

HIFA Project on Communicating health research to policymakers

Supported by Special Programme for Research and Training in Tropical Diseases, TDR/WHO

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HIFA is collaborating with TDR/WHO (Special Programme for Research and Training in Tropical Diseases) to promote sharing and learning of experience and expertise around the topic of health research communication to policymakers. Below is the structured summary of the thematic discussion September to October 2022, messages 1 to 125. Also provided is a list of profiles of contributors and a list of citations (resources that HIFA members have pointed us to).

Background

Read online: https://www.hifa.org/projects/new-communicating-health-research-support-evidence-informed-policymaking

What are the most impactful methods for researchers to communicate their research to policymakers so that the research is seen and applied? How can research be better packaged and communicated, including for example the role of policy briefs as well as academic journals, videos, social media, infographics, newsletters, use of video, and newsletter content? This discussion aims to consider the preferences of policymakers; the role of researcher-policymaker communications at all stages of the research cycle; and the role of intermediaries such as journal editors, communication professionals, publicists and journalists.

What types of research? Primary research (e.g. randomised controlled trials, observational studies, implementation research, operational research); secondary research (e.g. systematic reviews), and their geography (global, national, local); and tertiary research (where cumulative evidence is operationalised in, for example, the form of policy briefs and clinical guidelines).

We aim to look primarily from the perspective of researchers, whose motivation is typically to communicate their research effectively. At the same time, researchers need to know what policy-makers want and require, and they need to have an understanding of how their research fits in with the broader perspective of evidence-informed policy.

The questions below were offered to the HIFA community as a guide to the discussion.

1. What do we mean by Effective communication of health research to policymakers? How do we measure it?

- 2. What are the different approaches to communicating research (e.g. academic journals, policy briefs, interaction with policymakers, press releases, social media, infographics, use of video)? What is your experience with these approaches? What works and what doesn't?
- 3. What is the role of researchers in research communication, beyond publication of their paper? What is the role of other stakeholders (e.g. communication professionals, editors, media, public health professionals and critical thinkers)
- 4. What are the needs and preferences of policymakers?
- 5. What can be done to better support researchers in the communication of health research?

The discussion included 125 messages from 27 contributors in 19 countries: Canada, Croatia, Ghana, Honduras, Hungary, Iraq, Japan, Kenya, Malawi, Mexico, Myanmar, New Zealand, Nigeria, Norway, Solomon Islands, Switzerland, Tanzania, UK, USA.

The following selected extracts are from 27 contributors represented throughout the discussion themes below. These contributors included: Communication professionals/knowledge managers (3), Health systems researchers (4), Health workers (7), Library and information professionals (3), Patient representative (1) and Public health professionals (5) representing a range of universities, public health departments, NGOs and healthcare facilities.

A 'short edit' is now being prepared which will include:

- Key points raised by contributors
- Unanswered questions
- Areas that require further exploration

Contributors:

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PART 1: Extracts from discussion

Q1. What do we mean by Effective communication of health research to policymakers? How do we measure it?

1.1 What do we mean by Effective communication of health research to policymakers?

1.1.1 Terminology and scene-setting

Moderator: There is no absolute definition of 'effective', 'communication', 'health research' or 'policymakers'. So, we are not seeking an absolute definition of 'Effective communication of health research to policymakers'... 'Health research', for the purposes of this discussion, is inclusive... [primary, secondary, tertiary] ... The term 'policymakers' includes not only those who make health Policy decisions (big "P") at national or subnational levels, but also those who make policy decisions (little "p") in programme implementation.

Moderator: Research communication is a highly complex issue that is integrated in a wider sphere of policymaking, where many factors influence politicians other than evidence.

Chris Zielinski, UK: The definition of "effective communication" for health researchers proposed seems too narrow. A more accurate definition could be something like, "From a researcher point of view, this means that their research is considered as appropriate by the relevant target audiences, including funders, academic authorities and policymakers, among others. In all cases, research communications should be visible, accessible, clear and readily understandable. Effective research communications for policymakers should be in a format that meets their perceived needs, and should be seen as relevant and reliable."

David R. Walugembe, Canada: When policy makers receive communication from researchers and provide feedback, request for more information/facts/evidence, enact policies or implement programs and or interventions, informed by the content of the research communication, then that may constitute effective communication of health research.

Quote: 'An estimated 85% of investment in health and biomedical research is wasted every year due to redundancies, failure to establish priorities based on needs of stakeholders (particularly end-users of knowledge), poorly designed research methods, and incomplete reporting of study results, leading to billions of dollars lost globally' (See Citations - Engaging policymakers, health system managers, and policy analysts)

1.1.2 Making research visible to policymakers

Moderator: An initial thought from me is that (almost) all research should at least be available in a peer-reviewed journal, and the paper should ideally be freely accessible to all. ('Tertiary research' is an exception, as this is typically defined in terms of policy briefs and clinical

guidelines. Even then, tertiary research should (almost) always be peer-reviewed, and indeed the process for WHO guidelines, for example, is more rigorous than standard peer review).

Moderator: Many of us would argue that open access is a critical aspect of effective communication of health research to policymakers. It promotes transparency and trust, and it allows the policymaker (and those who write policy briefs or use other methods to inform the policymaker) to interrogate the full text.

Moderator. How can researchers make their research more visible?... 1. Align the research with policymakers' priorities 2. Engage with policymakers before, during and after the research 3. Publish the research in a high-impact journal 4. Provide a summary of the research in the appropriate format and language(s) 5. Prepare and implement a dissemination strategy 6. Present the research at conferences and press meetings, as appropriate... Unanswered question: Would you like to add or comment on the above?

Moderator: Live presentation of research (whether virtual or in-person) is an important aspect of effective research communication. Unanswered question: Would anyone like to share examples of how this has been done successfully (or unsuccessfully)?

1.1.3 Making research understandable to policymakers

Moderator: The main aim of this discussion is to identify the most impactful methods for researchers to communicate their research to policymakers. For example, how can research be better packaged and communicated, including for example the role of policy briefs as well as academic journals, videos, social media, infographics, newsletters, use of video, and newsletter content?

Moderator: We are looking primarily from the perspective of researchers. From their point of view, this means that their research is considered by policymakers where appropriate. This implies that it is visible, accessible, clear and readily understandable, that it is seen by policymakers as relevant and reliable, and that it is in a format that meets the perceived needs of policymakers.

Samuel Sieber, Switzerland: Effective communication of health research must remain true to the evidence... [and] can only be simplified to the point it remains true to the actual evidence. It should neither exaggerate, distort, unnecessarily dramatize nor accuse (unless there is irrefutable evidence to do so).

Jackeline Alger, Honduras: The [PAHO Policy on Research for Health document https://iris.paho.org/handle/10665.2/54411?locale-attribute=es] declares: 'Researchers, policy makers, health practitioners, and the public require timely and equitable access to research evidence. Strategies to bolster understanding of the essential links between research, policy, and action need to be developed, implemented, and evaluated.'

Khin Thet Wai, Myanmar. Effective communication of health research to policymakers implies the reach of clear, concise, credible, feasible, and understandable investigator-proposed solutions/research recommendations in different forms in combination in a timely manner through multiple communication channels and multiple platforms during dissemination...

Ama Fenny, Ghana: In my opinion this refers to making research products more accessible to policymakers by packaging it in a way that makes it easier for them to understand and also find useful. It must address specific problems and be linked to existing government policies.

Quote: Checklist for communicating effects of interventions

Make it easy for your target audience to quickly determine the relevance of the information, and to find the key messages.

- Clearly state the problem and the options (interventions) that you address, using language that is familiar to your target audience—so that people can determine whether the information is relevant to them.
- Present key messages up front, using language that is appropriate for your audience and make it easy for those who are interested to dig deeper and find information that is more detailed.
- Report the most important benefits and harms, including outcomes for which no evidence was found—so that there is no ambiguity about what was found for each outcome that was considered.

For each outcome, help your target audience to understand the size of the effect and how sure we can be about that; and avoid presentations that are misleading.

- Explicitly assess and report the certainty of the evidence.
- Use language and numerical formats that are consistent and easy to understand.
- Present both numbers and words and consider using tables to summarise benefits and harms, for instance, using Grading of Recommendations Assessment, Development and Evaluation (GRADE) summary of finding tables or similar tables.
- Report absolute effects.
- Avoid misleading presentations and interpretations of effects.
- Help your audience to avoid misinterpreting continuous outcome measures.
- Explicitly assess and report the credibility of subgroup effects.
- Avoid confusing 'statistically significant' with 'important' or a 'lack of evidence' with a 'lack of effect'.

Help your target audience to put information about the effects of interventions in context and to understand why the information is trustworthy.

- Provide relevant background information, help people weigh the advantages against the

disadvantages of interventions and provide a sufficient description of the interventions.

- Tell your audience how the information was prepared, what it is based on, the last search date, who prepared it and whether the people who prepared the information had conflicts of interest.

(Source: see Citations - A checklist for people communicating evidence-based information about the effects of healthcare interventions)

1.1.4 Making research credible to policymakers

Goran Zangana, Iraq: Misinformation, it appears, is not only limited to social media but also press releases by respected scientific institutions! [ref The scientific communication ecosystem - see Citations]

Moderator: 'Second, investigators should review press releases from their institution, funder, and the publishing journal. A study that analysed 462 press releases (and their associated peer-reviewed manuscript) from 20 leading UK universities found that 40% of the press releases contained exaggerated advice and 33% causal claims...' [ref The scientific communication ecosystem - see Citations]

1.1.5 Making research relevant to policymakers

Emily Vargas, Mexico: [translated from Spanish] Effectively communicating research results means disseminating relevant information and useful for a moment in the political process that helps, supports or strengthens decision-making in health, in favor of a common good.

1.1.6 Persuading policymakers to change policy

Moderator: A few people have suggested the aim is to change policy and practice. I'm not sure about this. 'Pushing' the findings of primary research to change policy and practice is not always the best way forward. There may be times when a primary study is, on its own, sufficient and compelling, but I suspect more often policy and practice should be based on research synthesis. Powerful communication of primary research direct to policymakers has the potential to distort rather than inform policy.

Moderator: I think 'effective communication of health research' does not necessarily imply a measurable change in policy or practice... From the perspective of a primary researcher, I suspect that many (not all) would want to see a change in policy or practice that had resulted from their research, at least in part. And if that change is shown to lead to improved health outcomes, so much the better. But not all health research recommends a change in policy or practice, and often such recommendations are not specific. Some research may even recommend current policy to stay as it is. So perhaps the term 'effective communication' should focus more on getting the attention and consideration of policymakers (and their advisers) rather than what they choose to do with it?

Unanswered question: **Moderator:** Do we have any researchers on HIFA whose work has led to a change in policy. whether Policy (with a big P, as in national/subnational policy) or policy with a small p (e.g. project/programme implementation)? What were the key ingredients to make this happen in terms of research communication? What was the role of your research team? What was the role of your institution?

Moderator: Perhaps more often the research team recognises that their results are just part of a bigger picture and their objective is not to change policy but to help inform policy. The best approach available to paint this bigger picture is the systematic review. So one definition of 'effective research communication' is that the study is included in a subsequent systematic review.

Sian Williams, UK: We also have to offer policy-makers hope. That might be by suggesting cross-cutting themes and solutions as no decision-maker can handle so many demands for investment. It would also be by a greater focus on areas of disinvestment....

Quote: 'There is also evidence of undesirable effects of using narratives. In one case study, narrative use led to widespread insurance reimbursement of a therapy for breast cancer that was later proven to be ineffective. Another case study described how the use of narrative inappropriately exaggerated the perceived risk of a procedure, which led to limiting its use and preventing a large number of patients from its benefits...' Conclusion: The existing evidence base precludes any robust inferences about the impact of narrative interventions on health policy-making. We discuss the implications of the findings for research and policy. [See Citations: Using narratives to impact health policy-making: a systematic review.]

Moderator: The negative outcomes described above are, paradoxically, the result of effective research communication. The findings of individual papers were inappropriately translated into changes in policy and practice that led to negative health outcomes. I suspect that most negative outcomes from research communication have their source in primary studies and not in research syntheses. What do you think?

Moderator: It is notable that all 10/13 recommendations are about providing information, and none of them are about persuading the reader to take action. (See Citations: Oxman A, Claire Glenton, Simon Lewin and colleagues: A checklist for people communicating evidence-based information about the effects of healthcare interventions)

My takeaway from this whole discussion is that the motivation for effective research communication is (or should be) all (or nearly all) about providing reliable information and understanding, and it is not (or should not be) about persuading changes in policy and practice. (The latter is advocacy - researchers may choose also to be advocates, but I would suggest that their primary role is to inform and be understood.)

To stimulate further discussion, I would propose that policymakers need balanced information from health research. They do not need individual primary researchers to persuade them to act on the basis of 'their' research findings.

So, where should financial and political support be provided to improve the effectiveness of research communication? I would argue that it should be directed more to improve balanced information and understanding (especially through research synthesis), and relatively less to strengthen researchers' ability to effect policy change (especially from a single primary study).

