Dengue at higher-altitudes: Nepal struggles to control a Dengue outbreak

Emerging Infections

Dengue cases have been recorded in 75 out of 77 districts throughout the

country, including remote hilly and mountainous regions with the

Kathmandu valley under the highest pressure, with the country recording over 17,500 infections and 21 related deaths in the past few months. Both Aedes aegypti and Aedes albopictus

mosquitoes have been found in the Valley, contrary to the assumption that Aedes aegypti virus could continue until November.

could be responsible for the ongoing outbreak. Experts warn that the ongoing spread of the <u>Link</u> <u>Link</u>

France through September:



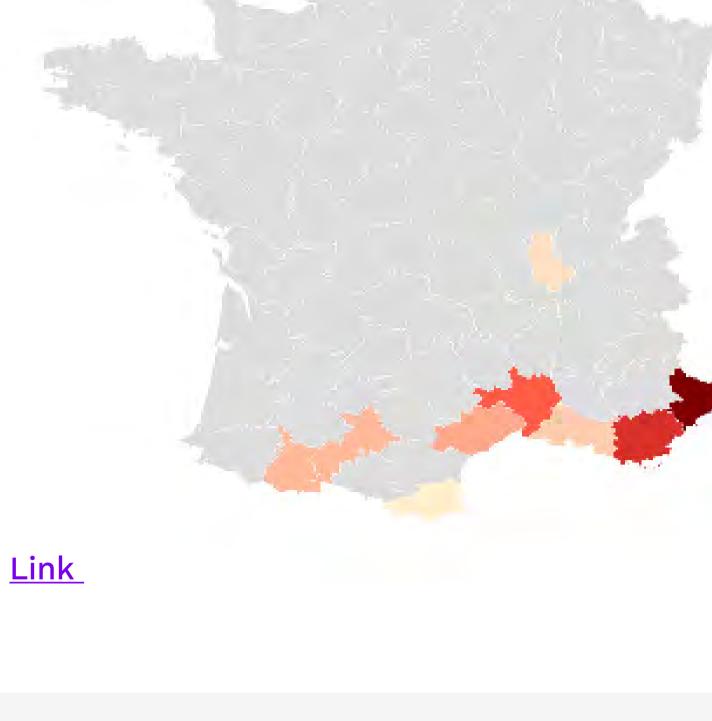
Mosquito fogging is done to prevent a

dengue outbreak in Kathmandu

Health authorities have reported elevated dengue fever activity in the country's south, with 47 cases reported between May 1-Sept. 20. since July, there have been nearly 40 indigenous dengue infections and

Dengue in Europe: Local Dengue Fever cases reported in southern

the French health authorities have warned of more cases to come.



Cases of autochthonous dengue infections

identified since 2010 in metropolitan

France, as of September 20, 2022

Re-emergence of Zika virus in travellers to Thailand:

—— Thailand for a median of 15 days between Mar 2022 and Jun 2022. Symptoms commenced a median of 8 days (range 6-21 days) after arrival in

travelers reported fever, and all reported a maculopapular rash. The diagnosis of ZIKV was made based on detection of ZIKV RNA in serum (n = 2), urine (n = 1), and in one case documented seroconversion. These ZIKV infections in returning travellers indicate ongoing transmission of ZIKV in popular tourist areas in Thailand. Given that only 20% to 50% of ZIKV infections are thought to be symptomatic, it is likely that there have been many more infections, both in travellers and in the Thai population. <u>Link</u> Uganda declares first Sudan ebolavirus outbreak in a decade

Authorities in Uganda were investigating six "suspicious" deaths reported

in the Mubende district this month, when a sample, from a 24-year-old

Thailand. All presented to a post-travel clinic (UK, Israel, Germany), Most (4/5)

