: Appreciate the role of health communication in public health and development; understand key steps in the development, implementation, and evaluation of high-quality health communication interventions; and access additional resources for health communication planning and guidance, at: <http://www.globalhealthlearning.org/course/health-communication-managers>.

What are the indicators of evidence application?

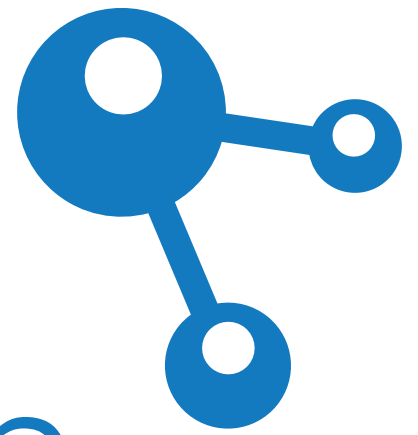
8.29 How does one know that evidence has been used?

- New policies or amended policies incorporate the evidence
- Recommendations adopted by implementing (and other) institutions
- Guidelines revised to reflect the evidence
- Getting evidence discussed in higher-level policy dialogues or by high-level policymakers, e.g. getting the Cabinet Secretary for Health talking about the issue in other forums, or having the issue discussed in Cabinet or meeting of the heads of the five departments at the MoH.
- Inclusion on agenda of technical working groups or other key meetings
- Changes in level of funding
- Number of policies, programmes, or products developed on basis of the evidence
- Frequency and quality of interactions with high level policy-makers
- Incidence of similar projects
- Changes made to programme or services
- Scaling of the original programme within geographic area

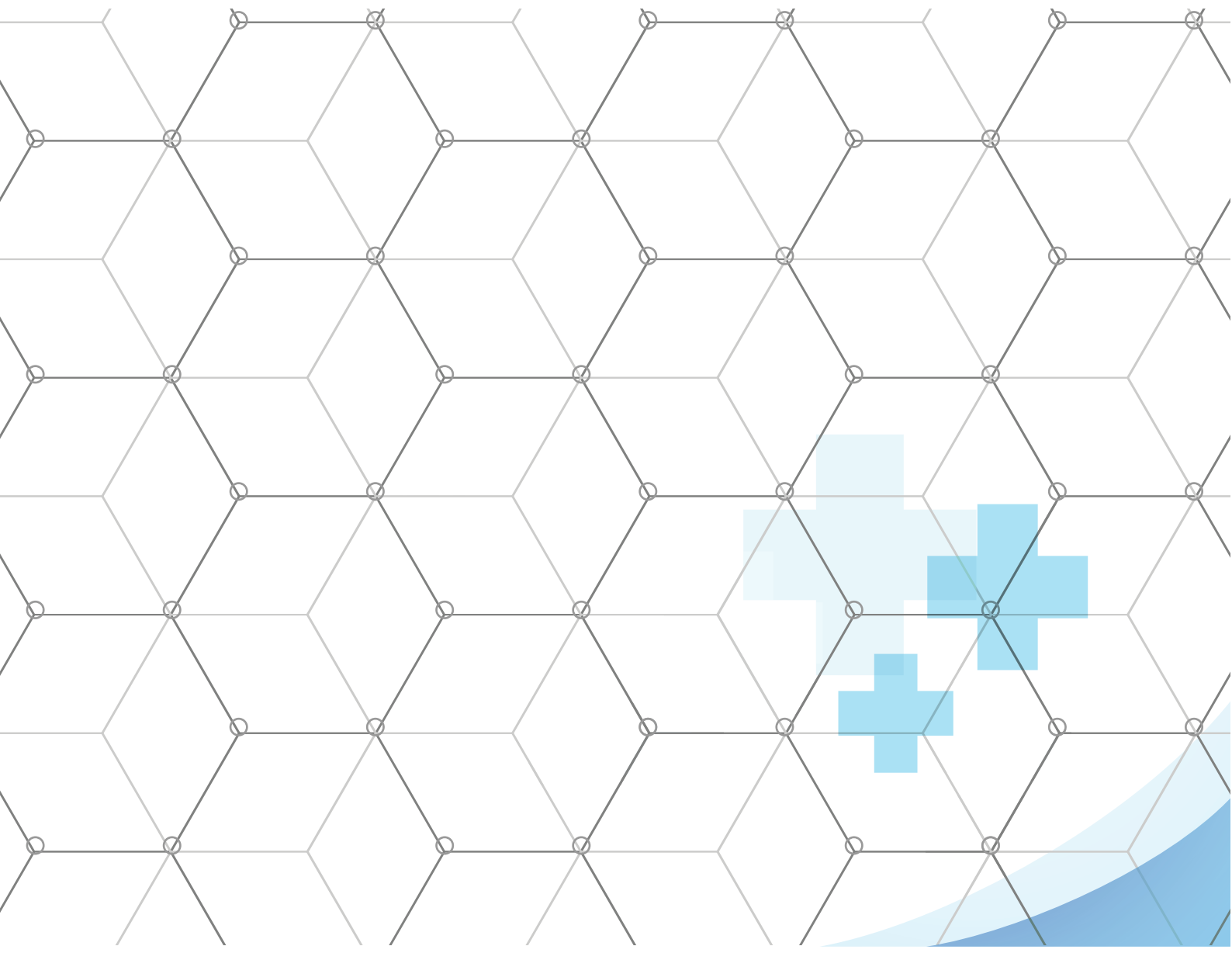
8.30 It is very complex to measure use of evidence. Acknowledging this complexity is a helpful reminder to articulate SMART indicators, but remain flexible. Even experts in developing and monitoring indicators allow for the fact that different people categorise measures differently and the important thing is to develop something that works for the context that one is working in.

