



**MINISTRY OF HEALTH**

**NATIONAL HEALTH RESEARCH AUTHORITY**

# **THE ZAMBIA NATIONAL HEALTH RESEARCH AGENDA 2018-2021**

**SETTING THE DIRECTION FOR EVIDENCE BASED  
DECISION MAKING WITHOUT LEAVING ANYONE  
BEHIND**

**September 2018**



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## Acronyms and Abbreviations

ACT	Artemisinin Based Combination Therapy
ADRs	Adverse Drug Reactions
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ARVs	Antiretroviral drugs
CAM	Combined Approach Matrix
CBVs	Community Based Volunteers
CHA	Community Health Assistant
CHNRI	Child Health and Nutrition Research Initiative
CHWs	Community Health Workers
COHRED	Council on Health Research for Development
DHIS2	District Health Management Information System version 2 DNA Deoxyribose Nucleic Acid
DOT	Directly Observed Therapy
ECSA	East, Central, and Southern Africa Health Community
eMTCT	Elimination of mother to child transmission of HIV ENHR Essential National Health Research
HIAP	Health In All Policy
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HPV	Human Papilloma Virus
HTS	HIV Testing Services
iCCM	Integrated Community Case Management
IPTp	Intermittent Preventive Therapy in pregnancy
IRLF	Implementation Research Leverage Fund
IRS	Indoor Residual Spray
ITNs	Insecticide Treated Nets
IYCF	Infant and Young Child Feeding
JLA	James Lind Alliance
KAP	Knowledge, Attitudes, and Practices

KAPP	Knowledge, Attitudes, Perceptions, and Practices
M&E	Monitoring and Evaluation
MDA	Mass Drug Administration
MDR-TB	Multi-Drug Resistance Tuberculosis
MOH	Ministry of Health
NCDs	Non-Communicable Diseases
NDP	National Development Plan
NHRA	National Health Research Authority
NHRAC	National Health Research Authority Council
NHRACo	National Health Research Advisory Committee
NHRP	National Health Research Policy
NPHI	National Public Health Institute
NSTC	National Science and Technology Council
NTDs	Neglected Tropical Diseases
PBF	Performance Based Financing
PSA	Prostate Specific Agent
RDT	Rapid Diagnostic Test
RMNCAH&N	Reproductive, Maternal, Newborn, Child, Adolescent Health and Nutrition
SBCC	Social and Behaviour Change Communication
SMAGs	Safe Motherhood Action Groups
SRH	Sexual and Reproductive Health
STIs	Sexually Transmitted Infections
TB	Tuberculosis
VH	Viral Hepatitis
VMMC	Voluntary Medical Male Circumcision
WHO	World Health Organization
ZAMFOHR	Zambia Forum for Health Research

## Foreword



This National Health Research Agenda forms a milestone in Zambia's health transformation agenda in that it provides an important guide to Zambia's quest for evidence-based decision making. The document links Zambia's health development goals as contained in the Seventh National Development Plan and Zambia's public health and health systems priorities as contained in the Ministry of Health Strategic Plan 2017-2021 to the production of research evidence and the translation of that evidence into practice. The document provides guidance to Governments and cooperating partners funding health research institutions, and researchers and other stakeholders on the areas of research that would best respond to Zambia's health needs. The document fulfills the policy measures articulated in Zambia Health Research Policy of 2010 in which the Zambian

government committed to ensuring that:

- a) There are mechanisms and criteria for identifying and agreeing on national health research priorities;
- b) Adequate funding is available for priority health research;
- c) A National health research agenda is set and disseminated to stakeholders with a provision for review and update from time to time;
- d) Stakeholders involved in health research buy into the national health research agenda;

The first National Health Research Agenda was developed in 1999 when the document called "The Zambia National Health Research Agenda: National Health Research Priorities and Recommendations for Action: 1999-2001" was developed under the then Central Board of Health. Since then, although few research priorities at program levels have been developed, there has been no National Health Research Agenda. Even though there was a Research Agenda was developed in 1999, there was no mechanism for ensuring that researchers buy into the national priorities. In addition, in the absence of such a mechanism, funding opportunities and sources tend to be the main determinants of health research rather than national health priorities. With this national health research agenda, the Zambian government through the National Health Research Authority will ensure that priority research needs are given attention through direct financial support. The National Health Research Authority has set up a Research Trust Fund to fund priority research. This Fund will be financed by the Zambian government through Parliamentary allocation, cooperating partners, and researchers through various fees charged by the National Health Research Authority.

I wish to urge all stakeholders in health research in Zambia and international organizations conducting health research or intending to conduct health research in Zambia to familiarize themselves with this important document. May I also appeal to all cooperating partners to financially support the National Health Research Agenda by coming up with Requests for Applications (RFAs) for funding to address specific research priority areas and release funds to be administered through the NHRA. This will not only help promote priority health research but will also help harmonize research financing and facilitate effective coordination of health research in the country.

A handwritten signature in black ink, appearing to read "Chitalu Chilufya". The signature is fluid and cursive.

Dr. Chitalu Chilufya, MP

**Minister of Health**

## Preface

One of the key mandates of the National Health Research Authority (NHRA) as provided for under Act No. 2 of 2013 of Zambia is to identify and prioritize areas for health research and advise the Minister, who shall recommend the priority areas to Cabinet for approval as national health research priority areas to be incorporated into the national health research strategic plan. Because the National Health Strategic Plan (NHSP) was developed before the National Health Research Priorities were identified, the National Health Research Authority critically analyzed the public health and health systems priorities in the NHSP and identified research priorities in line with the national health priorities.

The Health Research Act of 2013 provides clear criteria for identifying priorities for health research, and in line with the Act, the NHRA, in developing this National Health Research Agenda, took into consideration the following:

- (a) The burden of disease in the country;
- (b) The cost effectiveness of interventions aimed at reducing the burden of disease;
- (c) The availability of resources for the implementation of an intervention at the level closest to the affected communities;
- (d) The health needs of special groups;
- (e) The health needs of communities;
- (f) Emerging public health problems.

The development of this Research Agenda was highly consultative and was guided by the Research and Development Committee of the NHRA Council and technically by the NHRA Technical staff. The process involved consultations with health professionals in charge of specific health programs such as HIV, TB, Malaria etc., medical personnel in various fields, health researchers, heads of health research institutions, representatives of academic institutions, and other key stakeholders in the health sector. This was done to ensure that the priorities identified cover all health disciplines and that the National Health Research Agenda is owned by all health sector stakeholders. May I therefore appeal to all researchers in Zambia to buy into this National Health Research Agenda and use this document as a reference during the development of their institutional research plans. I also wish to appeal to academic institutions involved in health to ensure that their students are availed this document to guide their research projects.



Prof. Everist Njelesani

**Chairperson, National Health Research Authority Council**

## Acknowledgments

The National Health Research Authority wishes to acknowledge the contributions of all the researchers, heads of research and academic institutions, health programs personnel from MOH, Cooperating partners, and all research stakeholders for their valuable contributions to the development of the Research Agenda. We are grateful to you all for your support. Below we list various specific committees that contributed to the development of this document. The list of all individual stakeholders that were consulted and those that contributed is too long to itemize; but we are grateful to all.

