

Sustaining the Research Culture and Productivity in Developing Country Settings

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The *West Indian Medical Journal* (WIMJ) pre-dates the first graduating class of The University of the West Indies (UWI), with its first issue published in 1951, three years after the commencement of the first five-year medical school training programme in 1948 (1). Benefitting from the pre-existing *Jamaica Medical Review*, the UWI faculty demonstrated its commitment to one of the core activities of university life: the generation and publication of new knowledge. Since that time, much has changed in the health/biomedical research and publication industry/market. Among the factors that have the greatest impact on this changing landscape are the ethical requirements for research and the advances in information and communication technology. Research output can take credit for the high ranking and reputation of the UWI (2), and it is critical that this aspect of the institution be maintained and improved alongside its teaching and community service obligations.

Research accomplishments, including research funding, peer-reviewed manuscripts, technical reports, monographs, theses, and policy briefs, do not ‘fall like manna from the sky’ and cannot be created by ‘waving a magic wand’; instead, it requires investment and nurturing. Oftentimes, the initial explanations for inadequate or falling research output are lack of resources and insufficient protected time. Moreover, while these are important, other critical requirements include thought leadership, vision, commitment, mentorship (especially building confidence), an enabling environment and infrastructure with adequate resources, systems and processes. Participants should be empowered and ‘fit for purpose’ with relevant skills and competences, clarity of expectations, tailored approaches, and patience within a clearly defined set of objectives (3).

In my report to the Dean of the Faculty of Medical Sciences (FMS), UWI, Mona and the Vice Chancellor (VC) ‘Developing Research Culture among Residents and Students in Internal Medicine’ (Wilks 2005; unpublished), I noted that students and residents were important

resources in the UWI’s research enterprise and recommended that they be formally trained in the elements of the research paradigm: *the idea; the state of the art on the subject; the question to be answered by this effort; the hypothesis; goals and objectives; methods—field, laboratory, statistical; attendant ethical issues; budget; schedule; report/publication including conclusions and recommendations targeting a variety of audiences (colleagues, the public, policy makers, etc)*. This paradigm is now elegantly presented in the 2017 publication by Kivunja and Kiyuni (4). Recommendation also included training in the Essentials of Clinical Epidemiology (recently summarized) (5), basic biostatistics, and the mechanics of clinical research. Since that time, training programmes in epidemiology and research competence have been established at the masters, doctoral and diploma levels in the Caribbean Institute for Health Research (CAIHR), formerly the Tropical Medicine Research Institute (TMRI). There has not been any systematic uptake of these opportunities by the FMS, although several individuals from the departments of surgery and child health have done so. Other recommendations included deliberate inclusion of residents and students in regularly scheduled faculty/departmental research activities where they would be mentored and encouraged to participate in the culture driven to the research paradigm, including critical reading of the literature (journal clubs), departmental presentation of research proposals as well as interim and final research findings. Attendance of local, regional and international research meetings and sharing their experiences on their return is encouraged.

In that report, it was also recognized that avenues for showcasing research output and deliberate attention to career paths were essential, if the enterprise were to flourish:

‘Publication of Research: It is important that avenues be provided for the output of the research generated by this new thrust. Without compromising its

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standards, the *West Indian Medical Journal* should consciously seek to encourage the process by providing an outlet for the research findings of the students, residents, and junior faculty.

Career Path: While it is recognized that the UWI will not be able to absorb all its graduates, it is important that consideration be given to the creation of career paths to accommodate residents who wish to pursue academic medicine in the UWI, having been trained in that direction. This will form part of the stimulus and attraction to pursue this career.' (Wilks 2005, Report to Dean and VC; unpublished)

More recently, in our report to the UWI Mona FMS Dean (Wilks and Jackson 2018; unpublished) at the end of my one-year tenure as deputy dean for research, a framework was recommended after widespread consultation with faculty members at the departmental level and relevant literature review, with the objectives of improving health and health care (nationally, regionally, internationally), the learning environment, the research ethos and capacity, professional trust and collegiality; as well as recognizing core research principles, and acknowledging contextual differences among departments, sections and individuals.

It is strongly recommended that several operational activities should become routine to ensure the building of the research culture and ethos. These include several components of the research paradigm, for example, scholarly departmental activities like scheduled Journal Clubs, research seminars, research protocol presentations, updates on research progress, practice sessions for presentations at conferences, obligatory reports following conference attendance, including opportunities for networking and collaboration, sharing new developments that can inform the local research agenda, and guaranteed protected time for individual and small group reflective practice.

This strategy has been corroborated by other entities wishing to improve research capacity and accomplishments especially among clinicians and teachers with burdensome service loads, limited training in research methods and few opportunities for protected research time. The College of Family Physicians of Canada (5) as well as the Department of Family Medicine (DFM) at Western University in London, Ontario, Canada, under the umbrella of 2014 North American Primary Care Research Group (NAPCRG) Annual Meeting identified similar strategies to improve research among departments of family medicine (3). The experience of Kathryn

Nicolson and her colleagues in London, Ontario, Canada, suggests that a five-year horizon with significant funding support is appropriate in this building process, albeit in a community-based research setting (7). At the same time, the efforts of the academy like the UWI cannot operate in isolation, especially regarding the securing of viable career paths. Langhaug and her colleagues, using a mental-health paradigm, examined the influence on career path viability of research training and capacity building in four African countries (8). They identified similar critical inputs of appropriate infrastructure, grants administration, mentorship, leadership, research culture, and communication between researchers and policy makers. Factors that appeared critical to enhancing career paths include ensuring research positions; acquisition of high-level research skills; adequate funding and commitment from the countries involved as well as advocacy. This brings into focus the need to demonstrate the relevance of the research agenda to the stakeholders and potential funding agencies including government. The establishment of collaboration between academia and policy makers is crucial, and the current effort by the Jamaican government to establish the Essential National Health Research Committee (ENHRC) aimed at developing research policy and agenda is commendable and should be encouraged (9).

In conclusion, while universities like the UWI will from time to time produce highly successful, world-renowned research scientists, the institution will not develop a sustainable, high-quality research enterprise without deliberate strategies characterized by vision, leadership and the development of the structures, systems, processes, and people to achieve this ambition. The viability and sustainability must also take into consideration the context of the wider setting including the health agenda of the country/region and the priorities of policy makers.

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