8.31 Sometimes evidence is directly applicable, for instance, when policy guidance is developed around it. It can also be applied, but not become so obvious. For example, evidence may be seen in collaboration activities or funds leveraged. Since there are multiple ways that evidence can be applied in the real world, there are also multiple ways to indicate that evidence use has occurred.

Chapter 9



Conclusion



Conclusion

9.1 These Guidelines provide guidance on evidence use and policy-making for policymakers and technical staff in in the MoH and county departments for health, as well as other health sector stakeholders. The emphasis on evidence-informed policy-making is because its advantages to policy-making have been widely recognised by policymakers and researchers alike. It is worth noting though that evidence-informed policy-making is a process that requires both sustained attention and resources. Even then, the advantages of evidence-informed policy-making, listed below, justify the resources investment:

- Helps ensure that policies and programmes are **responding to the real needs** of the community, which in turn, can lead to better outcomes for the population in the long-term
- Helps ensure increased effectiveness of policies and programmes by enabling the **uptake of emerging technologies and best practices, and scale-up of proven interventions**
- Can **highlight the urgency of an issue** or problem, which requires immediate attention. This is important in securing funding and resources for the policy to be developed, implemented and maintained
- **Enables information sharing amongst other members of the public sector**, in regard to what policies have or have not worked
- Can **reduce government expenditure**, which may otherwise be directed into ineffective policies or programmes, which could be costly and time-consuming
- Can **produce an acceptable return on the financial investment** allocated toward public programmes by improving service delivery and outcomes for the community
- Ensures that decisions are made in a way that is consistent with **democratic and political processes**, which are characterised by transparency and accountability

References

- Buffet, C., Ciliska, D., and Thomas, H. (2007). *Can I Use this Evidence in My Programme Decision? Assessing Applicability and Transferability of Evidence*. Hamilton, ON: National Collaborating Centre for Methods and Tools.
- CADRE Project at the University of Nebraska-Omaha (n.d.). *Reading Comprehension: Beyond the Text Skills*. Retrieved from: <https://sites.google.com/site/capstonef2012/reading-comprehension/beyond-the-text-skills/synthesizing-information>
- Community-Based Monitoring System (CBMS) Network Coordinating Team (n.d.) *Guidelines for Writing a Policy Brief*. Retrieved from: http://www.pep-net.org/sites/pep-net.org/files/typo3doc/pdf/CBMS_country_proj_profiles/Philippines/CBMS_forms/Guidelines_for_Writing_a_Policy_Brief.pdf
- DeVry University South Florida Campus Community Website (n.d.) *WWW Resource: Boolean Searching on Internet*. Retrieved from: http://www.mir.devry.edu/academics_lib_www2.html
- DFID (2014). *How to Note: Assessing the Strength of Evidence Provides Detailed Criteria for Assessing the Strength of a Body of Evidence*. Retrieved from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/291982/HTN-strength-evidence-march2014.pdf
- DFID (2013). *Research Uptake Guidance: A Guide for DFID-Funded Research Programmes*. Retrieved from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/200088/Research_uptake_guidance.pdf
- Eaton, S.E. (2010). *Reading Strategies: Differences between Summarising and Synthesising*. Retrieved from: <https://drsaraheaton.wordpress.com/2010/09/29/reading-strategies-differneces-between-summarizing-and-synthesizing/>
- Galligan, A.M. and Burgess, C.N. (2003). *Moving Rivers, Shifting Streams: Perspectives on the Existence of a Policy Window*. (Occasional Paper No. 29). Paper Presented at the 29th Annual Social Theory, Politics and the Arts Conference. Retrieved from <https://arted.osu.edu/files/arted/paper29.pdf>
- Gilmore, T., Krantz, J. and Ramirez, R. (1986). "Action Based Modes of Inquiry and the Host-Researcher Relationship," *Consultation* 5.3 (Fall 1986): 161.
- Global Debate and Public Policy Challenge (undated). *Writing Guidelines: Policy Brief*. Retrieved from: <http://gdppc.idebate.org/content/writing-guidelines-policy-brief>
- Gough, D., S. Oliver and J. Thomas (2013) *Learning from research: Systematic reviews for informing policy decisions: A quick guide*. EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.
- Gurung, P. (2014). *Role of Research in Policy-Making (in terms of policy research)*. [PowerPoint slides]. Retrieved from: <http://www.slideshare.net/PabitraGurung/role-of-research-in-policy-making-in-terms-of-policy-research>
- Hallsworth, M. and Rutter J. (2011). *Making Policy Better: Improving Whitehall's Core Business*. London: Institute for Government.

