Nexus between science and evidence-based decision making: Towards strengthening the Nigerian health system

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My presentation will cover:

- Conceptualizing evidence-based decision making
- Conversations on evidence-based decision making
- Previous evidence-based decision making initiatives in Nigeria's health system
- Building evidence-based decision making into science
- Nexus of science and evidence-based decision making in health
  - **Knowledge brokering**
  - **Outcome mapping (OM)**
  - **Multidisciplinary approach**
  - **Getting research into policy and practice (GRIPP) approach**
- Generating scientific evidence for strengthening the Nigerian health system
- On-going efforts relating to the nexus between science and EBDM
- Communication tools for strengthening the nexus between science and EBDM

Conversations on Evidence-based decision making (EBDM)

Conversations on NAS WhatsApp group

"I know that there are some disconnect between research findings and practice, but how has the research of our professors helped us to solve our problems"

"..health system DEFORMED by REFORMS poorly implemented, half implemented, incompletely implemented, always with self interest overriding NATIONAL interest"

"What is the incentive structure for getting research into policy and practice" for evidence-based decision making?

"Blending the Humanities and Science.. Raised an important issue of blending in Nigeria's higher education" "The title strikes at the root of the existence of the Academy of Science"

"Our Academies cannot engage our national leadership in meaningful direct conversation to use the national resources of intellect"

Initial notes:

- How to communicate research findings to policymakers and integrate research findings into the policy making process is a key challenge world-wide.

- Creating a nexus between Science and Decision-making is critical for strengthening the Nigerian health system to achieve national and global targets.

  - It requires the conscientious efforts of scientists, knowledge brokers and decision makers

- Decisions that are not based on scientific evidence result in wastage (of time, money, manpower) and will invariably cause more harm than good

- ‘Any’ scientific evidence is better than no scientific evidence

Is scientific evidence used for health policy making in Nigeria?

Onwujekwe O et al (2015). Role and use of evidence in policymaking: an analysis of case studies from the health sector in Nigeria. Health Res Policy Syst. 2015

- **Three case studies: (1) integrated maternal neonatal and child health strategy (IMNCH); (2) oral health policy; and (3) human resource for health policy.**
- **Data collected using document reviews and in-depth interviews with key policy actors.**
- **Found that evidence was used more if it was perceived to be context-specific, accessible and timely.**
- **Formal evidence, such as survey reports and research publications, were most useful in the agenda-setting stage to identify the need for the policy and thus initiating the policy development process.**
- **International and local evidence were used to establish the need for a policy and develop policy, and less to develop policy implementation options.**
- **Recognition of the value of different types of evidence, combined with structures for generating and using evidence, are likely to enhance evidence-informed health policy development in Nigeria and other similar contexts.**

A HEALTH SYSTEM is:

The sum total of all the organisations, institutions and resources whose primary function is to improve health

- ✓It includes all levels from policy making to service delivery

Current opportunities for creating the nexus between science and evidence-based decision making in the Nigerian Health System

1. Getting the recommendations of the Lancet Nigeria Health Commission (2022) into policy and practice (Abubakar et al, 2022).

Some are:

- **Increase fiscal space: for health through more efficient tax collection and innovative health financing**
- **Strategic health purchasing: Improve efficiency of systems for pooling and purchasing using national and state purchasing organisations with oversight for allocation of funds, and payers at each level**
- **Government should anticipate donor transition and domesticate financing of health, research, and development, to achieve health independence and decolonise the Nigerian health space.**
- **A National Medical Research Council with 2% of the health budget and central government funding can award competitive peer reviewed grants to support high quality evidence and innovation.**

2. Implementing policy directions on EBDM in the new National Health Research Policy and Priorities

1. The FMOH and NHRC should create a framework for improving utilization of research findings for evidence-based policy and decision making

2. Researchers to as much as possible involve policy makers from onset of research in research work

3. The FMOH and NHREC to ensure that research findings and products are put into use.

4. The DPRS in FMOH to put in place facilitating mechanisms for the utilization of research findings.

5. All research projects should have inbuilt feedback mechanisms for sharing their findings with policy makers and the respondents that provided the data that was used in the study

6. The NHRC should develop ways and means to improve the communication skills of researchers for policy making using easy to understand policy briefs, stakeholders' feedback workshops, publications and conference presentations were advocated.

7. Translational research should be encouraged and prioritised for funding

8. The FMOH should establish a national publications database, where publication outputs are submitted and easily used for evidence-informed decision making

9. The FMOH should establish a health observatory platform to be coordinated by both government and non-governmental research body, to store all research activities

Conceptualizing evidence-based decision making (EBDM)

What is it, and how is it undertaken?

What is Evidence-based decision making?

- Evidence-based decision making (EBDM) is a process for **making the best decisions possible using the evidence available**.
- It avoids decision making that is based on **gut feeling, intuition, or instinct** and instead relies on data and facts.
- EBDM is based on relevant facts and not feelings and not faith! if you want the best possible outcomes.
- Data for decision making can be obtained from four types of sources,
  1. Empirical studies from academic journals
  2. Internal company data
  3. Professional expertise from practitioners
  4. Values and concerns of stakeholders
- These varied types of evidence—academic, internal, and experiential—must be evaluated for quality if they are to be used as the basis for making decisions. **In other words, the evidence considered should be the best available.**

Reference: www.thebalancecareers.com/evidence-based-decision-making-for-hr-4799980

Science - as an input to EBDM

- Any system of knowledge that is concerned with the physical world and its phenomena and that entails unbiased observations and systematic experimentation.
- Science involves a pursuit of knowledge covering general truths or the operations of fundamental laws.
- It can be divided into different branches based on the subject of study.
  - The physical sciences study the inorganic world and comprise the fields of astronomy, physics, chemistry, and the Earth sciences.
  - The biological sciences such as biology and medicine study the organic world of life and its processes.
  - Social sciences like anthropology and economics study the social and cultural aspects of human behaviour.

Sources: https://www.britannica.com/science/science; science | Definition, Disciplines, & Facts | Britannica

Context of science informing decision making

- **Evidence-based decision making vs faith-based vs politics-based decision making**
- **Health policymaking is a complex process and analysing the role of evidence is still an evolving area in many low- and middle-income countries (Onwujekwe et al, 2015)**
- **Getting "timely", "relevant", and "ethically/scientifically compliant" research evidence into policy and practice (GRIPP) is a tasking exercise but must be done if the goal is to improve our policy and practice ecosystem (Uzochukwu et al, 2016).**
- **Finding and using appropriate mechanisms for transferring research into policy and practice has become a major policy driver in the UK and around the world (Word, House and Hamer, 2019).**
- **Research-to-decision-making partnerships help ensure policymakers have access to the information they need in a format that is most accessible to them (R4D, 2022).**

How Evidence-Based Decision Making Works

- **Evidence based on Science,** Generated using rigorous research methods

- During an EBDM process, there are three stages of action:

    1. Gathering evidence
    2. Interpreting evidence
    3. Applying what you have learned - **Implementing evidence-based decision making model can help to overcome the knowledge-research gap and make decisions that drive systems forward.**

Reference: www.thebalancecareers.com/evidence-based-decision-making-for-hr-4799980

Challenges to Evidence-Based Decision Making

- EBDM is constantly confronted by two opposing norms:
  1. **Faith-based decision making**
  2. **Politics-based decision making**

- Relevant literature highlights the following as the most commonly cited barriers to evidence use(R4D, 2022; Oliver, et al., 2014)
  - ➢Unavailability of timely and relevant research
  - ➢The absence of a connection between researchers and decision makers
  - ➢Absence of a connection between researchers and decision makers

Factors influencing ease of translation of modeled evidence for decision-making: Individual

Facilitator	Barrier
Decision-maker has **capacity to interpret and apply** modeled evidence	Decision-maker lacks **capacity to interpret and apply** modeled evidence
Decision maker **highly prioritizes modeled evidence** in decision-making	Decision-maker **has competing interests** besides modeled evidence that factors into their decisions
Modeler has **capacity to effectively communicate** modeled evidence	Modeler lacks **capacity to effectively communicate** modeled evidence
Modeler has **strong relationships with decision-makers** and is well-connected to the decision-making process	The modeler **does not have strong relationships with decision-makers** and is not connected to the decision-making process

