Clinical Infectious Diseases

NEWS

Donald Kaye, Section Editor

The Americas Becomes First Region to Eliminate Measles

27 September 2016 (Reuters [Sebastien Malo])—The Americas has become the first region in the world to be free of measles, following a 22-year vaccination drive against the disease which continues to infect tens of thousands of people globally, the Pan American Health Organization (PAHO) said.

The milestone was confirmed after no cases of the highly contagious disease originating in the Americas were recorded in at least 3 years, the PAHO said. Globally, measles remains a leading cause of death among young children in the developing world.

About 250 000 people were infected with measles last year, most in Africa and Asia, the PAHO said. The last outbreak of measles that originated in the Americas occurred in Venezuela in 2002, the PAHO said. But the region was only declared free of measles this year.

Factors such as conflicts that made it difficult to access some communities slowed down the verification process, said Merceline Dahl-Regis, chair of a committee of experts responsible for verifying the elimination of measles and other diseases in the Americas.

Justin Lessler, an epidemiology expert at the Johns Hopkins Bloomberg School of Public Health in Baltimore, said imported cases of measles—which remains widespread in other parts of the world—could still lead to small outbreaks in the Americas.

"People still need to be vaccinated to maintain elimination," he said.

Before a separate, worldwide vaccination drive against measles began in the 1980s, the disease caused 2.6 million deaths a year worldwide—12 000 of them in the Americas, according the PAHO.

Editorial comment. This announcement is a double-edged sword. We will be "free of measles" only as long as we maintain high immunization rates, as there will always be imported cases until measles is eradicated worldwide. Being "free of measles" will give the anti-vaccination communities ammunition to advance their cause.

Adult, Larval Insecticides Pack Deadly Punch to Mosquitoes, Zika: United States

23 September 2016 (Reuters [Ransdell Pierson and Richard Chang])—The unprecedented aerial spraying of products that kill both adult mosquitoes as well as their larvae delivered a "1–2 punch" that has stopped direct transmission of the Zika virus in the Wynwood section of Miami, US and Florida health officials said.

The trendy Miami neighborhood in June became the first neighborhood in the continental United States with a local outbreak of Zika.

The US Centers for Disease Control and Prevention (CDC) on Monday declared Wynwood free of Zika, saying there had been no cases of infection with the virus there in the past 45 days. Even so, the federal agency urged pregnant women to consider putting off nonessential travel to the neighborhood to avoid risk of infection.

On a conference call with reporters on Friday, CDC Director Tom Frieden said infections in Wynwood appeared to stop soon after aerial applications of naled, a chemical long used in the United States to kill adult mosquitoes, and of a larvicide called Bti that is a naturally occurring bacterium.

The combination of pesticides that separately target adults and larvae of the mosquito that carries Zika, *Aedes aegypti*, was unprecedented, he said.

Editorial comment. Naled is an organophosphate. Organophosphates are highly effective against adult mosquitoes but are toxic for humans. There are strict controls to limit risk. Bti stands for *Bacillus thuringiensis* serotype *israelensis*, which produces toxins that kill mosquito larva and larva of some other insects. It is apparently safe for other species.

US CDC Issues Zika Travel Advisory For 11 Southeast Asian Countries

29 September 2016 (Reuters [Dipika Jain, Deena Beasley, and Jeffrey Dastin])—The US Centers for Disease Control and Prevention said it has issued a travel advisory urging pregnant women to postpone nonessential travel to 11 Southeast Asian countries in connection with the Zika virus.

The 11 countries are Brunei, Myanmar, Cambodia, Indonesia, Laos, Malaysia, Maldives, Philippines, Thailand, East Timor, and Vietnam.

Update: Interim Guidance for Preconception Counseling and Prevention of Sexual Transmission of Zika Virus for Persons with Possible Zika Virus Exposure

(MMWR 65:1077–81, 2016)—Based on new though limited data, the Centers for Disease Control and Prevention now recommends that all men with possible Zika virus exposure who are considering attempting conception with their partner, regardless of symptom status, wait to conceive until at least 6 months after symptom onset (if symptomatic) or last possible Zika virus exposure (if asymptomatic). Recommendations for women planning to conceive remain unchanged: women with possible Zika virus exposure are recommended to wait to conceive until at least 8 weeks

after symptom onset (if symptomatic) or last possible Zika virus exposure (if asymptomatic). Couples with possible Zika virus exposure, who are not pregnant and do not plan to become pregnant, who want to minimize their risk for sexual transmission of Zika virus should use a condom or abstain from sex for the same periods for men and women described above. Women of reproductive age who have had or anticipate future Zika virus exposure who do not want to become pregnant should use the most effective contraceptive method that can be used correctly and consistently.

