
Figures and figure supplements

Estimates of the global burden of Japanese encephalitis and the impact of vaccination from 2000-2015

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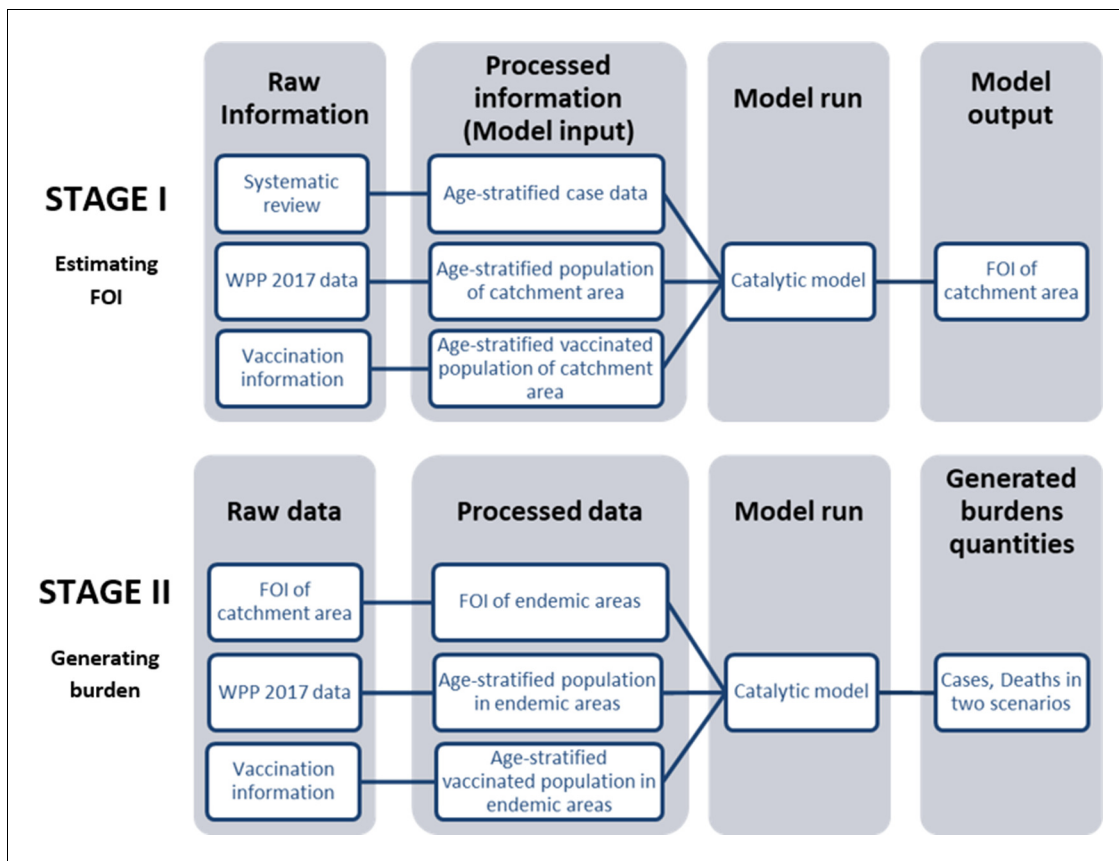


Figure 1. Flowchart describes two main stages in our analysis: Estimating FOI (force of infection) and generating burden. In Stage I we estimate FOI (force of infection) of all studies' catchment area. In Stage II we then used the FOI estimates to generate global burden. Abbreviation: WPP: World Population Prospects.