Quote: 'Warning labels on alcoholic products need to be updated to spell out details of potential harm in order to make them more effective, say two US researchers. The current labelling, which has not changed for 30 years, focuses on risks during pregnancy and with operating machinery and includes a vague statement that alcohol "may cause health problems." This is "so understated that it borders on being misleading," the two researchers argue. The science related to the use of alcohol has moved on, and there is now firm evidence of harm... Yet the general public is mostly unaware of the most serious health risks that are associated with alcohol consumption, they point out. "We believe Americans deserve the opportunity to make well-informed decisions about their alcohol consumption," say Anna H. Grummon, PhD, MSPH, of the Harvard T. H. Chan School of Public Health, Boston, Massachusetts, and Marissa G. Hall, PhD, MSPH, of the University of North Carolina at Chapel Hill... However, as previously reported by Medscape Medical News, pressure from the alcohol industry led to changes in the Yukon project, and while a general health warning remains, the label about increased cancer risk was removed. The alcohol industry has tried to suppress efforts to educate the public, and this has created problems in conveying health information to consumers, the authors note. The industry spends more than \$1 billion each year to market its products in the United States.' (See Citations: Alcohol Warning Labels Need Updates to Reflect Harms)

Moderator: 1. When considering 'effective communication of health research', we need to be thinking not only about the impact of a single study, but also on how research findings combine with existing research evidence. 2. In the case of policymaking to update alcohol warning labels, as with most policies, the decision is typically taken by a collective of policymakers. That said, a senior policymaker (such as the president or health minister of a country) can champion the cause. 3. Whether single or multiple, policymakers need compelling evidence, both to direct them to their favoured policy, and to persuade others of the merits of that policy. 4. Different policymakers will have different motivations. While a health minister may favour to update alcohol warning labels to decrease consumption, the president may be more interested to increase consumption, perhaps to generate more tax revenue. The Japanese government for actively *encouraging* example young people drink more alcohol: https://www.bbc.co.uk/news/world-asia-62585809 5. There is a human-rights dimension to this discussion. As HIFA has demonstrated in our white paper with the New York Law School, governments have a legal obligation under international human rights law to ensure that their citizens have access to reliable healthcare information. This implies that governments have a legal obligation to update alcohol warnings so that citizens are better informed. (See Citations: Alcohol Warning Labels Need Updates to Reflect Harms)

Quote: 'This paper explores the mechanisms used by information professionals with a specific knowledge mobilisation role to make evidence useful for local decision making and planning of public health interventions...Published research evidence is made fit for local commissioning and planning purposes by information professionals through two mechanisms. They localise evidence (relate evidence to local context and needs) and tailor it (present actionable messages)'. (See Citations - Localising and tailoring research evidence helps public health decision making)

1.1.7 Persuading practitioners to change practice

Samuel Sieber, Switzerland: To be effective AND efficient, communicating health research best aims at policy AND at practice... In practice (pun intended!), most policies are only as good as their practical implementation. That's why efficient communication of health research ideally aims at both the political decision-makers and those that implement said policy: doctors and healthcare workers, patients and people with lived experience, civil society and non-state actors, among others.

1.1.8 Having an impact on health outcomes

Moderator: [Research communication] may be facilitated/affected by several types of actors: advisers, policy brief writers, media, journalists, civil society organisations, not to mention the original researchers themselves.

1.1.9 Researcher motivation, public health vs self-interest

Moderator: A definition of 'effective communication' from a public health perspective would arguably be different. For example, many of us would say that optimal policymaking should not be based on which research team is the most effective communicator. By definition, this promotes biased policymaking. We would argue that effective communication is that which supports evidence-informed policymaking, which WHO describes as ensuring that 'the best available research evidence is used to inform decision-making... characterized by systematic and transparent access to and appraisal of evidence as an input into the policy-making process.

Samuel Sieber, Switzerland: "And I would strongly advocate for a definition that also appeals to a researchers' responsibility to seriously consider and promote policy and practice implications and evidence translation of any piece of evidence."

Moderator: Yes indeed. As we started out the planning of this discussion we considered the researcher's perspective, the policymaker's perspective and the public health (and civil society) perspective. We acknowledged there is sometimes a tension, even a contradiction, between these perspectives. If a researcher is primarily motivate by getting *their* recommendations into policy and practice, this can lead to bias and negative health outcomes. I am reminded of the 'effective communication' of Andrew Wakefield and the MMR vaccine.

Moderator: In an ideal world all health researchers would be focused on improving health outcomes, and I am sure that this is the reason that almost all researchers start on their chosen career. Just in the same way that (some) politicians go into politics "to make society better". But, just as politicians can become increasingly self-interested, the same is possible with researchers. The system tends to push researchers in this direction. Their professional success is determined largely by the number of papers they produce, and the impact factor of the journals where they publish those papers. Furthermore, researchers spend a lot of their time chasing research funding from a relatively small number of funders. The competition with other researchers is intense.

Moderator: As we have heard earlier in this discussion, the funding agencies themselves are often driven by research 'successes' in the sense of discovery and translation into policy and practice. So researchers are motivated to get their findings directly into policy. 'Getting findings directly into policy' may sometimes be appropriate, but perhaps more often it deviates policymakers from an evidence-informed approach whereby policy is based on research synthesis rather than single studies. Funding agencies are perhaps less interested in research that adds to the cumulative evidence base as compared with research that directly changes policy and practice. Unanswered question: I would be interested to hear from researchers and others about these pressures and incentives, and how this might impact on the impartiality of their communication with policymakers.

Hajime Takeuchi, Japan. Research results should be returned to society and should never be researched for research [*2]. To that end, it is essential to design what the research is for what and for whom, what hypotheses exist, and what we want to clarify. As long as it is health research, we should make some new proposals for current health policy. It is crucial to conduct research from the standpoint of the socially vulnerable, aim for a better society, and stand on the side of those in difficulty to raise their voices and reflect it in the policy.

Moderator: One perspective on 'effective research communication' is that it has an impact on policy and practice. A related but different perspective is that effective research communication simply contributes to the collective evidence that may be used to inform policy and practice - it does not need to have a direct impact.

Moderator: Perhaps the term 'effective communication' could apply less to the push of a single research study, and more to the factors that encourage and enable policymakers to consider all the relevant evidence? This implies more collaboration and less competition, more focus on improving health outomes and less on getting the next funding award.

Moderator: 'Most investigators want the results of their studies to be communicated accurately, but they too have their biases... some researchers believe that their work will be more influential than is probably the case.' [ref The scientific communication ecosystem - see Citations]

Moderator: 'First, investigators should choose their words carefully... Some investigators also spin the results of their studies, emphasising secondary outcomes, underpowered or non-preplanned subgroup analyses or de-emphasising the results that did not support their hypotheses. Such tactics undermine the validity of the scientific process and can mislead the public and harm patients.' [ref The scientific communication ecosystem - see Citations]

Moderator: 'Relative differences between groups in a study can differ from absolute differences. Investigators should provide both... Not presenting the NNT exaggerates the success of a study.' [ref The scientific communication ecosystem - see Citations]

Moderator: There is another perspective that we have discussed that is perhaps more important: the public health perspective whereby the end goal is not to increase the visibility of a particular piece of research, but to contribute to a wider effort to support evidence-informed

policymaking (which arguably is the surest way to improve health outcomes). This emphasises the collaborative nature and potential of health research.

Moderator, UK: As we look this week at the role of researchers in research communication, and reflect on their/your motivations, it was serendipitous that PLOS (a leading open access publisher) sent out today a survey with the title "What motivates you as a researcher?" https://plos.org/values-assessment/

[Note from moderator: The survey gives 26 options for response. 24/26 reflect a public health perspective; only 2/26 reflect personal interest: 'I want to be globally recognized for my accomplishments in my field... By the end of my career in research, I most hope my colleagues will think of me as an innovative researcher and mentor, and a leader in my field or region.' Unanswered question: What are the motivations of researchers?]

1.1.10 Evidence-informed policymaking

Moderator. In the context of our discussion on research communication, what I am understanding here is that evidence-informed policy leading to improved outcomes has less to do with the effectiveness of communication of individual researchers, and more to do with the mindset of policymakers. Looking at the role of researchers, it is important that they work together to promote evidence-informed policymaking. The question then becomes: What is the role of researchers (and other stakeholders) in promoting evidence-informed policymaking and what is their role in countering policymaking that ignores the evidence? For the latter, I am reminded of the role of academics in countering the heads of state of the USA and Brazil during the COVID-19 pandemic.

1.2 How do we measure the effectiveness of communication of health research?

Moderator: The question 'How do we measure it?' invites us to assess the effectiveness of different methods of communication. What indicators can we use to measure the effectiveness of communication?

Moderator: *If* there is no single numerical indicator of effectiveness of research communication, the implication is that each instance of communication needs to be assessed on a case by case basis, on the basis of whether the communication achieved the desired objective(s).

Samuel Sieber, Switzerland: Effective communication of health research implies a measurable change in policy or practice... a shared vision of change and tangible objectives are fundamental to any successful communication strategy, and should precede summarizing evidence, selecting dissemination tools, and crafting messages...

Samuel Sieber, Switzerland: Measuring effective communication... should look at communication outcomes rather than outputs. Neither the number nor the format of communication products determine communication success. An informal pitch to a decision-maker may have greater effect than a widely disseminated policy brief... A good

communication strategy comes with a built-in outcome mapping, which allows both to get everyone on the same page on what impact may look like, and to monitor progress regularly.

Hajime Takeuchi, Japan. The measurement is the number or percentage of health research products used as medical grounds for policymaking. And the actual policy decisions and the extent to which policy is based on research products.

Jacklyne Ashubwe-Jalemba, Kenya. I think to be effective there needs to be a clear roadmap for the communication which details the inputs, processes, and expected outcomes (both intended and potentially unintended). These (inputs, processes and outcomes) may be considered useful measurement points of effectiveness because doing the right thing, in a right way, is likely to produce the desired results...

Khin Thet Wai, Myanmar. I would like to propose indicators to measure the effectiveness inclusive of: awareness, interest, understanding, gaining trust towards research evidence, degree of meeting the expectations/needs/preferences, able to integrate with political and other commitments, timely application and visibility of potential health impact. These process and outcome indicators can be measured by ranking as low, medium and high.

Moderator, **UK** (**Moderator**) Google Scholar publishes 'most influential papers' each year. It bases this on citations - easy enough to measure, but does the number of citations correlate with whether or not the research is seen and applied in policy and practice? I suspect there is a weak correlation. The most cited medical paper of 2021, however, has indeed been referenced also in almost 100 policy documents to date.

-- Google Scholar reveals its most influential papers for 2021 Read in full: https://www.nature.com/nature-index/news-blog/google-scholar-reveals-most-influential-papers-research-citations-twenty-twenty-one

Ama Fenny, Ghana: How much of the evidence is used for formulating policies could be used as a measure of effective communication.

Moderator: How might we *measure* the effectiveness of health research communication? To help answer this question, I looked at the paper by two members of the HIFA Communicating health research group (Rob Terry (TDR/WHO) and Tanja Kuchenmuller (Evidence to Policy and Impact/WHO)) (see Citations - Assessing the impact of knowledge communication and dissemination strategies targeted at health policy-makers and managers)

The main conclusion was: 'There is limited evidence regarding the effectiveness of interventions targeting health managers and policy-makers, as well as the mechanisms required for achieving impact.'

Moderator: How did the studies measure 'effectiveness'? (See Citations - Assessing the impact of knowledge communication and dissemination strategies targeted at health policymakers and managers)

-- We included outcomes related to the effectiveness of communication and dissemination strategies targeted at managers or policy-makers...

Our primary outcomes were use or uptake of research results, decision-making, adherence to research knowledge (i.e. change in knowledge/awareness) and behavioural change...

Thirteen studies assessed the use or uptake of research results, 14 studies assessed decision-making or changing behaviours, six studies assessed intention to use or apply evidence, 14 studies assessed change in knowledge, and five studies assessed changes in awareness...

Secondary outcomes were those related to understanding, perception and persuasiveness. We considered only objective understanding and not self-reported understanding. Perception referred to how effective an intervention was perceived to be. Persuasiveness considered how likely participants were to make a hypothetical decision in favour of an intervention...

Understanding was assessed by nine studies, perception by seven studies and persuasiveness by three studies, and cost was reported by a single study as a research gap...

Additionally, the included studies assessed outcome measures that were not included in our protocol. These included learning (six studies), attitudes/beliefs (four studies), skills or competencies (three studies), discussion regarding the evidence (two studies), health outcomes (two studies), engagement (two studies), policy changes (one study), value of research evidence (one study), scaling-up of intervention (one study), acceptability (one study), research culture (one study), intention to act (one study), sustainability of evidence-informed policy-making (EIPM) (one study), research coproduction (one study) and credibility (one study).

Moderator: The implication is that there are many possible outcomes to consider, and many possible approaches to measurement. As we have discussed previously, there are many aspects to the term 'effectiveness', and the definition of 'effectiveness' will vary from one perspective to another, and from one context to another. Are we able to identify a numerical indicator of 'effectiveness' that can be applied to research communication? Unanswered question: It would seem perhaps not. I look forward to hear what Rob and Tanja and others have to say on this topic. Meanwhile I am reminded about a well-known and highly controversial measure - the journal impact factor - which is based on citations. *If* there is no single numerical indicator of effectiveness of research communication, the implication is that each instance of communication needs to be assessed on a case by case basis, on the basis of whether the communication achieved the desired objective(s).

Q2. What are the different approaches to communicating research (e.g. academic journals, policy briefs, interaction with policymakers, press releases, social media, infographics, use of video)? What is your experience with these approaches? What works and what doesn't?

2.1 Planning the approach

Mark Storey, USA. I think approaches will vary based on a number of complex factors including:

1. What is the operational level of the change you are seeking? Who has the authority to implement the change? Is the intervention or change something that can be implemented by

individual practitioners (e.g., physicians, public health officials), or does it require a policy approval or decision within an organization (e.g., a hospital, clinic, or agency), or is it something that needs to be agreed upon or enacted at the association or government level?

