

Research Equity in Otolaryngology–Head and Neck Surgery

OTO Open
 2021, 5(2) 1–3
 © The Authors 2021
 Article reuse guidelines:
sagepub.com/journals-permissions
 DOI: 10.1177/2473974X211024145
<http://oto-open.org>


Rolvix Harlan Patterson, MD, MPH^{1*}, Mary Jue Xu, MD^{2*},
 Samuel Okerosi, MBChB, MMed³, Mahmood F. Bhutta, DPhil, FRCS^{4,5},
 Carolina Der, MD, PhD⁶, Blake Alkire, MD, MPH^{7,8,9}, Rose Njogu, MSc¹⁰,
 Varun Vendra, MD, MA¹¹, Sharon Ovnat Tamir, MD¹²,
 and Johannes J. Fagan, MBChB, MMed¹³

Abstract

Equitable research collaborations benefit the quality and relevance of global otolaryngology–head and neck surgery research. However, analyses of existing global health literature have shown disproportionate representation by foreign authors. To avert this inequity and improve global otolaryngology–head and neck surgery research, we propose a framework that emphasizes local representation and capacity building in research.

Keywords

global health, global surgery, research equity

Received May 8, 2021; accepted May 10, 2021.

Head and neck pathologies disproportionately affect low- and middle-income countries (LMICs). For example, hearing loss is the fourth-leading cause of morbidity worldwide,¹ with 80% of the 400 million individuals affected by moderate or severe hearing loss residing in LMICs.² For children in LMICs, an estimated 75% of hearing loss is preventable, as compared with 48% in high-income countries (HICs).³ Additionally, LMICs will bear 80% of head and neck cancer deaths and up to US\$394 billion in associated economic losses by the year 2030.⁴

Given the disproportionate burden of disease, LMIC-led research should be promoted, as local stakeholders possess relevant perspectives to prioritize and foster appropriate research, investigate pertinent questions, and formulate sustainable health policies.^{5,6} Such an investment allows innovations and lessons such as contact tracing amid pandemics and community health worker–led outreach to be shared worldwide.^{7–9} However, there exists an imbalance in the existing research output between HIC and LMIC researchers. For example, LMIC authorship represented only 35% of articles published in the *Lancet Global Health* between 2013 and 2017.¹⁰

Inequalities in research output from LMICs may stem from multiple causes, ranging from limited funding, lack of research infrastructure, language barriers, limited research training, and competing clinical demands.^{6,11,12} The preference for English in international journals may prevent nonnative speakers from more broadly disseminating their research.¹³ The skill needed to thoroughly research a clinical question, the costs of accessing literature for background research, as well as the open access publishing fees may be additional barriers.¹⁴ Further deterring LMIC research, manuscripts authored by local

¹Department of Head and Neck Surgery and Communication Sciences, School of Medicine, Duke University, Durham, North Carolina, USA

²Department of Otolaryngology–Head and Neck Surgery, University of California San Francisco, San Francisco, California, USA

³Department of Otolaryngology, Machakos Level Five Hospital, Machakos, Kenya

⁴University Hospitals Sussex, Brighton, UK

⁵Brighton and Sussex Medical School, Brighton, UK

⁶School of Medicine, Clínica Alemana, Universidad del Desarrollo; Otorhinolaryngology Department, Dr Luis Calvo Mackenna Children's Hospital, Santiago, Chile

⁷Program in Global Surgery and Social Change, Harvard Medical School, Boston, Massachusetts, USA

⁸Center for Global Surgery Evaluation, Massachusetts Eye and Ear Infirmary, Boston, Massachusetts, USA

⁹Department of Global Health Equity, Department of Otolaryngology and Laryngology, Harvard Medical School, Boston, Massachusetts, USA

¹⁰SH:24 Sexual and Adolescent Reproductive Health, London, UK

¹¹Department of Otolaryngology–Head and Neck Surgery, School of Medicine, University of Pittsburgh, Pittsburgh, Pennsylvania, USA

¹²Department of Otolaryngology–Head and Neck Surgery, Faculty of Health Sciences, Samson Assuta Ashdod University Hospital, Ben Gurion University, Ashdod, Israel

¹³Division of Otolaryngology, University of Cape Town, Cape Town, South Africa

*These authors contributed equally to this article.

