

*Full Length Research Paper*

# Linking research evidence to health policy and practice

Zahiruddin Quazi Syed<sup>1\*</sup>, Abhay Gaidhane<sup>1</sup> and Sanjay Zodpey<sup>2</sup>

<sup>1</sup>Department of Community Medicine, Jawaharlal Nehru Medical College, (DMIMSU) Wardha, India.

<sup>2</sup>Public Health foundation of Indian, New Delhi, India.

Accepted 16 July, 2016

Evidence based policies in public health are receiving increasing attention and importance for organizing, funding and delivering the health services. The world health organization's, task force report on health system research states, "millennium development goals will not be attained without new research addressing health system constraints to delivering effective interventions" (World Health Organization, 2005), "research is an essential component of strong health systems for informed and knowledgeable action to improve people's health and accelerate the rate of global, regional and national development" (The Ministerial Summit on Health Research, 2004), evidence-based policy relies on the principle that policy decisions must involve comprehensive analysis of health issues, testing of newer strategies or possible health interventions and mechanism to deliver those health interventions. Health system would be better able to deal with existing challenges if interventions that adopted are based on sound evidences. High quality research has an important part to play in strengthening these interventions and subsequently health systems. Public health agencies should exercise its responsibilities in the development of comprehensive public health policies by promoting the use of the scientific knowledge in decision-making about public health and to serve the public interest. Currently, there is insufficient use of research evidence by decision-makers attempting to improve health systems performances (World Health Organization, 2006; Thomsom et al., 2007). With this background we look at the range of issues related to linking research evidence into health policy and practice, especially in Indian context that can also be true for other low and middle income countries.

**Key words:** Evidence based policies, public health, health system.

## INTRODUCTION

### LINKAGES AND EXCHANGES BETWEEN THE RESEARCHER AND POLICY MAKERS

Researcher search for truth by using the rationale model.... policy maker search for compromise by using intuitive models" (Canada's International Development Research Centre (IDRC), Swiss Agency for Development and Cooperation (SDC) 2008). Researchers and policy makers operate from the different perspective. The usual thinking of policy makers is that researchers are too academic and they don't understand practical aspects of an issue.

Researchers, on the other hand, think that decision makers hardly ever take into account the complexities of issues before taking policy decisions. The other

misperception of decision makers, having some trust in evidence, is that the health system research is an end product that can be directly incorporated into the health policy whereas researchers fail to understand that the policies are not made swiftly, rather it is a nonlinear, incremental process that comes out over time and it is influenced by many factors like beliefs, perceptions, ideologies and financial and political environments apart from information and research evidences (Alliance HPSR, 2007; Jonathan and Lomas, 2000, 1997). The failure of policy makers and researchers to understand each others roles and contributions in policy making is a major stumbling block for linking evidence into policy.

Studies have proved that mechanism promoting early an-ongoing exchanges and interactions between researchers and policy makers would be useful for two

\*Corresponding author. E-mail: [ahirquazi@rediffmail.com](mailto:ahirquazi@rediffmail.com).

communities to understand each others role and work in close collaboration. It will generate evidences that are inline of policy needs and therefore facilitate utilization of evidences in policy making process (Nick Black, 2001).

Linkages and interactions between researchers and policy makers can be facilitated by establishing institutional mechanisms that will promote holding meetings between researchers and policy makers for priority-setting exercises, convening national policy dialogues, debates or conferences (Dobbins, 2007; Landry, 2006). In order to become more familiar with problems that occur in practice or policy making, researchers have to engage in more discussions through collaborative relationships with target users (Haynes, 1990). Policy-makers could also be engaged as a responsible partner in various stages of health system research process, right from setting priority research questions, conducting corroborative research projects, discussing results, knowledge transfer or dissemination, utilization of research evidences in decision making and governance and funding health system research (The Ministerial Summit on Health Research, 2004).

