

# A Situational Analysis of the Health Research Environment in Zambia

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Submitted to the National Health Research Advisory Committee

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## TABLE OF CONTENTS

<b>TABLE OF CONTENTS</b> .....	I
<b>ACRONYMS AND ABBREVIATIONS</b> .....	II
<b>ACKNOWLEDGEMENTS</b> .....	III
<b>EXECUTIVE SUMMARY</b> .....	IV
<b>1.0 INTRODUCTION AND BACKGROUND</b> .....	1
1.1 Objectives of the Study.....	1
<b>2.0 METHODOLOGY</b> .....	3
2.1 Limitations of the Study.....	3
<b>3.0 FINDINGS</b> .....	4
3.1 Overseeing the National Research Agenda.....	4
3.2 Developing Effective Resource Mobilisation Capacities.....	6
3.3 Development of Capacities for Health Research.....	7
3.4 Overseeing Research Ethics in Health.....	8
3.5 Monitoring and Coordinating of Research.....	10
3.6 Developing Capacities in Knowledge Management and Translations.....	11
3.7 Dissemination of Research Results and Reports.....	11
3.8 Facilitation of Policy Dialogue.....	12
3.9 Advocacy for Evidence-Based Decision-Making in Health.....	13
<b>4.0 DISCUSSION AND ANALYSIS</b> .....	14
<b>5.0 CONCLUSION AND RECOMMENDATIONS</b> .....	15
<b>REFERENCES</b> .....	16
<b>APPENDICES</b> .....	17

## ACRONYMS AND ABBREVIATIONS

<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>CBoH</b>	Central Board of Health
<b>CCGHR</b>	Canadian Coalition for Global Health Research
<b>CIDRZ</b>	Center for Infectious Diseases Research in Zambia
<b>CIHDZ</b>	Center for International Health and Development Zambia
<b>FNDP</b>	Fifth National Development Plan
<b>HMIS</b>	Health Management Information Systems
<b>INESOR</b>	Institute of Economic and Social Research
<b>GRZ</b>	Government of the Republic of Zambia
<b>MoH</b>	Ministry of Health
<b>MSTVT</b>	Ministry of Science Technology and Vocational Training
<b>NGO</b>	Non Governmental Organisation
<b>NHRAC</b>	National Health Research Advisory Committee
<b>NHREC</b>	National Health Research Ethics Committee
<b>NHRB</b>	National Health Research Board
<b>NHRP</b>	National Health Research Policy
<b>NMCC</b>	National Malaria Control Centre
<b>NSTC</b>	National Science and Technology Council
<b>SOP</b>	Standard Operating Procedures
<b>STIs</b>	Sexually Transmitted Infections
<b>TB</b>	Tuberculosis
<b>TDRC</b>	Tropical Diseases Research Centre
<b>TWG</b>	Technical Working Group
<b>USAID</b>	United States Agency for International Development
<b>UNZA</b>	University of Zambia
<b>ZAMFOHR</b>	Zambia Forum for Health Research

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## EXECUTIVE SUMMARY

1. The Current National Public Health Priorities are articulated in the National Health Strategic Plan, 2006-2010, (MoH, 2005). These are: Integrated Child Health and Nutrition; Integrated Reproductive Health; HIV/AIDS, STIs and Blood Safety; Tuberculosis (TB); Malaria; Epidemics Control and Public Health Surveillance; and Environmental Health and Food Safety. Health research priority setting was last undertaken in 1998. The existing research agenda is thus outdated and presently, national priority setting mechanism is not well articulated and not clearly understood by researchers.
2. Inadequate financing from Government, unavailability of funding to support research, the absence of a mechanism to source for and secure funding from other sources and the limited coordination of support from international partners in the health sector remain major challenges facing the growth and strengthening of health research capacity in Zambia.
3. Several inadequacies in the health research environment have contributed to the relatively less-than optimal capacity in conducting health research. The inadequacies pointed out related to both institutional and human resource capacity as well as poor infrastructure. While the potential to conduct rigorous research exists, this has not been comprehensively supported and facilitated. Inadequate management capacity at the Ministry of Health (MoH) to address the vital aspect of development of capacities for health research means that this would continue to be a challenge; structures like the National Health Research Advisory Committee, (NHRAC) have their own limitations- by design, the NHRAC does not have an executive function and its role is purely advisory.
4. The National Health Research Ethics Committee (NHREC) oversees research ethics in Zambia. The Chair and vice Chairpersons of the NHREC are appointed by the minister, and the committee has overall responsibility for overseeing research ethics. Currently, the National Health Research Ethics Committee oversees the work of four other subsidiary research ethics committees. These are University of Zambia (UNZA) Research Ethics Committee, Tropical Diseases Research Center (TDRC) Research Ethics Committee, Macha Research Ethics Committee, and Ethics Reviews Converge (ERES). There are two other research ethics committees at the University of Zambia: the Social Sciences Research ethics committee and another at the School of Veterinary Medicine. The National Health Research Ethics Committee is still finalizing the Standard Operating Procedures (SOPs). The SOPs will guide the running and operations of the subsidiary committees. Presently, the legal framework for regulation of ethics is weak: it is not backed by law. Further, the relevant Statutory Instrument is yet to be enacted and the

provisions under the Science and Technology Act do not control the research activities undertaken by the Ministry of Health, as the National Science and Technology Council falls under a different ministry, the Ministry of Science, Technology and Vocational Training (MSTVT).

