
Pandemic Planning Toolkit

A resource to assist your organization in preparing for pandemic influenza



STORM WARNING

Planning for a flu pandemic is different from standard disaster preparedness because it won't be a localized event.

Editor's note: Health authorities and agencies agree U.S. employers should make their pandemic influenza preparations now, before the H5N1 flu virus begins to infect the North American population. It has killed a small number of people in several countries, including China and Egypt. Mike McGuire, vice president, anti-infectives for Roche, the Nutley, N.J.-based health care company that makes Tamiflu (www.roche.com), and Dr. Ann Peterka, the company's director of Employee Health Services, discussed Roche's preparedness plans and the threat of H5N1 in a March 27, 2007, conversation with Occupational Health & Safety's editor.

The federal government and state governments are stockpiling anti-virals for 25 percent of the U.S. population, which is why corporate preparedness is so critical, McGuire said. "This plan will be important to a number of crises that they may run into. . . . If there is one thing that I'd really, really want to leave with the readers, it is this: Now is the time to plan. This is one of those times that you cannot be flying the plane while you're building it." Excerpts from the conversation follow.

Whenever our magazine raises the issue of pandemic flu, some safety professionals tell me it can't happen here. Are they wrong?

Mike McGuire: A very interesting thing happened yesterday at Newark Airport. There was a flight that came in from Hong Kong. On the way over, some people on the plane were coughing and looked like they were sick. And as the flight continued, more and more people appeared like they had become sick on the plane; so much so that when the plane landed, they held all the passengers on the plane for a couple of hours until doctors could come on board and examine the passengers to make sure it wasn't H5N1. That was not the case, but therein lies a pretty good example as recent as 24 hours ago of how quickly a virus could spread.

It's very similar to how difficult it is to predict the exact time and place of the next earthquake in California or hurricane in Florida. We need to plan. That's what we are really trying to educate people about in industry and in the government. We need to plan now. Now is the time to plan for an event like this to occur because you don't know when it's going to occur. We've had three pandemics occur in the last century; some of them were pretty devastating. We do know that they occur about every 30 years.

The criteria for a virus to become a pandemic flu are starting to add up. For instance, it's a virus that hasn't been seen by humans at all; we have no immunity to this H5N1 virus that's over in Asia and Middle East countries. We have no vaccine to prevent it. And what we have seen in some cases is some human-to-human transmission, but not enough for us to call it a pandemic yet.

They're working on vaccines.

McGuire: There is a big effort going on with regard to research and developing vaccines. The issue is that the virus can mutate. So you could have a vaccine against a virus that mutates a little bit, and we're not sure how effective that vaccine now is against the mutated virus.

Dr. Ann Peterka: Right now, they're watching the H5N1 bug. It's spreading geographically, becoming endemic in the bird populations from country to country and continent to continent. And this is expanding the opportunity for human exposure. We also know that right now, there's a 59 percent case fatality rate for those people who have contracted it. It has a predilection for younger adults and the younger age group.

A couple of other things that need to be taken into consideration: In comparison to other pandemics, we have more extensive and more rapid travel and a larger, denser population. We also have greater numbers of immuno-compromised hosts and an aging population who are living longer. Another aspect that differs from previous pandemics is the fact that more children than ever before are in daycare. When we put these variables together, it helps set the stage for the next possible pandemic. As to the safety professionals that question you: I'd say they're wrong.

The factors you mentioned are for society as a whole, but they also have a significant workplace impact. You're saying this is a workplace issue of great importance?

Peterka: No doubt about it.

McGuire: On all of our travel, when you get your itinerary, Dr. Peterka has identified certain locations; you want to be aware of these things occurring so you'll be prepared for them.

Peterka: Companies should definitely be putting a plan in place. They should realize that it's not going to be business as usual. Right now, we're in Phase 3, which is limited human-to-human spread of H5N1, with the majority of cases occurring due to spread from animal to human. But we also consider Phase 3 as a planning phase. Once you get into Phase 4 and Phase 5, you're going to be tapping into plans. So it's very important to have the plans in place ahead of time.

U.S. companies should be looking at what their mission will be, knowing what crucial products or services they plan on providing, with the knowledge that they will not be able to do what they would normally. Once they identify the products or the services, then they can work backwards asking themselves: What are the activities involved in order for these products/services to continue to be available? Who are the business-critical people to support these activities? Who must come in, and

who can work from home? And, lastly, what tools are needed to allow them to do this? Companies also need to look at their own vendors and supply chain to ensure they have business continuity plans in place to support the company's functions.

