

TECHNICAL REPORT

Demand and use of health policy and systems research in Mozambique: a case study on institutional capacity

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BREAKING NEW GROUND

THINKWELL

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Authors:

This report was prepared by Jorge Cabral and Michela Romanelli.

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ACRONYMS

AHPRS	Alliance for Health Policy and System Research
CCS	Health Coordinators National Meeting
CHWs	Community Health Workers
CISM	Manhica Health Research Centre
DP	Development Partner
FRELIMO	Mozambique Liberation Front
HMIS	Health Management Information System
HPRS	Health Policy and System Research
HR	Human Resources
HRH	Human Resources for Health
HSRU	Health Sector Reforms Unit
IMR	Infant Mortality Rate
INS	National Health Institute
IP	Implementing Partner
LMIC	Low and Middle-Income Country
HRH	Human Resources for Health
HSRU	Health Sector Reforms Unit
IMR	Infant Mortality Rate
INS	National Health Institute
LMIC	Low and Middle-Income Country
M&E	Monitoring & Evaluation
MCH	Maternal & Child Health

MDG	Millennium Development Goal
MMR	Maternal Mortality Rate
RENAMO	National Mozambican Resistance
SDG	Sustainable Development Goals
TWG	Technical working groups
UEM	Universidade Eduardo Mondlane

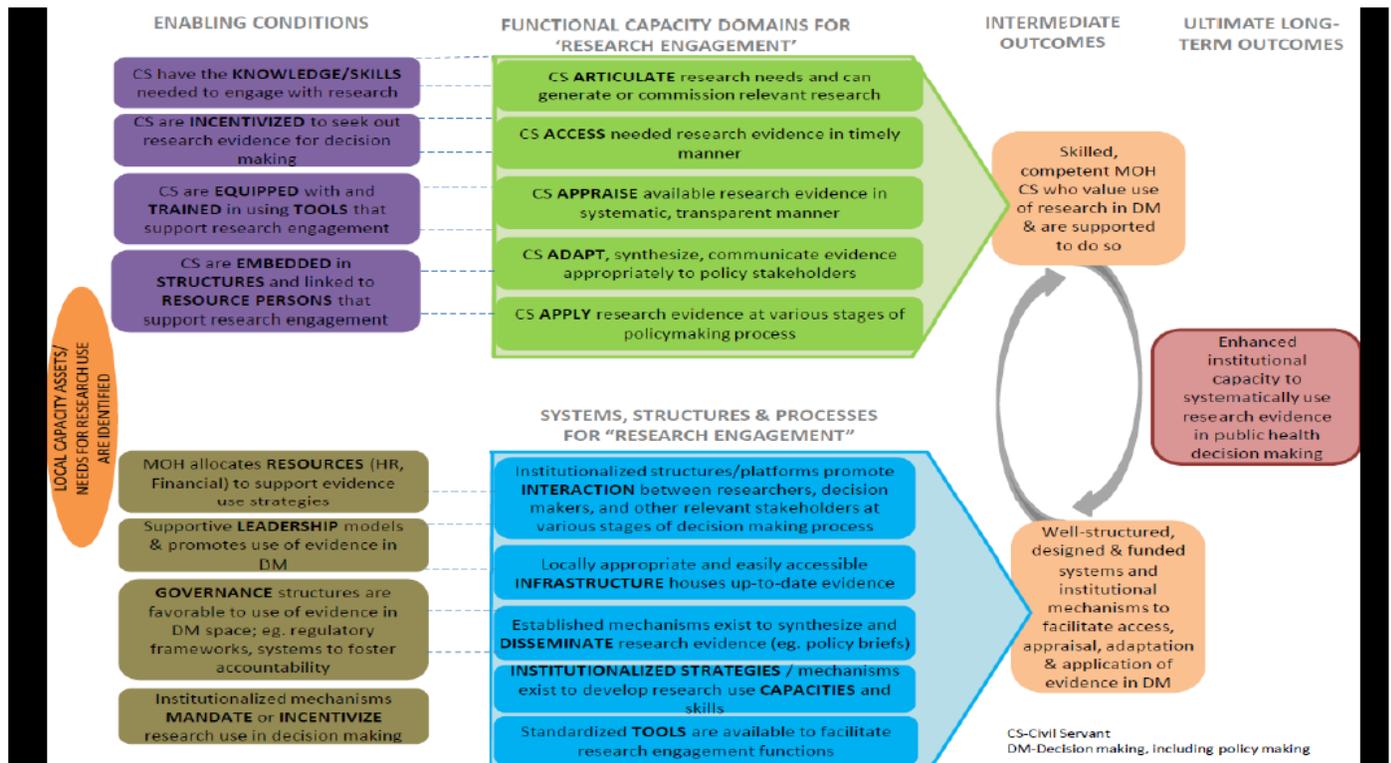
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INTRODUCTION

Strengthen institutional capacity for health policy demand and use of health system research. The aim of this study is to identify key competencies and strategies that can strengthen institutional capacity for health policy and demand and use of health system research within the Ministry of Health (MoH). This research is part of a study involving nine countries (Chile, Ethiopia, Ghana, Kyrgyzstan, Lebanon, Mozambique, Rwanda, South Africa, and Sri Lanka) under the initiative of the Wellcome Trust and Alliance for Health Policy and System Research (AHPSR). The study is based on a conceptual framework (Table 1) designed to capture the broad logic of change that is believed to influence the capacity development for health policy and health system research. It also captures the expected outcomes.

Table 1. Strengthening Institutional capacity for health policy and health systems – a conceptual framework (Wellcome Trust and Alliance for Health Policy and System Research)



The ultimate long-term outcome is the enhanced institutional capacity to use research evidence in public health decision making. The analysis's intermediate outcomes are to provide a description of specific individual level competencies for research engagement, as well as a description of institutional level mechanisms to facilitate appraisal,

adaptation, and application of evidence in decision making. The conceptual framework is organized around two interconnected and mutually reinforcing main streams. The streams focus on the individual level capacity and the institutional level capacity. At both levels, enabling conditions and capacity domains for research engagement are listed. Based on the conceptual framework, data analysis and interpretation consider generic factors influencing the institutionalization of research use and capacity at country level.¹

BACKGROUND AND CONTEXT

The Alliance for Health Policy and Systems Research (AHPSR) is an international collaboration based in the World Health Organization (WHO) that aims to promote the generation and use of health policy and systems research (HPSR) to strengthen health systems in low- and middle-income countries (LMICs).

Strengthening the institutional capacity for demand and use of evidence in LMICs. One of the strategic objectives of AHPSR is to support efforts to strengthen institutional capacity for the demand and use of evidence in LMICs. This strategic direction is grounded in global initiatives and resolutions (e.g., the Ministerial Summit on Health Research in Mexico City, 2004; World Health Assembly in Geneva, 2005). These called national governments to develop mechanisms to support the use of research evidence in developing health policy and health-care delivery systems.

Improved use of research evidence in decision-making and contextual factors. In responding to these global calls, the past two decades have witnessed considerable progress in the establishment of systems and structures to support the use of research evidence in decision-making in several LMICs. It's become evident that institutional capacity for improving the demand and use of evidence requires long-term and sustained commitment of resources with respect to developing systems, structures, and an enabling environment. While there may be important contextual differences among countries with increasingly sustainable and robust institutions for demand and use of evidence and specifically health policy and systems research, there may also be similar approaches and strategies. A review of their experiences can reduce the need to 'reinvent the wheel' and inform country strategies for strengthening institutional capacity.

Evidence based decisions are recognized as an emerging concern in LMICs. The capacity to demand and use research has not been sufficiently assessed in LMICs. In addition, the existing tools directed to test how government officials use evidence in decision making 'have significant limitations for LMICs.'² It is proposed that nine comparative case studies of institutional capacity for demand and use of research evidence in ministries of health in LMICs be undertaken. The proposed countries are Chile, Ethiopia, Ghana, Kyrgyzstan, Lebanon, Mozambique, Rwanda, South Africa, and Sri Lanka. This paper will consolidate learnings derived from understanding the trajectories of the collective experiences of these countries, representing diverse geographic, political, and economic contexts. The

¹ Examples of such factors include the staff turnover in the institutions, as well as the degree of decentralization of the decision-making process, alongside with other specific contextual factors.

² Rodriguez et al., (2017), *Health Research Policy and System*, 15:65

findings will be very relevant for other countries which are in the nascent stages of developing institutions and functions for supporting the demand and use of evidence.

