Travel & Endemic Newsletter

December 2022

Emerging Infections

Japanese Encephalitis Emergence in Australia

In Australia, Japanese encephalitis virus circulated in tropical north Queensland between 1995 and 2005. In 2022, a dramatic range expansion across the southern states has resulted in 30 confirmed human cases and 6 deaths.
The 2022 outbreak of Japanese encephalitis (JE) in Australia reflects an expansion of the previous range of JE virus (JEV) in this country and is now epidemiologically linked with piggeries across multiple territories.
Environmental conditions, such as atypical rainfall during the warm summer months, along with the proliferation of competent mosquito vectors (Culex annulirostris) and the distribution of compatible avian species are implicated.
Based on data limitations that include limited information from publicly available sources, a risk model is suggested, which estimates that approximately 3% of the Australian human population is at risk for JE. The situation is worrisome and may represent the beginning Of JEV endemicity in Australia; additional surveillance and risk assessment are warranted and interventions may be required.

Link

Current distribution of Japanese encephalitis virus (JEV) in Australia and the human population at risk. A, Distribution of piggeries (pink circles), locations of JEV-exposed or -infected piggeries (red circles), and places associated with human JEV cases (blue triangles) in 2022. The map also shows JEV distribution in relation to elevation and the presence of the Great Dividing Range (shaded in gray). B, Human population at risk, assuming that all piggeries can be infected and that mosquitoes have considerable dispersal potential

Dengue

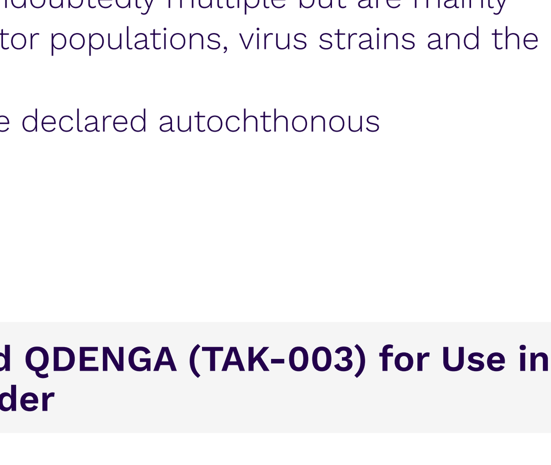
Dengue worldwide

In 2022, and as of 23 November, 3 643 763 cases and 3 380 deaths have been reported. The majority of cases have been reported from Brazil (2 182 229), Vietnam (303 637), Philippines (187 560), India (110 473) and Indonesia (94 355). The majority of deaths have been reported from Brazil (929), Indonesia (853), Philippines (613), Bangladesh (258) and Vietnam (112).

Link

Autochthonous dengue in mainland France, 2022: geographical extension and incidence increase separator

In 2022, the situation regarding DENV transmission in mainland France appears to be exceptional both in terms of number of transmission events and number of autochthonous cases. From 1 May to 21 October 2022, 217 imported cases of dengue were identified in mainland France. The majority of cases were imported from Cuba (n = 71), Ivory Coast (n = 16) and Mexico (n = 14).
By 21 October 2022, the surveillance had identified 65 autochthonous cases of dengue fever, across nine transmission events.
The drivers of arbovirus transmission are undoubtedly multiple but are mainly influenced by the interactions between vector populations, virus strains and the global environment.
France is the only European country to have declared autochthonous dengue cases this year.



Distribution of arbovirus autochthonous events in mainland France, 2010–2022

Link

The European Commission Approved QDENGA (TAK-003) for Use in Individuals Four Years of Age and Older

Approval from the EC was supported by results across 19 Phase 1, 2 and 3 trials with more than 28,000 children and adults, including four and a half years of follow-up data from the global, pivotal Phase 3 Tetravalent Immunization against Dengue Efficacy Study (TIDES) trial. The TIDES trial met its primary endpoint of overall vaccine efficacy (VE) by preventing 80.2% of symptomatic dengue cases 12 months after vaccination. In addition, TAK-003 met its key secondary endpoint by preventing 90.4% of hospitalizations 18 months after vaccination. Efficacy varied by serotype (DENV-1 – 4). The TIDES exploratory analyses showed that throughout the 4.5-year study follow-up, TAK-003 prevented 84% of hospitalized dengue cases and 61% of symptomatic dengue cases in the overall population, including both seropositive and seronegative individuals. TAK-003 has been generally well tolerated, with no evidence of disease enhancement in vaccine recipients, and no important safety risks have been identified, to date.

