



Submitted electronically

March 11, 2022

Ms. Dawn O'Connell
Assistant Secretary for Preparedness and Response
HHS Office of the Assistant Secretary for Preparedness and Response (ASPR)
200 Independence Ave.
Washington, DC 20201

Re: 2023-2026 National Health Security Strategy (NHSS)

Dear Ms. O'Connell,

Thank you for the opportunity to provide comments to inform the development of the 2023-2026 National Health Security Strategy (NHSS). We welcome the position the Office of the Assistant Secretary for Preparedness and Response (ASPR) has taken to develop a strategy that considers the lessons learned from the COVID-19 pandemic. We look forward to collaborating with ASPR to inform its strategy to improve and strengthen our nation's capabilities to prepare for and respond to future public health emergencies and health security threats.

FasterCures and the Center for Public Health are centers of the Milken Institute, a nonprofit, nonpartisan think tank. As part of the Milken Institute, FasterCures and the Center for Public Health work to catalyze practical, scalable solutions to address the challenges of our biomedical and public health systems, respectively. Guided by a conviction that the best ideas, under-resourced, cannot succeed, we conduct research and analysis and convene top experts, innovators, and influencers from different backgrounds and competing viewpoints. We leverage this expertise and insight to construct programs and policy initiatives.

In this letter, we offer comments on the following areas:

- The national health security threat posed by antimicrobial resistance;
- Early warning capabilities as a core component of a broader strategy to pre-empt future pandemics; and
- The critical role of the private sector in preparedness, response, and recovery efforts.

Our comments have been informed by our research and input from multi-stakeholder convenings.

Antimicrobial Resistance

Antimicrobial resistance (AMR)—which occurs when bacteria, viruses, and other microorganisms adapt over time and no longer respond to the medicines designed to treat infections—is a growing threat in the US and globally. AMR, frequently referred to as the silent or overlooked pandemic,^{1,2} will increasingly demand our attention in the coming years. During the pandemic, a surge in drug-resistant infections has been reported by multiple countries due to the rise of

secondary infections and the misuse of antibiotics and other antimicrobials to treat COVID-19.³ Even prior to the pandemic, the global impact of drug-resistant infections on human health was staggering, with a recent study estimating that bacterial AMR caused 1.27 million deaths worldwide in 2019 and played some role in the deaths of nearly 5 million people overall.⁴ According to the US Centers for Disease Control and Prevention (CDC), antibiotic-resistant diseases afflict more than 2.8 million Americans and claim more 35,000 American lives every year.⁵ In its most recently published analysis, the CDC estimates first-line antibiotic treatment failures is costing the US health-care system \$20 billion each year in direct costs and another \$35 billion in lost productivity.⁶

We believe that any strategy on public health preparedness and response must integrate planning for all pandemic sources, including AMR. It is critical that we have access to effective antibiotics, not only in curbing growing resistance but also in responding to future pandemics, which, like COVID-19, may carry significant risk of hospitalization and secondary bacterial infections. However, while the need for new antibiotics is generally understood, the development of these medicines has slowed to a standstill due to significant financial disincentives for investment.

In the medium- and long-term, steps must be taken to spur innovation in antibiotics. The Milken Institute has been working with stakeholders across the ecosystem to examine new incentives that can revitalize the antibiotic pipeline. Through our work, we have found that policies that address payment for antibiotics such as those described in The Pioneering Antimicrobial Subscriptions to End Upsurging Resistance (PASTEUR) Act (S. 2076) and the Developing an Innovative Strategy for Antimicrobial Resistant Microorganisms (DISARM) Act (H.R. 4127) will be critical to stimulating new antibiotic development. Both of these bills seek to change current payment models for antibiotics so that payments are more appropriately tied to their value to public health.

We strongly urge that the NHSS aligns with and promotes efforts to advance antibiotic development, including policy initiatives to create incentives to help revive the pipeline of new antibiotics.

Early Warning System for Pandemic Threats

The ongoing COVID-19 pandemic has underscored the need for stronger early warning capabilities to detect public health threats. In the future, many new pathogens are expected to be zoonotic in origin due to land use, food production practices, and population growth – both at home and abroad. As zoonotic outbreaks become more frequent, biosurveillance systems will need to monitor the effects of these changes on animal health and their potential spillover to humans.

