

## **Epidemiology of imported dengue cases in England, Wales and Northern Ireland: a ten-year review**

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### **Introduction:**

Dengue is a mosquito-borne viral infection which can cause severe disease including shock and haemorrhage. Dengue is endemic in tropical and subtropical regions worldwide, with sporadic autochthonous cases recently reported in Europe and the USA. Its evolving epidemiology is driven by climate change, urbanisation and increased international travel.

### **Methods:**

We conducted a retrospective review of imported confirmed and probable dengue cases diagnosed in England, Wales and Northern Ireland by the UK Health Security Agency's Rare and Imported Pathogens Laboratory between 1 January 2015 and 31 December 2024. Extracted data included date of birth, sex, travel country and specimen date. Descriptive analysis summarised demographics, travel destinations and temporal trends.

### **Results:**

Between 2015 and 2024, 4,969 imported dengue cases with a final clinical diagnosis were included. Case numbers remained stable to 2018, surged in 2019 (783 cases), declined in 2020-202 during COVID-19 travel restrictions, and then increased to a record peak in 2024, with 904 cases (Table 1). The median age of cases was 38 years (IQR 27-51), and 47% were female. The most frequently reported travel countries were India (n =1,165 cases, 28.1%), Thailand (n = 564,13.6%), Indonesia (n = 269, 6.5%) and Sri Lanka (n = 269, 6.5%).

### **Conclusion**

This ten-year review highlights the increasing burden of imported dengue in the UK, reflecting UK travel patterns and worldwide dengue distribution. These findings emphasise the value of robust surveillance in identifying dengue risk in UK travellers and the importance of targeted travel health advice.