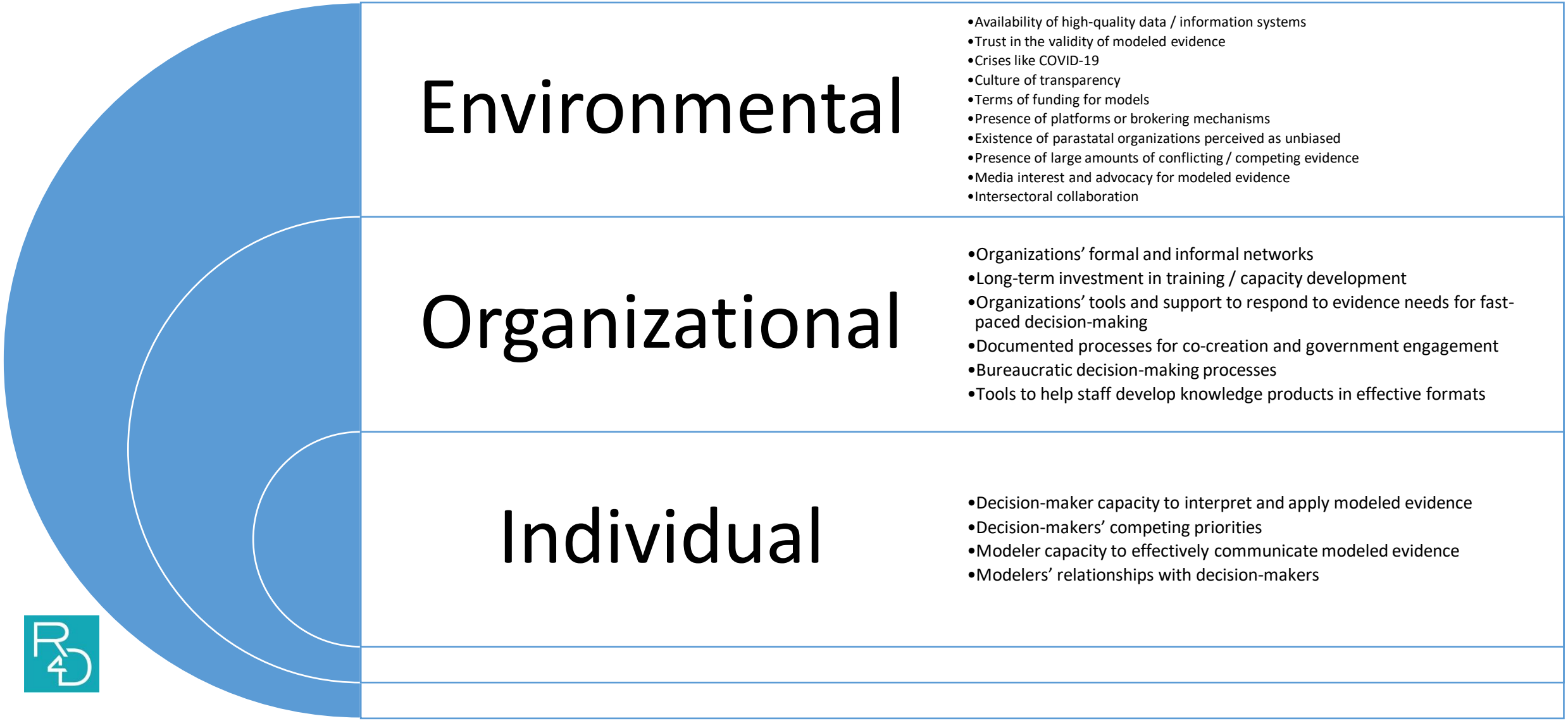
Factors influencing ease of translation of modeled evidence for decision-making: Organizational

Facilitator	Barrier
Organizations has **formal and informal networks** with decision-makers and other relevant actors (media, partners, private sector, etc.) that their modelers can leverage for communication	Organizations **lack formal or informal networks** with decision-makers and other relevant actors
Organizations have tools and resources available to **help staff develop knowledge products** in effective formats (e.g., data visualizations, dashboards, policy briefs)	Organizations lack tools and resources to **help staff develop knowledge products** in effective formats
Organizations and decision-making agencies invest in **long-term training / capacity development** for the creation, communication, interpretation, and application of models	Organizations and decision-makers approach **training/capacity development** for the creation, communication, interpretation, and application of models on an ad-hoc basis or not at all
Organizations have tools and resources available to allow for timely responses for **fast-paced decision-making**	Organizations lack tools and resources to produce models quickly enough to be relevant for **fast-paced decision-making**.
Organizations have documented processes for **co-creating models/engaging the government** from the beginning	Organizations lack processes for **co-creating models and engaging the government** from the beginning
Decision-making agencies have **decision-making processes that allow for the consideration of all available evidence** in decision-making	**Bureaucratic processes** do not allow for the engagement of modelers in decision-making

Factors influencing ease of translation of modeled evidence for decision-making: Environmental

Facilitators	Barriers
Availability of **high-quality data / information systems**	**Data** is difficult to access or of poor quality
Trust in the validity of modeled evidence due to perceptions of quality, objectivity, clear assumptions, and contextual relevancy	Lack of **trust** in the validity of modeled evidence due to perceptions of quality, biases, assumptions, or contextual relevancy
Presence of new **crises like COVID-19** calling for evidence of the effectiveness of different health strategies about which not much is yet known	**Lack of an impetus** for decision-makers to explore the opportunities provided by modeled evidence
Culture of **transparency** around model development, assumptions, and findings	Lack of **transparency** around model development, assumptions, and findings
Terms of funding for models that allow for / require co-creation with the government	**Terms of funding** for models prescribe the model development process and do not allow for /require co-creation with the government
Presence of **platforms or brokering mechanisms** to allow for the exchange of knowledge and transparent review and debate of modeled evidence	Lack of **platforms or brokering mechanisms** to allow for the exchange of knowledge and transparent review and debate of modeled evidence
Existence of **parastatal organizations** (like Health Technology Assessment agencies) perceived as unbiased to review and make decisions based on modeled evidence	**Lack of organizations perceived as unbiased** to review and make decision based on modeled evidence
Platforms are available to help **organize and clarify conflicting / competing evidence** for decision-makers	Presence of large amounts of **conflicting / competing evidence**
Media interest and advocacy for modeled evidence	The **media** does not highlight modeled evidence
Intersectoral collaboration allows for the development of complex models	The **siloing of research structures and disciplines** (mathematics, medicine, statistics, economics) prevents the development of complex models

Factors influencing ease of translation of modeled evidence for decision-making



Three major issues in EBDM:

Links between evidence and policy making

Links between evidence and beneficiaries

Links between evidence-driven policies and implementation

Where do we get evidence? Four types of sources have been identified by The Center for Evidence-Based Decision Making:

1. Empirical studies published in academic journals
2. Internal company data
3. Professional expertise from practitioners
4. Values and concerns of policy, frontline, and community stakeholders

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More can include:

- Meta-analysis of scientific literature
- Modeling, etc.

Previous EBDM initiatives

The Nigerian Academy of Science (NAS)

Some previous EBDM initiative by NAS

1. Forum on Evidence Based Health Policymaking in Nigeria

- **Nigerian Academy of Science Forum on Evidence Based Health**. 2006 to 2011. Chaired by Prof Adetokunbo Lucas. (NCNC!).

2. The **Policy Research Evidence for effective working of the Nigerian Health systems (**PREVIEW) project: a collaboration between the Nigerian Academy of Science and the Lagos State Ministry of Health directed at stimulating the culture of policy pronouncement which are based on evidences from research.

- Many other knowledge brokering activities on COVID-19 and UHC

List of Forum members: A blended team!

Prof Adetokunbo Lucas, (*Chair).*
Dr Reuben Abati, Chairman, Editorial Board, *The Guardian Newspapers*
Dr Sam Adenekan, Corporate Affairs Manager, *Nestlé Nigeria Plc.*
Prof Martin Aghaji, Professor of Cardiothoracic Surgery, *University of Nigeria*
Dr Vincent Ahonkai, Vice President, US Regulatory Affairs, *GlaxoSmithKline, US*
Prof J.P. Ambe, Professor of Paediatrics, *University of Maiduguri, Maiduguri.*
Dr. Abimbola Asagba, Former Director of Public Health, *Federal Ministry of Health.*
Dr Lola Dare, Executive Director, *Centre for Health Sciences Training, Research, and Development, Ibadan, Nigeria.*
Prof GJF Esan, Director, *Institute of Genetic Chemistry and Laboratory Medicine, Ibadan, Nigeris*
Prof AO Esogbue, *Georgia Institute of Technology, USA*
Prof EM Essien, *University of Uyo, Uyo, Nigeria*
Prof James Hughes, Director, Prog. In Infectious Diseases, *Emory University, Atlanta, GA, USA.*
Dr Oni Idigbe, Director General, *Nigerian Institute of Medical Research, Yaba, Lagos.*
Dr S.F. Kuku, Co-chairman, *Eko Hospital, Lagos, Nigeria.*
Prof Daniel Lantum, Professor of Medicine, *University of Yaoundé, Cameroon.*
Dr Celestino Obua, *Senior Lecturer, Faculty of Medicine, Makerere University, Kampala, Uganda*
Prof Akin Osibogun, Chief Medical Director, *Lagos University Teaching Hospital*
Dr Temitayo Odusote, Epidemiologist, *USAID, Abuja, Nigeria.*
Ms Funmi Esan-Olayiwola, Program Officer, (Health), *Department for International Development, UK.*
Mr Kunle Olumide, Consultant, *American Business Council, Lagos.*
Dr Obinna Onwujekwe, Department of Health Administration & Management, *University of Nigeria, Enugu.*
Dr Leke Pitan, Former Commissioner of Health, *Lagos State Government*
Dr Femi Pitan, Community Health Physician, *Chevron Nigeria Plc.*

2. The NAS PREVIEW Project

- The **Policy Research Evidence for effective working of the Nigerian Health systems (**PREVIEW) project: a collaboration between the Nigerian Academy of Science and the Lagos State Ministry of Health directed at stimulating the culture of policy pronouncement which are based on evidences from research.
- It was a two year programme of activities where by a set of participants each year took part in one training session and two policy retreats.
- The first year had activities spread between March 2011 and March 2012 (with a training to March 2011, retreat in June 2011 and March 2012).
- Year two commenced with a training session in May 2012 while the retreats were held in July and September 2012.

