

## **Assessment of the healthcare burden of hospitalized dengue in England: a retrospective analysis (2010–2023)**

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**Background:** International travel and factors including climate change, are contributing to the global increase in dengue cases, including among UK returning travelers. Here, we evaluate the incidence, complications and healthcare burden of hospitalized dengue in England.

**Methods:** This retrospective cohort study (2010–2023) used Clinical Practice Research Datalink (CPRD) Aurum linked with Hospital Episode Statistics, and Office for National Statistics mortality data. Hospitalized dengue was defined as an overnight inpatient admission coded as dengue and served as the index date, with the incidence calculated per million person-years. The incidence of first occurrence of complications at any time following index was calculated per 1000 person-years. Healthcare resource use from the index to one year later was summarized per-patient.

**Results:** 596 patients with hospitalized dengue were included; the hospitalized dengue incidence rate increased from 2010 until the highest in 2019 (5.8/million person-years); rates increased in 2022 after COVID-19 lockdowns. Approximately one-third of hospitalized dengue cases were aged 18–29 years, most were White or Asian, and the most common complications were gastrointestinal (gastroenteritis/colitis; 34.7/1000 person-years). Healthcare costs following hospitalized dengue cases were mostly driven by inpatient admission costs; ~20% of cases had a subsequent hospital admission (~50% were dengue-related).

**Conclusions:** Increasing incidence of dengue cases in England has followed global trends. The healthcare burden of dengue which results in a hospital admission in England suggests targeted public health strategies are needed, particularly among younger travelers. Additionally, improvements in general practitioners' reporting of suspected dengue cases are warranted.