The specific context of Mozambique

Mozambique is a young country with young institutions. Only a few years after Mozambique's independence in 1975, Frente de Libertacao de Mocambique (FRELIMO), the socialist guerrilla organization that had fought the colonial war against Portugal, assumed power. In the 1980's Mozambique became what has been called "a Cold War battlefield."³ During this time, socialist Mozambique was forced to fight a lengthy civil war against RENAMO, a counterinsurgency movement. RENAMO was funded and directed by the neighboring capitalist economies of South Africa and Zimbabwe. The brutal civil war between FRELIMO and RENAMO lasted until a Peace Accord was signed in October 1992. The political pressure and the need for aid and funds to finance imports, compelled FRELIMO to negotiate its first structural adjustment in 1986. This began the implementation of a free market economy.⁴

Mozambique ranks among the bottom eight countries in the UN's Human Development Index.⁵ Approximately 50% of the population lives below the poverty line.⁶ The scarcity of resources affects the health sector as well: according to the 2012 National Health Accounts, the per capita spending on health was below 40 US\$, the percentage of Government spending on health was below 7%, and 43% of public spending on health was funded by development aid. Despite recent improvement in policies on human resources for health, the overall ratio of professionals per population is still below 0.8/1000 inhabitants, and only 13% of them have a university degree.⁷ The health system is dominated by the public sector. The National Health Service must spread its resources and services across a large country, with approximately 65% of its population (almost 29 million, according to the 2017 Census⁸) living in low-density rural areas. Apart from the accessibility constraints, the health system also faces an increasing burden of new health challenges in the first phase of its health transition, including high malaria and HIV prevalence.

The context of Mozambique needs to be taken into full account while analyzing the data from the interviews and the material gathered. Mozambique is a young country with new institutions. The scarcity of resources still determines a huge donor-dependency. Notwithstanding the improvement recorded in terms of growth in national human resources and capacities, there are still huge challenges that need to be taken into consideration, among those the high HIV prevalence.

³ Hanlon, J., (2003), *Peace Without Profit: How the IMF Blocks Rebuilding in Mozambique*, Oxford, UK: James Currey.

⁴ Abrahamsson, H., and Nilsson, A., (1995), *Mozambique The Troubled Transition: From Socialist Construction to Free Market Capitalism*, Zed

⁵ UNDP, (2016), Human Development Index

⁶ The World Bank, *Poverty & Equity Data Portal*, Available at: <http://povertydata.worldbank.org/poverty/country/MOZ>

⁷ MISAU / DNRH: Anuário Estatístico 2015

⁸ INE, National Institute of Statistics (2017)

THE CASE STUDY

For this case study, a research protocol was approved by the National Commission for Bioethics in Health, based on the conceptual framework provided by the Wellcome Trust and Alliance for Health Policy and System Research. The protocol included the following research questions:

- What are specific examples of how health policy and systems research has informed and is continuing to inform decision-making?
- What has been the trajectory, key drivers, and milestones towards building and strengthening institutions for evidence-informed decision-making?
- What were the specific capacities that were targeted and what were the strategies employed for strengthening these capacities?
- In what ways did the context influence the trajectory?
- Have there been instances where evidence has been side-lined, even when there was space to use evidence?
- According to the conceptual framework, the country study should provide “intermediate” and “high-level” results.
- Intermediate results:
 - Provide a description of improved capacities (individual and institutional) for the: a) identification and use of evidence, b) production of evidence, including how much effort and resources have been invested in the creation of these capacities
 - Describe enabling environments and bridging systems and forums for communication and consensus
- High-level results:
 - Offer a synthesis of findings on the systematic use of evidence in the country.

METHODOLOGY

Methodological approach

The use of a case-study methodology has been particularly appropriate for the context of Mozambique. We adopted a case study approach to allow for a reflection on the study participants’ nuanced perceptions. Through their perceptions, we had the chance to obtain a clear picture of the patterns of progress, challenges, constraints, and failures of the health system. These perceptions have also been triangulated with the documentation reporting on health sector developments in the considered period. The perceptions of stakeholders involved in this case study also helped to capture the dynamics of their interactions. Finally, the case study sheds a light on the existing power dynamics amongst crucial actors of the system.

During the preparation of the research protocol, we conducted a desk review of the existing literature based on articles that focus on health system strengthening in developing countries, use of evidence, health policy, and system research. We used a framework included in Rodriguez et al. (2017)⁹ that detailed the level of influence of the individual and organizational capacity along the continuum—from needs identification to

⁹ Rodriguez et al.,(2017), *Health Research Policy and System*, 15:65

the uptake of evidence in policy generation (Annex III). A reference bibliography is in Annex I.

Supporting material for the interviews

In preparation for the interviews with key informants, we noted some of the main policy events that have marked the recent trajectory of the Ministry of Health and the Government of Mozambique towards the adoption of new policies. These key events helped to discern crucial moments in the policy definition, such as the assessment of reasons for failure and non-feasibility of a strategic plan or the trajectory for the adoption of a certain intervention (or the utilization or non-utilization of available evidence). The existing list of cases has been used to trigger reasoning around evaluation mechanisms that have led, for example, to the revision of the Health Sector Strategic Plan (PESS),¹⁰ the revision of the National Strategic Plan for Human Resources for Health,¹¹ or the preparation of the Investment Case (on Reproductive, Maternal, Neo-Natal, Infant Mortality, and Adolescent Health) as part of the Global Financial Facility Initiative of the World Bank.¹²

Policies: health sector, system's blocks and programs

We intended to characterize the use of evidence in the formulation and evaluation of policies at various levels and scopes, from sector mid-term policies to specific intervention programs. It is acknowledged that the functioning of certain large programs (e.g., MCH, malaria or HIV control) aim to be effective in the control of specific health problems, while their sheer scale and complexity simultaneously shape various blocks of the health system (level of qualification of HRH, referral systems, logistics, technology demands, M&E, etc.).

Use of the conceptual framework to design questions for the semi-structured interviews

The continuum of capacities and interactions from “diagnosis of evidence needs” to “utilization of evidence” has been crucial to determine the questions to include in the interview guidelines for three types of key-informants. The differentiated role and functions in the system of three types of key-informants has been central in the definition of questions to be included in each interview guidelines. The full list of interviews’ guidelines and questions is presented in Annex IV.

For that purpose, the conceptual framework suggested by Rodriguez et al. (2017) can be simplified into three stages:

¹⁰ Government of Mozambique, Ministry of Health (2014). Plano Estratégico do Sector Saúde, 2014-2019, Maputo

¹¹ Government of Mozambique, Ministry of Health (2017). *National Human Resources Development Plan for Health 2016-2025*.

¹² Government of Mozambique, Ministry of Health, and the Global Funding Facility in support of all Women and all Children (2017). Investment Case Proposal. Maputo

Table 2. The categories of actors, along the continuum from diagnosis of need to uptake of evidence into health policy formulation

Stage 1: Policy makers	Stage 2: Providers of evidence and research	Stage 3: The utilization of evidence – the dialogue
<p>How normal it is to use evidence and/or research for the formulation and evaluation of health policies?</p> <p>How does the “need” for evidence and/or research is formulated, and subsequently contracted to providers?</p>	<p>Who does the research and evidence gathering?</p> <p>What type of evidence is sought and consequently prepared?</p> <p>Under what format is the evidence brought to the attention of the policy-makers?</p>	<p>What capacities do policy-makers have to analyze evidence?</p> <p>What are the enabling and constraining factors for the use or non-use of evidence?</p> <p>What differences exist amongst the various National Directorates of the MoH?</p>

The structure of each type of interview was intended to trigger the response of the interviewees at various levels. Interviewees were asked to give an account of their direct memory of a certain event, the role they personally played, as well as the role of other relevant actors. Additional information on the wider context in which that event happened, taking into consideration the political, social and economic environment, were also collected during the interviews. The semi-structured interviews also allowed for additional information to be gathered, as interviewees reported on elements not explicitly included in the initial set of questions. They also suggested relevant documentation to be consulted for further triangulation of information. Policy makers were mainly asked to help identify the mechanisms for evidence demand and evidence uptake. The academic institutions were mainly asked to respond on evidence generation.

Interviews and data analysis

The selection of key informants was intended to broadly represent the health system. The first group of key informants have been selected based on the following features: i) professionals with significant experience in the health sector in Mozambique and (ii) continuous presence in Mozambique for the past 20 years. These informants have been crucial to identify key policy making events during the last two decades. The key events’ chronology enabled us to pursue interviews that focused on (i) information on the use of evidence for policy making and (ii) the growth of institutional capacity for both generating and digesting evidences. A “snow-ball” approach has been used for the selection and hierarchization of the key informants, as well as of relevant documentation.

Key informant interview findings were triangulated with secondary information on demand and use for evidence to policy, development of resources, processes and systems, as well as key policy making documents, as referred by the initial key informants.

The information gathered from both interviews and documentation has been organized according to the “Conceptual framework on key capacities and strategies for strengthening institutional capacity for health policy and health systems research within a Ministry of Health.” An initial set of codes and categories has been constructed based on the conceptual framework and the questions for the interviews. As we conducted the analysis of interview transcripts, more categories and meanings have been added to the initial set. A detailed description of the categories and meanings, as reported from the combination of

interviews and documentation, is displayed in Annex V. The section on “Findings” (below) synthesizes the results from that triangulation.

FINDINGS

The results from the case study will be presented at two complementary levels:

a. The current resources, processes, and recent trajectory, along the continuum from diagnosis of needs to dissemination and utilization of evidence and research, as perceived by key informants. The results will be organized around five main areas:

1. Evidence demand and the need for evidence generation
2. Capacity to produce evidence and undertake health research
3. Discussion, digestion, and dissemination of evidence
4. Utilization of evidence in policy making and reformulation
5. Factors that have been influencing the trajectory in Mozambique

b. The answers to the research questions

OVERALL SITUATION

Generation and utilization of evidence and research information is widely implemented in Mozambique.