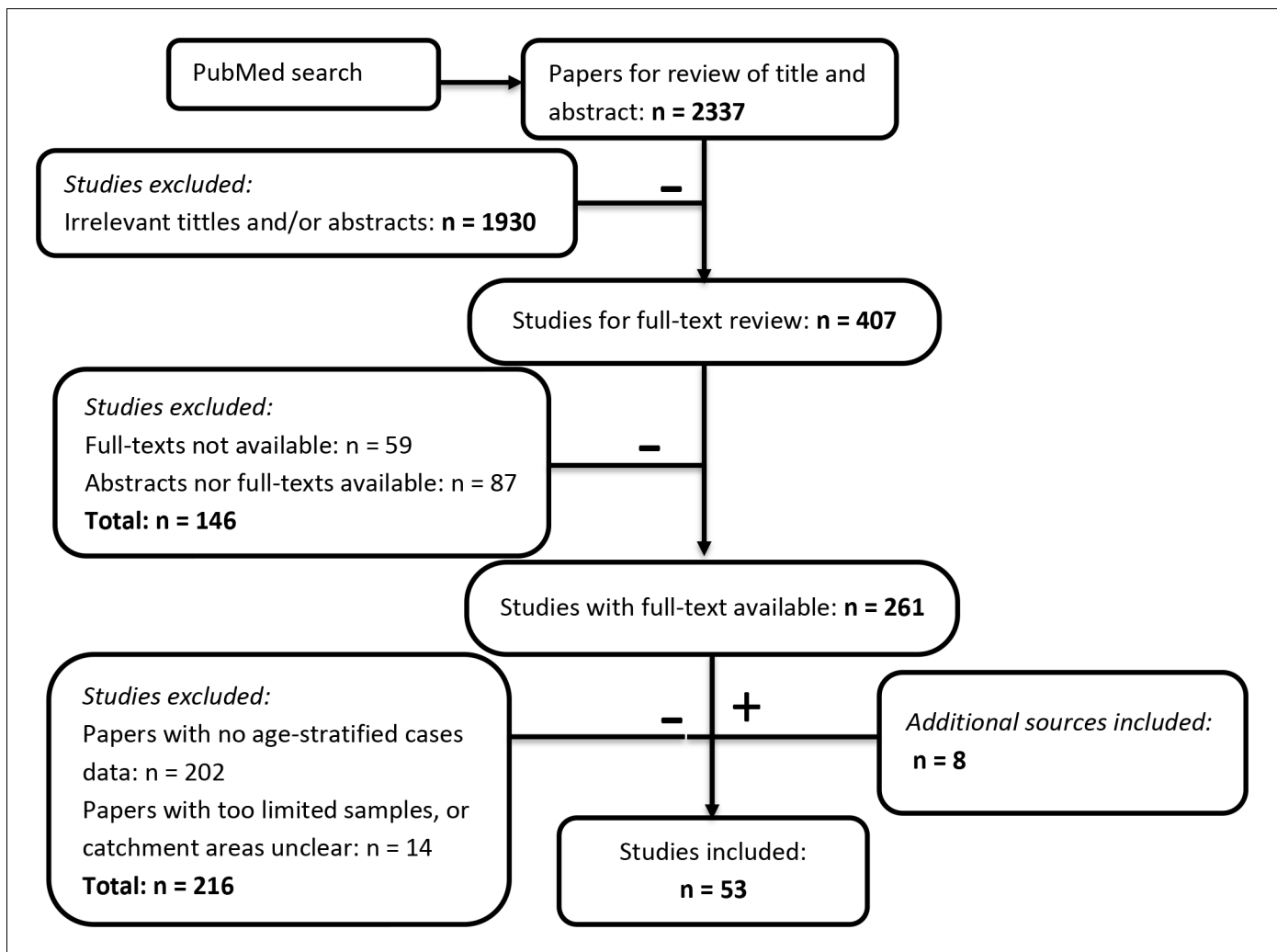


Figure 2. Flowchart describing the systematic review procedure searching for Japanese encephalitis age- stratified case data.

