ORIGINAL RESEARCH ARTICLE

Approaches to monitoring and evaluation of knowledge translation platforms in low- and middle-income countries: A scoping review

[*1]Bala I. Harri, [2]Ijeoma R. Okedo-Alex, [1]Ngozi R. Azodoh, & [1]Adaeze O. Okonkwo

Affiliation

[1]Department of Health Planning Research and Statistics, Federal Ministry of Heath, Nigeria

[2]University of British Columbia, Canada

***For Correspondence**

Email: harribalaisa@gmail.com; Tel: (+234) 813 315 3063

Abstract

Background: Knowledge Translation Platforms (KTP) attempt to bridge the "know-do gap" between researchers and policymakers. This study summarized the evidence on activities, as well as methods of monitoring and evaluation projects of KTPs in Low- and Middle-Income Countries (LMICs).

Methods: The Arksey and O'Malley methodology for scoping reviews was used. The databases accessed include Medline, Global Health, CINAHL, EBSCO and Cochrane library databases. Only Studies that indicated range of activities, tools or methods used in monitoring and evaluating KTP to achieve the implementation of evidence informed policymaking in LMICs were included. The key words used includes Knowledge Translation, Monitoring and Evaluation, Platforms and Low- and Middle-Income countries.

Results: Total of 3150 hits were obtained from the searched databases. 750 duplicates were identified and removed resulting to 2398 articles. Using title screening, 2123 articles were excluded resulting in 275 articles for abstract screening. Abstract screening led to exclusion 246 articles, leaving 29 articles for the full-text screening. Full-text screening resulted to exclusion of 25 articles resulting to 4 articles that meet the inclusion criteria. No relevant articles were obtained from the reference list screening and grey literature search.

Conclusion: Evidence shows that Case study methodology is the predominate method of evaluating KTPs. The shortest time duration from generation to use of evidence in decision making was noticed to be 1-year. The range of activities used to monitor KTP in bridging the "know do gap" includes stakeholder's engagement, building capacity, priority setting, meeting with stakeholders, generating policy brief, litmus testing of brief, stakeholders dialogue, evidence brief and dialogue review, disseminating of findings and implementation. The minimum and maximum number of activities performed in each KTP process is 5 and 8 activities respectively.

Keywords: *Knowledge translation platforms, evidence informed policy, monitoring and evaluation, low-and-middle-income-countries*

Introduction

The process to bridge the time lag between research findings and policy action is known as Knowledge Translation (KT).[1] Generally, translating knowledge from research to practice takes a very long time[2]. KT is aimed at ensuring that knowledge in the form of best available evidence informs decision making in health systems[1].

Traditional KT assumes that the "know-do gap" exists because the two actors (researchers and policymakers) do not understand each other's work. The researchers are viewed as experts that produce the evidence while the policymakers are the implementers of research findings.[3] In this case, researchers disseminate ("push") findings of completed research to policymakers for implementation. However, lack of understanding of technical information by policymakers and in some instances the professional inertia to change accounts for the time lag between evidence generation to implementation. The "know-do gap" could be bridged by KT through simplifying technical jargons when communicating with policymakers or building the capacity of policymakers to understand technical methods of communication by researchers or researchers disseminate their findings in a more relevant and timelier format. On the other hand, policymakers could also demand "pull" for evidence. In this case, researchers will conduct research to meet the specific needs of policymakers.[4]

Canadian Institutes for Health Research -CIHR (2000)[5] views KT as activities from the initial development of new scientific knowledge at a local level to its practical application to yield valuable outcomes within a global context. Furthermore, CIHR (2000) argues that KT is a two-way interaction between researchers, implementers, and the process of utilizing research outcomes. Therefore, the process could be interactive involving dissemination, communication, transfer of technology, and management of knowledge within an ethical context. This gives room for good communication between researchers and policymakers thereby exchanging knowledge.[5]

Specifically, WHO defines KTP as any partnership between stakeholders in the health care systems, civil society groups, policymakers, and researchers to facilitate policy development and implementation using the best scientific evidence available.[6] These platforms will create a system of stakeholder's interaction and exchange of knowledge between researchers and decision-makers. It will also guide researchers on how to create and disseminate studies that are likely to be valuable to policymakers in a manner that is accessible and acceptable. Furthermore, the platforms will provide policymakers with support and structure on how to demand the best available evidence for implementation.[7]In line with the recommendation of WHO, several platforms are currently conducting knowledge translation projects in LMICs.[8] It is important to note that monitoring and evaluation should be embedded during the implementation of KT activities to keep track of set targets and goals.[9] The reliability of an M&E approach depends on pre-set parameters that will appraise resources, activities, outputs, and outcomes during implementation. The precision of pre-set parameters in the form of indicators or metrics for an M&E determines its potency to guide a project in achieving its

objectives.[10] Notably, to the best of our search, no evidence-based method is available to monitor and evaluate the implementation of KTP projects. This study aims to review the available evidence on methods used to evaluate and monitor KTPs projects. It also evaluated the range of activities or tools used in a KTP and the duration from generating evidence in a KTP to achieving its goal of using best available evidence for decision making.

Methods

The Arksey and O'Malley methodology for scoping review was used.[11] Studies were screened for eligibility using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension checklist for reporting a scoping review[12].

Inclusion and exclusion criteria

This study only included KTPs that are within the context of LMICs. Furthermore, it included researches that identified specific techniques used to monitor and evaluate projects implemented by KTPs along with the range of activities, methods and tools used in KTP to achieve evidence-based policy. The research design for the studies that met the inclusion criteria was considered. Non-English literatures were excluded.