### MEMBERS OF THE SMALL TECHNICAL COMMITTEE ON RESEARCH PRIORITY SETTING

No.	Name	Position and Organization
1	Ms. Caren Chizuni	Chief Safe Motherhood Officer, MOH
2	Ms. Agness Aongola	National Nutritionist, MOH
3	Mr. Boniface Kanjere	Biostatistician, National Food and Nutrition Commission
4	Prof Margaret Maimbolwa	Associate Professor, UNZA School of Nursing Sciences
5	Mr Micheal Isimwaa	Acting Director Policy & Planning Ministry of Fisheries & Livestock
6	Dr. Godfrey Biemba	Director and CEO, NHRA
7	Dr. Victor Chalwe	Deputy Director, Research Regulation and Promotion, NHRA
8	Ms. Sandra Sakala	Deputy Director, Research Coordination
9	Mr. Brian Chiluba	Senior Regulations Officer, NHRA
10	Ms. Kutha Banda	Senior Research Associate, NHRA
11	Mr. Chunga Chipwaila	Senior Research Associate, NHRA
12	Ms. Hiwote Solomon	Senior Research Associate, NHRA



## STAKEHOLDERS WHO REVIEWED ATTENDED THE FINAL CONSENSUS MEETING AND ADOPTED THE DOCUMENT

No.	Name	Position and Organization
1	Dr. D Katongo	Provincial Health Director, Luapula Province
2	Webster Lungu	Research Advisor, NISIR
3	Dr Masika Tulia Makelele	M.O/ Kasama General Hospital
4	Boniface Mutale	PNO/Muchinga PHO
5	Gwendolyn Yondela	PMTCT Program Officer
6	Mr Micheal Isimwaa	Acting Director Policy & Planning Ministry of Fisheries & Livestock
7	Mrs Veronica Muntanga	HBC/CTC Program Officer/MoH
8	Bwembya Josphat	Operations Research Specialist (TB)/PATH/ETB
9	Clara C. Kasapo	TB Officer
10	Dr Kennedy Lishimpi	Director & National Coordinator Cancer Control
11	Kasanga Sakha-Zilipa	ZAMRA
12	Florence Kabinga Mwale	CEHO/MoH
13	Dr Patricia Mupeta Bobo	Assistant Director-Child Health and Nutrition/ MoH
14	Dorothy Sikazwe	Chief Nutrition Officer/MoH
15	Rodwell Vongo	President/THPAZ
16	Dr Modest Mulenga	Director/TDRC
17	Stainley Mwale	Regulatory Coordinator/CIDRZ
18	Japhet Matoba	Data Manager/MRT Project Coordinator
19	Dr Busiku Hamainza	Epidemiologist
20	Ellah Zingani	Lecturer/UNZA SOHS
21	Prof James Chipeta	Ass Deam Research/UNZA SOM
22	Liswaniso Christopher Tabo	Assistant Registrar-RES/DGRS UNZA
23	Andrew Phiri	Reporter/MoH
24	Hikabasa Halwiindi	UNZA/ SoPH
25	Mwiche Siame	Strategic Information Officer/MoH
26	Albertina Moraes	Knowledge Translation Officer/ZNPHI
27	C Kankasa	UTH-HAP
28	Peggy Simwanza	Min of Gender
29	Vina Chileshe	CIDRZ

**MEMBERS OF THE RESEARCH AND DEVELOPMENT COMMITTEE OF THE COUNCIL WHO REVIEWED THE DOCUMENT**

No.	Name	Position on the Committee
1	Mr Michael Isimwaa	Chairperson
2	Prof. Margaret Maimbolwa	Member
3	Mr Webster Lungu	Member
4	Dr. Panganani Njobvu	Member
5	TDr. Rodwell Vongo	Member

**MEMBERS OF THE NATIONAL HEALTH RESEARCH COUNCIL WHO APPROVED THE DOCUMENT**

No.	Name	Position on the Council
1	Prof. Evarist K. Njelesani	Chairperson
2	Ms. Indie Dinala	Vice Chairperson
3	Prof. M. Maimbolwa	Member
4	Dr. Victor Mukonka	Member
5	Ms. Irene K. Munga	Member
6	Ms. Bridget Moya	Member
7	Mr. Michael Isimwaa	Member
8	Mr. Webster Lungu	Member
9	Prof. Trevor Kaile	Member
10	Mrs. Karen Sichinga	Member
11	Prof. Manenga Ndulo	Member
12	Dr. Panganani Njovbu	Member
13	Mr. Lazarous Mwelwa	Member
14	Dr. Rodwell Vongo	Member
15	Mr. Francis Chilunga	Member



**Dr. Godfrey Biemba**  
 Director and Chief Executive Officer  
**National Health Research Authority**

## Chapter 1: Background and Context

Setting priorities for health research areas is an important exercise as it aligns research to national health priorities and guides researchers, policy makers and program implementers to research topics and questions whose answers would positively impact the health status of the people. Research priorities determine the research agenda, practices, and technologies of a given nation [1]. Available data shows that to date there has been five health research priority setting initiatives in Zambia [2]. The first national health research priority setting was conducted in 1998 to 1999 by the National Health Research Advisory Committee (NHRACo) of the Ministry of Health (MoH) which came up with a document called the first National Health Research Agenda [3, 4]. Other research priority setting initiatives that followed were: Priority setting for health research as part of the general priority setting for health driven by the National Health Strategic Plan 2006–2011; priority setting by the National Science and Technology Council (NSTC); priority setting by the Zambia Forum for Health Research (ZAMFOHR), a comprehensive priority setting process for MoH programs; and priority setting by the MoH in partnership with the World Health Organization Implementation Research Leverage Fund (WHO-IRLF) on Maternal, Neonatal and Child Health. An analysis of all these initiatives reveals a lack of linkages between the different initiatives, with no conscious recognition and building on previous priority-setting experiences [2]. The current health research priority setting has taken into account the weaknesses and strengths in the previous priority setting initiatives and builds upon those initiatives. The current process has taken a deliberate effort to align the health research priorities to the national priorities as outlined in Zambia’s Seventh National Development Plan (7NDP) 2017-2021[5] and the Ministry of Health Strategic Plan 2017-221 [6]. The process has also taken into account issues identified in the National Health Research Policy (NHRP) of 2010 [7].

The 7NDP has a specific focus on research and development and has allocated development outcome no.10 to “enhance research and development” with two specific strategies: Enhance research and development and innovation capacity; enhance policy formulation and analysis. The first strategy focuses on developing a high-quality research base with a critical mass of highly qualified human resource, modern adequately equipped infrastructure and a technology development structure that will popularize science and technology for promoting and creating a national culture of research and innovation. Specific programs to address this strategic focus are: Laboratory infrastructure development; Infrastructure upgrading; Quality assurance enhancement; and Financing improvement.

The second strategy focuses on developing technologies and initiatives that will enhance the attainment of the 7NDP by strengthening capacities to produce evidence-based analytical studies that will adequately inform policy development and subsequent paradigm shift. Specific programs to attain this strategic focus include: Research quality assurance; policy review and analysis enhancement; diversification agenda research promotion; and system and capacity assessment.

