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Questions raised over response to influenza A outbreak

With several countries now confirming human cases of a new influenza A virus, Anastasia Moloney examines whether the local and international response to the outbreak was quick enough.



As the tally of confirmed cases of the influenza A (H1N1) virus level off in Mexico City, questions are being raised about whether health authorities in and outside of Mexico reacted swiftly enough to the outbreak.

In early April, analysts working at Veratect—a US biosurveillance consultancy—picked up a string of reports about unusual respiratory diseases in several states in Mexico, including a health alert in the state of Veracruz on April 6. “Things in Mexico were looking very strange. Locals were very concerned about what was going on”, said Robert Hart, director of Veratect.

Urgent warning alerts posted by local health authorities in Mexico continued over the following days. On April 16, Veratect reported that Mexican health officials were concerned about unusual cases of pneumonia in a hospital in the Oaxaca state. “By then, I knew there was a serious problem”, said Hart. This information was available to leading US and international health agencies hooked up to Veratect’s alert feed service. The Pan American Health Organization (PAHO) had also been picking up these alert feeds.

WHO has also said it was monitoring the situation from April 10 on the basis of reports from Mexican authorities about unusual respiratory cases, and had immediately asked Mexican authorities to investigate. Health officials in Mexico reported back to WHO concluding there was no epidemic. At this stage, the new A (H1N1) virus had not yet been identified.

On April 16, the death of a woman with diabetes from acute pneumonia in the Oaxaca state prompted Mexican health authorities to alert PAHO about a possible epidemic brewing.

WHO issued its first public response about the influenza A outbreak on

April 24, and held its first emergency meeting the next day. That was 18 days after Mexican health officials first raised the alarm locally. By then, the virus had spread across Mexico’s borders to the USA. It was when the USA confirmed seven cases of influenza A (H1N1) on April 24 that international agencies started to respond quickly.

“Although it is difficult to reconstruct the hazy timeline of events, the Mexican experience has exposed delays and apparent flaws in procedures to detect disease outbreaks...”

Although it is difficult to reconstruct the hazy timeline of events, the Mexican experience has exposed delays and apparent flaws in procedures to detect disease outbreaks as set out in the International Health Regulations in 2007, which aimed to strengthen WHO’s response capacity after the epidemic of Severe Acute Respiratory Syndrome.

PAHO spokesperson, Daniel Epstein, confirms that PAHO received alerts from Veratect on April 16, but defends criticisms that the agency was slow to act. “There was no time delay”, he said, “a cluster of influenza cases in one country does not necessarily have international significance”. 8 days later, laboratory tests done in Canada confirmed that 18 of the 51 tests from Mexican specimens for suspected A (H1N1) came back positive. 12 of those were found to have the identical genetic pattern as the influenza A (H1N1) viruses from California, explains Epstein. “These were crucial links”, said Epstein. 2 days later, WHO raised its alert level from 3 to 4 (of 6).

People have been ready to point the finger of blame. Miguel Angel Lezana,

director of the National Epidemiology Center in Mexico City, has said PAHO should have acted more quickly based on the alerts about unusual outbreaks of seasonal influenza sent to the international agency in mid-April. However, on May 1, Mexico’s health minister, José Ángel Córdova, put these remarks down to a “confusion” and downplayed any tensions while emphasising there had been “no contradictions or difficulty” between WHO and the Mexican health ministry.

Mexico’s response to the outbreak has also been criticised. Agenor Álvares da Silva, head of the Brazilian National Health Surveillance agency, has questioned the slow response of Mexican health authorities since, he says, alarm bells had been raised in March, but international health authorities were only informed about a potential epidemic in mid-April.

Experts think that the new H1N1 virus—a hybrid of avian, porcine, and human influenza—originated in Mexico. However, the Mexican Government, has been keen to stress that unusual cases of influenza had been detected around the same time in both the USA and Mexico from the end of March onwards.

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People wait to be checked for flu-like symptoms at Mexico City’s Naval Hospital

Mexico City has been the epicentre of the A (H1N1) outbreak, but across the country, as of 0600 h GMT on May 4, there were 590 confirmed cases of infection, including 25 deaths, according to WHO.

