THE JOURNAL OF OBSTETRICS AND GYNECOLOGY OF INDIA

The Journal of Obstetrics and Gynecology of India (September–October 2017) 67(5):319–323
DOI 10.1007/s13224-017-1013-4

INVITED MINI REVIEW

Influence of Research on Health Policy and Clinical Practice

Hafizur Rahman[1]

Received: 19 April 2017 / Accepted: 16 May 2017 / Published online: 7 June 2017

About the Author

Dr Hafizur Rahman is a Professor of Obstetrics and Gynaecology at Sikkim Manipal Institute of Medical Sciences at Gangtok, India. He has over 50 scientific research publications in international indexed journals, peer reviewer of more than a dozen international journals and editorial board member of several international and national journals. Dr Rahman was awarded with prestigious Shan S. Ratnam Young Gynaecologist Award (SSR-YGA) and Community Fellowship (CFP) by Asia and Oceania Federation of Obstetrics and Gynaecology (AOFOG) at XXIV Asia and Oceania Congress of Obstetrics and Gynecology (AOCOG) held in Borneo Convention Centre at Kuching, Malaysia in 2015. He was awarded with FOGSI Dr Pravin Mehta Fellowship in Laparoscopy in 2015 by Federation of Obstetrics and Gynaecological Societies of India and was FOGSI Dr Kamini Rao Yuva Orator from east zone in the year 2015–16. Sikkim Manipal University awarded him A++ (A double plus), University's highest performance achievement award consistently for last eight years. He has been regularly invited as faculty at RCOG, AOCOG and IFFS World congress and All India Congress of Obstetrics and Gynaecology (AICOG) and won several awards for his presentations. He has also featured as an external examiner at various Indian university examinations. Dr Rahman is the founder Secretary of the Gangtok Obstetrics and Gynaecological Society and organized many CMEs, practical and research methodology workshops including 26th NEOGSCON in 2015 at Gangtok.

Abstract Clinical research is a type of biomedical research conducted to aid and support the development of knowledge wherein there is involvement of patient. One of the key duties of healthcare professionals is to involve in research and change existing practice, when there is robust evidence in favour of new strategies that can have better patient care. Knowledge derived from research and experience may be of little value unless it is put into practice. Evidence-based medicine (EBM) is the diligent, clear, and wise use of current best research evidence in making decisions about clinical care of patients. The practice of EBM is incorporating clinician's expertise with the best available clinical evidence from research. It leads to improved patient outcomes and promote critical thinking and reflective practice. Effective research utilization can enhance policy decisions, resource allocation for programmes, and decisions about how to deliver those services.

Keywords Audit · Evidence · Health policy · Health practice · Research

Dr Hafizur Rahman is a Professor of Obstetrics and Gynaecology, Sikkim Manipal Institute of Medical Sciences, Gangtok, India.

✉ Hafizur Rahman
hafizezzy@gmail.com

[1] Sikkim Manipal Institute of Medical Sciences, 5th Mile, Tadong, Gangtok, Sikkim, India

"'The important thing is not to stop questioning."
-Albert Einstein.

Introduction

Biomedical research is the basic research, applied research, or translational researches conducted to support evolution of new knowledge in the field of medicine. **An important** type of medical research is clinical research, which is distinguished by the involvement of patients. The increased lifespan of humans over the past century can be significantly attributed to advances resulting from medical research [1].

Clinical research or trials in obstetrics and gynaecology have significantly increased in number, size, and quality in the past few years. A well-planned and executed trial particularly multicentre trail or randomized trials can generate robust evidence that change health policy and clinical practice [2].

Why Participation in Research is Important in Obstetrics and Gynaecology?

Positive Effects on the Care of Women

Participation in research can improve women's health services and outcomes. It is well recognized that research findings improve the future care of women. The improved outcomes observed in the women involved in a clinical trial may be due to positive change in the behaviour of the clinician, improved provision of care such as prompt action on the investigation findings, or better nursing care by virtue of being in a trial. Improved outcome may also because of strict compliance with the research protocol with standard guidelines, management with a new method that may be beneficial and positive attitude, knowledge, and clinical expertise of the clinicians involved in research, thereby improving the care of women [3].

Delivering the Duties of a Healthcare Professional

One of the key duties of healthcare professionals is to change existing interventions, when there is robust evidence in favour of new strategies that can improve the health of women. This objective cannot be achieved without participation in research. Clinicians are expected maintain high-standard safety measures in the care of women by working collaboratively with the women themselves and with professional colleagues, helping to resolve controversies and uncertainties in management [4].

Audit or Research?