The production and utilization of evidence to inform the design and revision of health policies is common practice in Mozambique. Strategic plans for National Programs, such as Malaria and HIV/AIDS are evaluated and/or updated regularly. External evaluations are typically conducted by independent evaluators and the findings are discussed within the program or with development partners and academic institutions in loci such as TWGs and other regular meetings.

Drivers that influence generation and utilization of evidence are varied, and include the following:

- a. Strong technical background of the heads of the Health National Directorates and National Programs. Directors are requiring a rigorous use of evidence generation before introducing new approaches in the management of public health programs;¹³
- b. Existence of medium term strategic plans both at level of national programs and at the sector level (Health Sector Strategic Plan) which include monitoring and evaluation agendas. The evaluation of the sectoral plans presents an opportunity to conduct comprehensive analysis of the health system;¹⁴
- c. Pressure from development partners to generate evidence, especially on disease control programs. In many cases, the evaluation of the current plans and interventions are considered necessary by the donor to grant subsequent funds;
- d. Pressure from development partners to base new strategic plans on sound evaluations of their previous implementation;

¹³ The rapid tests for HIV and syphilis donated to Mozambique have been tested for its application and use in the health system by the National Institute for Health, upon request of the National Directorate of Public Health prior its adoption.

¹⁴ The mid-term evaluation of the 2nd. Health Sector Strategic Plan produced a highly regarded report on the Performance of the overall health system, which has been used as the basis for the design of the subsequent Strategic Health Plan, 2014-2019. *Ministério da Saúde, USAID, WHO, SDC, HS2020, 2012. Revisão do Sector Saúde*

e. Existence of a National Health Institute as a semi-independent entity within the Ministry of Health, assigned with the stewardship of a National Health Research Agenda.¹⁵

Evidence generation does not necessarily translate into policy adoption. In Mozambique, as in other developing countries, the implementation of policies and strategies based on research evidence is weak. The reasons for this include lack of policy coherence, lack of enforcement and accountability mechanisms, and a lack of adequate financing for policy implementation.¹⁶ There are other factors that interfere with the translation of evidence into new policies in Mozambique. Despite the existence of a National Health Research Agenda,¹⁷ which would imply an interest for informing policy making with evidence, the system does not have full capacity to absorb and digest evidence produced by research and to transform them into policy.

Due to the high dependency on external funds, development partners play a crucial role in evidence demand and use. In Mozambique, the extreme scarcity of resources resulted into a very strong role for development partners. These partners are not only contributing conspicuous amounts of funding to run national programs and fund crucial areas of the health system, but they also invest in deploying strong technical assistance in technical working groups (TWGs) and crucial departments and directorates at the MoH. This results in a considerable influence over the definition of protocols in programs, demand for evidence generation, and policy making.

EVIDENCE DEMAND AND NEED FOR EVIDENCE GENERATION

Individual versus organizational capacity

Individual capacity to identify need for research within the Ministry of Health is not always available. Many departments and directorates lack senior staff who could be assigned to analyze data and evidence available. Heads of Departments or technical staff are also constrained in their ability to identify bottlenecks in the system as they concentrate on the execution of a myriad of programs and projects. Routinely, they face competing priorities based on multiple requests from DPs. In addition, heads of departments or programs and technical staff do not always have the research mindset and are not familiar with data analysis and interpretation. The MoH has still a limited number of senior staff holding a master's degree or a PhD.

The identification of need for evidence is facilitated by the proximity of the academic institutions to the Ministry of Health. The INS is assigned a permanent seat on the advisory board of the Minister of Health and some senior staff of the academic institutions are also working in National Directorates, e.g., National Directorate for Public Health. This overlapping in functions results in an added value for the MoH, who can take advantage on the capacity of this senior staff to advise on both need identification and evidence digestion.

The demand for evidence and capacity for its assimilation varies across the different Directorates and National Programs at the MoH. Organizational capacity for evidence demand also depends on the availability of good data, as well as staff capacity to conduct further analysis that can highlight the need for

¹⁵ The National Health Research Agenda is a formal document of the Ministry of Health, approved by the Minister of Health. The current agenda lists 19 items for health research: 17 on disease control intervention areas, only 2 items on health policy and health system issues.

¹⁶ Mugwagwa, J., Edwards, D., de Haan, S., (2015), 'Assessing the implementation and influence of policies that support research and innovation systems for health: the cases of Mozambique, Senegal, and Tanzania', *Health Research Policy and Systems*, 13:20

¹⁷ National Institute for Health (2017), 'National Health Research Agenda – Agenda Nacional de Pesquisa em Saude (2017-2021)', Mozambique.

evidence generation. The Human Resources for Health Directorate (DHRH), for instance, avails itself of an HRH Observatory that possesses a greater capacity of data analysis and, consequently, identification of bottlenecks and areas for investigation. The DHRH also has its own research agenda, based on the research priorities generated by the data analysis conducted in the Observatory. On the other hand, the Public Health Directorate has suffered historically from attrition amongst senior technical experts and, recently, has seen a high turnover of Directors and Senior Staff.

Evidence from outside the national health sector

Evaluation exercises on strategic plans and programs depend on availability of funding from DPs. Regular evaluation of national programs or strategic plans, as well as the completion of Demographic Health Surveys (DHS) offer an important chance to gather evidence. In fact, access to reliable and quality information can be a bottleneck in the identification of evidence need. A still fragmented Health Management Information System and a weak routine data collection hinder the MoH's capacity for analysis while the MoH still relies on the DHS for some relevant data, such as Maternal Mortality Ratios (MMR). Development partners fund these surveys and should take place every five years, subject to fund availability. Strengthening the routine data collection has been recognized as a priority for the health system and Mozambique is currently expanding and consolidating its HMIS system. Data on chronic diseases, for example, are not collected in the provinces. The introduction of a file to capture the information at facility level is under evaluation at the National Directorate of Planning and Cooperation (which houses the HMIS).

Evidence is often identified at the global level and brought in the country for subsequent absorption. The introduction of new approaches to public health problems can be the consequence of the adoption of international guidelines (e.g., from the World Health Organization). In this case, the need for evidence generation is associated with the anticipated changes that the introduction of new protocols will create. For instance, in the case of the introduction of new vaccines, there is the need to prove a certain prevalence and incidence of the infection that the vaccine will respond to.¹⁸ In the case of disease control programs, and the HIV National Program especially, the issue of new international guidelines can translate into revisions of the national clinical protocols, approaches to community health programs, as well as changes in patient flows in health facilities.¹⁹

“Not always evidence is available in the health sector, at times we need to rely on evidence generated by other institutions.” (K-I group 1)

CAPACITY TO PRODUCE EVIDENCE AND UNDERTAKE RESEARCH

Academic institutions and evidence generation

The three main health research institutions are well recognized loci for evidence production. The National Institute for Health (NHI/INS), the Medical School of the Universidade Eduardo Mondlane (UEM), and the Manhica Health Research Centre (CISM) have all recorded an exponential growth in the last decade, in the numbers of research projects realized and publications accepted, as well in the number of staff who have completed a master's degree or a PhD.

¹⁸ The Manhica Health Research Centre (CISM) has been considered the center of reference to confirm prevalence and incidence of meningitis and respiratory diseases due to Haemophilus Influenzae. After confirmation of these data, the vaccines were introduced in Mozambique in 2004.

¹⁹ For instance, due to the subsequent passage from 'Option A and B' to 'Option B+', and to the current 'Test and Treat.'

a. The National Institute for Health is an institution of the Ministry of Health. Its mission is to generate technical and scientific information that can inform policy decisions in health. The INS also takes part in the decision-making process and has a permanent seat in the Minister of Health’s consulting board. The INS has recently revised its organogram, grown its staff to approximately 400 employees, and created a Health System Strengthening Department. In some provinces, the INS has supported the creation of research centers. These centers hold full autonomy to set their research agenda, obtain approval, and implement research projects. These centers also organize provincial or regional research dissemination events.

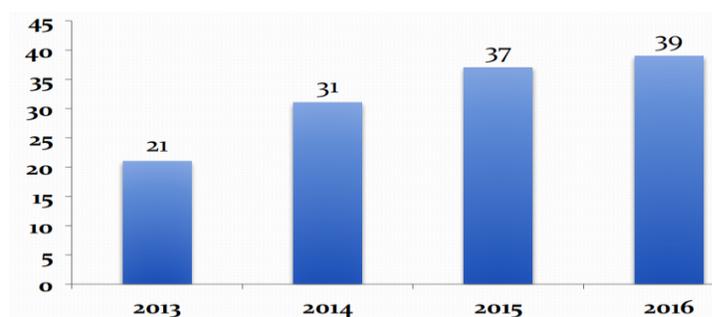
Table 3. Students enrolled into the Pos-Grad courses at NHI/INS

Courses	2010	2012	2014	Total
Master in Health Sciences	10	10	16	36
Field Epidemiology and Laboratory Training Program (11	14	13	38
Master in Health systems			13	13
Medical Residence in Public Health			19	19
Total	21	24	61	106

Source: INS, 2018

This growth in capacity to train new researchers has also resulted in new projects awarded to the INS. This also impacted on the number of manuscripts published in relevant scientific journals.