Conversations on EBDM from elsewhere

Conversation on EBDM from the US National Institutes of Health (NIH)

From the outgoing Director of the NIH - not addressing vaccine hesitancy is one of his chief regrets as the former NIH director, and that he wishes the agency **incorporated more insights from behavioural social-science research into confronting the problem**

"If we don't do more research in that area [vaccine hesitancy], when the next pandemic comes along, we still won't have a good understanding of how to address vaccine misinformation" - William Riley (social psychologist) – Fmr. director of NIH Office of Behavioral and Social Sciences Research (until December, 2021)

"NIH can channel the same sense of urgency and coordination that it brought to the COVID-19 pandemic to pressing health issues, that it should take more action to bolster the diversity of the biomedical workforce and that it should invest significantly more money into social and behavioural science and health-disparities research".

Four lessons from the pandemic to reboot the NIH (nature.com)

1. **Embrace fast innovation** and reduce bureaucracy

2. **Tackle funding inequities** based on a researcher's institution, career stage, race or research area

3. **Build bridges** with social and behavioural science to grapple with issues such as vaccine hesitancy

4. **Look outside** the agency for insights to break out of the "insular ivory tower"

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“Blending the Humanities and Science.. Raised an important issue of blending in Nigeria’s higher education” “The title strikes at the root of the existence of the Academy of Science”

Building Evidence-Based Decision Making into Science

Multidisciplinary approach – ‘blended models’

Integrated economic-epidemiological models (Aragrande and Canali, 2020)

- A new group of models called “integrated economic-epidemiological models” reflect the close interdependence of public health outcomes and the economy and the concern of policy makers to balance lives and livelihoods.
- These integrated models promise to help overcome the key challenge of fragmented and siloed research on the pandemic and better inform policy decisions.
- The drive for integration comes from both sides: Economists have rapidly escalated their attempts to incorporate epidemiological models in their analyses.
- While the basic mathematical principles of dynamic transmission models are deceptively simple, it is an enormous endeavour to obtain realistic estimates from these models.
- Likewise, epidemiological models often ignore broader economic considerations or incorporate them in a simplistic manner as an add-on or disjointed calculation. **The multidisciplinary approach, and blending of models and disciplines ensure that strong links are built between science and decision-making**

Don’t ignore politics and socio-economic contexts in forming the nexus between science and evidence-based decision making

- **Understanding political-economy is quite important**
- There is a relationship between evidence and politics in a democratic system
- Most of decision-making in health is politics
- Over the last 20 years, there has been increasing reference to evidence within policy circles both nationally and locally.
- A series of national decisions in the UK show the long-standing cultural differences between researchers and policy-makers and the primacy of political priorities.
- By politics we must consider vertical (with top government authorities) and horizontal (with the grassroots) politics
- As an influencer of decision making, the scientists should always seek ways to meet or interface with the decision maker and sustain relationships to get the job done. He or she needs the expertise knowledge brokers.

Hasan Salih Suliman Al-Qudah. European Journal of Business and Management. DOI: 10.7176/EJBM 11(11), 2019. **The Effect of Evidence-Based Management Practices on Improving Job Performance: A Structural Equation Modeling**

Connecting science with Evidence-based decision making (EBDM) – Research to Action

The Rise and Roles of Knowledge brokering (KB) and Outcome mapping (OM)

Knowledge Brokering: The missing link in the evidence to action chain?

- Knowledge Brokering: The missing link in the evidence to action chain?

- Transferring health care research into policy and practice is a messy and complex process which both policymakers and researchers can struggle with. A potential solution is to use individuals or organisations as knowledge brokers.

Ward, House and Hamer (2009)

Knowledge brokerage

- Intermediaries or brokers: Positioned at the interface between the worlds of researchers and decision makers, they are seen as the human force behind knowledge transfer, finding, assessing and interpreting evidence, facilitating interaction and identifying emerging research questions (CHSRF 2003).

- NAS and other Academies as major knowledge brokers in Nigeria

NAS as a knowledge broker

- NAS and other Academies are major knowledge brokers

- NAS should be the leading knowledge broker in Science in Nigeria because it has the capacity to,

1. Build relationships and networks with, among, and between producers and users of knowledge
2. Provide linkages, knowledge sources, and knowledge itself (including technical expertise, market insights, research evidence) to organizations in its network
3. Strengthen the ability (skills) of decision makers to interpret and use research evidence

Three models of brokering Ward, House and Hamer (2019)

- **Knowledge management: T**he best understood and most used aspect of knowledge brokering and has been developed in response to the difficulties associated with navigating, managing and sharing a large body of research and other evidence
- **Linkage and exchange: It** focuses on the development of positive relationships between researchers and decision makers.
  - **Based on the understanding that involving decision makers in the research process is the best predictor for seeing it used**
  - **One-to-one encounters are the most efficient mechanisms for transferring research**
  - **Relational strategies such as networks, partnerships and collaboratives can enhance successful knowledge exchange.**
  - **Knowledge brokers act as intermediaries or linkage agents, using interpersonal contacts to stimulate knowledge exchange, the development of new research and the application of solutions.**
- **Capacity building: It** seeks to address shortcomings in the ability of decision makers to interpret and use research evidence.

Challenges with knowledge brokering

- The first challenge is the time and resources required for effective brokering.
- The second challenge is the lack of distinction between brokering roles.
- The third challenge is the range of skills which are required to fulfil the different roles of a knowledge broker
- The final and probably the biggest challenge to knowledge brokering is the lack of knowledge about how it works, what contextual factors influence it and its effectiveness (Conklin, Hallsworth et al. 2008).

NAS as a boundary partner or knowledge broker

- A **knowledge** broker is an intermediary (an organization or a person), that aims to develop relationships and networks with, among, and between producers and users of knowledge by providing linkages, knowledge sources, and in some cases knowledge itself, (e.g. technical know-how, market insights, research evidence) to organizations in its network .

en.wikipedia.org/wiki/Knowledge_broker

Outcome Mapping

- **Outcome mapping (OM)** is a methodology that is applied to projects (or programme) relating to research communication, policy influence and research uptake.

https://www.researchtoaction.org/author/researchtoaction/

- OM could be used to help plan and monitor a communications strategy for a research programme, or be attached to a policy influence plan https://odi.org/en/publications/roma-a-guide-to-policy-engagement-and-influence/

- Initially, it can seem like a complicated process, made up of numerous different elements, but once you have got to grips with it, it can be a really valuable way of **planning, monitoring and evaluating** a project, while also engaging stakeholders.

https://www.researchtoaction.org/author/researchtoaction/

Outcome mapping (OM)

- OM helps us learn about the influence or progression of change among direct partners as part of a project or program (boundary partners), and therefore helps people to think systematically and practically about what they are doing and to adaptively manage variations in strategies to bring about desired outcomes.