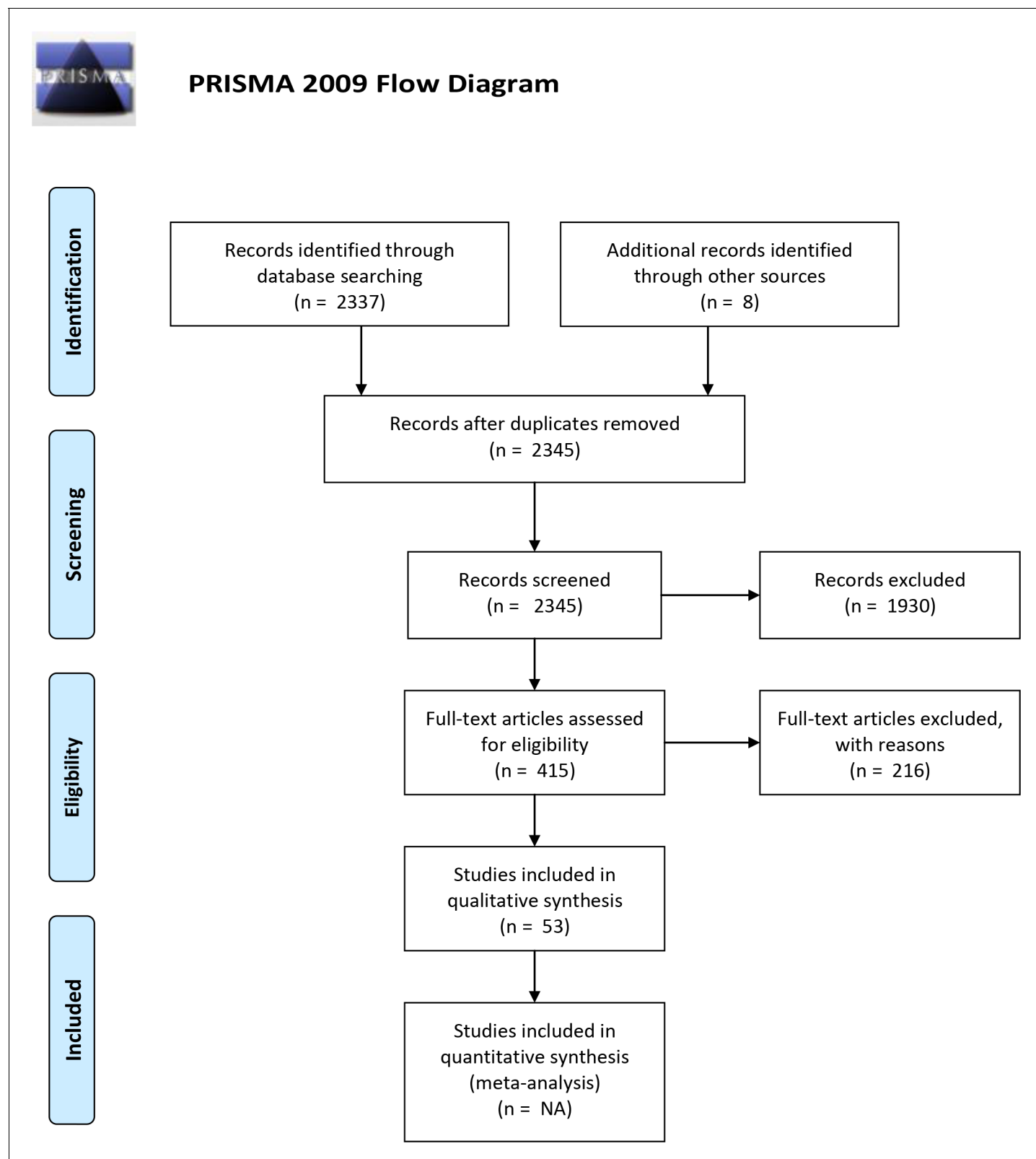


Figure 2—figure supplement 1. PRISMA 2009 flowchart.