Institutionalizations of a culture of research and retaining researchers with an ability to do high quality health system research within the public sector will also create conducive environment for research to make on policy agenda. This will also give confidence to politicians, decision makers and managers to use of evidences in their debates, dialogues, speeches or key not addresses. The other mechanism that can promote much needed interaction between researchers and policy makers is to give exposure to policy makers to research environment early in their carrier and to give internship opportunities for young researcher into public sector/health system organizations, whereby they can spend more time understanding the policy making environment (Hanney et al., 2003).

## **HIGH QUALITY HEALTH SYSTEM RESEARCH**

Policy makers perception is that research is mainly done as a part of routine or regular academic activity or to receive some incentives or promotions in job, but not necessarily to answer questions that needs answering (Landry et al., 2006). In order to generate evidences that are highly valued by policy makers one need to apply available knowledge, under the prevailing socioeconomic and cultural environment through health system research involving the interdisciplinary efforts between the biomedical, social and behavioral sciences acting epidemiology as a bridge. Commissioning such high quality research requires additional funds, building capacity of researchers and research institutions and critically evaluating the research proposals in context of policy making (IDRC and SDC, 2008).

Funding can be assigned as a core grant (for broad

based institutional support) or as a project based funding (usually competitive in nature). A recent survey in 2008 had identified huge funding gap in low and middle income countries compared to develop countries for health system research (Dobbins and Barnsley, 2001). Therefore LMIC have to rely more upon donor agencies for funds, which are mostly for a product focused or disease focused assessments or evaluations. In contrast, many believe that the number of lives saved would be much greater if investments have been made in issue based programs and or relevant synthesis or summaries aimed at improving service delivery (Jonathan and Lomas, 2000). National governments and international donors will have to provide additional funds specially for health system research.

Capacity building in needed at 3 levels individual, institutional, societal level. These 3 levels are interrelated therefore a comprehensive effort and investment to develop capacity in health system research at all these 3 levels is essential. A more sustained national efforts and funding is required to develop the capacity for health system research rather than relying on the fragmented approach for funding health research by international donor agencies (Jonathan Loma, 2000). Specific programs needs to be developed to build capacity of researcher in health system research that ranged from - financial supports, fellowships, mentoring programs at individual level, networking, organizational assessments and development grants.

Training of researchers in the policy context is needed to frame good research question. Capacity building programs should also aim at strengthening skills of program managers or policy makers in research methods as it would improve their understanding of research and increase the importance policy makers place on research and motivation to use it.

It is worthwhile to critically evaluate health service research proposal from policy making perspectives to generate evidences of high quality. This can be done utilizing 4 considerations; development framework, research uniqueness, decision making process and stakeholder or community engagement. Decision makers are more likely to use the outcome of such research proposals. Research proposal must also include a format for reporting the research evidence and plan for dissemination for various users. Research proposals that are analyzed using such approach should be documented to enhance the knowledge base on this critical aspect of health systems research (Syed et al., 2008).

## **PERCEIVED IMPORTANCE OF RESEARCH IN POLICY MAKING**

All kinds of "information" have some influence on policy making process. Apart from research there are other sources of information, like personal experiences,

opinions of experts and peers, anecdotes etc. If scientific evidence cannot convince the policy makers, they will place more importance upon other sources of "information". Therefore researchers must understand that the evidences created by them needs to be contextualized for applicability and utility and more they participate in the process of contextualization their hard work is more likely to be valued by policy makers.

Researchers can adopt interdisciplinary, collaborative approach for conducting health system research as the health system problems are usually complex and for finding answers to them one needs to cross well beyond the traditional academic sphere of influences. Researchers need to take into account these issues before framing research questions or interpreting the research results (Albert et al., 2007).

