

EDITORIAL

Nationalizing Operational Research Capacity Building: Necessity or Luxury?

Rony Zachariah*, Mohammed Khogali*, Ajay M. V. Kumar^{†,‡,§}, Anthony D. Harries^{†,||} and John C. Reeder*

“All nations should become consumers and producers of research knowledge.”

This was one of the main messages of the 2013 World Health Report titled “Research for Universal Health Coverage [1].” To make this goal a reality, research capacity needs to be built in public health programmes, close to the demand for health services.

In many low- and middle-income countries, the health system is overwhelmed with high patient load and obliged to deal with multiple diseases, all within a framework of limited human and financial resources. It is precisely in these contexts that public health programmes need to embrace a culture of inquiry, to understand what works and what does not work and find practical solutions to problems. Failure to do so can result in the health system simply continuing to deliver services without any knowledge about whether these services are effective in improving clinical and programme outcomes, whether all those in need of services, particularly the vulnerable, are able to access them and whether drugs that are being given to patients are actually working. Operational research can help to answer these questions. In the era of the Sustainable Development Goals, the answers to such questions are critical in strengthening the health systems that are necessary to achieve Universal Health Coverage [2].

A practical definition of operational research is the “search for knowledge on interventions, strategies and tools that can improve the performance of health services including quality and coverage [3].” Put simply, it is about doing better by examining the nuts and bolts of the health system, detecting problems, and building the science of solutions. There are many direct parallels between the goals, approaches, and outputs of operational research

and those of implementation science, but operational research such as implementation science is generated and led from identified constraints to health care delivery. Implementation science could be seen as being broader and to do with “scalability.” However, in our opinion, there is no strict line between the two. Health systems should embrace this process as part of a continuing culture of health system accountability.

The main benefits of country-focussed operational research include: 1) improving the performance of the national health system, 2) assessing the feasibility and effectiveness of new strategies and/or interventions in specific settings and populations, and 3) informing decision making for changing policy and/or practice.

Indeed, such research has been linked to changes in and/or reinforcement of policy and program implementation [10], a synergistic benefit of conducting operational research within the health system is improved data collection, monitoring, usage and feedback [4]. Furthermore, operational research programs could be framed as building sustainable human resource capacity through a cycle of human resource development that involves “Train, Embed, Sustain, and Enable” of health staff within disease control programs and institutions.

A number of elements are needed to build and sustain operational research capacity at national level, including: building a critical mass of trained operational researchers who are embedded and retained within programmes and who train others; having a mechanism to define and prioritize country-relevant research; making sure there is engagement and buy-in of decision makers; and integrating these activities as part of country action plans and budgets. Effective dissemination including publishing in peer-reviewed journals is also needed [5]. The latter serves as a quality control mechanism and is a recognized standard in medicine [6].

The driving principle for training at country level is that it must be practical, be able to provide hands-on mentorship, and be accompanied with milestones and targets so that it is output-oriented. One proven model that encompasses these aspects is the Structured Operational Research and Training Initiative (SORT IT) [7]. It is a global partnership coordinated by the Special Programme for Research and Training for Tropical Diseases (TDR) and implemented with various partners. Aimed at making countries data rich, information rich, and action rich [8], this model has been expanded to 91 countries, trained close to 800

* UNICEF, UNDP, WORLD BANK, WHO, Special Programme for Research and Training in Tropical Disease (TDR), World Health Organisation, Geneva, CH

† International Union Against Tuberculosis and Lung Disease, Paris, FR

‡ International Union Against Tuberculosis and Lung Disease, South-East Asia Office, New Delhi, IN

§ Yenepoya Medical College, Yenepoya, Mangaluru, IN

|| London School of Hygiene and Tropical Medicine, London, UK

Corresponding author: Dr Rony Zachariah (PhD) (zachariah@who.int)

participants, and resulted in hundreds of peer-reviewed papers [9]. Importantly, nearly 70% of the research has contributed to a change in policy and or practice [10].

There are many examples of countries that have adapted and successfully nationalized the SORT IT model. Examples include: Kenya, where the focus was on tuberculosis and neglected tropical diseases [11]; Sierra Leone and Liberia, on the Ebola virus disease outbreak and health systems recovery [12]; Pakistan, on embracing various public health problems [13]; Armenia [14] and Ukraine [15], on access to health care among vulnerable populations; India, on tuberculosis and other training innovations [16, 17]; and the United Kingdom, on health protection issues [18].

Rwanda has also adapted the SORT IT model using a deliverable-driven and learning-by-doing pedagogy. This experience was described previously as an Intermediate Operational Research Training Programme [19]. In this special supplement of the *Annals of Global Health*, several new studies are presented from Rwanda focusing on new thematic areas. These include child development, neonatology, integrating oncology services with non-communicable diseases, cervical cancer, unintentional injuries in children, registries for rheumatic heart disease, and drug stock-outs for non-communicable diseases. This is a compendium of research on public health issues that are important and useful to the Rwandan health system.

In conclusion, any country and health system striving to achieve Universal Health Coverage and excellence must be able to generate and use locally available evidence in a timely manner. This must be considered a necessity and not a luxury. Ways forward in mobilizing resources to build, sustain, and expand operational research initiatives at country level are urgently needed.

Disclaimer

The views presented in this article are those of the authors and may not necessarily reflect those of their affiliated institutions.

Funding Information

Funding for this special collection was generously provided by Dr. Stephen Kahn and the Abundance Foundation.

