Zika Update: More Bad News, and Maybe a Little Good

By Josh Bloom — April 13, 2016

Sometimes public officials hold press conferences for no particular reason, except perhaps to get themselves on TV.

This is not one of those times. Dr. Anne Schuchat, Principal Deputy Director of the CDC, and Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases, held a press briefing Monday at the White House to provide an update on the Zika virus. The news wasn't encouraging, as demonstrated by quotes from both officials.

Schuchat: “Everything we look at with [the Zika] virus seems to be a little scarier than we initially thought.”

Fauci: “The more and more we learn, the more you get concerned about the scope of what this virus is doing.”

Fauci is not overstating matters. There are several disturbing developments, with more popping up rather often. First, although Zika originally made the news because it was linked to (and is now the known cause of) microcephaly — babies born with small heads and severe brain damage — the virus is now being implicated in other neurological conditions and eye problems, as well as premature births and stillbirths.

Worse still is that the risk to the developing fetus is not limited to the first trimester, as was initially believed. There is now evidence that this risk persists during the entire pregnancy.
As we previously reported [1], the projected range of the Aedes aegypti mosquito, although based solely an estimate from a computer model, has grown to the point where 50 cities—as far north as New York City—could be infected. And the potential area of infection may be enlarged further when a related species, Aedes albopictus, which is known to spread some of the same infections as Aedes aegypti, is factored in. Aedes albopictus can survive colder climates, so if it is shown that it can also be a carrier of the virus, the game will change.

Early estimates, which predicted that Aedes aegypti could affect 12 states, have been revised to 30 states. Although neither Dr. Fauci or Dr. Schuchat expects widespread outbreaks in the U.S., both stressed the need for readiness.

Estimate range of Aedes aegypti and Aedes albopictus. Source: CDC

Dr. Fauci reported that there was some progress on the medical front, both in vaccines, and antiviral drugs. But, there will be no quick fix. Although Dr. Fauci noted that the group had screened 62 potential drugs, and that 15 showed signs of some activity against the virus, he
cautioned "that doesn't mean they're going to turn out to be good drugs."

I can personally back this up. During the 5+ years that I ran the hepatitis C chemistry program at Wyeth, we discovered hundreds of compounds that inhibited the virus in cells, some of them quite well. But, in the end, a grand total of zero of them became drugs. We were not alone. Research in this area began around 1991, but the first approved drug didn't appear until 2011, and the first good one (Sovaldi) not until 2013 — 22 years after dozens of companies jumped in. It is a very long journey from a Petri dish to a pill.

Nor will a vaccine will be available anytime soon. Vaccine and infectious disease expert Dr. Paul Offit of the Children's Hospital of Philadelphia said "it would take years to develop a vaccine for Zika."

While information about this infection continues to trickle in, it won't be until mosquito season begins (June) until the full extent of this problem begins to unfold. Stay tuned.