### **CONFIDENCE IN THE RESEARCHER AND RESEARCH EVIDENCE**

Policy-makers look for the consistency and reliability of the evidence. The extent to which the policy makers value the research findings in the policy making process will influence how much it is utilized (Albert et al., 2007). The weak link between research evidences and policies could also be explained by the lack of consensus about the research findings due complexity of evidences, scientific controversies and different interpretations. Many times evidence is dismissed as irrelevant because it is done in different settings (lack generalisability) or there may be other types of competing evidences (personal experiences, local information, colleagues' opinions etc). At times, detrimental social environment and poor quality of knowledge purveyors may also hold back the use evidences for making of health policies. Decision makers confidence in research evidence is high if it comes from trusted sources, credible journals that publish research reports or trusted organizations that undertake research. Credibility of researcher can also be enhanced by positioning research evidence as a reliable, expert and preferable compared to other type of information sources (Dobbins et al., 2004).

### **REPORTING OF RESEARCH EVIDENCES**

Public health decision maker value evidences that are current, free of technical jargon, transparent and with recommendations ranked in order of effectiveness. Some decision makers also look for discussions on cost analysis, in term of local, regional, national or global context. Researchers need to learn to present the result of their hard work in an easily understandable and in sensitive manner not only to the needs of various audiences, but also considering the available resources and skills of those audiences (Jonathan, 2000). Evidence

presented in customized form as it's often used for presentations, forwarding to colleagues, printing and filing for own use, composing a briefing note and delivered in electronic format preferred by the policy makers. With regards to specific format, research reports that are short and concise are usually appreciated by the decision makers. Evidences that appeared in user friendly format - first executive summaries, followed by abstracts are more preferred, whereas the least preferred are full text original articles/reports (Dobbins et al., 2004). Studies from developed countries suggested that policy makers prefer the specific format - "1:3:25" (1- page take-home messages; 3-page executive summary; 25-page report).

### **ACCESSING EVIDENCES**

The internet and various other online resources are very useful in accessing research evidences, but many decision makers from LMIC are either not trained in accessing the information and or have limited access to internet. Moreover retrieving of information/ evidence is considered as a time consuming process. Studies have clearly articulated the need for sensitization and assistance to policy maker in effectively managing the vast quantities of information they received, as well as training in how to optimize available information sources (Trostle et al., 1999). By creating knowledge base, promoting knowledge brokerage and creating opportunities for transfer or dissemination of knowledge (knowledge transfer platforms) could be an effective strategy to minimize the time for locating, appraising, synthesizing, and incorporating research evidence into decision making process.

Creating knowledge base can be a welcoming move for conducting searches and commissioning synthesis, creating information and local data bases and maintaining websites. The most important role of these knowledge bases would be to function as a clearing-house and providing packed synthesis to policy makers or decision makers.

Furthermore, in order to facilitate retrieval of optimally packaged high-quality and highly relevant reviews; knowledge bases can act as a rapid response units at the country, state or regional level and can publish short briefing notes based on policy reviews. Research institutions and health system organizations together need to take an initiative for creating the knowledge bases at local, country and regional level.

Often the confusion prevails regarding accountability for supplying the evidences. Knowledge brokering will be a useful strategy for making evidences readily available, easy-to- use, and in customized format to decision makers. Having particular person or group of persons delegated the responsibility to search and compile the relevant research findings for the policy questions at hand is preferred and perceived to be extremely helpful.

Knowledge brokers / purveyors usually function as neutral actors and they are trusted and instrumental resources for bringing together the worlds of research and policy (Alliance HPSR, 2007).

Providing right opportunities or knowledge transfer platforms at right time for disseminating evidence is very crucial, as evidences that are culturally appropriate as well as tailored to specific concerns and deadlines of policy-makers are valued.<sup>6</sup> Information technology and email are the most preferred methods for receiving research information by policy makers. Therefore launching of website dedicated to evidence for policy making, developing low cost databases will serve as an important medium for transmitting evidences. Public health informatics also have a great potentials as it can improve the quality of population-based information upon which public health policy is based and caters to the specific program needs. Online as well as print publication of an evidence bases for policy decisions and providing open access to information would be very useful knowledge transfer platform (Alliance HPSR, 2007).