Clinical audit and research have many similarities. Clinical audit is a quality enhancement process with objectives to improve patient care and outcomes through systematic review of provided care against standard criteria and the implementation of necessary changes. Systematic evaluation of the structure, procedures, and outcomes of care is compared against standard criteria. Where necessary, changes are implemented at an appropriate level and further evaluation is done to confirm improvement in healthcare standard. Review of evidence by National institute of Clinical Excellence (NICE) concluded that audit is an effective method for improving the standard of quality of clinical care [5].

Both research and audit start with a question, both aim to change or influence clinical practice, both require proper clinical data collection, and both depend on a rigorous methodology and design to achieve sound conclusions. The standards of audit in terms of design, data collection, and analysis should be as high as for research, as audit potentially leads to change more often than research does and often does much greater change. Both audit and research differ from normal clinical practice because normal clinical practice rarely involves in such high standard of data collection or analysis [6].

The major administrative difference between audit and research is that research aims to achieve new knowledge and finding out which treatments is the most effective, whereas clinical audit is about quality of care and to find out whether the best practice is being practised. Research gives information what we should be doing and clinical audit find out whether we are doing right thing what we should do [7].

Evidence-Based Medicine

Evidence-based medicine (EBM) is the diligent, clear, and wise use of current best research evidence in making decisions about clinical care of patients. The practice of EBM is integrating clinician's expertise with the best available clinical evidence from systematic reviews or meta-analysis [7, 8]. Individual clinical expertise is the proficiency and sound clinical judgment obtained through years of clinical experience and clinical practice. Increased expertise is observable in effective and logical diagnosis and in the more thoughtful identification and empathetic use of individual patients' clinical situation, rights, and prerogative in making clinical decisions about their individual care. External clinical evidence both disproves previously accepted diagnostic tests and treatments and replaces them with new ones that are more robust, valid, effective, and guarded [8].

Good clinician uses both individual clinical expertise and the best available evidence, and so both are indispensable. Without clinical expertise, clinical practice is risky, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient. Without up-to-date evidence, clinical practice runs out of date and may be harmful to patients. EBM is not restricted to meta-analyses and randomized controlled trials. It involves tracing out the best available evidence with which to answer clinical questions in a particular clinical situation [8].

Practice of True Evidence-Based Medicine

True EBM takes care of individual patients as its greatest importance, determining prime care method for particular clinical situation. To practise such clinical care, evidence must be individualized for the patient [9]. For research or evidence to be most user friendly, they must be expressed like the number needed to treat, number needed to harm, and number needed to screen and so that clinicians, together with their clients, can make a free voluntary decision on appropriate care method [10].

Practice of true EBM is based on sound clinical judgement not restricted by rules. A new clinician may work on a long history, clinical examination, and a number of diagnostic tests. On the other hand, an expert clinician makes a rapid initial differential diagnosis from a brief history and examinations, and then uses only a few selected tests to arrive at a diagnosis and to rule out other possibilities [11].

Practice of true EBM builds a strong bond between patient and clinician. It ensures uninterrupted care and empathetic listening of the patient, especially in grave clinical situations. Along with practice of EBM, clinicians are also expected to provide detailed information to patients and make ethical and clinical judgments, and socially accepted role to care, console, and ease to sufferings [11].

To deliver true evidence-based medicine, all the stakeholders must be proactive and diligent. Patients must demand better evidence, better presented, better explained, and applied in a more personalized way. Clinician's training and knowledge should go beyond searching and critical appraisal of evidence to expertise in judgment and joint decision-making skills with patient. Producers of evidence and clinical guidelines need to clearly highlight who will use them, the scope, purposes, and situations. The publishers must raise their standard and publish studies fulfils usability standards with sound methodological ones [2]. To support true evidence-based practice, researchers, clinicians, and policy makers must avoid the instrumental generation and use of evidence by vested interests [12].

Real Evidence Influencing the Policy Makers

Use of research evidence in the management of health system and policy making is a big challenge. Knowledge translation and exchange among relevant stakeholders is essential to make use of the benefits of research advances in strengthening health systems and improving people's health [13]. Much research evidence is not presented or communicated at appropriate manner, and most health managers and policy makers do not always have the appropriate skills and capacity to find and use research evidence [14].

Several factors can influence research evidence to put into decision and policymaking, e.g. the local context, poor communication among researchers, policy makers, and stakeholders, research evidence is not timely, relevant, or inappropriate [13]. The researchers and policy makers have to play an important role in dealing with these factors and make evidence into practice.

