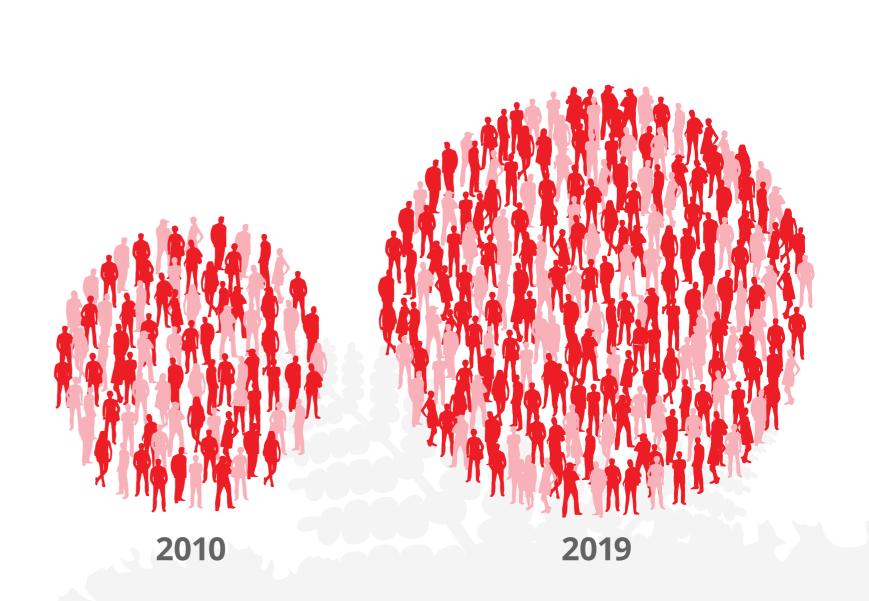
Expansion of the geographic range of dengue has been documented, particularly in the latter half of the 20th century

One modelling estimate indicates 390 million dengue virus infections per year (95% credible interval 284–528 million), of which 96 million (67–136 million) manifest clinically (with any severity of disease)¹. Another study on the prevalence of dengue estimates that 3.9 billion people are at risk of infection with dengue viruses. Despite a risk of infection existing in 129 countries, 70% of the actual burden is in Asia¹.

The number of dengue cases reported to WHO increased over 8 fold over the last two decades, from 505,430 cases in 2000, to over 2.4 million in 2010, and 5.2 million in 2019. Reported deaths between the year 2000 and 2015 increased from 960 to 4032, affecting mostly younger age group.¹ The total number of cases seemingly decreased during years 2020 and 2021, as well as for reported deaths. However, the data was not yet complete and COVID-19 pandemic might have also hampered case reporting in several countries.^{2,3}