Studies have identified that many policy makers also prefer verbal report to documents, and place more importance to information presented to them by individuals highly respected, then documents. Comments made by respected individuals or those who deemed to be knowledgeable in the subject are also highly influential. Therefore convening conferences, workshops, meetings, symposiums, debates and developing a regional collaborations and networks are also an important platforms for disseminating the knowledge (Dobbins and Barnsley, 2001).

## **USE SYSTEMATIC REVIEWS OR META-ANALYSIS**

Every year, researchers and scientists publish more than 3 million new articles in scientific journals. It's been estimated that a healthcare professional would need to read around 20 articles every day just to stay at top of their field. Considering the rapid expansion of knowledge base and limited capacity of policy maker in health system research, searching, accessing and reviewing quality research evidences seems to be difficult tasks for policy makers. Meta-analysis or systematic review could gives policy makers a comprehensive but concise view of research evidences on a specific issue (Shea, 2007).

Systematic reviews have much strength as it can give condensed, balanced and verifiable information on specific policy related issue. Moreover, in meta-analysis, information or researches from different settings are pooled together to arrive at a conclusions, thus the results are more likely to be flexible, dynamic and can be replicable in different settings. Researcher needs to disseminate systematic reviews to the appropriate target audiences (that is, to link the key messages with the level

of decision making) and present that in ways that are easily understood and easy to use. Such audience-specific messages from systematic reviews, those are in line with the decision-making environments to which they apply are more likely to be used. However, audience-specific messages from the same research findings may differ among regions as well as among different decision-making groups. Organizations such as the Cochrane collaboration and the National institute for health, Clinical excellence of the UK, WHO Alliance etc are currently leading the way in providing systematic reviews (Dobbins, 2004).

## **ESTABLISHING NORMS OR REGULATIONS**

Supporting regulations that mandate evaluation of new social or health programs and making operational research as an integral part of existing health program will enhance the use of evidence in decision making. These initiatives have been already started in many national health programs in developing countries, but what is important is to disseminate the reports of such assessments and evaluations so that other can also learn from it. India's Revised National Tuberculosis program (RNTCP), National Rural Health Mission (NRHM), National AIDS Control Program (NACP) keeps updating the priority topic for operational research on their website RNTCP and NACO under NACP-3 provide cash assistance to postgraduate for thesis on operational research and fellowship (National AIDS Control Organization, 2008) . This gives an opportunities to young researcher to be in contact with decision making word in early stage of their carrier.

There is a need for establishing and supporting the special commissions or technical advisory groups or study groups to look up in these issues. These bodies may comprise of persons from diverse field, including researchers, health managers, politicians, NGO representatives, media persons, and critic's etc. Strengthening the institutional incentives for utilizing research evidence like introducing this dimension in into recruitment process and performance assessment or staff appraisals or giving reorganization awards - financial / in kind will also facilitate the uptake of evidences in decision making process (Ministerial Round Table, 2006).

## **DOCUMENTING AND PUBLISHING SUCCESS STORIES**

Documenting the success stories where research evidences was used in policy making process and policies that had made a considerable impact will enhance the importance of scientific evidences in the decision making process. There are many successful example across the world, but more so from developed countries.

LMIC also needs to document such success stories so that they can be used to advocate for use of research evidence in policy making. Here we have given three examples from Indian setting.

India launched a National Goiter Control Program in 1962 as a result of the landmark study "The Kangra Velly Study (1956 - 1972) conducted by Prof V Rmalingaswami. On the further evidences (1962 - 1984) the central council the Indian government took a policy decision India to iodate the entire edible salt in the country by 1992 and in the same year August the program was renamed as a National Iodine deficiency Disorder Control Program (IDDCP). Currently the National IDDCP is a high priority program of Indian Government.