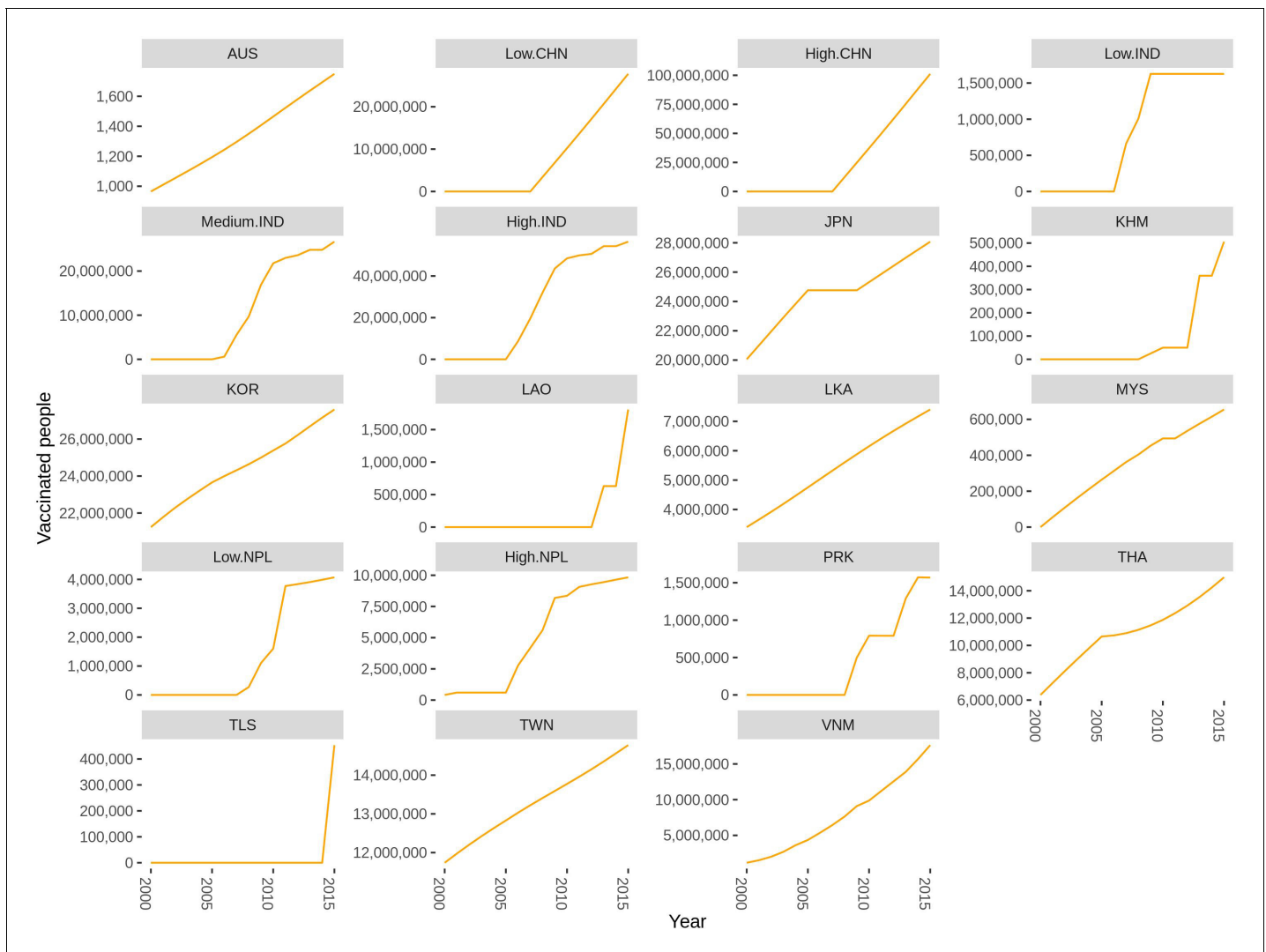


Figure 3. Reported number of individuals vaccinated in each region from multiple data sources by region from 2000 to 2015. If the country is not listed there is no vaccination reported. Abbreviations: AUS: Australia, CHN: China, IND: India, JPN: Japan, KHM: Cambodia, KOR: South Korea, LAO: Laos, LKA: Sri Lanka, MYS: Malaysia, NPL: Nepal, PRK: People's Republic of Korea, THA: Thailand, TLS: Timor-Leste, TWN: Taiwan, VNM: Vietnam. The supplementary file: **Figure 3—source data 1** lists the vaccination data and the sources for each country.

