

Dengue fever racing around the world: WHO



A patient talks on her mobile phone under a mosquito net at a dengue fever ward in Villa Elisa, Paraguay. The health ministry declared an epidemic alert for the entire country after some 400 new cases of dengue were reported in 24 hours, totalling more than 6,000 confirmed cases and 70 deaths in the past three months.



A female *Aedes aegypti* mosquito, distinguished by the white bands on its legs, sucks blood from a human host. The species is known for spreading dengue and yellow fevers. (Centers for Disease Control and Prevention / THE CANADIAN PRESS)



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By **Jennifer Yang** Global Health Reporter

Dengue fever is now the fastest spreading insect-borne virus in the world and has reached “epidemic potential,” the World Health Organization said Wednesday.

Indeed, Dr. Scott Halstead, a leading dengue expert who has studied the virus for more than 50 years, goes even further: he believes the pandemic has already arrived.

“We’re in it. We’re in the pandemic,” said Halstead, a senior scientific adviser to the [Dengue Vaccine Initiative](#). “We have more dengue in more countries, and in more places and involving more people, than any other time in history. It’s reached a huge geographic expanse and now we’re stuck with it.”

While Halstead and the WHO may differ on the precise definition of what constitutes a “pandemic,” they both agree dengue has reached alarming levels since “breakbone fever”

began to spread just after the Second World War.

In 1955, only three countries reported dengue cases, according to the WHO, which released its second report on neglected tropical diseases Wednesday. Today, dengue fever is found in over 125 countries and nearly half the world's population is now at risk of infection.

Currently, there are several dengue outbreaks. One on Portugal's Madeira Island marks Europe's first sustained transmission of the virus in nine decades. Paraguay is in the midst of a nationwide epidemic. There have been more than 6,000 confirmed cases and 70 deaths in the past three months, according to Reuters.

"In 2012, dengue ranked as the fastest spreading vector-borne viral disease ... registering a 30-fold increase in disease incidence over the past 50 years," the UN health agency said in a news release. "The world needs to change its reactive approach and implement sustainable preventive measures."

Dengue is transmitted by mosquitos — primarily the female *Aedes aegypti*, which also spreads yellow fever — and typically causes flu-like symptoms, headache and skin rash. The disease is incredibly painful and debilitating.

"I've met many, many adults who have had dengue, mostly in Asia, and what they say is almost the same words: 'That is the worst disease I've ever had,' " he said.

The disease can develop in a severe form known as dengue hemorrhagic fever or dengue shock syndrome, which can be fatal. About 2.5 per cent of people affected die, according to the WHO.

There is no treatment for severe dengue other than hospitalization and fluid management, which can make dengue an expensive disease to treat, Halstead said.

What makes finding a dengue vaccine particularly challenging is that there are four strains of the virus. An infected person will develop lifelong immunity to one particular strain, but he or she is at increased risk of getting severe dengue if infected later with one of the three other strains.

According to Dr. Raman Velayudhan, a WHO scientist specializing in neglected tropical diseases, two main factors have contributed to dengue's rapid rise: urbanization and the spread of mosquitoes, aided by spreading transportation networks.

"The mosquitoes are spreading all over silently," Velayudhan said. "They are there in many

places and just waiting for an infected human to come by.”

Both he and Halstead agree it is unlikely that the tropical disease will ever become established in Canada — but that doesn’t mean Canadians shouldn’t worry about it.

According to the Public Health Agency of Canada, about 200 to 300 Canadian tourists get dengue every year. A nasty bout of breakbone fever is just a plane ride away.

“I don’t think there’s any tropical country you can visit that doesn’t have dengue,” Halstead said. “These are all global problems that have an enormous impact on the health and the financial stability and prosperity of countries in the world. Dengue is a drain.”