Introduction to the

rise of dengue



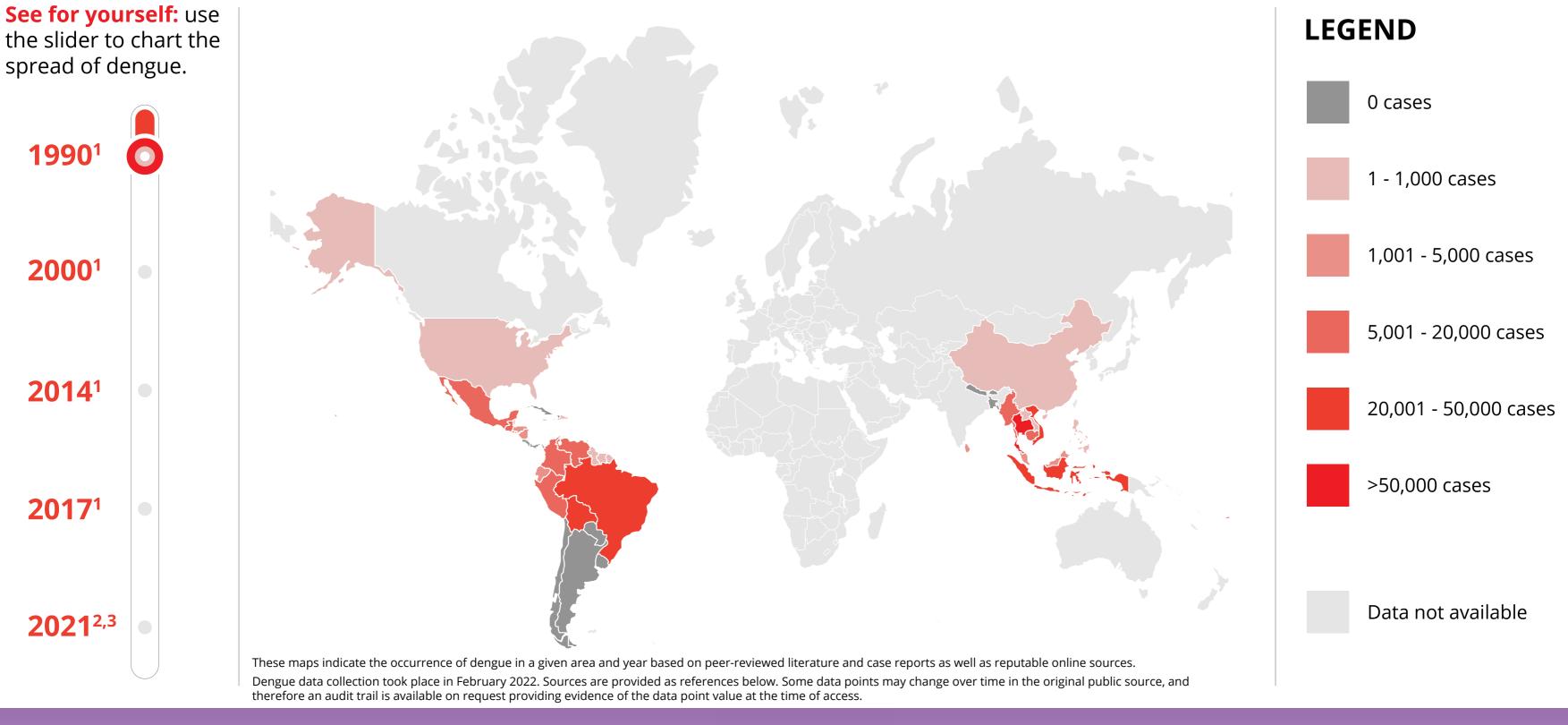






References

Introduction to the rise of dengue



