

One Small

BITE

One Large

THREAT

Texas Hospitals Focus on Prevention and Education as Zika Threatens to Spread

By Debbie Ritenour



When you live in Texas, especially the Gulf Coast region, mosquitoes are a way of life. Sure, their incessant buzzing is annoying, and yes, their bites can itch, but they are as much a part of the Lone Star State as oil and cattle. Although it has long been known that mosquitoes transmit disease, generally speaking, they have been seen as more of a nuisance than anything else.

That may be changing quickly.

As of mid-August, there have been 108 reported cases of Zika virus disease in Texas. While most people infected with the virus have mild or no symptoms, Zika infection during pregnancy has been associated with severe birth defects. All 108 reported cases

Prevent Infection, Prevent Transmission

As Benjamin Franklin stated, “An ounce of prevention is worth a pound of cure.” And because there is no cure for Zika virus disease, which has been linked to microcephaly and Guillain-Barré syndrome, prevention is especially important.

“Prevention is always the best strategy,” said Luis Castagnini, M.D., infectious disease specialist at

The Children’s Hospital of San Antonio.



CASTAGNINI

transmitted live through the hospital’s social media channels and featured top medical experts. Discussion topics included testing methods, recommendations for women of child-bearing age, and projections for potential outbreaks in the United States.

The event was a success, according to Castagnini, who was one of the presenters.

“It was very well-received and well-attended,” he said. “We reached a lot of people, and there has been continued interest.”

Castagnini notes that the community has to get involved and be active participants in prevention efforts. From eliminating standing water in backyards to keeping gutters clear of debris, the community must work together to contain the mosquito population.

“If you decrease the mosquito burden

“No one was surprised that the first [Zika] outbreak in the United States was in Miami-Dade County, and no one will be surprised if the next one is in the Gulf Coast region.”

- Kjersti Aagaard, M.D., Ph.D.

have been related to travel abroad to areas with active Zika transmission. There have been no reported cases of Zika virus disease transmitted by mosquitoes in Texas – yet. But considering that Zika is primarily transmitted through the bite of an infected *Aedes* mosquito, which is found in many parts of Texas, most experts think it’s just a matter of time before the disease begins spreading locally.

The Texas health care community knows there’s no time to waste. The Texas Department of State Health Services has committed more than \$6 million in state and federal funds to disease surveillance, expanded testing capabilities, and public education and awareness campaigns. Texas Medicaid has announced it will cover the cost of mosquito repellent for eligible women between the ages of 10 and 45 or pregnant. And around the state, hospitals are taking action to ensure they are prepared in case Zika starts to spread in their communities.

“Preventing transmission through mosquito control is going to be key in preventing the spread of the disease.”

Last spring, when it became clear that Zika was more than the latest media buzzword, The Children’s Hospital of San Antonio formed a task force to develop a coordinated approach to the emerging public health threat. The task force includes representatives from a variety of departments, including infectious diseases, neonatology, neurology, genetics, maternal-fetal medicine and the emergency department. Castagnini, who serves as chair of the task force, said the group quickly identified the need for public communication and education.

“We wanted to spread the word to the community,” Castagnini said. “We do have the vector for transmission.”

On June 15, The Children’s Hospital of San Antonio hosted a conference on Zika for members of the media, health experts and the community at large. The event was

itself, there will be low risk of spreading the disease,” he said.

If the disease does begin to spread in San Antonio, The Children’s Hospital of San Antonio is prepared. The task force worked with hospital administrators to develop a plan to ensure patients will have everything they need, from testing to counseling to follow-up care. He emphasized that because only a few laboratories in the United States are certified to test for Zika, hospitals must have strong relationships with their local health department.

“Testing is very important. It must be performed appropriately and in a timely fashion,” Castagnini said. “It’s important to have that strong relationship so there is always someone at the end of the line to discuss who to test, when to test and how to test.”

Ultimately, Castagnini noted, when it comes to Zika, prevention is and should be the focus of most efforts right now.

continued on page 19



Peter Hotez, M.D., Ph.D., dean of the Baylor College of Medicine National School of Tropical Medicine and Texas Children's Hospital endowed chair in tropical pediatrics, spoke during The Children's Hospital of San Antonio's conference on Zika in June.

“Unfortunately, there is no treatment. There is little we can do to revert the effects of Zika,” he said. “We’re focused on prevention and surveillance. Mosquitoes cannot travel a long way. We need to contain them and prevent transmission. If you prevent mosquito bites, you prevent infection.”

Partnering for the Greater Good

With 32 reported cases as of mid-August, Harris County has seen more cases of Zika than any other county in Texas. Two of those cases were infants with microcephaly, one of whom died. Many health experts believe the area is particularly vulnerable to a potential Zika outbreak.

“We’re fortunate that we have a population that is really fluid between Houston and Central and South America. It’s a wonderful thing to live in such a diverse community. But so much travel between these areas means Houston is at a heightened risk,” said Kjersti Aagaard, M.D., Ph.D., a maternal-fetal medicine specialist at Texas Children’s Pavilion for Women. Aagaard noted that the high number of travelers, the existence of the Aedes



AAGAARD

mosquito, and the hot, humid climate add up to an increased likelihood of local transmission of the Zika virus.

Aagaard and her colleagues at Texas Children’s Hospital have been preparing for such a scenario for months. In January they formed a task force to study the situation and identify solutions. The task force recommend the hospital establish a Zika clinic for pregnant women at risk for contracting the disease, the first of its kind in Texas. The clinic opened in May.

“We limited it at first to our referral provider group but then opened it up to the community at large because we were getting a lot of requests,” Aagaard said.

Through the clinic, pregnant women have access to a team of medical experts who can provide the latest testing and monitor their progress. In addition to blood, urine, amniotic fluid tests and counseling, the clinic offers a targeted diagnostic ultrasound that can be performed as early as 15 weeks into pregnancy to determine if there are any concerning developmental signs for Zika infection in a fetus. The clinic currently is open on Fridays from 8 a.m. to noon but may expand its hours as the need arises.

The response to the clinic has been very positive, Aagaard noted.

“The medical community at large has really appreciated having a dedicated place to go where doctors and nurses are aware of the minute-by-minute changes and updates

related to Zika,” she said. “The clinic is full and has been full for quite awhile now.”

The speed with which the health care community at large has responded to the potential Zika threat has impressed Aagaard.

“It’s a hard thing when a virus catches you by surprise. It’s really remarkable what has been accomplished in six months,” she said. “We went from learning about the situation and being skeptical to having developed sophisticated testing and complex risk assessments.”

Partnerships have been key to the clinic’s success. Staff work closely with Harris County Public Health, the Houston Health Department, and the Centers for Disease Control and Prevention on testing, and a number of individuals from the pathology and laboratory medicine departments at Texas Children’s Hospital have provided invaluable assistance.

“We’re very, very lucky to work hand in hand with these groups,” Aagaard said, “and we thank them for their expertise and teamwork in these trying times.”

Aagaard encourages all Texas hospitals, especially those in the Houston area, to make sure they are prepared for a Zika outbreak in their communities.

“No one was surprised that the first outbreak in the United States was in Miami-Dade County, and no one will be surprised if the next one is in the Gulf Coast region,” she said. ★