

Clinicians' engagement in clinical research: Existing situation and way forward

Tigist Workneh Leulseged^{1*}

¹ Medical Research Lounge Trading PLC, Addis Ababa, Ethiopia

Corresponding author*: tigdolly@gmail.com

The success of any clinical practice is determined by the clinician's competence, which stems not only from the understanding of clinical concepts, but also from the support of clinical decision-making through the generation of appropriate evidence to keep the practice up to date. This contributes to meeting the ever-changing population needs and the challenges of the health care system for better patient outcomes (1,2). As a result, the notion of evidence-based clinical practice (EBP), which combines the best available research evidence with clinical experience and patient values, has moved to the forefront of clinical practice guidelines. EBP is a process that healthcare providers use to make informed decisions about patient care which is targeted to improve patient outcomes, reduce healthcare costs, increase patient satisfaction and enhance provider confidence. EBP plays a vital role in resource-constrained settings to assure the best possible patient-centered care while lowering health-care costs by advocating the deployment of effective and efficient interventions (3-5).

In today's world, EBP is the foundation for every clinical practice, resulting in improved patient outcomes and greater life expectancy, with recent emphasis changing from prognostic to curative research to improving quality of life. However, this is not true for all countries. The developing world has lagged behind in the research field, causing the clinical practice to rely on guidelines developed in affluent nations (7,8). As a result, clinical practice in such countries is mostly based on reading and treating by the book. This is a problem when it comes to a disease that is not a priority condition in the developed world, such as communicable diseases, which have been killing millions of people in the developing world for several years due to a lack of inventions in proper preventive and curative services for such conditions (6,9).

Among the many challenges to implementing EBP in developing countries, inadequate training and limited involvement of clinicians in the evidence generation process is the biggest barrier. Ethiopia, like the rest of the developing world, lags behind in evidence generation to support clinical decision-making. Despite frequent exposure to research programs in undergraduate and postgraduate trainings, our clinicians, who are supposed to be at the forefront of medical innovation and research, are generally unaware of the benefits of clinical research or how to participate in it, have little understanding of the research system including the stakeholders involved, and struggle to properly understand the basic concepts of research and how to conduct it (10). The major gap begins with a misunderstanding of the ultimate objective of research. In the absence of an exemplary research mentor, most clinicians believe that the mere reason for conducting research is to advance their career and they genuinely don't seem to understand the applicability of research in their practice (11). Our academic promotion criteria encourage solo authorship, discouraging multidisciplinary team and junior-senior collaboration, few numbers of papers are required for promotion, the threshold for expedited promotion is relatively low, and lower quality publications are tolerated. Most importantly, the impact of the research publications is not assessed.

In the context of the curriculum, clinicians allege that the program fulfillment courses are delivered in bulk in a short period of time, and that despite the subjects' novelty to medical professionals, there is little practical time allotted for them to better comprehend it. Furthermore, the practical sessions do not provide the necessary guidance to help the trainees make the appropriate decision in properly designing their protocols to fit their research questions. The advisor's dedication to the advisership appears to be unregulated. Due to the lack of proper guidance and support, most students lack motivation to engage in research activities (11,12). The system also appears to tolerate low-quality research at all levels. This, combined with the fact that the program fulfillment research adds little value in the final passing or failing of the clinician from the program, and in some cases, not even taken as a prerequisite, has caused most clinicians not to appreciate its value. This has encouraged most to deprioritize it and depend heavily on very basic descriptive research studies (11). This further has led to inadequate capability for research design and conduct among the clinicians which is reflected by their unfavorable attitude and limited engagement in research endeavors.

Furthermore, there is a scarcity of funds to support clinical research in Ethiopia. The majority of research grants are awarded by government institutions. Apart from being insufficient, these grants typically favor professionals and those few who are already experienced in research endeavors, denying a learning opportunity for the growing number of young clinicians who should be shaped in the right direction to balance clinical practice and research. The grants are less stringent in requiring multidisciplinary team research, resulting in a lack of collaboration between clinical and public health professionals, resulting in research outputs that lack an appropriate statistical and clinical balance in the interpretation of results. Additionally, these grants are not consistently and adequately available, forcing most to rely on hunting international grant opportunities, which may steer research into donor interest areas rather than country priority areas, leading to a donor-dependent research system with poor sustainability and relevance to the local context. Furthermore, the regulatory environment for clinical research in Ethiopia is complex and time-consuming, which can deter clinicians from participating in any research (9-12).