5. There is no elaborate system in place to monitor and coordinate research work undertaken by various local and non-local/external researchers and institutions. The need for an effective monitoring and coordination of research has been recognized and the problem of fragmentation of health research undertakings has been explicitly acknowledged by the MoH.
6. There are currently fragmented efforts at ensuring knowledge management systems are put in place in individual projects, programmes and institutions. However, opportunities exist for developing capacities for knowledge management and translation, but adequate mechanisms and supporting systems in aspects such as monitoring and coordination of health research need to be put in place.
7. There is no policy framework for dissemination of research outcomes in the health sector. A number of avenues and mechanisms for dissemination exist. The National Health Research Conference was reported to be one of the principal avenues for dissemination. However, its potential has not been fully utilized. Journal publications and scientific meetings are also being used for dissemination of research findings.
8. Facilitation of policy dialogue has mostly taken the form of meetings. However, more still needs to be done to link health research to decision-makers, in terms of creating appropriate systems and infrastructure.
9. Efforts to promote Evidence-based decision-making and policy formulation in the health sector have been initiated. However, advocacy for this approach is still in its nascent stages. This invariably is linked to an enhanced research environment.

## **1.0 INTRODUCTION AND BACKGROUND**

At the present moment, Zambia does not have a research body responsible for stewardship, financing, creating and sustaining resources, setting priorities, and producing and using health research. The Ministry of Health (MoH) accepted recommendations of the National Health Advisory Committee (NHRAC) of setting up such a body. However, due to lack of resources, these recommendations have not proceeded into action.

The National Health Research Advisory Committee (NRHAC) received a grant from the Canadian Coalition for Global Health Research (CCGHR) to plan for the establishment of a Zambian Health Research Body. Following the aforementioned, the Ministry of Health has put in place a Technical Working Group (TWG) to define the structure and functions of such a body.

It is envisioned that the aforementioned research body will have nine core functions outlined below:

- i. Overseeing the research agenda.
- ii. Developing effective resource mobilisation capacities.
- iii. Developing capacities for health research.
- iv. Overseeing Research ethics.
- v. Monitoring and coordinating health research.
- vi. Developing capacities in knowledge management and translations.
- vii. Dissemination of Research results, reports and proposals.
- viii. Facilitation of policy dialogue.
- ix. Advocacy for evidence-based decision-making and policy formulation in the health sector.

As part of the process leading to the formation and establishment of the National Health Research Agency, the NHRAC commissioned a study, to undertake a situational analysis of the current health research environment in Zambia.

### **1.1 Objectives of the Study**

The main objective of undertaking the situational analysis of the health research environment was to provide the Technical Working Group (TWG) with information for deliberations regarding the formation of the National Health Research Body (NHRB).

The specific tasks of the assignment were to map out Zambian institutions, actors, and activities to inform the formation of the said body. In addition, the other task was to answer specific

questions related to the proposed nine functions of the NHRB stated above. The findings and subsequent analysis are structured around the nine proposed functions, and these form the main thematic areas.

## **2.0 METHODOLOGY**

The study was predominantly qualitative in approach. A Semi-Structured Interview (SSI) guide was developed and used for the interviews. Interviews were conducted with purposively selected key informants in the Ministry of Health, (MoH), selected research institutions, NGOs, relevant committees, and other principal stakeholders in area of research and in the health sector. A comprehensive list of respondents who participated in the study, and the names of institutions they represented or covered in the study are shown in **Appendix 1**. Information generated from the interviews was coded, synthesized and analyzed around the major thematic areas.

In addition, secondary information was generated through review of selected relevant documentation and records. The two approaches complemented each other.

### **2.1 Limitations of the Study**

The study had no major limitations that would have fundamentally compromised the quality and integrity of information generated. However, the following two challenges were faced:

- Unavailability of potential key respondents due to various commitments. In most cases, this ultimately resulted in delays in conducting the interviews and subsequently in the reporting. In some instances, interviews were not secured. In other instances, replacements within the same institutions were found, but in a few cases, this resulted in relatively less informative interviews.
- Unavailability of vital numerical data and specifically, figures and data related to monies budgeted for, allocated and utilized in respect to health research.

### 3.0 FINDINGS

This section outlines results of the situational analysis. As indicated above, the findings are organized around the proposed nine functions of the NHRB.