GeoSentinel highlight 5 cases of recent Zika virus infection in returning

travellers from Thailand. All travelers were tourists who had travelled to

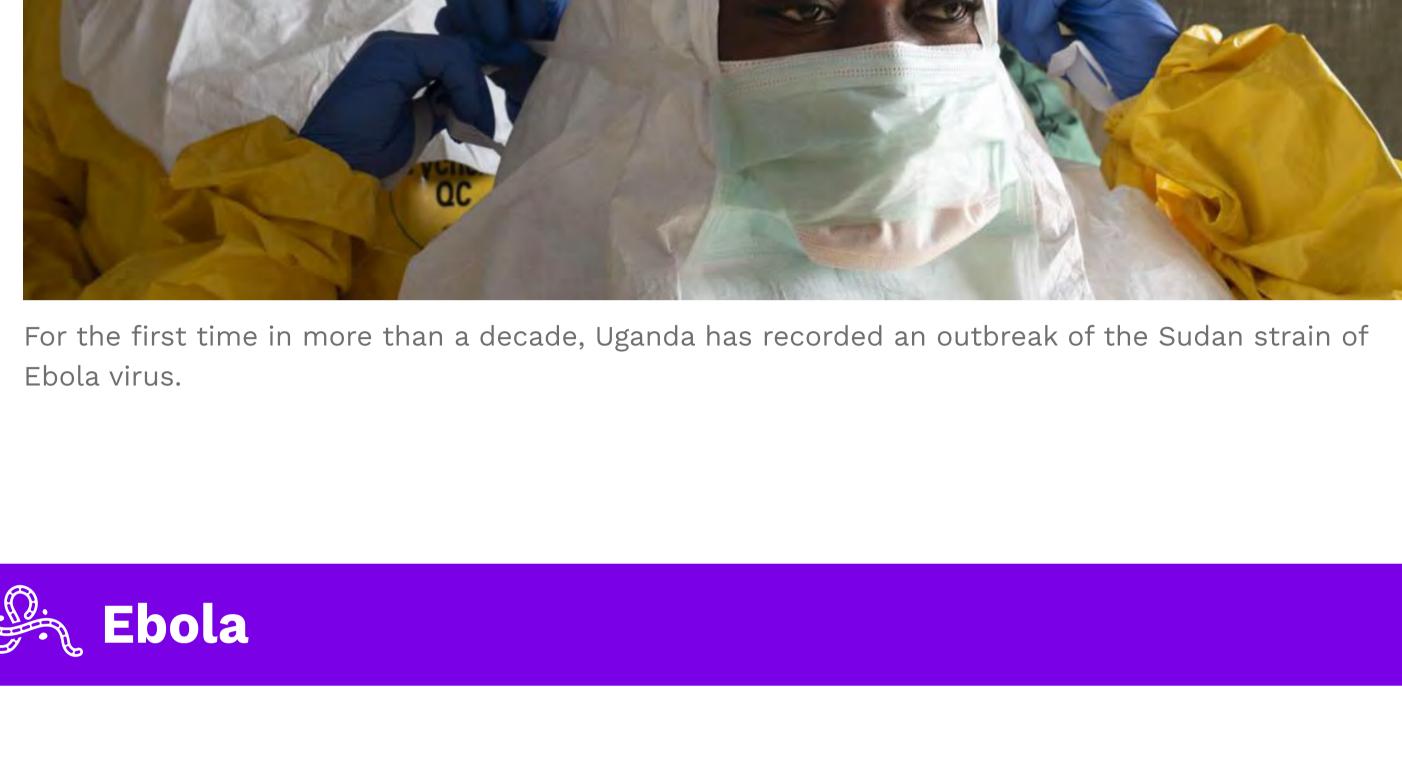
<u>Link</u>

<u>Link</u> On 20 September 2022, the health authorities in Uganda declared an outbreak of

Ebola disease caused by Sudan virus (SUDV).

man who has since died, tested positive for the virus.

As of 25 September 2022, a cumulative number of 18 confirmed and 18 probable cases have been reported, including 23 deaths, of which five were among confirmed cases (CFR among confirmed cases 28%). This is the first Ebola disease outbreak caused by Sudan virus (SUDV) in Uganda since 2012.



75% of Ebola survivors reported persistent symptoms 1 year after infection

Symptoms of headache, fatigue, joint pain, muscle pain, hearing loss, visual loss,

decline over time, more than half continue to report symptoms up to 5 years after

numbness of hands or feet were longitudinally assessed among participants in a Liberian Ebola Survivors Cohort study. The study on Ebola survivors showed that 75% have persistent symptoms 1 year after infection, and while these symptoms

infection.

Link to publication

Malaria Monoclonal Antibody Highly Safe and Effective Against Malaria

trial that assess the safety and pharmacokinetics of L9LS, a next-generation

antimalarial monoclonal antibody, and its protective efficacy against controlled

human malaria infection in healthy adults who had never had malaria or received

a vaccine for malaria. In this small trial, L9LS administered intravenously or

subcutaneously protected recipients against malaria after controlled infection,

One injection of a candidate monoclonal antibody (mAb) known as L9LS was found to be safe and highly protective in U.S. adults exposed to the malaria parasite, according to results from a National Institutes of Health Phase 1 clinical

Malaria

without evident safety concerns.

Link to publication Chemoprophylaxis Delays Symptom Onset in Travelers Infected With

60-day or greater delay in symptom onset among patients infected with P vivax with similar results noted among those infected with P ovale. According to the researchers, "this work suggests that using chemoprophylaxis, especially doxycycline, mefloquine, chloroquine or chloroquine-proguanil, may delay the onset of symptoms" in patients with P vivax or P ovale malaria." Link to publication

In 2013, the principal advisory group to the WHO for vaccines and immunization

(Strategic Advisory Group of Experts on Immunization) concluded that YF booster

doses are not needed for lifelong protection against YF in immunocompetent

persons. This new systematic literature review and meta-analysis on the duration

of protection after 1 and ≥2 vaccine doses focused only on high-quality

evidence—excluding retrospective studies, case reports, and case series—and

responses wane. Young children (age less than 2 years) experience particularly

• Age and immune status at time of vaccination together with YF risk must be

steep declines in YF vaccine antibody responses by age 4-5 years.

balanced with the potential adverse consequences of revaccination.