- Hammerstrøm, K., Wade A., Hanz K., Jørgensen A.K. (2009). Searching for Studies: Information Retrieval Methods Group Policy Brief. Oslo, Norway: The Campbell Collaboration. Retrieved from: http://www.campbellcollaboration.org/artman2/uploads/1/C2_Information_retrieval_policy_brief_new_draft.pdf
- Hedin A, and Kallestal C. Knowledge - based public health work. Part 2: Handbook for compilation of reviews on interventions in the field of public health. National Institute of Public Health. 2004. http://www.fhi.se/shop/material_pdf/r200410Knowledgebased2.pdf
- HM Treasury, United Kingdom Government (2011). The Green Book: Appraisal and Evaluation of Central Government. London: UK Government.
- Innvaer, S., Vist, G., Trommald, M. and Oxman, A. (2002) Health policy-makers' perceptions of their use of evidence: a systematic review. *Journal of Health Services Research and Policy*, 7: 239-244.
- Jones, N. and Walsh, C. (2008). 'Policy Briefs as a Communication Tool for Development Research', Background Note. London: Overseas Development Institute.
- Joppe, M. (2000). The Research Process, *The Quantitative Report Journal*, 8(4): 597-607. Retrieved from: <http://www.nova.edu/ssss/QR/QR8-4/golafshani.pdf>
- Kingdon, J. (2003). *Agendas, Alternatives, and Public Policies*. 2nd Edition. New York: Longman.
- Klassen TP, Jadad AR, Moher D. Guides for Reading and Interpreting Systematic Reviews. 1. Getting Started. *Archives of Pediatric and Adolescent Medicine*, 1998;152:700 - 704.
- KLRC (2015). *Guide to the Legislative Process in Kenya*. 1st Edition. Nairobi: Kenya Law Reform Commission (KLRC). Retrieved from: <http://www.klrc.go.ke/index.php/reports-and-publications/562-a-guide-to-the-legislative-process-in-kenya>
- Kolsnik, V. (2012). Mind Map on How to Create a Mind Map. Retrieved from: <https://www.flickr.com/photos/ult/7577744858>
- Mallett, S., Hopewell, S., Clarke, M. (2002). Grey literature in Systematic Reviews: The First 1000 Cochrane Systematic Reviews. Fourth Symposium on Systematic Reviews: Pushing the Boundaries, Oxford (UK).
- Miles, M.B. and Huberman. A.M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.
- Ministry of Health (2014). *Kenya Health Policy 2014-2030*. Nairobi: Ministry of Health.
- Ministry of Health, Government of Malawi (2014) *Guidelines for Policy Development and Analysis for the Public Health Sector in Malawi*. Lilongwe: Government of Malawi.
- NHS Centre for Reviews and Dissemination (2001). *Undertaking Systematic Reviews of Research on Effectiveness*. CRD's Guidance for those Carrying Out or Commissioning Reviews. CRD Report Number 4 (2nd Edition). NHS Centre for Reviews and Dissemination, University of York.
- Nutley, S., Powell, A. and Davies, H. (2013). *What Counts as Good Evidence?* Alliance for Useful Evidence. Retrieved from: <http://www.alliance4usefulevidence.org/assets/What-Counts-as-Good-Evidence-WEB.pdf>