#### 3.1 Overseeing the National Research Agenda

The National Public Health Priorities are articulated in the National Health Strategic Plan, 2006-2010, (MoH, 2005) and this provides a situational analysis of health systems research in Zambia. These are Integrated Child Health and Nutrition, Integrated Reproductive Health, HIV/AIDS, STIs and Blood Safety, Tuberculosis (TB), Malaria, Epidemics Control and Public Health Surveillance, and Environmental Health and Food Safety. The Fifth National development Plan (FNDP) has highlighted other priorities in the health sector. These are related to human resource development and support systems priorities which include among others, research and development or health systems research. While this is so, the link between national health priorities and health research priorities has been reported to be weak.

In the interviews conducted and reviews of relevant documents undertaken, the study revealed that the health research priorities and the national health priorities are not well aligned: research activities tend to be concentrated in areas that are adequately financed and supported such as Malaria and HIV and AIDS, among others, at the exclusion of others. Respondents argued that the problem is further compounded by the absence of a National Health Research Policy (NHRP) to govern health research. The NHRP, has however, been written, but still awaits cabinet approval.

It was noted that determination of health priorities has in the past, prior to 2001, been done on *ad hoc* basis, (Ministry of Health, 2008). Efforts to define national health priorities in research culminated in the Zambia National Health Research Agenda, 1999 to 2001. The effort resulted in identification of priority areas of research, and outlined basic requirements and appropriate strategies for strengthening research in national health. However, the effort and process of setting and identification of national health research priorities, has not been sustained over time. It was pointed out that health research priority setting was last undertaken in 1998. At the time, the research priorities were divided into health systems research and health research. Since 2001, priority setting in the health research sub-sector has virtually been non-existent. A key observation made was that, the existing research agenda is thus outdated.

The above scenario has had its attendant problems in the area of health research. First, it was pointed out that in the absence of national health research priorities, research is currently being undertaken out of researchers' personal interest. Secondly, health research has concentrated in areas where resources are available and this has been determined and directed by institutions or organizations that have the financial resources to fund research, and it was pointed out that in

some cases, this resulted in conflicting agendas. Most of the respondents argued that current research efforts are biased towards infectious or communicable diseases, mental health and HIV and AIDS, overlooking other areas.

Further, the long absence of a health research unit in the Ministry of Health was perceived as one of the factors that had contributed to the many challenges faced in the health research sub-sector: the current MoH structure does not provide for a Health Research Unit, (Ministry of Health, 2007). However, it was pointed out that immense opportunities exist for setting a research agenda, as there are a number of organizations and institutions that are involved in or extend support to health research in Zambia. These include: government institutions like the National Malaria Control Centre (NMCC), Tropical Diseases Research Centre (TDRC), Non Governmental Institutions, (Zambia Forum for Health Research (ZAMFOHR), CHESSORE, among others), the private sector, and international entities like Boston Centre for International Health Zambia, Zambia Emory HIV Research Project, and Centre for Infectious Diseases Research in Zambia (CIDRZ), Elizabeth Glesier Pediatrics AIDS Foundation, and Health Services and Systems Programme, (HSSP). Others local and non-local organizations and institutions involved in research include the, Churches Health Association of Zambia (CHAZ) and Macha Research Institute. Others are the United States government Centres for Disease Control and various USAID supported projects, the University of Zambia School of Medicine, and the Institute for Economic and Social research (INESOR) of the University of Zambia.

In addition, within the broader research environment is the National Science and Technology Council (NSTC), mandated by an Act of Parliament, the Science and Technology Act of 1997, CAP 26, to regulate, among other functions, research and technology in Zambia. Although the NSTC research related activities in science and technology, the interviews revealed that, as an institution, the NSTC lacks clear legal and other guidelines on how to work with various sectoral actors like the MoH and the institution is currently reviewing the Science policy framework to address the different shortcomings. At present, key priority areas of research for the NSTC comprise the following: alternative energy sources, agro-processing, animal health, and environmental issues. Under research and development, and specifically relating to Health and Medical Research, the National Policy on Science and Technology addresses the following: to ensure that research priorities are geared to generating information intended to solve health and nutritional problems; to ensure that research capabilities and capacities of institutions carrying out health research are strengthened; relating the research programmes to the priority problems in the health sector; establishment of effective linkages between research institutions on one hand, and users on the other; and establish an effective health data bank for research results and mechanisms for their utilization (Government of the Republic of Zambia, 1996). Furthermore, it is noteworthy that the Science and Technology Act of 1997 also provides for formation of research institutes and centres in Zambia. The council is charged with the responsibility to recommend to the Government the establishment of new research institutes and centres.

Presently, the NCST is involved in consultations to facilitate the process of setting up a National Bio-ethics Committee.

### 3.2 Developing Effective Resource Mobilisation Capacities

Inadequate financing, unavailability of funding to support health research, and limited coordination of support from international partners in the health sector were cited in the interviews as major challenges facing the growth and strengthening of health research capacity.