The MoH National Health Strategic Plan 2017-2021 has set specific Public Health Priorities and Health System Priorities as outlined in the table below:

PUBLIC HEALTH PRIORITIES	HEALTH SYSTEMS PRIORITIES
<ol style="list-style-type: none"> <li>1. Primary health care</li> <li>2. Maternal, neonatal and child health, youth and adolescent health</li> <li>3. Communicable diseases, especially malaria, HIV and AIDS, STIs and TB</li> <li>4. NCDs</li> <li>5. Disease outbreaks and epidemic control, public health surveillance</li> <li>6. Environmental health and food safety</li> <li>7. Health service referral systems</li> <li>8. Health promotion and education</li> <li>9. Community health</li> <li>10. Social determinants of health</li> </ol>	<ol style="list-style-type: none"> <li>1. Human Resources for Health</li> <li>2. Essential Drugs and Medical Supplies</li> <li>3. Infrastructure and equipment</li> <li>4. Health Information</li> <li>5. Leadership and governance</li> </ol>

The National Health Research Policy of 2010 has set specific policy measures on research priority setting as summarized below:

- w Develop mechanisms and criteria for identifying and agreeing on national health research priorities;
- w Ensure adequate funding is available for priority health research;
- w Ensure that a National health research agenda is set and disseminated to stakeholders with a provision for review and update from time to time;
- w Ensure that stakeholders involved in health research buy into the national health research agenda.
- w Undertake a thorough update and inventory of all health research in the country

## **Chapter 2: Objectives and Process of the National Health Research Priority Setting**

### **2.1 Objectives of the national health research agenda**

#### **2.1.1 Overall Objective**

The main objective of the Zambia National Health Research Agenda and Priorities is to align the production of research evidence to the National Health Goals and Objectives as well as provide guidance to researchers, research institutions, academic institutions, policy makers, program implementers, health development partners and other partners on Zambia's health research focus.

#### **2.1.2 Specific Objectives**

The specific objectives of the research agenda are:

- a) Align health research outputs with the national health research priorities
- b) Guide researchers, policy makers, program implementers, academic institutions, health development partners and other stakeholders on health research priorities
- c) Provide a guide for national health research activities to address national health research gaps and needs
- d) Provide a guide on research areas to be funded through the National Health Research Fund
- e) Facilitate mobilization of finances and resources for the conduct of locally relevant health research

### **2.2 The Process of Developing the National Health Research Agenda**

#### **2.2.1 Overview of the process**

The development of the national health research agenda was based on a highly consultative and inclusive process and used evidence based research priority setting methodologies. The priority setting process involved the following key steps:

- a) Desk review of health research priorities set in previous years in Zambia. This was an important step so as to learn from the past priority setting efforts in Zambia. As Pascalina and others observed, in the past there has been lack of linkages between the different priority setting initiatives and no conscious recognition and building on previous priority- setting experiences [2].
- b) Health research gap analysis based on a desk review of research conducted under specific thematic areas over the five years prior to 2017
- c) Identification and prioritization of some key research ideas by a small select group of stakeholders based on the Ministry of Health National Health Strategic Plan 2017-2021 and the health research gap analysis
- d) Wider stakeholder consultation via email

- e) Revision of research ideas and topics by the National Health Research Authority, incorporating input from the wider research community; circulation of a consolidated research priorities document (Draft National Health Research Agenda) to the wider research community, policy makers, program implementers, and health development partners
- f) Final Stakeholders Consultation and Consensus Workshop
- g) Finalization of the National Health Research Agenda document by the National Health Research Authority
- h) Submission of the National Health Research Agenda to the National Health Authority Council for approval
- i) Submission of the National Health Research Agenda to the Honourable Minister of Health for approval
- j) Dissemination of the National Health Research Agenda

## 2.2.2 Priority Setting Criteria

### Priority setting methods overview

Global literature reveals many methods and criteria used to set national health research priorities [8]. These include:

- a) Child Health and Nutrition Research Initiative (CHNRI)
- b) Delphi method
- c) James Lind Alliance
- d) 3D Combined Approach Matrix (CAM)
- e) Council on Health Research for Development (COHRED) Essential National Health Research (ENHR)

Below we briefly describe the above methods for the sake of those who may not be familiar with them.

#### Child Health and Nutrition Research Initiative (CHNRI)

This is a systematic but flexible method for setting research priorities for global health [9, 10]. The method has five guiding principles:

- ◆ **Answerability:** Likelihood that research option would be answerable in an ethical way
- ◆ **Effectiveness:** Likelihood that resulting intervention would reduce disease burden
- ◆ **Deliverability:** (affordability and sustainability) of resulting intervention
- ◆ **Maximum potential** that intervention will reduce disease burden
- ◆ Effect of disease burden **on equity** in population

The above principles or priority setting criteria may be expanded as per illustrated in table 1 below

**Table 1 Possible Criterion for priority setting**

Answerability? (some health research options will be more likely to be answerable than the others)
Attractiveness? (some health research options will be more likely to lead to publications in high- impact journals)
Novelty? (some health research options will be more likely to generate truly novel and non-existing knowledge)
Potential for translation? (some health research options will be more likely to generate knowledge that will be translated into health intervention)
Effectiveness? (some health research options will be more likely to generate/improve truly effective health interventions)
Affordability? (the translation or implementation of knowledge generated through some health research options will not be affordable within the context)
Deliverability? (some health research options will lead to/impact health interventions that will not be deliverable within the context)
Sustainability? (some health research options will lead to/impact health interventions that will not be sustainable within the context)
Public opinion? (some health research options will seem more justified and acceptable to general public than the others)
Ethical aspects? (some health research options will be more likely to raise ethical concerns than the others)
Maximum potential impact on burden? (some health research options will have a theoretical potential to reduce much larger portions of the existing disease burden than the others)
Equity? (some health research options will lead to health interventions that will only be accessible to the privileged in the society/ context, thus increasing inequity)
Community involvement? (some health research options will have more additional positive side- effects through community involvement)
Cost and feasibility? (all other criteria being equal, some research options will still require more funding than the others and thus be less feasible investments)
Likelihood of generating patents/lucrative products? (some research options will have greater likelihood of generating patents or other potentially lucrative products, thus promising greater financial return on investments, regardless of their impact on disease burden)
<b>Source: Igor Rudan, 2008</b>

## Delphi method

This is two stage process starting with a questionnaire to seek initial views from a wide range of experts. The responses are then collated and sent out again to the contributors for comments. The experts are also asked to assess their relative level of competence in answering the questions [11]. We used some modified form of the method through email consultation with the research community (research experts) in one of our priority setting process; the main modification is that we did not use a structured questionnaire.

## James Lind Alliance (JLA)

The James Lind Alliance is an independent organization funded by the National Institute of Health Research and Medical Research Council, UK. Its role is to provide a platform for an independent and integrative approach to determining both patients' and clinicians' views on setting the research agenda. The JLA uses both quantitative and qualitative approaches to the inclusive participation of a range of different stakeholders (patients, clinicians, and caregivers) [12, 13]. This methodology was found to be inappropriate for our national priority setting process.

## 3D Combined Approach Matrix (CAM)

The three dimensions combined approach matrix is a methodology that is based on three equally important pillars: **process, tools and context** [14]:

- ♦ The **process** of selecting priorities is a continuous and cyclical activity that involves a large number of stakeholders. The key is to make the process as objective and participatory as possible and define priorities that are responsive to local needs.
- ♦ Priority-setting **tools** are instruments that enable the collection, organization and analysis of information needed to help set priorities.
- ♦ The method also takes into account the social, economic and cultural **context**.

In addition to the three pillars, the methodology also considers the priority-setting from three dimensions: **Public health, institutional, and equity**.

**Public Health:** Considers the magnitude of problem, determinants of the problem, available interventions, cost-effectiveness of the interventions, present investments

**Institutional:** Considers a) Individual, household, community; b) Health sector; c) Other sectors related to social determinants; d) Governance: institutions and structures which impact health.

**Equity:** This dimension aims to elucidate the correlates of poverty, powerlessness and social injustice and may include categories such as gender, poverty, disability, religion, educational status or race. This dimension is new and has not been fully tested in different settings.

Council on Health Research for Development (COHRED) Essential National Health Research (ENHR)

This methodology is based on about three principles and four characteristics of the process [15]. **Principles:** Put country priorities first; work for equity in health; link research to action for development.