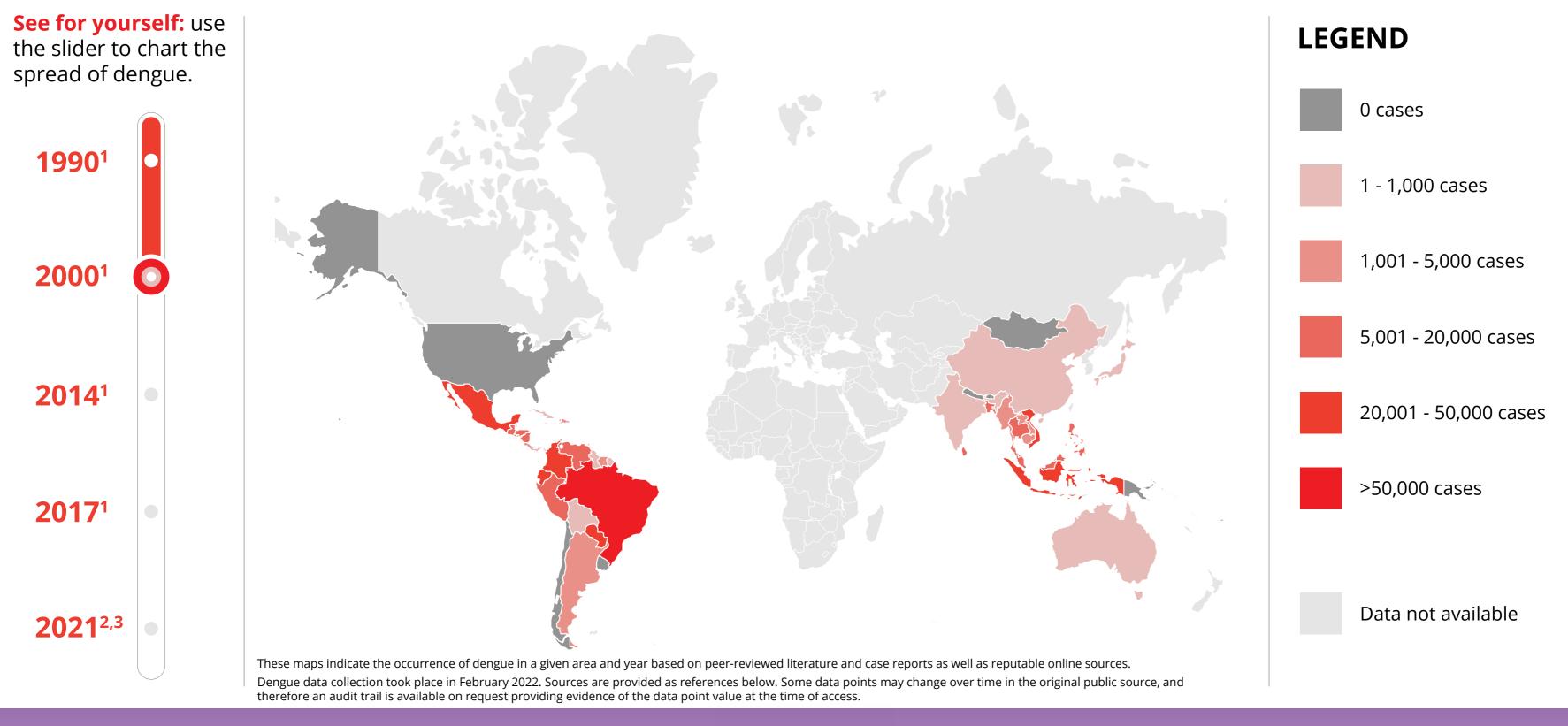


Global spread of dengue



References

Introduction to the rise of dengue





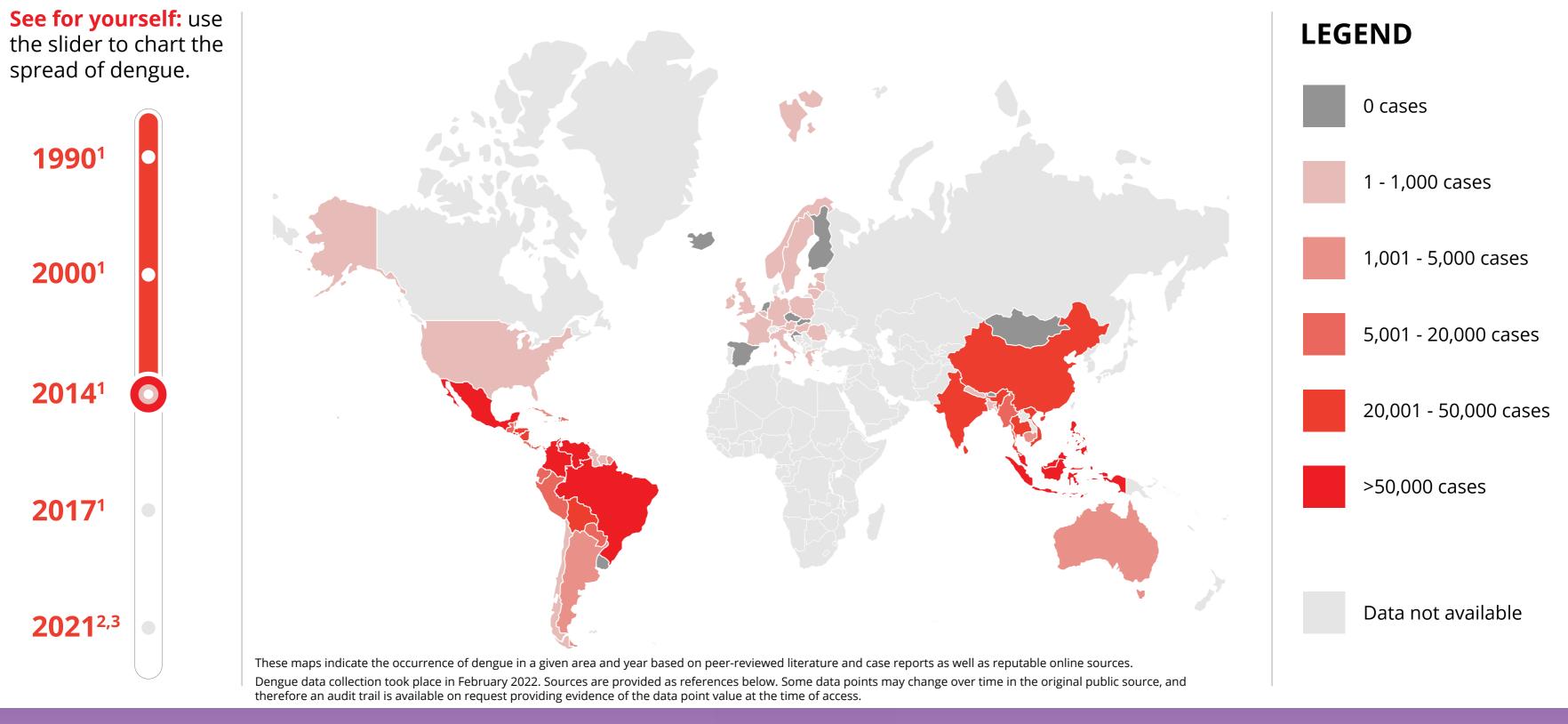