- Oliver, K. S., Innvaer, T., Lorenc, J., Woodman, J. T (2014). A systematic Review of Barriers to and Facilitators of the Use of Evidence by Policymakers. *BMC Health Services Research*, 14:2.
- Office of the First Minister and Deputy First Minister, Northern Ireland Government (n.d.) A Practical Guide to Policy-Making in Northern Ireland. Belfast: Government of Northern Ireland.
- Overseas Development Institute (n.d.) Policy Processes are Complex. Retrieved from: <https://kirstyevidence.files.wordpress.com/2012/09/rapid-diagram1.jpg>
- Oxman, A.D., Lavis J. N., Lewin S. S. and Fretheim, A. (2009). Support Tools for Evidence-Informed Health Policy-Making (STP) 1: What is Evidence-Informed Policy-Making? *Health Research Policy and Systems*, 7(Suppl 1): S1. Retrieved from: <http://www.health-policy-systems.com/content/7/S1/S1>
- Pollard, A. and Court J. (2005) How Civil Society Organisations Use Evidence to Influence Policy Processes: A literature review, ODI Working Paper No. 249, London: ODI.
- SECURE Health Programme (2014). An assessment of Capacity Needs for Application of Research Evidence in Decision-Making in the Health Sector in Kenya. Nairobi: SECURE Health Consortium.
- SECURE Health Programme (2015). Evidence-Informed Policy-Making Training Curriculum. Nairobi: Secure Health Consortium.
- Shea, B.J., Grimshaw, J.M., Wells, G.A., Boers, M., Andersson, N., Hamel, C., Porter, A.C., Tugwell, P., Moher, D., and Bouter, L.M. Development of AMSTAR: a measurement tool to assess the methodological quality of systematic reviews. *BMC Medical Research Methodology* 2007, 7:10.
- Sutcliffe, S. and Court J. (2006). A Toolkit for Progressive Policymakers in Developing Countries. London: Overseas Development Institute. Retrieved from: <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/190.pdf>
- University of Illinois at Chicago (n.d.) Evidence-Based Practice in the Health Sciences: Evidence-Based Nursing Tutorial. Information Services Department of the Library of the Health Sciences-Chicago, University of Illinois at Chicago.
- University of Southern California Libraries (n.d.) Organising Your Social Sciences Research Paper: Types of Research Designs. Retrieved from: <http://libguides.usc.edu/writingguide/researchdesigns>
- Webster's New World College Dictionary (2014) 5th Edition. Boston: Houghton Mifflin Harcourt.
- WHO (undated). Health Policy. Available at: http://www.who.int/topics/health_policy/en/
- WHO (2012). Updated WHO Policy Recommendation: Intermittent Preventive Treatment of Malaria in pregnancy using SulfadoxinePyrimethamine (IPTpGSP).
- Zimmerman, S. and C. Hutchins. (2003). Seven Keys to Comprehension: How to Help Your Kids Read It and Get It! New York: Three Rivers Press.

Annexes

Annex 1: List of Contributors

Name	Title	Institution
1. Dr. Charles M. Nzioka	Head, Division of Health Research and Development	MoH
2. Dr. James Mwitari	Deputy Chief Public Health Officer	MoH
3. Dr. Ruth Kitetu	Head, Health Sector Policy and Strategic Planning Unit	MoH
4. Mr. Elkana Onguti	Chief Economist/Head, Division of Policy & Planning	MoH
5. Mr. Daniel Kavoo	Programme Officer, Community Health and Development unit	MoH
6. Mr. Saleh A. Bardad	National focal person for Ear Health and Hearing Care/ Parliamentary Liaison Officer	MoH
7. Mr. Simon Ndemo	Head of Monitoring and Evaluation Unit	MoH
8. Dr. David Soti	Head, Division of Health informatics, Monitoring & Evaluation	MoH
9. Ms. Rose Mwongera	Principal Youth Development Officer	MoH
10. Mr. Humphrey Ringera	Researcher and Policy Analyst	Parliament
11. Mr. Said Osman	Researcher and Policy Analyst	Parliament
12. Dr. Rose Oronje	Director, Science Communications and Evidence Uptake	AFIDEP
13. Ms. Violet Murunga	Senior Knowledge Translation Officer	AFIDEP
14. Prof. Matilu Mwau	Executive Director	CNHR
15. Dr. Marsden Solomon	Reproductive Health Advisor	FHI 360
16. Dr. Eliya Zulu	Executive Director	AFIDEP
17. Mr. Jones Abisi	Policy and Advocacy Coordinator	AFIDEP
18. Ms Tricia Petruney	Technical Advisor, Research Utilisation; Global Health, Population and Nutrition	FHI 360
19. Mr. Bonnie Mathooko	Chief Research Officer	Parliament
20. Dr. Patrick Amoth	Head, Division of Family Health	MoH
21. Dr. Esther Ogara	Senior Assistant Director of Medical Services	MoH

Name	Title	Institution
22. Dr. John Kinuthia	Head, Research and Programmes, KNH	KNH
23. Dr. Evans Amukoye	Director, Centre for Respiratory Disease Research	KEMRI
24. Ms. Kirsten Krueger	Technical Advisor, Research Utilisation	FHI 360
25. Ms. Terry Watiri	Health Economist	MoH
26. Ms. Marale Sande	Researcher and Policy Analyst	Parliament

Annex 2: 12 Major Types of Research Designs

Action Research Design

Definition and Purpose

Action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to further the goals of social science simultaneously. Thus, there is a dual commitment in action research to study a system and concurrently to collaborate with members of the system in changing it in what is together regarded as a desirable direction. Accomplishing this twin goal requires the active collaboration of researcher and client, and thus it stresses the importance of co-learning as a primary aspect of the research process. (Gilmore et al, 1986)

What do these studies tell you?