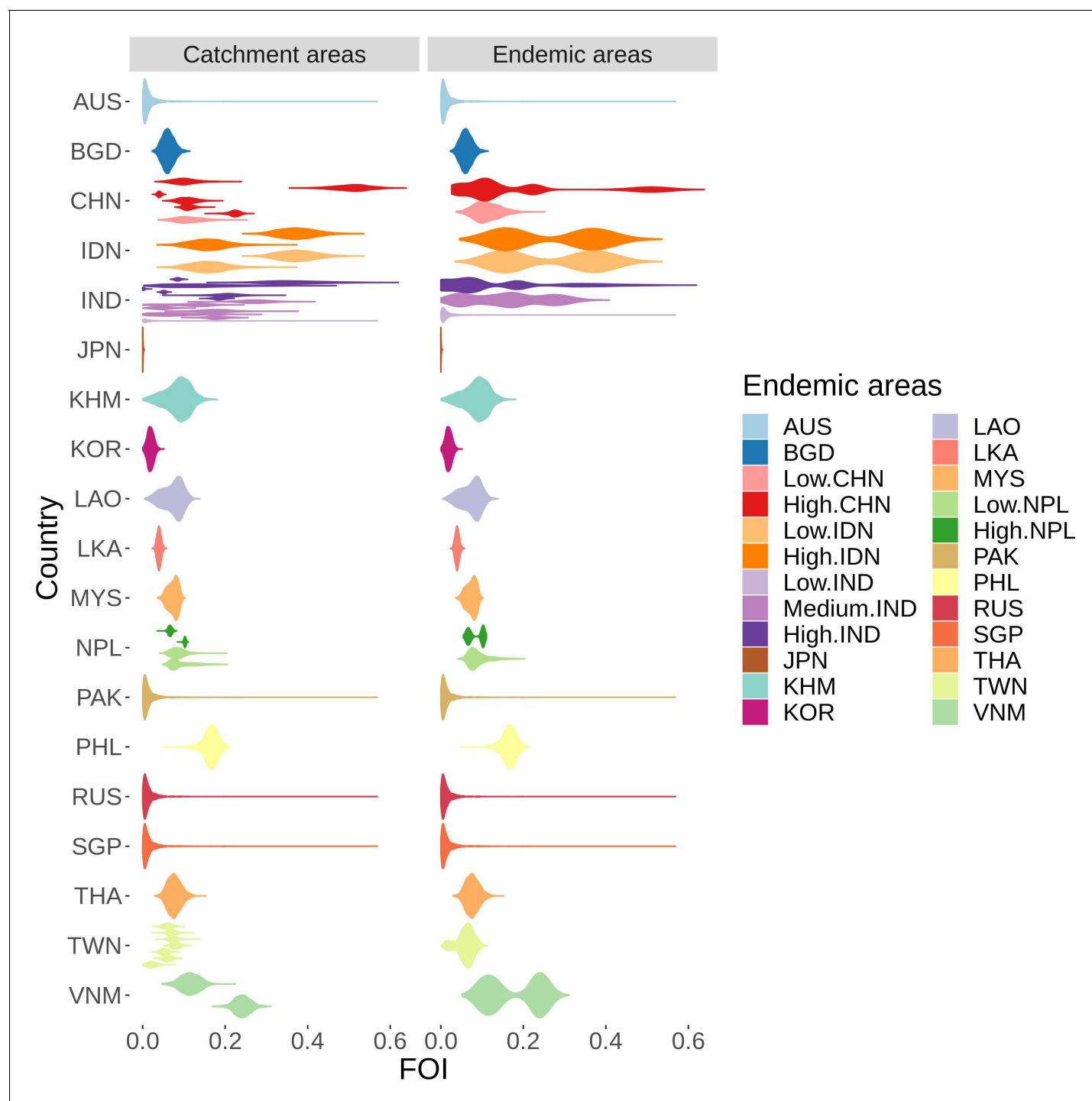


Figure 4. FOI distribution estimated from all studies' catchment areas (on the left), each distribution represents FOI from one study, which were used to infer the FOI distribution in all endemic areas (on the right). The colors are coded after the endemic areas as in the legend. Abbreviation: AUS: Australia, BGD: Bangladesh, CHN: China, IDN: Indonesia, IND: India, JPN: Japan, KHM: Cambodia, KOR: South Korea, LAO: Laos, LKA: Sri Lanka, MYS: Malaysia, NPL: Nepal, PHL: Philippines, RUS: Russia, SGP: Singapore, THA: Thailand, TWN: Taiwan, VNM: Vietnam. Countries have low, medium or high following the classification in *Campbell et al., 2011*.