Competing Interests

The authors have no competing interests to declare.

References

1. **WHO.** The world health report 2013: Research for universal health coverage. World Health Organization, Geneva. Available: http://apps.who.int/iris/bitstream/10665/85761/2/9789240690837_eng.pdf; (Accessed 13th March 2014).
2. **United Nations.** Transforming our world: The 2030 agenda for sustainable development. Available: <http://sustainabledevelopment.un.org/post2015/transformingourworld> (accessed 18th September 2018).
3. **Zachariah R, Harries AD, Ishikawa N, et al.** Operational research in low-income countries: What, why, and how? *Lancet Infect Dis.* 2009;

9(11): 711–717. DOI: [https://doi.org/10.1016/S1473-3099\(09\)70229-4](https://doi.org/10.1016/S1473-3099(09)70229-4)

4. **Walley J, Khan MA, Shah SK, Witter S, Wei X.** How to get research into practice: first get practice into research. *Bull World Health Organ.* 2007; 85(6): 424. DOI: <https://doi.org/10.2471/BLT.07.042531>
5. **Rujumba J, Byamugisha R.** Publishing operational research from ‘real life’ programme data: a better form of accountability. *Trop Med Int Health;* 2011. DOI: <https://doi.org/10.1111/j.1365-3156.2011.02892.x>
6. **Zachariah R, Tayler-Smith K, Ngamvithayapong-Yana J, et al.** The published research paper: Is it an important indicator of successful operational research at programme level? *Trop Med Int Health.* 2010; 15(11): 1274–1277. DOI: <https://doi.org/10.1111/j.1365-3156.2010.02630.x>
7. **Ramsay A, Harries AD, Zachariah R, et al.** The Structured Operational Research and Training Initiative (SORT IT) for public health programmes. *Public Health Action* (in press); 2014.
8. **Harries AD, Khogali M, Kumar AMV, et al.** Building the capacity of public health programmes to become data rich, information rich and action rich. *Public Health Action.* 2018; 8(2): 34–36. DOI: <https://doi.org/10.5588/pha.18.0001>
9. **TDR.** SORT IT publications grouped by diseases/topics. Available: <http://www.who.int/tdr/capacity/strengthening/sort/en/> (accessed 12th November 2018).
10. **Kumar AMV, Shewade HD, Tripathy JP, et al.** Does research through Structured Operational Research and Training (SORT IT) courses impact policy and practice? *Public Health Action.* 2016; 1(1–6). DOI: <https://doi.org/10.5588/pha.15.0062>
11. **Owiti PO, Kosgei RJ, Kihara AB, et al.** Editorial: Structured operational research and training in the public sector: The Kenyan experience. *East Afr Med J.* 2016; 93(10): S1–S2.
12. **TDR.** Operational research identifies new ways forward post Ebola: <http://www.who.int/tdr/news/2017/or-identifies-new-ways-forward-post-ebola/en/> (Accessed 28th August 2019).
13. **Fatima R, Yaqoob A, Qadeer E, et al.** Building sustainable operational research capacity in Pakistan: Starting with tuberculosis and expanding to other public health problems. *Glob Health Action.* 2019; 12(1): 1555215. DOI: <https://doi.org/10.1080/16549716.2018.1555215>
14. Why a special issue of JIDC on the Structured Operational Research and Training Initiative in Armenia? Available: <https://jidc.org/index.php/journal/article/view/11446> (Accessed 28th August 2019).
15. Why a special issue of JIDC on tuberculosis and HIV among key populations in Ukraine? 2019. Available: <https://jidc.org/index.php/journal/article/view/11697> (Accessed 28th August 2019).
16. **Kumar AMV, Satyanarayana S, Wilson N, Zachariah R, Harries AD.** Operational research capacity building in Asia: Innovations, successes and challenges of a training course. *Public Health Action.*

- 2013; 3(2): 186–188. DOI: <https://doi.org/10.5588/pha.13.0008>
17. **Sagili KD, Satyanarayana S, Chadha SS**, et al. Operational research within a Global Fund supported tuberculosis project in India: Why, how and its contribution towards change in policy and practice. *Glob Health Action*. 2018; 11(1): 1445467. DOI: <https://doi.org/10.1080/16549716.2018.1445467>
 18. **Ghebrehewet S, Harries AD, Kliner M**, et al. Adapting the Structured Operational Research Training Initiative (SORT IT) for high-income countries. *Public Health Action*. 2019; 9(2): 69–71. DOI: <https://doi.org/10.5588/pha.18.0103>
 19. **Odhiambo J, Amoroso CL, Barebwanuwe P, Warugaba C, Hedt-Gauthier BL**. Adapting operational research training to the Rwandan context: The Intermediate Operational Research Training programme. *Glob Health Action*. 2017; 10(1): 1386930. DOI: <https://doi.org/10.1080/16549716.2017.1386930>

How to cite this article: Zachariah R, Khogali M, Kumar AMV, Harries AD, Reeder JC. Nationalizing Operational Research Capacity Building: Necessity or Luxury? *Annals of Global Health*. 2020; 86(1): 136, 1–3. DOI: <https://doi.org/10.5334/aogh.3056>

Published: 20 October 2020

Copyright: © 2020 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <http://creativecommons.org/licenses/by/4.0/>.

]u[*Annals of Global Health* is a peer-reviewed open access journal published by Ubiquity Press.

OPEN ACCESS 