By George Friedman

Word began to flow out of Mexico the weekend before last of well over 150 deaths suspected to have been caused by a new strain of influenza commonly referred to as swine flu. Scientists who examined the flu announced that this was a new strain of Influenza A (H1N1) derived partly from swine flu, partly from human flu and partly from avian flu strains (although there is some question as to whether this remains true). The two bits of information released in succession created a global panic.

This panic had three elements. The first related to the global nature of this disease, given that flus spread easily and modern transportation flows mean containment is impossible. Second, there were concerns (including our own) that this flu would have a high mortality rate. And third, the panic centered on the mere fact that this disease was the flu.

News of this new strain triggered memories of the 1918-1919 flu pandemic, sparking fears that the "Spanish flu" that struck at the end of World War I would be repeated. In addition, the scare over avian flu created a sense of foreboding about influenza - a sense that a catastrophic outbreak was imminent.

By midweek, the disease was being reported around the world. It became clear that the disease was spreading, and the World Health Organization (WHO) declared a Phase 5 pandemic alert. A Phase 5 alert (the last step before a pandemic is actually, officially declared, a step that may be taken within the next couple of days) means that a global pandemic is imminent, and that the virus has proved capable of sustained human-to-human transmission and infecting geographically disparate populations. But this is not a measure of lethality, only communicability, and pandemics are not limited to the deadliest diseases.

'Pandemic,' not 'Duck and Cover'

To the medical mind, the word "pandemic" denotes a disease occurring over a wide geographic area and affecting an exceptionally high proportion of the population. The term in no way addresses the underlying seriousness of the disease in the sense of its wider impact on society. The problem is that most people are not physicians. When the WHO convenes a press conference carried by every network in the world, the declaration of a level 5 pandemic connotes global calamity, even as statements from experts -- and governments around the world -- attempt to walk the line between calming public fears and preparing for the worst.

The reason to prepare for the worst was because this was a pandemic with an extremely unclear prognosis, and about which reliable information was in short supply. Indeed, the new strain could mutate into a more lethal form and re-emerge in the fall for the 2009-2010 flu season. There are also concerns about how its victims disproportionately are healthy young

adults under 45 years of age -- which was reported in the initial information out of Mexico, and has been reported as an observed factor in the cases that have popped up in the United States. This was part of the 1918 flu pandemic pattern as well. (In contrast, seasonal influenza is most deadly among the elderly and young children with weaker immune systems.)

But as the days wore on last week, the swine flu began to look like little more than ordinary flu. Toward the end of the week, a startling fact began to emerge: While there were more than a hundred deaths in Mexico suspected of being caused by the new strain, only about 20 (a number that has increased slightly after being revised downward earlier last week) have been confirmed as being linked to the new virus. And there has not been a single death from the disease reported anywhere else in the world, save that of a Mexican child transported to the United States for better care. Indeed, even in Mexico, the country's health minister declared the disease to be past its peak May 3. STRATFOR sources involved in examining the strain have also suggested that the initial analysis of the swine flu was in fact in error, and that the swine flu may have originated during a 1998 outbreak in a pig farm in North Carolina. This information reopens the question of what killed the individuals whose deaths were attributed to swine flu.

While little is understood about the specifics of this new strain, influenza in general has a definitive pattern. It is a virus that affects the respiratory system, and particularly the lungs. At its deadliest it can cause secondary infections - typically bacterial rather than viral - leading to pneumonia. In the most virulent forms of influenza, it is the speed with which complications strike that drives death rates higher. Additionally, substantively new strains (as swine flu is suspected of being) can be distinct enough from other strains of flu that pre-existing immunity gained from flus of years past does not help fend off the latest variation.

Influenza is not a disease that lingers and then kills people -- save the sick, old and very young, whose immune systems are more easily compromised. Roughly half a million people (largely from these groups) die annually worldwide from more common strains of influenza, with the Centers for Disease Control and Prevention (CDC) pegging average American deaths at roughly 36,000 per year.

Swine flu deaths have not risen as would be expected at this point for a highly contagious and lethal new strain of influenza. In most cases, victims have experienced little more than a bad cold, from which they are recovering. And infections outside Mexico so far have not been severe. This distinction of clear cases of death in Mexico and none elsewhere (again, save the one U.S. case) is stark.

Much of what has occurred in the last week regarding the new virus reminds us of the bird flu scare of 2005. Then as now, the commonly held belief was that a deadly strain was about to be let loose on humanity. Then as now, many governments were heightening concerns rather than quelling them. Then as now, STRATFOR saw only a very small chance of the situation becoming problematic.

Ultimately, by the end of last week it had become clear to the global public that "pandemic" could refer to bad colds as well as to plagues wiping out millions.

A real crisis

The recent swine flu experience raises the question of how one would attempt to grapple with a genuine high-mortality pandemic with major consequences. The answer divides into two parts: how to control the spread, and how to deploy treatments.

Communicability

The flu virus is widely present in two species other than humans, namely, birds and pigs. The history of the disease is the history of its transmission within and across these three species. It is comparatively easy for the disease to transmit from swine to birds and from swine to humans; the bird-to-human barrier is the most difficult to cross.

Cross-species influenza is of particular concern. In the simplest terms, viruses are able to recombine (e.g., human flu and avian flu can merge into a hybrid flu strain). What comes out can be a flu transmissible to humans, but with a physical form that is distinctly avian - meaning it fails to alert human immune systems to the intrusion. This can rob the human immune system of the ability to quickly recognize the disease and put up a fight.