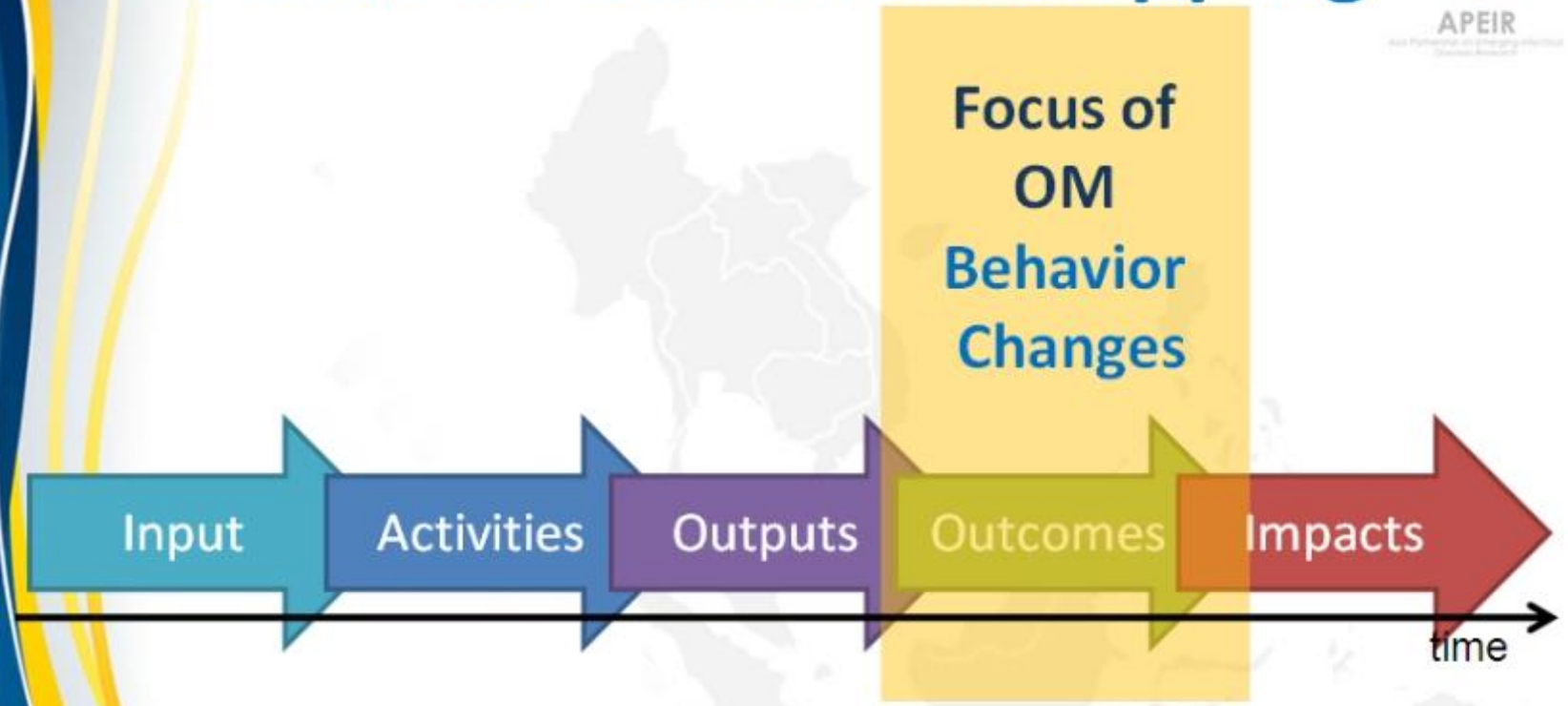
- OM provides a set of tools to design and gather information on the outcomes, defined as **behavioural changes**, among the **'boundary' partners** of a project. Identifying the behavioural changes that a project aims to deliver becomes synonymous with its outcomes, and part of a wider process of focusing on how change happens.

- OM can be used as a standalone methodology or in combination with a variety of others, such as **Logframe Analysis or Most Significant Change (MSC)**. In addition, a variety of tools, such as **Force Field Analysis** and **Stakeholder Analysis**, can be used to support the OM process.

Key Outcome Mapping Concepts

1. Sphere of influence
2. Boundary Partners
3. Outcomes as behavioural change
4. Contribution over attribution
5. Participation

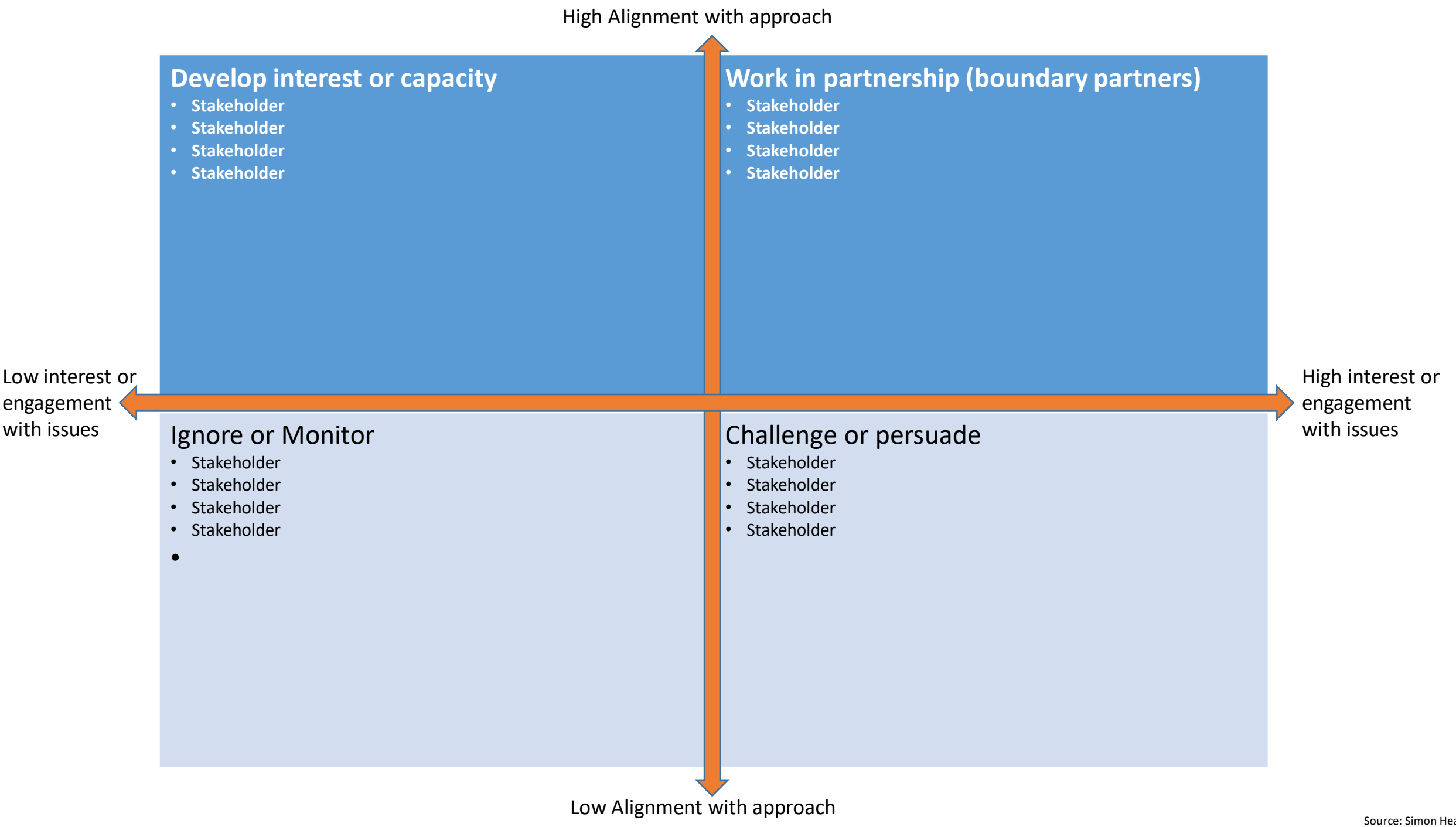
Focus of Outcome Mapping



Behavior changes ➔ (broader sense) (e.g., changes of actions, ways of thinking, activities, etc)

HEALTH SYSTEMS RESEARCH INSTITUTE

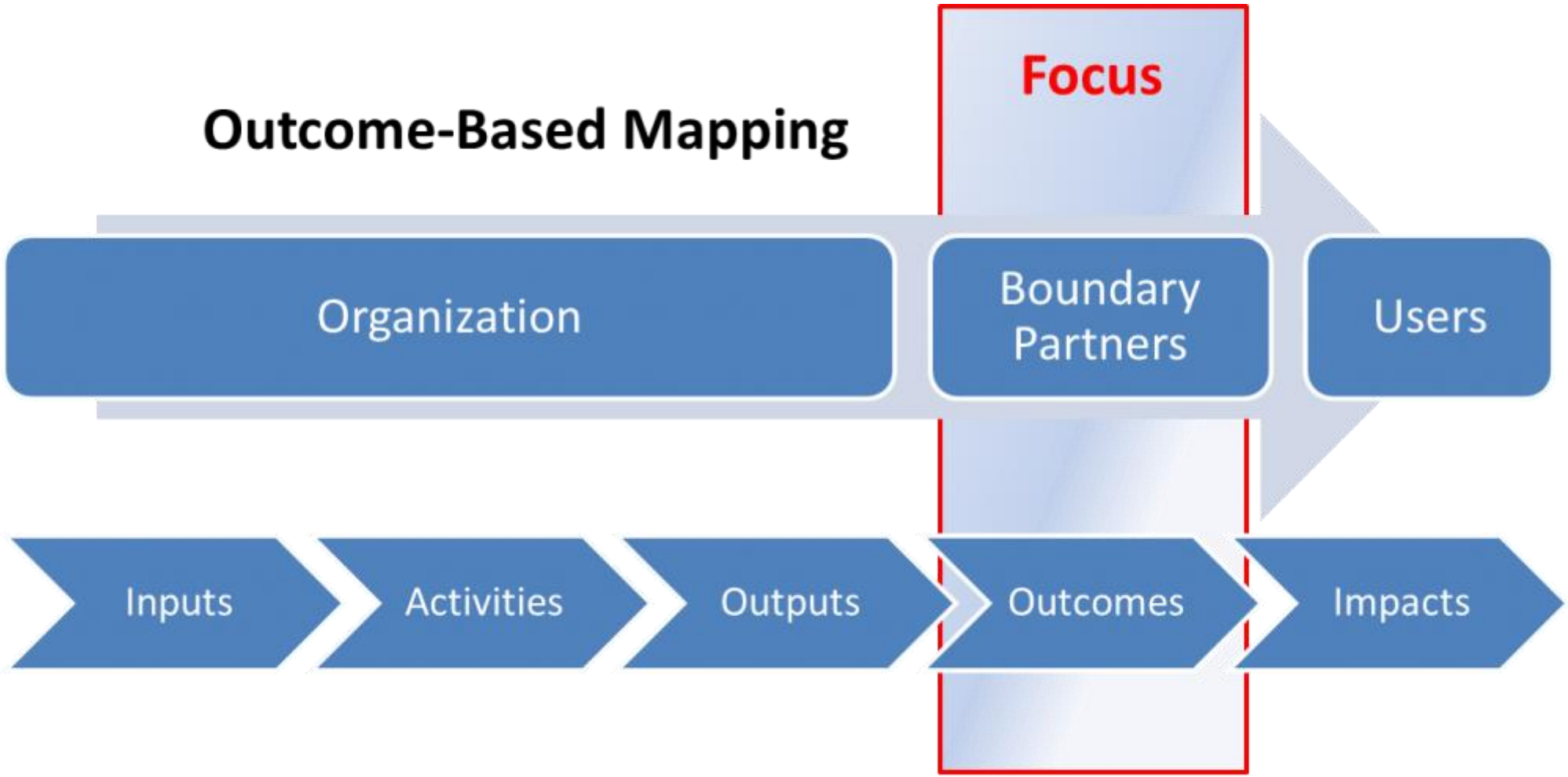
IDRC | CRDI Canada
International Development Research Centre
Centre de recherches pour le développement international



