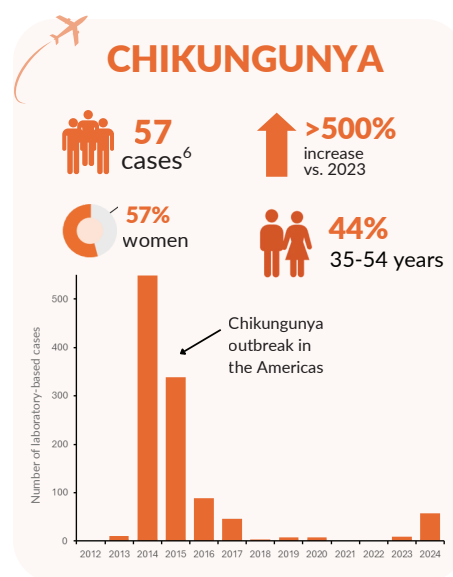
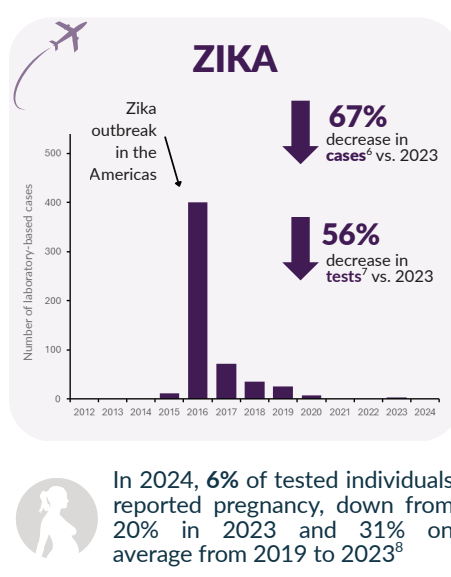
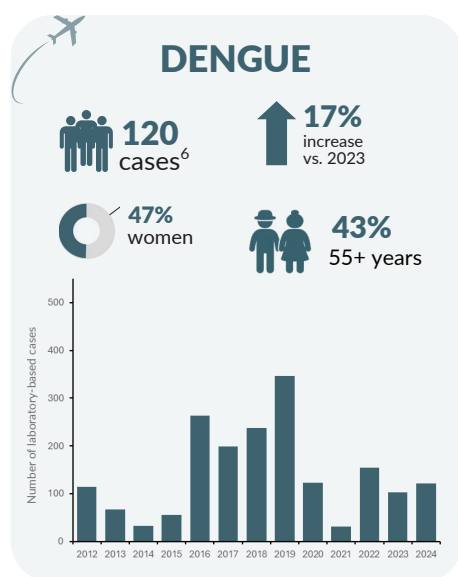




Travel-related dengue, Zika and chikungunya in Canada, 2024

Update to results from a feasibility pilot study on laboratory-based surveillance

- Dengue, Zika and chikungunya are vector-borne diseases (VBD) spread by mosquitoes that people living in Canada may encounter during travel abroad¹. These diseases are not currently endemic in Canada and are not reportable and/or nationally notifiable; yet hundreds of travelers returning from endemic regions are diagnosed in Canada each year^{2,3}.
- Laboratory-based surveillance uses routine laboratory requisition and testing data to identify and monitor disease activity. The Retro 3 feasibility pilot⁴ applied this approach to retrospectively analyze travel-related dengue, Zika, and chikungunya in Canada from 2012 to 2023³, now updated through 2024. Results reflect testing conducted at the National Microbiology Laboratory (NML) only, including confirmatory serology for all provinces and territories and molecular testing for all except British Columbia, Alberta, Ontario and Québec, and underestimate the total disease burden⁵.



The Latin America and Caribbean region⁹ was the top travel destination linked with laboratory-based cases of dengue and chikungunya in 2024

- A total of 120 dengue, 1 Zika and 57 chikungunya laboratory-based travel-related cases were identified among a total of 752 persons tested for these diseases at the NML in 2024¹⁰.
- Disease patterns closely reflected global trends and those observed in countries of travel destination.
- Dengue cases in 2024 had higher proportions aged 55+ (43% vs. 20% average in 2019–2023) and men (53% vs. 31%). Most chikungunya cases in 2024 were aged 35–54 (44%) and women (57%); prior years had few cases for comparison.
- No dengue or chikungunya laboratory-based cases among individuals with reported pregnancy in 2024, compared to 28% on average for dengue and only 1 case for chikungunya from 2019 to 2023⁸.



In 2024, results from a pilot laboratory-based surveillance study revealed a marked increase in identified laboratory-based travel-related cases of dengue and chikungunya. Laboratory data can be leveraged for epidemiological analyses, offering timely insights to support surveillance of evolving trends and inform public health response.