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The Cosmopolitan Viruses

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Program Note: Tune in tonight to hear more from Dr. Nathan Wolfe and the spread of viruses on AC360° at 10 p.m. ET.

Dr. Nathan Wolfe
Epidemiologist
Global Viral Forecasting Initiative

As someone who studies how pandemics are born and how we may be able to predict and prevent them, I'm, of course, fascinated with the outbreak of Swine Flu. I want to understand its biology. Where it comes from, how it initially took hold, and then managed to spread from person to person, landing in places as distant as Nova Scotia, Brazil, and New Zealand.

But I'm also fascinated at how the public, media and government have responded to it, and what our responses mean for the future of our species. Watching the response to the Swine Flu, it occurs to me that when new outbreaks occur, the media and the public can quickly forget history. SARS and H5N1 (the 'Bird Flu') and earlier disease spillovers from animals such as HIV fall quickly out of memory. Somehow Swine Flu seems unique: a frightening threat coming from out of the blue, and one that we need to scramble to address.

The Swine Flu is a threat. We know that flu pandemics have the potential to kill millions. But is it unique? Was it unpredictable? Must we repeat this cycle of complacency, dread, and panic that punctuates our increasingly frequent global outbreaks from SARS to H5N1 to Swine Flu...

We live in an increasingly interconnected world. People from Mexico can get to New Zealand in a day. People from the rural Amazon or Congo can be in Paris or Tokyo in two. And we are in contact with the animals around us that seed these pandemics. That means that what we're experiencing with Swine Flu will happen again. And again. And again. And again.

Global disease control today is like Cardiology was in the 1950s. Just waiting for the heart attack. With no sense of the reasons pandemics occur or the many potential ways to monitor for them, detect them early, and ultimately prevent them.

Pandemics are hard to predict. But so are hurricanes and tsunamis and earthquakes. Yet we would never question the logic of working to forecast these threats. And arguably the threats represented by viruses are potentially orders of magnitude more devastating. Imagine a hurricane that could strike globally. That could kill millions. That could last for years. Would we not want to forecast that hurricane? Would we accept those that said hurricanes were simply 'too hard to predict'? I don't think so.

And Swine Flu is by no means an anomaly. We know that Swine Flu, like the vast majority of new outbreaks come from animals. We can monitor those animals and the humans that come into contact with them so we can catch these viruses early, before they infect major cities, continents and the world.

That is exactly what we do at the Global Viral Forecasting Initiative, in sites throughout the world. And we are not alone. We are among a growing group of partners including WHO (e.g. their Global Outbreak Alert and Response Network), the CDC (e.g. their Global Disease Detection Program), USAID (e.g. their Avian and Pandemic Influenza and Zoonotic Disease Program), and DoD (e.g. their Global Emerging Infections Surveillance and Response System), conservation organizations like The Wildlife Conservation Society and The Wildlife Trust and foundations such as Google.org and the Skoll Urgent Threats Fund, who are working to create a predictive science of pandemics along with the monitoring systems to head them off early before they spread globally.

We should watch the Swine Flu carefully, but we should see it for what it is: one of many pandemics – past and future – that will continue to plague us until we figure out how to predict and prevent them.

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