- 2. What are the political and personality factors among the individuals and organizations that have the authority to approve the change or not?
- 3. Who are you? Are you an insider/part of the system and what is your institutional relationship to the authorities you are trying to influence? Or are you an outsider (from a foreign-financed NGO or an independent entity) and what is your reputation, what kinds of leverage/incentives do you have available?...

Samuel Sieber, Switzerland: Know who to talk to: Conduct a basic stakeholder mapping/listing based on your findings. I usually find it best to avoid complex mapping techniques, power matrix or support vs. opposition charts (they are often unnecessarily complicated). Simply ask "who needs to know" about your research findings and list names, contact details etc. TDR's SORT IT/Knowledge Management module has a great template for this (maybe not yet publicly available).

Khin Thet Wai (Myanmar): Considerable understanding of the needs and concerns of policymakers from the outset should be in place by taking into account of the annual reports, keynote addresses, recent health regulations and acts, donor evaluation reports, meeting minutes etc.

David R. Walugembe, Canada: As rightly discussed, there are several approaches to communicating research including academic journals, policy briefs, interactions with policy makers, press releases, social media, infographics, and use of videos among others. To this list we can add book chapters, blogs, newspaper articles, websites, factsheets, drama skits, music pieces (edutainment), policy dialogues, townhall meetings, television and radio talk shows, conferences, workshops and meetings among others. I have had the unique opportunity of using several of these approaches while supporting eight health systems- related research coalitions in sub-Saharan Africa to engage their diverse stakeholders in knowledge translation. A brief comment about these approaches is that none works successfully independent of others! One needs a combination of these approaches to communicate effectively. They are also context specific- the success of some approaches varies from one context to the other. Additionally, the characteristics of the intended recipients of the health research communication (policy makers) including their capacity to read, interpret and assess/evaluate research communication, their power, influence and interest in relation to the research communication may all affect the approaches used to communicate. Additionally, the quality of the research communication (findings), their timing, public sentiments about the subject matter they relate to, may also influence which approaches may be successful in communicating research findings. For example, communicating research findings that may contradict government policies and programs via mass media during an election season may be interpreted as opposition to the government in power and may attract sanctions from policy makers while similar efforts may be welcomed as constructive input once the policy makers have successfully assumed their

elective positions! Likewise, findings that address issues of concern to certain populations may be effectively communicated by mobilizing and engaging such communities pragmatically through activities or platforms that they are familiar and resonate with. For example, edutainment strategies such as sports, music, dance and drama may be effective ways in communicating key health messages to policy makers dealing with youths and communities that may not be able to read and write but can interpret and or use such messages.

2.2 General considerations

Unanswered question: **Moderator**: I would be very interested to hear any examples of a communication strategy for a piece of research. What were the objectives for the communication? What did you do? What were the results? Were any lessons learned that could be shared with others?

Unanswered question: **Moderator**: Have you ever published a paper? Did it make a difference to policy or practice? Or was it ignored? Please let us know your experience!

Samuel Sieber, Switzerland: Even with the best of strategies, effective communication also remains a game of opportunity, network, and politics... It's able to recognize windows of opportunity (a sudden interest in a topic from a high-level politician, an invite to publish an oped in a magazine, a retweet from a major multilateral agency, etc.)...

Hajime Takeuchi, Japan. When the wind as the possibility of the proposal is realised blows, the mass media pick up the proposal as news, and policymakers may react sensitively to that wind.

Richard Fitton, UK. Hajime's comments "when the wind of the possibility of the proposal blows the mass media pick up the proposal as news, and policy makers may react sensitively to that wind" has rung through during our 30 year professional struggle to release doctor's grip on their medical notes. The first wind was the murder of over 200 patients by a family doctor who covered his tracks by altering his medical records to cover his tracks about false diagnoses of causes of death. The second has been the covid19 pandemic. The first wind forced the attention of the medical regulatory body, press and government, the second has done so too. Patient access to records is an objective of Europe, the G7 countries, China and, I am sure, of many other countries but we started to implement the change in the early 1990's.

Emily Vargas, Mexico: [translated from Spanish] The strategy, route or channel to share or disseminate scientific evidence will depend on the political moment (phase of the public policy process), as well as the closeness or influence (lobbying capacity) that the researcher or the organization to which he is linked has with the decision-maker. The identification and assessment of it requires an analysis of the environment, the key actors, their interests and the issues surrounding it. To be concrete, the most effective strategy is identified in an analysis of the context at the moment a window of opportunity is identified.

Moderator: We have previously noted the paper by HIFA working group members Rob Terry, Tanja Kuchenmuller and colleagues:

CITATION: Assessing the impact of knowledge communication and dissemination strategies targeted at health policy-makers and managers: an overview of systematic reviews. Evelina Chapman et al. Health Research Policy and Systems volume 19, Article number: 140 (2021) https://health-policy-systems.biomedcentral.com/articles/10.1186/s12961-...

The main conclusion is: 'There is limited evidence regarding the effectiveness of interventions targeting health managers and policy-makers, as well as the mechanisms required for achieving impact.'

Unanswered question: What does this tell us, if anything, about the wide variety of communication approaches that have been reported by HIFA members during this discussion?

Moderator: The lack of demonstrable effectiveness is not surprising. First, we see that research communication is a complex, non-linear process. Second, the definition of 'effective communication' is highly variable. Third, we note that there is no one-size-fits-all approach to research communication - the strategy needs to reflect the specific objectives of the communication, and these perceived objectives may vary from one perspective to another. Fourth, there is no agreed indicator or measure of effectiveness - it varies case by case.

Moderator: Another finding of this study is: 'Regarding dissemination strategies, interventions that aimed at improving only the reach of evidence did not have an impact on its use in decisions, while interventions aimed at enhancing users' ability to use and apply evidence had a positive effect on decision-making processes.' I look forward to hear more about this from Rob and Tanja.

Moderator: Looking again at our discussion over the past 3 weeks, this second finding seems to align with our emerging narrative. Namely, we started with a simplistic view that a researcher/research team has a finding that they want to communicate *to* policymakers, and increasingly we note the importance of interaction *with* policymakers and other stakeholders throughout the research cycle. And when we look at research communication from a public health perspective rather than a researcher perspective, we note the importance of collaboration and research synthesis rather than competition and direct impact of single studies.

Moderator: In terms of supporting research communication in the future, Mark Storey (USA) suggested: "It would be useful to develop a toolkit (describing the different types of interventions) together with a number of brief case studies providing examples of different approaches used at many of the different operational levels and local settings in which changes have successfully (or even unsuccessfully) been promoted." Is anyone aware of previous work in this area? What already exists in terms of guidance for researchers to increase the visibility and impact of their work?

2.3 Making research visible

Moderator: (Almost) all research should at least be available in a peer-reviewed journal, and the paper should ideally be freely accessible to all. ('Tertiary research' is an exception, as this is typically defined in terms of policy briefs and clinical guidelines. Even then, tertiary research

should (almost) always be peer-reviewed, and indeed the process for WHO guidelines, for example, is more rigorous than standard peer review.)

Joseph Ana, Nigeria: Today, researchers can pre-print their work before or whilst they submit their manuscript to a journal of choice, thereby side-stepping traditional peer review scrutiny. The result is that before the peer reviewed and 'approved' research report is published, policy makers already have seen and / or read the unscrutinised version. Therefore, increasingly, policy is informed by the un-peer reviewed preprint and implementation already on the way before the 'approved' peer reviewed version is published...

Joseph Ana, Nigeria: One other influencer or confounder of the current research to publishing to policy to practice pathway is the blog... The initiated (researcher, author, journals, subject experts, etc) know that blogs are personal opinion, without peer review but the uninitiated politician-policy maker does not know that.

Irina Ibraghimova, Croatia: - In our author guidelines we advise the authors besides 'Research implications' also to identify 'Practical implications' and 'Social implications' and include those sub-headings in the structured abstract of an article. - We also recommend to add a 'plain language summary'. - Each journal issue provides a review of included articles, which concludes what healthcare practitioners, educators, and managers can learn from that issue and apply to their own areas of practice. Those reviews are in open access. - As an editor I am constantly working to attract authors and peer-reviewers not only from academia, but from other sectors as well.

2.4 Making research understandable

Ama Fenny, Ghana: There are a variety of ways to present the same information and from my experience, lengthy reports and academic journals are hardly used by policymakers. Rather, briefs, press releases and infographics catch their attention. Sometimes as a researcher, you are often asked what the key message is from all the study results and what is your call for action. This can be hard if your study has several objectives but I would limit the key messages to at most three per study.

Richard Fitton, UK: Could we add "using" pictures to the 8 points of communicating research? [*see note below] Much research suggests that patients remember 15% of what they're told face to face, 25% if they are given written supplementary information and 80% if they are given pictures. Current technology makes this feasible and I would suggest the supportive use of music if this supports the messages?

Joseph Ana, Nigeria: The answer lies in recognizing significant characteristics of a policy brief as one tool aimed to increase the possibility of transferring research to policy and then practice. By nature, policy briefs are different from academic reports. They are meant to be presented to usually, a non-academic chief executive / policy maker to aid policy making that is based on evidence, informal, brief, clear and engaging in a positive tone. To be effective and

persuasive, it should not be dominated by technical and specialist jargons. The chief executive should not have to browse google to search for meaning of terminologies in the brief.

Policy briefs are generally valued by policy-makers, so long as they meet the criteria listed above. In addition, the writer /author of the brief must bear the policy maker and his needs in mind. It should easy to read because decision-making is already a complex process, with other conflicting interests, ideas and values in the mix, to take account of. Furthermore, prior established credibility of the writer/author and the research source are equally important. In our experience, a policy brief should not be more than three pages which the often busy chief executive can spend between thirty minutes to one hour to read, leisurely, understand, and act on.

Sian Williams, UK: I'm reminded of excellent thinking by Peter Sandman on risk communication. It considers two dimensions - outrage and hazard. Is there sufficient or insufficient in relation to any particular topic and how can communication strategies rebalance. https://www.psandman.com/index-OM.htm

Sian Williams, UK: I think scientific publications may be better at describing the hazard than in considering the outrage factor. Maybe the role for good journalism and advocacy by scientists, clinicians and public can focus on the outrage through narrative. So many publications start with "3rd leading cause of...." " will be the 4th leading cause of...." which may be aiming to produce outrage, but actually just falls flat due to repetition.... they can't all be?

2.4.1 Making information available in the right language

Ruth Martis, New Zealand: Most of all, communication needs to be in the language(s) of the people/country. Of course, we strive to translate from English to or other languages into English for LMIC at least abstracts but this does not necessarily happen in Europe, hence even in high income countries evidence is not necessarily translated. I realise there are many variables why communication is not effective but I have just been travelling through Germany, Denmark and Greece and am amazed how much evidence based published literature with important outcomes for maternity care is not understood or implemented. My guess one reason this is so that those results were only published in English or other languages. In particular I noticed, People spoke and understood conversational English well, but when it came to academic and research words, many were at a loss. Reading an academic article in English as a second language needs sufficient research vocabulary and takes time to translate by the individual. For a simple example, the routine giving of an enema during labour has clearly shown no benefits, but can cause anxiety for the labouring woman etc. These were valid research results a long time ago but only published/communicated in English it seems. I do realise there are many variables affecting communication and the transfer of knowledge into practice, but let's start with the mantra I often use: 'the language of the heart (first language) is what speaks to the heart' and only that will effect long lasting change'. If translation work or translators for oral communication are too expensive, then maybe we need to offer focussed academic/research English or other language courses.

Chris Zielinski, UK: In the context of our current discussion of research communication, I should note that we not only need to translate research into a level of language appropriate for policy makers and the general public, but often also into local languages - an almost completely neglected part of research communication. This has obvious practical implications - misunderstandings of language were one reason for attacks on health workers in the Congo trying to help with the Ebola outbreak a few years ago. There are also ethical issues, particularly when research is based on human subjects, since it is an obligation of ethical research to communicate the results to the subjects. Again, this ethical obligation is often ignored.

2.5 Making research credible

Moderator: The vast majority of editors form a critical part of the research communication process. They typically have the needs of their readers in mind. They receive and initially assess manuscripts, manage the peer review process, and edit the final paper for accuracy and clarity. [However] the World Association of Medical Editors newsletter refers to a blog that looks at the integrity of editors: http://deevybee.blogspot.com/2022/09/we-need-to-talk-about-editors.html

"We need to talk about editors...Even if an editor starts off well, they may over time start to think 'What's in this for me?' and decide to exploit the opportunities for self-advancement offered by the position. The problem is that there seems little pressure to keep them on the straight and narrow; it's like when a police chief is corrupt. Nobody is there to hold them to account...we see clearcut instances of paper mill outputs [*see note below] that have apparently been approved by a regular journal editor...some preliminary suggestions...

Moderator: 'Studies have limitations. Yet the limitations often do not appear in media reports or even in the scientific paper...' [ref The scientific communication ecosystem - see Citations]

2.6 Making research relevant

Samuel Sieber, Switzerland: When communicating health research, situating the evidence in context (and describing it sufficiently) is key. Also helps to create compelling content that is of interest for different audiences.

Samuel Sieber, Switzerland: Reflecting the implication of evidence for patients (or, better: individuals with lived experience), communities, and practitioners and implementers. I usually try to create content that tells the story of a piece of evidence from one or several personal perspective(s). This also helps shedding light on different aspects such as social, economic, environmental etc. determinants of health and health inequalities.