Corresponding Author:

Mary Jue Xu, MD, Department of Otolaryngology–Head and Neck Surgery, University of California San Francisco, 2233 Post St, San Francisco, CA 94115, USA.

Emails: MaryJue.Xu@ucsf.edu, maryjuexu@gmail.com



Table 1. Global Otolaryngology–Head and Neck Surgery Initiative Research Equity Guidelines.

1. Global research projects will aim to include a diverse team of students, trainees, and researchers of various languages, countries, experience, and expertise. Region-specific research will include regional representation from the initiation of the project and will prioritize having local representatives as first or co–first authors to highlight and develop local expertise. Global projects will include diverse, global representation.
2. All authors will meet early in the project to draft role descriptions (including provisional first and senior authors), ensuring that each role is defined and agreed upon. These roles will guide the order of authorship. Authorship discussions will occur early in the research process and be reviewed periodically throughout the research.
3. Authors should be involved early in project development and have meaningful roles in subsequent academic outputs such as manuscripts, abstracts, and articles.
4. All authors listed will satisfy the International Committee of Medical Journal Editors authorship criteria.
5. The first, corresponding, and/or senior authors of a publication have primary responsibility for all aspects of the work, including project development, circulation for review, and submission. They will oversee all other authors' standards for authorship and will present concise written descriptions of contributions to the work, which must be approved by all authors. This record must be submitted to the Global OHNS Initiative project manager to be shared with the initiative both at the initiation of the project and again prior to publication.
6. Each research project must be overseen by a senior researcher who can attest to the veracity of the work.
7. Manuscripts should be submitted for review by Global OHNS Initiative members to provide input before final approval.
8. First authors should have priority to present the research (eg, at conferences).

researchers may not be afforded the same consideration by reviewers for top-tier international journals. A study found that LMIC-based randomized clinical trials were published in lower–impact factor journals than HIC-based trials despite a high proportion of potential clinical benefit—even after adjusting for whether trials reported positive or negative results of an intervention.¹⁵ Double- or triple-blind review could help overcome some of these issues.¹⁶

Authorship can serve as a marker for the downstream impact of these barriers. High rates of foreign authorship have been reported in research specific to LMICs. For example, Dimitris et al reported that low-income country authors constituted 36.8% and 29.1% of first and senior authors, respectively, in publications related to their countries of affiliation.¹⁷ Pertaining to surgical research, Pauyo et al reported that 24% of articles about low-income countries were authored exclusively by high-income foreign nationals.¹¹ This extends to conference presentations, with significantly lower rates of abstract and oral presentations by LMIC authors.¹² While authorship trends still need to be characterized in the field of otolaryngology–head and neck surgery (OHNS), we propose that research collaborations focused on care delivery in LMICs take proactive measures to promote equity by using the framework outlined here.

Proposed Components of a Research Equity Framework

To achieve a vision of research equity, country- and region-specific research priorities must be determined in collaboration with local OHNS researchers. Country- or region-specific research should not be undertaken by foreign researchers without participation by local providers throughout the research process. Resources, including funding and technical support, should support local investigators.¹⁸ Furthermore, local OHNS providers must be commensurately recognized

through equity in authorship, opportunities to disseminate findings, and additional means of professional growth.¹⁹

This model for international research collaborations has been championed by several efforts, most notably by the non-profit Partners in Health/Rwanda (PIH/R). The PIH/R research department implemented guidelines to ensure equitable representation of Rwandan authors.²⁰ It achieved >50% Rwandan representation in first and senior authorships and have critically invested in building Rwandan clinical research capacity. To advance research equity in global OHNS collaborations, we urge the OHNS community to incorporate a similar approach into international research partnerships.

