

# Seeking to address issues with COVID-19 vaccines in Japan and to resolve global problems with vaccination programmes

Ken Inoue<sup>1</sup>, Yoshiyuki Ohira<sup>2</sup>, Noriyuki Kawano<sup>3</sup>, Haruo Takeshita<sup>4</sup>, Sadayuki Hashioka<sup>4</sup>

<sup>1</sup>Kochi University, Kochi, Japan

<sup>2</sup>International University of Health and Welfare, School of Medicine, Chiba, Japan

<sup>3</sup>Hiroshima University, Hiroshima, Japan

<sup>4</sup>Shimane University, Shimane, Japan

Over a year has passed since coronavirus disease 2019 (COVID-19) first emerged and began to spread around the world, but there are still no signs of it being contained in Japan or elsewhere. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) variants have increasingly become a cause for concern.

In a study by the Ministry of Health, Labour and Welfare of Japan, about 15,000 residents of 5 Japanese prefectures underwent an antibody test for COVID-19 in December 2020 [1]. In each prefecture, 0.14–0.91% of residents tested positive for COVID-19 antibodies. Given the percentage of people with COVID-19 antibodies, containment via herd immunity cannot be expected [1]. The public needs to be accurately informed about COVID-19 vaccine [2]. Another issue to be addressed is the efficacy of each vaccine against the United Kingdom and South Africa variants of SARS-CoV-19 [3]. Additional information about these and other SARS-CoV-19 variants will probably be needed in the future.

Vaccination of the general population is proceeding as COVID-19 vaccines are being developed around the world. While developed countries have obtained sufficient vaccine supplies and have started or plan to start vaccina-

tion programmes, in many developing countries there is a shortage of both vaccine supplies and vaccination programmes according to the World Health Organization [4]. COVID-19 vaccination in both developed and developing countries may be the key to containing the disease, so it is crucial that developing countries obtain sufficient vaccine supplies and promote vaccination programmes if COVID-19 is to be contained worldwide. The collaboration between international organizations like the World Health Organization and various fields related to COVID-19 measures needs to be enhanced, and developing countries need substantial support in vaccinating their populations against COVID-19.

## REFERENCES

1. Kochi Shimbun. 2021; February 6: 1.
2. Inoue K, Hashioka S, Kawano N, et al. Issues regarding the COVID-19 vaccination program in Japan Re: Ageism in Indonesia's national covid-19 vaccination programme. 2021; February 11. <https://www.bmj.com/content/372/bmj.n299/rr> (cited 2021 February 11).
3. Nikkei Inc. <https://www.nikkei.com/article/DGXZQGM070L50X-00C21A2000000/> (cited 2021 February 8).
4. NHK. <https://www3.nhk.or.jp/news/html/20210130/k10012841621000.html> (cited 2021 February 8).



Ken Inoue, MD, PhD, Research and Education Faculty, Medical Sciences Cluster, Health Service Centre, Kochi University, 2-5-1, Akebono-cho, Kochi-shi, Kochi 780-8520, Japan, tel: +81-88-844-8158, fax: +81-88-844-8089, e-mail: ke-inoue@med.shimane-u.ac.jp

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