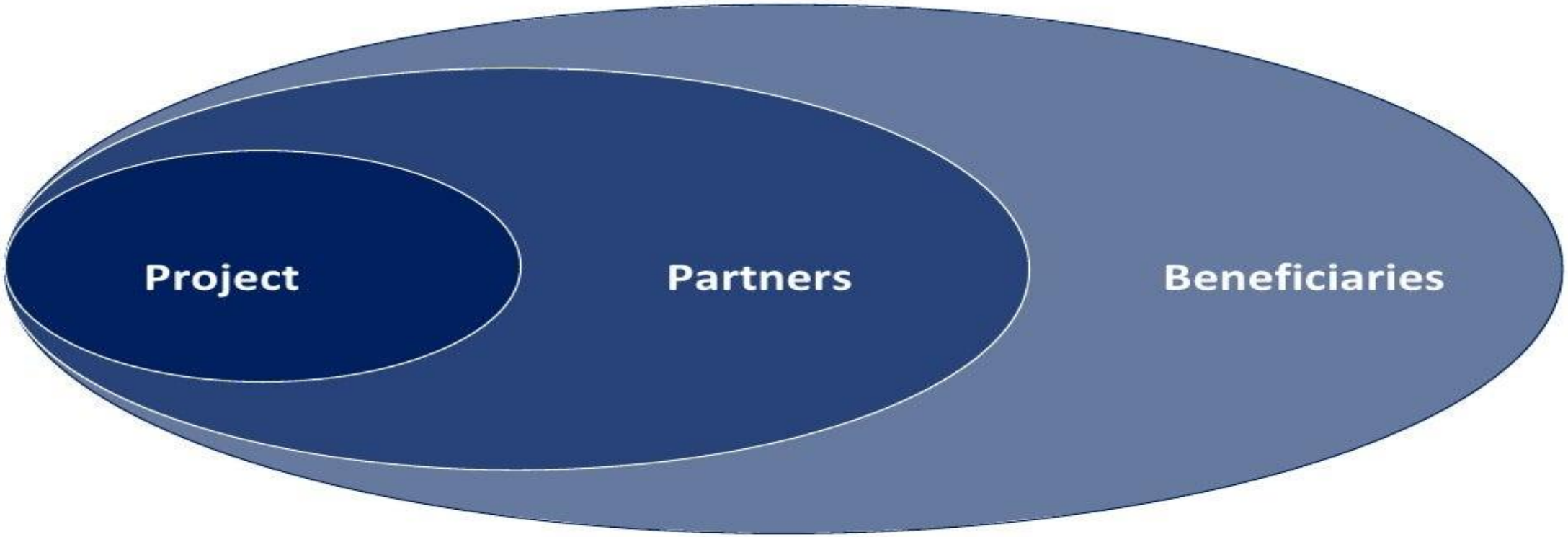
Source: Simon Hearn

Outcome-Mapping

https://blog.taskque.com/wp-content/uploads/2017/01/Outcome-Mapping-1024x508.png



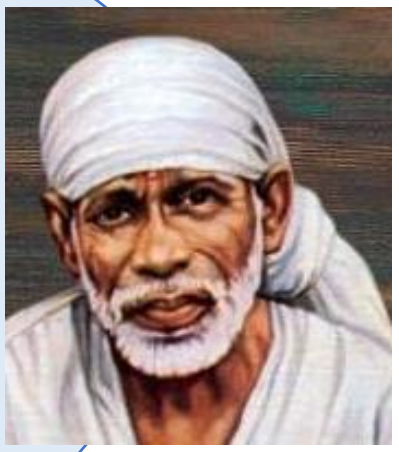
There is a limit to our influence



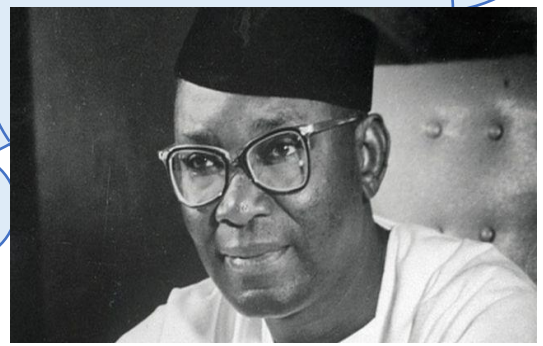
Sphere of control → Sphere of influence → Sphere of interest

OutcomeMapping
LEARNING COMMUNITY

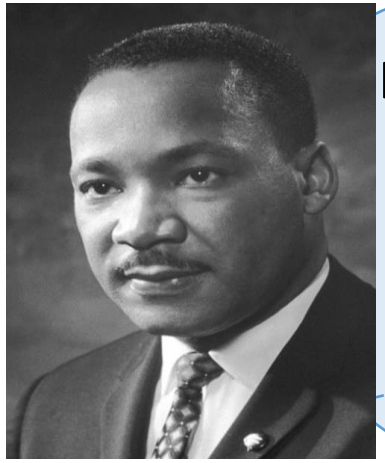
A house must be built on solid foundations if it is to last. The same principle applies to man, otherwise he too will sink back into the soft ground and becomes swallowed up by the world of illusion – Sai Baba



Originality is the essence of true scholarship. Creativity is the soul of the true scholar – Nnamdi Azikiwe



As we ponder…..



An individual has not started living until he can rise above the narrow confines of his individualistic concerns to the broader concerns of all humanity – Martin Luther King, Jr

A health system has not started functioning properly until it embraces EBDM

Creating the nexus between science and EBDM for strengthening the Nigerian health system

Overview of the health system & the situation of the Nigerian health system

Four key actors in any health system

1. The government or professional bodies that structure or regulate the system
2. The population including patients
3. Financing agents, who collect funds and allocate them to providers or purchase services
4. The providers of services

Multidimensional composition of a health system

- Government sector
- Private sector
- Households
- Healthcare services
- Training institutions
- Research institutions
- Regulatory bodies
- Etc

Health system building blocks

- Global building blocks (by WHO) – six (6) in number

- Nigerian adaptation – ten (10) in number

Six global building blocks of the health system (WHO, 2000)

1. **Governance:** Leadership must guarantee effective oversight, regulation, and accountability.
2. **Service delivery:** Health services must be effective, efficient, equitable and accessible
3. **Health Financing:** Adequate funds must be raised for health, so that services are affordable to all
4. **Human Resources for Health:** A number of well-trained staff should be available and efficiently deployed.
5. **Health Management Information System:** There should be useful data on health system performance.
6. **Access to medicines and other critical resources:** Access must be equitable.