Table 4. Scientific manuscripts published by NHI/INS staff



Source: INS, 2018

b. The Medical School of the UEM has several research departments ranging from clinic, biomedical diagnostics, public health, and health systems. The Medical School undertakes quality policy evaluation linked to the health sector and development partner’s areas of interest. It also provides recommendations to the Ministry of Health for subsequent uptake of evidence and policy definition. Recent assignments included evaluations of the Village Health Workers strategy, the quality of pre-service training, the performance of community participation mechanisms. The Community Health Department of the Medical School avails itself of 33 senior staff, including six staff with PhD degrees. Over ten years (2005-2016), the annual number of publications has increased from below 15 to more than 60. The Medical School strategy has recently invested in augmenting its capacity to develop and submit technical proposals for research funds (including an internal structure to support researchers in both pre-award and project life cycle), aiming at the retention of its staff of professors and researchers.

c. The CISM was created in 1996 to advance biomedical research to protect and improve population’s health. CISM works under a bilateral cooperation program between the Governments of Mozambique and Spain. It simultaneously developed an internal structure for proposal writing to ensure long-term sustainability and growth. The institution has participated in clinical trials of high international relevance and contributed to the generation of key data. This has played a significant role in the adoption of new

treatments and vaccines in a variety of areas, such as malaria, tuberculosis, diarrheal diseases, respiratory infections, and HIV/AIDS in Mozambique and across the world. Currently, CISM has approximately 700 employees, 22 of which have a Masters' degree and 15 a PhD. The center also has four medical specialists and has hosted more than 100 international trainees. CISM's current portfolio has more than 20 active projects which range from conducting biomedical research to strengthening health systems and training.

Heavy reliance on external funding remains an issue for research institutions and scarce independence of the academic institutions.

The academic institutions are highly dependent on foreign funding for their research activity, for both operational costs and retention of senior staff. They are commissioned to undertake research or evaluation work mainly by the MoH or directly by the DPs. UN agencies and the World Bank have their own evaluation agenda and they tend to use consulting companies, particularly for mid and end-term evaluations of strategic plans, although they also commission evidence production by local academic institutions. Each institution also submits independent proposals to international programs, funds, and grants (aimed at maintaining their own research agendas and related staff).

“There has been a huge increase in the technical capacities of our researchers, especially the more junior, due to the exposure to new research methods.”
(K-I group 2)

The Ministry of Health is not always clear on what evidence is required to fulfill policy making-revision questions. Leaders of research institutions aren't always aware of MoH officers' needs. Nevertheless, at times the proximity between the academic institutions and the MoH mitigates this lack of clarity. It can enable stronger collaboration among senior staff to better define terms of reference, budgets, and timelines for research or evaluations. High turnover of senior staff at national directorates and conflicting interests amongst senior staff also hinders the MoH's capacity to identify specific needs for information and evidence generation.

A National Health Research Agenda was formally approved in 2017.²⁰ The Agenda engages the MoH, academic institutions, and development partners around seven thematic research areas (ranging from disease-control to overall health systems). It highlights various research approaches, such as basic research, clinical trials, and social-anthropological research. The M&E framework defines 11 result indicators, including participation of policy-makers on multidisciplinary research protocols and several policies informed by research results. The Agenda also considers the development of human resources and institutional infrastructure as a main implementation challenge. The INS-NHI is formally charged with the stewardship of the Agenda.

Development Partners and evidence generation

DPs contribute heavily to the evidence generation through implementing partners and local and international NGOs.

DPs tend to collect evidence from the field activities of the implementing partners whose projects they fund, especially for HIV/AIDS and to a lesser extent, malaria. In some cases, these findings are “matched” with international evidence to support revision of policies and guidelines at the MoH

“The problem with evidences coming from the ‘field’ is that the partner does not take enough time for consolidating an approach. Innovative strategies often are just piloted and not scaled up.” (K I – group 1)

²⁰ Moçambique, Ministério da Saúde (2017). Agenda Nacional de Pesquisa em Saúde, 2017-2021. Maputo

level. In most cases, however, the MoH has regarded the evidence generation as directed more by the DPs' or implementing partners' own interests than by an interest to contribute to the health system's growth and the improvement of the population's health. This has been reported especially for those partners working within the HIV/AIDS area.

National and international NGOs involved in project implementation have also brought some innovative approaches to the attention of the Ministry of Health. In some cases, the implementation of pilot projects has been accompanied by strong evidence production. The NGOs have thus been able to make a strong case for the adoption and scale-up of a certain intervention at national level. One example of this is the 'GAAC' approach, which *Medicins Sans Frontières* tested and suggested for scale-up based on their documented experience in the Province of Tete.²¹

DISSEMINATION, DISCUSSION, AND DIGESTION (ASSESSMENT) PROCESSES

Technical working groups at the MoH level

TWGs are effective platforms for dissemination and digestion of evidence. The intensification of the direct support of DPs to vertical programs, specific areas of the health system, and holistic health system strengthening has led to a proliferation of technical working groups. TWGs work on specific technical issues to discuss bottlenecks in national program implementations. They are especially active in some directorates (i.e., public health, human resources, and planning and cooperation). Local research and consultancy reports are regularly incorporated into TWGs' agendas.²²

Decisions made in the TWGs are often dictated by the DPs' or implementing partners' specific agenda. There is a huge investment of DPs and implementing partners into TWGs—they feel that they contribute their technical assistance. Typically, TWGs can count on the participation of professionals unavailable at the program implementation level in the MoH (such as pediatricians, gynecologists, or M&E specialists) and tackle problems of utmost interest for the DPs. The MoH cited these technical groups as important loci to disseminate, discuss, and digest existing evidence for subsequent decision making, as well as proposing new evidence generation.

Nevertheless, the maturity of the debates on these TWG's is frequently constrained by the attrition of senior staff. These senior staff are not always able to analyze complex information or make decisions when faced with contradictory evidence (e.g., the effectiveness of insecticide-impregnated bed-nets for the control of malaria). For instance, the HRH National Directorate, despite hosting the HRH Observatory and co-chairing a TWG, faces a chronic shortage of senior staff with analytical capacity. Consequently, at times TWGs become an occasion for partners to pursue their own agenda.²³

Annual meetings and National Health Conference for evidence dissemination and digestion

Dissemination and digestion of results from evaluation or research activities also justifies specific workshops or national meetings, as occurred for the revision of the scope of work of the CHWs, or the

²¹ GAAC is the Portuguese acronym for Community ART Group (CAG) of HIV positive patients. The approach has been tested in Tete by MSF, piloted in 10 provinces and finally been translated into a National Policy. Ministry of Health, (2015), *Strategy on CAG*, Mozambique

²² A recent example of such utilization of a TWG for dissemination of research results has been with the Time & Motion Study, within the TWG on HRH.

²³ I.e., The discussion about introducing the mobile brigades for ARVs distribution in the community started within a technical group and has been long opposed by the national HIV program, until it has been finally accepted. The introduction of the new records for maternal and child health has been debated for various months within one technical working group, where representatives from IPs were making the case for introducing new data to be collected during the visit.

assessment on coverage and effectiveness of MCH interventions. Some relevant topics are also discussed during the annual planning meeting at the provincial and national level.²⁴ The meetings are often used to widen the potential for feedback from all potential actors involved in the thematic area before the suggested policy revisions are accepted by the MoH.²⁵

Enthusiasm and commitment in such platforms from decision-makers is reported to be higher when the MoH has been leading the process. This applies throughout the process from needs identification to the uptake of evidence in policy making. It also applies to research activities, for instance, through active participation in providing feedback on the research preliminary findings or engagement in ongoing research activity.

Policy makers often expect to receive information that can easily direct them towards uptake of evidence into policies. Researchers and analysts do not always have the ability or capacity to produce reader-friendly briefs or to present information for policy makers to make decisions, particularly when the research or evaluation is commissioned to consultants that are not familiar with the health system and do not have a sufficient command of the Portuguese language. Decision-makers tend to prefer more solution-oriented reports rather than reports focusing mainly on identification of system's problems.

The National Health Conference (Jornadas Nacionais de Saúde) is a recurrent event for evidence dissemination. Every three years, the INS organizes the National Health Conference (a three-day event), with a wide range of academic and grassroots participants (the XVIth Jornadas will take place in September 2018). For this year's event, the organizers are seeking to combine results dissemination with policy reformulation on a few pre-selected themes (e.g., the scientific director of the INS is personally instructing the participants on selected round-tables to go beyond the results of their protocols into the policy revision implications). Therefore, there is a growing interest to use this opportunity to translate evidence into information for uptake into policy making.

"It is rare that researchers surprise policy makers with new points of view. Researchers are supposed to 'translate' technical information and present them to the decision-makers for them to act." (K I group 1).

THE UTILIZATION OF EVIDENCE INTO POLICY FORMULATION AND EVALUATION

Bottlenecks in the utilization of evidence

Newly generated evidence tends to be incorporated more quickly at program level. Implementation guidelines and protocols within the main programs such as MCH, Malaria and HIV control tend to be more frequently updated, as new evidence from international or national sources becomes available. However, national strategic plans are normally evaluated on a longer timeline (mid-term, or end-line evaluations for strategies taking five up to seven years), in compliance with the Ministry of Health's M&E plans.

