

PROPOSED

PROPOSED CONGRESSIONAL HEARINGS ON THE RECOMMENDATIONS OF THE 2024 NATIONAL BLUEPRINT FOR BIODEFENSE

WE ARE STILL DANGEROUSLY
UNPREPARED

ISSUED BY THE
BIPARTISAN COMMISSION ON BIODEFENSE

May 2024



HEARINGS

APPENDIX

**PROPOSED CONGRESSIONAL
HEARINGS ON THE
RECOMMENDATIONS
OF THE 2024 NATIONAL
BLUEPRINT FOR BIODEFENSE**

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INTRODUCTION

The Bipartisan Commission on Biodefense has released *The National Blueprint for Biodefense: Immediate Action Needed to Defend Against Biological Threats*. This updated Blueprint contained 36 specific legislative, programmatic, and policy recommendations to strengthen national defense against biological threats (see Appendix). After a comprehensive examination of US biodefense efforts by the Executive Branch and Legislative Branch of government, we called for major reforms to bolster America's ability to confront intentionally introduced, accidentally released, and naturally occurring biological threats. Biodefense touches many aspects of government and, as such, requires a complex enterprise approach that pragmatically addresses (1) leadership; (2) intelligence, attribution, and deterrence; (3) science and technology; (4) preparedness; (5) detection and surveillance; and (6) response, recovery, and mitigation (see Figure 1).

Congressional oversight to ensure that federal departments and agencies are meeting congressional and other mandates, and are doing so in a coordinated fashion, is imperative. The following proposed hearings address all 36 of the recommendations that comprise the 2024 *National Blueprint for Biodefense*.

Note that while not listed in the following text, the House Committee on Appropriations and Senate Committee on Appropriations share responsibility for addressing the elements of the national biodefense enterprise mentioned in this document.

Figure 1. Conspectus of the National Blueprint for Biodefense



LEADERSHIP

- National leadership and management
- National biodefense strategies and reviews
- Unified biodefense budget
- Congressional agenda for biodefense



INTELLIGENCE, ATTRIBUTION, AND DETERRENCE

- Biological intelligence management
- Biological attribution for decision-making
- Biological and Toxin Weapons Convention
- Biological threat reduction
- Federal Select Agent Program overhaul
- Artificial intelligence/life science risk management



SCIENCE AND TECHNOLOGY

- The Apollo Program for Biodefense
- Next-generation personal protective equipment
- Pathogen transmission reduction in built environments
- Incorporation of national defense science and technology
- Astrobiodéfense
- Regulatory process improvement
- Medical countermeasure investment
- Medical countermeasure innovation



PREPAREDNESS

- Stockpile supply, distribution, and dispensing
- Centers for Disease Control authorization
- Public health security workforce
- Stratified biodefense hospital system
- Warfighter biodefense
- Clinical infection control guidelines
- School biodefense
- Critical infrastructure biodefense
- State, Local, Tribal, and Territorial biological emergency preparedness



DETECTION AND SURVEILLANCE

- BioWatch replacement
- National diagnostic testing for biological events
- Public health data infrastructure and collection during biological emergencies
- Integrated biosurveillance



RESPONSE, RECOVERY, AND MITIGATION

- Biodefense resources for State, Local, Tribal, Territorial emergency services
- Public health biological emergency funding, guidance, and waivers
- Laboratory response networks for biodefense
- National decontamination and remediation of the environment after biological events
- Global public health response to biological events

Recommendation 1: Reinforce White House leadership of the national biodefense enterprise.

Hearing Topic

Hearings should explore current White House biodefense leadership structures, lessons learned from federal preparedness and response to previous biological events, and proposals to strengthen leadership of the biodefense enterprise at the White House and throughout the federal government.

Committees

- House Committee on Oversight and Accountability
- Senate Committee on Homeland Security and Governmental Affairs

Suggested Witnesses

- Former and Current National Security Advisors
- Former and Current Directors of the White House Office of Pandemic Preparedness and Response Policy
- Former and Current Senior Directors of the National Security Council Global Health Security and Biodefense Directorate
- Former White House coordinators for Ebola, COVID-19, and Mpox
- Former Directors of the Homeland Security Council Health and Biodefense Directorate

Suggested Questions

1. What circumstances and White House structures positioned previous White House coordinators for biological events for success when normal leadership structures failed? What lessons can we take from the response to Ebola, COVID, and Mpox?
2. In 2022, Congress required the creation of the White House Office of Pandemic Preparedness and Response Policy. How can the Administration and Congress support this entity and set it up for success in leading biodefense activities?
3. What lessons have been learned from the experiences of leading during COVID-19 and Mpox and how have those lessons been addressed?
4. What are the challenges in aligning and coordinating federal departments and agencies to create a unified and effective national biodefense enterprise?

Recommendation 2: Implement, maintain, and update a comprehensive national biodefense strategy.

Hearing Topic

A requirement of the National Defense Authorization Act for Fiscal Year 2017 (P.L. 114-328), the 2018 and 2022 iterations of the National Biodefense Strategy addressed federal government biodefense goals and responsibilities. Before that, the federal government relied on numerous disparate and uncoordinated policies and strategies to address biological threats.