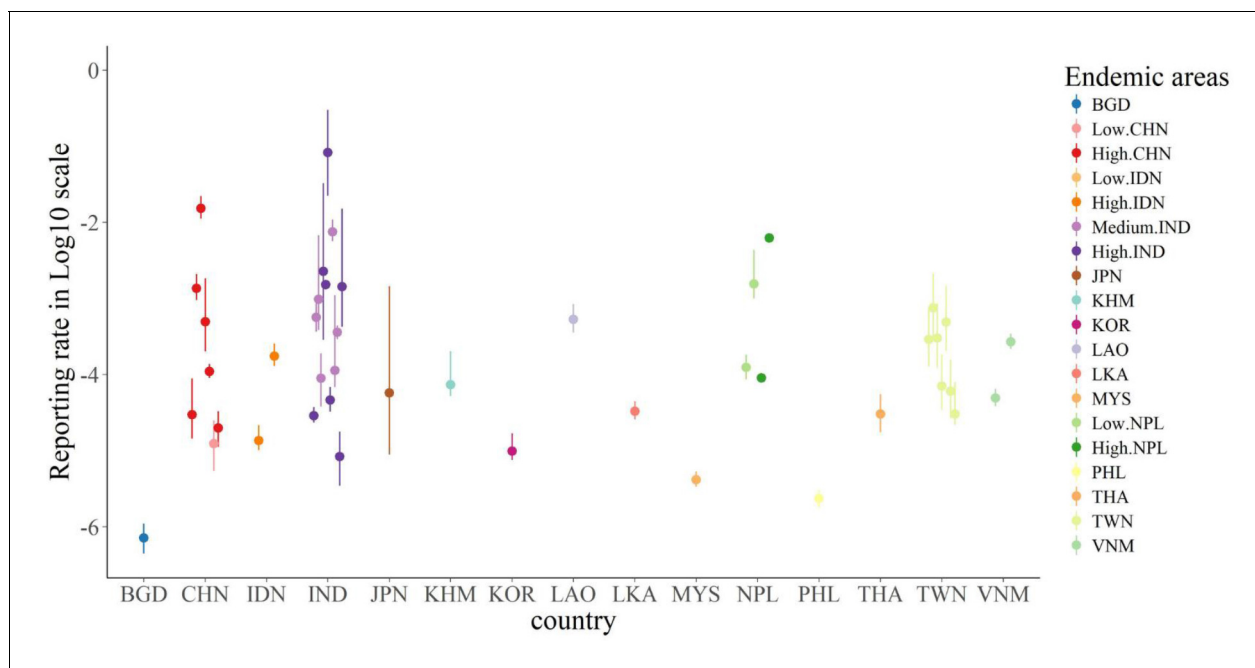


Figure 4—figure supplement 1. Estimated reporting rate from all studies. For each study, the dots with vertical lines are the mean reporting rate estimated from the model with 95% credible interval. The colors represent the endemic areas as seen in the legend.

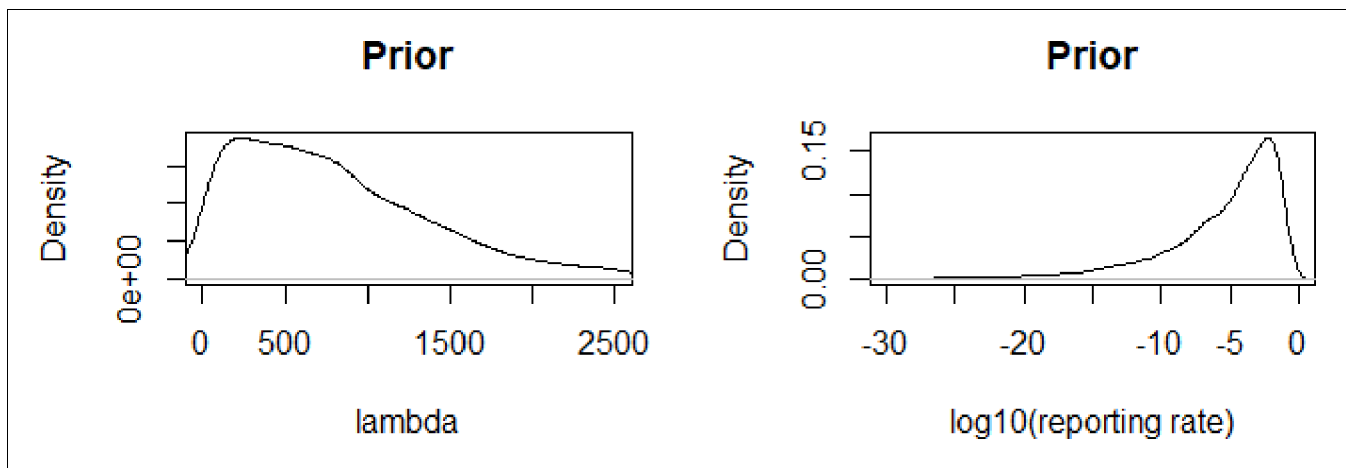


Figure 4—figure supplement 2. prior distributions for lambda and rho.

