Zika: Not Much Good News So Far

By Josh Bloom — March 16, 2016

Since Zika became big news a few months ago, its story has progressed as the virus and its transmission have been studied more. Unfortunately, this problem keeps getting worse, except for the fact that thus far, all reported cases in the United States have been from people who have visited infected areas. No cases have been acquired in the U.S. directly from mosquitoes.

Here is a brief summary of what we know about Zika thus far:

- The initial suggestion that it might be linked to birth defects (microcephaly) is getting closer and closer to "proof," as more becomes known about the virus.
- Zika can be transmitted sexually.
- It has been detected in semen, urine, saliva, and (obviously) blood.
- There is now an FDA-approved test for the virus.
- The common Culex mosquito has been infected (in the lab). All cases in the wild have thus far been spread by the less common Aedes species.
- It remains unknown whether this will change. That would be much worse.
- A model that was published in the *Lancet* (see here [1]) suggested that almost half of the U.S. could be at risk during the mosquito season.

Now, some more bad news, courtesy of another *Lancet* paper [2], which not only reinforces the Zika-microcephaly link, but also gives some disturbing estimates about the frequency with which it will occur.

A study of an outbreak in French Polynesia from 2013-2014, a Zika crisis revealed that the risk of microcephaly in the fetuses of women who were infected during their first trimester of pregnancy was 1 in 100. Since the latest estimate [3] from Brazil alone is 5,000 cases of microcephaly, if we are to use the same ration this means that there must be about 500,000 infections of women who were infected early in their pregnancies. One can only guess how many people in the country are infected, but it must be in the millions, or tens of millions.

Dr. Simon Cauchemez also compared the risk of Zika birth defects with those from other known infections. It is much less prone to cause birth defects than other known viruses, such as rubella or
herpes.

However, the incidence of Zika is so much higher that it offsets at least some of this difference. The authors noted that between 1 percent and 4 percent of mothers are infected with cytomegalovirus, a member of the herpes family, and that there are only about 10 pregnant women with rubella each year in France.

More studies are underway. Perhaps some of the will bring us some good news. We could use it.