Nevertheless, suggested program or intervention improvements can prove difficult to act upon, for various reasons: a) intersectoral interventions might be needed and these are unlikely to be introduced because of

²⁴ The updating of the Primary Health Care policy has been first discussed in a dedicated workshop and then in the Health Coordinator National Meeting (CCS), a bi-annual meeting gathering MoH senior staff and representatives from DPs.

²⁵ In the National HIV Meeting the new guidelines to be adopted are first discussed with all the relevant stakeholders, including the Provincial Medical Directors.

the difficult inter-ministerial coordination; b) system-block interventions might demand a coordinated set of activities instead (e.g., in the HRH context, rural retention and motivation demands a coordinated set of interventions ranging from adaptations of training curricula, pressing for special status of health professionals within the civil service, support from local governments, etc.); c) the sustainability of certain interventions might be too dependent on funding from DPs (e.g., the expansion of positive experiences with APEs - community health workers); d) funding or logistical constraints to implement the recommended innovations.²⁶

Rotation in key managerial position represent a serious bottleneck to uptake of evidences.²⁷ Delays in absorbing evidence into policies can be further complicated by the frequent turnover of the senior staff, as well as attrition amongst department heads and technical staff, as has been the case within the Public Health National Directorate, as above mentioned.

The delayed preparation and approval of a national research agenda (2017) has been identified as a missing link or weak element. The new National Health Research Agenda formalizes a framework that has been agreed upon between MoH, research institutions and DP's, and whose implementation is supposed to be jointly monitored. Previously, research activities were driven by individual researchers, implementers, or senior staff in the MoH. Thus, the influence of international evidence or pressure from in-country evidence generation was interfering even more with the accomplishment of the MoH's research priorities. Nonetheless, the existence of the Agenda does not ensure that there will be a greater focus on defined research priorities, or that consideration for evidence in policy making will increase in the near future.

CONTEXTUAL FACTORS

Evidence generation is high in the political agenda in Mozambique

Mozambique has a series of documents and policies that support research for health, but evidence uptake into policies is not consistent. Apart from what is stated in the national constitution and embraced with adherence to the Millennium Development Goals' (MDGs) Poverty Reduction Program II (2006–2013), Mozambique has set research as a pillar in its Health Sector Strategic Plan (2014-2019). A National Health Research Agenda has been approved in 2017. The existence of sector and program strategic plans demand regular evaluations (mid-term and final review, according to planning documents formally approved). Decision makers at the MoH are aware of the marked increase in the number of research results published in academic journals by local research institutions. TWGs have been instrumental in bringing these publications to the table, and it is not uncommon that decision makers are listed amongst the co-authors of technical reports and articles.²⁸ Nevertheless, evidence uptake is not regular, and it is influenced by lack of funding, systemic limitations, and logistical constraints.

²⁶ Two salient examples: i) the replacement of Chloroquine as first line treatment for malaria took almost 15 years, since local research showed resistance of parasites to the drug (published research results in 1988): financial capacity for wide use of newer anti-malarials only materialized with the first Global Fund project in Mozambique (in the early 2000's); ii) the innovation on criteria for the initiation of ART for HIV patients (international evidence from UNAIDS and WHO, plus local experiments with implementing NGO's) originated three modifications of protocols within three years (a high turbulence for both MoH DM's and health professionals across the health system, apart from the logistical demands)

²⁷ Rotations and replacements took place at the national director level in the three main MoH directorates (public health, HRH, planning and cooperation) during the last two years.

²⁸ The Directorates within the MoH where this awareness and co-authorship has been more frequent are: HRH, MCH, Immunization Program, malaria, tuberculosis and HIV control, CHWs. These are also the areas where uptake from local and international evidence has been more intensely incorporated into policy formulation and revision.

Academia to support in the evidence generation

The growth in capacity, resources and production of the local academic institutions has created an environment of reciprocal trust amongst MoH, DP's and the academy. The MoH and the DPs look at the academic institutions as fundamental partners for the generation of evidence and presentation of results for decision making. Nevertheless, this trust is not unconditional: MoH officers have expressed their doubts on the capacity of the INS to respond to the overall research needs of the health system and they have often complained about the delays in delivering results. Conversely, the academic institutions have repeatedly expressed their concerns regarding the capacity of the MoH to diagnose and objectively express their evidence needs, as well as to 'digest' and use the evidence made available. Despite the growing capacity and output of the local research institutions to generate quality evidence, concerns remain regarding challenges in mapping out research activities being conducted and their links to policy making.

Proximity of academic institutions to the Ministry of Health

The academic institutions are well placed to advocate for the use of evidence in decision making. The proximity of the academic institutions to the MoH has facilitated the communication in the phases of diagnosis of evidence needs and dissemination. The last five years have also witnessed a unique period of even closer communication between the MoH and academic entities, when the former Deputy Director of the INS became the National Director of Public Health.²⁹ This has progressively translated into a closer involvement of the INS in the MoH's processes and mechanisms. It has also determined a more frequent use of evidence generation.

DPs are creating undue pressure and expectation to produce results

The strong participation of DP's in the funding of major disease control programs translates into pressure to improve the effectiveness of interventions. In some cases, this pressure translates into conducting research that is not relevant for the national agenda and can divert the already limited capacity of the academic institutions to deliver commissioned results in time. Funding from DPs can also be irregular, unpredictable, and can impact on the MoH's research priorities. Some of the research or evaluations needed at the program level might wait for approval of DPs funding, until they become urgent. This often translates into emergency requests to research institutions and creates logistical problems to the executors. Alternatively, the academic institutions feel forced to respond to the evidence need on a "rapid appraisal – consultancy" mode, instead of through a proper research protocol, which is more time and resource consuming.

ANSWERING THE RESEARCH QUESTIONS

The detailed information gathered from the key informants are below systematized to answer the research questions listed in the methodology section.

What are specific examples of how health policy and systems research has informed, and is continuing to inform decision-making?

Evidence from local and international research has been informing policy making-revision at various levels:

²⁹ Dr. Francisco Mbofana, an academic who campaigned for health system research capacity while being the Scientific Director of the INS. After being appointed National Director for Public Health, he became the well-informed champion of the utilization of evidence for policy revision within his National Directorate. In this role, he was responsible for all the disease control programs and the PHC approach. Examples of the utilization of evidence to inform policy under his stewardship were the updates to HIV control protocols and the driving of the Investment Case on Reproductive, Maternal, Neo-Natal, Infant and Adolescent Health.

- Overall health policy and system research: the revision of the Health Sector Strategic Plan (2014-2019), and the HRH Strategic Plan (2017-2025), the introduction of a National Agenda for Research and the revision of training curricula for the main cadres of middle-level professionals.
- Program level: expanding CHWs' scope of practice, the Investment Case on Reproductive, Maternal, Neo-Natal, Infant and Adolescent Health, the introduction of new vaccines within the EPI, the introduction of new offers for contraception, the broadening of the family targeting for distribution of insecticide-treated bed-nets, the scaling-up of the Test & Start approach for HIV treatment, among many others in the national HIV program.

What has been the trajectory, key drivers and milestones towards building and strengthening institutions for evidence-informed decision-making?

- Overall, operational plans and programs and projects are progressively standardized into documents approved jointly by the MoH and co-funding DPs and systematically include M&E frameworks.
- The independence of major co-funders: the DPs, from the local political dynamics, and their considerable share of funding of the public health system, led to a common concern for the search of effectiveness in major public health interventions.
- Existing platforms for technical discussion are regularly used for the dissemination of evidence from local pilots, carried by implementing NGOs. Evidence from these pilot-stage experiments are routinely used to update existing protocols and, when supported by a sound evidence, for uptake into policies (i.e., GAAC).
- The increasing availability of university and post-graduate professionals both within the MoH, and within the local academic institutions increases capabilities in both groups.
- National research institutions are witnessing an increase in their commissioning of research work to respond to evidence requests from MoH and DPs.
- Major milestones were: i) the adoption of the current Health Sector Strategic Plan (2014-2019) which calls for the definition of a National Health Research Agenda; ii) the formal adoption of the National Health Research Agenda (2017); iii) the inauguration of the new leadership in the INS (2010-2011), and its restructuring to respond progressively to health system strengthening challenges ; iv) the creation of the Manhica Health Research Centre (1996) and its transformation into a Foundation (2008); v) the setting of TWGs (starting with HRH, in 2013) on various thematic areas.

What were the specific capacities that were targeted and what were the strategies employed for strengthening these capacities?

The strengthening of capacities can be seen in two main areas:

- Growth in qualified health and research professionals, as a result of: i) an increasing output from local medical schools; ii) abundant fellowships for post-graduate trainings; iii) local public health post-graduate training available since the mid-2000's; iv) academic institutions using participation in international projects to insert post-graduate training for the participating junior researchers.
- Growth in functionality of two major research institutions. INS and the Manhica Health Research Centre undertook major restructuring of their internal organization to accompany their exponential growth in staff and volume of projects undertaken, towards an increased efficiency.

The main strategies included:

- The TWGs became a platform for a discussion between senior staff from the MoH, academic institutions, and DPs: selected evidence as discussed within the TWGs could not continue to be ignored.
- The growth of the Monitoring and Evaluation Department within the National Directorate for Planning and Cooperation reflected the pressure of the MoH to comply with the approved M&E frameworks of strategic plans.