Presently, government allocation to research has been estimated at approximately 5% of the required amounts, (Ministry of Health, 2009). The ‘absence’ of national health research policy and well established priority-setting mechanisms, were also seen as one of the major factors responsible for unavailability of funds for health research: *“There is no direct route to Government funding, and researchers turn to donors.”* **Table 1** shows trends in amounts of financial resources budgeted for and allocated in the health research sub-sector for the last six years. Where funding was available, this has predominantly been used for operations research. The data prior to 2004 was not available.

**Table 1: Details of Amounts Budgeted for, allocated to, and Utilised for Health Systems Research against Total Allocations under Health Planning and Budgetary unit**

	2004	2005	2006	2007	2008	2009
<b>Amount Budgeted</b>	329,990,389	96,727,599	1,000,000,000	1,100,000,000	1,200,000,000	1,161,019,160
<b>Amount Allocated</b>		96,727,599	1,000,000,000	786,522,722	1,000,000,000	1,161,019,160
<b>Amount Utilised</b>	-	-	-	-	-	
<b>Total</b>	<b>2,059,094,442</b>	<b>2,306,638,864</b>	<b>3,918,917,405</b>	<b>5,927,079,243</b>	<b>5,012,692,344</b>	<b>16,082,585,920</b>

*Source: Ministry of Finance and National Development*

\*Information on actual amounts utilized for research were not available

Total amounts allocated to health systems research have been fluctuating over the reference period. In 2004, no monies out of the budgeted for amounts was allocated.

Further, health research (human) is not one of the priority areas with other national potential sources of funding such as NSTC, as stated earlier. On the other hand, while cooperating partners have conducted and tended to support applied research on ‘relevant’ health and development questions, such research has concentrated on their programmes and areas of interest and the absence of comprehensive guidelines or mechanisms to direct and coordinate this support within the MoH framework has exacerbated the problem. A significant portion of financial resources

within programmes/projects supported by cooperating partners have been in HIV and AIDS interventions, Malaria, and T.B.

Overall, the interviews revealed a general consensus that health research in Zambia is not funded to the extent that it should be. Levels of funding have not matched the research needs.

### **3.3 Development of Capacities for Health Research**

Interviews conducted with stakeholders highlighted several inadequacies in the health research environment. The inadequacies pointed out related to both institutional and human resource capacity as well as infrastructure. It was observed that presently within the MoH, capacity to conduct rigorous research is non-existent. This was reported to be true for all levels: headquarters, provincial and district and facility-levels. National Institutions that were identified as undertaking meaningful research were the NMCC, TDRC and the University of Zambia. It was argued that for the University of Zambia this was expected as research work was their core business.

It was also reported that most of the research that is being undertaken in the health sector, is conducted within the auspices of international partners and projects and that the indigenous research agenda is not as strong. It was further noted that in most cases, participation of nationals in the various research activities taking place was mostly about being part of a research team. Technically the research efforts were spearheaded by non-local/ external researchers and local researchers have tended to have little control over what takes place. It was argued that very few local researchers have initiated research or developed research ideas. A number of factors deemed to contributing to the perceived inadequate human capacity among local researchers in the health sector were identified:

- i. Technical capacity, in terms of proposal development, undertaking research, and analysis of and reporting on findings was said to be poor.
- ii. Local researchers have problems with mobilizing resources for research; most do not know where to access funding for research, especially in the light of not having a body to which one could apply for funding.
- iii. Other potential sources like the NSTC have no specific funds allocated to health research. This means that researchers in the health sector will have to compete with researchers from other sectors for whatever limited funds are available at any given time.
- iv. There was a general absence of initiatives aimed at raising the profile of health research. Initiatives such as the National Health Research Conference, which are pivotal in raising the health research profile, have not been consistently held.

However, it was also pointed out that opportunities for capacity strengthening and training initiatives existed in some institutions, and mostly through international collaborative relationships. Major players identified included Zambia Emory HIV Research project, CIDRZ, CIHDZ, among others. However, it was also argued that these efforts were isolated, highly fragmented and cannot be relied upon in any attempts to address the deficiencies in national capacity for health research.

The interviews revealed that the fundamental problem in the development of national capacity in health research was the non-existence of a national plan for capacity building. It was further noted that while the MoH might have the desire to strengthen the capacity for research, it lacked the management capacity to implement this; the effort is demanding in terms of both human resources and funding. According to Ministry of Health (2005), the capacity to analyze, interpret and utilize data at both Province and District levels was limited and that integration and institutionalisation of research as an integral routine component of the health policy development and program implementation process was of critical importance.

Thus the inadequate management capacity at the MoH, to address the vital aspect of development of capacities for health research means that this would continue to be a challenge; by design, the mandate for structures like the National Health Research Advisory Committee does not go beyond playing a purely advisory role; they do not have an executive function.

