

Health research policy and systems: moving towards evidence-informed health research capacity strengthening practice

The ability to produce robust, locally appropriate research has long been recognised as an essential component of an effective health system (1). Research capacity is limited in many low- and middle-income countries (LMICs) (2). Accordingly, international development donors and governments are increasingly investing in health research capacity strengthening (HRCS) initiatives in LMICs to improve health systems, population health and, ultimately, socio-economic development (3). Although the research system comprises three inter-related levels – the individual researchers, the institutions in which researchers work and the national collective and interconnectedness of researchers, research institutions and research end-users (often referred to as the ‘societal’ level within the HRCS literature) – the majority of investment in strengthening health research capacity has been focused on the individual level (4, 5).

A major constraint to supporting LMIC health research system strengthening at present is that the evidence-base to inform HRCS intervention design, implementation and evaluation is poorly developed. Fundamental gaps in our knowledge remain, ranging from a limited understanding of key ‘drivers’ of health research capacity, a lack of means to assess existing health research capacities, uncertainty as to the overall (and relative) effectiveness of various HRCS intervention types and approaches and few robust evaluation frameworks with standardised metrics by which reliable outcome and impact data could be obtained (5-8). In short, we do not yet have the evidence to reliably inform which types of intervention, in which combinations, with which focus and in what proportion, are required to build health research capacity effectively and sustainably in LMIC settings.

The lack of robust evidence to inform the HRCS process is somewhat of a paradox, given the general aim of HRCS is to better enable countries to produce and utilise research evidence to resolve national health challenges, and given scientists – whose very occupation is centrally concerned with employing and extending research evidence in their respective disciplines – are a primary actor in the HRCS endeavour. Why, then, do we continue to approach HRCS without investing in the evidence-base to support it? The reasons behind the lack of evidence are likely multiple. HRCS is an inherently complex, non-linear and long-term process subject to a diverse range of influences. The HRCS evidence that is available

is also highly fragmented, published in different fields and beset by a lack of standardised definition or terminology (9). This fragmentation makes it difficult to readily access the full range of evidence that may be available to inform HRCS intervention and, perhaps more problematically, it has stymied the emergence of a unified and identifiable 'community of research practitioners' in what is a niche and often isolated research field. Nevertheless, progress towards evidence-informed HRCS practice is possible and is happening. Publications in this space continue to grow, even if the research quality is often limited (8, 9). The more HRCS funders, implementing partners and evaluators dedicate time, effort and resources to conducting and publishing robust HRCS learning and evaluation then both the necessary evidence and an identifiable community of researchers dedicated to building the evidence will continue to develop. Research funders and research producers will then be able to draw on those generating HRCS evidence to help them tackle the most difficult aspects of HRCS, especially the complex and relatively under resourced task of building health research capacity at institutional and societal levels.

It is in this light that we can further appreciate the study presented by Dorji et al in this edition of *Journal of Health Services Research and Policy* assessing the knowledge, attitudes and practices towards (operational) health research and its utilization among health professionals, including traditional healers, in Bhutan (10). What is especially encouraging about this paper is that the data are presented as a baseline against which the outcome of current and planned HRCS initiatives may be assessed. Whilst baseline assessment is standard practice in programme evaluation, it is uncommon in an HRCS context where robust, published baseline assessments are relatively rare (and follow-up assessments even rarer) (9). Even more encouraging, in the 'Discussion' section of the paper we learn that since 2018 the Bhutan Ministry of Health – in recognition of both the importance of health research and the relative lack of local capacity – has initiated a national health research strategy and action plan. This comprehensive plan recognises the importance of developing a 'national research system', as opposed to HRCS plans that often only address specific components of a system. It therefore has elements targeted beyond simply the production of research by individuals and encompasses actions to strengthen the institutions and 'societal' levels of the national health research system. Bhutan's research plan includes many exciting initiatives such as a national training programme in operational research for health workers and a national ethics board, and incentive schemes to encourage health worker participation in published research. Dorji et al's findings highlight the need for HRCS among Bhutanese health workers, with fewer than 25% of respondents reporting any previous experience of having conducted a research project and less than 15% receiving research training. However, there is also cause for optimism with over 80% of respondents expressing interest

in conducting research despite the majority having little or no practical experience or research training, and lacking mentors and methodologists. The finding that research knowledge was greatest among younger respondents is also potentially an early indication that recent HRCS initiatives may be starting to bear fruit among the new generation of health workers. As countries such as Bhutan increase their investment in research, they also need to develop research management and governance processes including a range of legal, organizational and operational policy instruments (e.g. pertaining to good financial grant practice or safeguarding of research participants). The importance of adhering to the principles involved in designing national research systems (i.e. starting small and expanding gradually, finding and building on what exists already, and establishing trusting and well-defined partnerships) has been exemplified in a case study from Malawi (11) but could equally apply to the approach taken in Bhutan. We look forward to future publications presenting a robust follow-up assessment on the population described in Dorji et al's paper and we strongly encourage others to follow their lead in terms of conducting (and publishing) robust baseline assessments in order that we may continue to strengthen the available evidence-base to inform HRCS initiatives in LMICs.

Justin Pulford¹ and Imelda Bates²

¹ Senior Lecturer, Centre for Capacity Research

² Chair in Clinical Tropical Haematology, Centre for Capacity Research

Liverpool School of Tropical Medicine

United Kingdom

References

1. COHRED. *Health research: essential link to equity in development*. Oxford: Commission on Health Research for Development; 1990.
2. World Health Organisation. *Global observatory on health R&D* Geneva: World Health Organisation; 2020 [Available from: <https://www.who.int/research-observatory/en/>]
3. Kilmarx PH, Maitin T, Adam T, et al. A Mechanism for Reviewing Investments in Health Research Capacity Strengthening in Low- and Middle-Income Countries. *Ann Glob Health* 2020;86:92.
4. UKCDS. *Rapid mapping of international funders' research capacity strengthening priorities*. London: United Kingdom Collaboration for Development Science; 2015.

5. Franzen SR, Chandler C and Lang T. Health research capacity development in low and middle income countries: reality or rhetoric? A systematic meta-narrative review of the qualitative literature. *BMJ Open* 2017;7:e012332.
6. Huber J, Nepal S, Bauer D, et al. Tools and instruments for needs assessment, monitoring and evaluation of health research capacity development activities at the individual and organizational level: a systematic review. *Health Res Policy Syst* 2015;13:80.
7. Pulford J, Price N, Amegee Quach J, et al. Measuring the outcome and impact of research capacity strengthening initiatives: A review of indicators used or described in the published and grey literature. *F1000Res* 2020;9:517.
8. Fosci M, Loffreda L, Velten L, et al. *Research Capacity Strengthening in Low- and Middle-Income Countries*. London: The UK Department for International Development; 2019.
9. Dean L, Gregorius S, Bates I, et al. Advancing the science of health research capacity strengthening in low-income and middle-income countries: a scoping review of the published literature, 2000-2016. *BMJ Open* 2017;7:e018718.
10. Dorji T, Wangmo S, Gurung M, et al. Knowledge, attitude and practice towards health research and its utilization among health professionals in Bhutan: Results of a nationwide cross-sectional survey in 2019. *Health Res Policy Syst* 2020.
11. Cole DC, Nyirenda LJ, Fazal N, et al. Implementing a national health research for development platform in a low-income country - a review of Malawi's Health Research Capacity Strengthening Initiative. *Health Res Policy Syst* 2016;14:24.