- The competition between the three local academic and health research institutions is increasing their capacity to deliver timely and quality products. In addition, to continue to attract demand and funding associated to work commissioned by both the MoH and the DPs.

In what ways did the context influence the trajectory?

The main influences of the local context can be summarized into:

- The increasing numbers of senior health-related professionals with post-graduate training created a conducive environment to utilize global and local evidence.
- The political stabilization of the country enabled a culture of compliance with evaluation of national policies.
- The pressure from co-funding DPs has driven attention to evidence generation for quality, effectiveness, and efficiency of supported interventions.
- The unattractive salary conditions for senior public health officials, results in high attrition of those remaining in the system with colleagues working in other institutions, as well as high levels of ‘brain drain’ towards the IPs. This translates into a reduced capacity of the MoH to diagnose needs and digest available evidence.
- One consequence of the high dependency of the MoH on co-funding from DPs has been the verticalization and fragmentation of support to the health sector following specific areas of interest or specific projects. The time and attention of many senior officials is split among the myriad of projects. This dramatically reduces their time to analyze existing statistics, scrutinize existing data generated within IPs’ projects, and evaluate existing approaches implemented by partners.

Have there been instances where evidence has been side-lined, even when there was space to use evidence?

There were a few relevant instances when evidence has not been translated into policy, mainly due to lack of funding or to systemic and logistic constraints:

- The case of the delay in changing malaria treatment protocols, until funding became available from the Global Fund Against AIDS, Malaria, Tuberculosis.
- The various drafts of “HRH rural retention” strategies, based on evidence gathered since the mid 2000’s due to staggering costs of some components of the potential strategy (e.g., salary decompression for middle-level professionals, housing, among others). The findings were translated into policy proposals only in 2017, as part of the HRH Strategic Plan (2017-2025) and the very recent ‘Attraction & Retention strategy for HRH’ (2018).

For various other system’s blocks and interventions, the “space to use evidence” is commonly a mix of constraints on funding, organization and logistics, such as:

- The limited capacity of the system to deal with chronic non-communicable diseases, not yet regularly monitored in the HMIS. This, despite the growing prevalence of diabetes and hypertension among the urban as well as rural population, as highlighted in three STEPS surveys.
- The existing constraints to deal with neglected tropical diseases, due to the weak surveillance system, despite surveys showing their prevalence, and available international guidelines on their treatment.
- The unexplored potential for greater effectiveness of services provided by CHWs using apps on mobile devices. These initiatives have not been scaled-up, despite robust evaluations undertaken on two provincial pilot experiments.

As mentioned in various examples above, when sufficient funding is made available (e.g., in various DP-funded programs and projects) the new evidence has been translated quicker into updates to strategic plan (i.e., in the HRH) or national programs (e.g., malaria, EPI, HIV, contraception), even when the introduction of suggested innovation has created turbulence among policy makers, program managers and service

providers. However, it should also be noted that for many such examples of acceptance of the turbulence, the DPs contributed with both funding and technical-organizational support.

CONCLUSION

The conclusions outlined are a synthesis of the major insights of this study and an attempt to synthesize the status of evidence to policy landscape of the Mozambican health sector.

The diagnosis of needs for, and utilization of, evidence became a “practice” in the Mozambican health sector, though not yet a formal norm. Several actors and factors are pressing towards evaluation of previous policies before new ones are designed, as DPs are paying closer attention to the effective and efficient utilization of their funding for health interventions.

Though standardization of national documents, such as strategic plans, has become a “practice” of evaluation and utilization of evidence on policy making, senior officers and program heads have often offered resistance in accepting external or internal evidences, when not absorbed through established mechanisms.

The shortage of dedicated and capable staff to synthesize and digest evidence for the attention of decision makers is a major constraint. Scarcity of financial and human resources creates a stronger dependency on the DPs. It also creates power imbalances between the MoH and the donor community. There is a variety of influential actors in the donor community with conflicting agendas, which further hinders the MoH’s capacity to take independent decisions. The dependency on DPs, and the myriad of projects that they co-finance, also contributes to the fragmentation of the time and attention of the decision-makers in the MoH.

Emerging health problems continue to challenge the health system, despite successes and progress in resources and intellectual output due to the epidemiological transition; the management challenges in a relatively new national public system; and the pattern and location of the population, mainly rural and scattered in a vast area.

The past years have shown growth and progress in resources and processes, but the attrition of senior public health officers within the MoH still hinders the capacity for diagnosis and digestion and use of evidence. In the meanwhile, the growth of academic institutions has been more consistent, though still highly dependent on external funding.

In the last five to ten years, Mozambique has invested heavily in building capacities of academic institutions and Ministry of Health senior staff to undergo evaluation and research. These efforts, often motivated by the donors’ pressure to base initiative on evidence, have resulted in a regular production of evidence.

Despite the existence of some mechanism for dissemination of evidence (e.g., TWGs, National Health Conference, ‘ad hoc’ meetings), the Ministry of Health is not always directly involved in the ‘digestion’ of those findings for further uptake into policy. MoH senior staff have expressed a hierarchization of evidence produced, with a clear preference for results that suggest solutions versus ones that present problem diagnosis.

The variability of involvement of policy makers in evidence generation and dissemination contributes to low uptake of evidence to inform strategic plans and shape policy agendas., Despite this gap, there have been examples in the last decades when health policies and system research have informed decision-making. Nevertheless, MoH and academic institutions are working to create conditions to institutionalize mechanisms for more regular uptake of evidence into policy making (i.e., the new approach of the 2018 National Health Conference and the regular participation of the INS in MoH meetings).

ANNEXES

ANNEX I: DOCUMENTATION AND REFERENCES USED AND QUOTED

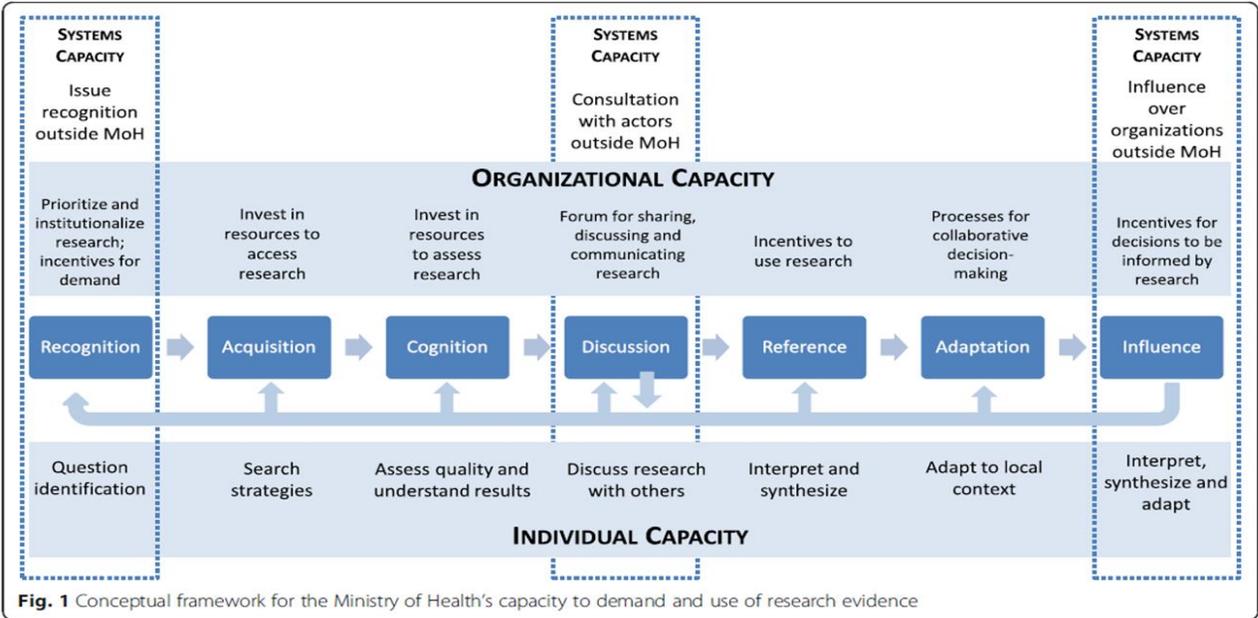
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ANNEX II: PERSONS INTERVIEWED

Name	Designation	Organization
Dr. Aleny Couto	Director of National HIV Control Program	Ministry of Health (Mozambique)
Dr. Avertino Barreto	National Public Health Directorate (former Director)	Ministry of Health (Mozambique)
Dr. Francisco Mbofana	National Public Health Directorate (former Director)	Ministry of Health (Mozambique)
Joaquim Durão	Pharmaceutical and Logistics Department (former Director)	Ministry of Health (Mozambique)
Martinho Dgedge	National Human Resources Directorate (former Director)	Ministry of Health (Mozambique)
Norton Pinto	Director of National Human Resources Directorate	Ministry of Health (Mozambique)
Dr Páscoa Wate	Chief of Maternal and Child Health	Ministry of Health (Mozambique)
Dr. Moshin Sidat	Director of Medical School	Eduardo Mondlane University
Dr. Eduardo Samo Gudo	Scientific Director	National Institute of Health (INS)
Dr. Eusébio Macete	General Director	Manhica Health Research Center (CISM)
Dr. Humberto Cossa	Senior Health Specialist	WORLD BANK
Mr. Peter Cloutier	Health Office Chief	USAID
Mr. James McQuenPatterson	Chief of Health and Nutrition	UNICEF