Caplan [15] described "two-community theory" to explain the poor associations between researchers and policy makers. The researchers and policy makers may have difference in awareness, attitude, and objectives to the problem that can cause miscommunication and sometimes rivalry among them [13]. Such miscommunication may put a lengthy and laborious study conducted over years may not find the attention of policy makers [16]. Frequently, a good research finds the right policy maker at the right time, but there are other factors (political forces, bureaucracies etc.) to play role in implementing agendas to be taken into account [16]. Sometime good evidence may not see appropriate light as the researcher does not communicate his research to a policy maker for fear of losing the autonomy of the research, or poorly trained or inexperienced policy makers using evidence in the first place [17]. A policy maker may not also incorporate research into decision-making because of a lack of contact with the researchers and research that is not timely, high quality, or relevant. One systematic review identified that factors such as interactions between researchers and healthcare policy makers and timing/timeliness appear to increase the prospects for research use among policy makers. It concluded that researchers could help to ensure that the future flow of evidence will better inform healthcare management and policymaking by involving healthcare managers and policy makers in their production and better highlighting information that is relevant for decisions [18].

Incorporating Evidence into Policy Making and Practice

Knowledge obtained from research and expertise is of little value unless it is put into practice. Knowledge translation

and exchange become apparent to take up this challenge and to narrow the "know–do" gap [18, 19]. To reduce this knowledge–practice gap and maximum utilization of research evidence, numerous frameworks have been designed. A very comprehensive framework taking a holistic view of the health system, different barriers, and influential factors on decision-making has been developed by world health organization [19]. This framework describes seven main domains that can be helpful in transferring knowledge to action—a) preparing a climate and context for research use, i.e. organization or institution undertakes activities to establish a climate and context where research evidence is used in decision-making, b) linkage and exchange efforts examine the relationships needed to enable the use of evidence, c) knowledge creation looks at the opportunities and existing capacity to conduct relevant research in the local context, d) push efforts, usually undertaken by researchers or intermediaries whether the information is pushed to different user groups to disseminate research evidence to potential users in appropriate formats, e) pull efforts are the efforts of policy makers to seek and use research on appropriate context, f) facilitating pull efforts relates to appropriate systems and infrastructure (technical infrastructure, "one-stop websites", and unrestricted access to online resources and journals) in place that enable access to relevant research, g) evaluation efforts to monitor the implementation and to evaluate the impact of evidence on practice. It has to be noted that although this type of framework has been proposed to implement research into policy making, evidence is lacking on such frame work or ideas [20]. Further research is needed in this area.

Irrespective of the framework employed to narrow knowledge–action gap, ultimately research utilization enhances policy decisions, resource allocation for programmes, and decisions to deliver those services [21]. It leads to improved patient outcomes and promote critical thinking and reflective practice among health professionals. It also ensures safe and effective clinical practice based on relevant, scientifically sound knowledge. Effective research utilization validates researcher efforts, motivates researchers to continue to work for new knowledge, and reinforces professional responsibility [22].

Research utilization in policymaking may be instrumental, conceptual, or symbolic. Instrumental use is direct use of research finding in policy formulation; conceptual use is gradual incorporation of insight, theories, concepts, and perspectives, whereas symbolic use denotes use of research to support continuation of an already running protocol [23].

Evidence-Based Policy Making Role of Government and Professional Organizations

When health professionals are expected by public and politicians to practise best evidence-based care, it is reasonable that this should be applicable to Government health policy also [24]. If health professionals are expected to base their decisions on the findings of recent research politicians, policy makers and their policy should also follow the rule. Individual patients may be at less risk from non-evidence-based policymaking but the dangers for the community as a whole may be higher. The impact of policies that are poorly designed and untested may be disastrous. So all health policies are subject to rigorous research prior to and after implementation what is known as health systems research (HSR). HSR has proved to be a useful tool for health decision makers at all levels over the past twenty years in industrialized countries, providing them with the necessary data for informed decision-making [23].

The problem in many health policies is that politicians holding office and policy makers may avoid research on particular policy for fear that the results will be politically unfavourable. For this reason, there needs to be independent organizations, continuing source of ideas and funding to support research and analysis relevant to policy. Many non-government organizations are associated with community that influences health policy.

Although some organizations have professional or sectional interests, many organizations may have a position of independence from which they must both analyse government policies and propose policies of their own or fund others to carry out research on such policies or practices. Of particular notable organization in this aspect is Federation of Obstetrics & Gynaecological Societies of India and other professional organizations of clinicians. For example, there should be the initiative in establishing a research programme to evaluate the government's current cervical cancer control programme, the success of which is disappointingly low in India. An organized screening programme reduced the incidence and mortality by 80% in developed countries [25]. Despite being effective, most of the women in developing and under-developed countries do not have access or people are not participating in screening programme [25]. There should be health system research on the policy for maximal access of screening procedure including involvement of nursing staffs and other paramedical health professionals, financial incentives, and free coupon distributions to improve participation. Such continuing research on health policy may

provide new dimensions of care for disadvantageous sections in developing countries.