10 Nigerian building blocks

These are the thrusts of the Federal and State(s) Strategic Health Development Plans

- The six Global building blocks, plus

7. Community participation
8. Partnerships
9. Research
10. Infrastructure

Cooking a good food – an optimally functional Health System

Health Systems specialists combine all the building blocks of the health system (using scientific evidence) to ensure that it functions optimally

Expectations from good health systems

- **Good oversight for resources and powers**
- **Improves the health of the population**
- **Efficiency – good health at low cost**
- **Equitable – accessibility**
- **Good quality**
- **Affordability**
- **Provides services that are responsive and financially fair**
- **Provides Universal Health Coverage**
- **Ensures financial risk protection for all**

Nigeria has a weak health system

- Ranked 187 out of 191 by WHO in 2000 and only better than Afghanistan in terms of maternal mortality in 2011!
  - **Sub-optimal Health System Governance (**Abubakar et al, 2022)
  - One of the highest levels of out of pocket spending and catastrophic health spending in the worlds (Abubakar et al, 2022)
  - Low levels of Service delivery (Abubakar et al, 2022; NPC&ICF Macro, 2018)
  - **Number 1 for malaria and highly ranked for other diseases**
  - **About 500 million Dollars spent every year on medical tourism**

Nigeria's weak health system (Abubakar et al, 2022)

- **Nigeria's life expectancy at birth is just over 54 years, the fifth lowest in the world**
- **Each year, more children under 5 die in Nigeria than anywhere else in the world**
- **The maternal mortality ratio – a leading indicator for the functioning of the health system – is exceeded only by Chad, Sierra Leone, and South Sudan**
- **A combination of high burden of maternal and child health + reduced but still significant burden of infectious diseases (especially malaria) + growing burden of NCDs – Epidemic diseases are also a recurring risk**
- **Key risk factors driving ill health in Nigeria (malnutrition, unsafe water, air pollution, high systolic blood pressure) indicate the need for health creation and disease prevention**

Nigeria's health system (Abubakar et al, 2022)

- Recent policy reforms have moved in the right direction, for example FSSHIP, PHCUOR, the 2014 National Health Act, BHCPFP, etc.
- However, implementation suffered due to:
  - – Complex and insufficiently specified governance arrangements between federal, state & local levels
  - – Fragmentation and lack of accountability
  - – Unsustainability of PHC support efforts (e.g. MSS, Free Maternal and Child Health programme)
- As a result, the health system has failed to adequately address needs

Using inputs from Science for Evidence-Based Decision Making in the health sector

Getting research evidence into policy and practice (GRIPP) approach

Getting research evidence into policy and practice (GRIPP) for EBDM

- Finding and using appropriate mechanisms for transferring research into policy and practice has become a major policy driver in the UK and around the world (Word, House and Hamer, 2019).

- GRIPP is a tasking but necessary approach for ensuring that improved policy decisions are adopted (Uzochukwu et al, 2016).

- It is a process of going from research evidence to decisions and action.

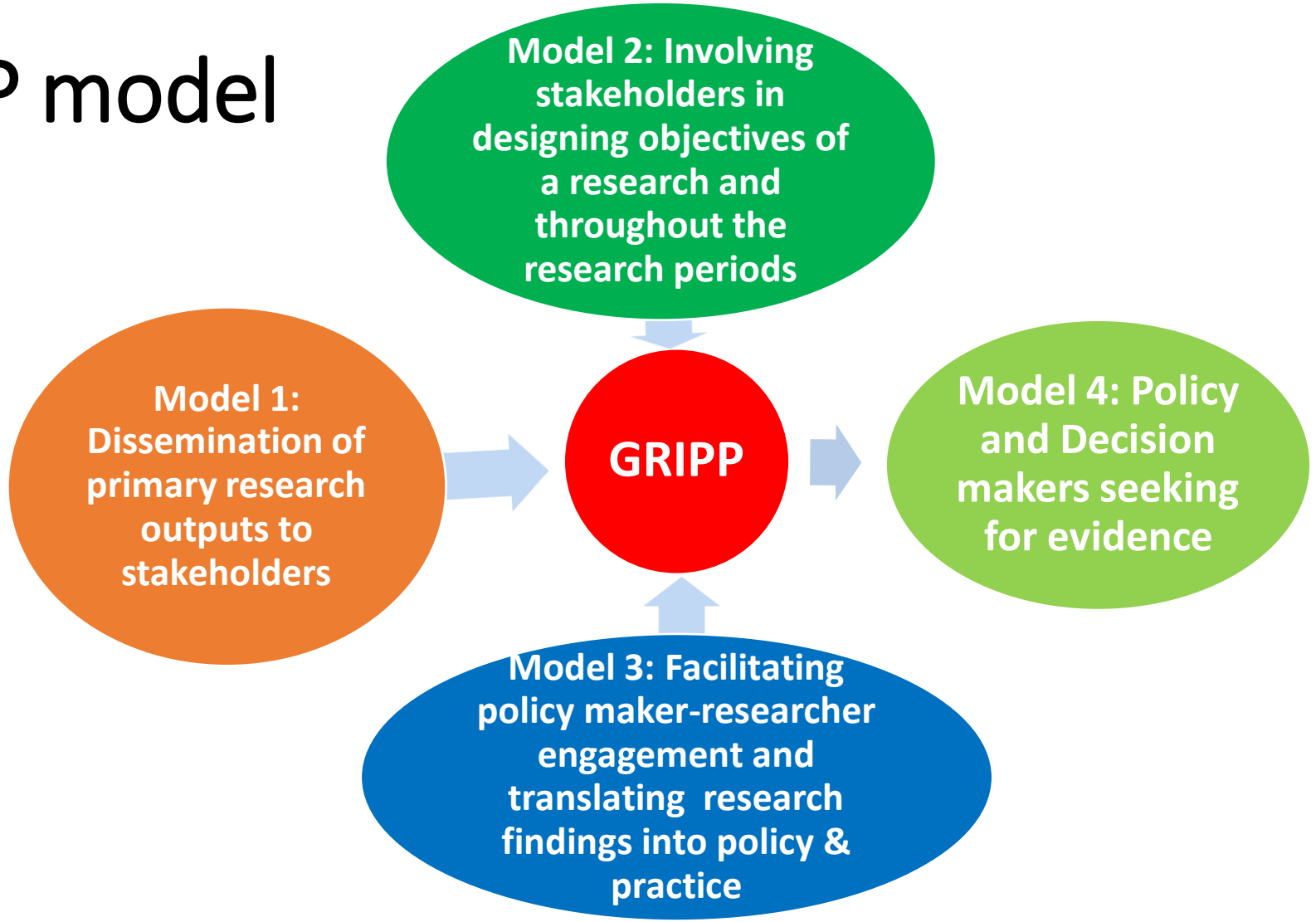
- GRIPP involves two broad issues,

    1. Engaging the stakeholders
    2. Using evidence in decisions

Experiences of Health Policy Research Group, College of Medicine, University of Nigeria, in GRIPP for health system strengthening

Using the Four (4) models for GRIPP – these are related to the models of knowledge brokering

HPRG's GRIPP model



Uzochukwu B, Onwujekwe O, Mbachu C et al (2016). The challenge of bridging the gap between researchers and policy makers: Experiences of a Health Policy Research Group in engaging policy makers to support evidence informed policy making in Nigeria. *Globalization and Health* 12(67). DOI: 10.1186/s12992-016-0209-1

Model 1: Dissemination of primary research outputs to stakeholders

Mode of dissemination of the results

- Production of policy briefs and distribution to policy makers and programme managers

- Stakeholders' workshops including commissioners of health, permanent secretaries, directors of public health, heads of line ministries, representatives of civil society organisations and sometimes the traditional rulers of the research communities

The power of non-academic means of science communication

- In 2018 and 2020, we published two articles in The Conversation a famous blog outlet, while the larger study was published in Health Policy and Planning a popular health policy and systems research journal

- We discovered that as of April 2021, each of our articles in the blog outlet got over 6200 reads and counting, while the journal article got below 4500 page views and not up to 1000 downloads, even that it was published before the second blog article… Social media was a core enabler of this feat.

ANALYSIS May 4, 2020

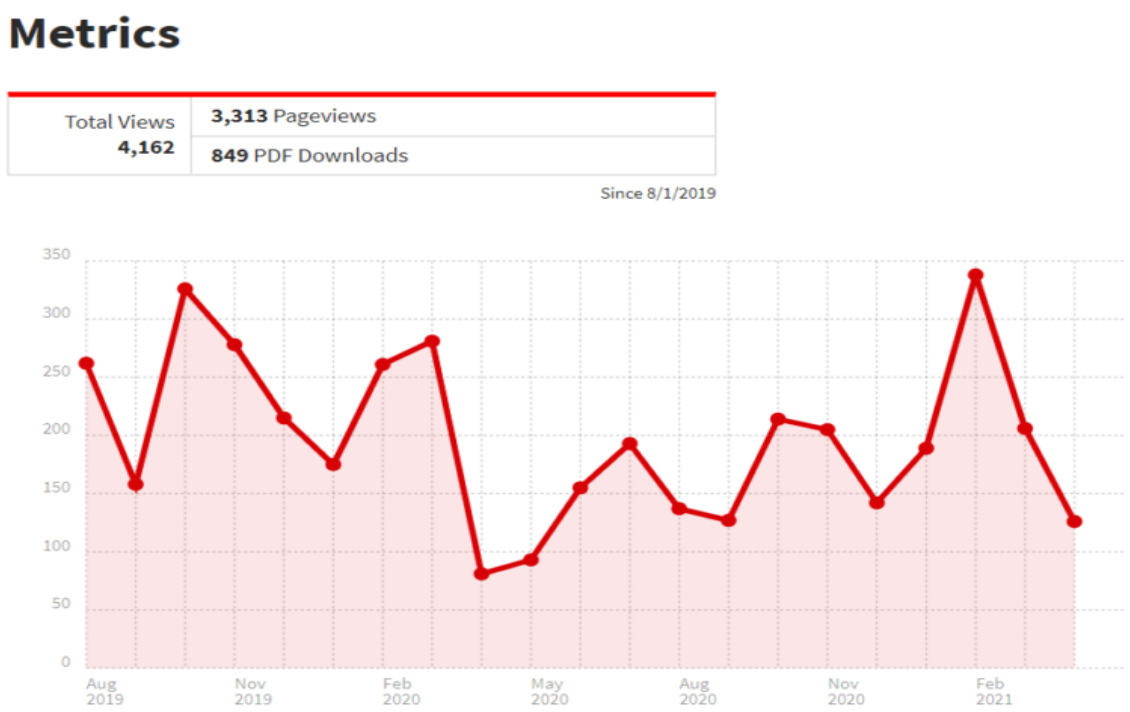
Coronavirus: corruption in health care could get in the way of Nigeria's response

6,655 1

ANALYSIS July 9, 2018

Corruption in the Nigerian health sector has many faces. How to fix it

6,303 4



Model 1: Dissemination of HPRG primary research outputs to stakeholders contd....

