

Swine influenza: how much of a global threat?



On April 27, WHO raised its pandemic alert level from phase 3 to phase 4 after human cases of a novel H1N1 swine influenza A virus spread quickly around the world from its origin in Mexico. Concern over the virus—a hybrid of human, pig, and avian influenza—started mounting internationally last week following outbreaks of influenza-like illnesses in Mexico and other countries. As of April 28, according to WHO, Mexico had 26 laboratory confirmed human cases of swine influenza A (H1N1) with seven confirmed deaths. The USA had 40 confirmed cases with no deaths. Elsewhere, there were confirmed cases in Canada, UK, Spain, New Zealand, and Israel.

Swine influenza is a porcine respiratory disease that rarely infects humans. From December, 2005 to February, 2009, the USA had 12 cases of human infection with swine influenza. The outbreak in Mexico might have started as early as March 18, when authorities began detecting a surge in influenza-like illnesses in the country. Health officials initially thought they were seeing cases of seasonal influenza. But, on April 21, the US Centers for Disease Control and Prevention reported two isolated cases of a novel swine influenza in California. On April 24, Mexico announced that the same virus had been detected in the country's outbreak of influenza-like illness.

The Mexican Government has been swift to implement public health measures to try to contain the outbreak. On April 24, schools, museums, libraries, and theatres were closed in the capital. 6 million face masks were distributed to the public along with health advice to prevent the spread of infection. Public events were cancelled. Meanwhile, the USA declared a public health emergency and prepared for 12 million doses of oseltamivir to be delivered to states from federal stockpiles (the new virus has tested sensitive to oseltamivir and zanamivir). At the global level, WHO activated its 24 h emergency response room on April 24, which allows the agency to be in contact simultaneously with countries, institutions, partners, and relevant health authorities around the world to coordinate the response. The agency also convened an emergency committee to advise the Director-General on the outbreak.

The second meeting of that committee recommended raising the influenza pandemic alert level after the epidemiological pattern of the outbreak suggested that human-to-human transmission was occurring with the

ability to cause community-level outbreaks. The world has moved closer towards a pandemic, but it is not yet inevitable. Crucially, containment of the outbreak is no longer feasible and countries should now be preparing to mitigate the effects of the virus on their populations.

Over the past 5 years, the international community has been preparing for an influenza pandemic in response to the threat posed by H5N1 avian influenza. National and regional responses to this threat have been variable. Transparency and continued communication between WHO, governments, health officials, the public, and the media, will be critical as the situation with swine influenza evolves.

Some countries are more prepared for this task than others. Of particular concern is the ability of low-income and middle-income countries to detect and mitigate the effects of this new virus on their populations. History has shown that developing countries are disproportionately affected by an influenza pandemic. In *The Lancet* in 2006, for example, Christopher Murray and colleagues used data from the 1918–20 Spanish influenza pandemic to predict that the next global influenza pandemic would kill 62 million people, with 96% of those deaths occurring in low-income and middle-income settings. Displaced populations, such as refugees, are especially at risk.

The public should expect further deaths from this swine influenza outbreak. *The Lancet* certainly expects the number of those infected to increase and the spread of infection to expand. Therefore, all recommendations made so far should be seen as provisional. We are passing through an unstable period in this outbreak's evolution. Every member of the public has a part to play in limiting the risk of a full-blown pandemic. Vigilance, and not alarm, is needed, with readiness to self-isolate oneself at home if an influenza-like illness develops. Such home isolation, combined with other measures of social distancing, are most likely to stop the spread of swine influenza. These actions could buy the necessary time to boost stockpiles of antivirals and develop a vaccine against this virus, which will inevitably take months rather than weeks to prepare and distribute. So far, the rapid responses by governments and international agencies have triggered effective mechanisms to protect the public. But the vital role and responsibility of the individual should not be ignored. ■ *The Lancet*



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For WHO's updates on human cases of swine influenza see <http://www.who.int/csr/disease/swineflu/en/index.html>

For the paper by Chris Murray and colleagues see *Articles Lancet* 2006; 368: 2211–18