1. This is a collaborative and adaptive research design that lends itself to use in work or community situations
2. Design focuses on pragmatic and solution-driven research outcomes rather than testing theories
3. When practitioners use action research, it has the potential to increase the amount they learn consciously from their experience; the action research cycle can be regarded as a learning cycle
4. Action research studies often have direct and obvious relevance to improving practice and advocating for change
5. There are no hidden controls or pre-emption of direction by the researcher

What these studies do not tell you?

1. It is harder to do than conducting conventional research because the researcher takes on responsibilities of advocating for change as well as for researching the topic
2. Action research is much harder to write up because it is less likely that you can use a standard format to report your findings effectively [i.e., data is often in the form of stories or observation]
3. Personal over-involvement of the researcher may bias research results
4. The cyclic nature of action research to achieve its twin outcomes of action (e.g. change) and research (e.g. understanding) is time-consuming and complex to conduct
5. Advocating for change requires buy-in from participants

Case Study Design

Definition and Purpose

A case study is an in-depth study of a particular research problem rather than a broad statistical survey or comprehensive comparative inquiry. It is often used to narrow down a very broad field of research into one or a few easily researchable examples. The case study research design is also useful for testing whether a specific theory and model actually applies to phenomena in the real world. It is a useful design when not much is known about an issue or phenomenon.

What do these studies tell you?

1. Approach excels at bringing us to an understanding of a complex issue through detailed contextual analysis of a limited number of events or conditions and their relationships
2. A researcher using a case study design can apply a variety of methodologies and rely on a variety of sources to investigate a research problem
3. Design can extend experience or add strength to what is already known through previous research
4. Social scientists, in particular, make wide use of this research design to examine contemporary real-life situations and provide the basis for the application of concepts and theories and the extension of methodologies
5. The design can provide detailed descriptions of specific and rare cases

What these studies do not tell you?

1. A single or small number of cases offers little basis for establishing reliability or to generalise the findings to a wider population of people, places, or things
2. Intense exposure to the study of a case may bias a researcher's interpretation of the findings
3. Design does not facilitate assessment of cause and effect relationships
4. Vital information may be missing, making the case hard to interpret
5. The case may not be representative or typical of the larger problem being investigated
6. If the criterion for selecting a case is because it represents a very unusual or unique phenomenon or problem for study, then your interpretation of the findings can only apply to that particular case

Causal Design

Definition and Purpose

Causality studies may be thought of as understanding a phenomenon in terms of conditional statements in the form, "If X, then Y." This type of research is used to measure what impact a specific change will have on existing norms and assumptions. Most social scientists seek causal explanations that reflect tests of hypotheses. Causal effect (nomothetic perspective) occurs when variation in one phenomenon, an independent variable, leads to or results, on average, in variation in another phenomenon, the dependent variable.

Conditions necessary for determining causality:

- Empirical association -- a valid conclusion is based on finding an association between the independent variable and the dependent variable
- Appropriate time order -- to conclude that causation was involved, one must see that cases were exposed to variation in the independent variable before variation in the dependent variable
- Non-spuriousness -- a relationship between two variables that is not due to variation in a third variable

What do these studies tell you?

1. Causality research designs assist researchers in understanding why the world works the way it does through the process of proving a causal link between variables and by the process of eliminating other possibilities
2. Replication is possible
3. There is greater confidence the study has internal validity due to the systematic subject selection and equity of groups being compared

What these studies do not tell you?

1. Not all relationships are casual! The possibility always exists that, by sheer coincidence, two unrelated events appear to be related (e.g., Punxatawney Phil could accurately predict the duration of Winter for five consecutive years but, the fact remains, he is just a big, furry rodent)
2. Conclusions about causal relationships are difficult to determine due to a variety of extraneous and confounding variables that exist in a social environment. This means causality can only be inferred, never proven
3. If two variables are correlated, the cause must come before the effect. However, even though two variables might be causally related, it can sometimes be difficult to determine which variable comes first and, therefore, to establish which variable is the actual cause and which is the actual effect

Cohort Design

Definition and Purpose

Often used in the medical sciences, but also found in the applied social sciences, a cohort study generally refers to a study conducted over a period of time involving members of a population which the subject or representative member comes from, and who are united by some commonality or similarity. Using a quantitative framework, a cohort study makes note of statistical occurrence within a specialised sub-group, united by same or similar characteristics that are relevant to the research problem being investigated, rather than studying statistical occurrence within the general population. Using a qualitative framework, cohort studies generally gather data using methods of observation. Cohorts can be either “open” or “closed.”