2.7 Making recommendations and persuading policymakers and practitioners

Mark Storey, USA. In my own past experience, which focused on promoting the use of evidence-based clinical guidelines at the institutional hospital or clinic level, our approach was to (a) identify and promote individual champions within the institution and (b) learn about existing quality review processes and try to find ways to engage within them to promote change.

Samuel Sieber, Switzerland: Be guided by science... This highlights the importance of including some form of "so what?" and "way forward" in science communication. Can be tricky where a study/review does not have any concrete recommendations, but can be mitigated with (above) strategies to personalize evidence with examples, and discuss problem-solving strategies based on complementary evidence (other studies, narratives from people with lived experience etc.)

Samuel Sieber, Switzerland: Stop being so (overly) dramatic: important to always stay true to the actual evidence and not too unnecessarily dramatize in the sheer interest of storytelling or to gain attention...

Samuel Sieber, Switzerland. [Some research may even recommend current policy to stay as it is.] This is very true and important to remember. I would argue, however, that no change in policy or practice is also a recommendation worth communicating, with the desired outcome of maintaining and strengthening an existing policy or practice.

Samuel Sieber, Switzerland. Unspecific recommendations, on the other hand, are in my experience a major challenge in knowledge translation and research communication. In any given study or review, recommendations are necessarily bound to the actual evidence. This often makes them very general, and does not allow to take political context, implementation considerations etc. sufficiently into account. Making research recommendations actionable often requires reflecting and enriching them with additional sources of "evidence", such as programme data, evaluations and direct interaction with policy-makers, implementers, and people with lived experience. In my view, this is the core supporting function of knowledge translation. And I would very much second the importance involving key stakeholders from the beginning of any research process.

Moderator: In my day-to-day reading of global health research, I suspect that most of the recommendations I see are really quite non-specific. This is fine if it accurately reflects the actual research (it makes no sense to make recommendations specific for the sake of it, without the evidence for that specificity). The research then becomes one part of a jigsaw of pieces of evidence that, ideally, are interpreted for specific countries or contexts. It would be interesting to hear more from HIFA members about the challenges of global and local synthesis.

Samuel Sieber, Switzerland: I would... argue that "getting attention and consideration of policymakers (and their advisers)" is not enough to define effective communication. And I would strongly advocate for a definition that also appeals to a researchers' responsibility to seriously consider and promote policy and practice implications and evidence translation of any piece of evidence.

Moderator: I think research communication is indeed more about the sharing of knowledge than persuading policymakers to make a particular decision. Researchers can undertake the latter, but I would call it advocacy [not research communication].

Samuel Sieber, Switzerland: Get consent on desired change: Connect 2-3 stakeholders, decision-makers, or implementers to outcomes you would like to see based on the evidence. Define what change you are recommending - and get consent from co-authors, partners, etc. (that way, you create a shared vision of change and widen the perspective). Consider breaking up the change into incremental steps (for instance, what would you expect, like, love to see in a short-, mid-, or long-term perspective) - and remain stakeholder-oriented (who needs to do what). This is essentially a theory of change exercise, but it can be done in a quick and light format. (This is ideally done at the design stage of a study/review already, but can still be put together after publication, too). I found outcome mapping works great, ODI's Roma guide has some great tools, see: https://odi.org/en/about/features/roma-a-guide-to-policy-engagement-and-...

Samuel Sieber, Switzerland: Craft your message: Translate your findings and recommendations into an actionable message targeted at your main stakeholders. This can be done in multiple formats: a full-fledged policy brief, a two-page an evidence-brief format, or a simple presentation. At the very least, the format should include a) some background and context, b) why/how findings matter, c) a factual account of key findings, and d) actionable, stakeholder-related recommendations (who should do what). There are multiple evidence/policy brief templates available across the internet: This SUPPORT Tool article [https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-45...] discusses strategic considerations. **EVIPNet** guiding some and the manual [https://apps.who.int/iris/handle/10665/337950] fairly detailed offers guide comprehensive policy brief development. Notably, I often found that this to be the time to bring in additional evidence from other studies, programme data, evaluations etc., as a single piece of evidence may only provide limited ground to recommend practical action.

Samuel Sieber, Switzerland: Choose your main channels: Decide how to best reach key stakeholders. I often found that merely sharing the study or sending an anonymous evidence brief is the worst option! Is there someone in your network that can connect you directly to a decision-maker (or, even better, have they been involved in a study from the beginning)? Can you present your findings in the actual study setting (to practitioners, in the community?). Are there organisations/partners that may be able to leverage your findings from their work? What do stakeholders care for the most (see 1)? Going back to the stakeholder list often already defines a basic communication strategy, which can be revised and updated regularly.

Samuel Sieber, Switzerland: Consider amplifying your message on additional channels: It's usually only at this point I would consider investing in developing additional formats such as traditional print, audio visual, or social media (podcasts, video clips, social media etc.) - for two reasons. For one, there is a risk of getting lost in content strategies and production processes, good audio visual and social media content takes time to produce. The other reason is that many of these formats require to be very short, visual and (at times) dramatic, posing a challenge to translate factual evidence into suitable messages. Ideally, this wider communications strategy supports the more targeted research communication to strategic decision-makers. This is where collaboration between researchers, knowledge translators and

communication professionals (journalists etc.) is both the most challenging and the most promising. (And that is not to say that researchers who are active on social media should not feel encouraged to post their findings!)

Moderator: Effective research communication can and does take place without a change in policy or practice.

Moderator: It is arguably more appropriate to say something like 'Effective communication of health research implies that the key messages of the research have been integrated in the development of policy and practice'. This integration can be indirect. Typically, a single primary research study will not result in a change in policy or practice. However, it can be said to be effectively communicated if, for example, it has been included in a research synthesis (e.g. systematic review).

Moderator: In the case of Cochrane reviews it is clear that 'effective research communication' is about providing information and not about recommending a particular course of action. And yet repeatedly in the wider health literature we see both primary researchers and secondary researchers go beyond informing, towards making recommendations and even lobbying for specific policy change. If (some) systematic reviewers specifically avoid making recommendations, then why do so many primary research studies make recommendations?

Moderator: In what circumstances is it appropriate for a researcher/research team to persuade policymakers to take a specific course of action, rather than to focus on providing the information that policymakers need to make their own decisions?

Moderator: I am reminded of Richard Fitton's message last week, when he quoted the UN Assembly President: "We are not asking scientists to tell us what to do. We are asking scientists to show us the options"

Joseph Ana, Nigeria. At least in the environment and context where my experience comes from, it will be more difficult for a sole researcher to get his/her result put into policy, because of all the other extraneous factors that come into play when public policy is being made. Not least is the 'carrying along' factor. Therefore engaging as wide as possible many people especially those in the policy making corridors is crucial. Yes, the research findings g should be valid and useable but engagement as early as in the pre-research Stage is very important. Other advantages of early engagement are that everyone has a sense of ownership in the policy and the outcomes and it makes scale up more likely and easier.

Richard Fitton, UK: I have been well supported by 5 out of six MPs and am in correspondence with and in attendance at the surgery of my local MP on two digital health issues. I reckon iterates [it takes] 12 to 18 months to successfully help an MP to "understand" your case and about another two or three to get the all party committees to understand.

Richard Fitton, UK. The new Assembly President also told UN News that the theme for the body's 77th session, would be 'solutions through solidarity sustainability and science', aiming specifically to enhance the role of science in the UN body's decision shaping. 'Member States are struggling with declining trust [and] division. Our task is to find solutions based on

evidence; solid evidence that can help us move forward. Science can provide science-based evidence, Mr. KÅ'rösi said, stressing; 'We are not asking scientists to tell us what to do. We are asking scientists to show us the options and to show us what might be the consequences of our actions or inaction. Science should be invited as a 'supporter', but ultimate political decision making remains with the Member States.

Moderator: Unanswered question: With respect to direct impact of single primary research studies, can anyone give examples where this has been realised? I suspect it is most common when the research is looking at specific implementation issues at the local level? This may impact especially on policy decisions with a 'little p' (e.g. programmes and projects) but perhaps there are also examples of impact on Policies with a 'big P' (national and subnational policy). Where single studies impact on policy, what are the key communication approaches that have been successful? Policy briefs, face-to-face meetings, media?

2.8 Engaging other stakeholders

Ama Fenny, Ghana: What has worked for us in one of my past projects was the involvement of all stakeholders - government, CSOs, NGOs, queen mothers and chiefs etc right from the inception to the end of the project. When the final results were released, we did an abridged version and shared this with all the people who were part of the process. As we engaged on different platforms - workshops, national forums etc, we were eventually called to present the findings to the Vice president of Ghana. We still published several papers and book chapters but what made the impact was making the information less technical and more accessible to those who needed it the most - policymakers.

Moderator: It would be wonderful to hear from you [Ama Fenny] and others what made an impact. If I think back to previous conferences and meetings, sometimes a personal story was even more compelling than a stark statistic. I have heard policymakers speak movingly about how they witnessed a death or someone suffering, and I even remember one policymaker who said something like "I resolved there and then to make this my priority in office". My own experience of witnessing 35 years ago an unnecessary child death in Peru due to lack of basic knowledge on how to treat diarrhoea (the parents had believed they should withhold fluids, thereby unknowingly precipitating her death) was the seed for my lifelong commitment to improve the availability and use of reliable healthcare information. Do you or others have examples of different approaches to research communication you can share?

Ama Fenny, Ghana. [in response to moderator] It was in simple English and also stating the key messages clearly. It involved 3 basic steps, stating the facts (results), stating the implications (effect on individuals, families, businesses and economy) and finally the call to action (advocating for policy change to curb productivity loss).

Ellos Lodzeni, Malawi: Any Research which has to be relevant must involve and engage the users through their Associations or organizations. This will ensure that all relevant factors have been taken into account and there is acceptance and cooperation from the users. User cocreation is very critical. Any deviation will produce sub-standard results. Users are experts in their own right due to personal experiences.

Samuel Sieber, Switzerland: Build trust and engagement that can combat dis/misinformation. This also requires collaborating across disciplines and actors (e.g., between scientists and

communication specialists, with patient organizations and non-state actors), and makes communicating health research into more of a dialog format than a one-sided dissemination process.

Joseph Ana, Nigeria: On seeing the shocking findings of the failing Health system in Cross River State, Nigeria in 2004... It was decided that whatever plan we designed had to draw-in and engage other sectors of the state government, hence the first state health plan was anchored on a Health in All Policies Policy (HiAPP) approach, which gave birth to the 12-Pillar Clinical Governance Programme. We (the SMOH) engaged all of government in health, in particular, the ministries of Finance, Education, Water resources, Power and Electricity, Works and Roads, Lands and Housing, Information and Public Enlightenment, and Governor's Office had representation the Management Committee of the Centre for Clinical Governance Research and Training (the Think Tank). We also engaged every donor / development partner working in the State and outside it... The message here is that involving non-medical people and the wider population at the pre-search [? pre-research] and concept level aids later communication of the results from research, which also aids evidence informed policy making and implementation.

Quote: 'As uses and expectations around local evidence may be different for different groups, aligning these priorities through multistakeholder engagement in which all parties participate in defining the questions and cocreating the solutions is critical, along with promoting standardized reporting of contextual factors...' (see Citations - Role of Local Evidence in Transferring Evidence-Based Interventions to Low- and Middle-Income Country Settings)

Quote: It is unclear how to engage a wide range of knowledge users in research. We aimed to map the evidence on engaging knowledge users with an emphasis on policy-makers, health system managers, and policy analysts in the knowledge synthesis process through a scoping review... We used the Joanna Briggs Institute guidance for scoping reviews... All 84 documents were published in the last 10 years, and half were prepared in North America. The most common type of knowledge synthesis with knowledge user engagement was a systematic review (36%). The knowledge synthesis most commonly addressed an issue at the level of national healthcare system (48%) and focused on health services delivery (17%) in high-income countries (86%). (See Citations: Engaging policymakers, health system managers, and policy analysts)

Quote: Policy-makers were the most common (64%) knowledge users, followed by healthcare professionals (49%) and government agencies as well as patients and caregivers (34%). Knowledge users were engaged in conceptualization and design (49%), literature search and data collection (52%), data synthesis and interpretation (71%), and knowledge dissemination and application (44%). Knowledge users were most commonly engaged as key informants through meetings and workshops as well as surveys, focus groups, and interviews either inperson or by telephone and emails. Knowledge user content expertise/awareness was a common facilitator (18%), while lack of time or opportunity to participate was a common barrier (12%). (See Citations: Engaging policymakers, health system managers, and policy analysts)

Quote: Conclusions: Knowledge users were most commonly engaged during the data synthesis and interpretation phases of the knowledge synthesis conduct. Researchers should document and evaluate knowledge user engagement in knowledge synthesis. (See Citations: Engaging policymakers, health system managers, and policy analysts)

Quote: 'There are numerous perceived benefits to engaging policy-makers, policy analysts, and health system managers in knowledge synthesis. Examples include more comprehensive literature searches, improved rigor of knowledge synthesis findings, greater clarity of results [59] as well as greater relevance, uptake, and usefulness of results. However, the results of our scoping review suggest that very little research has been conducted in this area.' (See Citations - Engaging policymakers, health system managers, and policy analysts)

2.9 Role of other stakeholders

Quote: - Information professionals carry out many activities involved in mobilising research into practice but this is often not recognised.