© copyright 2022. Takeda Pharmaceutical Company Limited. All rights reserved. VV-MEDMAT-65558

Global spread of dengue



References

Introduction to the rise of dengue





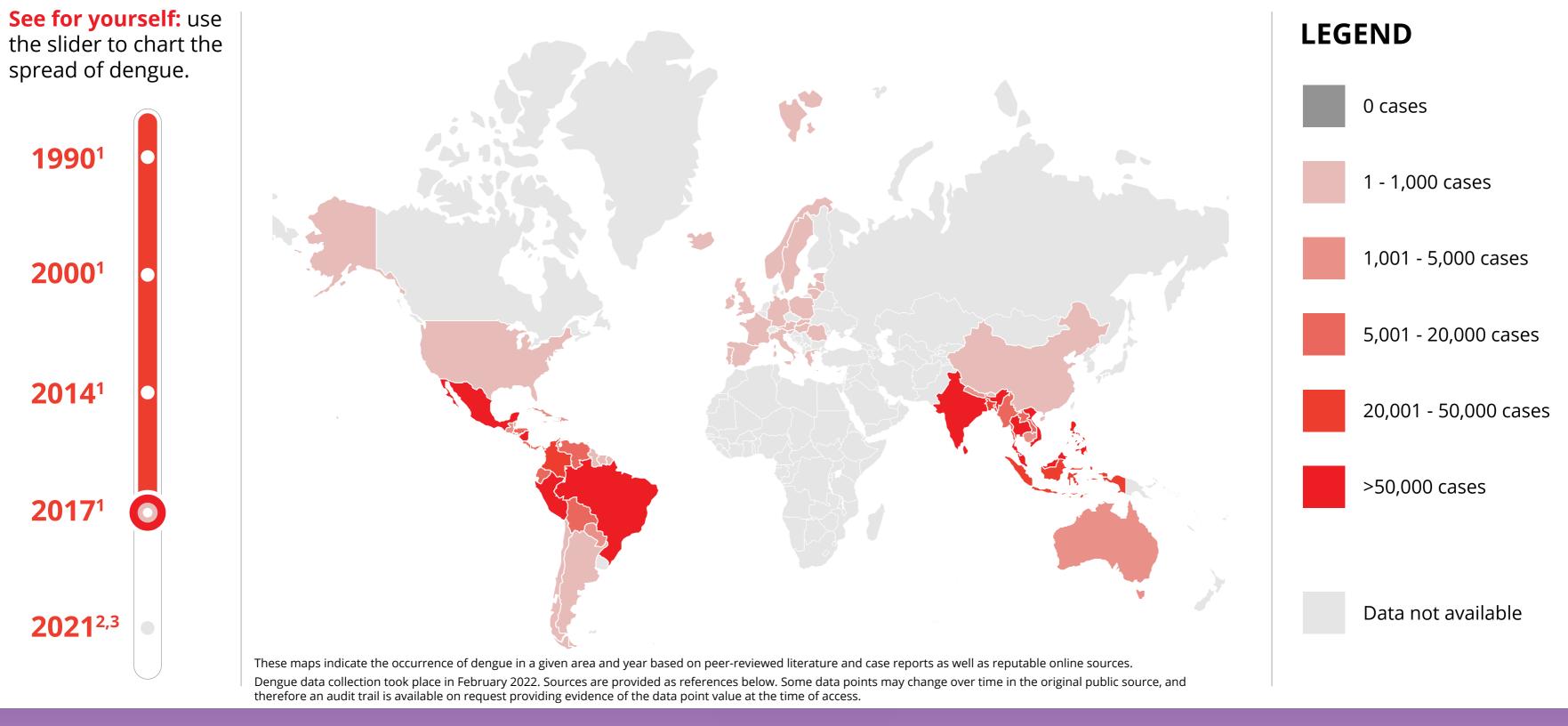
© copyright 2022. Takeda Pharmaceutical Company Limited. All rights reserved. VV-MEDMAT-65558