- Open Cohort Studies [dynamic populations, such as the population of Los Angeles] involve a population that is defined just by the state of being a part of the study in question (and being monitored for the outcome). Date of entry and exit from the study is individually defined; therefore, the size of the study population is not constant. In Open Cohort Studies, researchers can only calculate rate based data, such as, incidence rates and variants thereof.
- Closed Cohort Studies [static populations, such as patients entered into a clinical trial] involve participants who enter into the study at one defining point in time and where it is presumed that no new participants can enter the cohort. Given this, the number of study participants remains constant (or can only decrease).

What do these studies tell you?

1. The use of cohorts is often mandatory because a randomised control study may be unethical. For example, you cannot deliberately expose people to asbestos; you can only study its effects on those who have already been exposed. Research that measures risk factors often relies upon cohort designs
2. Because cohort studies measure potential causes before the outcome has occurred, they can demonstrate that these “causes” preceded the outcome, thereby avoiding the debate as to which is the cause and which is the effect
3. Cohort analysis is highly flexible and can provide insight into effects over time and related to a variety of different types of changes (e.g., social, cultural, political, economic etc.)
4. Either original data or secondary data can be used in this design

What these studies do not tell you?

1. In cases where a comparative analysis of two cohorts is made (e.g., studying the effects of one group exposed to asbestos and one that has not), a researcher cannot control for all other factors that might differ between the two groups. These factors are known as confounding variables
2. Cohort studies can end up taking a long time to complete if the researcher must wait for the conditions of interest to develop within the group. This also increases the chance that key variables change during the course of the study, potentially impacting the validity of the findings
3. Due to the lack of randomisation in the cohort design, its external validity is lower than that of study designs where the researcher randomly assigns participants

Cross-Sectional Design

Definition and Purpose

Cross-sectional research designs have three distinctive features: no time dimension; a reliance on existing differences rather than change following intervention; and, groups are selected based on existing differences rather than random allocation. The cross-sectional design can only measure differences between or from among a variety of people, subjects, or phenomena rather than a process of change. As such, researchers using this design can only employ a relatively passive approach to making causal inferences based on findings.

What do these studies tell you?

1. Cross-sectional studies provide a clear 'snapshot' of the outcome and the characteristics associated with it, at a specific point in time
2. Unlike an experimental design, where there is an active intervention by the researcher to produce and measure change or to create differences, cross-sectional designs focus on studying and drawing inferences from existing differences between people, subjects, or phenomena
3. Entails collecting data at and concerning one point in time. While longitudinal studies involve taking multiple measures over an extended period of time, cross-sectional research is focused on finding relationships between variables at one moment in time
4. Groups identified for study are purposely selected based on existing differences in the sample rather than seeking random sampling
5. Cross-section studies are capable of using data from a large number of subjects and, unlike observational studies, is not geographically bound
6. Can estimate prevalence of an outcome of interest because the sample is usually taken from the whole population
7. Because cross-sectional designs generally use survey techniques to gather data, they are relatively inexpensive and take up little time to conduct

What these studies do not tell you?

1. Finding people, subjects, or phenomena to study that are very similar except in one specific variable can be difficult
2. Results are static and time-bound and, therefore, given no indication of a sequence of events or reveal historical or temporal contexts
3. Studies cannot be utilised to establish cause and effect relationships
4. This design only provides a snapshot of analysis so there is always the possibility that a study could have differing results if another time-frame had been chosen
5. There is no follow up to the findings

Descriptive Design

Definition and Purpose

Descriptive research designs help provide answers to the questions of who, what, when, where, and how associated with a particular research problem; a descriptive study cannot conclusively ascertain answers to why. Descriptive research is used to obtain information concerning the current status of the phenomena and to describe “what exists” with respect to variables or conditions in a situation.

What do these studies tell you?

1. The subject is being observed in a completely natural and unchanged natural environment. True experiments, whilst giving analysable data, often adversely influence the normal behaviour of the subject (also known as, the Heisenberg effect whereby measurements of certain systems cannot be made without affecting the systems)
2. Descriptive research is often used as a pre-cursor to more quantitative research designs with the general overview giving some valuable pointers as to what variables are worth testing quantitatively
3. If the limitations are understood, they can be a useful tool in developing a more focused study
4. Descriptive studies can yield rich data that lead to important recommendations in practice
5. Approach collects a large amount of data for detailed analysis

What these studies do not tell you?

1. The results from a descriptive research cannot be used to discover a definitive answer or to disprove a hypothesis
2. Because descriptive designs often utilise observational methods (as opposed to quantitative methods), the results cannot be replicated
3. The descriptive function of research is heavily dependent on instrumentation for measurement and observation

Experimental Design

Definition and Purpose

A blueprint of the procedure that enables the researcher to maintain control over all factors that may affect the result of an experiment. In doing this, the researcher attempts to determine or predict what may occur. Experimental research is often used where there is time priority in a causal relationship (cause precedes effect), there is consistency in a causal relationship (a cause will always lead to the same effect), and the magnitude of the correlation is great. The classic experimental design specifies an experimental group and a control group. The independent variable is administered to the experimental group and not to the control group, and both groups are measured on the same dependent variable. Subsequent experimental designs have used more groups and more measurements over longer periods. True experiments must have control, randomisation, and manipulation.

