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Bridging the gap: promoting equity and diversity in global oncology research within Sub-Saharan Africa

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Sub-Saharan Africa (SSA) suffers from one of the highest caseloads of oncological patients in the world (128.2 cases per 100 000).[1] Cancer incidence and mortality are on the rise in low-income and middle-income countries (LMICs), where more than 75% of the global cancer burden is predicted to occur by the year 2040.[2] Given this anticipated rise in caseloads, our recent *Lancet Oncology Commission* report called for urgent collaborations between LMICs and high-income countries (HICs) to build research capacity in limited resource environments and strengthen cancer control efforts.[1]

With partnerships like the University of North Carolina and Kamuzu Central Hospital in Malawi, Dana Farber and Butaro Cancer Center of Excellence in Rwanda, and the Swedish and Ghanaian governments, there have been an increasing number of clinical and research collaborations to curb the spread of cancer in SSA. As these partnerships expand and new ones are established, it will be crucial to increase the representation of researchers from SSA countries. Indeed, engaging local scholars ensures that their lived experience and on-ground expertise are appropriately valued, thereby driving the research questions being asked and the methodologies pursued.[1]

In the past, there has been much concern over the lack of author representation from LMICs in the global oncology literature.[3 4] Bibliometric analyses have highlighted that within international collaborations (mostly Global North-Global South collaborations), authors from SSA are often listed in the middle, raising concerns regarding continued practices of historical power imbalances.[4 5] In fact, about 12% of the medical literature (2014–2016) was found to be consistent with the definition of 'parachute science' where researchers from well-resourced environments conduct research in underprivileged settings without the involvement of local scientists.[5] Furthermore, only 8% of global oncology randomised clinical trials were found to be led by LMICs and upper-middle-income countries.[6] Although the share of Africa's contribution towards global research output doubled from 1% to 2% between 1996 and 2012,[7] the overall share represents an imbalance between the region's scientific ecosystem maturity and the population's disease burden.[8]

The glaring authorship inequities illustrate the quintessential need to promote the involvement of African researchers within SSA research studies. Given the limited technological and financial resources in SSA, increasing long-term funding opportunities and research collaborations have been identified as one of the key determinants of scientific output.[9] However, such opportunities often factor-in the perceived reliability of the investigation team (often measured by experience, number of publications and journals published) to mitigate potential implementation risks.[9] Inequalities in such evaluation pipelines often act as bottlenecks and discourage local researchers to participate.

Efforts have been undertaken globally to create more fair and inclusive evaluation criteria while prioritising indigenisation of research in SSA. Since 2010, The Beginning Investigator Grant for Catalytic (BIG Cat) initiative, supported by the National Cancer Institute Centre for Global Health, has supported over 18 high-impact oncological projects in various regional countries in SSA, producing more than 40 scholarly publications/presentations. The project continues to support proposals worth US$50 000 with the calls for the fourth cohort having been wrapped in September 2022.

We believe that publication of research in local peer-reviewed journals should also be encouraged (given the high cost of open-access in international journals), since they offer greater reach in the local societies (common language, familiarity) where the research will be the most influential. Practices encouraging journal impact factors, indexation and reputation, should be discouraged by universities and other employers. The San Francisco Declaration on Research Assessment (https://sfdora.org/) and Hong Kong Principles represent a right step in that direction.

Likewise, we believe that the journals and publishers should incorporate standardised and strict authorship guidelines to end unethical practices. Leading by example, senior executive editor of *The Lancet* Sabine Kleinert announced that the journal has been and will continue to reject papers with data from Africa that fail to acknowledge African collaborators to promote fairness and equality.[10] A similar stance has been echoed by *PloS Medicine* that now requires local researchers to be the first or last authors. The *Cell Press* has now made it mandatory for authors to include an author inclusion and diversity statement, an online questionnaire aimed at promoting ethnic, geographical and gender-based equality. Furthermore, the questionnaire seeks to ensure gender diversity in the reference list of the published papers (akin to Citation Diversity statements). However, despite implementation of these practices, workarounds have hindered the overall success of the correcting measures.

Guest authorship (authorship by invitation) remains a popular and widely accepted practice in LMICs, often fueled by institutional requirements and limited cognisance of International Committee of Medical Journal Editors guidelines on authorship and conflict of interest.[11] Intriguingly, *The Lancet Global Health* recently observed that authors based in HICs tend to report their LMIC affiliation(s) when considering open-access fee waivers.[12] Conversely, authors primarily based in the LMICs have reported facing geographical bias during the editorial and peer-review process,[13 14] leading them to omit their LMIC affiliations. While HICs are perceived to produce high-quality research, LMIC papers are perceived to be poor in quality and English language structuring.[13 14] Such bias is often not limited just to institutional affiliations, but also spreads against female researchers and certain ethnic minorities, all the while favouring respected authors and high-ranking universities.[15]

Such selective reporting of affiliations makes it difficult to estimate the real contributions from LMIC authors. To reduce such biases, double-blind peer-review has been adopted by multiple journals including *Nature*. Though the process is associated with a lower acceptance rate, it is thought to be more impartial.[16] Nonetheless, self-citations, institutional citations, and use of phrases such as 'in our previous study' risk unblinding and reintroduction of reviewer bias.[16]

Moving forward, if conducted with these challenges and arguments in mind, international research collaborations present an opportunity to build internal research capacity within SSA and enhance equity and diversity within global oncology research.

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