GHM Open. 2023; 3(1):56-57.

LETTER

DOI: 10.35772/ghmo.2023.01006

Global vaccine equity: The G7's commitment and challenges

Yudai Kaneda[1,*], Kenzo Takahashi[2], Akihiko Ozaki[3], Tetsuya Tanimoto[4]

[1] School of Medicine, Hokkaido University, Hokkaido, Japan;
[2] Graduate School of Public Health, Teikyo University, Tokyo, Japan;
[3] Department of Breast and Thyroid Surgery, Jyoban Hospital of Tokiwa Foundation, Fukushima, Japan;
[4] Department of Internal Medicine, Jyoban Hospital of Tokiwa Foundation, Fukushima, Japan.

Abstract: The "Hiroshima Vision", unveiled at the G7 Hiroshima Summit in 2023, leaves room for enhancement in the specific content of equitable global vaccine distribution plans. Despite the efforts of COVID-19 Vaccines Global Access (COVAX), vaccine supply faces severe disparities, with high-income countries receiving a disproportionately larger share. To mitigate future public health crises, mechanisms proven by past instances, such as establishing regional vaccine hubs, promoting technology transfers, and considering early patent rights relinquishment, need to be implemented. Correcting vaccine inequity necessitates learning from the COVID-19 pandemic and demands global cooperation and consensus from the G7.

***Keywords*:** G7 Hiroshima Summit, global vaccine equity, COVID-19, COVAX, Japan

G7 Hiroshima Summit, held in May, 2023, released the "Hiroshima Vision", initiating a partnership for better medical countermeasure access and delivery based on equity, efficiency, and speed principles (*1*). Yet, more realistic global vaccine plans should have been incorporated from the experience of the coronavirus disease 2019 (COVID-19) pandemic.

One of the lessons to be learned is the significant global disparity in vaccine supply. Although the COVID-19 Vaccines Global Access (COVAX) is a joint initiative of global health entities to equitably distribute vaccines to mitigate the health and economic impact of the pandemic, according to the latest statistics of two-dose supplies, high-income countries are supplied with 75%, while only 26% of vaccines are supplied to low-income countries (*2*). This was because high-income countries prioritized the vaccination of their citizens, especially the newly developed and effective mRNA vaccines failed to reach low- and middle-income countries (LMICs).

Although the number of deaths was relatively low in Africa and other countries due to younger populations compared to developed countries, continued effort to distribute mRNA vaccines, which is also effective in preventing long covid, should be explored because COVID-19 will not cease in the foreseeable future (*3*). Moreover, considering the increased risk from the global population aging, establishing a global vaccine hub is urgently needed, as low-income regions such as Africa may become the next endemic area (*4*).

However, as it is unclear to what extent the establishment of one company's vaccine production base overseas, as Pfizer is currently doing in South Africa (*5*), for example, will contribute to equitable vaccine distribution, one possible solution is to share the technology itself in addition to the factory, with LMICs. Previously, Sumitomo Chemical, a Japanese company, transferred its insecticide-laden mosquito net manufacturing technology license-free to stakeholders in LMICs such as Tanzania (*6*). Such an approach highlights the challenges and possibilities of strengthening the ecosystem through private sector involvement in global health initiatives and should also be considered in the context of this COVID-19 reflection, as well as disruptive innovation.

Additionally, the early relinquishment of patent rights for mRNA vaccines should be considered a viable solution to redress vaccine inequities. The efficacy of positioning vaccines, testing equipment, and treatments as global public goods is suggested by the World Health Organization's decision in 2005 to essentially waive the intellectual property rights to Antiretroviral drugs (ARVs) for the treatment of HIV/AIDS, to improve access to these ARVs in LMICs (*7*). As a result, countries like Kenya could import generic drugs through compulsory licenses, reducing the cost of ARVs. It may also be effective to encourage the relinquishment of intellectual property rights by companies like Pfizer and Moderna for mRNA vaccines under the cooperation of the G7.

Vaccines, funded heavily by public money, should not be controlled by a few entities but should be global

public assets for sustainable scaling and vaccine inequity. Intellectual property exemptions, providing regional vaccine production networks, and technology transfers can help achieve this. These approaches will require global cooperation, funding, and political will, and further discussion and G7 consensus is desired.

Funding: None.

Conflict of Interest: Dr. Ozaki reported personal fees from Medical Network Systems Inc. and Kyowa Kirin co. ltd. outside the submitted work. Dr. Tanimoto reported personal fees from Medical Network Systems Inc. and Bionics co. ltd., outside the submitted work. No other disclosures were reported.

References

1. Ministry of Foreign Affairs of Japan. G7 Hiroshima Leaders' Communiqué 2023. *https://www.mofa.go.jp/mofaj/files/100506909.pdf* (accessed May 27, 2023).
2. World Health Organization. COVAX DATA BRIEF 2023. *https://www.gavi.org/sites/default/files/covid/covax/COVAX-data-brief_22.pdf* (accessed May 27, 2023).
3. Byambasuren O, Stehlik P, Clark J, Alcorn K, Glasziou P. Effect of covid-19 vaccination on long covid: Systematic review. BMJ Medicine. 2023; 2:e000385.
4. Chang AY, Skirbekk VF, Tyrovolas S, Kassebaum NJ, Dieleman JL. Measuring population ageing: An analysis of the Global Burden of Disease Study 2017. Lancet Public Health. 2019; 4:e159-e167.
5. Becker Z. South Africa's Biovac produces first Pfizer COVID-19 vaccine doses: Report 2022. *https://www.fiercepharma.com/vaccines/south-africas-biovac-produces-first-pfizer-covid-19-doses-bloomberg-reports* (accessed May 27, 2023).
6. Gradl C. Sumitomo Chemical and the FightAgainst Malaria Using Bednets: A Case Study. *https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/programs/cri/files/report_52_Sumitomo.pdf* (accessed July 13, 2023).
7. UNAIDS. Using TRIPS flexibilities to improve access to HIV treatment 2015. *https://www.unaids.org/sites/default/files/media_asset/JC2049_PolicyBrief_TRIPS_en_1.pdf* (accessed May 27, 2023).

Received June 14, 2023; Revised July 13, 2023; Accepted July 14, 2023.

Released online in J-STAGE as advance publication July 16, 2023.

**Address correspondence to*:
Yudai Kaneda, School of Medicine, Hokkaido University, Kita15, Nishi 7, Kita-ku, Sapporo, Hokkaido 0608638, Japan.
E-mail: nature271828@gmail.com