- Localising and tailoring are two key mobilising mechanisms that information professionals can use to increase the use of evidence in practice.
- Information professionals make evidence fit for decision making by localising evidence which relates to local context and needs.
- Information professionals tailor the format of evidence to present commissioners and planners with actionable messages.
- Information professionals' expertise could be used more systematically to champion a culture and infrastructure within and between health organisations that encourage knowledge mobilisation. (See Citations Researchers' perspective of real-world impact from UK public health research)

2.10 Communicating systematic reviews and rapid reviews

Sarah Rosenbaum, Norway: Adding to Samuel Sieber's mention of SUPPORT tools, I'd like to point to another study from the SUPPORT project, where we developed a template for presenting evidence from systematic reviews to policy makers in LMIC's:

Evidence summaries tailored to health policy-makers in low- and middle-income countries https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3040014/

We carried out this work through extensive user testing of an early prototype in several countries, where researchers in our network interviewed policy makers in their local contexts. My role was as information designer and researcher. Some of the more persistent challenges encountered are echoed comments this forum: we many in participants had a poor understanding of what a systematic review - they expected information not found in the systematic reviews (e.g. recommendations, broader scope)

- they wanted shorter, clearer summaries.

We addressed these issues in using several strategies, outlined in the article (too much to write here).

I would like to point to one of most appreciated features in these summaries was a table we added with authors' interpretation of the relevance of the evidence and intervention for LMICs, which I was reminded of when reading the article Irina pointed to about localizing and tailoring research. By explicitly mapping findings to researcher's interpretations of the possible applicability of each of these, you can transparently provide an opinion about possible applicability, something users found very valuable.

The other highly appreciated feature was the front page with key messages up front. We based this on a graded-entry principle of presenting in layers: key messages in a top layer, a middle layer with more information, and access to the full text for those who want unedited information. In my view, this is one of the most robust principles people can use in presenting research evidence in any kind of format, because it caters to the very different needs of both expert and less-expert audiences.

This last bit reminds me of a paper about communication theory in implementation science, describing two paradigms of communication as transactional (transferring information) and transformative (building shared

understanding). https://implementationscience.biomedcentral.com/articles/10.1186/s13012-.... I would venture to say that optimizing evidence presentation falls under "transactional" communication, while listening to how people experience your evidence dissemination falls under "transformative".

More about the SUPPORT Summary work here: https://www.cochrane.no/support-summaries

Moderator: Claire Glenton has kindly forwarded me this checklist for dissemination of Cochrane systematic reviews. The accompanying guidance is quite detailed: https://training.cochrane.org/sites/training.cochrane.org/files/public/u...

Some of these are perhaps applicable only to systematic reviews while others may be more widely applicable. I think each of them are worth consideration as we explore how to improve the impact of health research communication to policymakers. Here is the list and below are a few initial comments from me.

The dissemination checklist: 1-page overview

- 1. Have you involved your target audience or sought their feedback?
- 2. Have you used plain language?
- 3. Have you used words in your title that your target audience is likely to search for, recognize, and find relevant?

- 4. Have you communicated to your target audience that this product is relevant for them?
- 5. Have you structured the content so people can find key messages, then access more detail if they want?
- 6. Have you made the content easy for people to quickly scan and read?
- 7. Have you shown that the evidence involves real people?
- 8. Have you specified the populations, interventions, comparisons, and outcomes?
- 9. Have you stated that this information is from a systematic review?
- 10. Have you specified how up to date the review is?
- 11. Have you avoided misleading presentations and interpretations of the effects?
- 12. If you have used numbers to present the findings, have you used absolute numbers and labelled numbers clearly?
- 13. Have you described the certainty of the evidence?
- 14. Have you presented the findings in more than one way?
- 15. Where the topic or findings may be upsetting, controversial, or disappointing: have you handled this sensitively?
- 16. Have you made it clear (a) that the review was prepared by Cochrane and (b) who prepared the dissemination product?
- 17. Is it easy for people to find information about who the review authors are, how they were funded, and any conflicts of interest?
- 18. Have you avoided giving recommendations?

Moderator: I invite discussion on any of the above, and especially on the last point:

18. Have you avoided giving recommendations?

Here, the Cochrane guidance says:

At a minimum:

- Do not give recommendations in your dissemination product.

Ideally, also:

- State explicitly that recommendations are not included.
- Think about how you can help people reach their own decisions.

The aim of a Cochrane Review is to provide the best available evidence, and then let people make their own decisions.

Moderator: Previous research has shown that engagement of policymakers in the research process increases the policy-relevance of research questions and promotes uptake and implementation. This 2018 paper looks at engagement in secondary research (knowledge synthesis). Although the paper does not make the point, I would propose that engagement of policymakers in secondary research is even more important than engagement in primary research. This is because secondary research, when done rigorously, uniquely promotes evidence-informed policymaking and is therefore more likely than primary research to have robust conclusions for implementation in policy and practice.

Moderator: As we have discussed previously on HIFA, it is also critical that policymakers and their advisers understand what evidence-informed policymaking actually means, i.e. that it is based on all available evidence (rather than the results of a single study). Furthermore, interpretation is complicated by the fact that much secondary research is overrepresented by research in high-income countries rather than LMICs. Therefore, LMICs have the added

burden of synthesising global and local research, an important topic that is not addressed in the study below.

Mark Lodge, UK: When planning a systematic review, it is always recommended to include library/information professionals while the search strategy is being developed. Asking for their advice or comments after the event is too late.

Moderator: The authors note that 'published evidence on the optimal methods of planning, doing, and sharing the results of [rapid] reviews is lacking...'. I suspect the same is true for evidence on the optimal methods of sharing the results of *any* research, including primary research. Unanswered question: Are you aware of any research on this topic? [see Citations - Top 10 rapid review methodology research priorities identified using a James Lind Alliance Priority Setting Partnership.]

Q3. What is the role of researchers in research communication, beyond publication of their paper? What is the role of other stakeholders (eg communication professionals, editors, media, public health professionals and critical thinkers)

3.1 Role of researchers

Khin Thet Wai, Myanmar. Apart from the dissemination efforts... enablers of effective communication of health research should also include initial advocacy about the research project to policymakers and other stakeholders.

Meena Cherian, Switzerland: Researchers will have to expand their role beyond 'academic goals' by involving themselves in communicating their research to community level. Raising awareness on the burden of disease and solutions at the grassroot level is a catalyst for sociobehavioural change and policies. Very often, important research are published and cited in high impact factor journals, however there is a delay in communication to the public particularly in layperson's language. Therefore, collaborations between health information forums and media, schools, public/community centres would not only enhance updated scientific information but would also generate evidence-based decision-making for proposing policy agenda in a timely manner.

3.1.1 Role of local/national researchers

Moderator: Unanswered question: Do you have any experience with the WHO approach to policymaking, whether from the point of view of a guideline developer, researcher, information professional or policymaker? Whether at global or country level? My (basic) understanding is that WHO produces international guidance that is made available to member states to help inform policy. Member states consider the global guidance in their own context and alongside relevant local research and use these to develop policy. Can anyone describe in more detail how this works? In particular, can you describe a case study where WHO guidance was adapted to inform national policy? Also, what actually happens when global evidence (for example

from WHO guidance) is synthesised with local evidence? Can you describe a situation where this has worked (or where it hasn't?).

Moderator, UK. In addition to contributing to a systematic review, local/national researchers have a unique role to study relevant factors in their country, so that policymakers and their advisers can synthesise global evidence (typically systematic review) with local evidence. Or perhaps there are occasions when the local evidence is so compelling that the global evidence becomes secondary? And there may be situations where decision making relies entirely on local evidence.

Oluwatosin Caleb Adeyemi, Nigeria: I have some experience with this in Contraceptive Programming led by youth. In about six years of research and policy work targeted at improving youth access to contraceptives, stakeholders and youth identified that integrating contraceptive access with usual care was most effective where youth-friendliness was instituted. However, programme after programme attempted to implement a 'Youth-friendly clinic' separated from standard care. IYAFP in Nigeria continues to provide this evidence to INGOs, but most funders appear to be set on implementing evidence from HICs to LMICs.

Moderator, UK: Reading the notes on this webinar, it seems there are a number of drivers here to successful research communication. First, it is relevant that WHO provides an enabling framework for synthesis and sharing of research at country level, through this new programme of Country Insights. The Insights provide a template which makes it both easier for countries to contribute, and provides for consistency and rigour. Those who are responsible for developing each Insight (policymakers at ministry of health? public health professionals?) will need to tap into their public health and research academic community for the relevant evidence, thereby creating a "pull" effect on research evidence. Furthermore it might be expected that this pull effect would favour secondary research and research from multiple studies rather than single primary studies, which might be expected to promote evidence-informed policy rather than policy driven by single studies. There are implications for communicators of primary and secondary research. Perhaps it is more important to provide frameworks and incentives for policymakers to collect and share evidence (pull) rather than to focus on the ability of researchers to make their research visible? Indeed the two can be complementary.

Moderator: Arguably, what policymakers need most is not the results of single primary research studies (although these can be paramount in selected situations), and not even the results of systematic reviews. Most often, they need a synthesis of global (secondary) evidence and local evidence, provided by expert information professionals. This critical process of global and local synthesis is not only important and complex, it is also (in my view) a neglected part of knowledge translation.

Moderator: Synthesis of global and local research is crucial for national and subnational policymaking. It is the basis of WHO's knowledge sharing approach whereby WHO provides rigorous international guidance that can be used and adapted by Member States.

Moderator: Unanswered questions: I would like to ask HIFA members: Do you have any experience you can share on global and local synthesis? We are especially keen to hear from information professionals at country level:

- How can global evidence (for example WHO guidance) be improved to make it more easily adaptable to national/local context?
- Are you aware of any resources to guide global and local synthesis?

Have you been involved in WHO guidance development? Or Cochrane?? Or the Global Evidence Synthesis Initiative? We would love to hear from you.

3.1.2 Role of researchers post-publication

Moderator: A representative of the research team (usually the 'corresponding author') needs to be available at all times after publication for other academics and other stakeholders to contact for comment, questions and clarifications. From my experience, it is hit-and-miss (more often miss) whether a corresponding author responds in practice. Occasionally we have corresponding authors join the HIFA forum to engage in discussion on the implications of their research.

Ama Fenny (Ghana): The researchers work does not end with the publication of their paper as is often the case. It is important for the results to be given more visibility. Many times, researchers are not fully equipped with the skills to communicate findings using other approaches. This is where other communication professionals are needed to bridge this gap. The role of the media in disseminating research findings should not be overlooked especially when findings are relevant for policymakers. But the media should be given the right information and key concepts explained to them properly. Otherwise they may put their own spin on the results and distort the findings. There should guidelines for engaging the media and transparency throughout the process.

Khin Thet Wai (Myanmar): 'It is of utmost importance to create the enabling environment for research communication beyond scientific publications. Researchers need to engage with regulatory authorities, policymakers and program implementers, academia, media personnel, and other influential stakeholders...'

3.2 Role of other stakeholders, eg communication professionals, editors, media, public health professionals and critical thinkers?

Moderator: With communication professionals, perhaps the research team itself includes a communication professional, or at least someone who has built skills and expertise in this area. In some research institutions, perhaps there is a dedicated communications and media department whose role is specifically to increase the visibility of research. Unanswered question: Have you any experience of working as (or with) a media or communication professional? We would also like to hear from you if you are an editor, a public health professional, or a 'critical thinker'.

3.2.1 Role of library and information professionals

Joseph Ana, Nigeria: I want to thank Mark for that advice about getting in touch with a librarian as you set out to start a systematic review. The same applies to making sure you get a

statistician involved in any research you want to undertake right at the first thought of it. You would not consult an architect after you have completed the building or put another way, that would not be the sensible approach if you want a livable and safe home.

3.2.2 Role of faith leaders

Moderator, UK: The support of faith leaders is vital in promoting the availability and use of reliable healthcare information. The following article is from today's BBC news: https://www.bbc.co.uk/news/live/world-africa-62845571 Uganda cleric urges people to believe in science...

3.3 Role of the media

Chris Zielinski, UK: If new health research is to be taken up by policy makers, there needs to be a strong and conscious effort for the research community to interact with the media. Let's remember that the aim is not just R2P - research to policy but R2P2P - research to policy, and then from policy to practice. (The latter is actually the point of the whole exercise.) The application of policy implies creating community understanding and awareness, and this will never come purely from research published in academic journals. We need joint efforts, collaborations and partnerships between research and media. HIFA could consider what mechanisms are possible for such interaction, and advocate for establishing them.

Geoff Royston, UK: [Media] influence can be positive, for example in publicising an important health protection issue, or negative, for example where media publicity misrepresents a health risk. (There are numerous examples of both of these, not least in the context of Covid and other epidemics.)

Balazs Babarczy, Hungary: There are a lot of different, often competing voices in the media, and policy makers, especially politicians, are the very experts of forging their own narrative and agenda using those, so I don't think we can expect that researchers will ever be able to outcompete them in this contest for society's interest. Therefore, I think that our ambition as researchers should rather be to spread our ideas within the expert circles of policy administration, and wait for the opportunity to arise...

Moderator: The mass media shapes public (and policymaker) opinion and yet reporting of health research in the media is very often inaccurate, incomplete, biased, misleading, and ultimately damaging to individual understanding, trust in science, health policy and health outcomes. What can be done to address this issue?... One aspect is that the media's motivation is largely to make profits, to exert influence, or at least attract the largest possible audience. A headline that honestly says "Studies have not established a link between chocolate on breast cancer" is less likely to 'sell' than one that says misleadingly "Chocolate causes breast cancer".