What do these studies tell you?

1. Experimental research allows the researcher to control the situation. In so doing, it allows researchers to answer the question, "What causes something to occur?"
2. Permits the researcher to identify cause and effect relationships between variables and to distinguish placebo effects from treatment effects
3. Experimental research designs support the ability to limit alternative explanations and to infer direct causal relationships in the study
4. Approach provides the highest level of evidence for single studies

What these studies do not tell you?

1. The design is artificial, and results may not generalise well to the real world
2. The artificial settings of experiments may alter the behaviours or responses of participants
3. Experimental designs can be costly if special equipment or facilities are needed
4. Some research problems cannot be studied using an experiment because of ethical or technical reasons.
5. Difficult to apply ethnographic and other qualitative methods to experimentally designed studies

Exploratory Design

Definition and Purpose

An exploratory design is conducted about a research problem when there are few or no earlier studies to refer to or rely upon to predict an outcome. The focus is on gaining insights and familiarity for later investigation or undertaken when research problems are in a preliminary stage of investigation. Exploratory designs are often used to establish an understanding of how best to proceed in studying an issue or what methodology would effectively apply to gathering information about the issue.

The goals of exploratory research are intended to produce the following possible insights:

- Familiarity with basic details, settings, and concerns
- Well-grounded picture of the situation being developed
- Generation of new ideas and assumptions
- Development of tentative theories or hypotheses
- Determination about whether a study is feasible in the future
- Issues get refined for more systematic investigation and formulation of new research questions
- Direction for future research and techniques get developed

What do these studies tell you?

1. Design is a useful approach for gaining background information on a particular topic
2. Exploratory research is flexible and can address research questions of all types (what, why, how)
3. Provides an opportunity to define new terms and clarify existing concepts
4. Exploratory research is often used to generate formal hypotheses and develop more precise research problems
5. In the policy arena or applied to practice, exploratory studies help establish research priorities and where resources should be allocated

What these studies do not tell you?

1. Exploratory research generally utilises small sample sizes and, thus, findings are typically not generalizable to the population at large
2. The exploratory nature of the research inhibits an ability to make definitive conclusions about the findings. They provide insight but not definitive conclusions
3. The research process underpinning exploratory studies is flexible but often unstructured, leading to only tentative results that have limited value to decision-makers
4. Design lacks rigorous standards applied to methods of data gathering and analysis because one of the areas for exploration could be to determine what method or methodologies could best fit the research problem

Historical Design

Definition and Purpose

The purpose of a historical research design is to collect, verify, and synthesise evidence from the past to establish facts that defend or refute a hypothesis. It uses secondary sources and a variety of primary documentary evidence, such as, diaries, official records, reports, archives, and non-textual information (maps, pictures, audio and visual recordings). The limitation is that the sources must be both authentic and valid.

What do these studies tell you?

1. The historical research design is unobtrusive; the act of research does not affect the results of the study
2. The historical approach is well suited for trend analysis
3. Historical records can add important contextual background required to more fully understand and interpret a research problem
4. There is often no possibility of researcher-subject interaction that could affect the findings
5. Historical sources can be used over and over to study different research problems or to replicate a previous study

What these studies do not tell you?

1. The ability to fulfil the aims of your research is directly related to the amount and quality of documentation available to understand the research problem
2. Since historical research relies on data from the past, there is no way to manipulate it to control for contemporary contexts
3. Interpreting historical sources can be very time consuming
4. The sources of historical materials must be archived consistently to ensure access. This may especially be challenging for digital or online-only sources
5. Original authors bring their own perspectives and biases to the interpretation of past events and these biases are more difficult to ascertain in historical resources
6. Due to the lack of control over external variables, historical research is very weak with regard to the demands of internal validity
7. It is rare that the entirety of historical documentation needed to fully address a research problem is available for interpretation, therefore, gaps need to be acknowledged

Longitudinal Design

Definition and Purpose

A longitudinal study follows the same sample over time and makes repeated observations. For example, with longitudinal surveys, the same group of people is interviewed at regular intervals, enabling researchers to track changes over time and to relate them to variables that might explain why the changes occur. Longitudinal research designs describe patterns of change and help establish the direction and magnitude of causal relationships. Measurements are taken on each variable over two or more distinct time periods. This allows the researcher to measure change in variables over time. It is a type of observational study sometimes referred to as a panel study.

What do these studies tell you?