ANNEX III: CONCEPTUAL FRAMEWORK – THE CONTINUUM FROM NEEDS IDENTIFICATION TO EVIDENCE UPTAKE INTO POLICY FORMULATION (RODRIGUEZ ET AL., 2017)



Source: Rodriguez, et al (2017). Assessing the capacity of ministries of health to use research in decision-making: conceptual framework and tool. Health Research Policy and Systems (2017) 15:65 DOI 10.1186/s12961-017-0227-3

ANNEX IV: GUIDELINES FOR SEMI-STRUCTURED INTERVIEWS

DRAFT INTERVIEW GUIDELINES

This interview guidelines will be translated into Portuguese and may be subjected to further editing and refinement. Four types of interviews will be conducted:

1. Initial (guidance) interviews
2. Key informants on policy revision and making, managers of the health system and/or “blocks”
3. Directors of academic institutions
4. Representatives of development partners with relevant technical presence and influence

INITIAL GUIDANCE INTERVIEWS

Issues:

- Overall trajectory of demand/availability/utilization of evidence-research on policy design/revision (health system blocks/main health programs)
- Proposals for “policy-making events” deserving a deeper analysis

Whom:

- Individuals with long records of key positions in MoH (Planning, Public Health, etc.)

Key positions in MoH:

- From your personal experience, can you recall events of policy design/revision during which specific evidence was sought/used?
- In your view, which directorates within the MoH have been most successful in defining evidence needs/capacity to digest the evidence and utilizing such evidence in their policy design/revision processes?

Possible candidates as “marker” policies:

- Community health workers (CHWs)
- Rural retention for health professionals (HRH)
- HIV/AIDS Control Programme
- Strategic Plans: Health Sector Strategic (multi-year) Plan (PESS); HRH

K. I. GROUP 1. POLICY REVISION AND MAKING, MANAGERS OF THE HEALTH SYSTEM AND/OR “BLOCKS”

Issues:

- Defining research priorities/questions and assessing/using evidence
- Platforms for assessing and circulating evidence examples; documentation
- Examples and documentation

Who:

- MoH National Planning Directorate
- MoH National Public Health Directorate
- MoH National HRH Directorate

- In your Directorate, is there a formal process for regular policy design/revision and M&E? What is its periodicity (approximately) for policy design and for policy M&E?
- During the last five to ten years (or your years of tenure in office), can you recall instances of policy revision and design in which research has been contracted to inform the policy making process?
- Alternatively, can you remember similar policy making moments when already existing evidence (local and international) was used to inform the process? Which institution has been charged with making that evidence available?
- In your personal appraisal, is there currently an environment in which policy design/revision and M&E is usually informed by evidence? Who are the main actors that ensure that such processes are followed? Are there any formal internal guidelines that require reference to specific evidence as part of the processes of policy design/revision?
- Within your Directorate, how much in-house technical capacity exists to digest and synthesize available evidence, including making sense of the contradictory statements of that available evidence?
- Do these in-house technical capacities function regularly to keep senior leadership informed on evidence, or are they called on specifically for periodical events of policy design/revision?
- Senior and experienced technical staff are critical for the formulation of research needs and evidence digestion. How successful has your directorate been in securing the continuation of these staff's presence? Has your directorate experienced difficulties in keeping these staff within the MoH?

For the specific case of the HRH Directorate:

How useful is the HRH Observatory information digest as a complement to other evidence (and/or regular statistics collection)?

- What kind of evidence base is regularly used in policy design/revision + M&E?
- What type of individuals/institutions are normally engaged and assigned with the provision of the evidence?

Type of evidence	Type of institutions
Local research	Local academic institutions Consultancy groups Foreign institutions
Local rapid assessments	Local academic institutions Foreign institutions
International evidence and technical guidelines	In-House technical experts DP's technical experts Local academic institutions Foreign institutions

- What is your assessment of the capacity of the local academic institutions to respond to demands for evidence in support for policy design/revision?
- What are your views about the “relevance,” “accuracy,” and “timeliness” of the evidence made available – and how does it satisfy the calendar of policy design/revision?
- Were there cases when the foreseeable consequence of increased resource demands – of the suggested policy changes – have influenced the process of taking stock of the evidence and using it for policy-making?
- Can you suggest two examples of:
 - o Policies for which available evidence has been translated into design/revision?
 - o Policies for which available evidence has not been translated into design/revision?
- Which categories had a heavier weight on such success/failure: a) the relevance, accuracy, and timeliness of the evidence; b) the appropriateness of the processes used in the connections between the researchers and DMs; c) resource/cost constraints foreseen by the policy changes?

K. I. GROUP 2. DIRECTORS OF ACADEMIC INSTITUTIONS

Issues:

- Objectivity when contracting: needs from decision-makers (DMs)
- Platforms for dissemination of evidence to DMs/CS’s
- Growth in resources/systems
- During your tenure in office (or personal experience), how many events can you recall during which academic institutions (yours or another) have been approached/contracted by MoH (or a DP, on behalf of the MoH) to carry out any research/evidence gathering to support such policy process?
- As for your institution, can you remember whether the research questions/evidence needs were objectively/accurately expressed by the DMs?
- Did the time targets demanded by the DMs enable a proper research protocol to be undertaken?
- How have the results of your work been circulated to the requesting DMs (formal presentation of report, engagement with technical committee, preparation of policy brief for the DMs)?
- What is your assessment of the technical preparedness and availability of time from the DMs and their support technical staff to digest the results that you have reported?
- As for the resources/capacity of your institution (to be involved in HSP Research):
 - o A brief growth curve on post-graduate degrees among academic staff
 - o Roughly, what is the relative importance of contracted work, for: the finances of the institution; the keeping of the senior academic staff?
 - o Which Department is more frequently involved in HSP Research?
 - o Is there a core group that supports academic staff when preparing the answer to a bid/request (budgeting, bioethics, etc.)?
 - o Do staff usually involved in HSPR have to work extra hours to undertake research and prepare reports/attend meetings?

K. I. GROUP 3. REPRESENTATIVES OF DEVELOPMENT PARTNERS WITH TECHNICAL INTERVENTIONS

Issues:

Role of technical agencies/development partners in providing evidence for policy making

- During your institution's experience working with the MoH, can you recall events when your institution offered evidence (international evidence, or local project evidence) in support of policy decision/revision?
- In these events, how proactive has the MoH been in defining the evidence/needs/problems to be solved (and for which the evidence was needed)?
- What processes/instances were used to bring the evidence to the attention of the DMs? Existing mechanisms (e.g. regular joint evaluation committees), or specific processes (e.g., a short-time consultancy)?
- What has been the balance in involvement of your institutions' technical staff, and of the MoH, in facilitating evidence submission in formats appropriate to the working schedules of DMs (e.g., policy briefs)?
- Can you recall instances when, despite the DMs acceptance of the evidence, the policy (new or revised) could not be implemented? What were the main constraints?

ANNEX V: LIST OF CODES AND CATEGORIES USED IN THE CONTENT ANALYSIS SUPPORTING MATERIAL FOR THE INTERVIEWS

Rationale for coding and analysis of interviews

The analysis of interview transcriptions for the study on “demand and use of evidence for policy revision and formulation” was made using a qualitative approach. A total of 16 interview transcriptions –three from initial key informants, seven from Ministry of Health (MoH) officials, three from directors of academic and research institutions (ARIs), three from representatives of Development Partners (DPs) – were coded and triangulated between researchers.

Coding

Codes were used to classify the different levels of abstraction and create sets of related information units for comparison. An average of 38 codes were generated. Primary level of coding was based on the conceptual framework provided by AHPSR (pre-established codes/close coding). Second level of coding was based on the “emerging codes” (pen coding) that were being identified by the researchers during the coding process. Emerging codes helped researchers in labelling aspects identified as “contextual or specific” examples regarding demand and use of evidence in Mozambique as well as to code fragments that did not fully match fully within the primary level of coding.

Fragments that expressed ideas on demand and use of evidence in Mozambique were extracted from interview transcriptions and served as quotations linked to a specific code as well as to a code group.