Moderator: A second aspect is that researchers themselves, and the research institutions and communication teams that support them, can overemphasise the importance and interpretation of their research. This can be further distorted by the journalist copywriters who change the

wording for dramatic effect. For example, "A is associated with B" is not qualified with an explanation of the possible causes of the association or, worse, it is misreported as "A causes B".

Q4. What are the needs and preferences of policymakers?

Chris Zielinski, UK: It is nice to imagine that health policy makers spend their Sundays reading academic biomedical journals - or even the policy briefs laboriously prepared for them by intermediaries - nice, but completely unlikely... To them, whatever health issue is making the headlines is clearly the most important one... Only after consuming the evening news do they reluctantly begin to peruse their policy briefs.

Emily Vargas, Mexico: [translated from Spanish] [Political] advisers and technical team are key players, since they are the ones who carry out the analysis of the context and share with the decision maker in short meetings, in the corridors, in a specific report that is sent to your email or WhatsApp.

Geoff Royston, UK: I spent 30 years, as an analyst and manager of analysts, working with health service policy makers and managers. Sometimes this was "hands on" research and analysis, sometimes it entailed commissioning research and sometimes it involved acting as a "broker" between academic researchers and policy makers. Given that background I offer a few comments about helping communication between researchers and policymakers to meet their needs of the latter. Some of these comments of course echo ones already made in this discussion. Some of the lessons were learnt the hard way!

- Be aware understand the policymakers' business, their needs and appreciate their environment. Talk, and if possible work closely, with them to improve this understanding. Be conscious of any difficulties handling research findings might present to policymakers.
- Be relevant find out health policymakers' and managers' "hot topics" and consider how research can identify and inform "high impact changes" in these areas.
- Be timely fit with the "zeitgeist" matters, and policymakers' timescales can be very short, which often does not sit easily with research timeframes. Communication about this needs to be realistic.
- Be visible publish and publicise in the right way in the right places. For example do not publish only in research journals. Policymakers and managers are busy people and have little if any time to spend assimilating research reports.
- Be compelling ensure messages are as robust and as simple as possible (though, to paraphrase Einstein, no simpler) and presented in a way that makes clear their policy relevance.

- Be a facilitator - make it easier for policymakers and managers to use research findings. For example computer models can help link research and policy; taking results from variety of research studies in their input and producing output that directly informs policy questions (the Lives Saved Tool (LIST) model is a well-known example). Such models also help indicate gaps in research needed to address policy issues - so they are a two-way communication tool.

Moderator: Unanswered question: We have tended to talk of research communication as a linear process from the researcher to the policymaker. And yet the comments in this discussion clearly show that it is a lot more complex than this. Another perspective is to start from the policymaker, who in reality will be seeking multiple inputs, only some of which are directly research-related. Seldom is there a simple researcher-to-policymaker dynamic.

'The difficulty of communicating complex knowledge to policy makers has generated a substantial literature. Ironically despite this wealth of literature the evidence on what works in communicating scientific findings is mixed [1] although there is a growing consensus that the starting point should always be your audience(s). This may seem obvious but understanding how policy makers' process evidence and the context in which they operate is key [2]. Policy makers often have too much information to digest so will use heuristics to filter information and make decisions quickly. So ask yourself how can I help policy makers process what it is I want to say? What should my communication strategy be? What format should I communicate in and when should I communicate? Finding the right time to communicate can also effect whether you have a receptive audience or not... The way you present or frame your evidence can have a fundamental effect on how it is understood and whether it's taken up by policy makers... Using stories or tailoring your message can help with framing your evidence...' [from How to communicate effectively to policy makers - A guide for Academics]

4.1 Contextual factors

Wilber Sabiiti, UK: COVID-19 pandemic, particularly between March 2020 and March 2021 is a perfect example of a scenario in which policy makers and decision makers expressed hunger and readiness to receive research evidence to inform their course of action. Consequently, the channels of communication between researchers (scientists) and policy makers were established and open 24-7 for evidence to stream in and get used as quickly as possible. We often heard politicians, say, 'we are following science for every decision taken'... One take home from this is that readiness to receive information by the recipient (policy maker) from the communicator (researcher) is a critical for effective communication.

David R. Walugembe, Canada: The needs and preferences of policymakers may vary from one context to another and are dependent on several factors. These may include their capacity, power, influence, interest, resources, ideas and institutions. Policymakers with all these variables at their disposal may need and prefer advice/evidence that can empower them to do better and deliver on their mandates. However, those that operate in constrained systems may not be receptive to ideas/evidence that puts more strain on their resources, challenges their approaches or threatens their survival in power. Additionally, policy makers in systems with

empowered electorate and democratic systems that encourage accountability, would need feedback from the electorate on how best they can deliver services while those operating in alternative systems may not create empowering ambiances for such input.

Massimo Serventi, Tanzania: I've been in Africa for the past 40 years, I've witnessed a transformation in healthcare that to me is bad and deserves comments, in primis by African colleagues. Today medicine is mainly curative (1) more and more private, (2) based on prescription of drugs (3) and lab tests (4), people are empowerished by this trend (5). I feel this last point to be serious, poor deserve respect and not exploitation, certainly so by their professionists in their countries...

4.2 Helping policymakers to differentiate reliable and unreliable information

Joseph Ana, Nigeria: So, in creating necessary links and cooperation for communicating research to inform policy makers, HIFA can highlight and educate policy makers to be aware of these new methods by which some researchers by-pass traditional peer scrutiny, which may impact negatively on implementation of policy derived from them, when eventually the approved peer reviewed research result is published. Preprints and Blogs apart from the labels, need to carry some Alert sign, especially for the uninitiated politician-policy maker, so that they and other readers including initiated policy makers and the media know that these are the personal opinion of the researcher. And that the report may change after peer review and therefore should not be the basis for making Policy. The same awareness should be applied if secondary (systematic review, meta-analysis) or tertiary level (guidelines and policy briefs) research reports are being used / prepared: that is, information from preprints and blogs, should be marked as such, so that users should know that the information may change later.

Khin Thet Wai, Myanmar: Needless to say, researchers' commitment towards seeking solutions by primary and/or secondary research to address priority health problems and to empower communities should match with the preferences of policymakers. Considerable understanding of the needs and concerns of policymakers from the outset should be in place by taking into account of the annual reports, keynote addresses, recent health regulations and acts, donor evaluation reports, meeting minutes etc. Mostly, policymakers might prefer research recommendations leading to short term solutions with visible outcomes to gain public confidence and quick win. By and large, rapid surveys and mixed methods approaches might fulfil the needs of policymakers for quick decisions and resource allocation for implementing effective strategies. However, safeguarding the quality of research in terms of scientific integrity and ethical soundness is of paramount importance.

Q5. What can be done to better support researchers in the communication of health research?

Joseph Ana, Nigeria: Most researchers in LLMICs wake up every day wishing that they ... have more practical support on the ground from their governments and partners from elsewhere. Help in the form of more resourcing including provision of functional information

resource centres with regular reliable connectivity, hard and soft copy reference texts, regular scheduled on-hands training and retraining on how to read, write and publish, including training on critical appraisal of published material. They need help with free open access to publish their work to the world....

Moderator: Some [researchers] are driven by motivations such as 'making an impact' that can undermine their ability to provide unbiased contributions to the knowledge base... Unanswered question: We all continue to be unaware of such guidance.

5.1 Capacity building and training tools

Mark Storey, USA. It would be useful to develop a toolkit (describing the different types of interventions) together with a number of brief case studies providing examples of different approaches used at many of the different operational levels and local settings in which changes have successfully (or even unsuccessfully) been promoted.

Samuel Sieber, Switzerland: Agree that the TDR SORT IT training approach – and especially the knowledge management module – are great and impactful initiative. Fully agree with your assessments that hands-on capacity building (for research and knowledge translation), more awareness in the research community, and sensitizing donors play an important role.

Samuel Sieber, Switzerland: As capacity building tends to be resource-intense, and unfortunately not everybody can attend a SORT IT course, I also keep wondering if and how key success factors of the format could be made more broadly available? The close 1:1 mentoring is hard to replace, but the SORT IT approach to me successfully operationalizes some principles that could be applied for improved research communication in general:

* Consider and plan for communicating for policy or practice change from the design stage of research (consider, for instance, making decision-makers and implementation partners co-authors. Look for key policy moments or major communication opportunities such thematic conferences as days, etc.) * Prioritize communication objectives and target audience over complex formats and reach: try to reach key decision-makers and implementers first, rather than trying to diffuse reach mass * Use available templates (of briefs, presentations, elevator pitches), and write with a message and audience mind clear in * Collaborate closely with communication and knowledge translation colleagues (such as your comms department, colleagues or friends working in communications etc.) * Apply the same principles of (peer-)review to communication materials – share and improve content as much as possible with colleagues and friends

Jacklyne Ashubwe-Jalemba, Kenya: As a knowledge management mentor on the TDR SORT IT course, I know that hands-on capacity-building initiatives such as this one are very effective in supporting researchers in communicating their research findings to relevant stakeholders. The researchers who have participated in the knowledge management module have reported that their findings have gained traction within places of work because of the

skills in packaging their evidence to be relevant to the target audiences/ decision-makers within their contexts.

Moderator: 'The Global Health Network... has a wide variety of knowledge sharing hubs and resources but I could not find one on research communication. I had a look on the AuthorAid website and could not find guidance there either. [Unanswered question: Are you aware of practical guidance on research communication?]

Khin Thet Wai, Myanmar: Capacity building for knowledge management and developing policy briefs in terms of short courses, training workshops and introducing mentoring process will effectively support researchers to communicate health research successfully to policymakers. Their communication skills require further improvement in this connection. On the other hand, training/advocating policy makers and program implementers in knowledge translation and utilization of research findings might be helpful for researchers to overcome the existing barriers.

Moderator: INASP also runs the AuthorAID platform, which provides support and services for over 20,000 developing country researchers, including mentoring.

'In 2021 INASP published Context Matters: A Framework to support knowledge into policy, 'a participatory tool to help detect and understand the best entry points to improve the use of knowledge in a public agency'. This framework: - Looks at internal factors within an organization as well as the external political economy and relationships. - Addresses visible changes, such as new processes or behaviours, and invisible changes, such as incentives or cultures for knowledge use - Builds on the experience of 50+ policymakers and practitioners - [has been] Tried and tested with multiple government agencies in a wide range of countries, including Peru, Ghana, Uganda, Pakistan' https://www.inasp.info/contextmatters

Moderator: This checklist from the National Institutes of Health (US) is written for the public but may be equally useful for communicating research to policymakers.

here: https://www.nih.gov/about-nih/what-we-do/science-health-public-trust/che...

Below are some extracts with my comments:

"As science and health communicators, our main goal is to share our institutions' wealth of science and health knowledge"

Is this the main goal, or is it to contribute to evidence-informed policy and practice? They are not synonymous.

"Take care to not overstate the importance or statistical significance of a study, finding, or emerging situation when relaying what's interesting or exciting about a scientific development."

This seems to me to be especially important. Too often we read or hear the mass media (and those who work in and with them?) misrepresenting and misleading the p [public and policymakers. A finding from a small or poorly designed study is put forward inappropriately as a truth, perhaps ignoring the wealth of contradictory evidence from existing research.

There is a bias here also to new primary research, which is typically given prominence over secondary research and systematic review. It is as if the media (and researchers?) can sometimes exploit the lack of understanding about knowledge synthesis and uncertainty.

"Explicitly state whether the study shows an association or causation. An association is a relationship, or correlation. A positive association means as one goes up, so does the other. A negative association means as one goes up, the other goes down. Causation is when an event or variable is shown to cause a specific outcome. Whether a study shows association or causation depends on the study design." This is commonly misrepresented too.

"Discuss both the benefits and drawbacks of any potential treatment, as health care decisions must take many different factors into account, e.g. treatment effectiveness, side effects, and overall risk of the intervention." Some researchers may be able to discuss this impartially, others not.

Irina Ibraghimova, Croatia: Helpful hints for sharing research with people in policy (the UK) https://www.emeraldgrouppublishing.com/opinion-and-blog/helpful-hints-sharing-research-people-policy

Connecting research with policy: Guide to writing for policy-makers (Australia, National Environmental Science Program) https://www.nespthreatenedspecies.edu.au/publications-and-tools/connecting-research-with-policy-guide-to-writing-for-policy-makers

Research Engagement with Policy Makers: a practical guide to writing policy briefs (the UK, NIHR Policy Research Unit in Behavioural Science) https://osf.io/m25qp

Quote: INASP: 'We support Southern researchers and their institutions to build the confidence, knowledge and skills so that their research can be published and communicated – to academic and non-academic audiences. Our approach is to build the individual skills of researchers via: - Massive open online courses (MOOCs) on research writing and publication. Our large-scale online courses in research writing, publishing and grant proposal writing are supported by expert facilitators from around the world. - Thematic online courses on research communication and proposal writing. We deliver intensive courses on research communication and proposal writing, tailored to fit thematic areas, and country context. - Supporting research communication to non-academic audiences, such as policymakers and practitioners. We design and implement research uptake strategies and skills training for projects aiming to influence policy.

5.2 Health communication research

Moderator: I believe there should be much more political and financial investment in understanding the causes of misreporting in the media and what can be done to improve it. Second, journalist and researcher professional associations should lead the conversation on how to imporve the quality of research communication and restore trust in science. Third, high-quality support and training should be made readily available to journalists and researchers, together with incentives to report more honestly and with less bias.