Zika No Threat to Plasma-Derived Drugs, Says EU Regulator

21 September 2016 (Reuters [Ben Hirschler])—Patients who take medicines derived from blood plasma or urine are not at increased risk of catching Zika, even if the body fluids come from countries where the virus is prevalent, Europe's drugs regulator said.

Plasma-derived products are used to treat some serious blood conditions and to help fight infections, while urine-based medicines include certain hormone treatments and therapies to help break up blood clots.

The European Medicines Agency, Europe's equivalent of the US Food and Drug Administration (FDA), said its experts had assessed the risks and concluded that manufacturing processes used for such products would inactivate or remove the Zika virus. This includes the use of solvents or detergents, pasteurization, and filtration.

Health authorities are currently taking extra care with whole blood donations. Last month, the FDA recommended that all blood donations be tested for Zika in a drive to prevent transmission of the virus through the blood supply.

Vela Diagnostics Receives FDA Emergency Use Authorization for Zika Virus Molecular Assay

26 September 2016 (Vela Diagnostics Press Release)—Vela Diagnostics announced today that the *Sentosa* SA ZIKV RT-PCR Test has received Emergency Use Authorization (EUA) from the US Food and Drug Administration (FDA).

The real-time polymerase chain reaction (PCR) test by Vela Diagnostics enables the qualitative detection of RNA from Zika virus in human specimens and is available for use in laboratories in the United States that are certified under the Clinical Laboratory Improvement Amendments of 1988, 42 U.S.C. §263a, to perform high-complexity tests, or by similarly qualified non-US laboratories.

The test is authorized for use with serum, EDTA plasma, and urine (collected alongside a patient-matched serum or plasma specimen) from individuals meeting Centers for Disease Control and Prevention Zika virus clinical criteria and/or epidemiological criteria.

Authorized to run on the automated *Sentosa* SX101 real-time PCR workflow, along with the *Sentosa* SX Virus Total Nucleic Acid Kit v2.0, authorized laboratories can process 22 samples per run for rapid detection of Zika virus with a turnaround time of approximately 3 hours.

This test has not been FDA cleared or approved.

The Cost of Cheap Drugs? Toxic Indian Lake is "Superbug Hotspot"

28 September 2016 (Reuters [Zeba Siddiqui and Ben Hirschler])—A short drive from the bustling tech hub of Hyderabad, Medak is the heart of India's antibiotics manufacturing business: a district of about 2.5 million that has become one of the world's largest suppliers of cheap drugs to most markets, including the United States.

But community activists, researchers, and some drug company employees say the presence of more than 300 drug firms, combined with lax oversight and inadequate water treatment, has left lakes and rivers laced with antibiotics, making this a giant Petri dish for antimicrobial resistance.

Drugmakers in Medak, including large Indian firms Dr Reddy's Laboratories Ltd, Aurobindo Pharma Ltd, and Hetero Drugs Ltd, and US giant Mylan Inc, say they comply with local environmental rules and do not discharge effluent into waterways.

Thirteen leading drugmakers promised last week to clean up pollution from factories making antibiotics as part of a drive to fight the rise of drug-resistant superbugs, while United Nations member countries pledged for the first time to take steps to tackle the threat.

Local doctor Rao pointed to studies by scientists from Sweden's University of Gothenburg that have found very high levels of pharmaceutical pollution in and around Kazhipally lake, along with the presence of antibiotic-resistant genes.

The scientists have been publishing research on pollution in the area for nearly a decade. Their first study, in 2007, said antibiotic concentrations in effluent from a treatment plant used by drug factories were higher than would be expected in the blood of patients undergoing a course of treatment. That effluent was discharged into local lakes and rivers, they said.

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