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Letters to the editor

Drug pricing for hepatitis B and C in Australia and Japan

To the Editor,

We read with interest the article by Yao et al. [1], which indicated that the prices of drugs for hepatitis B virus (HBV) and hepatitis C virus (HCV) are higher in the United States than in countries with similar economies. This study provides valuable insights into the medical economics of treating viral hepatitis across different nations. Because the original data source was not specified for some countries, we collected the relevant information from the publicly available data provided by the Pharmaceutical Benefits Scheme of Australia [2] and Ministry of Health, Labour and Welfare of Japan for confirmation [3]. In each of these countries, the price and indication of approved drugs are regulated by government.

We identified several inconsistencies in nucleoside/nucleotide analogue (NA) drug pricing for HBV for Australia and Japan (Fig. 1). In fiscal year 2024, NAs approved in Japan included lamivudine (LAM), entecavir (ETV), tenofovir disoproxil fumarate (TDF), and tenofovir alafenamide (TAF) in that order of approval, whereas adefovir (ADF) was discontinued in 2022 [4,5]. Consistent with this order, the most expensive NA was TAF with a price of 6.46 United States dollars (USD), similar to the reported price of 6.72 USD. TDF had the second highest price of 4.09 USD, not 10.51 USD as in the article. The article may be referring to a different product of TDF approved only for human immunodeficiency virus 1 and priced at 9.93 USD (1419.1 Japanese yen). While LAM is no longer recommended as the first choice of NAs in the Japanese guideline [4,5], it is included in the drug list with a price of 2.15 USD, not "N/A" as reported. Emtricitabine/TDF is not approved for HBV in Japan, and is for human immunodeficiency virus 1. This is also the case for Australia. Multiple generic products of ETV were available in Japan during fiscal year 2024 with three different prices ranging from 0.54 to 1.47 USD. The prices of other drugs are compatible with our calculation for Japan.

Although the changes do not affect the authors' overall conclusion, the accuracy of reporting should be ensured in scientific publications. The difficulty in collecting data about medical costs in each country is understandable, as it requires some local knowledge and because the original records may be in a foreign language. While the original data for medical costs may not be published in journals, in this instance, they are publicly available. Since any published literature can be a resource of future citations and information dissemination, we believe that a correction should be issued by the authors and the figures for other countries rechecked.

With these corrections and the assumption that other results are accurate, Australia and Japan tend to have the lowest prices of branded antivirals for HBV and HCV among the surveyed countries. In Australia and Japan, this in part reflects government schemes to lower drug costs [6,7]. This policy may have negative impacts on drug availability and overall profits [8], but prices are set by mutual negotiation [9]. Overall, the article by Yao et al. [1] provides important information to understand drug costs and policies in various countries, but the reported information should be accurate.