Table 1: List of codes and code groups

Code	Code Groups
Contextual factors: Degree of decentralization of decision-making	
Contextual factors: Degree of turnover	5. Factors that have been influencing the trajectory in Mozambique 1. The identification of need for evidence and its request
Contextual factors: Dev partner demand for evidence	
Contextual factors: High pressure to meet targets	
Contextual factors: Increasing demand due to existing local expertise with capacity to identify need and generate evidence	
Contextual factors: Lack of HR at program level	5. Factors that have been influencing the trajectory in Mozambique 1. The identification of need for evidence and its request
Contextual factors: Lack of national pharmaceutical strategy summary of challenges	

Contextual factors: Political will	
Contextual factors: predominant political system ideology	
Ind_Enab Condition: Staff linked to structures and people supporting use of evidence	<p>1. The identification of need for evidence and its request</p> <p>4. The utilization of evidence in policy making and evaluation-reformulation</p>
Ind_Enab Condition: Trained to use available institutional tools	<p>2. The capacity to produce evidence and undertake health research</p> <p>4. The utilization of evidence in policy making and evaluation-reformulation</p>
Ind_Enab Conditions: Motivation to seek out and use evidence	<p>5. Factors that have been influencing the trajectory in Mozambique</p> <p>1. The identification of need for evidence and its request</p> <p>4. The utilization of evidence in policy making and evaluation-reformulation</p>
Ind_Enab Conditions: Technical Skills	<p>2. The capacity to produce evidence and undertake health research</p> <p>3. Discussion, digestion and dissemination</p> <p>4. The utilization of evidence in policy making and evaluation-reformulation</p>
Individual level: Accessing needed research	<p>5. Factors that have been influencing the trajectory in Mozambique</p> <p>3. Discussion, digestion and dissemination</p> <p>4. The utilization of evidence in policy making and evaluation-reformulation</p>
Individual level: Adapting into appropriate formats	
Individual level: Applying research evidence	4. The utilization of evidence in policy making and evaluation-reformulation

Individual level: Appraising research relevance and quality	<p>5. Factors that have been influencing the trajectory in Mozambique</p> <p>3. Discussion, digestion and dissemination</p> <p>1. The identification of need for evidence and its request</p> <p>4. The utilization of evidence in policy making and evaluation-reformulation</p>
Individual level: Articulating and generating needed research	<p>1. The identification of need for evidence and its request</p> <p>4. The utilization of evidence in policy making and evaluation-reformulation</p>
Org_Enab condition: Governance Structures	<p>5. Factors that have been influencing the trajectory in Mozambique</p> <p>3. Discussion, digestion and dissemination</p> <p>1. The identification of need for evidence and its request</p>
Org_Enab condition: Sufficient resources	<p>5. Factors that have been influencing the trajectory in Mozambique</p> <p>4. The utilization of evidence in policy making and evaluation-reformulation</p>
Org_Enab condition: Supportive leadership	<p>5. Factors that have been influencing the trajectory in Mozambique</p> <p>3. Discussion, digestion and dissemination</p> <p>4. The utilization of evidence in policy making and evaluation-reformulation</p>
Organisational level: Institutionalized strategies to develop research use	
Organisational level: Promote Interaction	
Organisational level: Synthetize and disseminate	
Organisational level: Tools to facilitate research engagement	<p>5. Factors that have been influencing the trajectory in Mozambique</p> <p>3. Discussion, digestion and dissemination</p>

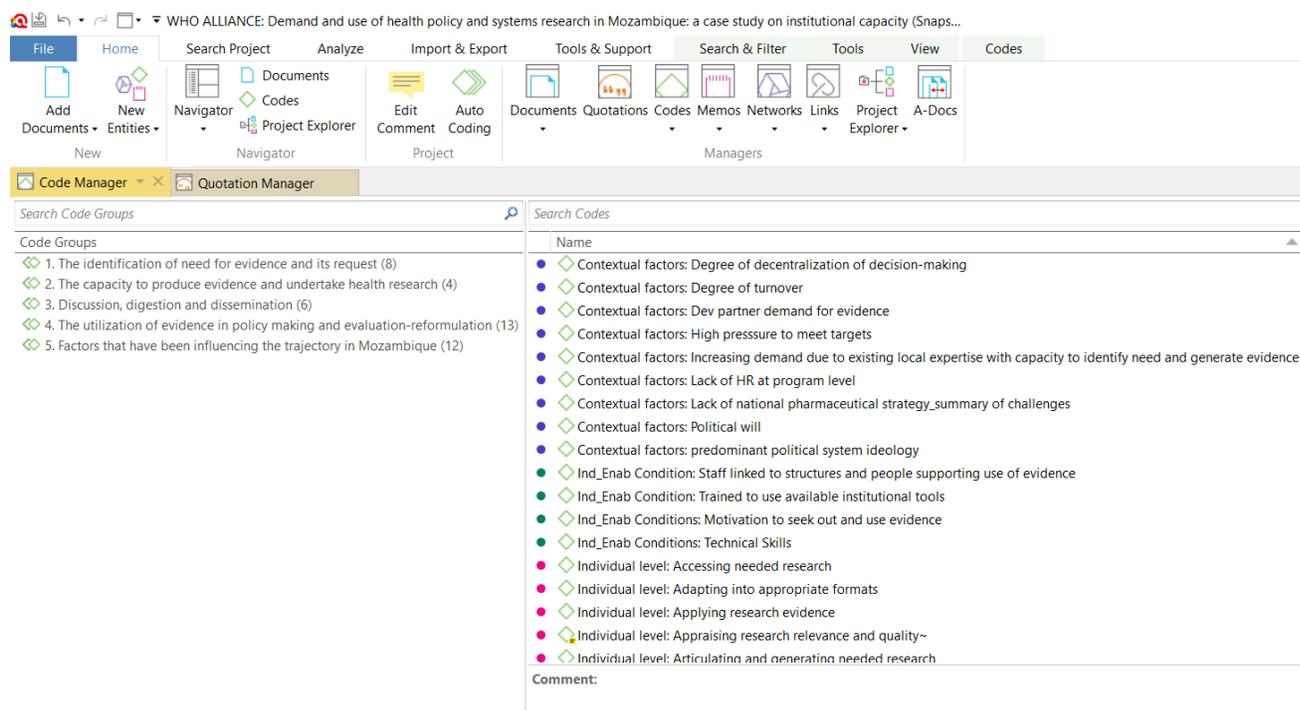
Organizational level: Accessible infrastructure	2. The capacity to produce evidence and undertake health research
Other factors: Dev partners=generate evidence as part of technical assistance	
Other factors: Evidence generated through individual consultancies	
Other factors: evidence=significant funding for Research institutions	
Other factors: Generate evidence=academic growth	
Other factors: Generate evidence=significant funding for research institutions	
Other factors: Imbalances in the generation of evidence within MoH	2. The capacity to produce evidence and undertake health research 4. The utilization of evidence in policy making and evaluation-reformulation
Other factors: Infrequent population surveys=weakness in generating evidence	
Other factors: Interaction and dissemination=better with government lead	
Other factors: lack of coordination among Dev partners	
Other factors: No regular check_Evidence accessed for policy formulation	5. Factors that have been influencing the trajectory in Mozambique 1. The identification of need for evidence and its request 4. The utilization of evidence in policy making and evaluation-reformulation
Other factors: Policy evaluation=donor requirement for funding	4. The utilization of evidence in policy making and evaluation-reformulation
Other factors: Regular revision of guidelines=optimize interventions	5. Factors that have been influencing the trajectory in Mozambique
Other factors: Research Institutions growth in capacity	5. Factors that have been influencing the trajectory in Mozambique
Other factors: Well-established structures/institutions reinforcing use of evidence	

Code groups link different codes that were created to answer to specific question or thematic issue. Code groups served as major level of analysis for which each code was used to help on providing explanations.

For instance, as per the conceptual framework **“articulating research needs and generating the needed research (either directly or indirectly, such as through commissioning)”** was identified as one of the five main core competencies related to research use for decision making at individual level. Therefore, this competency was used as a code and included all quotations that had a reference on that topic.

The following stage was the analysis of whether the code helps explain one of the thematic issues, and where relation was found significant, the code was then assigned to a code group labelled as **“The identification of need for evidence and its request”** which summarizes all information from codes that seek to respond to that specific topic.

Figure 1: Illustration of linkage between codes and code groups



Documents were also labelled following the categories of informants – ministry of health, academic and research institution and development partners – as per the protocol.

Data triangulation

The small amount of interview transcriptions made it possible for researchers to share insights on the data for all the transcriptions instead of selecting a small amount to use as a sample. After each coding process was finalized the “project bundle”³⁰ of ATLAS.ti with all the codes generated was shared among researchers.

³⁰Project bundling is a feature in ATLAS.ti which allows the users to group together (a.k.a. ‘bundle’ or ‘zip’ together) the analysis project file and the source data files. By using this feature, the user would be able to properly export or transfer their analysis project from one machine to another, or simply to create a complete ‘copy’ of their analysis projects. This complete ‘copy’ of the analysis project is called ‘project bundles’ and known by the extension “.atproj”.

All discrepancies identified on the coding were properly addressed to ensure coherence between researchers. This also included specific remarks or findings by researchers during the coding phase.

Data cleaning was also made during triangulation phase. Report generated after each coding phase as well as remarks made in the project bundle were used to perform data cleaning.

Analysis report

Coding report was generated to guide triangulation of data. ATLAS.ti has specific feature to allow researchers export data in a variety of formats, including MS word and excel. The report contains a summary of linkages between codes and quotations required to perform the analysis including a well-structured summary of responses given by the study participants and linked to one or two codes. Code groups are also included in the report and are generally followed by several codes taken as conducive to help explain the same question/topic.

The comments section of the ATLAS.ti was used by researchers to share important remarks on issues being spotted during the coding process and for highlighting a specific point made by interviewees, suggest a new “emerging code” and other interpretations on the data. This section served as an analysis workbook that helped to make coding and analysis more insightful.

Figure 2: Coding and analysis scheme