- One-on- one discussion of results and advocacy with policy makers and programme managers
- Presentations of findings in both local and international conferences

Close and long relationship between the HPRG researchers and policy makers (Relationship & Trust)

Model 2: Stakeholders request for evidence to support the use of certain strategies or scale up health interventions

- Objectives are set together and research carried out together
- Several workshops and briefing meetings are held with them before, during and after the intervention.
- The active collaboration and participation by the stakeholders facilitated the dissemination and acceptability of the results.
- **Close and long relationship between the HPRG researchers and policy makers facilitated this (Partnership & Trust).**

Model 3: Facilitating policy maker-researcher engagement and translating research findings into policy & practice

- Workshops for middle and senior-level policy-makers
- A training manual was developed for this purpose.
- Two policy retreats including policy dialogue
- Policy makers got to know what research evidence exists in their State
- Researchers x-rayed their work and had the opportunity to interact with the policy makers
- A policymaker-Researcher committee formed
  - Change of practice in immunization, malaria control and NCD control
  - Suppository of research evidence in the ministry

Expertise of the intermediaries in this field facilitated this

Model 4: Policy and Decision makers seeking for evidence

- **Here Policy and Decision makers seek for evidence from researchers**

- The research is funded by policy & decision makers external agency if proposal is accepted

Generating scientific evidence for health system strengthening

Key scientific techniques

Context

- In order to strengthen the Nigerian health system through EBDM, scientific evidence is needed in the following areas
  - All 10 building blocks and the software
  - The health targets of the Sustainable Development Goals (SDGs), especially Universal Health Coverage (UHC)

- Three (3) strategies are needed,

1. Develop and cost strategic plans for achieving UHC in Nigeria: comprising of 38 plans for achieving UHC in the country by the third quarter of 2013 (for the Federal, 36 states and the FCT).
2. Review of National and State Strategic Health Development Plans 2 and use available/new scientific evidence to develop the National and State Strategic Health Development Plans 3.
3. Use scientific evidence to drive the implementation of the Basic Healthcare Provision Fund (BHCPF) and planning/programming for achieving UHC in Nigeria

Health technology assessment (HTA)

- **HTA refers to the systematic evaluation of properties, effects, and/or impacts of health technology. It is a multidisciplinary process to evaluate the social, economic, organizational and ethical issues of a health intervention or health technology. The main purpose of conducting an assessment is to inform a policy decision making (WHO).**

- HTA is the systematic evaluation of properties, effects and/or impacts of health technologies and interventions.

- It covers both the direct, intended consequences of technologies and interventions and their indirect, unintended consequences.

http://www.who.int/medical_devices/assessment/en/

The main purpose

- To inform policymaking for technology in health care, where policymaking is used in the broad sense to include decisions made at, e.g., the individual or patient level, the level of the health care provider or institution, or at the regional, national and international levels.

Key characteristics of HTA

- HTA is a field of scientific research that seeks to inform policy and clinical decision making around the introduction and diffusion of health technologies.

- It is a multidisciplinary field that addresses the health impacts of technology, considering its specific healthcare context as well as available alternatives.

- Contextual factors addressed by HTA include economic, organizational, social, and ethical impacts.

- The scope and methods of HTA may be adapted to respond to the policy needs of a particular health system (Health Technology Assessment International 2013).

A major output of many HTA assessments

Determining Value for Money of health technologies

Experiences on HTA from elsewhere: The National Institute for Health and Care Excellence (NICE)

https://www.nice.org.uk/about

"We provide national guidance and advice to improve health and social care".

- It is a HTA agency

The organisation is split into 7 directorates:

Structure of NICE | Who we are | About | NICE

https://www.nice.org.uk/about/who-we-are/structure-of-nice

Centre for Health Technology Evaluation (CHTE)

Develops guidance on the use of new and existing treatments within the NHS, such as medicines, medical technologies and surgical procedures.

- Responsible for:
  - technology appraisals
  - medical technology evaluations
  - diagnostic technology assessments
  - interventional procedures guidance
  - Cancer Drugs Fund
  - Patient Access Scheme Liaison Unit
  - scientific advice
  - Office for Digital Health
  - Office for Market Access
  - topic selection

Creating a nexus of science and evidence-based decision making in health

Case study of the Nigeria COVID-19 Research Consortium (NCRC)

The Nigeria COVID-19 Research Consortium (NCRC)

- A scientific advisory group comprising major health institutions and academia - NCDC, NIMR, NUC, TETFUND, Universities, Private sector

- Tasked to synthesize research evidence on COVID-19, interpret the evidence and make evidence-based recommendations to decision makers, including the Presidential Steering Committee, FMOH, NCDC and development agencies

- They adopted three (3) main strategies to facilitate EBDM,
  1. Co-production of research evidence with policymakers
  2. Use of peer reviewed evidence
  3. Technical working group

1. Co-production Strategy of the NCRC

- Modelers (scientists) met with the policy makers and the programmatic people every Tuesday evening
- During the meetings epidemiological models and assumptions were shared by the scientists (researchers)
- Interpretations of the models were provided using simple terms (to enable comprehension)
- Policymakers and programme officers (“users and actors”) would reflect on the evidence and provide immediate feedback (corrections & observations) to the researchers
- Researchers would revisit and recalibrate the models based on any validated corrections.
- This process ensured **participation**, **representation**, **ownership** and **trust in the evidence**

Generating scientific evidence for health system strengthening

Key scientific techniques

Key areas

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Areas for future evidence-to-policy to implementation capacity development in Nigeria

To improve the functioning of the Nigerian health system and achieve universal health coverage and other health SDG targets

First four areas

1. **Create a National HTA agency for specifically generating evidence required for decision making by MDAs of FMOH and SMOH and other public and private sectors**

2. Creation of a National Medical Research Council or Commission (for funding of health research and its translation into policies and decisions)

3. **Creation/Strengthening of the National Health Policy Unit in the FMOH and State MOHs**

4. **NAS and other academies assuming the role of knowledge brokers and policy champions**

Next four areas

1. Continuous capacity development of research users (strategic decision makers + policy makers) to understand and use generated evidence to improve the health system

2. Continuous capacity development of researchers to push for the use generated evidence by decision makers + policy makers to improve the health system

3. Improving the existing national capacities in Health Policy and Systems Research plus Analysis (HPSR+A).

4. Employing the right people at all levels of government, especially to head MDAs

On-going research relating to the nexus between science and EBDM

Translating Modeled Evidence for Decision-Making

Translating Modeled Evidence for Decision-Making

RESULTS FOR DEVELOPMENT

Problem Statement / Objectives

The goal of this project is to understand how to structure modeling-to-policy and -program efforts to be effective at bridging the gap between modeled evidence and policy/program decision-making by:

1. Identifying the factors and approaches that facilitate or inhibit exchange between decision-makers and modelers

2. Evaluating current practices in forums where translation work is already occurring

3. Proposing changes to be made in funding approaches, organizational structures, and country or global policies to enable success

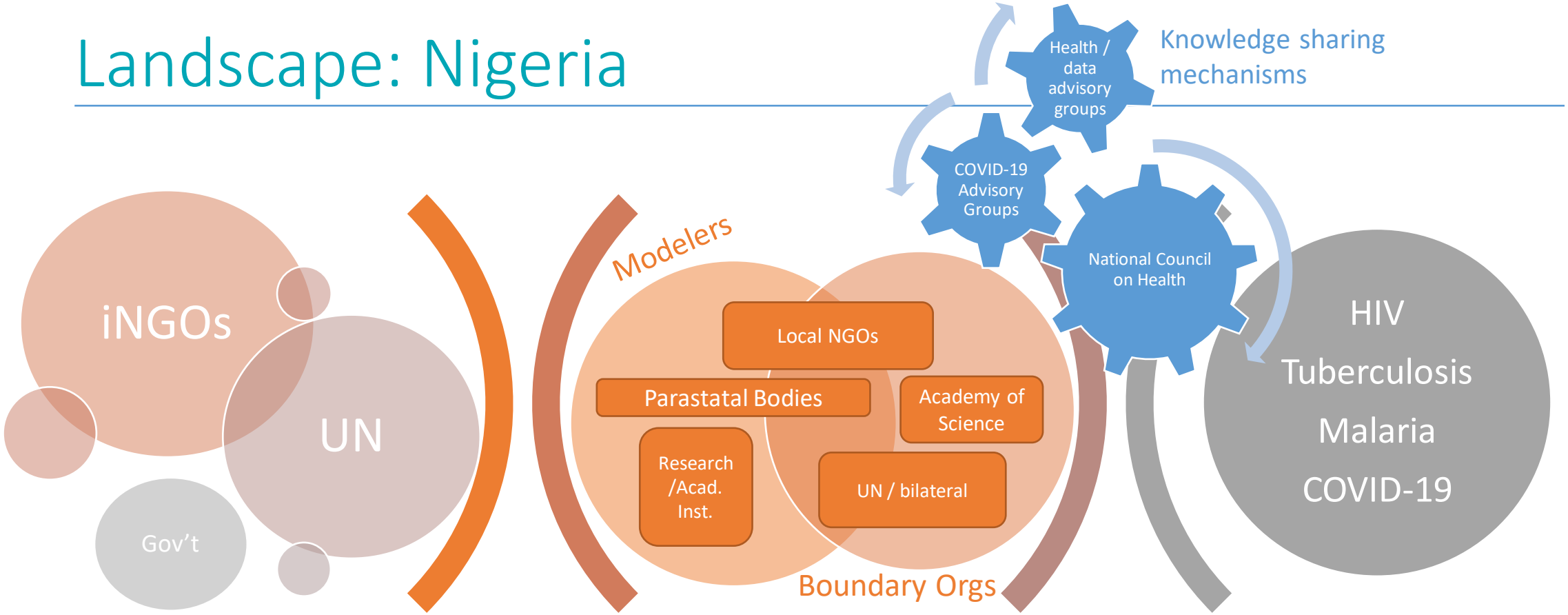
Countries where the research is happening