5.3 Financial incentives

Jacklyne Ashubwe-Jalemba, Kenya: if the funders are sensitized, they may prioritize the dissemination of research findings, and even set it as an expectation coupled with the financial support for it.

5.4 Raising awareness

Jacklyne Ashubwe-Jalemba, Kenya: Another way through which researchers may be supported to communicate their research findings is through awareness creation within the broader research community of the importance of disseminating their findings beyond publication for career progression, and the potential that their research evidence has to inform better decision-making at a higher level...

David R. Walugembe, Canada: Researchers in communication of health research may be helped by bringing to their awareness the various 'strategic planner/project manager' roles that they need to play beyond generating journal articles/scientific publications... Most importantly, researchers in communication of health research need support in cultivating meaningful partnerships with other stakeholders to enhance uptake and utility of their research findings.

CASE STUDIES

Moderator: Unanswered question: Have *you* ever published a research paper (or several -some researchers publish more than one every week!)? Did you want your paper to make a difference? And *did* it make a difference - or was it ignored?

Moderator: Unanswered question: Has your work led to a change in policy, whether Policy (with a big P, as in national/subnational policy) or policy with a small p (e.g. project/programme implementation)? What were the key ingredients to make this happen in terms of research communication? What was the role of your research team? What was the role of your institution?

Moderator, **UK:** Unanswered questions: One of the key objectives of our discussion is to compare and contrast the different approaches to communicating health research, to help

inform health researchers to achieve increased impact. We especially want to hear about the experience of health researchers.

- 1. What is your experience of communicating research to policymakers?
- 2. Which approaches have you used? (e.g. academic journals, policy briefs, interaction with policymakers, press releases, social media, television, radio...)
- 3. Can you share one example of *successful* communication to policymakers? What approach worked for you? How did you know it was successful?
- 4. Can you share an example of *failed* communication to policymakers? Perhaps an example where the relevant policymakers remained unaware of your research? Or an example where they ignored it or failed to use it in policy and implementation?

We have touched on:

- Academic journals
- Open access
- Pre-prints
- Blogs
- Policy briefs
- Social media
- Mass media (TV, newspapers...)
- Popular culture
- Interaction with policymakers, funders, academia, other stakeholders
- Engaging the public
- Press releases
- Storytelling
- Framing the message clearly and concisely

We have noted the many factors to consider when planning the communication strategy:

- Primary versus secondary research
- Global versus local research
- Stage in research cycle (before, during, after)
- Operational level of intended change
- Political and personality factors of policymakers

Looking forward to learn from your experience.

Moderator: Here's an example from HIFA: The last research paper HIFA published was a systematic review in 2020 'How primary healthcare workers obtain information for safe prescribing in LMICs' with the London School of Hygiene and Tropical Medicine and Nagasaki

University.

https://www.hifa.org/news/hifas-first-systematic-review-how-primary-heal...

The findings confirmed a lack of up-to-date and relevant information on medicines in low and lower middle-income settings. We concluded that 'Up-to-date medicine information and the means of making it accessible and acceptable to prescribers at the point of care must accompany the expanding access to medicines if those seeking medical care are to benefit. Such information needs to go beyond information about individual medicines, to include guidance on the selection of medicines.' Despite advocacy on these issues since 2013 led by the HIFA project on Information for Prescribers and Users of Medicines, I regret to say there has been no demonstrable impact on political and/or financial commitment to reliable information on medicines.

My feeling is that individual research papers, whether primary or secondary, are unlikely to result in a change of policy. At best they can underpin wider advocacy efforts, driven by all the available evidence and only exceptionally by a single study.

CASE STUDY 1

Martin Ndinakie Yakum, Cameroon: I want to share my experience in communicating research findings effectively. I believe that effective communication of research findings is a process starting from the research planning to the final results dissemination. I had a great experience in research findings communication when I was working with M.A.SANTE in Cameroon on the sustainable cholera surveillance research project. I can say that the communication with decision makers was effective because the findings of the research was used to revise national cholera contingency plan, organize OCV vaccination campaigns in cholera hotspots, and to integrate environmental cholera surveillance into the national surveillance system.

The success of this particular case could be attributed to multiple factors but essentially the following:

- 1. Policymakers were engaged at the planning stage of the study. The researcher's research question sometimes is not exactly the same question the policy makers are seeking answers. Therefore, engaging the health authorities, policy makers and other stake holders in the planning stage of the research would enable us (researchers) to know and integrate their concerns and questions on the subject matter. This early engagement stage does not only help to integrate their point of view but equally create some sort of expectations and anxiousness in them.
- 2. I was designated by our team to represent the project team at the national surveillance meeting in the MoH (held every week). This was a very good opportunity for the health authorities to remain in touch with the research team, keep everyone updated on the study progress.
- 3. Results dissemination seminars were organized 2 times per year, which was participated by policymakers, technical departments of the MoH, research team, and other partners. In this meeting, points discussed included research progress, key study findings, and

recommendations. Sometimes recommendation to include certain aspects in the study, which would lead to amendment of the protocol.

4. Because the study team was constantly in contact with the health authorities, the team was always invited by the MoH anytime a seminar was organized on cholera or emergency response. For instance, the revision of national cholera contingency plan. These were opportunity for the team to give contributions and advocate for the findings of this study to be included in the national guidelines when applicable.

In summary, effective communication of research findings with policymakers is a continues process done in a participatory approach. This approach gives the chance to every stakeholder to express their needs in terms of research question and to formulate the recommendation from the study together. Just to share this experience because I think it might be useful.

CASE STUDY 2

Moderator, **UK:** John Snow... In 1854 he identified a water pump in London as the likely source of a cholera outbreak, based on mapping deaths in the vicinity and interviewing residents. He wrote to the editor of the Medical Times and Gazette:

"On proceeding to the spot, I found that nearly all the deaths had taken place within a short distance of the [Broad Street] pump...The result of the inquiry, then, is, that there has been no particular outbreak or prevalence of cholera in this part of London except among the persons who were in the habit of drinking the water of the above-mentioned pump well. I had an interview with the Board of Guardians of St James's parish, on the evening of the 7th inst [7 September], and represented the above circumstances to them. In consequence of what I said, the handle of the pump was removed on the following day."

He included a map of the nearby streets, showing the locations of each death. Clearly this was sufficient to get the authorities (policymakers) to act...

CASE STUDY 3

Moderator: I am not a researcher but have been involved in a systematic review, a qualitative study of HIFA discussions, a position paper for WHO, a white paper with HIFA and the New York Law School, and several analysis/advocacy papers. I don't think any of them have had a direct impact on policymaking (whether with a big P or a small p).

The position paper for WHO (written with Fiona Godlee and colleagues in 2004) apparently stimulated much discussion internally, but I believe its main impact was to provide the rationale for HIFA, which was subsequently launched in 2006.

Our white paper with the New York Law School (2012) demonstrated that governments have a legal obligation under international human rights law to ensure their citizens have access to reliable healthcare information, and yet it has had no demonstrable impact on policymakers. Indeed, it was tragic to see, during COVID-19, how some heads of state not only ignored this responsibility but actively spread harmful misinformation.

In 2020 I co-authored a viewpoint/analysis paper with Geoff Royston and Chris Zielinski, where we argued that 'All stakeholders need to work together to accelerate progress towards universal access to essential health information; a catalyst for this would be the inclusion of universal access to essential health information in the relevant SDG target and associated monitoring indicators for UHC, a step that WHO could usefully endorse'. We failed to get the attention of the relevant stakeholders.

CASE STUDY 4

Khin Thet Wai, Myanmar: Before the initiation of the research projects - Advocacy to stakeholders This is the case that we have engaged prior to the initiation of the community-centered operational/implementation research projects to control dengue, malaria, and vaccine preventable diseases in resource constrained settings. Our strategic approach in terms of advocacy meetings through the influential stakeholder groups paves the way to transparency, trust-building, and community consent. Communicating the favourable risks and benefits ratio of intended research through advocacy makes the recruitment plan in community surveys and service provider surveys at ease.

Press release through public media Publicity through the widely circulated daily newspapers requires for new community experiments to allay anxiety, doubts, and misperceptions. There was a good example of one special event in 2018 in commemoration of ASEAN Dengue Day held in a school compound in the provincial context of Thailand. Collaborating research teams from low and middle-income countries in Asia participated in this event to attract community attention to the release of sterile Aedes mosquitoes as an innovative pilot research project led by Mahidol Scientists.

The aftermath of the research projects

Dissemination meetings - We have conducted the dissemination of research results at different levels (local/subnational, national and global levels) to ensure the uptake of research results to improve the training manuals for service providers in malaria elimination and service delivery guidelines for disease control and surveillance activities of childhood vaccine preventable diseases such as measles.

Policy briefs - For health emergencies preparedness and management, a policy brief entitled: "Measles outbreaks among hard to reach populations as a health crisis: implications for cost-effective vaccine delivery strategies in Myanmar" has been developed and disseminated. I It

was successfully presented as a poster for the wider scientific community at the Global Health Security Conference, 2019 in Sydney, Australia. Three policy recommendations were developed; (1) school entry check of vaccination status against measles and referring the unimmunized children to health facility, (2) urban immunization project, and (3) recruitment of volunteers in rural areas to improve MCV coverage in migratory population in Myanmar.

Scientific publications - Dengue outbreaks at smaller towns and rural sites led the necessity to strengthen advocacy and coordinated movements of healthcare providers and concerned stakeholders elucidated in a peer reviewed Journal. Other scientific publications put emphasis on controlling malaria among mobile migrants, challenges in training healthcare providers for malaria elimination and controlling measles outbreaks to achieve the elimination goal through preventive vaccination.

CASE STUDY 5

Joseph Ana, Nigeria: At the Centre for Clinical Governance Research and Patient Safety (CCGR&PS - www.hri-global.org), we had mixed emotions when we went through this article, because on one hand we were pleased that progress is being made to improve outcome for patients who suffer Out of Hospital Cardiac Arrest (OHCA) when they receive the novel Head-UP CPR (in the Traditional CPR the patient is supine), but on the other hand, we were, again, sad that while the populations in 'high-functioning systems' health shall benefit from this novel NP-CPR intervention, populations in lower-, low-, and middle income countries with low functioning health systems will not, for a long time, missing out on the increased chance of survival with neuro protection!

A few points stand out for us as Take Home messages:

- when first responders use a novel CPR approach that includes gradual head-up positioning combined with basic but effective circulation-enhancing adjuncts, individuals who experience out-of-hospital cardiac arrest (OHCA) with non-shockable presentations have a better chance of survival, as shown from data from more than 2000 patients.
- the study was presented at the American College of Emergency Physicians (ACEP) 2022 Scientific Assembly, Paul Pepe, MD, medical director for Dallas County Emergency Medical Services, in Texas, reviewed data from five EMS systems that had adopted the new approach.
- Traditional CPR supine chest compression techniques, if performed early and properly, can be lifesaving, but they are suboptimal, because the 'techniques create pressure waves that run up the arterial side, but they also create back-pressure on the venous side, increasing intracranial pressure (ICP), thus compromising optimal cerebral blood flow'
- therefore, a '--modified physiologic approach to CPR was designed. It involves an airway adjunct called an impedance threshold device (ITD) and active compression-decompression (ACD) with a device "resembling a toilet plunger," Pepe said. The devices draw more blood out of the brain and into the thorax in a complementary fashion.

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- the new technology uses 'automated gradual head-up/torso-up positioning (AHUP) after first "priming the pump" with ITD-ACD-enhanced circulation', which was found to 'markedly augment that effect even further'. 'In the laboratory setting, this synergistic NP-CPR bundle has been shown to help normalize cerebral perfusion pressure, further promoting neuro-intact survival.'
- the combination of these two adjuncts had 'dramatically improved SURV-NI by 50% in a clinical trial'
- "All of these devices have now been cleared by the Food and Drug Administration and should be adopted by all first-inresponders," "But they should be implemented as a bundle and in the proper sequence and as soon as feasible." [*see note from HIFA moderator below]
- 'Training and implementation efforts continue to expand, and more lives can be saved as more firefighters and first-in response teams acquire equipment and training, which can cut the time to response'

We also noted additional very important Take Home messages, especially for those populations in low functioning health systems: that,

- i) this new 'head-up CPR cannot yet be performed by laybystanders'.
- ii) "Also, do not implement this unless you are going to do it right".

Always Remember: Primum non nocere – First Do No Harm!

NOW READ ON, courtesy of MEDSCAPE:

Novel Head-Up CPR Position Raises Odds of Survival of Out-Of-Hospital Heart Attacks

By Heidi Splete October 13, 2022

Novel Head-Up CPR Position Raises Odds of Survival

https://www.medscape.com/viewarticle/982409

[*Note from NPW, moderator: The article says: "All of these devices have now been cleared by the Food and Drug Administration and should be adopted by all first-in responders." But, let's be careful here. Who is saying this? It is Pepe, the lead author of the research. In my view researchers should focus on communicating the results of their research, and not on making major policy recommendations. It is reasonable to say "Our results suggest that this method requires further exploration as a potential alternative to current CPR procedure". But I feel it is overstepping the role of a researcher to say everything "should" now change. Such change needs to be considered by the cardiovascular research community as a whole, taking into account all available evidence. Furthermore, I have checked the study itself - https://www.annemergmed.com/article/S0196-0644(22)00609-6/fulltext#relatedArticles

and it appears to be available only as an abstract. Indeed, it seems to be the abstract of a paper given at a conference. Furthermore, the authors disclosure statement says "Advanced CPR Solutions; Board Member/Officer/Trustee Advanced CPR Solutions' and at the end of the article it states that the research was partly funded by Advanced CPR Solutions. Advanced CPR Solutions. It is also notable that the abstract itself does not say 'should be adopted by all first-in responders'. This is what the journalist wrote, apparently reporting what Pepe had said verbally at the conference.