Search strategy

Relevant studies were identified using electronic databases search and the search was done on the 24th to 26th July 2020. Medline via Ovid, Global Health via Ovid, Cumulative Index to Nursing and Allied Health Literature (CINAHL) via EBSCO and Cochrane library databases were searched. Boolean operators (AND, OR) were used in each of the databases to combine keywords, their alternative with applied wild cards or truncation, and word phrases to search for relevant studies. Appendix 1 shows the detailed search strategy for the databases. After the search, studies generated were exported to the reference manager (Mendeley). All articles from the 4 databases were combined in Mendeley software and duplicates were then removed. The title of the studies was then screened to exclude those that do not meet the inclusion criteria. After the title screening, the abstract was read to screen those studies that do not meet the inclusion criteria. Selected studies after the abstract screening further went through a full-text screening to exclude those that do not meet the criteria. The reference list of all the articles that met the inclusion after the full-text screening was also screened for relevant studies. Grey literature was searched in google and the following websites: the WHO,[13] Canadian Institute of Health Research (CIHR),[5] Canadian Coalition for Global Health Research (CCGH),[14] United Kingdom Department for International Development (DFID),[15] United States Agency for International Development (USAID),[16] Health research web,[17] African Institute for Health Policy & Health Systems Studies,[18] Alliance for Health Policy and System Research,[19] Knowledge to Policy center (K2P),[20] Center for Global development,[21] Dignitas International,[22] Chatham House[23] and Abdul Latif Jameel Poverty Action Lab (J-PAL)[24].

Data extraction and analysis

Data extracted was collated and charted using Microsoft Excel software from office 364. The collated information includes; author's name, year of publication, aim of the study, methodology of evaluating KTP, location or country of intervention, area of intervention,

the time frame of intervention. Additionally, more descriptive information charted include the type of knowledge translation activities, where the Knowledge translation platforms are domiciled, the current status of KTP, methods, and frameworks of activities in a KTP, stakeholders involved in the intervention by KTP and the funding organization. Tables 1 and 2 below show the characteristics of the included studies.

Results

The search from the databases yielded the following results: Medline database 1846 articles, Global health yielded 1240 articles, CINAHL 64 article, and 0 articles from the Cochrane library. A total of 3150 articles were obtained from the databases. However, 750 duplicates were identified and removed by Mendeley software leaving 2398 for the title screening. After the title screening, 2123 articles were screened out because they did not meet the inclusion criteria leaving 275 articles for abstract screening. After abstracts were screened 246 articles were screened out leaving 29 articles for the full-text screening. After full-text screening 25 articles were screened out leaving 4 articles that met the inclusion criteria. Appendix 2 shows the reason for the exclusion of 25 articles after the full-text screening. Furthermore, all websites that were searched for grey literature did not yield any literature that meets the inclusion criteria. Snowballing was also used to search for relevant articles. Figure 1 shows a PRISMA diagram of the article selection process.

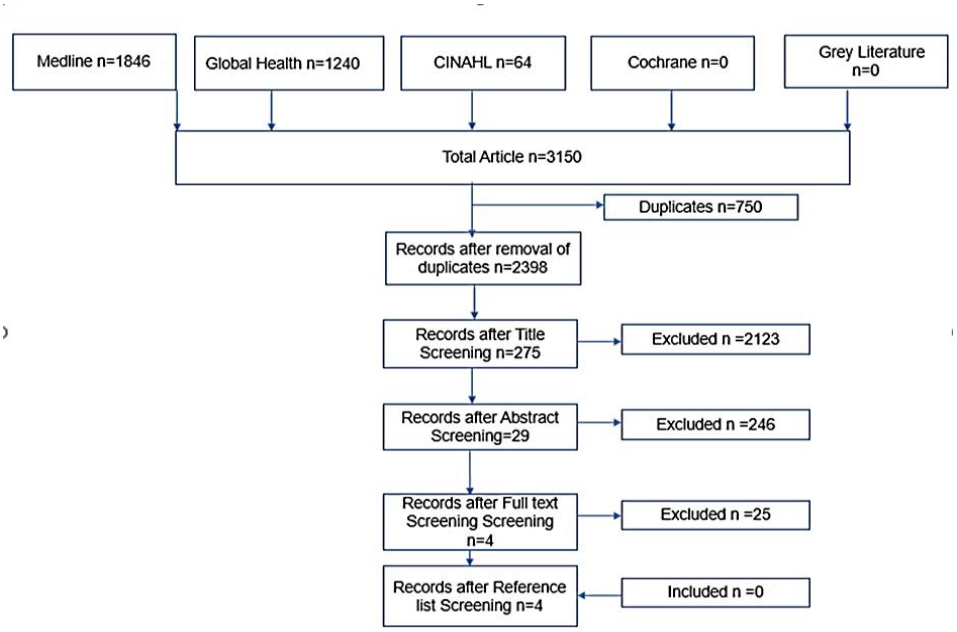

Figure 1: PRISMA diagram of the study selection process

Included studies

The four studies that made the inclusion criteria were by Fulone et al 2019,[25] Ongolo-Zogo et al 2018[26] Yehia et al 2015[27] and Nabyonga-Orem et al 2014[28]. All the studies included involve KTPs which have a formal partnership with stakeholders.