**Characteristics:** Inclusiveness; multidisciplinary and cross-sectoral approach; participatory and transparent processes; systematic analyses of health needs, societal and professional expectations.

Out of the methods above, recent evidence shows that the CHNRI is the most frequently used (26%), followed by the Delphi (24%), James Lind Alliance (8%), CAM (2%) and ENHR (1%)[9].

## Criteria Used for this Priority Setting:

In deciding on the criteria to use, the NHRA also reviewed some National Health Research Agendas within the African Region to compare notes. Based on available evidence the combination of the CHNRI, Delphi, 3D CAM and ENHR methods were used



in the priority setting process but the actual criteria was adapted from CHNRI. From the CHNRI the following criteria was used to rank research ideas and topics:

**Answerability:** Is the health research idea more likely to be answerable?

**Novelty:** Is the health research idea more likely to generate truly novel and non-existing knowledge?

**Potential for translation:** Is the health research idea more likely to generate knowledge that will be translated into health interventions?

**Effectiveness:** Is the health research idea more likely to generate/improve truly effective health interventions?

**Affordability:** Is the translation or implementation of the knowledge generated through the health research idea more likely to be affordable within the Zambian context?

**Deliverability:** Is the health research idea likely to lead to / impact health interventions that will be deliverable within the Zambian context?

**Sustainability:** Is the health research idea likely to lead to / impact health interventions that will be sustainable within the Zambian context?

**Ethical aspects:** Is the health research idea more likely to raise ethical concerns?

**Equity:** Is the health research idea more likely to lead to health interventions that will not only be accessible to the privileged in the Zambian society/context but to all socio-economic groups?

**Community involvement:** Is the health research idea likely to have more additional positive side-effects through community involvement?

**Feasibility:** Is the health research idea likely to lead to translation at the current stage of knowledge?

**Relevance:** Is the health research idea relevant to the Zambian context?

**Fills key gap:** Is the health research idea likely to fill the key gap in knowledge that is required for translation and/or implementation of priority health programs in Zambia?

**Cost:** Is the research idea likely to require less funding than other possible ideas within the same health priority thematic area to undertake in Zambia?

**Fundability:** Is the research idea more likely to receive funding support within Zambia?

**Alignment with “country health” priorities:** Is the health research idea aligned with Zambia’s National Health Priorities as contained in the Ministry of Health National Health Strategic Plan 2017-2021?

**Likelihood of generating patents/lucrative products:** Is the health research idea likely to generate patents or other potentially lucrative products, thus promising greater financial return on investments, regardless of their impact on disease burden in Zambia?

A “yes” to each of the questions above was rated as “1.0”, where there was a doubt, the score was “0.5” and where it was a definite “no” the score was “0.0” For each research idea a weighted average was then calculated, ranging between 0 and 1 and the ideas were then ranked; the idea with the highest score being ranked of higher priority. Overall, the overarching criterion was whether the idea was within the National Health Priorities.

## **Chapter 3: The National Health Research Priorities by Health Sector Priority Area: Translating Priority Health Issues into Priority Health Research Issues**

This chapter outlines the research priorities identified during the consultative process. The research questions are of different “depth” and include very broad “research avenues” or research fields; more specific “research options”; and more specific research questions that correspond to a title of a typical research paper [11]. Hence readers will note that some research priorities are more specific and directive, while others are very broad. This approach was chosen to allow for a wider selection of research ideas and innovation while at the same time provide researchers with main priority areas of research for Zambia. Rather than “prescribe” all the specific research questions for researchers, the approach has provided a number of broad research areas, carefully selected to respond to Zambia’s health priorities. Kindly note that the numbering of priorities in this document does not represent the order of priorities. The ranking methodology was used to come up with the lists of research ideas and questions but these were not further ranked in any order.

### **3.1 National Public Health Research Priorities**

#### **3.1.1 Reproductive, Maternal, Newborn, Child, Adolescent Health and Nutrition(RMNCAH&N)**

##### **A. Maternal Health**

1. Studies aimed at understanding antenatal and postnatal care practices in order to improve attendance and quality of care
  - a) Conduct studies to come up with novel and effective interventions to improve antenatal attendance in the first trimester
  - b) Studies aimed at finding effective interventions to improve adherence to guidelines/protocols for maternal health
2. Studies to improve supportive supervision and mentorship for quality pregnancy delivery services
3. Epidemiological research to identify main contributing factors to maternal and newborn deaths in Zambia
4. Formative research to better understand gender issues, local beliefs and practices, the reasons for them, and how they affect maternal health so that effective behaviour change strategies can be developed and evaluated for maternal health
5. Studies on community-based effective models of improving maternal and newborn care
6. Operations research to better understand how best to deliver affordable, proven, life-saving preventative and curative interventions in maternal health
7. Implementation research aimed at improved use of evidence-based maternal and newborn care interventions
8. Conduct formative survey on reusable menstrual products and how menstrual issues affect school attendance on the girl child
9. Assessment of the knowledge and response to maternal danger signs at the community level

## **B. Reproductive Health**

1. Studies to provide evidence to improve reproductive health commodities supplies
2. Intervention studies on infertility (both male and female )
3. Evaluate factors associated with low-uptake of contraceptives and what needs to be done
4. Assess effective methods of creating awareness around reproductive health issues, especially among adolescents
5. Studies to come up with effective interventions to deal with gender issues related to accessibility of family planning services in Zambia
6. Evaluate the barriers and facilitators of adolescents seeking reproductive health services at the facility level
  - a. Evaluate the effectiveness of the 'adolescent health platforms' which will replace the 'youth friendly corners'
7. Assess effective methods of creating awareness around reproductive health issues, especially among adolescents
8. Conduct formative survey on reusable menstrual products and how menstrual issues affect school attendance on the girl child
9. Conduct surveys on market access and performance of family planning and water purification products including condoms, oral contraceptives, etc.

## **C. Newborn Health**

1. Determine the factors associated with high-levels of fresh still births in Zambia
2. Studies to come up with interventions and strategies needed to prevent fresh still births in Zambia
3. What are the best interventions to address the current high neonatal mortality rates?
4. Assessment of the use of community-based proven interventions to reduce neonatal mortality
5. Evaluate the effectiveness of strategies being implemented to address high mortality among preterm babies
6. Studies to determine the age of fetal viability in Zambia

## **D. Child Health (under 10 years of age)**

1. Studies to improve Early Infant Diagnosis of HIV
2. Studies to increase uptake of HIV related services in children
3. Studies on Child Abuse – including operational research on programmes that empower children to report abuse
4. Partner mapping to assess coordination of partners under the child health programme
5. Evaluate programming around community participation and engagement in the demand and utilization of child health services

6. Evaluation of thrive interventions such as Early Childhood Development and rehabilitation programmes
7. Studies on viral hepatitis in children (prevalence, incidence, etc.) and the cost-effectiveness of mass antenatal screening and / or birth dose of hepatitis b vaccine in Zambia
8. Implementation and operational research on perinatal and infant health
9. Studies on non-communicable diseases affecting child health (e.g. epilepsy, cerebral palsy, malnutrition, etc.)