### **3.4 Overseeing Research Ethics in Health**

The need to oversee the conduct of research from ethics point of view has been recognized in the national research environment. The National Health Research Ethics Committee, a multi-sectoral committee of which the Chair and vice Chair are appointed by the minister. The committee has overall the responsibility for overseeing research ethics. Currently, the National Health Research Ethics Committee oversees the work of four other subsidiary research ethics committees. These are University of Zambia, and the Macha Research Ethics Committees, and privately- run ERES. As pointed out earlier, the NSTC is also proposing the formation of a Bio-ethics committee to oversee ethics in research.

Essentially, the National Health Research Ethics Committee, formed by the MoH, and the other four are tasked to address shortcomings in the conduct of research, from an ethics perspective. Major concerns raised in the conduct of research include:

- i. Lack of or inadequate supervision in the conduct of research; researchers, both local and external sometimes conducted studies without due regard for ethical considerations, especially where these studies involved people/ human subjects;
- ii. Insufficient controls to regulate external researchers ‘flying’ away with data and specimens (human materials);

- iii. Need to protect individuals and communities in which studies were undertaken; and
- iv. Instances where there was a variance between the manner in which researchers conducted research and what was presented and approved in their research protocols were not uncommon.

A number of regulations to govern ethics in health research, especially where external researchers are involved, have been put in place in order to address the highlighted deficiencies. The following principal measures have been put in place:

- i. It is a requirement that every research gets ethical clearance and authority and a written consent from the MoH, before the study is conducted;
- ii. It is mandatory to have a local researcher in collaborative research efforts. Other institutions have involved local researchers in the development of research protocols.
- iii. Data analysis is supposed to be undertaken in Zambia;
- iv. The practice of sending of samples of human materials outside the country has been halted, and its enforcement is stringent and until a legal framework is put place no such exports are allowed. Otherwise, a strong justification as to why tests cannot be undertaken locally would need to be advanced;
- v. Publication of work conducted in Zambia requires among other, local dissemination of findings at research sites and at the MoH, and to seek approval from the ministry; and
- vi. It is mandatory that participants in research are insured against harm and injury.

While a number of successes with regard to research ethics were pointed out, additional areas of concern were equally highlighted by various stakeholders. These included the following:

- i. The issue of intellectual property has not been adequately addressed and an adequate framework would need to be put in place in consultation with the Ministry of Justice.
- ii. Mechanisms for monitoring the conducting of research are still weak. That researchers would conduct their research with a deviation from the presented protocols was said to still be a possibility;
- iii. Protection of the rights of participants especially in biomedical research is not well-articulated or explicitly guaranteed;
- iv. Ethical approval of studies was still characterized by delays;
- v. The National Health Research Ethics Committee is still finalizing the Standard Operating Procedures to guide the running of the ethics committees; and

- vi. Weaknesses in the legal framework for regulation of ethics: the work of the NHREC is not backed by law. The relevant statutory Instrument is yet to be enacted and the provisions under the Science and Technology Act are somewhat vague.

### **3.5 Monitoring and Coordinating of Research**

According to the National Policy on Science and Technology, ( 1996) the NSTC has been mandated by an Act of Parliament (Chapter 236 of the Laws of Zambia) to advise Government on research policy, and is also mandated to co-ordinate, promote and direct scientific research activities in the country. However, the interviews revealed that, at present there is at present, no elaborate system in place to monitor and coordinate research work undertaken by various local and non-local/external researchers and institutions within the health sector. The need for an effective system for monitoring and coordination of research has been recognized and the problem of fragmentation of health research undertakings has been explicitly acknowledged by the Ministry of Health (2007).

As a result of a non-existent system for monitoring and coordinating of research in the health sector, a number of problems have arisen: the possibility of duplication of work is a reality; it is difficult to tell at any one time what research has been done or undertaken, and who is doing what, beyond ethical clearance and approval of studies; follow-up on on-going research efforts is not undertaken and this has had a negative bearing on other aspects of research such as dissemination of research outcomes, identification of gaps in available knowledge to inform further enquiry for policy formulation and other needs, and the general availability of scientific information in the public domain.

In the past, efforts to have a database or a central depository for storage of research findings, projects and reports had been initiated under the Central Board of Health (CBoH) and spearheaded by the Applied Research on Child Health project. However, this effort was not completed and was discontinued. Currently, the MoH has a registry of health research undertaken in Zambia. Currently, research findings, details on completed and on-going projects and reports can also be accessed through individual researchers, institutions and programmes. In addition, this effort has been complemented by individual organization. ZAMFOHR, for example, is currently managing and has continued to build a database for the various research works undertaken in Zambia. This is an initiative to enable different users to appreciate what research work has been done, and how this could be used by different stakeholders, including the health sector players, and the wider scientific community, among other purposes. This is also meant to augment efforts aimed at influencing use of evidence based information for decision-making and policy formulation in the health sector.