Location of KTPs

Two of the studies are from the African region, (Nabyonga-Orem et al 2014 and Ongolo-Zogo et al 2018),[26,28] one from the middle east (Yehia et al 2015)[27] and one from South America (Fulone et al 2019).[25] [Table 1]

Institution where the KTP is domiciled

The KTP in Fulone et al (2019),[25] is housed by the Seriama group at the University of Sorocaba Brazil, while the KPT from the study by Yehia et al (2015)[27] is housed at the Knowledge to policy Centre (K2P) group at American University of Beirut. Both KTP in Fulone et al (2019) and Yehia et al (2015) are in private non-profit Universities[25,27] while the two KPTs compared in the study by Ongolo-Zogo et al (2018)[26] in Uganda and Cameroon are housed in tertiary public institutions of learning own by the government. On the other hand, the KTP in Nabyonga-Orem et al (2014)[28] is housed in the National Level Ministry of health which is the National health policymaking institution of the country [Table 1]

Table 1: Characteristics and approaches to monitoring and evaluation of KTPs in included studies

Author	Publication Year	Title of Article	Study Aim(s)	Method of Evaluating KTP	Country of Intervention	KTP Domicile
Nabyonga-Orem et al	2014	Malaria treatment policy change in Uganda: What role did evidence play?	To explore the place of evidence in the design and implementation of Malaria Treatment	Case Study Approach	Uganda	National level Ministry of Health
Yehia et al	2015	Applying knowledge translation tools to inform policy: the case of mental health in Lebanon	The study seeks to gain a better understanding of the influence of KT tools and aims to inform initiatives towards promoting evidence-informed policymaking by taking mental health as a case study.	Case Study Approach	Lebanon	Knowledge to Policy Center (K2P) at the American University of Beirut
Ongolo-Zogo et al	2018	Assessing the influence of knowledge translation platforms on health system policy processes to achieve the health millennium development goals in Cameroon and Uganda: a comparative case study	To investigate whether and how the multifaceted activities undertaken by KTPs intersect with contextual factors	Qualitative comparative case study	Cameroon and Uganda	Government-affiliated institutions, a teaching hospital linked to the Cameroon ministry of health and a public university in the case of Uganda
Fulone et al	2019	Knowledge Translation for Improving the Care of Deinstitutionalized People With Severe Mental Illness in Health Policy	To investigate the means by which the care of deinstitutionalized individuals with severe mental disorders can be enhanced using KT tools.	Case Study Approach	Brazil	Seriema group at the University of Sorocaba Brazil

Approach for evaluating KTP

The study by Fulone et al (2019)[25] is a case study of the intervention activities of the Seriema group using the Supporting Policy Relevant Reviews and Trials (SUPPORT) tools for evidence-informed health policymaking to change the mental health policy of institutional care to deinstitutionalized care in Saracoba Brazil. Ongolo-Zogo et al (2018)[26] conducted a qualitative comparative case study with a semi-structured interview of informants and document review of KTPs in Uganda and Cameroon on a policy

intervention in task shifting and scaling up malaria prevention programs respectively. Yehia et al (2015) conducted a case study of K2P intervention using supporting the use of research evidence (SURE) guide and SUPPORT tools in implementing the mental health care in Lebanon[27]while Nabyonga-Orem et al (2014)[28] conducted a case study using key informant interview and document review to access the use of evidence in changing the malaria treatment policy in Uganda from chloroquine to Artemisinin Combination therapy. From the included studies case study methodology seems to be the predominate method used in evaluating KTPs [Table 1]

Range of activities and time duration from evidence generation to evidence use

The line of activities in the KTP aimed at resulting to the use of evidence in policymaking in the study by Fulone et al (2019)[25] includes; building capacity, priority setting, meeting with stakeholders which include policymakers and researchers, generating an evidence-based policy brief, dialogue between stakeholders, evidence brief and dialogue evaluation, post dialogue interview and finally disseminating findings. Furthermore, it is important to note that the cycle of activities had a duration of 3 years for completion.[25] However, during the process meeting with stakeholders was a continuous process and two activities (capacity building and development of evidence brief) took the longest duration of time in the cycle. The capacity building took 3 months while the development of the evidence policy brief took 2 months. Ongolo-Zogo et al 2018[26] indicated activities in the KTP with the aim of KT include stakeholders' engagement, priority setting, capacity building, joint synthesis of evidence amongst stakeholders, production of policy brief based on evidence, rapid evidence brief production, clearinghouse of policy relevant evidence and dialogue among stakeholders based on evidence. Although the activities in Fulone et al 2019[25] and Ongolo-Zogo et al 2018[26]seem to be similar, however Ongolo-Zogo et al (2018) started with stakeholders' engagement while Fulone et al (2019) building capacity. Yehia et al (2015)[27] indicated the following activities in the platform; priority setting, policy brief development, litmus testing of the brief which involves piloting the brief with few policymakers before dialogue, policy dialogue, evaluating the policy brief and the dialogue process. The litmus test allows the policymaker to evaluate the brief before dialogue and a dialogue evaluation was conducted to assess the process of the dialogue. Another post dialogue evaluation was conducted six months after the dialogue to assess the progress towards implementing outcomes of the dialogue and the process finally ends with the implementation of evidence-informed policy. The entire duration of activities in the study by Yehia et al (2015) took 1 year which is 2 years shorter than the intervention in Fulone et al (2019).[25] However, Yehia et al 2015[27] did not conduct capacity building and stakeholder engagement. But a key activity in Yehia et al (2015)[27] that was not found in all the other studies is the litmus testing of the evidence brief. This activity gives policymakers the privilege to brainstorm on available evidence and policy options recommended by the researcher before the dialogue. The KTP in Nabyonga-Orem et al 2014[28] differs from others because it is situated in the Ministry of health with the policymakers. The process lasted for 25 months with the following activities; discussions between policymakers and researchers, priority setting, evidence synthesis, technical working group discussion, interagency coordination committee, stakeholder's forum and implementation. It is noteworthy that the activities in Nabyonga-Orem et al

2014[28] were not indicated to take place in an order and does not seem to be detailed. Furthermore, Compared to Fulone et al 2019, Ongolo-Zogo et al 2018 and Yehia et al 2015,[25–27] it does not have activities to review the developed policy brief and the dialogue process.