Link

MPOX

WHO recommends new name for monkeypox disease

Following a series of consultations with global experts, WHO recommends the following:

- Adoption of the new synonym mpox in English for the disease.
- Mpox will become a preferred term, replacing monkeypox, after a transition period of one year. This serves to mitigate the concerns raised by experts about confusion caused by a name change in the midst of a global outbreak. It also gives time to complete the ICD update process and to update WHO publications.
- The synonym mpox will be included in the ICD-10 online in the coming days. It will be a part of the official 2023 release of ICD-11, which is the current global standard for health data, clinical documentation and statistical aggregation.
- The term "monkeypox" will remain a searchable term in ICD, to match historic information.

Link

Ebola

Ebola outbreak in Uganda

On 20 September 2022, health authorities in Uganda declared an outbreak of Ebola virus disease (EVD) caused by Sudan ebolavirus (SUDV) in Mubende District, Central Uganda. There are six species of Ebola virus, four of which are known to have caused disease in humans. Outbreaks of EVD are a known risk for Uganda, and this is the fifth Sudan ebolavirus outbreak reported in the country, the last in 2012. Outbreaks have been reported in 9 districts (Mubende, Kyegegwa, Kassanda, Kagadi, Bunyangabu, Kampala, Wakiso, Masaka City, Jinja). Rapid Response Teams were deployed to support outbreak response activities, including investigation of the unexplained deaths and contact tracing.

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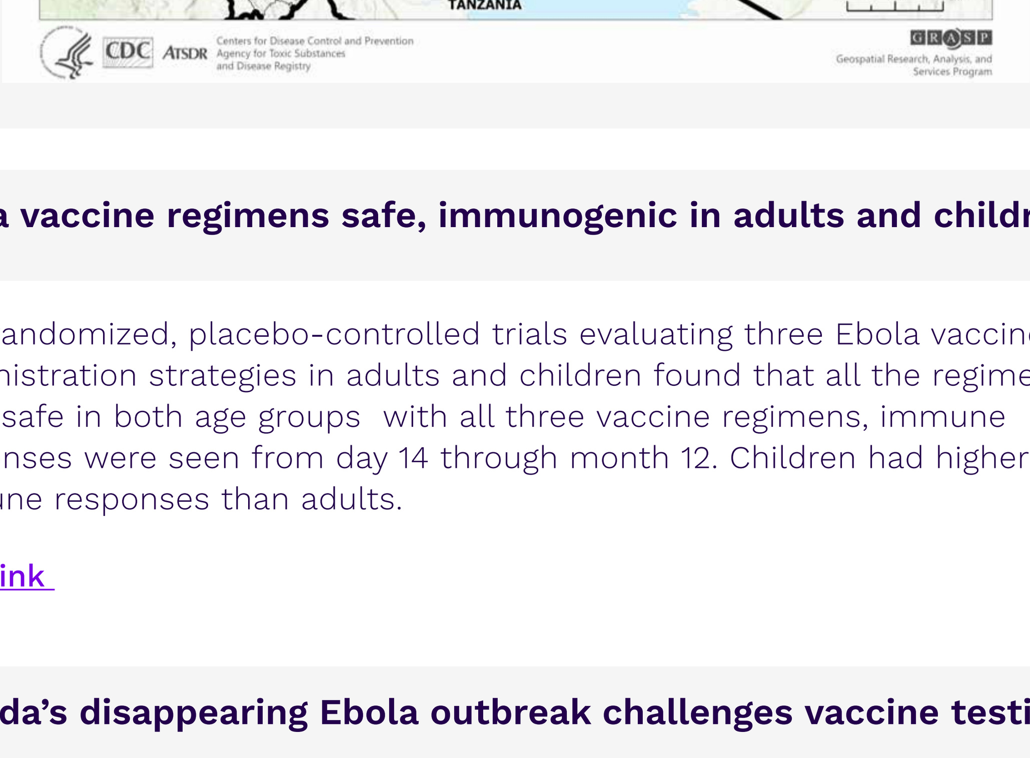


Ebola vaccine regimens safe, immunogenic in adults and children

Two randomized, placebo-controlled trials evaluating three Ebola vaccine administration strategies in adults and children found that all the regimens were safe in both age groups with all three vaccine regimens, immune responses were seen from day 14 through month 12. Children had higher immune responses than adults.

Link

Uganda's disappearing Ebola outbreak challenges vaccine testing

Uganda announced uplifting news about the Ebola outbreak that surfaced there in mid-September: The last known patient had recovered and been discharged from a hospital. Health officials hope that signals the spread of the virus has slowed dramatically, if not stopped altogether. Yet the aggressive containment efforts that led to the waning of the outbreak also means a quickly arranged trial of experimental ebolavirus vaccines faces formidable hurdles. The goal of the so-called ring trial is to test the efficacy of the vaccines by giving them to contacts of known cases. But the number of potential participants is dwindling fast.

