



8. One Health Pandemic Prevention and Mitigation: The Role of FDA

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In the early 2000s, scientists and public health experts observed a significant increase in the global circulation of infectious agents and the growing risk that zoonotic disease posed not just for epidemics but for a full-scale global pandemic. For many people, SARS (Severe Acute Respiratory Syndrome SARS-CoV) was a wake-up call. SARS surfaced in Guangdong Province, China, in November 2002, probably originating in a virus carried by horseshoe bats, and rapidly spread beyond China. More lethal than the SARS-CoV2, the virus causing our current pandemic, SARS-CoV was fortunately less infectious and eventually faded after killing fewer than 1000 people worldwide. But at the time, the public health community was well aware that it could have been much worse—and, of course, with SARS-CoV2 it is.

One response to the growing perception of a global threat from zoonotic disease was the emergence of the concept of “One World-One Health” in 2004. One Health was an extension of “One Medicine,” the notion that the boundaries between human health and animal health are both artificial and counter-productive. One Health took it several steps further, incorporating data and expertise from human health, animal health, and ecosystem health. At its most ambitious, the idea is that only by understanding the effects of industrialization, population growth, geopolitical issues, migratory movements of both humans and animals, and resulting ecosystem degradation can we really understand the emergence of new and re-emergent disease and toxicity. Some aspects of a One Health approach were adopted by WHO, FAO and, in the United States, by FDA, USDA, and CDC. In September 2019, months before the current pandemic was realized, the Advancing Emergency Preparedness Through One Health Act (S. 1903/H.R. 3771) was introduced in Congress. The goal of the legislation would be to require a coordinated One Health approach to be adopted by U.S. agencies. Largely unnoticed at the time of its introduction, it now has bipartisan salience. Nonetheless, the One Health concept is not well known. Even in the scientific community, it is much more resonant among veterinary scientists than it is among the broader biomedical community or environmental scientists and policymakers.

This paper will examine the One Health approach through FDA's One Health Initiative using the lens of Covid-19. Clearly, the existence of such an approach failed to forestall the pandemic. But was that a failure of implementation or a failure of concept—or more than either could achieve? What exactly is One Health? Is it merely a method designed to break down silos or is it something more? Are its proponents asking it to do too much? What is its role in horizon scanning for the next pandemic or solutions for the current one? How would it affect FDA's current mission, procedures, and evolution? How should FDA share a One Health approach with other agencies like CDC and USDA?