Table 2: Activities and characteristics of the KTPs in the included studies

Author Name	Intervention	Duration	Status of KTP	Line of KTP Activities	Stakeholders		Funding
Nabyonga-Orem et al	Malaria treatment policy	2004-2006	present	i. Discussions between policymakers and researchers, ii. priority setting, iii. evidence synthesis, iv. technical working group discussion, v. interagency coordination committee, and stakeholder's forum.	**Public sectors** National level Ministry of Health, Researchers in Universities, National medical stores (NMS), National drug authority (NDA) Service providers, Managers at district level **Private sectors** Civil society organizations, Researchers from private research institutions, Media, Private pharmaceutical sector and Service providers		Global Fund
Yehia et al	Mental health	2013-2014	Present		i. Priority-setting ii. Development of policy brief iii. Litmus Testing iv. policy dialogue v. Evaluation of policy brief policy dialogue vi. Post-dialogue survey	Primary healthcare representatives Researchers in public health and mental health Healthcare providers including mental health specialists Representatives of professional associations Health insurer International health organizations"	Faculty of Health Sciences (FHS) at the American University of Beirut
Ongolo-Zogo et al	**Cameroon** Improving governance for health district development Scaling up malaria control interventions **Uganda** Task shifting to optimize the roles of health workers Improving access to skilled birth attendance	2004–2014	Present		i. Stakeholder engagement ii. Priority Setting iii. Capacity building iv. Coproduction of evidence v. Rapid evidence briefs vi. Clearing of policy relevant evidence vii. Evidence informed dialogues	Government officials Health care providers Representatives of civil society organizations Representatives of external donors Media Researchers	International Research Chair Initiative in Evidence-Informed Health Policies, and the Canadian Global Health Research Initiative through the joint McMaster University. Makerere University Doctoral Program on Health Policy and

						Knowledge Translation."
Fulone et al	Mental health	2016 - 2019	Present	i. Capacity building ii. Prioritizing Policy related issue iii. Meeting with policy makers, researchers and stakeholder iv. Development of an evidence brief v. Facilitating policy dialogue vi. Evaluation of the evidence brief and dialogue vii. Post dialogue interview iii. Dissemination of findings	Policymakers at the federal, state, and municipal level; Health care providers included mental health specialists, public health specialists, psychologists, psychiatrists, occupational therapists, nurses, and social workers; Researchers from Brazilian public and private universities, Evidence-Informed Policy Networks (EVIPNet)-Brazil members, and Seriema members; The Brazilian anti-asylum movement; Public defense representative from the state of São Paulo who was involved in mental health-related legislations.	EVIPNet Brazil/Ministry of Health Brazil

Categorizing stakeholders

Fulone et al 2019[25] indicate the category of stakeholders to be involved in the dialogue to consist of 45% are health care providers who are either mental health specialists or psychiatrists, psychologists, social workers, public health specialists or nurses, 25 % of the stakeholders are researchers from public and private universities in Brazil, researchers from WHO and members of the Seriema group. 20% are policymakers from federal, state, and municipal level, and the rest from civil society organizations. The categorization of stakeholders in Ongolo-Zogo et al 2018, Yehia et al 2015 and Nabyonga-Orem et al 2014[26–28] are the same with Fulone 2019,[25]but Ongolo-Zogo et al 2018[26] had the media group which was not represented in both Fulone et al 2019,[25]Yehia et al 2015[27] and Nabyonga-Orem et al 2014.[28] Nonetheless, only Yehia et al 2015[27] had health insurers represented. The lack of representation of the media by other platforms could impact negatively on the dissemination of available evidence. This is because there could be a misconception of research findings if not disseminated clearly. Furthermore, poor dissemination could limit the range of stakeholders that are informed about available evidence [Table 2].

Discussion

This review identified four studies that outlined activities in KTPs that will lead to evidence-based policymaking. Fulone et al 2019[25] indicate, Capacity building, Prioritizing Policy related issues, Meetings with policymakers, researchers and stakeholders, development of an evidence brief, facilitating policy dialogue, evaluation of the evidence brief, and dialogue, post dialogue interview, and dissemination of findings. Ongolo-Zogo et al 2018,[26] outlined Stakeholder engagement, Priority Setting, Capacity building, a co-production of evidence syntheses, evidence briefs for policy, Rapid evidence briefs, Clearing of policy-relevant evidence, evidence-informed dialogues. Yehia et al 2015[27] outlined Priority-setting, development of policy brief, a Litmus test of the policy brief, policy dialogue, evaluation of policy brief and policy dialogue, post-dialogue survey and finally, Nabyonga-Orem et al 2014[28]outlined discussions between policymakers and researchers, priority setting, evidence synthesis, technical working group discussion, interagency coordination committee, stakeholder's forum and implementation. Notably, all the studies indicated case study methodology for evaluating KPT.