I think this case provides a good case study to explore the potential distortion that can take place when research is communicated. Pepe's 'novel' (it is amazing how often this word is used in the conference's several hundred abstracts) procedure may or may not contribute significantly to the cumulative knowledge on CPR - it is FAR too early to tell. I invite comments on the above. Neil PW]

CASE STUDY 6

Irina Ibraghimova, Croatia: I can share my experience in global evidence synthesis (as an information professional). [*see note below]

In 2011 I was invited as a consultant for the systematic literature review that was conducted by the African Palliative Care Association "A REVIEW OF HOME BASED CARE MODELS AND SERVICES FOR PEOPLE LIVING WITH HIV/AIDS WITHIN AND OUTSIDE AFRICA" (http://www.palliativecareassociationofmalawi.org/media/data/hbc_review_r...). I was asked to review the executed search strategy and the way it had been presented. The literature search entailed a comprehensive review of existing information on home based care for people living with HIV/AIDS in resource poor settings while the situational analysis was a cross-sectional study using qualitative and quantitative methods to explore the nature of existing home based care models in four African countries, including Tanzania, Zambia, Malawi and Kenya. The final report provided the findings both of the literature review and of the situation analysis. The aim was to make clear and practical recommendations for the integration of all aspects of palliative care within existing HBC services. I was quite excited to help with this project, which included many organizations and country representatives. The problem from my part was that I was asked to review the search strategy after it has been already executed and the initial version of literature review results written, while it is always recommended to include library/information professionals while the search strategy is being developed. I've never been informed on how the report findings were actually implemented.

In 2020 I have co-authored a mapping review of research literature on refugee health in Europe (https://doi.org/10.1108/IJHG-04-2020-0031). The topic of refugee health was recommended by the Editorial Advisory Board of the International Journal of Health Governance (where I served as a Regional Editor for Europe), as there "remained critical gaps in the knowledge base on a wide range of determinants of health service delivery and access for refugees and migrants in the WHO European Region". While preparing a protocol for our review we have contacted representatives of several agencies working with refugees in Europe to find out if they were interested in that kind of research and what particular findings would help them in their practical work. We were assured that the topic and type of review was highly relevant, and have been specifically advised to analyze in which settings and in which countries the research

has been conducted (besides many other parameters). We realized that other similar reviews only had two types of settings (clinical and non-clinical), while we had defined 11 different settings. And that analysis by country usually related to the author affiliation, not the country where the research was actually conducted. We were very pleased to see that our findings are cited in the recent WHO publication "Continuum of care for noncommunicable disease management during the migration cycle" from a series on "Global Evidence Review on Migration and Health" (https://apps.who.int/iris/handle/10665/352261

PART 2: PROFILES

(A-Z by last name)

HIFA Profile: Oluwatosin Caleb Adeyemi is an Academic Lecturer at the Faculty of Pharmacy, University of Lagos in Nigeria. Professional interests: Drug Information Centre, Outcomes research, Antibiotics stewardship. Email: unltd51 AT gmail.com

HIFA profile: Jackeline Alger, MD, PhD, is a parasitologist associated to the Department of Clinical Laboratory of the University Hospital; Executive Director of the Antonio Vidal Institute for Infectious Diseases and Parasitology; Tegucigalpa, Honduras. HIFA Country Representative of the Year for the years 2015 and 2018. Email jackelinealger AT gmail.com

HIFA profile: Joseph Ana is the Lead Consultant and Trainer at the Africa Centre for Clinical Governance Research and Patient Safety in Calabar, Nigeria, established by HRI Global (former HRIWA). In 2015 he won the NMA Award of Excellence for establishing 12-Pillar Clinical Governance, Quality and Safety initiative in Nigeria. He has been the pioneer Chairman of the Nigerian Medical Association (NMA) National Committee on Clinical Governance and Research since 2012. He is also Chairman of the Quality & Performance subcommittee of the Technical Working Group for the implementation of the Nigeria Health Act. He is a pioneer Trustee-Director of the NMF (Nigerian Medical Forum) which took the BMJ to West Africa in 1995. He is particularly interested in strengthening health systems for quality and safety in LMICs. He has written Five books on the 12-Pillar Clinical Governance for LMICs, including a TOOLS for Implementation. He established the Department of Clinical Governance, Servicom & e-health in the Cross River State Ministry of Health, Nigeria in 2007. Website: www.hri-global.org. Joseph is a member of the HIFA Steering Group and the HIFA group working Community Health Workers. on Website: www.hri-global.com Joseph is a member of the HIFA Steering Group and the HIFA working group on Community Health Workers. http://www.hifa.org/support/members/joseph-0 http://www.hifa.org/people/steering-group Email: info@hri-global.org and jneana@yahoo.co.uk

HIFA profile: Ben Angoa is Manager of the Solomon Island Planned Parenthood Association, Solomon Islands. Professional interests: Understanding effective communication of health research to policymakers; Using different approach to communicate research. Email: sippaeseaorma@gmail.com

HIFA profile: Jacklyne Ashubwe-Jalemba is a medical doctor and health systems researcher based in Nairobi, Kenya. She is a member of the HIFA project on Communicating health research, supported by TDR

HIFA profile: Meena Cherian is Director, Emergency & Surgical Care program, Geneva Foundation of Medical Education and Research, Geneva, Switzerland. She is a member of the HIFA working group on Essential Health Services and COVID-19. https://www.hifa.org/support/members/meena https://www.hifa.org/projects/essential-health-services-and-covid-19 www.gfmer.ch cherianm15 AT gmail.com

HIFA profile: Ama Pokuaa Fenny is a Senior Research Fellow with the Institute of Statistical, Social and Economics Research (ISSER) at the University of Ghana. She is a health economist whose research focuses on the evaluation of health and development programs in low- and middle-income country settings. In these settings, she studies the role of health financing strategies in offering social protection to vulnerable groups, targeted health system strategies to improve health seeking behavior and costing and cost-effectiveness methods that address efficiency of health programmes. Her current research focuses on the evaluation of child and adolescent health interventions and the integration of governmental policies into service delivery systems in Africa. At ISSER, Dr. Fenny provides leadership and oversight to projects involving research, project implementation, technical assistance and policy advocacy across a range of subjects. She is a member of the HIFA working group on Communicating health research. https://www.hifa.org/support/members/ama amafenny AT yahoo.co.uk

HIFA profile: Richard Fitton is a retired family doctor - GP. Professional interests: Health literacy, patient partnership of trust and implementation of healthcare with professionals, family and public involvement in the prevention of modern lifestyle diseases, patients using access to professional records to overcome confidentiality barriers to care, patients as part of the policing of the use of their patient data. Email address: richardpeterfitton7 AT gmail.com

HIFA profile: Irina Ibraghimova is an independent consultant with a PhD. in library sciences and more than 20 years' international experience in ICT for health projects. She now serves as a Co-editor for the International Journal of Health Governance (Emerald Publishing). Professional interests: Information and health literacy, evidence-based practice, science communication and medical journals editing. https://www.healthconnect-intl.org/ She is a HIFA country representative for Croatia: https://www.hifa.org/support/members/irina

HIFA profile: Ellos Lodzeni is patron and trustee at the Patient and Community Welfare Foundation in Malawi. Professional interests: Health governance and patient safety advocate. lodzene AT yahoo.co.uk

CHIFA profile: Yakum Martin Ndinakie is an Epidemiologist at M.A.SANTE in Cameroon. Professional interests: Health research in general and infectious diseases of poverty in particular. martinyakum AT gmail.com

HIFA profile: Moderator is coordinator of the HIFA global health movement (Healthcare Information For All - www.hifa.org), a global community with more than 20,000 members in

180 countries, interacting on six global forums in four languages in collaboration with WHO. HIFA brings stakeholders together to accelerate progress towards universal access to reliable healthcare information. HIFA is administered by Global Healthcare Information Network, a UK based non-profit in official relations with the World Health Organization. Twitter: @hifa org_neil@hifa.org

HIFA profile: Wilber Sabiiti is Principal Research fellow in Medicine at the Division of Infection and Global Health, School of Medicine, University of St Andrews, Scotland. https://www.hifa.org/support/members/wilber

HIFA profile: Massimo Serventi is a long-standing Pediatrician working in Africa since 1982. He has worked for several NGOs in 6 African/2 Asian countries. His interests include clinical and community pediatrics, adherence to clinical guidelines and school education as the major determinant of good health.

HIFA profile: Samuel Sieber is a Knowledge Translation and Communication Specialist, Global Coordination Mechanism on NCDs, Global NCD Platform, Deputy Director General's Office, WHO, Geneva, Switzerland. He is a member of the HIFA working group on Communicating health research. https://www.hifa.org/support/members/samuel siebers AT who.int

HIFA profile: Mark Storey has designed, implemented, and evaluated ICT for health programs for over fourteen years. As the former Director of ICT Programs at the American International Health Alliance, he created the Learning Resource Center project, which established ICT capacity at over 160 health organizations in Eurasia and Africa, and the EurasiaHealth Knowledge Network, an online clearinghouse and virtual community supporting health professionals in the Eurasia region. He has directly provided consulting support for health ministries in Albania, Eritrea, Kyrgyzstan, and Turkmenistan. He specializes in program design and management, evaluation and assessment, information architecture, and sustainability training.

HIFA Profile: Hajime Takeuchi is a professor at the Bukkyo University in Japan. Professional interests: child health, child poverty, child wellbeing. takechanespid@gmail.com He is a CHIFA Country Representative for Japan and a member of the CHIFA Steering Group (child health and rights) http://www.hifa.org/support/members/hajime takechanespid AT gmail.com

HIFA profile: Emily Vargas is a knowledge management researcher based in Mexico. emilymariavr AT gmail.com

HIFA profile: Khin Thet Wai is a former Director at the Department of Medical Research, Myanmar. She is a medical doctor and holds the Master's degree in Public Health from Institute of Medicine, Yangon and has a second Master's degree conferred by the Institute for Population and Social Research, Mahidol University, Thailand. She is a dedicated public health researcher specializing Epidemiology and Health Policy and Systems Research. https://www.hifa.org/support/members/khin-thet khinthetwaidmr AT gmail.com

HIFA profile: David R. Walugembe (PhD) is a graduate of Health Information Science from the University of Western Ontario and currently a Postdoctoral Research Fellow at the University of British Columbia, Canada. Professional interests: Implementation science; Health policy implementation; Knowledge translation and research utilization; Maternal and child health; Sustainability; Stakeholder engagement. dwalugembe AT gmail.com

HIFA profile: Sian Williams is Chief Executive Officer at the International Primary Care Respiratory Group in the UK. Professional interests: Implementation science, NCDs, primary care, respiratory health, education, evaluation, value, breaking down silos. sian.health AT gmail.com

HIFA profile: Goran Zangana is a medical doctor and Associate Research Fellow with the Middle East Research Institute, Iraq. He is a HIFA country representative for Iraq and is currently based in the UK. He is the current holder of Country Representative of the Year 2021.

HIFA profile: Chris Zielinski: As a Visiting Fellow and Lecturer at the Centre for Global Health, University of Winchester, Chris leads the Partnerships in Health Information (Phi) programme. Formerly an NGO, Phi supports knowledge development and brokers healthcare information exchanges of all kinds. Chris has held senior positions in publishing and knowledge management with WHO in Brazzaville, Geneva, Cairo and New Delhi, with FAO in Rome, ILO in Geneva, and UNIDO in Vienna. Chris also spent three years in London as Chief Executive of the Authors Licensing and Collecting Society. He served on WHO's Ethical Review Committee, and was an originator of the African Health Observatory. Chris is the elected Vice President (and President-in-Waiting) of the World Association of Medical Editors. He has been a director of the UK Copyright Licensing Agency, Educational Recording Agency, and International Association of Audiovisual Writers and Directors. He has served on the boards of several NGOs and ethics groupings (information and computer ethics and bioethics). chris AT chriszielinski.com. His publications are at https://www.researchgate.net/profile/Chris-Zielinski and https://winchester.academia.edu/ChrisZielinski/ and blogs are http://ziggytheblue.wordrpress.com and https://www.tumblr.com/blog/ziggytheblue

PART 3: CITATIONS

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ABSTRACT: ... It is important that those involved in knowledge translation and continuing medical education understand the fundamental principles of effective presentations, whether at scientific conferences, workshops or group teaching sessions. The switch to remote

presentations has made this a more challenging endeavour. We describe established presentation techniques that improve knowledge translation and how to use them in both face-to-face and remote settings.

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- Stop being so (overly) dramatic
- A climate change story goes beyond (the) climate
- Get local and think more about climate justice
- Build trust and engagement that can combat dis/misinformation
- Be guided by science and embrace yes

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'Researchers who make the challenging decision to engage with users early, strategically and imaginatively, may be surprised by the positive results... 'Communicators need to understand that timing is key to influencing policy makers. Researchers and CSOs tend to communicate when they have findings ready to share and at their convenience, but findings that relate to policy makers have to be communicated when they are ready and willing to listen.'

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