The Global Otolaryngology–Head and Neck Surgery Initiative (Global OHNS Initiative) is an international effort consisting of >170 members from 45 countries that aims to advance global OHNS care through collaborative research,²¹ and it has emphasized research equity as a core tenet by adapting the PIH/R guidelines.²² Initiative members were invited to review and comment on the guidelines, and feedback was incorporated to ensure that they reflect the diverse perspectives and priorities of initiative members.

The finalized Global OHNS Initiative “Research Equity Guidelines” (**Table 1**) are designed to ensure that all Global OHNS Initiative research prioritizes researchers from the region of focus. It is our hope that OHNS researchers adopt these principles and modify them to their contexts, because only with a shared conscious focus on equity will OHNS research and, by extension, OHNS care best serve patients around the world, especially those with the most need.

Acknowledgments

We note that the authorship of this commentary is weighted toward high-income countries. However, the ideas presented in this article are the product of direct contributions by the following Global OHNS Initiative members from 12 countries and discussions with

many more: Lillian Mokoh, MBChB, MMed ENT, Narmaya Thapa, MBBS, MS, Mark Shrimme, MD, MPH, PhD, Chee Yang Tan, Devi Sai Sri Kavya Boorgu, BS, Courtney Nguyen, BA, Isaac Wasserman, MD, MPH, Michael Lindeborg, MD, Praveen Rajaguru, MPH, Thomas Hampton, MBBS, Doreen Nakku, MBChB, MMed ENT, Sarah Drejet, MD, Tatsuya Yamasoba (山嵜 達也), MD, PhD, Josh Wiedermann, MD, David A. Shaye, MD, MPH, Isaie Ncogoza, MD, Taseer Din, MD, Theodore Klug, MD, MPH, Fatima Alzhra Hanifa, Walter Lee, MD, MHS, Gaelen Stanford-Moore, MD, MPhil, Valerie Salano, MBChB, MMed, and Sokdavy Touch, MD.

Author Contributions

Rolvix Harlan Patterson, conception, drafting, revising, final approval; **Mary Jue Xu**, conception, drafting, revising, final approval; **Samuel Okerosi**, conception, revising, final approval; **Mahmood F. Bhutta**, conception, revising, final approval; **Carolina Der**, conception, revising, final approval; **Blake Alkire**, conception, revising, final approval; **Rose Njogu**, conception, revising, final approval; **Varun Vendra**, conception, revising, final approval; **Sharon Ovnat Tamir**, co-senior author, conception, revising, final approval; **Johannes J. Fagan**, co-senior author, conception, revising, final approval.

Disclosures

Competing interests: None.

Sponsorships: None.

Funding source: Publication made possible in part by support from the University of California San Francisco Open Access Publishing Fund.