### **3.6 Developing Capacities in Knowledge Management and Translations**

There are currently fragmented efforts at ensuring knowledge management systems are put in place in individual projects, programmes and institutions. For example, the USAID supported Health Systems and Services Programme, has supported Anti Retroviral Therapy (ART) Information system, as well as the review and updating of Health Management Information system, (HMIS) to align it with relevant health sector goals. ZAMFOHR has also initiated the effort. However, this also requires that research information is available, and an effective monitoring and coordination system exists and fully functional and putting in place a central repository for all research findings and reports. Furthermore, other organizations like ZAMFOHR have made attempts to bringing researchers and policy-makers and other users to define research needs and to agree on specific research programmes. This is done with a view to improve ownership of research results as well as enhancing access to knowledge and to link existing knowledge to decision-making, policy formulation and to inform practices.

Overall, opportunities exists for developing capacities for knowledge management and translation, but this is largely contingent upon putting in place adequate mechanisms and supporting systems in aspects such as monitoring and coordination of health research.

### **3.7 Dissemination of Research Results and Reports**

Dissemination of research results, reports and proposals was identified as one of the key challenges in the national research environment. The lack of a policy framework for dissemination of research outcomes in the health sector has been acknowledged (Ministry of Health, 2008) despite the existence of a number of avenues and mechanisms for dissemination. The National Health Research Conference was reported to be one of the principal avenues for dissemination. However, its potential has not been fully utilized. This was started in 1998, with a view to holding it every two years, but this has not been the case. The holding of the National Research Conference has not been consistent due to inadequate funds.

In view of the foregoing, the only channels that exist at the moment are what might be termed as *ad hoc* arrangements. Any prospective research has to seek prior approval, and that results of such studies, including those initiated by and undertaken with external researchers have to be disseminated to the MoH, and approval for publication has to be granted. When this is done, the MoH is responsible for determining the audience. The interviews also revealed that for some organizations, for example CIHDZ dissemination of results of studies is also done in their respective research sites to participating communities, and no publication of research results is

done without prior discussions with the communities in the study sites. This practice was said to be well entrenched.

Other organisations like ZAMFOHR have websites, which could be a potential source for dissemination of existing and new research findings or results. Another potential avenue for dissemination of research findings and outcomes is the *Zambia Medical Journal*. Production of the journal however has not been consistent. The NMCC for example has disseminated works on malaria through the same Journal. However, the general view from the interviews conducted was that very few scientists actually read this journal. On the other hand, it was noted that other media of dissemination, like the print media, were said to have limitations. It was generally argued that the print media, and specifically newspapers and tabloids were not ideal avenues for dissemination as these tended to be wrought with distortions of content when it came to scientific information or certain specialized areas of knowledge like health.

The above notwithstanding, some initiatives have been made in the past by individual entities. Healthcare Publications Limited, a private company, had started publication and production of a magazine, *Healthcare* in 2008. The purpose of the publication was to provide health and health related news to the wider public. Information in the publication was packaged in formats that could reach different levels of stakeholders. However, while the magazine enjoyed a relatively wide distribution and appealed to the broader audience, production costs were somewhat prohibitive. Other institutions like the NMCC do publish in international journals and regularly submit abstracts to international health conferences, in addition to depositing its research results and related information on its website.

Generally the interviews conducted revealed that a lot of information or research results rarely go 'beyond the shelves' and that there was a consensus that it was imperative that some sensitization be embarked on in this area. Funds for such publicity, although limited, could be accessed from the National Science and Technology Council. The scenario was different in research that involved collaborative efforts. A lot of research work in collaborative relationships, is published in peer review journals, among others.

### **3.8 Facilitation of Policy Dialogue**

Currently, there is an element of policy dialogue between researchers and policy makers. This is mostly done through meetings between programmes and institutions involved in research and policy makers. The facilitation has mostly taken the form of meetings. The general idea is to maintain dialogue so that policy markers partly own the results of various research efforts. However, more still needs to be done to link health research to decision-makers, in terms of creating appropriate systems and infrastructure. Information to policy makers is sometimes disseminated through Technical Working Groups, (TWGs).

### **3.9 Advocacy for Evidence-Based Decision-Making in Health**

The need for evidence-based decision-making and policy formulation was highlighted in the interviews conducted. This means that research has to be linked to the different users of information. Efforts have been made to link research findings to policy-makers and practitioners. However, these efforts are still in their nascent stage. There is a growing interest among researchers, particularly those in the different donor-supported programmes, to conduct and support applied research on relevant health and development questions (Center for International Health and Development in Zambia, 2009). Efforts are being made to look at, for example, the Demographic and Health Surveys, (DHS) to identify gaps that need further enquiry to inform policy. However, advocacy for evidence-based research is still in its nascent stages. This is also directly related to generally improving the capacity for research.

#### **4.0 DISCUSSION AND ANALYSIS**

The findings suggest that there is currently no elaborate system to determine health research priorities in Zambia. While efforts have been made in the past, this has not been consistent, mainly due inadequate financial support. Government allocation to research is insufficient, and current research efforts have been supported through other sources and especially through various collaboration efforts with non-local researchers, programmes/projects and institutions. This has invariably resulted in a gap or a mismatch between national health priorities and research priorities. Research efforts are concentrated in selected areas at the expense of other areas that do not attract such support. Research activities are not aligned to the national health priorities articulated in the National Health Strategic Plan. In addition to lack of a system for setting the research agenda, and the associated problem of inadequate resources, the findings also point to limited human resource capacity, lack of institutionalised support or arrangements, and inadequate infrastructure to sustain rigorous research in the health sector. A more comprehensive response to address these limitations and inadequacies is thus imperative.