Conclusion

Participation in research improves patient care, and it is also duty of a healthcare professional to keep them updated and to change existing interventions, when there is robust evidence in favour of new interventions. Good clinician uses both individual clinical expertise and the best available evidence, so both are indispensable. Practice of true evidence-based medicine has the care of individual patients as its top priority, deciding best course of action for particular clinical situation. Practice of true evidence-based medicine is based on sound judgement. Health systems research has proved to be a useful tool for health decision makers at all levels providing them with the necessary data for informed decision and policy making. Researchers must ensure the future flow of evidence for better healthcare management and policymaking by involving healthcare managers and policy makers in their production and better highlighting information that is relevant for decisions and policy making. Such continuing research will provide new dimensions in health care for disadvantageous sections in developing countries.

Compliance with Ethical Standards

Conflicts of interest None.

References

1. "Basic Science". Association of American Medical Colleges. www.aamc.org. Accessed 20 March 2017.
2. Contopoulos-Ioannidis DJ, Gilbody SM, Trikalinos TA, et al. Comparison of large versus smaller randomized trials for mental health-related interventions. Am J Psychiatry. 2005;162:578–84.
3. Shakila T, Khan SK. Participation in research as a means of improving quality of care: the role of a principal investigator in multicentre clinical trials. Obstet Gynaecol. 2015;17:55–61.
4. National Health Service. The NHS Plan. Cmd. 4818. London: Stationery Office, 2000. [http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/dh_4002960] Accessed 20 March 2017.
5. NHS, National Institute for Clinical Excellence, Commission for Health Improvement, Royal College of Nursing, University of Leicester. Principles for Best Practice in Clinical Audit. Oxford: Radcliffe Medical Press; 2002. [http://www.uhbristol.nhs.uk/files/nhs-ubht/best_practice_clinical_audit.pdf] Accessed 21 March 2017.
6. Warlow C. Clinical research under the cosh again. This time it is ethics committees. BMJ. 2004;329:241–2.
7. Smith R. Audit and research. BMJ. 1992;305:905–6.
8. Sackett DL, Rosenberg WMC, Gray JAM, et al. Evidence based medicine: what it is and what it isn't. BMJ. 1996;312:71–2.
9. Montgomery K. How doctors think: clinical judgement and the practice of medicine. Oxford: Oxford University Press; 2006.
10. Gigerenzer G, Gaissmaier W, Kurz-Milcke E, et al. Helping doctors and patients make sense of health statistics. Psychol Sci Public Interest. 2007;8:53–96.
11. Greenhalgh T, Howick J, Maskrey. Evidence based medicine: a movement in crisis? BMJ. 2014;348:1–7.
12. Lenzer J. Why we can't trust clinical guidelines. BMJ. 2013;346:f3830.
13. Pablos-Mendez A, Shademani R. Knowledge translation in global health. J Contin Educ Health Prof. 2006;26:81–6.
14. Lavis JN, Catallo C, Permanand G, et al. BRIDGE study team: BRIDGE summary 1—communicating clearly: enhancing information-packaging mechanisms to support knowledge brokering in European health systems. Brussels: European Observatory on Health Systems and Policies; 2011.
15. Caplan N. The two communities theory and knowledge utilization. Am Behav Sci. 1979;22:459–70.
16. Hyder AA, Corluka A, Winch PJ, et al. National policy-makers speak out: are researchers giving them what they need? Health Policy Plan. 2011;26:73–82.
17. Ross SE, Lavis JN, Rodriguez C, et al. Partnership experiences: involving decision-makers in the research process. J Health Serv Res Policy. 2003;8:26–34.
18. Lavis JN, Davies H, Oxman AD, et al. Towards systematic reviews that inform health care management and policymaking. J Health Serv Res Policy. 2005;10:35–48.
19. Ellen ME. Knowledge translation on ageing and health: a framework for policy development. Geneva: World Health Organization; 2012.
20. Dobbins M, Ciliska D, Cockerill R, et al. A framework for the dissemination and utilization of research for health-care policy and practice. Online J Knowl Synth Nurs. 2002;9:7.
21. Hennink M, Stephenson R. Using research to inform health policy: barriers and strategies in developing countries. J Health Commun. 2005;10(2):163–80.
22. Gillis A, Jackson W. Research for nurses: methods and interpretation. Philadelphia: F.A. Davis Company; 2002.
23. Hanney SR, Gonzalez-Block MA, Buxton MJ, et al. The utilisation of health research in policy-making: concepts, examples and methods of assessment. Health Res Policy Syst. 2003;1(1):2.
24. Morrison I, Smith R. The future of medicine. BMJ. 1994;309:1099–100.
25. Rahman H, Kar S. Knowledge, attitudes and practice toward cervical cancer screening among Sikkimese nursing staff in India. Indian J Med Paediatr Oncol. 2015;36:105–10.