#### **E. Adolescent Health (10-19 years of age)**

1. Evaluate current interventions on community mobilization of reproductive health services for adolescents
2. Evaluate the use of new technologies to increase uptake of SRH services by adolescents
3. Evaluate the uptake of reproductive health services by adolescents and interventions to increase demand for these services
4. Evaluate the implementation of adolescent health strategies in Zambia
5. Evaluate factors associated with high rates of early marriage and teenage pregnancy in Zambia and determine the most effective interventions to deal with the vice
6. Evaluate factors associated with high rates of new HIV infections among adolescents in Zambia and determine the most effective interventions to deal with the challenge
7. Conduct a study on the Knowledge, Attitudes, and Perceptions (KAP) on HPV vaccine among adolescent girls in Zambia
8. Conduct studies aimed at reducing Drug and substance abuse
9. Conduct a knowledge, attitudes, perceptions, and practices (KAPP) study surrounding sexuality and sexual behaviors among adolescents living with HIV and those without
10. Assessment of knowledge, attitudes, and practices among health care workers of key adolescent issues
11. Evaluation of the comprehensive sexuality curriculum in schools and impact of comprehensive sexuality education on children and adolescents
  - a. Evaluate HIV/SRH outreach services for adolescents that are out of school

#### **F. Nutrition**

1. Determine the prevalence and factors associated with malnutrition (under and over nutrition) among all age groups in Zambia
2. Determine the prevalence of micronutrient deficiencies in Zambia
3. Determine the prevalence of nutrition related NCDs in Zambia
4. Conduct an implementation research on effective ways of integrating nutrition into other key health sector interventions, such as maternal and adolescent health, HIV care, TB, IMCI, WASH and NCDs
5. Conduct research to establish innovations and technologies that enhance implementation of child health and nutrition interventions, including nutrition therapies

6. Conduct studies on the effectiveness of community based blended complementary foods for Infant and Young Child Feeding
  - a. Assess the use of household appropriate technology or household gadgets for processing of complementary foods at community level
7. Conduct research to develop local therapeutic products to manage acute malnutrition
9. Conduct a prevalence survey on micronutrient status in the Zambian population
  - a. Evaluate the prevalence of Vitamin A deficiency in lactating mothers
  - b. Review the impact of Vitamin A supplementation in Zambia
10. Assess the cost-effectiveness of the Child Health Week
11. Determine the factors associated with high-levels of stunting in Zambia
12. Determine the feasibility of developing technologies and nutritionally adequate formulations using locally produced foods for various needs
13. Conduct studies in the safety, efficacy, effectiveness and cost-effectiveness of various local and global food supplements toward the reduction of certain diseases
14. Conduct studies to determine the effect of gender inequalities on nutrition in Zambia
15. Conduct a National food Consumption and nutrition intake assessment of the Zambian population
16. Conduct a study on the Perception of food fortification among consumers
17. Determine Knowledge, Attitudes and Practices on infant feeding in the context of HIV among the reproductive age groups.
18. Determine nutrition adequacy of foods from kiosks /restaurants in Zambia

### **3.1.2 Communicable diseases**

#### **A. HIV and AIDS, STIs**

##### **A1. Social and Behaviour Change Communication (SBCC)**

1. Conduct stud(ies) to evaluate the impact of Comprehensive Sexuality Education on adolescent access to HIV/AIDS and sexual reproductive health services
2. Assess the KAPP of key and vulnerable populations on available HIV prevention and care services in order to make sure no one is left behind in the quest to eliminate HIV and AIDS
3. Conduct stud(ies) assessing the fidelity of implementing social and behaviour change communication programs aimed at HIV prevention and care.
4. Conduct an impact assessment on the integration of SBCC in targeted HIV programmatic areas (e.g., eMTCT, HTS, VMMC, etc.)
5. Assess the social and cultural determinants of the current sexual behaviors among adolescents
6. Assess the effectiveness of various SBCC methods to improve awareness and create demand for STI screening and treatment

## **A2. Comprehensive Condom programming**

1. Evaluate the current supply chain management system for condoms to identify gaps and improvement areas
2. Assess facilitators and barriers to expanding access to condoms among sexually active populations
3. Conduct stud(ies) to determine best ways for improving uptake of female condoms among sexually active populations
  - a. Acceptance of female condom use
  - b. Awareness of improved brands of female condoms
4. Assess the level of correct & consistent condom use among sexually active populations

## **A3. Voluntary Medical Male Circumcision**

1. Assess utilization of condoms among young circumcised sexually active men
2. Conduct a study to assess the cost-effectiveness of the comprehensive VMMC package of services
3. Assess the quality of services offered within the comprehensive VMMC package
4. Conduct a study to assess the sustainability of the comprehensive VMMC package of services
5. Assess the acceptability and incidence of severe adverse events of the different methods of VMMC
6. Conduct studies on the prevalence of common viral and/or bacterial infections in the context of VMMC

## **A4. Sexually Transmitted Infections**

1. Conduct stud(ies) to identify gaps in syndromic and/or etiological STI management, including early treatment behaviour, partner notification and referral, and screening
2. Conduct implementation research on the integration of STI services with the community-level HIV screening
3. Assess facilitators and barriers to positive health seeking behaviours among key populations and other vulnerable populations
4. Assess the levels of utilization of youth friendly services integrating STI screening and management, HTS, and condom promotion and distribution
5. Conduct stud(ies) to determine the availability and effectiveness of youth friendly services integrating STI screening and management, HTS, and condom promotion and distribution
6. Determine the prevalence of STIs and co-infection with HIV in Zambia
7. Conduct Studies Tracking Drug Resistance for Gonorrhoea

## **A5. HIV Testing Services**

1. Conduct a needs-based analysis to determine if fast track unique identifiers are required to address multiple HIV testing at facility, community and self-testing settings

2. Assess the level of HTS utilization among at-risk sub-populations at high risk of HIV infection.
3. Conduct studies to evaluate factors associated with low-utilization of provider initiated HTS in order to strengthen the program, especially among children and early adolescents, including nutrition rehabilitation and other clinical services;
4. Evaluate the current supply chain management system for HIV testing reagents and other laboratory consumables and supplies to identify gaps and improvement areas
5. Conduct stud(ies) to determine the effectiveness (yield) of various HIV testing strategies
6. Conduct stud(ies) to assess the prevalence of HIV false positive test results among ART initiated clients
7. Conduct studies to assess the prevalence of false negative test results among those on long term ART
9. Conduct a desk review of the HTS programme to inform policy

#### **A6. Elimination of Mother to Child Transmission**

1. Assess the impact of Option B+ on the MTCT of HIV
2. Evaluate the practice of follow-up of HIV-positive mothers and their babies in their first- and second-year post delivery.
3. Evaluate the effectiveness of using SMAGs, CHW and Community Midwives in improving first ANC attendance, HIV testing and monitoring of clients at community level
4. Evaluate point of care HIV diagnostic tools for children born to HIV-positive mothers in rural settings

#### **A7. Treatment (ART)**

1. Evaluate the current and other innovative strategies of monitoring treatment adherence
2. Evaluate the impact of collaborative HIV/TB interventions (3Is)
3. Assess the current linkages between ART programs and the food security sector
4. Assess the feasibility of providing ART patients with locally produced foods
5. Conduct intervention studies to improve retention on ART programs
6. Conduct studies on the side effects of ARVs being used in Zambia

#### **B. Tuberculosis**

1. Conduct studies to understand factors responsible for the delay in diagnosis of TB
2. Evaluate the impact of using GeneXpert on time to diagnosis, notification and treatment
3. Evaluate new TB diagnostic technologies (LAM, Digital X-ray, etc.) for their sensitivity, impact on diagnosis/notification
4. Evaluate new strategies for improving TB case notification
5. Conduct a follow up study on the TB drug resistance survey (DRS)
6. Determine factors contributing to the poor treatment success rate among susceptible TB and MDR-TB patients on treatment