In order to help other companies as they go through their pandemic planning, Roche developed a Web site called pandemictoolkit.com. It is user friendly and provides corporations with information on what is a pandemic, how to go about putting together a business continuity plan, an overview on antivirals and other major considerations in relation to pandemic, as well as a detailed list of pandemic-related Web site resources that they can tap into.

Any business could be affected, large or small, whether domestic or international?

McGuire: Absolutely. Here in Nutley on March 8, we had a program where we brought our key suppliers and folks we work with in terms of supplies and services. We provided them an overview of the potential impact a pandemic could have on society and business. The objective of this was to share that with them; the second was really to say how interdependent we all are on each other.

Here's an example for you: Folks who manufacture chlorine--not only are they important for water purification, it's a chemical that's involved in nuclear power facilities. If a chlorine manufacturer goes down, or a couple of them, you could have what is called a single-point failure and could result in the water supply and power being affected.

Our mission during a pandemic is to manufacture critical drugs and Tamiflu. So, as Ann said before, we're not going to be making Valium. We're going to scale back on that. We're going to only manufacture those drugs that are critical to us. Once we identified what those critical drugs were, we went out to each of the functional areas in our company and said, "Right now, what would you need to do to prepare? If a virus starts to mutate and infect people in Asia, what's the next step? If it's here in the United States, what else would you need to do?"

Should every business go through this process?

McGuire: Once you do that, you can identify who the key people are. You can also say there's another group of people who are important but don't necessarily need to come to the plant. They can work from home. We in our plant have identified these people, with backups. We have phone numbers, cellphone numbers, we have all information needed to contact these people.

We have stockpiled some materials. . . . What other companies should do is take a look at what materials they should stockpile in order to keep producing or providing their service during that time period.

The other thing we learned from Hurricane Katrina and 9/11 was communications. We've provided satellite phones to a number of individuals within the Nutley organization and the manufacturing supply chain. So the Roche facilities that are manufacturing have satellite phones just in case the land lines or cellphones go down. We have secure video linkups to each one these sites, as well. So what we've built into our communication plan--which people need to think about--is redundancy.

That's planning for the worst-case scenario. If you take a look at the worst-case scenario and you plan for that, anything short of that, you'll be very well prepared.

The great thing about influenza is that we get to practice this every year. Ann has put together some

interventions throughout the plants here that will be important during a pandemic, as well.

Peterka: We have dispensers of hand gel cleaner in all the public areas, as well as at the entrance of our cafeterias, and touchless towel dispensers and antimicrobial soap in the restrooms. These things are already in place and have become a part of the fabric and the landscape here at Roche. People are used to it now.

We have the yearly seasonal flu CDC messaging about covering a cough and washing your hands. And during a pandemic, [we have] planned for a heightened hygiene awareness and educational campaign that will also include messaging such as to stay home when you're ill, etc. During a pandemic, we would be thermo-scanning the business-critical employees before they would be permitted access to the site. This would be in an effort to identify people who were potentially infectious and to prevent them from coming on site.

We have stockpiled personal protective equipment. This includes various types of masks, including N95s and surgical masks, as well as gloves, hand sanitizers, thermometers, etc. in an effort to ensure that we will have this equipment available for our employees during this critical period.

Very interesting. Employers have to make provisions for workers' dependents, don't they? If they're sick, even the mission-critical people may not be able to work.

Peterka: That's why, as Mike had noted, when the list of critical employees as created, two tiers of backups were also included.

Mike, you mentioned stockpiling materials. Many manufacturers minimize inventory all they can; aren't you asking them to behave in a way that may be alien to how they manufacture?

McGuire: It is different. For instance, at food stores in some parts of the country, at the first sign of snow or a forecast for snow, the shelves are cleared. Now, imagine that you have a pandemic: The shelves would be really cleared.

Obviously we're not asking food stores to double their supplies. But manufacturers have that ability and should be thinking for their manufacturing and services supply: "What do I need? Just in case my supply chain is disrupted for two months or a month, what do I need to keep running?"

What we'll see in a pandemic is, wave one will come, it'll go, and then a second wave will come through. What we've seen in the past is there's a potential for three waves to come through. It's happening at different times all over the world and in the United States, so disruptions are what you want to minimize. You may be through wave one in Dallas, but your suppliers-- who are located in Nebraska, let's say--might be in their first wave.

Looking at past events like this, how do you know when you're in one?