Once the Mexican authorities declared a health alert on April 23, a flurry of measures primarily aimed at preventing people congregating in crowded spaces in Mexico City, were introduced over several days. Thousands of free face masks were handed out to the public. Crèches, schools, and universities were told to close their doors until May 6. Public events were cancelled and football matches played before empty stands. The city's 25 000 eateries were banned from serving all food apart from takeaways, and cinemas, gyms, bars, conference centres, and tourist sites were closed, in an attempt to curb the spread of the virus. Information booths and call centres were set up and screening rooms installed at Mexico City's international airport.

Government public awareness campaigns on the radio and television advise people with flu-like symptoms to stay at home and wash their hands well. This seems to be paying off. A local opinion poll said that 87% of Mexicans knew about the preventive measures implemented by the government, and that 84% believed the government has provided clear and sufficient information about the epidemic. Mexico City's

20 million residents have been taking government measures seriously. "While people have been complaining, they've been obeying the government's instructions", said Julio Sotelo, commissioner of the National Institute of Health in Mexico City. "I would say there's fear but not public panic."

As WHO raised its threat alert to level 5 on April 29, the mayor of Mexico City further stepped up measures. Local and federal government offices and private businesses "not fundamental" to the economy were ordered to suspend work for 5 days until May 5. Labour Secretary, Javier Lozano, urged employers to monitor their workers health and said they should isolate anyone showing up for work with signs of the influenza. Only essential businesses such as supermarkets, hospitals, and chemists were allowed to remain open.

Over the bank holiday weekend, Mexico City ground to a halt. Most citizens heeded President Calderon's advice. "Stay at home with your families. There is no safer place to avoid getting infected than in your own home", he said during his first nationwide televised address on April 29 since the public health crisis erupted. The capital's normally gridlocked and smog filled avenues were traffic free and eerily silent. The last time Mexico City came to such a standstill was in the aftermath of the 1985 earthquake.

The Mexican Government is boosting its stockpile of antivirals. "We've been accumulating our stockpiles for the last 6 years, and while there's enough Tamiflu to go around, more is being imported", explained Sotelo.

So far, the exact source of the outbreak remains a mystery. Unconfirmed rumours point to La Gloria, a dusty town in the southern Mexican state of Veracruz, where it is believed that 5-year-old Edgar Hernández became infected with the A (H1N1) virus in late March. Some local

residents in La Gloria have blamed the nearby US-owned industrial pig farms for the outbreak of the disease. "This is just speculation", said Sotelo. "We're working hard to find out the source of the outbreak."

In Mexico City, the outbreak may be smaller than first feared. As testing continues, the number of confirmed cases has turned out to be far less than the 2500 suspected cases initially reported. "Apparently the rate of infection is not as widespread as we might have thought", said Córdova on May 1.

So far, 26 people have died from laboratory confirmed cases of the A (H1N1) virus, including a child in the USA. WHO believes a pandemic is "imminent" and says the focus is now on "minimizing the impact of the virus...rather than on stopping its spread internationally". As of 0600 h GMT May 4, according to WHO, 20 countries have officially reported 985 cases of A (H1N1) influenza, including ten European countries, the USA (226 cases), and Canada (85 cases). Apart from Mexico, so far, four other countries have reported confirmed laboratory case of A (H1N1) infection in Latin America.

In the USA the epicentre of the outbreak is in New York, but across the country hundreds of schools have closed. Schools with pupils who have suspected or confirmed cases of influenza A are being recommended to close for 14 days. "I do believe we'll see an escalation of cases in the US", said Paul Jarris, director of the US Association of State and Territorial Health Officials.

Melvin Kramer, president of EHA Consulting Group—a public health consultancy in Maryland—emphasises that the outbreak must be seen in context. "It's scary, it's bad but I think we've been hyped", said Kramer, "35 000 to 37 000 people in the US die every single year from seasonal flu."

Anastasia Moloney

The printed journal includes an image merely for illustration

Reuters
A member of the Mexican Navy hands out surgical face masks to the public, April 26