Throughout the pandemic, FasterCures has worked with experts from the US and around the world to begin to identify areas in which investments would be most impactful in preventing future pandemics. A key takeaway from this work was the need for a coordinated early warning system that would collect and analyze data and generate insights on the places and animal populations at highest risk of spillover to humans (we describe this vision fully in our June 2021 publication, [“A Global Early Warning System for Pandemics: Mobilizing Surveillance for Emerging Pathogens”](#)). Importantly, such a system would:

- Monitor microbe, animal, and human interfaces;
- Provide strategic information on the geographies and animal populations at highest risk of zoonotic spillover to humans;
- Capture traditional data and nontraditional data sources of outbreak information;
- Characterize pathogens in pre- and early event settings to provide information on their evolution and risk;
- Capture and integrate human behaviors (e.g., population migration, conflict, and climate events) to better identify potential areas of risk;
- Leverage data collected from historical and current events and outbreaks for insights (such as on the behaviors and practices that drive spillover);
- Leverage the newest genomic sequencing technologies and most advanced prediction methods; and
- Ensure all data captured are translated into insights to support outbreak response and decision-making.

The 2019-2022 NHSS recognizes the importance of surveillance across the One Health spectrum to provide early warning detection and diagnosis. We urge ASPR to elevate the strengthening of early warnings capabilities as a key focus area of the 2023-2026 NHSS.

Role of Partnerships and the Private Sector

Finally, the Milken Institute recognizes the critical role the private sector can play in national health, and we urge ASPR to include the private sector in its strategic approach, as it did in the 2019-2022 NHSS. However, we encourage ASPR to take a broader view of the private sector beyond the health and medical product sector to include organizations in data, technology, agriculture, and finance, which can bring to bear nontraditional data systems, advanced analytics and cutting-edge technologies. In a report released on February 3, "[Learning from COVID-19: Reimagining Public-Private Partnerships in Public Health](#)," we call for an evolution from traditional public-private partnerships toward those that emphasize a shared responsibility of all sectors, industries, and communities as agents of public health and accountability for the public good. The report highlights partnerships and case studies that emerged in response to the COVID-19 crisis and offers 10 recommendations for how public-private partnerships can be strengthened to maximize their impact on public health preparedness and response.

Conclusion

Thank you for the opportunity to provide comments in the development of the next NHSS. We welcome the opportunity to provide additional detail on the information above and to serve as a resource as you continue to refine the strategy.

Sincerely,



Esther Krofah
Executive Director
FasterCures and Center for Public Health
Milken Institute

¹ Kate Dodson, "Antimicrobial Resistance Is the Silent Pandemic We Can No Longer Neglect," United Nations Foundation, November 22, 2021, <https://unfoundation.org/blog/post/antimicrobial-resistance-is-the-silent-pandemic-we-can-no-longer-neglect/>.

² Ramanan Laxminarayan, "The Overlooked Pandemic of Antimicrobial Resistance," *The Lancet*, January 21, 2022, [https://doi.org/10.1016/S0140-6736\(22\)00087-3](https://doi.org/10.1016/S0140-6736(22)00087-3).

³ "Americas report surge in drug-resistant infections due to misuse of antimicrobials during pandemic," Pan American Health Organization, November 17, 2021, <https://www.paho.org/en/news/17-11-2021-americas-report-surge-drug-resistant-infections-due-misuse-antimicrobials-during>.

⁴ Christopher J. L. Murray, Kevin Shunji Ikuta, Fabrina Sharara, Lucien Swetschinski, Gisela Robles Aguilar, Authia Gray, Chieh Han, Catherine Bisignano, Puja Rao, Eve Wool, et al., "Global Burden of Bacterial Antimicrobial Resistance in 2019: A Systematic Analysis," *The Lancet* (January 2022): 1-27, [https://doi.org/10.1016/S0140-6736\(21\)02724-0](https://doi.org/10.1016/S0140-6736(21)02724-0).

⁵ "Antibiotic Resistance Threats in the United States 2019," U.S. Centers for Disease Control and Prevention, December 2019, <https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf>.

⁶ "Antibiotic Resistance Threats in the United States, 2013," U.S. Centers for Disease Control and Prevention, April 2013, <https://www.cdc.gov/drugresistance/pdf/ar-threats-2013-508.pdf>.