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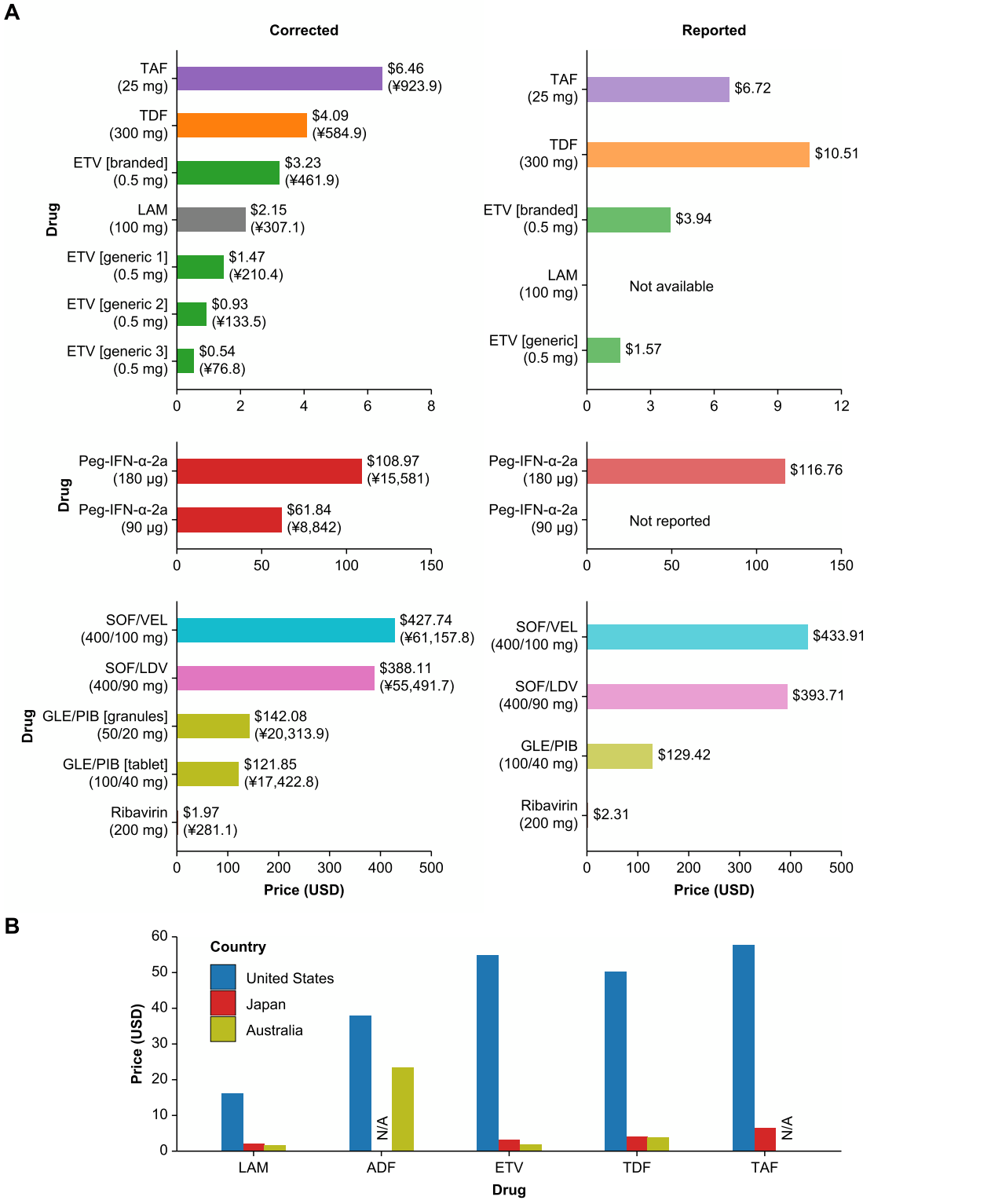

Fig. 1. The drug pricing for hepatitis B and C with correction to Australia and Japan in 2024. (A) The prices of antiviral drugs for HBV and HCV infection in Japan during fiscal year 2024 (April 2024–March 2025) based on the initially reported and corrected values. The currency conversion is based on the exchange rate of 142.98 JPY/USD on 4 January 2024, as reported by Bank of Japan. In the corrected plots, each bar is annotated with the converted price in USD followed by original price in JPY. It should be noted that drug prices for fiscal year 2024 were subjected to revision and therefore may slightly differ from those in January–March 2024 (fiscal year 2023). (B) The updated comparison of drug pricing for branded NAs between Australia, Japan, and the United States in 2024 (corresponding to Fig. 1 in the original article). While the above corrected prices were used for Japan, the prices reported in Table 1 of the original article were used for Australia and the United States (average wholesale price) for consistency. Emtricitabine/TDF was excluded because it is not approved for HBV both in Australia and Japan. N/A indicates that the drug is not available for HBV in the country. ADF was discontinued in Japan in 2022. TAF is not included in the Pharmaceutical Benefits Scheme of Australia. ADF, adefovir; ETV, entecavir; GLE/PIB, glecaprevir/pibrentasvir; HBV, hepatitis B virus; HCV, hepatitis C virus; JPY, Japanese yen; LAM, lamivudine; NA, nucleoside/nucleotide analogue; Peg-IFN, pegylated interferon; SOF/LDV, sofosbuvir/ledipasvir; SOF/VEL, sofosbuvir/velpatasvir, TAF, tenofovir alafenamide; TDF, tenofovir disoproxil fumarate; USD, United States dollar.

Data availability

The R code for the analysis was deposited in GitHub (https://github.com/maitosuoh/hbv-hcv-drug-au-jp-2024).

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Author contributions

The study conception and design, material preparation, data collection and analysis were performed by Maito Suoh. The first draft of the manuscript was written by Maito Suoh, and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Declaration of competing interest

None.

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