Global spread of dengue



References

Introduction to the rise of dengue



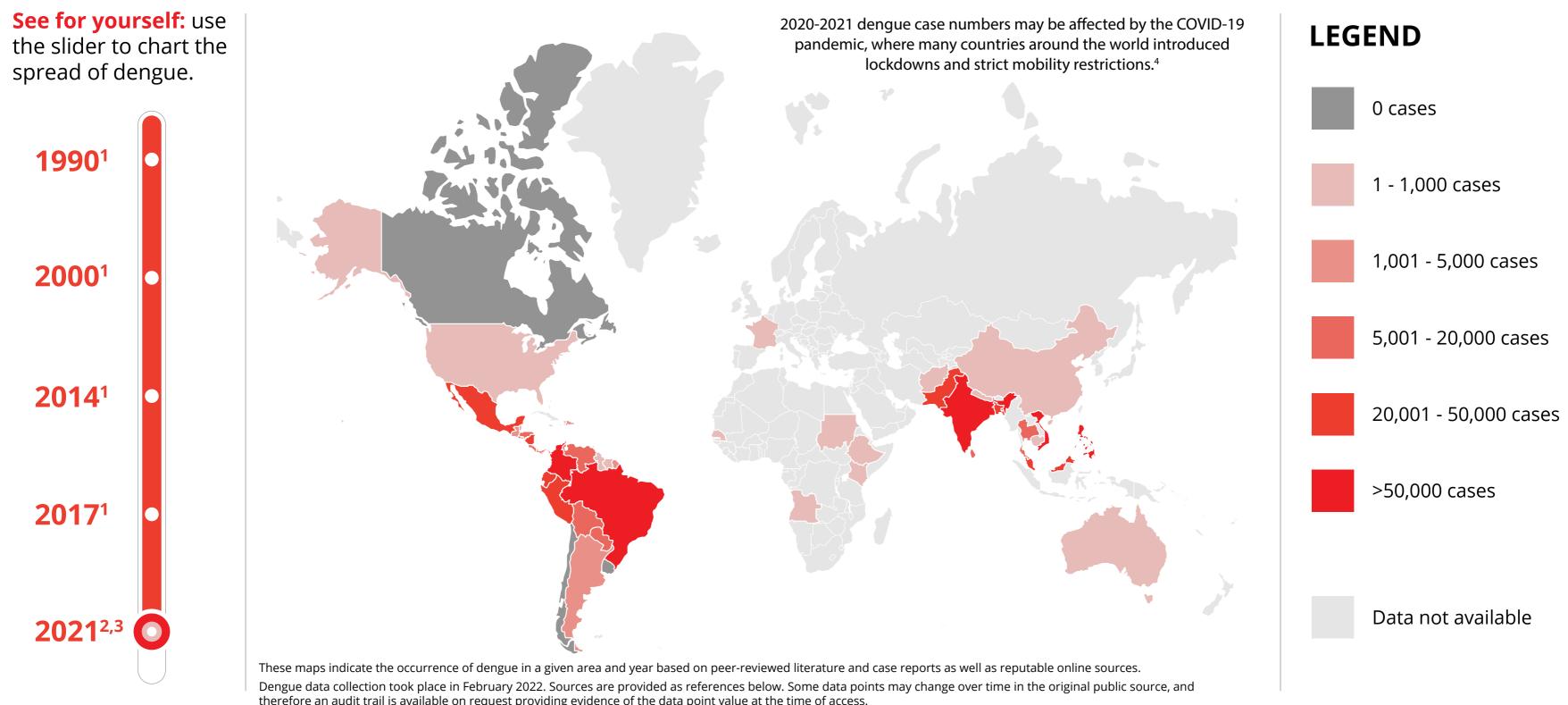


© copyright 2022. Takeda Pharmaceutical Company Limited. All rights reserved. VV-MEDMAT-65558

Global spread of dengue



Introduction to the rise of dengue



therefore an audit trail is available on request providing evidence of the data point value at the time of access.





Global spread of dengue



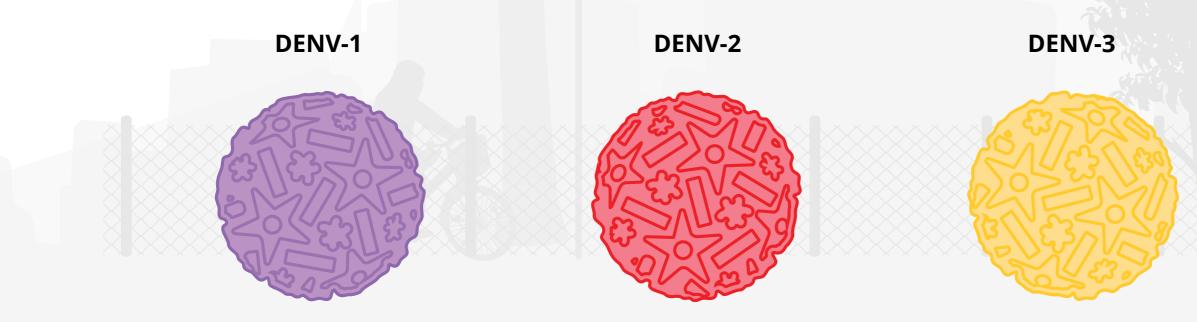
Introduction to the rise of dengue

DENV Serotypes

DENV has four distinct, but closely related, viral serotypes (DENV-1-4) can circulate in the same area and can all cause disease. The four serotypes are identical in 65% of their genome, but there may be some genetic variation even within each serotype. The pathophysiological responses to infection with each of the four serotypes differs in immune status, making dengue a highly complex disease. However, despite these immunological differences, infection with any of the serotypes results in the same clinical disease.¹⁻³

All four DENV serotypes (DENV-1-4) are now circulating in Asia, Africa, and the Americas.⁴

Severe dengue happens in about 5% of cases.⁵ DENV-2 is more often associated with severe dengue than other serotypes. Dengue outbreaks reported between 1990 and 2015 showed that, when comparing serotypes, the highest pooled mortality was attributed to DENV-2 (2%), followed by DENV-3 (1.6%).^{2,6}











DENV-4

