be insufficient power to detect publication bias, but by using a conservative approach we were able to take this into account.[1]

We highlight that there are limitations in our study, and clearly state that effect sizes might be overestimated due to a lack of adjustment of potential confounders. The unadjusted results are correctly reported and adjustment for potential confounders can be made by readers in light of the number of comparisons they wish to consider.

Monitoring AST, ALT, and serum albumin during the early phases of dengue disease will provide the opportunity to better understand how these parameters might detect the early onset of severe dengue, which in turn can help optimise and innovate patient care across transmission settings.

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1 Sangkaew S, Ming D, Boonyasiri A, et al. Risk predictors of progression to severe disease during the febrile phase of dengue: a systematic review and meta-analysis. *Lancet Infect Dis* 2021; **21:** 1014–26.

2 Sadeghi R, Treglia G. A practical guideline on diagnostic and prognostic meta-analyses. In: Treglia G, Giovanella L, eds. Evidence-based positron emission tomography. New York, NY: Springer, 2020: 17–22.

3 IntHout J, Ioannidis JPA, Rovers MM, et al. Plea for routinely presenting prediction intervals in meta-analysis. *BMJ Open* 2016; **6:** e010247.

4 Riley R D, Moons KGM, Snell KIE, et al. A guide to systematic review and meta-analysis of prognostic factor studies. *BMJ* 2019; **364:** k4597.

See **Online** for appendix

Adverse event reporting and Bell's palsy risk after COVID-19 vaccination

The comparison of the risk–benefit balance of COVID-19 vaccines in real-world populations has presented new challenges over the past few months. For instance, the detection of rare adverse events is unresolved by clinical trials but mandatory to better inform clinical decision-making in countries where several vaccines are available.[1] However, heterogeneity in the distribution of different COVID-19 vaccines among countries and populations makes such comparisons difficult.

We read with interest the Article by Eric Yuk Fai Wan and colleagues,[2] which explored the association between Bell's palsy, the mRNA-based BNT162b2 vaccine, and the inactivated CoronaVac vaccine in Hong Kong.[2] Hong Kong is one of the rare places where both types of vaccines are available, allowing direct comparison of their efficacy and safety from a unique database. The results of this study suggest a higher risk of developing Bell's palsy in individuals who received CoronaVac than in those who were unvaccinated, and also in those who received the BNT162b2 vaccine. Surprisingly, this safety signal has not been detected by global pharmacovigilance systems.

Since 1968, the WHO pharmacovigilance database has collected and aggregated suspected adverse drug reactions that are spontaneously reported by patients and health professionals from more than 150 countries. This system allows early detection of rare adverse drug reactions by identifying unexpectedly increased proportions of adverse drug reactions reported with a particular drug compared with other drugs in the database (ie, disproportionality signals).[3] Comparison of signals between drugs is challenging in global pharmacovigilance databases because of the heterogeneity in pharmacovigilance systems, unmeasured confounding, change in the rate of adverse events reported to pharmacovigilance systems with drug time on the market, and media coverage of drugs or adverse events, or both. However, COVID-19 vaccines are a rare case for which comparison of signals could be relevant because of similar therapeutic indication, use, and time on the market.[4]

As of Aug 31, 2021, the WHO pharmacovigilance database contained 770 343 reports of adverse events with the BNT162b2 vaccine, of which 7892 were reports of facial paralysis (the method for case identification has been described elsewhere).[5] However, only 30 091 reports of adverse events had been made for CoronaVacc, of which 38 were reports of facial paralyses. Therefore, the disproportionality signals of facial paralysis are lower for Coronavac than for BNT162b2, which differs from the findings of Wan and colleagues' study.

This discrepancy could be due to several reasons. First, the broad media coverage of this potential adverse event might have stimulated its reporting with mRNA vaccines. Second, the low number of adverse events reported with CoronaVac vaccines does not allow for an accurate estimate of the proportion of rare adverse drug reactions. Several large countries that used CoronaVac did not report any adverse events as part of the WHO Program for International Drug Monitoring (appendix pp 1–2).

The results of Wan and colleagues' study highlight the risk of false conclusions being drawn from comparison of disproportionality signals in an international pharmacovigilance