After the deliberations of international conference on population and development held at Cairo in 1994, the reproductive and child health program on India marks a paradigm shift - a change from a population control approach through top-down, target driven family welfare program, to one that provides high quality services that are gender sensitive and responsive to the needs of the clients, especially women who are the major user but have a serious problem of access, both physical and social to health services (Family Planning perspectives, 1999).

Smoking, in India, is restricted in confined spaces and is banned in public places such as aircraft, public buildings and transportation systems, theatres, cinemas, taxis, and restaurants. Standards have been codified in laws and regulations, and have led to changes in public health policy related to tobacco. This is the result of high quality research evidences generated last 50 years and advocacy (Dobbins et al., 2007).

A similar sequence can be marked out in developing an approach for using research evidence for public health policies on counseling and voluntary HIV testing, alcohol consumption and driving, domestic violence and child abuse, use of seat belt and helmets etc, however the implementation status differs across various programs.

## CONCLUSION

We identified in this review that personal and frequent contact between researchers and policy-makers, increase in funding for health system research and capacity building of researchers, research institutions, relevance, timeliness and confidence in research, research report that is concise and that included a summary with clear recommendations, creating know-ledge base, promoting knowledge brokerages, appro-priate knowledge transfer platforms, bringing incentives and regulation for research utilization and documenting success stories are some of the determinants that will facilitate linking of research to policy making. Lack of shared conceptual clarity among researchers and policy makers about the scope and nature of health system

research will inhibit its uptake.

It is said that "The two things one should never watch being made are sausages and public policy" (Loman, 1997) . But to reach near the set target of MDG, there is a great need to closely watch not only the processes of making of health policy but also generating health evidence that can be easily accessed, adapted and applied. National government must have a clear vision and plans for promoting health system research and incorporating it in the decision making process.

## REFERENCES:

- Albert MA, Fretheim A, Maïga D (2007). Factors influencing the utilization of research findings by health policy-makers in a developing country: the selection of Mali's essential medicines. *Health Res. Policy Syst.*, 5: 2 (doi:10.1186 /1478-4505-5-2) (Available at <http://www.health-policy-systems.com/content/5/1/2>, accessed on 30th Jan 2009)
- Alliance HPSR (2007) Sound Choices: Enhancing capacity for evidence-informed health policy. WHO, Geneva (Available at [www.who.int/alliance-hpsr](http://www.who.int/alliance-hpsr), accessed on 2/2/2009)
- Dobbins M, Rosenbaum R, Plews N, Law M, Fysh A (2007). Information transfer: what do decision makers want and need from researchers? *Implementation Science* 2007, 2:20. doi:10.1186/1748-5908-2-20 (Available from <http://www.implementationscience.com/content/2/1/20>, accessed on 9/2/2009)
- Dobbins M DeCorby K, Twiddy T (2004). A Knowledge Transfer Strategy for Public Health Decision Makers. *Worldviews Evidence-Based Nursing*, 1(2): 120-128.
- Dobbins M, Jack S, Thomas H, Kothari A (2007). Public Health Decision-Makers' Informational Needs and Preferences for Receiving Research Evidence. *Worldviews Evidence-Based Nursing*, 4(3): 156-163.
- Dobbins M, Barnsley J (2001). Factors Affecting the Utilization of Systematic Reviews - A Study of Public Health Decision Makers. *Int. J. Technol. Assessment Health Care*, 17(2): 203-214.
- Dobbins M, Thomas H, Ann O'Brien M, Duggan M (2004). Use of systematic reviews in the development of new provincial public health policies in Ontario. *I. J. Technol. Assessment Health Care*, 20(4): 399-404.
- Family Planning perspectives (1999). From family planning to reproductive health: challenges facing India. Vol. 25 supplement. (Available at <http://www.guttmacher.org/pubs/journals/25s4499.html> retrieved on 13/3/2009). Also see <http://mohfw.nic.in/dofw%20website/dofw.htm>
- Hanney S R, Gonzalez-Block M A, Buxton M J, Kogan M (2003). The utilization of health research in policy-making: concepts, examples and methods of assessment. *Health Res. Policy Syst.*, 1: 2. (available at <http://www.health-policy-systems.com/content/1/1/2> accessed on)
- Haynes R B (1990). Loose connections between peer-reviewed clinical J. *Clinical Practice. Annal. Internal Med.*, 113: 724-728.
- Jonathan, Lomas (2000). Connecting research and policy. (available at [http://portals.wi.wur.nl/files/docs/ppme/lomas\\_e.pdf](http://portals.wi.wur.nl/files/docs/ppme/lomas_e.pdf), accessed on 2/3/2009)
- Lomas Jonathan (1997). "Improving research dissemination and uptake in the health sector: beyond the sound of one hand clapping". McMaster University Centre for Health. Economics and Policy Analysis. Policy Commentary C97-1, November.
- Landry R, Amara N, Pablos-Mendes A, Shademani R, Gold I (2006). The knowledge-value chain: a conceptual framework for knowledge translation in health. *Bull. World Health Organ.*, 84: 597-602
- Ministerial Round Table (2006). Translation of Research into Policy and Health Care Practice Fifty seventh session Auckland New Zealand 18th - 22 Sept 2006. World Health Organization, regional office for the western pacific. ( Available at [www.who.int](http://www.who.int), accessed on 12/2/2008)
- Nick Black (2001). Evidence based policy- proceed with care, *Education and debate. BMJ*, 323: 275-9