McGuire: WHO has a system that has six triggers. Right now, we're on trigger three. . . . Four is you begin to see the virus spreading in small groups of people. Five, you're beginning to see it spread in larger groups of people. And six is pretty much, we're off the races: widespread infection out there.

Peterka: What you also have to remember is that, as Mike had said, there may be a wave going on in one geographic area but not in another. You also have to look to the local public health authorities, as well, for guidance.

There will be a main trigger from the WHO and the CDC, but also local health authorities may put stakes in the ground earlier, using possibly a more conservative approach--for example, having a lower threshold to close schools, etc.

Is there some experience from 1918 and other events to tell us how long we have before we may get to six if we're at three now?

Peterka: No one knows.

McGuire: One of the reasons for that is, you could actually be infected with the virus, not showing any symptoms or signs, but shedding that virus to infect others for 48 hours. Once it starts, [we need] some incredible surveillance systems out there to detect these; CDC has set that up in the United States at emergency rooms and so forth. Now, you have to trace that individual who has contacted those people, who are now infected and have contacted these other people

It could be quick, it could be slow. We just don't know what it will be, but some of the modeling says unless they could be quarantined within about 21 days, it's probably broken out of that area. And then we have global issues.

You mentioned H5N1 is infecting young people when it has infected human beings overseas. That's what happened in 1918.

Peterka: It's very reminiscent of 1918 because it attacks younger, healthy people between the 20 and 40 age range.

That ought to frighten U.S. employers because 20 to 50 is the prime worker population. If they're thinking they have a young, healthy population and nothing to worry about, that's not the case.

Peterka: No.

Besides the precautions you've mentioned Roche is taking, are there other actions you'd recommend for employers?

Peterka: Have a business continuity plan: One of the most important pieces of this is having senior management buy-in. Very, very important. Here at Roche, we have a dedicated pandemic planning team with dedicated resources and a defined budget. A plan is only as good as the support that it has, both in terms of management as well as financial.

As we had noted earlier, we decided what our mission was, and for us it was to protect our employees and continue to provide life-sustaining drugs. We also have a very strong cross-functional team, so all of the functional areas of our company have been involved in the planning effort.

You have employees all over the world: Is there much difference in your preparations in other locales?

McGuire: The only difference would be in what are the manufacturing capability and the facilities in those affiliate countries. For instance, in some countries we may not have manufacturing; we may have distribution of product. Those folks will need to provide a distribution plan, which is very similar to what we see globally. There is a global team that has been set up that we work with to ensure

we're doing the same things at the right times, as an organization.

We've had a simulation already. The other countries are now moving into that phase; some may have already conducted simulations. We're all what I'll call "stress testing" our plants to see where the gaps are so we can come back and make the appropriate revisions to the plan. Because this is an ongoing situation; as more data comes in to us in regards to what's happening with the virus [and with] our manufacturing, we throw that into the simulations, and our preparedness, and our plans to make sure that we're all in synch.

Are the key suppliers involved in the simulations?

McGuire: The first one we ran, they were not. That's why we ran the program on March 8. I think you raise a very good point in terms of what I'll call the next steps in our plan. When we did the simulation, that was part of what we saw in the gap analysis. [We now have] phone numbers and names of companies and people--that's an outcrop of that.

And it's not only with corporations, but government officials on the state and local levels. We had the program to begin to educate our suppliers on what they need to do in order to be prepared so we can keep on manufacturing, but also what do their suppliers need to do. So it keeps on going down and out in that network.

It's the identification of critical supplies and services and to whom they're going that will dictate what will happen to those companies and how they need to set up their plans. Part of our plan is now ensuring that our suppliers have a plan and their suppliers have a plan.

Did you find on March 8 they were well prepared or were they not prepared?

McGuire: I think we saw a range. Some there were very prepared, and I think there were some that were not prepared. . . . Our objective was to raise this on their radar screen so this will be taking place.

Earlier, you mentioned pandemictoolkit.com. There is a great deal of information freely available for our readers and others to educate themselves about this threat.

McGuire: Yes, there is. Our goal was to try to place that into one place for people to go. That was the objective of our pandemic Web site.

Peterka: What we tell companies that approach us is we don't want them to reinvent the wheel. It gives them one leg up to start their planning if we can provide them with some of the learning that we've attained.

Are more meetings like March 8 planned?

McGuire: We're taking a look at further meetings. That was a pretty big meeting--I think we had 115 corporations that work with us. Our next step is to tier suppliers, for instance the people who manufacture capsules for Tamiflu. Sitting down with them and really, really getting into their plan and our plan, and going into even more detail with some of those key, key suppliers for us.