www.nclinmed.com
Novelty in Clinical Medicine. 2022; 1(3): 119-120
https://doi.org/10.22034/ncm.2022.337000.1038

Letter Open Access

Science and Global Health

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Received: April 10, 2022; **Accepted:** April 12, 2022; **e-Published:** April 12, 2022

Keywords: Globalization, Neglected Tropical Diseases, Epidemics, Communication in health.

Dear Editor

The global inequality in health is an urgent call for action to improve the conditions and quality of life of vulnerable populations. Current estimates show that a child born in Sierra Leone today has an average life expectancy almost 40 years shorter than a child born in Japan.[1] Infant mortality rates in the countries south of the Sahara Desert in Africa are up to 50 times higher than those in the most developed countries in Europe. This unacceptable difference is associated with underdevelopment and social and environmental determinants, food insecurity, low education, limited access, and poor quality of health services.

The area of work and research called Global Health aims to reduce health inequality for populations worldwide. Global health emphasizes transnational issues and solutions; it involves many disciplines within and outside the health sciences and promotes collaboration and institutional strengthening. Global health activities are aligned with the United Nations 2030 Agenda for sustainable development. The scientific activity is part of this context, seeking to discover, develop, and implement new methods and more efficient products to prevent, diagnose, and treat public health problems. Scientific research in global health aims to accelerate the incorporation of innovations to protect or restore health, preferably through public health systems with universal access.

Despite the significant growth in global health, in a recent study, we showed a significant scientific imbalance in publications from developed and developing countries in the last decade years even when the issues studied are of primary interest to lower-income countries. Less than 20% of researchers publishing in global health are from low- and middle-income countries.[2]

Translational research has contributed significantly to developing products and strategies for the control of infectious diseases of global health interest.[3] Some of them are the mass preventive chemoprophylaxis strategies to control filariasis and geohelminthiasis; the repositioning and drug combination for chloroquine-resistant malaria; multidrug therapy to shorten treatment and prevent resistance in tuberculosis, leprosy, and HIV/AIDS; rapid diagnostic tests for leishmaniasis, HIV, and syphilis; and also, the development of genetically modified mosquitoes (*Aedes aegypti*) to control the transmission of malaria and dengue. The vaccine against the human papillomavirus (HPV) indicated for cervical cancer prevention and the development of personalized treatments based on molecular biomarkers for cancer are good examples of the application of translational research to global health problems.

The Zika epidemic and the current COVID-19 pandemic have brought numerous lessons and challenges for science and management in global health, such as (i) the scientific community, in collaboration with the surveillance system,

need to be alert, prepared, and responsive to the emergence and re-emergence of new infectious agents, (ii) transparency, data sharing, documentation, and adherence to the International Health Regulations are fundamental in emergencies (iii) multi-professional effort, and research agendas relevant to public health are necessary conditions for a rapid response and autonomy of countries (iv) national and international scientific and political leaders must inform, guide and educate the population for prevention and care in a harmonized way, and (v) the media and the social networks have a critical role in communicating health issues based on scientific evidence, avoiding the polarization and politicization of opinions and practices.

In times of globalization and extensive social networking, epidemics expose the inequities and lack of preparedness of the political structures and public services. The world watches in shock at the consequences of the post-pandemic events and waits for a social awakening for a more significant commitment to the collective well-being of humanity.

Acknowledgment

The author sincerely thanks and remember all health workers and the thousands of unsung heroes on the front lines of the fight against the Covid-19 pandemic.

Competing interests

The author declare that he has no competing interests.

Abbreviations

Human papillomavirus: HPV;

Human immunodeficiency virus: HIV;

Acquired immunodeficiency syndrome: AIDS;

Coronavirus disease 2019: COVID-19.

Authors' contributions

The author read and approved the final manuscript. The author take responsibility for the integrity of the data and the accuracy of the data analysis.

Funding

None.

Role of the funding source

None.

Availability of data and materials

The data used in this study are available from the corresponding author on request.

Ethics approval and consent to participate

None.

Consent for publication

By submitting this document, the author declare his consent for the final accepted version of the manuscript to be considered for publication.

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