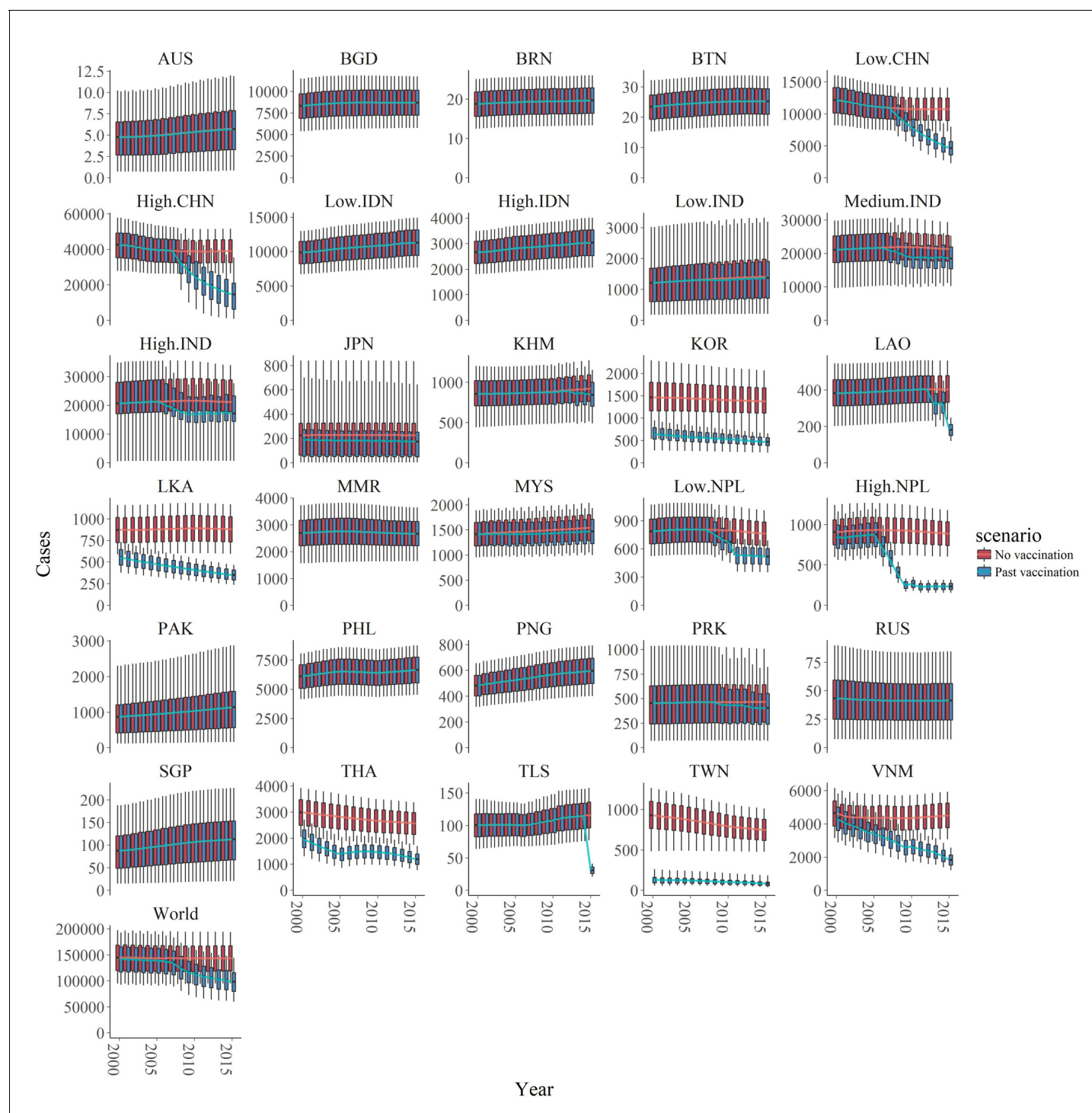


Figure 5. Number of estimated cases with and without vaccination of the 30 endemic areas and of the world from 2000 to 2015. The two scenarios, with or without vaccination, are also shown in blue and red respectively. In all areas, the boxplots represent the estimated cases with 95% credible intervals (also shown 1 st quartile, 3rd quartile) with the solid lines showing the mean value of each interval. Abbreviation: AUS: Australia, BGD: Bangladesh, BRN: Brunei, BTN: Bhutan, CHN: China, IDN: Indonesia, IND: India, JPN: Japan, KHM: Cambodia, KOR: South Korea, LAO: Laos, LKA: Sri Lanka, MMR: Myanmar, MYS: Malaysia, NPL: