

THIS IS IT! THIS IS NOT IT! Pandemic Preparedness Before and After COVID-19



Best Selling Author Predicts Future Pandemics

New York Times bestselling author David Quammen advises businesses to prepare for inevitable future pandemics because our society fails to recognize that man's relationship with the natural world is the cause of such outbreaks. Quammen, author of 12 books including *Spillover: Animal Infections and the Next Human Pandemic* spoke to LVBCH members during his July 21st webinar presentation, *THIS IS IT: THIS IS NOT IT: Pandemic Preparedness Before and After COVID-19.*

In *Spillover*, published in 2012, epidemiologists predicted there would be another "big one" (pandemic) caused by a new virus emerging from an animal, possibly a primate or bat, and would most likely be a virus that evolved quickly, such as a flu or corona virus. They further predicted it would originate where humans have disrupted contact with wild animals, such as in or near a wet market, perhaps in China.

"When the world corona virus was spoken in connection with this new pneumonia, disease scientists all over the world shuttered," Quammen said. COVID-19 is a type of zoonotic disease, defined as one that originates in an animal and then jumps or "spills over" into a human host. Zoonotic diseases account for 60-70% of human infectious diseases and have been seen throughout history. Other pandemics caused by zoonotic diseases have included the bubonic plaque, Ebola, HIV-AIDS, avian influenza, West Nile Fever, SARS, MERS, and Zika. COVID-19 is part of a horrible trend resulting from our contact with wild animals – either in a gentle or exploitive way – and the viruses they carry.

"This is the next big one; this is it what they told me to be ready for but this is not the end," he said. "When we get through this, which we will – with however much difficulty and misery and financial as well as human pain and death – we must immediately prepare for the next one because there will be another big one."

From a Darwinian perspective, diseases that take hold of a human host, instead of a monkey or bat, and are able to transmit from one human to another have "won the sweepstakes" and the virus can become one of the most successful viruses in the world. Epidemiologists and public health officials were aware this could happen and scientists have been developing ways to identify and prevent the spread of zoonotic diseases. Some countries like Singapore, which had been hit by SARS 1, were successful in

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managing COVID-19's spread. They had containment plans including mandatory quarantining and isolation of infected people. Meanwhile, the United States was caught "flat footed" and in fact had cut funding and dismantled our epidemic response team with disastrous results. Now we are leading in the number of deaths.

"Preparedness seems expensive if your imagination fails to tell you what could happen," he said. Now, we're not talking hypothetically, we're experiencing it. In hindsight, preparedness spending would have been much less costly. The United States government has already spent more than \$3 trillion in stimulus, not to mention what has been loss by businesses. Quammen shared the story of a scientist who 10 years ago was working on real-time, point-of-contact testing for airports. The scientist claimed that by the time the passenger had gone through security, the results of the test would be available. He suspects the reason such a test was not available when COVID-19 broke out was the lack of funding, rather than the lack of scientific knowledge.

Quammen referred to SARS 1 (severe acute respiratory syndrome) outbreak of 2003 as proof that we can control outbreaks. SARS was an infectious viral respiratory illness in which one of 10 people infected died, and like COVID-19 was caused by a coronavirus. Starting in Asia, it spread rapidly to more than two dozen countries through airplane passengers. Fortunately, it was quickly contained by prompt isolation of patients and strict enforcement of quarantine. In total there were just only 8,000 cases of SARS-1 and 700 deaths.

Quammen urged individuals – voters, taxpayers, white and blue collar workers – and businesses to be leaders in insisting that community health is properly funded. He advised business owners to ensure their employees are vaccinated against the flu and COVID, when available, and that their children are vaccinated against diseases like the measles. Regarding reopening, he said businesses have to be concerned for their employees' physical and behavioral health, have robust testing and contact tracing plans in place, and make it easy for employees to practice social distancing, masking, and good hygiene. Businesses should also think about their global supply chains and consider alternatives should the chain be broken.

When and how to reopen schools and colleges is an even more difficult question, he said, adding the emotional and psychological health of the students, their educational advancement, and the teachers' health must be considered. "This is a Solomonic question and I'm not Solomon so I don't know how to cut this baby in half," Quammen said. "I have only sympathy and respect for the people trying to make these decisions."

Despite all the challenges, he remains optimistic that we will have a vaccine. Although the COVID-19 virus 60 West Broad St. • Suite 306 • Bethlehem, PA 18018 • P: 610-317-0130

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will probably still be with for three or five years, we will be wiser and should take the pandemic as an opportunity to have a structural reset of community health and pandemic protection.

"We're smarter than viruses and we are capable of creating scientific and technological defenses against this kind of virus," he said. "We can develop societal defenses by organizing our communities across the nation, and from one nation to another. But we have to do much better next time and much better with COVID-19, starting tomorrow morning. We can do it."

ABOUT DAVID QUAMMEN



Mr. Quammen was born and raised in the suburbs of Cincinnati. After education at Yale and Oxford and the publication of a novel, he moved to Montana, where additional novels followed. He worked as a columnist for Outside Magazine for 15 years, as a contributing writer for National Geographic, and has received multiple National Magazine Awards. Columns, and longer pieces, comprised four short works of nonfiction, followed by four fullength nonfiction books including 2012's Spillover. Spillover received the National Association of Science Writer's Science and Society Book Award and the Society of Biology (UK) Book Award in General Biology. He has received honorary doctorates from Montana

State University and Colorado College. He also received a Rhodes scholarship, a Guggenheim fellowship, and a Lannan Literary Award for Nonfiction, and has served as Wallace Stegner Professor of Western American Studies at Montana State University.

ABOUT SPILLOVER

A masterpiece of science reporting that tracks the animal origins of emerging human diseases. The emergence of strange new diseases is a frightening problem that seems to be getting worse. In this age of speedy travel, it threatens a worldwide pandemic. We hear news reports of Ebola, SARS, AIDS, and something called Hendra killing horses and people in Australia—but those reports miss the big truth that such phenomena are part of a single pattern. The bugs that transmit these diseases share one thing: they originate in wild animals and pass to humans by a process called spillover. David Quammen tracks this subject around the world. He recounts adventures in the field—netting bats in China, trapping monkeys in Bangladesh, stalking gorillas in the Congo—with the world's leading disease scientists. Spillover takes the reader along on this astonishing quest to learn how, where from, and why these diseases emerge, and he asks the terrifying question: What might the next big one be?

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