New humanly transmissible influenza strains often have been found to originate in places where humans, pigs and/or fowl live in close proximity to each other -- particularly in agricultural areas where animal and human habitation is shared or in which constant, close physical contact takes place.

Agricultural areas of Asia with dense populations, relatively small farms and therefore frequent and prolonged contact between species traditionally have been the areas in which influenza strains have transferred from animals to humans and then mutated into diseases transmissible by casual human contact. Indeed, these areas have been the focus of concern over a potential outbreak of bird flu. This time around, the outbreak began in Mexico (though it is not yet clear where the virus itself originated).

And this is key to understanding this flu. Because it appears relatively mild, it might well have been around for quite awhile - giving people mild influenza, but not standing out as a new variety until it hit Mexico. The simultaneous discovery of the strain amid a series of deaths (and what may now be in hindsight inflated concerns about its lethality) led to the recent crisis footing.

Any time such threats are recognized, they already are beyond containment. Given travel patterns in the world today, viruses move easily to new locations well before they are identified in the first place they strike. The current virus is a case in point. It appears, although it is far from certain, that it originated in the Veracruz area of Mexico. Within two days of the Mexican government having issued a health alert, it already had spread as far afield as New Zealand. One week on, cases completely unrelated to Mexico have already been confirmed on five continents.

In all probability, this "spread" was less the discovery of new areas of infection than the random

discovery of areas that might have been infected for weeks or even months (though the obvious first people to test were those who had recently returned from Mexico with flu symptoms). Given the apparent mildness of the infection, most people would not go to the doctor. And if they did, the doctor would call it generic flu and not even concern himself with its type. What happened last week appears to have been less the spread of a new influenza virus than the "discovery" of places to which it had spread awhile ago.

The problem with the new variety was not that it was so deadly; had it actually been as uniquely deadly as it first appeared to be, there would have been no mistaking its arrival, because hospitals would be overflowing. It was precisely its mildness that sparked the search. But because of expectations established in the wake of the Mexico deaths, the discovery of new cases was disassociated from its impact. Its presence alone caused panic, with schools closing and border closings discussed.

The virus traveled faster than news of the virus. When the news of the virus finally caught up with the virus, the global perception was shaped by a series of deaths suddenly recognized in Mexico (as mentioned, deaths so far not seen elsewhere). But even as the Mexican Health Ministry begins to consider the virus beyond its peak, the potential for mutation and a more virulent strain in the next flu season looms.

Mortality

As mentioned, viruses that spread through casual human contact can be globally established before anyone knows of it. The first sign of a really significant influenza pandemic will not come from the medical community or the WHO; it will come from the fact that people are catching influenza and dying, and are doing so all over the world at the same time. The system established for detecting spreading diseases is hardwired to be behind the curve. This is not because it is inefficient, but because no matter how efficient, it cannot block casual contact - which, given modern air transportation, spreads diseases globally in a matter of days or even hours.

Therefore, the problem is not the detection of deadly pandemics, simply because they cannot be missed. Rather, the problem is reacting medically to deadly pandemics. One danger is overreacting to every pandemic and thereby breaking the system. (As of this writing, the CDC remained deeply concerned about swine flu, though calm seems to be returning.)

The other danger is not reacting rapidly enough. In the case of influenza, medical steps can be taken. First, there are anti-viral medicines found to be effective against the new strain, and if sufficient stockpiles exist - which is hardly universally the case, especially in the developing world - and those stockpiles can be administered early enough, the course of the disease can be mitigated. Second, since most people die from secondary infection in the lungs, antibiotics can be administered. Unlike with the 1918 pandemic, the mortality rate can be dramatically reduced.

The problem here is logistical: The distribution and effective administration of medications is a challenge. Producing enough of the medication is one problem; it takes months to craft, grow

and produce a new vaccine, and the flu vaccine is tailored every year to deal with the three most dangerous strains of flu. Another problem is moving the medication to areas where it is needed in an environment that maintains its effectiveness. Equally important is the existence of infrastructure and medical staff capable of diagnosing, administering and supporting patients -- and doing so on a scale never before attempted.

These things will not be done effectively on a global basis. That is inevitable. But influenza, even at the highest death rates ever recorded for the disease, does not threaten human existence as we know it. At its worst, flu will kill a lot of people, but the human race and the international order will survive.

The true threat to humanity, if it ever comes, will not come from influenza. Rather, it will come from a disease spread through casual human contact, but with a higher mortality rate than flu and no clear treatment. While HIV/AIDS boasts an extraordinarily high mortality rate and no cure exists, it at least does not spread through casual contact as influenza does, and so the pace at which it can spread is limited.

Humanity will survive the worst that influenza can throw at it even without intervention. With modern intervention, its effect declines dramatically. But the key problem of pandemics was revealed in this case: The virus spread well before information on it spread. Detection and communication lagged. That did not matter in this case, and it did not matter in the case of HIV/AIDS, because the latter was a disease that did not spread through casual contact. However, should a disease arise that is as deadly as HIV, that spreads through casual contact, about which there is little knowledge and for which there is no cure, the medical capabilities of humanity would be virtually useless.

There are problems to which there are no solutions. Fortunately, these problems may not arise. But if they do, no amount of helpful public service announcements from the CDC and the WHO will make the slightest bit of difference.