7. Explore solutions to optimize the utilization of the three current culture laboratories
8. Assess cost, acceptability and cost effectiveness of ambulatory MDR-TB care versus hospital based care
9. Evaluate treatment outcomes among MDR-TB patients on shorter regimen and those on longer regimen
10. Assess the impact of making Xpert MTB/RIF as an initial test for all presumptive TB cases on the DR-TB case detection
11. Evaluate the effectiveness of the decentralized MDR TB case management
12. Design and evaluate interventions to curb high lost to follow up among mobile TB patients (e.g. cross border)
13. Evaluate the effectiveness of TB screening in prisons
14. Conduct studies on TB in work places (Mines, factories, etc.)
15. Determine the prevalence of TB among health care workers
16. Assess practices of TB infection control measures in health facilities
17. Assess acceptability of new TB technologies and strategies by patients and health care workers

### **C. Viral Hepatitis**

1. Conduct a KAP study on viral hepatitis
2. Evaluate current health sector interventions for viral hepatitis and recommend strategies to improve the response
3. Determine the magnitude of viral hepatitis in Zambia
4. Assess level of compliance in prevention of hepatitis B and C (including prevention of mother to child transmission) at national level
5. Conduct studies to evaluate the management and outcomes of chronic hepatitis B and C in Zambia

#### **3.1.3 Neglected Tropical Diseases**

1. Determine the magnitude of various types of NTDs (Schistosomiasis, filariasis, trypanosomiasis) in Zambia
2. Assess the knowledge of and attitudes towards NTDs by health workers and community in Zambia
3. Assess the perception of community member on MDAs and impact MDAs for NTDs control

#### **3.1.4 Malaria**

##### **A. Vector Control**

1. How effective and efficacious (residual) are the next generation IRS products compared to the current products in Zambia?
2. What level of IRS coverage will be effective for community protection?
3. What are the factors associated with coverage and use of ITNs?
4. What is the most cost-effective IRS strategy within the context of universal ITN coverage?
5. Comparison of different IRS strategies to maximize finite resources in Zambia.
6. What is the insecticide durability, integrity and retention rate of ITNs currently in use?



## **B. Case Management**

1. What is the prevalence of HRP2 deletion among the *P. Falciparum* parasites population in Zambia?
2. What is the impact of mHealth enhanced supportive supervision, supply chain management, referrals and reporting on appropriate integrated community case management of malaria, diarrhea and pneumonia – a cluster randomized trial.
3. What is the distribution of the different malaria parasite species across the 10 provinces in Zambia?
4. What are the current pre-referral practices to evaluate new malaria diagnostic tools?
5. What are the current pre-referral practices for malaria at community and health facilities?
6. How effective is the current referral system for malaria from community to health facility?
7. How effective is PBF in retention of community health workers?
8. What are the Clinical manifestations and predictors of severe malaria?
9. What is the efficacy and safety of current antimalarials used in Zambia
10. What are the molecular markers for resistance of currently used antimalarials in Zambia?
11. Compliance of prescriber regarding adherence to standard malaria treatment guidelines: cross sectional study?
12. What are the current practices regarding malaria case management, confirmation and history taking?
13. Assessment of G6PD deficiency and hemoglobinopathies in areas targeted for MDA, especially with primaquine

## **C. Malaria in Pregnancy**

1. What is the current burden of malaria in pregnancy in the current three epidemiological zones of malaria transmission in Zambia?
2. What impact is IPTp having on malaria in pregnancy in the current three epidemiological zones of malaria transmission in Zambia?
3. How adherent are the health care providers in ANC clinics in giving IPTp-SP as DOT?
4. Would screening and treatment at first antenatal attendance improve the efficacy of IPTp-SP?
5. What is the knowledge, attitudes and practices of health workers with regard to the ITN policy on pregnant women?
6. What is the current prevalence of congenital malaria in the current three epidemiological zones of malaria transmission in Zambia?
7. Could there be a role of cotrimoxazole for the prevention of malaria in pregnancy?
8. What is the knowledge, attitudes and practices in communities in relation to malaria in pregnancy?
9. Cultural barriers
10. Traditional medicines
11. Prohibitive barriers to early disclosure of pregnancy
12. What is the outcome of pregnancy in relation to the frequency of intake of IPTp-SP?

## **D. Program Management**

1. How suitable is the current project management structure for malaria elimination strategy?
2. What factors contributed to the low implementation, achievements and impact or aspirations of the last five year National Malaria Strategic Plan?
3. What modalities are necessary for coordinating malaria research in Zambia?
4. What is the optimal threshold in terms of cost to eliminating malaria in Zambia? How do we mobilize sustainable financial resources for elimination in Zambia?
5. What are the minimum human resource needs for malaria elimination in Zambia: competence, numbers, spatial distribution and motivation in achieving malaria elimination?
6. What are the factors that impede compliance to technical malaria guidelines by health workers?
7. Using the existing tool (like the ECSA tool), what is the level of use of evidence in decision making for malaria elimination?
8. What are the effective implementation strategies for using MDA across all malaria transmission zones in Zambia?
9. How do we institutionalize best practices in information management system, interoperability and end user verification?
10. What is the effectiveness and efficiency of malaria logistics management system, including end use verification in malaria elimination?
11. What are the determinants that maintain malaria in Zambia?
12. Is the policy environment and strategy frameworks supporting malaria elimination as a tool to economic development?
13. What are the options to eliminate malaria in children aged 5 to 18 years?
14. What is the degree of harmonization of private and public health sector, including traditional practices in malaria management to the elimination agenda?

## **E. Social and Behavior Changes Communication (SBCC)**

1. Assess the attitudes and behaviors of health providers in prescribing ACT in unconfirmed malaria cases?
2. Measure the extent of none adherence to treatment guidelines among health provider in relation to ACTs.
3. To assess the role of primary school going children on net use and care within their households.
4. Explore barriers and facilitators associated with IRS uptake in urban and rural areas.
5. Understand how community leaders can influence their communities to sustain gains in populations where malaria has significantly reduced.
6. Evaluate community engagement and behavior change on uptake of key malaria intervention.

## **F. Strategic Information and M&E**

1. How effective, feasible and scalable is the Community DHIS2 (mHealth enhanced iCCM) in capturing community based malaria data?
2. What are the factors leading to the discrepancies of RDTs stocks between the end user

and the supply site?

3. What are the factors leading to discrepancies between IRS data capture tools and data that is reported on the ground?
4. The need to explore best ways of analyzing and utilizing current data. How do we improve data analysis in decision making for elimination strategies?
5. How effective and feasible is scaling up the weekly reporting system?
6. What are the most effective feedback mechanisms to stakeholders and to the communities to facilitate data driven decision making?
8. What are trends in the efficacy of the currently available insecticides?

#### **G. Elimination and Epidemic Response**

1. What is the country's ability to respond to malaria epidemics in light of malaria elimination?
2. What is the country's ability to detect and respond to malaria epidemics in light of malaria elimination?
  - a. Setting of threshold for the different epidemiological zones. (For low transmission zones)
  - b. Requirements for real-time data visualization to prompt epidemic response?
3. What improvements are needed to the surveillance system in elimination mode?
  - a. How best do we document the elimination process?
4. What is the most cost effective combination of interventions that can lead to malaria elimination in different epidemiological settings?
  - a. Where and when is environmental management appropriate?
  - b. What set of interventions should be deployed in the malaria elimination agenda to target the vector at all stages and the parasite in the human host?
5. What is the effect of MDA in reducing malaria prevalence in all epidemiological zones and in cases of outbreaks?
6. What is the most effective drug based interventions for malaria elimination?
  - a. Deploying drug interventions according to epidemiological patterns
7. Does pre-service and continuous medical education address malaria elimination agenda?
8. What is the malaria disease burden according to different cohorts and what are the appropriate approaches address these?