- National AIDS Control Organization (2008). <http://www.nacoonline.org/Search/?quicksearchquery=operational+research>. [http://www.nacoonline.org/About\\_NACO/Job\\_Opportunity/NACO\\_RESEARCH\\_FELLOWSHIP/](http://www.nacoonline.org/About_NACO/Job_Opportunity/NACO_RESEARCH_FELLOWSHIP/) (NACO research fellowship for Post graduate students – MD / M. Phil / PhD)
- Syed SB, Hyder AA, Bloom B, Sundaram S, Bhuiya A, Zhenzhong Z, Kanjilal B, Oladepo O, Pariyo G, Peters DH (2008). Exploring evidence-policy linkages in health research plans: A case study from six countries. *Health Res. Policy Syst.*, 6:4 doi:10.1186/1478-4505-6-4 (Available at <http://www.health-policy-systems.com/content/6/1/4>, accessed on 2/4/2009)
- Sauerborn R, Nitayarumphong S, Gerhardus A (1999). Strategies to enhance the use of health systems research for health sector reform. *Trop Med Int. Health*, 4: 827-835.
- Shea B, Grimshaw J, Wells G, Boers M, Andersson N, Hamel C, Porter A, Tugwell P, Moher D, and Bouter L (2007). "Development of AMSTAR: a measurement tool to assess the methodological quality of systematic reviews". *BMC Med. Res. Methodol.*, 7: 10
- The Ministerial Summit on Health Research (2004). *The Mexico Statement on Health Research*. Mexico City: (available at [http://www.who.int/rpc/summit/agenda/en/mexico\\_statement\\_on\\_health\\_research.pdf](http://www.who.int/rpc/summit/agenda/en/mexico_statement_on_health_research.pdf) accessed Oct 19, 2008)
- Thomsom G, Wilson N, Howden –Chapman P. The use and misuse of research by parliamentary politicians during a development of national smoke free law. *Australia New Zealand Health policy*, 4: 24. Doi 10.1186/1743-8462-4-24 (Available at <http://www.anzhealthpolicy.com/content/4/1/24> accessed on 10/2/2009)
- Trostle J, Bronfman M, Langer A (1999). How do researchers influence decision-makers? Case studies of Mexican policies. *Health Policy Plan*, 14: 103-114.