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Swine flu pandemic: mission accomplished?

Scanning through the nationally televised evening news in the United States, one cannot help but wonder whatever happened to the swine flu. A few months ago, worries over the potential of the newly emergent infectious strain of H1N1 influenza ruled the airwaves. Scores of medical correspondents camped out in front of the United States Centers of Disease Control and Prevention (CDC), perhaps somewhat morbidly, so that their news organizations would be present to break the news of the first fatalities. On the other side of the border, battle-hardened journalists provided blow-by-blow updates from the ground in Mexico City, where non-essential activities in one of the most populous and vibrant metropolitan areas in the world had come to a paralyzing halt.

A little over a month later, on June 11, the World Health Organization (WHO) declared the current influenza outbreak a pandemic and assigned it to the highest possible level (1). Yet this news did not receive the media attention it would have drawn had it been announced a month earlier.

What happened in the interim? Was the threat minimized or had it abated? Considering that there are tens of millions of flu infections each year in the United States alone with an estimated 30,000 deaths, had we initially overreacted to the reports of illness from this new strain?

A recent review in *Nature* highlights prevailing opinion on the emergence of the current influenza outbreak (2). A flu-like respiratory illness was first reported in a town in Veracruz, Mexico in mid-February. By mid-April, Mexican health authorities were warning the regional office of the WHO of a potential outbreak. In the same month, the first cases in the United States were identified by the CDC. Initially, it had been feared that those with the worst outcomes from infection were not the elderly or immuno-compromised, as is the case with the seasonal flu, but rather young and otherwise healthy adults. Further investigation indicated that the infections caused by the strain were less severe than originally thought; a report published on May 7 seemed to confirm this, since it mentioned the strain caused fewer than 50 of the 159 deaths in Mexico that had originally been attributed to it (3).

Now months into the pandemic, the flu gets little, if any, media coverage. One of the most informative press briefings by the CDC on the spread of the new H1N1 strain (4) was relegated to the inner pages of most newspapers (probably because it was in the same 24-h news-cycle as the death of Michael Jackson). Some of the facts presented in the CDC briefing were particularly noteworthy. In all likelihood there have been over 1 million infections of H1N1 so far this year in the United States with this strain accounting for almost all detected cases of influenza. The CDC also confirmed the demographic trends observed a few months ago in that the highest rates of illness were for those under 25 with relatively few people above 65 showing any signs of symptomatic infection.

The initial panic may have subsided, but the public needs to be aware that the risk of infection is still high. Influenza infections are not particularly prevalent in the warmer summer months. Reports from countries of the Southern Hemisphere where it is currently winter and peak flu season seem to indicate that the strain is spreading and intensifying (4). We should keep in mind that swine flu will still be around to infect healthy individuals in the

Northern Hemisphere when the flu season starts again here. Also, since the CDC press release, there have been reports of resistance to oseltamivir, an antiviral widely used to treat the flu (5). Were the strain to mutate rapidly, current conservative assumptions on expected morbidity and mortality would invariably change. Clearly, we are not out of the woods yet.

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REFERENCES

1. World now at the start of (2009) influenza pandemic [accessed July 6, 2009]. Available from http://www.who.int/mediacentre/news/statements/2009/h1n1_pandemic_phase6_20090611/en/index.html.
2. Neumann, G., Noda, T., and Kawaoka, Y. (2009) Emergence and pandemic potential of swine-origin H1N1 influenza virus, *Nature* 459, 931–939.
3. Mexico: The cracks opened up by the flu [accessed July 6, 2009]. Available from http://www.economist.com/world/americas/displaystory.cfm?story_id=13610935.
4. CDC Telebriefing on Investigation of Human Cases of Novel Influenza A (H1N1) [accessed July 6, 2009]. Available from <http://www.cdc.gov/media/transcripts/2009/t090626.htm>.
5. WHO says Tamiflu-resistant H1N1 “isolated case.” Reuters [accessed July 6, 2009]. Available from <http://www.reuters.com/article/latestCrisis/idUSLU322794>.