If you live in the southern US, you travel there, or you are assigned to fly to other Zika-affected countries like Brazil or Puerto Rico, the virus is on your mind these days. For most people, infection with Zika causes relatively mild symptoms, but some develop serious and lasting conditions like the autoimmune nervous system disorder Guillain-Barré. Also, Zika can cause devastating birth defects to babies infected in-utero, which matters if you are either pregnant or trying to get pregnant, or you’re the sexual partner of someone who is. Most people have read about the aerial spraying in some Miami neighborhoods and the various efforts to address pools of water where mosquitoes can breed. But what most people are unaware of is that, largely behind the scenes, more and more countries are implementing new pesticide spraying rules on aircraft to try to stop the mosquitoes that carry Zika from surviving a flight. So how can the world prevent the spread of Zika-carrying bugs without exposing more and more airline crews and passengers to pesticides onboard?

What is Aircraft Disinsection?
Aircraft disinsection is the process of spraying pesticide products in the cabin and flight deck, either prior to boarding or inflight. It is intended to prevent the transport of flying insects that carry disease or could damage crops or other plants. For example, France has long been concerned about importing malaria-carrying mosquitoes.

J. Anderson
AFA-CWA, AFL-CIO
Currently, about 50 countries require aircraft disinsection, on either selected or all flights. Most of these countries require that the crew, passengers, and cabin is sprayed, typically either at “top of descent” or after arriving at the gate, with a solution of pesticide called d-phenothrin. Some countries allow “residual treatment” instead, where the unoccupied cabin and flight deck are liberally sprayed with a solution of a related pesticide called permethrin.

Does the US currently require pesticide spraying on incoming flights?
The U.S. has not required routine spraying on incoming flights since 1979 when the Center for Disease Control and Prevention (CDC) formally recognized that the sprays can make people sick and may not even be effective. AFA has long advocated for pesticide-free cabins, keeping up the pressure by way of letters, presentations, articles, and meetings with the CDC, Congress, Department of Transportation (DOT), Environmental Protection Agency (EPA), and Federal Aviation Administration (FAA).

In 1977, AFA partnered with a passenger rights’ group and sued the US Department of Agriculture (USDA), protesting the practice of spraying DDT on some domestic flights to kill invasive beetles. In response, the USDA stopped spraying and instead relied on a plastic barrier intended to prevent the beetles from boarding. In 1985, AFA submitted comments to the EPA in favor of the agency’s proposal to disapprove pesticides for use in an occupied cabin. (The proposal passed in 1986.) Starting in 2000, AFA and our United Airlines members worked diligently to document the onboard conditions after residual spraying in Australia, which led to a formal investigation and subsequent changes to the spraying rules, including ending pesticide spray in crew bunk rooms.

Despite these victories, U.S. airlines are still subject to the spraying rules of other countries. So if an airline wants to operate a flight to Australia or Jamaica, for example, then they have to spray.

Does aircraft disinsection work?
Spraying these kinds of pesticides on aircraft is formally recommended by the World Health Organization (WHO) to prevent the spread of mosquitoes. However, there isn’t much evidence that these sprays work to prevent the spread of mosquitoes and other pests. One reason being that, over time, insects can develop resistance to pesticides. There is also evidence that exposure to the chemicals can cause ill health in humans. So, there are questionable benefits, at best, and these come at a cost, especially to crews. The number of countries that require pesticide spraying on flights shrank in 1995; unfortunately, with the recent spread of Zika virus, the number is growing again. There needs to be a better way to stop the spread of bugs on commercial flights!

Thinking outside the box...
Non-chemical means of disinsection are a smarter, safer way to prevent the transport of bugs that carry disease. Back in early 2002, a United Airlines Flight Attendant named Ken Bray called AFA for help. He had lost his career to ill health caused by pesticide exposure on trips to and from Australia. Ken said, “Why do they have to spray all these chemicals? This is our workplace. Why can’t they just use something like air blowers to keep bugs from boarding in the first place?” His idea took flight. On Ken’s behalf, AFA took the lead on promoting his concept, which continues to this day. First, we brought his idea to the DOT. They championed it by creating and leading an inter-agency task group that included the US CDC, DOD, EPA, FAA, and USDA.

The proposed concept was “air barriers” (basically, one or more specialized fans) at the boarding door, which creates a wall of turbulent air to keep bugs away, coupled with specialized net curtains at the service doors that are easy to install and

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remove as needed. AFA found a mosquito netting family business in Atlanta that whole-heartedly took on the challenge to design an aircraft product – and it works. USDA ran tests and found that air blowers were effective at containing more than 97% of released mosquitoes—a much better result than the 80% kill rate that chemicals promise, and nobody gets sick. The USDA research team of top-notch entomologists formally recommended the air barrier/net curtain approach. Fast-forward and we’ve seen more research, more task groups and presentations, and an ever-growing interest, including at the global level of the International Civil Aviation Organization (ICAO), in non-chemical disinsection. AFA has been recognized as the labor leader on this issue since day one, and we work hard to ensure that Flight Attendants’ working conditions and concerns are being addressed.

What’s Next?
Most countries follow ICAO rules, and ICAO requires that countries follow WHO rules when it comes to aircraft disinsection. So it is essential that the WHO recommends non-chemical methods - ideally instead of chemicals, but at least as alternatives to the chemical methods it endorses now. That way, countries can choose to require that airlines use a non-chemical approach to keep bugs out of the cabin on arriving flights.

ICAO and many others, including AFA, are working to make Ken’s proposal a reality. We will not rest until we can call him and tell him that the answer to his question of “Why can’t they?” is “They can and they do.” Flight Attendants should not have to be exposed to pesticides that may or may not work, make plenty of people sick, and feed insecticide resistance. It is time for the industry and its regulators to think outside of the box.

And Today?
In the meantime, if you work on a sprayed flight, wear long sleeves and long pants to reduce skin contact with sprayed surfaces. Also, report any symptoms or general issues with the spraying practices to your Air Health and Safety MEC Committee – we want to hear from you.

If you travel to Zika-affected areas, wear long sleeves and pants, avoid being outside during the day (when Zika-carrying mosquitoes are more likely to bite), use bug repellent, and use condoms to prevent transmission during sex. More information on Zika can be found at http://www.cdc.gov/zika/prevention.
Preparing for Election 2016: November 8

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15 Year Remembrance