Nepal, PAK: Pakistan, PHL: Philippines, PNG: Papua New Guinea, PRK: North Korea, RUS: Russia, SGP: Singapore, THA: Thailand, TLS: Timor-Leste, TWN: Taiwan, VNM: Vietnam.

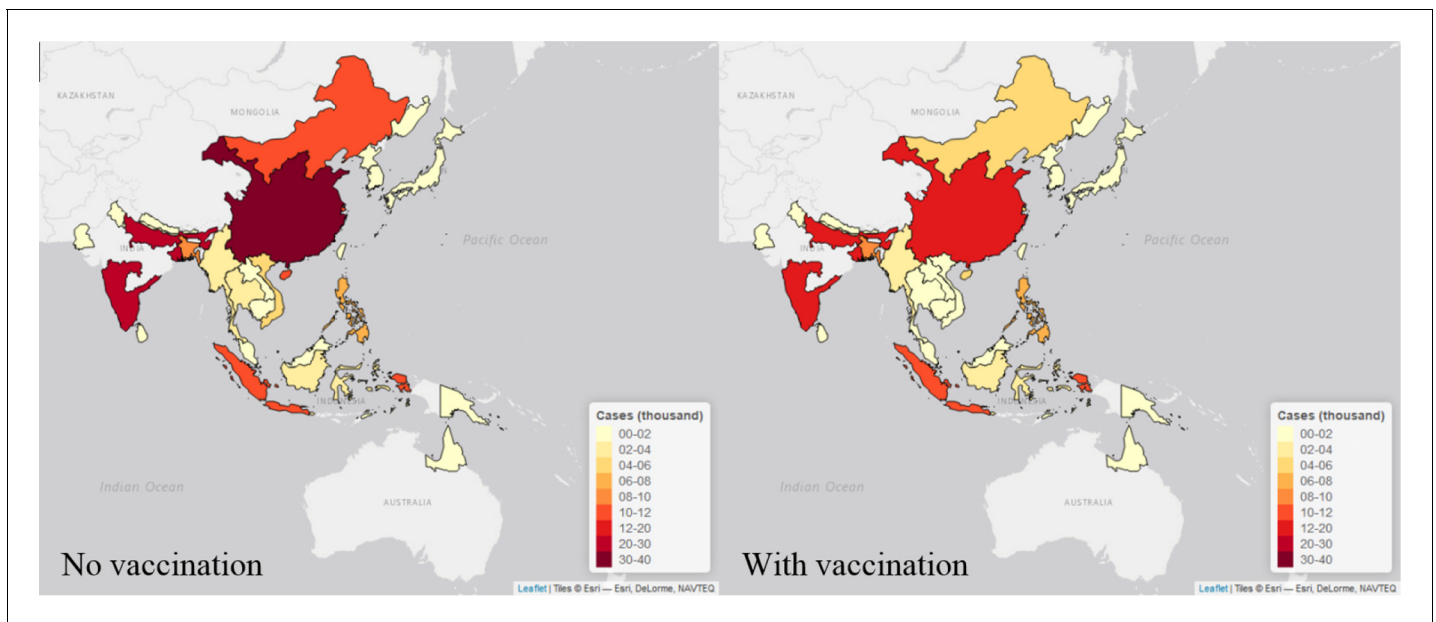


Figure 6. Maps of estimated cases (in thousand) in 30 endemic areas for two scenarios in 2015. Each endemic area is shaded in proportion to the area's estimated cases in thousand as seen in the legend, with yellow shade is the lowest value and red shade is the highest value. The map on the left is the estimates from no vaccination scenario, and the right is from the vaccination scenario. The maps were made by *leaflet* package in R (Joe et al., 2017).