#### **3.1.5 Non-Communicable Diseases**

##### **A. General Research Priorities on Non-Communicable Diseases**

1. Conduct studies to evaluate the determinants and magnitude of NCDs in Zambia
2. Conduct study(ies) to determine the morbidity and mortality attributed to NCDs in Zambia
3. Conduct stud(ies) to determine best strategies to integrate management of NCDs with other health conditions
4. Conduct a legal-environment assessment to analyze policies/legislation targeted at mental health, alcohol, tobacco use, and healthy diets.
5. Conduct a Knowledge, Attitudes, Perceptions, and Practices (KAPP) studies on mental health, alcohol, tobacco use, healthy diets and physical activity, and how they relate to common NCDs in Zambia
6. Conduct stud(ies) that aim to come up with strategies to strengthen interventions that address the prevention and control of NCDs
7. Conduct studies to identify new screening techniques and surveillance methods for NCDs in Zambia
8. Conduct a study to assess health facility capacity to manage NCDs (human capacity, equipment, space)
9. Conduct Studies on Masculo-Skeletal diseases

#### **B. Research Priorities on Cancer**

1. Conduct studies that aim to improve the prevention and management of common cancers in Zambia
2. Analyze the information at the National Cancer registry to establish cancer trends in Zambia from 2007 to 2017
3. Conduct studies on outcomes of cancer of cervix and other gynaecologic malignancies of patients who are HIV positive on ART versus HIV negative treated with chemoradiation with correlation to genomics, proteomics and metabolomics in order to identify good and bad prognostic factors and possible targets to treatment to improve outcomes
4. Evaluate HIV associated Kaposi Sarcoma staging and treatment outcomes
5. Conduct studies on characterization of breast cancer in Zambia
6. Conduct a retrospective analysis of characteristics and outcomes of patients treated for cervical, breast, head & neck, prostate and colorectal cancers at the Cancer Diseases Hospital (CDH) from 2007 to 2017.
7. Evaluate conjunctival squamous cell carcinoma management and outcomes: Is it an AIDS defining malignancy?
8. Evaluate feasibility of HPV DNA testing by use of the GeneXpert machines in Zambia to enhance prevention of cervical cancer
9. Conduct a longitudinal follow up study of children immunized with HPV vaccine to determine impact of the immunization program
10. Conduct a study to determine the prevalence of HPV oncogenic viruses among

men undergoing Voluntary Medical Male Circumcision by doing HPV DNA testing on foreskins from the clients

11. Conduct studies to demonstrate genomics, proteomics and metabolomics in pre cervical cancer and invasive cervical cancer to identify the high risk factors associated with rapid progression from pre-cancer to invasive cancer
12. Evaluate PSA screening versus PSA early diagnostic method for prostate cancer in Zambian men: A longitudinal follow-up study
13. Conduct a study on the prevalence of retinoblastoma in Zambia

#### **C. Research Priorities on Mental Health**

1. Assess factors associated with mental health patients roaming the streets and what needs to be done to rehabilitate them
2. Conduct studies to improve management of common mental health conditions (Focus on Schizophrenia and Depression)
3. Conduct a policy and legal environment assessment of mental health in Zambia in order to improve the policy and legal environment for the care and treatment of mental health patients in Zambia

#### **D. Research Priorities on Cardiovascular Disorders**

1. Conduct studies aimed at improving the management (diagnosis, treatment, and monitoring) of hypertension, especially at the community level
2. Conduct studies aimed at improving the management (diagnosis, treatment, and monitoring) of heart diseases, especially at the primary healthcare level

#### **E. Research Priorities on Diseases of the Endocrine (Focus on Diabetes)**

1. Conduct studies aimed at improving the management (diagnosis, treatment, and monitoring) of Diabetes, especially at the primary healthcare level
2. Conduct studies on prevalence of endocrine disorders

#### **F. Research Priorities on Road Safety**

1. Conduct rigorous studies to evaluate the effectiveness of current road safety measures
2. Conduct studies aimed at finding the most effective road safety interventions in Zambia

#### **G. Surgical Conditions**

1. Conduct studies on strategies to improve access to quality surgery in rural areas
2. Conduct studies that aim to improve specific surgical techniques to improve patient outcomes

#### **3.1.6 Disease outbreaks and epidemic control**

1. Conduct a national outbreak risk mapping study
2. Conduct a review of the national outbreak responses over a five year period

3. Conduct molecular analysis of isolates from cases during outbreaks over a period of five years
4. Innovative research, aimed at providing evidence for preventing and responding to epidemics.

### **Biomedical Science**

1. Conduct studies that aim to improve quality of diagnostic services in Zambia
2. Conduct studies that evaluate Point of Care diagnostics in Zambia
3. Conduct studies on the introduction, utilization, acceptability, and scale-up of PreExposure Prophylaxis as a biomedical HIV prevention method

### **3.1.7 Health Promotion, Social Determinants, Environmental Health, Primary Health Care, and Community Health**

1. Assess the level of multi-sectoral collaboration amongst various stakeholders in line with the decentralization policy to address Social Determinants of Health and within the Health in All Policies framework at the community level
2. Assess the skills of Community Based Volunteers (CBVs) in the management of minor illnesses and the challenges they are facing
3. Conduct a study assessing the cost effectiveness of incentive schemes for CBV
4. Conduct studies to examine existing models looking at integrating health promotion, disease prevention, control, and surveillance in the African region
5. Assess the capacity of districts, hospitals, and health centers to deliver health services at the community level
6. Assess the effectiveness, viability, scalability of currently available community financing schemes
7. Assess the status of community based HMIS data management
8. Assess the capacities of the communities' ability to respond to health emergencies, public health effects, and consequences of disasters and climate change impacts
9. Conduct studies to come up with innovative health systems and service delivery models at the community level
10. Research on impact of energy foods on the health of the Zambian population.
11. Assess the implementation effectiveness of the health in all policy (HIAP)
12. Conduct studies aimed at strengthening community action and personal skills development for health promotion
13. Assess the status of the school health and nutrition programme and identify interventions for improvement
14. Conduct studies specifically targeted at finding solutions to address social determinants of health most negatively affecting the Zambian population
15. Assess the coverage of access to safe water and sanitation in the peri-urban areas of Zambia.
16. Conduct a study to quantify consumer's willingness to pay for water purification tablets (Aquatabs)

17. Conduct studies that evaluate health impacts of climate change and seek to find solutions to health impacts of climate change

## **3.2 Health System Research Priorities**

### **3.2.1 Human Resources for Health**

1. Assess the effectiveness of the current referral system in Zambia
2. Conduct a study to inform the development and implementation of appropriate mechanisms for more equitable distribution of health workers, including improved targeting, placement, and regulation of staff posting
3. Assess the effectiveness of the human resource appraisal system
4. Conduct stud(ies) to identify innovative ways to improve efficiency and effectiveness in utilization of existing staff
5. Assess the capacity and uptake of trained health personnel in public and private institutions
6. Assess adherence to set standards for training institutions
7. Conduct a review of the Community Health Assistants (CHA) programme and how to best optimize the role of the CHAs at the community level

### **3.2.2 Essential drugs and medical supplies**

1. Conduct studies aimed at improving the whole supply chain system from procurement to the last mile
2. Studies aimed at improving the quality of drugs and medical supplies in the public and private sectors
3. Conduct a stud(ies) to determine factors associated with challenges experienced in the nutrition supply chain management
4. Conduct cohort studies to actively monitor and report adverse drug reactions experienced with the use of ART and TB treatment.
5. Conduct a study to determine acceptability and willingness to pay for injectable contraceptives - Sayana Press (DMPA SC)
6. Conduct studies to determine the level of misuse of topical corticosteroids.
7. Conduct studies to determine the misuse of codeine containing cough preparations
8. Conduct a survey to establish researchers' adherence/compliance with clinical trial regulations and guidelines (national and international)
9. Regulatory impact assessment of clinical trial regulations/guidelines on research in Zambia

### **3.2.3 Infrastructure and equipment**

1. Conduct an assessment on the health institutions infrastructures and equipment in relation to the epidemiological information generated at each facility.