1. Longitudinal data facilitate the analysis of the duration of a particular phenomenon
2. Enables survey researchers to get close to the kinds of causal explanations usually attainable only with experiments
3. The design permits the measurement of differences or change in a variable from one period to another (i.e., the description of patterns of change over time)
4. Longitudinal studies facilitate the prediction of future outcomes based on earlier factors

What these studies do not tell you?

1. The data collection method may change over time.
2. Maintaining the integrity of the original sample over an extended period of time can be difficult
3. It can be difficult to show more than one variable at a time
4. This design often needs qualitative research data to explain fluctuations in the results
5. A longitudinal research design assumes present trends will continue unchanged
6. It can take a long period of time to gather results
7. There is a need to have a large sample size and accurate sampling to reach representativeness

Meta-Analysis Design

Definition and Purpose

Meta-analysis is an analytical methodology designed to systematically evaluate and summarise the results from a number of individual studies, thereby, increasing the overall sample size and the ability of the researcher to study effects of interest. The purpose is to not simply summarise existing knowledge, but to develop a new understanding of a research problem using synoptic reasoning. The main objectives of meta-analysis include analysing differences in the results among studies and increasing the precision by which effects are estimated. A well-designed meta-analysis depends upon strict adherence to the criteria used for selecting studies and the availability of information in each study to properly analyse their findings. Lack of information can severely limit the type of analyses and conclusions that can be reached. In addition, the more dissimilarity there is in the results among individual studies [heterogeneity], the more difficult it is to justify interpretations that govern a valid synopsis of results.

A meta-analysis needs to fulfill the following requirements to ensure the validity of findings:

- Clearly defined description of objectives, including precise definitions of the variables and outcomes that are being evaluated
- A well-reasoned and well-documented justification for identification and selection of the studies
- Assessment and explicit acknowledgment of any researcher bias in the identification and selection of those studies
- Description and evaluation of the degree of heterogeneity among the sample size of studies reviewed
- Justification of the techniques used to evaluate the studies

What do these studies tell you?	What these studies do not tell you?
<ol style="list-style-type: none"> 1. Can be an effective strategy for determining gaps in the literature 2. Provides a means of reviewing research published about a particular topic over an extended period of time and from a variety of sources 3. Is useful in clarifying what policy or programmatic actions can be justified on the basis of analysing research results from multiple studies 4. Provides a method for overcoming small sample sizes in individual studies that previously may have had little relationship to each other 5. Can be used to generate new hypotheses or highlight research problems for future studies 	<ol style="list-style-type: none"> 1. Small violations in defining the criteria used for content analysis can lead to difficult to interpret and/or meaningless findings 2. A large sample size can yield reliable, but not necessarily valid, results 3. A lack of uniformity regarding, for example, the type of literature reviewed, how methods are applied, and how findings are measured within the sample of studies you are analysing, can make the process of synthesis difficult 4. Depending on the sample size, the process of reviewing and synthesising multiple studies can be very time consuming

Observational Design

Definition and Purpose

This type of research design draws a conclusion by comparing subjects against a control group, in cases where the researcher has no control over the experiment. There are two general types of observational designs. In direct observations, people know that you are watching them. Unobtrusive measures involve any method for studying behaviour where individuals do not know they are being observed. An observational study allows a useful insight into a phenomenon and avoids the ethical and practical difficulties of setting up a large and cumbersome research project.

What do these studies tell you?	What these studies don't tell you?
<ol style="list-style-type: none"> 1. Observational studies are usually flexible and do not necessarily need to be structured around a hypothesis about what you expect to observe (data is emergent rather than pre-existing) 2. The researcher is able to collect in-depth information about a particular behaviour 3. Can reveal interrelationships among multifaceted dimensions of group interactions 4. You can generalise your results to real life situations 5. Observational research is useful for discovering what variables may be important before applying other methods like experiments 6. Observation research designs account for the complexity of group behaviours 	<ol style="list-style-type: none"> 1. Reliability of data is low because seeing behaviours occur over and over again may be a time consuming task and are difficult to replicate 2. In observational research, findings may only reflect a unique sample population and, thus, cannot be generalised to other groups 3. There can be problems with bias as the researcher may only "see what they want to see" 4. There is no possibility to determine "cause and effect" relationships since nothing is manipulated. 5. Sources or subjects may not all be equally credible 6. Any group that is knowingly studied is altered to some degree by the presence of the researcher, therefore, potentially skewing any data collected

Source: University of Southern California Libraries, <http://libguides.usc.edu/content.php?pid=83009&sid=818072>

The development and production of these Guidelines was funded by the UK's Department for International Development (DFID) through the Strengthening Capacity to Use Research Evidence in Health Policy (SECURE Health) Programme.



UKaid
from the British people

AFIDEP

African Institute for
Development Policy

Bridging Development Research,
Policy and Practice

fhi360
THE SCIENCE OF IMPROVING LIVES



East, Central and Southern
Africa Health Community

Fostering Regional Cooperation for Better Health

