

## **Public health research in Ethiopia: Facing the challenge**

Mirgissa Kaba<sup>1</sup>, Yayehiyrad Kitaw<sup>2</sup>

Research is about trying to get closer to the truth in every field of science, technology and development. Evidences garnered through research would further advance knowledge, skills and attitudes. As an ongoing endeavor, research provides evidence that something works and works better or not effective or does not work in the way we thought it should. As an important tool to generate evidence for planning, policy and decision making and it also generate and share new insights for further thinking.

Within such broad frame of reference, public health research is as old as public health science. Over the course of its evolution, public health research has passed through various stages both in terms of the rhetoric of the time as well as contribution to health development. Epidemics that once killed millions of people were thwarted by public health evidences. It is documented, that “In London, for example, smallpox, cholera, typhoid, and tuberculosis reached unprecedented levels. It was estimated that as many as 1 person in 10 died of smallpox. More than half of working class children died before their fifth birthday” (1). Such shocking realities were somehow controlled and fast decline in mortality and morbidity during the past century is mainly attributed to interventions informed by empirical evidences generated by experts in the field of public health (2). Similarly the early epidemiological endeavors by J. Snow, proved that cholera is water-borne and could be controlled which helped in containing what has indiscriminately costed life (3).

Ever since public health evidences were available to demonstrate the association between disease, outcome, exposure,

confounder and effect modifiers; promotion of safe food and water, improved hygiene and sanitation, access to maternal and child health service helped prevent mortality and morbidity (4).

Recent developments and lessons from public health interventions recognized equity, freedom, dignity and peace as critical domains to improve human wellbeing (5). Nonetheless, in as much as public health functions are not uniform across the globe (6), improving the role of public health to pay attention to these domains requires innovative research. To date, advances in studies of human genome and research on social determinants of health is believed to play pivotal role in advancing public health’s contribution to improved state of life. This is particularly crucial amidst global challenges to health put-forth by advancing urbanization, climate change, migration and bioterrorism to mention just few (7).

This editorial intends to shade some light on the role of public health research in Ethiopia by way of drawing attention to future directions. The preceding arguments would inform subsequent argument.

In Ethiopia, the earliest public health evidence for decision making was recognized during the post Italian occupation and such evidences were reiterated to have been used in almost all policy documents (8,9). Over the years since, several research outputs of public health value were believed to have been produced. Although some of these research outcomes undoubtedly contributed to public health policies and programs of the country, recent report from the Ethiopian Public Health Association highlighted the difficulty to ascertain which of

---

<sup>1</sup>School of Public Health, Addis Ababa University (mirgissa.kaba@aau.edu.et)

<sup>2</sup>Independent Senior Public Health Consultant

the researches outputs were particularly of value to which policy and programs (8). Over the years however more space and resources are made available for public health research in Ethiopia. The ever increasing number of universities and colleges in Ethiopia with public health faculties and researches of by development partners are generating evidence of diverse values. Besides, the established research institutions such as Armauer Hansen Research Institute (AHRI), Aklilu Lemma Institute of Patho-Biology (ALIPB), the former Ethiopian Health and Nutrition Research Institute (EHNRI) – now Ethiopian Public Health Institute (EPHI) are among others engaged in public health research of national interest (8).

Although opportunities and resources (human and institutional) for public health research has expanded and could be strengthened, research system in terms of structures and resource allocation is limited. The need for structure to better coordinate health research, laws and regulations to govern research, availing financial resources, mechanisms to motivate researchers and improvement of public health research space were emphasized as areas for critical consideration (8, 9).

To date when Ethiopian is in an accelerated development process in every sphere and when health system is in a steady transformation, the need for public health evidence is of critical importance (8). However, how much empirical evidences of policy, strategic and program relevance has public health research greeted yet remains open for discussions. Yet, available anecdotes attest limitations in terms of design, mix of methods and measurement and consequent research results.