1. Kenya
2. Nigeria
3. India
4. Burkina Faso
5. South Africa

Country Context - Nigeria

- The modeling-to-decision-making ecosystem in Nigeria exemplifies the transition from nascent to flourishing
- Target group for modeled evidence include the departments, agencies and programmes (DAPs) in the Federal Ministry of Health
- Some examples of models generated from local NGOs, parastatal bodies, and universities; much of this research is done in consultation with (or led by) international organizations
- Some examples of organizations serving to broker modeled evidence
- Some capacity building initiatives exist but few programs serve to bridge the gap between the potential in the local ecosystem and the realization of a fully independent modeling ecosystem
- Nigeria is involved in several regional initiatives – WAHO, Africa CDC – and is a major player in the region

Landscape: Nigeria



Funders

Modelers/Boundary Orgs

Decision-Makers

Communication tool for strengthening the nexus between science and EBDM

Stakeholder engagement with policy briefs

What tools can be used for creating the nexus between science and EBDM in health

- Appropriate communication strategies
- Good Actionable Policy Briefs
- Appropriate political and stakeholders' engagements using the policy briefs and other communication tools

How to write actionable policy recommendations - Research to Action https://www.researchtoaction.org/2013/07/how-to-write-actionable-policy-recommendations/

- The policy brief has become the ‘go to’ tool in facilitating evidence-based policies.
- It seeks to inform the decision maker of policy options that are evidence-based, robust and will achieve the desired result in various scenarios.
- With the creation of each policy brief we hope that maybe, just maybe, we will get the right policy maker to read our compelling arguments, experience a eureka moment and spearhead the process of creating sound and effective policies with our research as their sword.
- Unfortunately, policy influence rarely happens in this manner. What you have to try to do is identify your policy makers’ problems and give him/her actionable policy recommendations.

Writing a policy brief

- When writing a policy brief, there are three main things to consider:

1. **The language** has to be just right, not too technical but professional.

2. **The length** has to be brief yet informative.

3. **The target audience**. Very importantly, a policy briefs needs to speak to a pre-identified and targeted audience.

Important to note:

- ***Sit down to write what you have thought, and not to think about what you shall write. You never know what you can do till you try.*** William Cobbett

Some simple things to consider to ensure that your recommendations are practical and actionable

1. Ensure that you have identified your target audience beforehand. Understanding who your audience is and what their job entails is crucial. What is their sphere of influence and what change can they implement?

2. Be very clear about what the current policy you want to change is.

3. Set the scene: Identify the shortfalls of the current policy. Where is this policy failing, why and how can your recommendations improve the status quo?

4. Be aware of how policies are made: remember that government policy actors are interested in making decisions that are practical, cost-effective and socially acceptable.

Some simple things to consider to ensure that your recommendations are practical and actionable

5. If you are suggesting change ask yourself: What specifically needs to be changed? How will this change come about? What resources will be needed? Where will these resources come from? What is the overall benefit to both the policy maker and society in general? If your recommendations include these components they are much more likely to garner the required change.

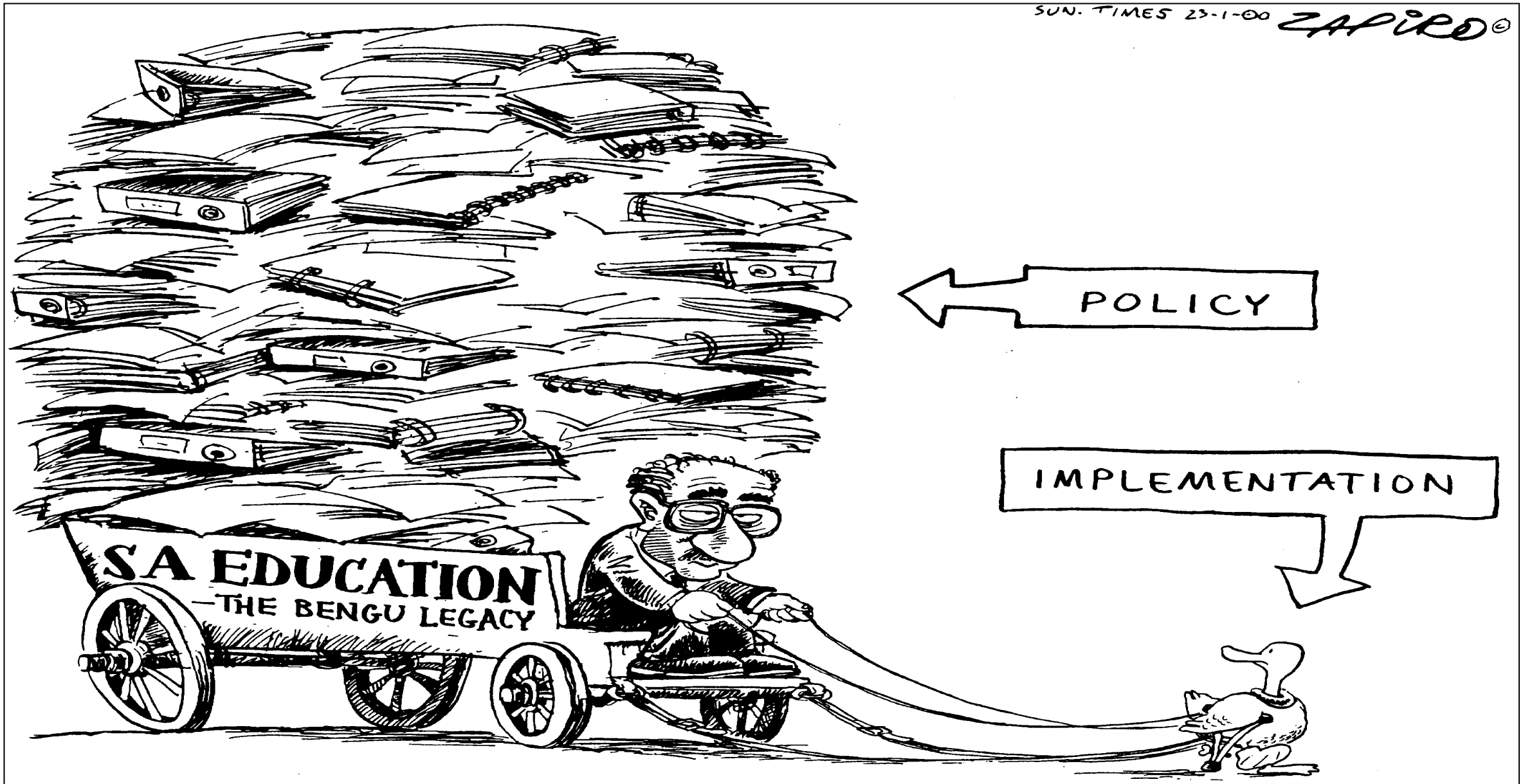
6. The word actionable suggests that your recommendations should be active. Try using language that is active rather than passive. Words such as use, engage, incorporate etc.

7. Keep your policy recommendations short. Identify 3 recommendations and elaborate on these. Pick the three that are most practical and relevant for your target audience then focus on presenting these in the most actionable way.

8. Make sure your research supports your recommendations. This may sound very obvious but policy makers will want to know that the evidence supports your assertions. Where you are providing an opinion, not supported by research, make this very clear.

9. Ask yourself, is my recommendation viable? Does the recommendation seem feasible?

Gap between policies and implementation



Sai Baba

Life is a song - sing it. Life is a game - play it. Life is a challenge - meet it. Life is a dream - realize it. Life is a sacrifice - offer it. Life is love - enjoy it.

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Some Nigerian examples of GRIPP from UNN

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