

The Honorable Lamar Alexander  
Chairman  
Committee on Health, Education, Labor and Pensions  
United States Senate Washington, D.C. 20510

June 26, 2020

RE: "Preparing for the Next Pandemic: A White Paper"

Dear Chairman Alexander,

Keep Antibiotics Working and its undersigned members and allies appreciate your leadership on addressing the threat from the current pandemic and on looking for ways to better prepare for the next one. The white paper, "Preparing for the Next Pandemic," does a thorough job reviewing the actions that have been taken and identifying needed next steps. However, we believe that there are two important gaps that the white paper does not adequately address: 1) the role of animals in the spread of pandemics and 2) the importance of antimicrobials for addressing pandemics. While beyond the scope of your white paper, we believe that Congress should also develop policy mechanisms to proactively reduce future pandemics, and we hope you will work on such measures as well. Formed in 2001, Keep Antibiotics Working is a coalition of 18 advocacy organizations that joined together to ensure that untreatable superbugs resulting from the overuse of antibiotics on farms do not reverse the medical advances of the past century.

**1) Pandemic response must address spillover of pathogens from animals to humans:**

This pandemic, like previous pandemics and most emerging diseases, is the result of a disease that originated in animals. The Plague, 1918 Spanish Flu, 2009 H1N1 Flu, Ebola, SARS, MERS, and now COVID-19 all spilled over from animals and have caused untold human suffering.<sup>1</sup> Several of these, including the 1918 Spanish Flu and other influenza strains such as the 2009 H1N1, along with other major causes of human illness such as *Salmonella enterica* and *Campylobacter* spp. are diseases linked to animal agriculture. The potential for animal agriculture to be a source of pandemics, while not directly addressed in the white papers was alluded to in the use of the Crimson Contagion Functional Exercise Series, which looked at the spillover of a highly pathogenic avian influenza strain from poultry farms to humans. Any response to future pandemics must take into account the role of animals both domestic and wild as potential origins of these diseases. One of the most pressing concerns related to zoonotic disease transmission is public health agencies' lack of authority to address human diseases that have food animal

<sup>1</sup> <https://www.ncbi.nlm.nih.gov/books/NBK525302/>

reservoirs.<sup>2</sup> The Animal Health Protection Act (AHPA) gives the U.S. Department of Agriculture (USDA) authority to monitor and take steps to control animal disease but there is no similar authority to address pathogens in animals that create risks to human health.

We recommend that any legislation to address future pandemics specifically provide public health officials with both resources and authorities to prevent, monitor, investigate, and respond to potential human pathogens that are present in facilities where livestock and poultry are present.

**2) Pandemic response must address the threat of antimicrobial resistance:**

Antimicrobials are essential tools for protecting public health but their ability to help patients is being threatened by the spread of antimicrobial resistance.<sup>3</sup> In the case of the COVID-19 pandemic, there is evidence that antiviral medications provide benefits<sup>4</sup> and most patients hospitalized with COVID-19 receive antibiotics to address secondary bacterial infections. These secondary infections contribute to the illness and death of COVID-19 patients.<sup>5</sup> The spread of antimicrobial resistance either to antiviral drugs or to antibiotics used to treat secondary infections greatly limits our ability to respond to pandemics and creates additional strains on our health system.

We recommend that any legislation to address future pandemics specifically provide resources to address antimicrobial resistance including strengthening existing monitoring and surveillance efforts for both antimicrobial use and antimicrobial resistance in human medicine and in agriculture.