Luke's second dimension of power discloses a dimension in policy making where particular groups or individuals can consciously or unconsciously allow or stop policy options from getting into the agenda stage of the policy process. This dimension of power gives added advantage towards implementation to those options that are set as policy agenda. Consequently, those options that are not set as agenda are not considered for implementation.[29] Therefore, where a KTP is domicile will impact its chances of getting its recommendation as a policy agenda for consideration in the policy process. Because the National Ministry of Health is the government institution for setting health agenda, the KTP in the study by Nabyonga-Orem et al (2014) will have a higher chance of implementing its evidence-based policy options compared to those KTPs in academic or private institutions. Furthermore, housing of the KTP in the Ministry of Health has the potential of institutionalizing the use of evidence in the country. On the contrary, the KTP in the Ministry of Health could foster the politicization of evidence. This is because evidence could be cherry-picked or skewed to support a political interest or ideology. However, this could be checked by the other stakeholders on the platform. Sriram et al (2018)[30] indicated complex bureaucratic procedures in government and frequent changes in government officials, this could also result to a setback in implementing activities in a KTP domicile in the Ministry of health in an LMICs.

Proctor[31]indicated an extreme of about 80-year period from the time of generating evidence to the time of its implementation in policy. However, studies by Ongolo-Zogo et al 2018[26] indicated the longest duration (10years) from evidence generation to policy implementation while Yehia et al 2015[27] indicated the shortest duration (1year) from evidence generation to policy implementation. Therefore, evidence from this review indicates that KTP could result to an excellent means of reducing the “know do gab”. None the less it involves a range of activities.

The WHO’s Evidence-Informed Policy Networks (EVIPNet) acknowledges that the knowledge gained from the monitoring and evaluating activities in a KTP could be used to develop existing or new KTPs.[32] Capacity building is an activity identified by Fulone et

al (2019) and Ongolo-Zogo et al (2018).[25,26] Fulone et al (2019)[25]indicated that the capacity building workshop was aimed at making the policymakers understand the need of evidence in policymaking which could influence the demand for evidence, additionally, the workshop was to create an avenue for interaction between researcher and policymakers which could foster the relationship between both stakeholders. However, Kasonde and Campell (2012)[33] in a study carried out in a KTP at Zambia indicated that policymakers are not usually available for the entire scheduled period for their training. This challenge is attributed to the busy schedule of policymakers. Nonetheless, to mitigate the challenge of policymakers not completing their schedule training, a study from Nigeria indicated that awarding a certificate degree in evidence-based knowledge translation by a University housing a KTP incentivized policymakers to complete their training.[34] It is also important to note that one of the barriers to KT in LMICs is the poor capacity of researchers to generate policy-relevant research,[35,36] hence capacity building should be channelled towards researchers as well. Additionally, employing social events might be a better means of creating opportunity for interaction between researchers and policymakers. This is because the atmosphere of social event tends to be more relaxing compared to workshops.

The strategic plan for WHO's Evidence-Informed Policy Networks for 2012 to 2015 noted three important innovative activities in a KTP to be monitored and evaluated. These activities are the priority-setting processes, the evidence briefs for policy, and policy dialogues.[32] The need for an evidence-based priority setting in the health care system in LMICs is drawn from the fact that there are enormous health needs and the resources to satisfy them are scarce.[37] Hence to ensure equity and efficient use of health care resources there is a need for prioritization of health care needs based on evidence. However, in several LMICs there are no rational processes for priority setting, hence contributing to distrust of policymakers and wastage of scarce resources.[38] Priority setting in a KTP involves a wide range of stakeholders thereby making the process transparent which confers trust apart from the benefit of selecting the most relevant health challenge for intervening using available evidence.

Policy briefs in KTP entails using global and local evidence to present public health challenges and possible policy options for dialogue in a simple format.[39] It is worth noting that contextualizing evidence is very important as scientific evidence alone might not bring about a needed solution. This is because other sociocultural or socioeconomic factors could be strong determinant to a health challenge. Therefore, the litmus testing indicated in by Yehia et al 2015 seems to be an innovative opportunity for policymakers to brainstorm on briefs before dialogue. This will give the policymakers opportunity to evaluate if presented evidence-based policy options will fit into their context. However, the introduction of litmus testing makes the duration of KT longer.

Ongolo-Zogo et al 2018[26] indicated rapid response of brief activities which will provide very fast evidence for decision-makers to use. This activity seems to be very important to provide logical reason for decisions amongst policymakers in a situation where little is known about a public health challenge. The rapid response of brief activities will be a needed activity in KTPs in LMICs in periods of epidemics or pandemic such as the present

novel COVID-19 pandemic. This is because it will guide policymakers to make decisions based on available evidence thereby avoiding irrational decisions which could result in more loss of lives and economic hardship. However, it is important to note that the best available evidence in a novel health challenge might not be a randomized control trial (RCT) or a systematic review. This is because there might be paucity of knowledge.

All the studies indicated an opportunity for researchers and policymakers to dialogue on the developed brief. Therefore, dialogue in a KTP provides the opportunity for a policymaker and researchers to relate their concerns about each other's work and the provided evidence. It also provides avenue for sharing experiences between stakeholders. Consequently, resulting in exchange of knowledge between stakeholders and trust building. Additionally, post dialogue survey indicated by Fulone et al 2019 and Yehia et al 2015[25,27] seems to provide an opportunity for improving the process of dialogue. However, it might be assumed that the person facilitating a dialogue process might also have an impact on the gains of the dialogue. Therefore, during dialogue process in a KTP, a trained facilitator who knows the aim of the activity should be used in facilitating the process. This is to ensure that the aim of the dialogue is not defeated. Finally, it is important to note that this review did not study the outcomes of the intervention; therefore, the relation between the range of activities and outcomes remains an area of further studies. Furthermore, the methodology (Scoping Review) used in this study does not evaluate the quality of literature used. But the concept of KTP is recent, consequently resulting to scarcity of studies.