An enhanced health research environment would also demand improvements in other aspects such as ethical considerations. The findings have pointed out that this aspect is being addressed. The MoH has formed the National Health Research Ethics Committee. As pointed out there are other Research Ethics Committees that fall under other Ministries, and Institutions. The National Science and Technology Council is also exploring ways of strengthening institutional arrangements for ethical review of research, and most likely through formation of yet another body. The findings suggest that the aspect of research ethics still faces a numbers of challenges: the operational framework is not comprehensive, the legal framework is yet to be strengthened, and the intellectual property issues remain a challenge. The absence of an effective mechanism to monitor and coordinate research further complicates the current health research environment in Zambia. This has further impacted negatively on attempts at developing capacities for knowledge management and translation, dissemination of research results, and coupled with inadequate funding, has undermined attempts at facilitating dialogue between the research community and policy-makers. The findings seem to suggest that there is growing interest within the health sector to link research to decision-makers, to move towards evidence-informed policies. However, efforts to address this are still minimal and isolated, and no clear strategies have been developed.

A semi-autonomous body or agency, with executive functions is better placed to adequately address the aforementioned shortcomings in the health research environment in Zambia. Of vital importance, be it in resource mobilisation, building research capacities, dissemination or linking

research to policy, is the coordination role. The results suggest that this appears to be the 'missing link'.

## **5.0 CONCLUSION AND RECOMMENDATIONS**

Based on the proposed functions of the NHRB, the findings suggest that a lot needs to be done to enhance the quality and sustainability of outputs and outcomes in the national research environment. Key among these includes the following:

1. Improved institutional mechanisms for coordination of health research and spearheading strengthening of capacities in health research, ensuring effective resource mobilization and facilitating policy dialogue, and linking research to policy, ensuring that systems for dissemination of research results, reports and proposals and robust knowledge management and translation strategies;
2. Strengthening the legal framework in health research ethics and monitoring to enhance the oversee the conduct of research;
3. Link health research to the wider research environment; and
4. Systems put in place and institutional orientation for continued sensitization of health research and to raise the profile of health research among stakeholders.
5. Creation of an agency to facilitate the above.

## REFERENCES

CIHDZ (2009) Annual report to the Ministry of Health, Activities for Funding, Boston University Center for International health and development-Zambia

GRZ (1997) The Science and Technology Act of 1997 Ministry of Science Technology and Vocational Training, Lusaka

GRZ (1996) National Policy on Science and Technology, Ministry of Science Technology and Vocational Training, Lusaka

MoH (2009) Developments in Research in the Health Sector, Ministerial Brief, Ministry of Health, Lusaka

MoH (2008) National Health Research Policy, Ministry of Health, Lusaka

MoH (2005) National Health Strategic Plan 2006-2010 Ministry of Health, Lusaka

## APPENDICES

### Appendix I: Names of Officials interviewed (respondents), Position (s) and their respective organizations/Institutions

Number	Names	Position (s)	Name of organization/Institution
1	Dr. Tambatamba	Deputy Director- Epidemiology and Disease control	Directorate of Public Health and Research, Ministry of Health
2	Mr. Fordson Nyirenda	Deputy Director- Environmental Health	Directorate of Public Health and Research, Ministry of Health
3	Dr. Joseph Kasonde	Executive Director	Zambia Forum for Health Research, ZAMFOHR
4	Dr. M. Maboshe	Chairperson  T.B Advisor	National Health Research Ethics Committee  World Health Organisation
5	Dr. E. Nkandu	Chairperson  Head of Department	UNZA Research Bioethics Committee,  UNZA School of Medicine
6.	Mr. Busiku Hamainza	Principal Operations Research Officer	National Malaria Control Centre
7.	Dr. Alfred Sumani	Programme development and Implementation	National Science and Technology Council
8.	Mr. Filipo Zulu	Programme Officer	National Science and Technology Council

9.	Ms. Bethany Freeman	Chief Research Officer	Center for Infectious Diseases Research in Zambia, CIDRZ
10.	Mr. Arthur Mazimba	Research Coordinator	Boston Centre for international Health and Development Zambia
11.	Mr. Zulu	HR Manager	Churches Health Association in Zambia, CHAZ
12.	Dr. Kabaso		Lusaka DHMT
13.	Dr. K. Yamabayamba	Senior Lecturer	Department of Animal science, University of Zambia

## **Appendix II: Semi-Structured Interview Guide for Health Research Environment Situation Analysis**

### **1.0 Overseeing National Research Agenda**

- a. What are the national (health) priorities in Zambia?
- b. Is there a match between the (health) priorities and the national health research priorities?
- c. What are the national health research priorities?
- d. To what extent and in what ways have the individual research priorities been researched?
- e. How are the (health) research priorities determined at present?
- f. Does (health) research address the questions of (health) policy makers?