Vivid concerns were in order firstly in terms of the type of research undertaking by experts in the field are by and large cross-sectional in design and are not cross cultural in scope. Quick review of publications from Ethiopia reveals that case control, randomized control

trials and longitudinal designs are rare and exceptional. This would affect the reliability of results on the one hand and wider implication influencing policies and programs. Methodologically, the attempt to get closer to the truth using mixed methods appears to be weak. This implies the fact that Ethiopian public health research has to go a long way to meet expectations from the health sector on the one hand and public health sciences on the other hand.

As it is the case across the world, infectious diseases are still major causes of morbidity and mortality (10). In Ethiopia, reports have commonly shown that lower respiratory infections, HIV and diarrhea continue to be common infectious diseases in Ethiopia. This is against claims by Surgeon General William H. Stewart who in 1967 contemplated the need to invest on infectious diseases since that could be easily defeated by antibiotics and vaccines (11). While on the one hand this implies that medicines could help solve widespread public health concerns, emergence and re-emergence of infectious, widespread non-communicable disease and accidents are increasing across the world and Ethiopia is not an exception. This calls for rigorous, interdisciplinary and cross-cultural evidences.

Within the broader challenges of financial resources, technological viabilities and weak logistic support, public health research encounters utmost challenge. As implied above, investment is now more on medicines and genome and public health research targeting priority areas remains a luxury. More particularly, rigorous research with an application of longitudinal, randomized control, case and control etc. designs that are believed to offer reliable results to better inform policies/strategies, policies and programs are not considered as priority.

Coordination among universities as well as research institutions; and between universities and research institutions is lacking despite

*Ethiop. J. Health Dev.* 2018;32(2)

previous calls for establishment of such a coordination body (8,9,12). Lack of such structure is the precedence for failure to define public health research agenda for the country, duplication of efforts and consequent misuse of rather limited resources for health research.

Another loose area that may have to be further substantiated with evidence is research capacities of public health experts. Although public health schools are expanding with commensurate number of experts in the field, research capacity of such expertise may be weak.

From the foregoing one could get some insight on the in the limitation of public health research, which is not up to expectation of complexities of health problems in the country associated with current development across the world and in the country in particular. Quality and reliable public health evidence is expected to challenge policy makers, interventions as well as future researchers. This may require adoption of case-control, randomized control trials, longitudinal, meta or systematic analysis and use of mixed methods to triangulate results. It is time to give it due attention by concerned stakeholders and faculties of public health to chart out mechanism to improve the quality and influence of public health research in Ethiopia.

## References

1. Committee for the Study of the Future of Public Health; Division of Health Care Services, 1988:58
2. Kristine Gebbie, Linda Rosenstock, and Lyla M. Hernandez, (eds). Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century. Committee on Educating Public Health Professionals for the 21st Century. ISBN: 0-309-50764-2, 320 pages, 6x9, 2003. <http://www.nap.edu/catalog/10542.html>
3. Snow, John. On the Mode of Communication of Cholera (2nd ed.). London: John Churchill. 1855.
4. Committee for the Study of the Future of Public Health-Division of Health Care Services. The Future of Public Health, ISBN: 0-309-58190-7, 240 pages, 6 x 9, (1988) <http://www.nap.edu/catalog/1091.html>
5. United Nations. The Millennium Development Goals: beyond 2015. New York: United Nations, 2013.
6. Ulrich Laaser and Helmut Brand. Global Health Action 2014, 7: 23694 - <http://dx.doi.org/10.3402/gha.v7.23694>
7. Angela Brand, Helmut Brand and Tobias Schulte in den Baumen. The impact of genetics and genomics on public health. European Journal of Human Genetics; 2008; 16:5–13.
8. Yayehyirad Kitaw et al. Evolution of Public Health in Ethiopia. 3rd Revised Edition, 2017, EPHA, Addis Ababa.
9. Gaym A. Health research in Ethiopia--past, present and suggestions on the way forward. Ethiop Med J. 2008 Jul;46(3):287-308
10. WHO. Health systems: improving performance. The World Health Report. Geneva, 2000.
11. Garrett L. The coming plague. New York: Farrar, Straus & Giroux, 1994.
12. EAS, 2013, 'Report on Mapping the Health Research Landscape in Ethiopia', Ethiopian Academy of Sciences (EAS), Addis Ababa.