Conclusion

This scoping review identified four studies that indicated case study methodology as the approach for evaluating a KTP. The range of activities in KTPs to bridge the "know do gap" according to authors included; building capacity, priority setting, meeting with stakeholders, generating an evidence-based policy brief, dialogue between stakeholders, evidence brief and dialogue evaluation, post dialogue interview, and finally disseminating findings. The aspects of KTP evaluated were priority setting, policy brief development, litmus testing of brief, policy dialogue, evaluating the policy brief, and the dialogue process and post-dialogue implementation evaluation. Although capacity building workshops is indicated to enhance interaction between researchers and policy makers, social events might be a more efficient way of creating avenue for interaction and developing relationship between stakeholders. Furthermore, dialogue between stakeholders is also a key activity across studies but there is need to employ a facilitator that is experience and knowledgeable on the goal of the dialogue to maximize the opportunity for dialogue.

Ethical Considerations

Not applicable

Source(s) of funding: None

Authors' Contribution

HB: Study of conceptualization and design, data extraction, analysis and interpretation of results, manuscript drafting and approval of the final manuscript for publication.

INO: Study design, data extraction, manuscript drafting and approval of the final manuscript for publication.

ICA: Study design, data extraction, manuscript drafting and approval of the final manuscript for publication

SA: Study design, analysis and interpretation of results, manuscript drafting, analysis and interpretation of results, and approval of the final manuscript for publication.

Acknowledgements: We acknowledge the technical support received from the African Health Observatory Platform (AHOP) at the London School of Economics and Political Science (LSE).

Availability of data and materials
The datasets used and/or analysed during the study are all available in the published study.

Conflict of interest: The authors declare no conflict of interest.

References

1. World Health Organisation. Bridging the "know–do" gap meeting on knowledge translation in global health. Published 2020. Accessed June 30, 2020. Available from https://www.measureevaluation.org/resources/training/capacity-building-resources/high-impact-research-training-curricula/bridging-the-know-do-gap.pdf

2. Morris Z, Wooding S, & Grant J. The answer is 17 years, what is the question: understanding time lags in translational research. Journal of the Royal Society of Medicine. 2011;104(12):510-520.

3. Rushmer R, Ward V, Nguyen T, & Kuchenmüller T. Knowledge translation: Key concepts, terms and activities. In: Population Health Monitoring.; 2019:127-150.

4. Walshe K & Davies H. Health research, development and innovation in England from 1988 to 2013: From research production to knowledge mobilization. Journal of Health Services Research & Policy,. 2013;3(Suppl 2013):1–12.

5. Canadian Institutes of Health Research. Knowledge Translation Strategy 2004-2009. Accessed June 30, 2020. https://cihr-irsc.gc.ca/e/26574.html#defining

6. World Health Organisation. Evidence-Informed Policy Network. Accessed June 30, 2020. https://www.who.int/evidence/about/en/

7. Lavis J, Lomas J, Hamid M, & Sewankambo N. Assessing country-level efforts to link research to action. Bulletin of the World health Organization. 2006;84:620-8.

8. World Health Organisation. Evidence-informed policy-making. Accessed June 30, 2020. Available from: https://www.who.int/evidence/resources/country_reports/KTP/en/

9. Straus SE, Tetroe J, Bhattacharyya O, Zwarenstein M, & Graham ID. Monitoring knowledge use and evaluating outcomes. Knowledge Translation in Health Care: Moving from Evidence to Practice. Chichester, West Sussex, United Kingdom: Wiley, John & Sons, Incorporated. 2013 Aug 12:227-36.

10. Measure Evaluation. A Trainers Guide to Fundamentals of M&E for Population, Health and Nutrition Programs. Accessed June 30 2020. Available from: https://www.measureevaluation.org/resources/publications/ms-02-05

11. Arksey H & O'Malley L. Scoping studies: towards a methodological framework. International Journal of Social Research Methodology. 2005;8(1):19-32.

12. Tricco A, Lillie E, & Zarin W, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med. 2018;169(7):467-473. doi:10.7326/M18-0850.

13. World Health Organization. Accessed July 24, 2020. Available from: https://www.who.int/

14. Canadian Coalition for Global Health Research. A Knowledge network for global health equity. Accessed July 24, 2020.Available from: https://www.ccghr.ca/

15. United Kingdom Department for International Development (DFID). Coronavirus (COVID-Accessed July 25, 2020.Available from: https://www.gov.uk/government/organisations/department-for-international-development.

16. United States Agency for International Development (USAID). Promoting Global Health. Accessed July 25, 2020. Available from: https://www.usaid.gov/

17. Health research web. Research for Health in the World. Accessed July 25, 2020. Available from: https://www.healthresearchweb.org/

18. African Institute for Health Policy & Health Systems Studies. Policy information platform (PIP), Nigeria. Accessed July 25, 2020. Available from: http://www.pipnigeria.org/#

19. Alliance for health Policy and system Research. Publication Database. Accessed July 25, 2020.Available from: https://www.who.int/alliance-hpsr/en/

20. Knowledge to Policy center (K2P). Accessed July 25, 2020. Available from: https://www.aub.edu.lb/k2p/pages/default.aspx

21. Center for Global development Ideas to Action: Independent research for global prosperity. Accessed 25th July 2020. Available from:https://www.cgdev.org/section/events?gclid=Cj0KCQjw7Nj5BRCZARIsABwxDKKCF_aJ1SgQs06XurcmZPosuaeTVDeekCVcHCvED_rzNwLjcLF7kGsaArEWEALw_wcB

22. Dignitas International. Knowledge Translation. Accessed July 25 , 2020.Available from: https://dignitasinternational.org/knowledge-translation/

23. ChathamHouse.Research. Accessed July 25, 2020. Available from: https://www.chathamhouse.org/research

24. Abdul Latif Jameel Poverty Action Lab (J-PAL). Research Resources. Accessed July 25, 2020. Available from:https://www.povertyactionlab.org/research-resources?view=toc

25. Fulone I, Maia Barreto J, Barberato-Filho S, Carvalho M, & Lopes L. Knowledge Translation For Improving The Care Of Deinstitutionalised People With Severe Mental Illness In Health Policy. Frontiers in pharmacology. 2019;10:1470.