References

- World Health Organization. Addressing the rising prevalence of hearing loss. Published February 2018. <https://apps.who.int/iris/bitstream/handle/10665/260336/9789241550260-eng.pdf>
- World Health Organization. World report on hearing. Published March 2, 2021. Accessed March 4, 2021. <https://www.who.int/activities/highlighting-priorities-for-ear-and-hearing-care>
- World Health Organization. Deafness and hearing loss. Published March 1, 2020. Accessed February 24, 2021. <https://www.who.int/news-room/fact-sheets/detail/deafness-and-hearing-loss>
- Patterson RH, Fischman VG, Wasserman I, et al. Global burden of head and neck cancer: economic consequences, health, and the role of surgery. *Otolaryngol Head Neck Surg*. Published online January 7, 2020. doi:10.1177/0194599819897265
- Ijsselmuiden C, Marais DL, Becerra-Posada F, Ghannem H. Africa's neglected area of human resources for health research—the way forward. *S Afr Med J*. 2012;102(4):228-233.
- Hedt-Gauthier BL, Jeufack HM, Neufeld NH, et al. Stuck in the middle: a systematic review of authorship in collaborative health research in Africa, 2014-2016. *BMJ Global Health*. 2019;4(5):e001853. doi:10.1136/bmjgh-2019-001853
- Harris M, Bhatti Y, Buckley J, Sharma D. Fast and frugal innovations in response to the COVID-19 pandemic. *Nat Med*. 2020;26(6):814-817. doi:10.1038/s41591-020-0889-1
- Ahmed F, Ahmed N, Briggs TWR, et al. Can reverse innovation catalyse better value health care? *Lancet Glob Health*. 2017;5(10):e967-e968. doi:10.1016/S2214-109X(17)30324-8
- Maxmen A. Ebola prepared these countries for coronavirus—but now even they are floundering. *Nature*. 2020;583(7818):667-668. doi:10.1038/d41586-020-02173-z
- Iyer AR. Authorship trends in *The Lancet Global Health*. *Lancet Glob Health*. 2018;6(2):e142. doi:10.1016/S2214-109X(17)30497-7
- Pauyo T, Debas HT, Kyamanywa P, et al. Systematic review of surgical literature from resource-limited countries: developing strategies for success. *World J Surg*. 2015;39(9):2173-2181. doi:10.1007/s00268-015-3102-9
- Velin L, Lartigue J-W, Johnson SA, et al. Conference equity in global health: a systematic review of factors impacting LMIC representation at global health conferences. *BMJ Glob Health*. 2021;6(1):e003455. doi:10.1136/bmjgh-2020-003455
- Bentounsi Z, Vervoort D, Drevin G, Pohl L, Ng-Kamstra J. Global surgery doesn't belong to the English Language. *BMJ Global Health Blog*. Published April 18, 2019. Accessed March 14, 2021. <https://blogs.bmj.com/bmjgh/2019/04/18/global-surgery-doesnt-belong-to-the-english-language>
- Newton CR. Research and open access from low- and middle-income countries. *Dev Med Child Neurol*. 2020;62(5):537-537. doi:10.1111/dmcn.14513
- Wells JC, Sharma S, Del Paggio JC, et al. An analysis of contemporary oncology randomized clinical trials from low/middle-income vs high-income countries. *JAMA Oncol*. 2021;7(3):379-385. doi:10.1001/jamaoncol.2020.7478
- Haffer S, Bazerbachi F, Murad MH. Peer review bias: a critical review. In: *Mayo Clinic Proceedings*. Published online February 20, 2019. Accessed April 7, 2021. [https://www.mayoclinicproceedings.org/article/S0025-6196\(18\)30707-9/fulltext](https://www.mayoclinicproceedings.org/article/S0025-6196(18)30707-9/fulltext)
- Dimitris MC, Gittings M, King NB. How global is global health research? A large-scale analysis of trends in authorship. *BMJ Glob Health*. 2021;6(1):e003758. doi:10.1136/bmjgh-2020-003758
- Kanmounye US, Jumbam DT, Endomba FT, et al. Advancing medical research in sub-Saharan Africa: barriers, facilitators, and proposed solutions. *PAMJ Clinical Medicine*. 2020;3:83. doi:10.11604/pamj-cm.2020.3.83.23716
- Hedt-Gauthier B, Airhihenbuwa CO, Bawah AA, et al. Academic promotion policies and equity in global health collaborations. *Lancet*. 2018;392(10158):1607-1609. doi:10.1016/S0140-6736(18)32345-6
- Hedt-Gauthier BL, Riviello R, Nkurunziza T, Kateera F. Growing research in global surgery with an eye towards equity. *Br J Surg*. 2019;106(2):e151-e155. doi:10.1002/bjs.11066
- Global OHNS Initiative. Accessed January 27, 2021. <https://www.globalohns.org>
- IMB research guidelines. Published April 13, 2017. <https://static1.squarespace.com/static/57e3d5dae4fcb55262939dbc/t/58ef1feaff7c50fa31426633/1512031540392/IMBRC+Guidelines+2017.4.13.pdf>