### **3.2.4 Health information**

1. Implementation research studies on Community Health Information System
2. Conduct studies to improve data utilization for decision-making at all levels of the healthcare system

### **3.1.5 Health care financing**

1. Assess the awareness, perception and accessibility of private health insurance schemes by the public
2. Conduct studies that aim to find best options for resource allocation in the health sector to promote equity
3. Assess the impact of the Public Health Insurance Scheme in Zambia once implemented

### **3.2.6 Leadership and governance**

1. Conduct studies that evaluate strategies to strengthen and implement transparent and accountable governance systems at all levels of health service delivery
2. Assess the level of collaboration between the private and public health institutions in improving access to and the management of various health conditions across the country
3. Evaluate the impact of healthcare decentralization on key health sector indicators

### **3.2.7 Service Delivery**

1. Conduct a study to assess the quality of care at all levels of the healthcare system (community, health post, health centre, level 1, level 2, level 3 hospitals) to determine bottlenecks and recommend what needs to be done to improve health outcomes

## **2.3 Novel/Innovative/Discovery Research**

1. Conduct vaccine trials aimed at testing candidate vaccines in HIV
2. Conduct vaccine trials aimed at testing candidate vaccines in TB
3. Conduct vaccine trials aimed at testing candidate vaccines in Malaria
4. Conduct efficacy and safety trials in traditional medicine
5. Conduct efficacy trials in the management of various non-communicable diseases

## **3.4 Traditional, Complementary, and Alternative Medicine**

1. Conduct studies to evaluate the safety and efficacy of various traditional, complementary, and alternative remedies.
2. Conduct studies to evaluate the effectiveness and cost-effectiveness of various traditional, complementary, and alternative remedies.
3. Evaluate the impact of the mass deforestation and bush clearing on the medicinal plants bio-diversity.
4. Evaluate the level of collaboration between conventional and traditional practitioners.
  - a. Conduct feasibility studies that will inform policy on formalization of referral mechanisms encompassing healer-to-healer, healer-to-hospital/clinic and clinic/hospital-to-healer system.
5. Conduct studies on the characterization of medicinal plants.



## Chapter 4: Research Priorities Implementation Framework

### 4.1 Coordination mechanism

The implementation of the national health research agenda will be implemented through the coordination of the NHRA. To make this work more effectively, all researchers will be required to notify NHRA the topic of their intended research at the design stage as soon as the study's funding is confirmed (irrespective of the funding agency) and a protocol is ready for submission to research ethics committees.

### 4.2 Stakeholders

For purposes of this research agenda, we divide stakeholders into: Permanent Secretaries of key government line ministries representing policy makers; Health Research Funding agencies/Cooperating Partners, including private sector; Provincial health directors, district health directors, heads of research institutions, both public and private; heads of academic institutions; researchers; university students in health related fields; all health workers; research ethics committees and institutional review boards.

In line with the 'health in all policy' the research authority will endeavor to encourage collaboration and synergies of research activities among all line ministries. However, the key stakeholder ministries will be: Ministry of Higher Education, General Education, Agriculture, Livestock and Fisheries.

### 4.3 Financing arrangements

Financing is critical to the implementation of this research agenda and different financing mechanisms will be pursued as described below:

#### a) Government Financing

The government of Zambia through the Ministry of Health will commit financial resources to directly fund research activities at district and health facility levels.

#### b) National Health Research Fund Grants

The National Health Research Authority has set up a Research Fund to support priority research activities based on scientific merit.

#### c) Public Private Partnerships

As part of its research promotion activities, the NHRA will mobilize private sector support to fund priority research activities in addition to the basket funding through the research fund. In its Strategic Plan for 2018-2022, the NHRA has planned to hold at least one private sector resource mobilization engagement activity annually. Researchers and research institutions will also be encouraged to target private sector funding in Zambia.

#### **4.4 Global Research Granting Schemes**

This continues to be the commonest mechanism for funding research where researchers respond to requests for applications (RFAs) from various research funding organizations. The NHRA will facilitate this further by providing a data base of all the research funding organizations. NHRA will also conduct capacity building training courses in grant applications and project grant management.

#### **4.5 Research dissemination and Knowledge translation**

To facilitate the dissemination of research outputs from the research agenda, the NHRA will undertake the following activities:

- w Host National Health Research Conferences Annually
- w Operate a Scientific Journal
- w Create and operate a forum for ongoing research dissemination: The NHRA will facilitate monthly scientific meetings for researchers to share their research results.
- w Facilitate production of Policy Briefs. NHRA will also compile and analyze evidence on priority policy issues and develop policy briefs
- Train and mentor researchers in knowledge translation

## Chapter 5: Research Priorities Monitoring and Evaluation Framework

The monitoring and evaluation framework will be part of the National Health Research Authority Monitoring and Evaluation Plan.

Table 2 below is a summary of the key performance indicators based on the specific objectives of the Research Agenda:

Objectives	Indicators	MOV	Baseline			
			2018	2019	2020	2021
Align health research outputs with the national health research priorities	% of research studies that are in line with the Health Research Agenda	NHRA database through routine M&E	TBD	50%	60%	75%
Guide researchers, policy makers, program implementers, academic institutions, health development partners and other stakeholders on health research priorities	% of research institutions with a copy of the national health research agenda	Routine M&E and Inspections of Research Institutions	TBD	60%	75%	85%
	% of research institutions with at least one researcher who has attended an orientation meeting to the national health research agenda	Routine M&E and Inspections of Research Institutions	TBD	25%	35%	50%
	% of registered health researchers who have a copy of the national health research agenda (electronically or in print)	NHRA Data base through an online survey	TBD	50%	75%	85%
Provide a guide for national health research activities to address national health research gaps and needs	% of research activities implemented under each priority thematic area	NHRA Data base	TBD	15%	25%	35%
	% of qualifying research applications funded through the research fund	NHRA Financial records	0	1%	5%	7.50%
Provide a guide on research areas to be funded through the National Health Research Fund	% of registered health researchers who know the existence of the Research Fund and how to access the funds	Online survey	0	50%	75%	85%

The NHRA will develop monitoring and evaluation tools to measure the indicators in the M&E Framework above. Some of the tools will include:

**1.0 Checklist for request to conduct research**

The checklist for submissions to NHRA requesting to conduct research will have an element of whether the study addresses any of the national health research priority areas as well as the necessary ethical approvals

**2.0 Record of applications to the research fund**

**3.0 Record of published studies that address national health research priorities**

An evaluation will be undertaken to establish among other things adherence to the research agenda and the utility of the research agenda. The evaluation will be conducted in 2022 after which a new research agenda will be developed.

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## **NATIONAL HEALTH RESEARCH AUTHORITY**

Paediatric Centre of Excellence  
University Teaching Hospital  
P.O. Box 30075  
LUSAKA

Telephone: +260 211 250309 | Mobile: +260 95 5632726  
Email: [znhrasec@gmail.com](mailto:znhrasec@gmail.com) | Website: [www.nhra.org.zm](http://www.nhra.org.zm)