How or what mechanisms exist to ensure that research addresses the questions of policy makers?

- g. What mechanisms exist for setting the research agenda?
- h. What have been the challenges in creating a national research agenda? (Any opportunities?)
- i. What can/could have been done differently?
- j. Who are the major actors in (health) research in Zambia?

### **2.0. Developing Effective Resource Mobilisation Capacities**

How do you mobilize resources for research at present/ what are the existing resource mobilization strategies?

- a. What have been the challenges?
- b. If any challenges, how have you addressed these?
- c. What can/could have been done differently?
- d. What is the present government allocation to (health) research?
- e. What have been the trends in the past 10 years, in terms of what is *budgeted* for, *allocated*, and *utilized*?

- f. Have there been any challenges, in terms of budgeting, allocation and utilization of funds in the area of (health) research?
- g. How might the government increase its budget allocation to (health) research?
- h. Are there any other national and international sources of funding for (health) research in Zambia?

### **3.0 Development of Capacities for Health Research**

- a. What is the existing capacity for (health) research in terms of institutional and human resources capacities?
- b. Are there any mechanisms (or opportunities) for capacity strengthening or training initiatives in (health) research?

If, yes, what are these?

If no, why not?

- c. Do the universities have the capacity for producing researchers? What about in terms of health research? (How)
- d. What is being done currently?
- e. Are there any international collaborative relationships for training researchers? Who are the major actors?
- f. What is your perception of these relationships?
- g. What could be done differently?

### **4.0 Overseeing Research Ethics in Health**

- a. Who is responsible for research ethics in Zambia?
- b. How are they doing it?
- c. What are the current institutional arrangements for ethical review of research?
- d. What are the regulations governing ethics in health research?
- e. What are the current regulations governing ethics in research by outsiders involving Zambian participants?
- f. What is your opinion on the strengths and weaknesses in the current ethics review process in Zambia?

- g. How are you addressing issues related to intellectual property? (How?) Have there been any challenges?
- h. Are there any mechanisms for monitoring the ethical conduct of research?
- i. How effective are these mechanisms and what are the challenges?
- j. What can/could have been done differently?

### **5.0 Monitoring and Coordinating Health Research**

- a. Who is responsible for monitoring and coordinating health research?
- b. What mechanisms/modalities exist for monitoring and coordinating health research?
- c. Are there mechanisms for avoiding duplication?
- d. Is there a database for storage of research findings, projects and reports?
- e. Are you able to tell at any one time as to who is doing what in terms of health research? What mechanisms exist/ how do you do it?
- f. How do you ensure financial accountability of on-going research?

### **6.0 Developing Capacities in Knowledge Management and Translations**

- a. Are there mechanisms for ensuring effective management and use of knowledge in Zambia?
- b. What opportunities exist for management and use of knowledge in Zambia?
- c. Are there any challenges in the management and use of knowledge?
- d. In what ways and how could use of generated knowledge be improved?
- e. Do you have a central repository for research findings/ reports?
- f. Are researchers required to deposit papers, findings etc. into a database/central repository?
- g. Do health researchers have access to the knowledge produced in Zambia?
- h. Do health providers, policy makers, and managers have access to the knowledge produced in Zambia?
- i. Are there any mechanisms/ systems in place aimed at ensuring increased access to knowledge?

- j. How adequate are these systems/mechanisms?
- k. What can/could be done differently?

### **7.0 Dissemination of Research Results, Reports, and Proposals?**

- a. Are there any avenues and mechanisms for disseminating new research findings?
- b. Which one are these?
- c. How effective are these avenues and /or mechanisms?
- d. Are there any *Zambian Journals* that can be used for disseminating information?

If yes, which ones are these and how adequate are these journals for disseminating research findings?

- e. Do the print media have any role in disseminating research findings?  

If yes, how effective are they in carrying out this role?
- f. What can/could be done differently?

### **8.0 Facilitation of Policy Dialogue**

- a. Are there any existing mechanisms/fora for policy dialogue between researchers and policy makers?
- b. How effective have been the following in maintaining dialogue between researchers and policy makers?

Conferences, Meetings, Workshops, and Seminars.

- c. Is there any other for a for policy dialogue?
- d. What mechanisms / initiatives could promote and or enhance more dialogue among researchers and research-users?

### **9.0 Advocacy for Evidence-Based Research in Health**

- a. Are there institutions that are currently involved in advocacy for evidence-based research?
- b. Which ones are these?
- c. How effective are these efforts?

- d. What opportunities exist for advocacy of evidence-based health research?
- e. What are the challenges?
- f. What can/could be done differently?
- g. What advocacy approaches should be used to effectively move evidence towards policy?