Duration of Protection After Vaccination Against Yellow Fever -

Chemoprophylaxis use was found to be associated with delayed symptom onset

in patients who developed Plasmodium vivax or P ovale malaria infections after

traveling to malaria-endemic countries, according to results of a study. In the

multivariate analysis, chemoprophylaxis use was significantly associated with a

• Healthy adults vaccinated with a single dose of yellow fever (YF) vaccine generally have high levels of neutralizing antibodies (nAbs) for up to 10 years, after which these levels wane, potentially increasing the risk for secondary vaccine failures. Both age at primary vaccination and immune status impact how vaccine

by

host-seeking

the

acetophenone

cycle

control.

of

reducing

providing a strategy of arboviral

The study shows that flavivirus

infection increases the production

commensal bacteria on the host

skin, enhancing viral transmission.

Link to publication

by

mosquito

activity,

Link to publication Mosquito-transmitted flaviviruses can manipulate skin microbiota host

to produce a scent that attracts mosquitoes:

Mosquito-Borne Diseases

carefully indexed risk of bias in contributing studies.

Systematic Review and Meta-analysis

The conclusions from this new work:

stimulate mosquito olfaction for Female mosquitoes host-seeking attractiveness. Flavivirus infection the promotes expansion acetophenone-producing skin bacteria. the dietary administration of isotretinion to flavivirus-infected Acetophenone from the skin microbiota of flavivirus-infected hosts animals interrupted flavivirus life promotes mosquito attractiveness

attractiveness

Healthy individual

Acetophenone

RELMa +

RELMa

Flavivirus-infected individual

Skin microbiota

Isotretinoin oral gavage

mosquito

attractant

resident

thus

Acetophenone, a volatile compound that is predominantly produced by the skin

microbiota, was enriched in the volatiles from the infected hosts to potently

BioFire Global Fever Panel for the identification of malaria, leptospirosis, chikungunya, and dengue: cross-sectional diagnostic accuracy study In this evaluation of the BioFire GF Panel in nine countries, mostly at tropical and subtropical sites, 35% of the specimens tested had at least one of the six analytes detected. The GF Panel showed sensitive (PPA ≥92·7%) and specific (NPA ≥99·2%) detection of two viral infections (dengue, chikungunya), leptospirosis, and malaria (Plasmodium species, and P falciparum and P vivax/ovale specifically). This 1 h sample-to-answer, molecular device can detect common causative agents of acute febrile illness with excellent positive percent agreement and negative percent agreement directly in whole blood. Link to article

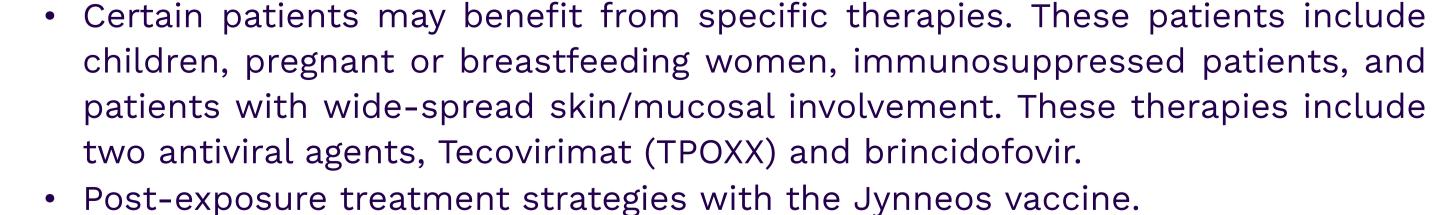
Monkeypox

management to consider.

not well-established.

Among other points in the article:

Monkeypox 2022: Gearing Up for Another Potential Public Health Crisis Mayo clinic experts have published a special article in Mayo Clinic Proceedings to provide clinicians with a focused overview of the viral infection, establishing strategies for infection prevention and control and a summary of clinical



Link to article

Monkeypox linked to encephalitis, confusion, seizures Preliminary evidence suggests there is an association between monkeypox and

confusion (2.4%) and encephalitis (2%) in patients with monkeypox.

be

high

 Other reported symptoms Pooled prevalence of neuropsychiatric included headaches, anxiety, presentations in patients with monkeypox: depression, myalgia and though fatigue, their

seizures

encephalitis

confusion

neuropsychiatric complications, including encephalitis, confusion and seizures. In

a review of 19 studies dating back to 2003, researchers identified seizures (2.7%),

• The exact source of infection as it pertains to the current outbreak, the virus

Most patients with monkeypox infections have a self-limited course and recover

incubation period and the transmissibility as compared to past outbreaks are

with basic supportive care. Clinicians should be alert to diagnose and manage

co-existing sexually transmitted infections and secondary bacterial infections.

Link to study publication

prevalence could not

calculated due

heterogeneity.

to

MAT-IL-2200429