26. Ongolo-Zogo P, Lavis J, Tomson G, & Sewankambo N. Assessing the influence of knowledge translation platforms on health system policy processes to achieve the health millennium development goals in Cameroon and Uganda: a comparative case study. Health policy and planning. 2018;33(4):539-554.

27. Yehia F & El Jardali F. Applying knowledge translation tools to inform policy: the case of mental health in Lebanon. Health research policy and systems. 2015;13(1):29.

28. Nabyonga-Orem, J Ssengooba F, Macq J, & Criel B. Malaria treatment policy change in Uganda: what role did evidence play? Malaria journal. 2014;13(1):345.

29. Lukes S (1974). *Power: A Radical Approach*. London: Macmillan

30. Sriram V, Bennett S, Raman V, & Sheikh K. Developing the National Knowledge Platform in India: a policy and institutional analysis. Health research policy and systems. 2018;16(1):13.

31. Proctor R. The history of the discovery of the cigarette–lung cancer link: evidentiary traditions, corporate denial, global toll. Tobacco control. 2012;21(2):87-91.

32. World Health Organisation. World Health Organisation. EvipNet 2012-2015 strategic plan: towards a world in which the best available research evidence informs health policy-making.

33. Kasonde J, Campbell S. Creating a knowledge translation platform: nine lessons from the Zambia Forum for Health Research. Health Research Policy and Systems. 2012;10:31.

34. Uneke C, Ndukwe C, Ezeoha A, Uro-Chukwu H, & Ezeonu C. Implementation of a health policy advisory committee as a knowledge translation platform: the Nigeria experience. International journal of health policy and management. 2015;4(3):161.

35. World Health Organisation. Policy & *Practice.* Accessed June 30, 2020. *Available from: https://www.who.int/bulletin/volumes/94/4/15-162966/en/*

36. Murunga V, Oronje R, Bates I, Tagoe N, & Pulford J. Review of published evidence on knowledge translation capacity, practice and support among researchers and research institutions in low-and middle-income countries. Health research policy and systems. 2020;18(1):16.

37. Uneke C, Ezeoha A, Ndukwe C, Oyibo P, Onwe F, & Aulakh B. Research priority setting for health policy and health systems strengthening in Nigeria: the policymakers and stakeholders' perspective and involvement. Pan African Medical Journal. 2014;16(1).

38. Steen H, Jareg P, & Olsen I. Providing a Core Set of Health Interventions for the Poor. Towards Developing a Framework for Reviewing and Planning? A Systemic Approach. Background Document. Norway, Oslo. Centre for Health and Social Development.; 2001.

39. World Health Organisation. Evidence-informed policy. Accessed June 30, 2020. *Available from:* https://www.who.int/evidence/resources/country_reports/KTP/en

APPENDIX

Appendix 1: search Strategy

1. Knowledge Translation.mp. or Translational Medical Research/

2. exp Translational Medical Research/

3. Public Health/ or Decision Support Techniques/ or Decision Making/ or Public Health Practice/ or Evidence-Based Medicine/ or Evidence-Based Practice/ or Humans/ or Health Policy/

4. (knowledge adj2 (application or broke* or creation or diffus* or disseminat* or exchang* or implement* or management or mobili* or translat* or transfer* or uptak*

or utili*)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

5. (evidence* adj2 (exchang* or translat* or transfer* or diffus* or disseminat* or exchang* or implement* or management or mobil* or uptak* or utili*)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

6. (KT adj2 (application or broke* or diffus* or disseminat* or decision* or exchang* or implement* or intervent* or mobili* or plan* or policy or policies or strateg* or translat* or transfer* or uptak* or utili*)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

7. (research* adj2 (diffus* or disseminat* or exchang* or transfer* or translation* or application or implement* or mobil* or transfer* or uptak* or utili*)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

8. ("research findings into action" or "research to action" or "research into action" or "evidence to action" or "evidence to practice" or "evidence into practice").mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

9. technology transfer.ti,ab. or technology transfer.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

10. Diffusion of Innovation/ or (diffusion adj2 innovation).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

11. (("systematic review*" or "knowledge synthes*") adj5 ("decision mak*" or "policy mak*" or "policy decision?" or "health polic*")).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

12. ((evidence base* or evidence inform*) adj5 (decision* or plan* or policy or policies or practice or action*)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

13. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12

14. (Monitoring and Evaluation).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

15. (M and E).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

16. (Account* or effect* or surveillance).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

17. (Indicator* or metric* Parameter*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

18. Data Collection/

19. (Input or output or outcome or Impact).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary

concept word, rare disease supplementary concept word, unique identifier, synonyms]

20. (Frameworks or framework).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

21. (Assessment or assessments).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

22. (Evaluating or evaluation or Evaluat*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

23. Quality Assurance, Health Care/ or Quality Control/ or "Quality of Health Care"/

24. "Quality of Health Care"/

25. (Mechanisms or monitor*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

26. Process Assessment, Health Care/

27. (Benchmarking or Benchmark*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