Researchers had hoped for a chance to test new Ebola vaccines. A vaccine has been approved since 2019 for the Zaire ebolavirus, which has caused multiple outbreaks in several countries, including a widespread epidemic in West Africa that ran from 2013 to 2016. But monkey studies suggest that vaccine will not work against the genetically distinct Sudan ebolavirus behind this Uganda outbreak. When the new Ebola cases surfaced, several vaccines for the Sudan ebolavirus were in development, and Ugandan health officials on 2 December approved testing three candidates.

Link

The three experimental vaccines that will be tested build off of existing vaccine experience. One is being produced by the not-for-profit group IAVI and uses the same vaccine platform as Merck's Ebola Zaire vaccine, Ervebo; It uses a livestock virus known as vesicular stomatitis virus that has been modified to carry a key protein from the Ebola Sudan virus. The two other vaccines — one is being developed by the Sabin Vaccine Institute, a nonprofit, while the other is being developed by the University of Oxford's Jenner Institute — use adenoviruses that normally infect chimpanzees to introduce the immune system to a surface protein from Ebola Sudan viruses. The Jenner Institute used the same vaccine platform when it designed AstraZeneca's Covid-19 vaccine. Though the Ugandan outbreak appeared to be expanding rapidly a few weeks ago, the flow of new cases has slowed of late, creating questions about whether the outbreak could be brought under control before the clinical trial can generate answers.

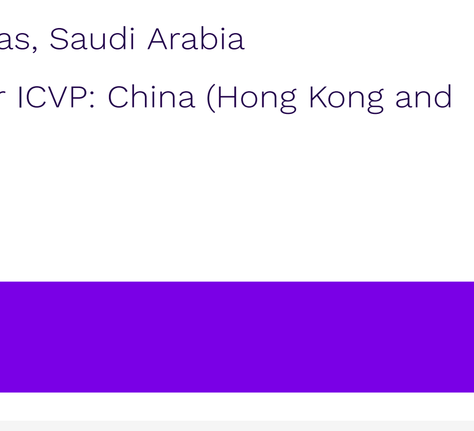
Link

Yellow fever

Yellow fever: updated country certificate requirements, 2022

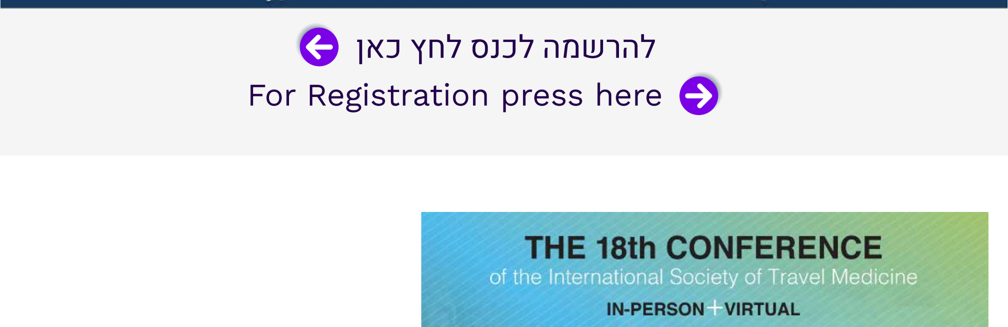
The World Health Organization (WHO) have recently published updates to the country yellow fever recommendations and requirements for an International Certificate of Vaccination or Prophylaxis (ICVP) . Link

- Key updates include:
- New requirement for yellow fever vaccine certification (ICVP): Djibouti, Philippines, Qatar
- Removal of requirement for yellow fever ICVP: Belize, Iraq, Jordan, Somalia,
- Sudan, Trinidad and Tobago, Uruguay
- Addition or removal of transit information: Honduras, Pakistan, Paraguay
- Changes to age requirement for ICVP: Honduras, Saudi Arabia
- Other changes to requirement for yellow fever ICVP: China (Hong Kong and Macao), Egypt, Honduras and Paraguay.



Example completed ICVP for yellow fever vaccination

Upcoming Congresses



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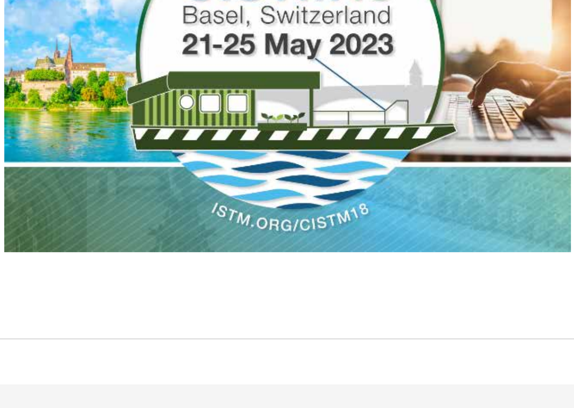

HAPPY NEW YEAR 2023

Contact | lital.hertz@sanofi.com

Scientific Editor | Prof. Eli Schwartz