*Below we offer recommendations in areas identified in your white paper.*

## **Tests, Treatments and Vaccines**

Along with vaccines, effective antimicrobials are needed to reduce the burden of illness in future pandemics; however, the existing model for the development and marketing of new antimicrobials is failing. Any legislation addressing future pandemics should include funding for a broad menu of incentives across the antibiotic life-cycle that are targeted at encouraging the

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<sup>2</sup> <https://www.gao.gov/assets/670/666231.pdf>

<sup>3</sup> <https://www.cdc.gov/antibiotic-use/stewardship-report/pdf/stewardship-report-2018-508.pdf>

<sup>4</sup> <https://www.chicagotribune.com/coronavirus/ct-coronavirus-treatment-remdesivir-new-promising-trial>

<sup>5</sup> <https://www.thelancet.com/action/showPdf?pii=S0140-6736%2820%2930183-5;>

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30211-7/fulltext;](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30211-7/fulltext;)

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30566-3/fulltext#tbl2](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30566-3/fulltext#tbl2)

development of antimicrobials to counter the greatest microbial threats.<sup>6</sup> Legislation must also include support for diagnostic tests to guide optimal antibiotic use, and for vaccines to prevent infections and obviate the need for antibiotics. Support is needed for diagnostic tests and vaccines for use in animal agriculture as well. Tests and vaccines for use in animals are important because the resistant bacteria that spread from the overuse of antibiotics on farms can be transferred to people through farm workers, through food, and through the contamination of the environment with waste, antibiotics, and resistant bacteria. These resistant bacteria can then cause secondary infections or transfer their resistance to other bacteria that cause secondary infections in people whose immune systems are already strained by pandemic illness.

### **Disease Surveillance**

Improved surveillance is key to identifying and addressing future pandemics. Given that pandemics are largely the result of spillover from animals both domestic and wild, much more must be done to monitor pathogens in animal populations. Improved surveillance is also desperately needed to track and control resistant pathogens so our antibiotics can remain functional for treating future pandemics. Finally, we need to monitor how antibiotics are being used to make sure that their overuse does not lead to resistance that harms our ability to respond to pandemics. We recommend that any legislation addressing future pandemics include resources for surveillance of pathogens in animal populations and provide public health agencies authority to investigate pathogens in facilities where animals are raised. It should provide additional resources for monitoring, surveillance, and reporting of antimicrobial resistance and antibiotic use in human healthcare and agricultural settings.

### **Public Health Capabilities**

A critical gap in public health regulatory capability is the lack of public health agency authority to address human pathogens on farms where animals are raised for meat. This was clearly shown during a 2015 outbreak of *Salmonella* affecting almost 200 patients where public health authorities were blocked from investigating and taking action on farms where the pathogen likely originated.<sup>7</sup> This lack of authority will greatly hinder our ability to monitor and address future pandemics which can potentially spread in food animal populations before spilling over to humans. In addition, more resources are needed to ensure that antibiotics are used effectively in both human healthcare and agricultural settings. Given the serious challenges to developing new antimicrobials, it is essential that existing ones remain effective both for day to day infections and for the increased risk of infection during a pandemic. We recommend that any legislation

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[https://www.chathamhouse.org/sites/default/files/field/field\\_document/20151009NewBusinessModelAntibioticsCliftGopinathanMorelOuttersonRottingenSoExecSum.pdf](https://www.chathamhouse.org/sites/default/files/field/field_document/20151009NewBusinessModelAntibioticsCliftGopinathanMorelOuttersonRottingenSoExecSum.pdf)

<sup>7</sup> <https://www.nytimes.com/2019/08/04/health/pork-antibiotic-resistance-salmonella.html>

addressing future pandemics provide public health agencies specific authority to address the potential for pandemic pathogens to spillover from farms. Legislation must also include increased resources to support improved antibiotics use in both human healthcare and in agricultural settings.

We thank you for your leadership on the critical issue of pandemic preparedness and urge you to be sure that measures to address pathogen spillover and antimicrobial resistance are a key components of our nation's preparedness efforts.

Sincerely,

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Food Safety Program Director, Food Animal Concerns Trust  
On behalf of Keep Antibiotics Working and its undersigned member and colleague organizations

Center for Biological Diversity  
Clinician Champions for Comprehensive Antibiotic Stewardship (CCCAS)  
Food and Water Action  
Food Animal Concerns Trust  
U.S. PIRG