28. 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27

29. (afghanistan or albania or algeria or american samoa or angola or "antigua and barbuda" or antigua or barbuda or argentina or armenia or armenian or aruba or azerbaijan or bahrain or bangladesh or barbados or republic of belarus or belarus or byelarus or belorussia or byelorussian or belize or british honduras or benin or dahomey or bhutan or bolivia or "bosnia and herzegovina" or bosnia or herzegovina or botswana or bechuanaland or brazil or brasil or bulgaria or burkina faso or

burkina fasso or upper volta or burundi or urundi or cabo verde or cape verde or cambodia or kampuchea or khmer republic or cameroon or cameron or cameroun or central african republic or ubangi shari or chad or chile or china or colombia or comoros or comoro islands or iles comores or mayotte or democratic republic of the congo or democratic republic congo or congo or zaire or costa rica or "cote d'ivoire" or "cote d' ivoire" or cote divoire or cote d ivoire or ivory coast or croatia or cuba or cyprus or czech republic or czechoslovakia or djibouti or french somaliland or dominica or dominican republic or ecuador or egypt or united arab republic or el salvador or equatorial guinea or spanish guinea or eritrea or estonia or eswatini or swaziland or ethiopia or fiji or gabon or gabonese republic or gambia or "georgia (republic)" or georgian or ghana or gold coast or gibraltar or greece or grenada or guam or guatemala or guinea or guinea bissau or guyana or british guiana or haiti or hispaniola or honduras or hungary or india or indonesia or timor or iran or iraq or isle of man or jamaica or jordan or kazakhstan or kazakh or kenya or "democratic people's republic of korea" or republic of korea or north korea or south korea or korea or kosovo or kyrgyzstan or kirghizia or kirgizstan or kyrgyz republic or kirghiz or laos or lao pdr or "lao people's democratic republic" or latvia or lebanon or lebanese republic or lesotho or basutoland or liberia or libya or libyan arab jamahiriya or lithuania or macau or macao or "macedonia (republic)" or macedonia or madagascar or malagasy republic or malawi or nyasaland or malaysia or malay federation or malaya federation or maldives or indian ocean islands or indian ocean or mali or malta or micronesia or federated states of micronesia or kiribati or marshall islands or nauru or northern mariana islands or palau or tuvalu or mauritania or mauritius or mexico or moldova or moldovian or mongolia or montenegro or morocco or ifni or mozambique or portuguese east africa or myanmar or burma or namibia or nepal or netherlands antilles or nicaragua or niger or nigeria or oman or muscat or pakistan or panama or papua new guinea or new guinea or paraguay or peru or philippines or philipines or phillipines or phillippines or poland or "polish people's republic" or portugal or portuguese republic or puerto rico or romania or russia or russian federation or ussr or soviet union or union of soviet socialist republics or rwanda or ruanda or samoa or pacific islands or polynesia or samoan islands or navigator island or navigator islands or "sao tome and principe" or saudi arabia or senegal or serbia or seychelles or sierra leone or slovakia or slovak republic or slovenia or melanesia or solomon island or solomon islands or norfolk island or norfolk islands or somalia or south africa or south sudan or sri lanka or ceylon or "saint kitts and nevis" or "st. kitts and nevis" or saint lucia or "st. lucia" or "saint vincent and the grenadines" or saint vincent or "st. vincent" or grenadines or sudan or suriname or surinam or dutch guiana or netherlands guiana or syria or syrian arab republic or tajikistan or tadjikistan or tadzhikistan or tadzhik or tanzania or tanganyika or thailand or siam or timor leste or east timor or togo or togolese republic or tonga or "trinidad and tobago" or trinidad or tobago or tunisia or turkey or "turkey (republic)" or turkmenistan or turkmen or uganda or ukraine or uruguay or uzbekistan or uzbek or vanuatu or new hebrides or venezuela or vietnam or viet nam or middle east or west bank or gaza or palestine or yemen or yugoslavia or zambia or zimbabwe or northern rhodesia or global south or africa south of the sahara or sub-saharan africa

or subsaharan africa or africa, central or central africa or africa, northern or north africa or northern africa or magreb or maghrib or sahara or africa, southern or southern africa or africa, eastern or east africa or eastern africa or africa, western or west africa or western africa or west indies or indian ocean islands or caribbean or central america or latin america or "south and central america" or south america or asia, central or central asia or asia, northern or north asia or northern asia or asia, southeastern or southeastern asia or south eastern asia or southeast asia or south east asia or asia, western or western asia or europe, eastern or east europe or eastern europe or developing country or developing countries or developing nation? or developing population? or developing world or less developed countr* or less developed nation? or less developed population? or less developed world or lesser developed countr* or lesser developed nation? or lesser developed population? or lesser developed world or under developed countr* or under developed nation? or under developed population? or under developed world or underdeveloped countr* or underdeveloped nation? or underdeveloped population? or underdeveloped world or middle income countr* or middle income nation? or middle income population? or low income countr* or low income nation? or low income population? or lower income countr* or lower income nation? or lower income population? or underserved countr* or underserved nation? or underserved population? or underserved world or under served countr* or under served nation? or under served population? or under served world or deprived countr* or deprived nation? or deprived population? or deprived world or poor countr* or poor nation? or poor population? or poor world or poorer countr* or poorer nation? or poorer population? or poorer world or developing econom* or less developed econom* or lesser developed econom* or under developed econom* or underdeveloped econom* or middle income econom* or low income econom* or lower income econom* or low gdp or low gnp or low gross domestic or low gross national or lower gdp or lower gnp or lower gross domestic or lower gross national or lmic or lmics or third world or lami countr* or transitional countr* or emerging economies or emerging nation?).ti,ab,sh,kf.
13 and 28 and 29