For a better health-care system and improved patient outcomes, continuous capacity building is at the heart of the change we are looking forward to. Our clinicians require extensive exposure to clinically oriented, hands-on research trainings in order to understand how to transform their observation into problem-solving research utilizing the appropriate research tools. The Medical school curriculum should ensure adequate and meaningful participation in research activities throughout each year of both undergraduate and postgraduate training, using a multitude of platforms. It is critical to ensure the involvement of local investors and philanthropists in clinical research in order to ensure a sustainable funding source and to focus research on national priority areas. The regulatory environment for clinical research in Ethiopia could be streamlined to make it easier for clinicians to participate. This could include simplifying the application process, reducing the amount of paperwork required, and providing prompt clearance for early initiation of research projects, particularly for time-sensitive themes. In addition, the academic promotion system should be reviewed to ensure that it is based on quality of research publications and the impact of the research work. Furthermore, continuous recognition of researchers, who produce significant research studies contributing to improved clinical decision-making, should be made to foster the culture of clinical research in the country.

In conclusion, as the field of EBP continues to grow, by improving clinicians' engagement in clinical research and by addressing the challenges to EBP implementation, we can create a more favorable environment for clinical research and ensure that all patients, regardless of their location, have access to the best possible care.

References

1. Mayer, D. (2010). *Essential evidence-based medicine* (2nd ed.). Cambridge: Cambridge University Press.
2. Hoffman, T., Bennett, S., & Del Mar, C. (2013). *Evidence-based practice: across the health professions* (2nd ed.). Chatswood, NSW: Elsevier.
3. Straus, S., Glasziou, P., Richardson, W., & Haynes, R. (2011). *Evidence-based medicine: how to practice and teach it* (4th ed.). Edinburgh: Churchill Livingstone Elsevier
4. Bushell, M. (2019). Supporting your practice: Evidence-based medicine. *Australian Pharmacist*, 38, 3, 46-55
5. Tenny S, Varacallo M. Evidence Based Medicine. [Updated 2022 Oct 24]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK470182/>
6. Masic I, Miokovic M, Muhamedagic B. Evidence based medicine - new approaches and challenges. *Acta Inform Med*. 2008;16(4):219-25. doi: 10.5455/aim.2008.16.219-225. PMID: 24109156; PMCID: PMC3789163.
7. Al-Lawama M. How to implement medical evidence into practice in developing countries. *Int J Med Educ*. 2016 Oct 2;7:320-321. doi: 10.5116/ijme.57b8.9002. PMID: 27694687; PMCID: PMC5056025.
8. Mozafarpour S, Sadeghizadeh A, Kabiri P, Taheri H, Attaei M, Khalighinezhad N. Evidence-based medical practice in developing countries: the case study of Iran. *J Eval Clin Pract*. 2011 Aug;17(4):651-6. doi: 10.1111/j.1365-2753.2011.01642.x. Epub 2011 Jan 30. PMID: 21276143.
9. Alemayehu, C., Mitchell, G. & Nikles, J. Barriers for conducting clinical trials in developing countries- a systematic review. *Int J Equity Health* 17, 37 (2018). <https://doi.org/10.1186/s12939-018-0748-6>
10. Emwodew D, Melese T, Takele A, Mesfin N, Tariku B. Knowledge and Attitude Toward Evidence-Based Medicine and Associated Factors Among Medical Interns in Amhara Regional State Teaching Hospitals, Northwest Ethiopia: Cross-sectional Study. *JMIR Med Educ*. 2021 Jun 24;7(2):e28739. doi: 10.2196/28739. PMID: 34185012; PMCID: PMC8277356.
11. T. Moges, M. Derebew, D.H. Mariam, Knowledge, attitude, and practice of residents in medical research and barriers: A cross-sectional survey at Tikur Anbessa Specialized Hospital, *EJHD*, January 201731(4):259-265, <https://www.ajol.info/index.php/ejhd/article/view/167799>

12. Gebresilassie KY, Baraki AG, Kassie BA, Wami SD (2022) Midwifery-led researches for evidence-based practice: Clinical midwives engagement in research in Ethiopia, 2021. PLoS ONE 17(6): e0268697. <https://doi.org/10.1371/journal.pone.0268697>