

Coronavirus: Are U.S. hospitals prepared?

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Hospitals are bracing for the potential spread of coronavirus in the United States, trying to plan for a potential onslaught of sick patients combined with potential supply shortages.

The strict quarantine and screening measures enacted by the U.S. Centers for Disease Control and Prevention have given hospitals breathing space to review their pandemic plans and stockpile needed equipment, said Dr. Mark Jarrett, the chief quality officer for Northwell Health, a New York hospital chain.

"We're buying some time now that it hasn't really spread so much in the United States," Jarrett said. "That's giving us a chance to gear up factories and address supply chain issues."

But the United States is in the throes of a tough flu season that's already straining the capacity of many hospitals, said Nancy Foster, vice president of quality and [patient safety](#) for the American Hospital Association.

"It is a tough flu season. It's a very bad flu season. And many of our hospitals are pretty darned full," Foster said. "If there were to be an outbreak here in the next couple of weeks, the overlap means that many hospitals would be full to the brim, if not overflowing."

To make matters worse, the coronavirus epidemic has hampered supply chains leading out of China, and is highlighting the problems with American hospitals' dependence on "just-in-time" supply orders, experts said.

Protecting health care workers first

Take, for example, the N95 respirator mask, which is primarily manufactured in China.

This mask provides much better protection for [health care workers](#) than the thinner masks worn in surgeries, said Shelly Schwedhelm, Nebraska Medicine's executive director of emergency management and

biopreparedness. Nebraska Medical Centers treated three Ebola patients in its biocontainment unit in 2014, and recently opened a nearby quarantine clinic for coronavirus-infected people re-entering the United States from China.

"The folks that are going to have the closest contact with patients should use the N95," Schwedhelm said, noting that procedure masks or surgical masks "just don't have the filtration capability you would need for some of these viruses."

This is not a theoretical threat. More than 1,700 medical workers in China have become infected with coronavirus while on the job, Chinese officials announced last Friday.

"This is concerning and consistent with what CDC knows from our experience with SARS and MERS, where we saw that transmission can be amplified in health care settings if infection control practices are not carefully followed," Dr. Nancy Messonnier, director of the CDC's National Center for Immunization and Respiratory Diseases, said during a media briefing on Friday.

However, Schwedhelm said, because the N95 typically is only worn when treating patients with rare infectious diseases like tuberculosis or measles, U.S. hospitals typically don't stock a lot of them in supply closets.

"If you haven't done stockpiling of that item, you're never going to have enough" to go around in case of a coronavirus outbreak, Schwedhelm said.

Unfortunately, Jarrett said, stockpiling runs counter to the efficient way medical centers are run nowadays. Hospitals everywhere have become very dependent on global supplies of drugs and equipment, as well as

supply orders that always come in the nick of time, he added.

China crucial to supply chain

"Hospitals don't have huge warehouses full of stockpiles like they used to in the old days, because things can be shipped so quickly and communication is so quick," Jarrett said.

This means a catastrophe in one part of the world can quickly put a pinch on medical supplies elsewhere.

For example, when Hurricane Maria slammed Puerto Rico in 2017, one of the consequences for hospitals was a shortage of saline IV bags, Jarrett noted. It turned out pharmaceutical factories in the U.S. territory were a major supplier of the bags, and they went dark when the storm knocked out power.

The CDC already has heard enough concerns regarding the N95 that the agency issued recommendations for extended use and limited reuse of the respirators, in case there aren't enough to go around.

China also is a major supplier of raw ingredients needed to manufacture penicillin, ibuprofen, aspirin and other routine medications, fueling concerns about future shortages.

"We are starting to hear of some reports of hospitals who are unable to get their regular supplies, or there's a delay in getting their regular supplies, but it's just sort of the beginning of this," said Roslyne Schulman, the American Hospital Association's director of emergency response and public health policy.

Foster said that many hospitals "are making sure that every N95 mask is being used appropriately, because that's one of the things we anticipate

could be in shortage in the nearer term."

Learning from prior outbreaks

The U.S. health care system does have the advantage of experience in dealing with previous outbreaks, including H1N1 flu, SARS, MERS and even Ebola, experts said.

"We've all had a lot of practice putting plans into place for major viral illnesses and pandemics. That being said, you can never be prepared enough, and it always depends on the volume of patients you're going to see," Jarrett said. "If it was as overwhelming as it appears to be in China, that would certainly stress the whole health care system in the U.S. tremendously because there are only a certain number of beds."

To save on personal protective supplies, hospitals have plans to place coronavirus-infected patients in specific quarantined areas and have them be treated by specific teams of dedicated personnel, Schulman said. That way, heavy-duty respirators and other protective equipment will only need to be handed out to the limited number of [hospital](#) workers coming into direct contact with the sick.

If necessary, Foster said, hospitals also could limit the number of people allowed into routine surgeries, to conserve surgical gowns, masks and gloves. Elective surgeries might have to be suspended if things grow dire.

"I would say we are better prepared than we were, but a pandemic is really an all-hands-on-deck scenario," Schwedhelm said. "We're going to need every health care worker to be able to protect themselves and we need to be able to provide them the resources to do that, otherwise I'm not sure they're going to come to work."

More information: The U.S. Centers for Disease Control and Prevention has more about [coronavirus](#).

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