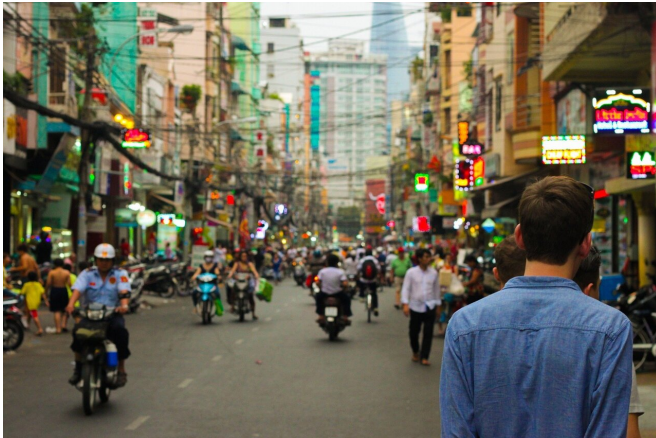


The silent threat of the coronavirus: America's dependence on Chinese pharmaceuticals

12 February 2020, by Christine Crudo Blackburn, Andrew Natsios, Gerald W Parker and Leslie Ruyle



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As the new coronavirus, called 2019-nCoV, spreads rapidly around the globe, the international community is scrambling to keep up. Scientists rush to develop a vaccine, policymakers debate the most effective containment methods, and health care systems strain to accommodate the growing number of sick and dying. Though it may sound like a scene from the 2011 movie "[Contagion](#)," it is actually an unfolding reality.

In the midst of all of this, a potential crisis simmers in the shadows: The global dependence on China for the production of pharmaceuticals and medical equipment.

Chinese dominance in the pharmaceutical market

We represent an interdisciplinary group of scientists and policymakers at the [Scowcroft Institute's Pandemic and Biosecurity Policy Program based at the Bush School of Government](#)

[at Texas A&M University](#) who have been holding annual summits addressing pandemic-related issues for the past five years. One of our goals is to promote dialog on potential risks related to pandemics and U.S. security, in this case the disruption of supply chains and availability of medical supplies and drugs.

Today, about [80% of pharmaceuticals sold in the U.S. are produced in China](#). This number, while concerning, hides an even greater problem: China is the largest and sometimes only global supplier for the active ingredient of some vital medications. The active ingredients for medicines that treat [breast cancer and lung cancer and the antibiotic Vancomycin](#), which is a last resort antibiotic for some types of antimicrobial resistant infections, are made almost exclusively in China. Additionally, China controls such a large market portion of heparin, a blood thinner used in [open-heart surgery](#), kidney dialysis and blood transfusions that the U.S. government was left with no choice but to continue buying from China even after a [contamination scandal in 2007](#).

China is not only the dominant global supplier of pharmaceuticals, but it is also the largest supplier of medical devices in the U.S. These include things like [MRI equipment](#), surgical gowns, and equipment that measures oxygen levels in the blood. Supplies of these essential products have not yet been severely disrupted by the coronavirus, but if China is no longer will or able to supply them to the U.S., thousands of Americans could die.

More concerning still are the limited options available to the U.S. and the rest of the globe to make up the shortfall. It could take years to develop the necessary infrastructure to reestablish U.S. manufacturing capacities and obtain Food and Drug Administration licensure to overcome the loss

of the Chinese supply.

When a disease reaches epidemic levels, the first obligation for leaders in any country is to protect their own people. As this current crisis progresses, there may come a point when political leaders in China will face decisions on whether to prohibit the export of pharmaceuticals, medical devices and other vital medical components in order to treat or protect their own people. Such acts would be the logical outcome of an escalating situation. For the [2009 H1N1 pandemic response](#), for example, the U.S. was pushed to the back of the queue for vaccine deliveries even though we had existing contracts with a major vaccine manufacturer located in another country. Those vaccine deliveries were delayed.

Disruption of global pharmaceuticals?

While a total loss of active ingredient imports from China might seem far-fetched, we believe the increasing scale of the outbreak moves it closer to the realm of possibility.

About six weeks into international recognition of the epidemic in China, there are already [shortages of vital personal protective equipment](#) in both China and the U.S. UPS has transported more than [2 million masks and 11,000 gowns](#) to Wuhan to help alleviate the shortage. But what happens when everyone runs out of protective equipment?

Wuhan is a [significant player in the biotechnology and pharmaceutical industry](#), with multiple pharmaceutical companies located in the city. How many of these factories have closed as a result of the pandemic, and when will those that have closed open back up? Global supply chains could reach a crisis point if they are compromised because Hubei province, where Wuhan is located, is in quarantine and factories are shut down.

Additionally, Wuhan is the location of China's first Biosafety Level (BSL) 4 laboratory, which was opened in [2017 to research SARS](#) and other emerging diseases. It is the only lab in China that can safely handle the world's most dangerous pathogens that pose a significant risk of transmission. Infection, death and quarantine in

Wuhan and the surrounding Hubei province is restricting the ability of all types of commerce in the region. Meanwhile, the virus is already creating a significant supply chain imbalance within China. That means those medical supply companies will be under pressure to keep any products produced within the country for protection of their own health care workers, laboratory personnel and the general public.

The regulatory apparatus to insure that the Chinese manufactured pharmaceuticals being exported meet the highest standards of safety and quality control are [weak or nonexistent](#), according to a congressional report last year. The pressure placed on supply chains by the outbreak could further exacerbate existing quality control challenges. In doing so, the virus has highlighted our reliance on China as a U.S. national security issue due to outsourcing our manufacturing capabilities and inability to ensure [quality control](#).

As with all pandemics, the complexity of this outbreak demands international collaboration and transparency. At the same time, U.S. public health officials must acknowledge the country's vulnerability due to our dependence on Chinese production of pharmaceuticals and [medical equipment](#). The U.S. must develop a response plan for the inevitable shortages in the near-term and take necessary actions to reclaim control of our medical supply chain. Continuing to overlook this long-known vulnerability will only lead to catastrophe.

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