COUNTRY SITUATIONAL ANALYSIS

Guyana is located in the northeast of South America. Guyana has been free of yellow fever since 1968, thanks to vaccination programs, and the country has not been known to have any sylvatic transmission of yellow fever since. Vaccination coverage in childhood remains over 90%.

Since the reintroduction of the *Aedes aegypti* mosquito, dengue has become a major public health problem and has progressively increased in incidence and geographical spread. In addition, two other arboviruses were introduced during the last decade: chikungunya and zika. Their dramatic spread and morbidity highlight the capacity of these viruses to create public health concerns.

ECOLOGICAL FACTORS AND CLIMATE

Guyana has an extensive tropical rainforest ecosystem; this includes large areas of evergreen mountain forest, swampy savannah in the highlands, and sandy hills. The forest area is 94% of the land cover, with 6% used for agricultural activities. Agriculture and natural resources such as forestry, fishing, and mining provide economic activity in Guyana.

VECTOR DISTRIBUTION AND INCIDENCE

High vector infestation levels were found in enomological surveys.\(^3\)

EPIDEMIOLOGY

Guyana has been free of yellow fever since 1968. The entire territory is considered endemic, with regional disparities in immunization in hard-to-reach populations and the potential influx of migratory movements from border countries with active transmission (Brazil, Suriname, Venezuela [Bolivarian Republic of]).

### DEMOGRAPHICS\(^2\)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>750,000</td>
</tr>
<tr>
<td>Annual population growth rate</td>
<td>0.4%</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>72 years (female); 67 years (male)</td>
</tr>
<tr>
<td>Percentage of population living in urban dwellings</td>
<td>27%</td>
</tr>
<tr>
<td>Percentage of urban population living in slums</td>
<td>31%</td>
</tr>
</tbody>
</table>

---

**Endemic areas**

The entire territory is endemic.

**PAST OUTBREAKS**

Only isolated cases since 1960. Last human case occurred in 1968.

**Trend of past outbreaks**

Last reported cases occurred in 1962 (2 cases) and 1968 (1 case), related to sylvatic acquisition.

**ARBOVIRAL ACTIVITY**

**Dengue**  Dengue outbreaks started in Guyana in 1998. Since then, occurrence persisted over the years, with co-circulation of serotypes. Guyana reported 10,561 cases during 1998–2021. Some studies suggest a significant under-reporting of dengue and that surveillance should be strengthened.

**Chikungunya**  Chikungunya emerged in Guyana in 2014, with a second epidemic wave in 2015, and a reduced number of case incidence in 2016. During 2014–2016, Guyana reported to the Pan American Health Organization (PAHO) over 27,690 cases of chikungunya.

**Zika**  Zika cases emerged in Guyana during late 2015, with 34 confirmed cases between 2015 and 2016, and 3 confirmed cases of congenital syndrome associated with the zika virus.

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## YELLOW FEVER VACCINATION COVERAGE

### Routine immunization in childhood

<table>
<thead>
<tr>
<th>Yellow fever vaccine introduced</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>Nationwide</td>
</tr>
<tr>
<td>Year of introduction</td>
<td>2000</td>
</tr>
<tr>
<td>Age vaccine is administered (months)</td>
<td>12</td>
</tr>
<tr>
<td>Vaccine schedule</td>
<td>Single dose</td>
</tr>
<tr>
<td>Integration with first doses of measles, mumps, and rubella vaccine (MMR-1)</td>
<td>Yes</td>
</tr>
<tr>
<td>Gap MMR1/yellow fever vaccine to monitor program</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Vaccination campaigns

- Catch-up campaigns implemented during the last 20 years: Yes
- Preventive mass vaccination campaigns implemented during the last 20 years: Yes
- In 1999, a nationwide vaccination campaign for residents aged 1–59 years achieved 99% coverage. However, disparities in the regional coverage, particularly within the hinterland regions where the rugged terrain makes access difficult as well as the nomadic behavior of residents in these areas, make tracing difficult. From 2015 to 2017, mass door-to-door immunization campaigns targeted the adult population and travelers to at-risk countries.
- Reactive vaccination campaigns implemented during the last 20 years: No
- Guyana offers yellow fever vaccination to travelers departing to at-risk countries: Yes
- Vaccination in internal travelers (mobile population to high-risk areas in the country): Yes
- Registration system to record vaccination data: Nominal immunization registry system on paper

### Vaccine program funding

- Sources of financing: Government
- Gaps in funding during the past 5 years: No
- Does the country require financial support?: Yes

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## INTERNATIONAL HEALTH REGULATIONS

<table>
<thead>
<tr>
<th>Does the country request proof of vaccination against yellow fever at points of entry?</th>
<th>Yes</th>
</tr>
</thead>
</table>

### LABORATORY DIAGNOSTIC CAPACITY

<table>
<thead>
<tr>
<th>Member of Arbovirus Diagnosis Laboratory Network of the Americas</th>
<th>Yes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>National Reference Laboratory</th>
<th>Via CARPHA (The Caribbean Public health Agency)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Report to PAHO</th>
<th>Yes</th>
</tr>
</thead>
</table>

**SURVEILLANCE**

<table>
<thead>
<tr>
<th>National guidelines for surveillance</th>
<th>Yes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Type of surveillance for human cases</th>
<th>Syndromic-case based</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Type of surveillance for nonhuman primates</th>
<th>Passive</th>
</tr>
</thead>
</table>

**TESTING CAPACITY FOR YELLOW FEVER:**

- Entomological surveillance: Yes, but limited
- Entomo-virologic surveillance: No
- Reactive case investigation: No data
- RT-PCR blood specimens: Yes
- RT-PCR tissue specimens: No
- RT-PCR wild type virus versus vaccine: No
- Immunohistochemistry: No
- Virus isolation: Yes
- External quality assessment compliance: No

**YELLOW FEVER CONTROL STRATEGIES**

- Multiannual immunization plan: Yes
- Risk assessment methodology: Yes
- Vector control activities: Yes
- Diagnosis: Yes
- Surveillance: Yes
- Request for proof of yellow fever vaccine at points of entry: Yes

### POPULATION MOVEMENTS

Guyana shares with Venezuela (Bolivarian Republic of) a long history of border conflicts. In recent years, a migrant movement from Venezuela (Bolivarian Republic of) broke through the border. With funding support from the United Nations Central Emergency Response Fund (UNCERF), Guyana’s government provides help to over 3000 refugees and migrants from Venezuela (Bolivarian Republic of) who are considered in a vulnerable situation.

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