Hearings should assess the execution of the National Biodefense Strategy, determine how add-ons (e.g., global health security) should be incorporated into the Strategy, explore capability gaps identified in the implementation process, and discuss next steps in securing the Nation from biological threats.

Committees

- House Committee on Oversight and Accountability
- Senate Committee on Homeland Security and Governmental Affairs

Suggested Witnesses

- Director of the White House Office of Pandemic Preparedness and Response Policy
- Secretary of Health and Human Services
- Secretary of Defense
- Secretary of Agriculture
- Secretary of Homeland Security
- Secretary of the Interior

Suggested Questions

1. How frequently are you coordinating or meeting with federal department and agencies about implementation of the National Biodefense Strategy?
2. Has there been discussion of clarifying roles and responsibilities under each goal delineated in the National Biodefense Strategy?
3. Are you developing or have you developed a departmental-specific biodefense strategy or implementation plan in alignment with the National Biodefense Strategy? What major milestones are you targeting for implementation in the next two years?
4. Who is the lead on biodefense policy in your department and how can Congress and the Administration support that lead in effectively coordinating across your department?

Recommendation 3: Unify biodefense budgeting.

Hearing Topic

Lacking a unified approach to budgeting, biodefense budget requests are spread across dozens of departments and agencies. Until recently, the government neither reviewed nor regularly reported federal investments in biodefense activities. The William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (P.L. 116-283) changed this paradigm by requiring the White House Office of Management and Budget to conduct an annual crosscut analysis of biodefense spending across the federal government. The Office of Management and Budget issued the first such report in January 2023. However, this information has yet to inform biodefense spending decisions.

Hearings should address identification of biodefense spending at federal departments and agencies, aggregation and analysis of that information, and how information produced in the biodefense crosscut and other reports is used to inform the President's Budget Request, mandatory spending, and appropriations.

Committees

- House Committee on the Budget
- House Committee on Oversight and Accountability
- Senate Committee on the Budget
- Senate Committee on Homeland Security and Governmental Affairs

Suggested Witnesses

- Director of Office of Management and Budget
- Comptroller General of the United States

Suggested Questions

1. In response to the Office of Management and Budget biodefense data call required by the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (P.L. 116-283), how did the departments and agencies identify which programs and spending addressed biodefense and should therefore be included in the biodefense crosscut?
2. How has the Fiscal Year 2023 biodefense crosscut analysis and the process involved in producing that product impacted your understanding of, and planning for, biodefense needs throughout the Executive Branch?
3. What information would you find useful in future biodefense crosscuts?
4. What do the historical trends going back 15 years show regarding how much of the federal budget has been dedicated to biodefense, both monetarily and as a percentage of overall budgets?

Recommendation 4: Establish a clear congressional agenda to ensure national biodefense.

Hearing Topic

Congress should strengthen oversight, authorization, and appropriations for federal biodefense efforts to efficiently adapt our Nation's laws and strengthen federal defense against the growing biological threat.

Hearings should examine the scope of biodefense activities that are the subject of congressional oversight, which congressional committees have jurisdiction over biodefense, and recommendations to establish a clear congressional agenda to ensure national biodefense.

Committees

- House Committee on Oversight and Accountability
- Senate Committee on Homeland Security and Governmental Affairs

Suggested Witnesses

- Comptroller General of the United States
- Director of the Congressional Research Service
- Co-Chairs of the Bipartisan Commission on Biodefense

Suggested Questions

1. Which congressional committees have jurisdiction over biodefense? Are there any that have more jurisdiction than others?
2. What problems have you seen with so many committees conducting oversight of COVID-19 and other pandemics and biological events affecting national security?
3. As you know, Congress experiences similar difficulties with a clear congressional agenda for homeland security, as 88 committees and subcommittees have some jurisdiction. Most Committees are unwilling to cede jurisdiction. What recommendations would you make to congressional leadership to require these committees to work together to establish a clear congressional agenda for national biodefense?
4. What recommendations would you make for congressional oversight, investigation, legislation, and appropriation to include in a congressional agenda for national biodefense?

Recommendation 5: Increase, improve, and prioritize management of biological intelligence.

Hearing Topic

Despite the dire consequences and concerns associated with the biological threat, Congress has not provided, nor has the Intelligence Community dedicated, resources to collect information, analyze it, and produce intelligence about biological threats to the same extent as other threats.

Hearings (open and closed, unclassified and classified) should examine the biological intelligence enterprise, including federal department and agency roles and responsibilities.

Committees

- House Permanent Select Committee on Intelligence
- House Committee on the Judiciary
- House Committee on Armed Services
- Senate Select Committee on Intelligence
- Senate Committee on the Judiciary
- Senate Committee on Armed Services

Suggested Witnesses

- Director of National Intelligence
- Director of the Central Intelligence Agency
- Director of the Federal Bureau of Investigation
- Director of the Defense Intelligence Agency

Suggested Questions

1. How is the collection and analysis of information to produce biological intelligence different or similar to information collection and analysis to produce intelligence about other threats? How are these differences managed?
2. How, and with whom, is biological intelligence shared across the Intelligence Community and are there methods to improve this communication?
3. What activities has the National Counterproliferation and Biosecurity Center undertaken to enhance collection, analysis, and dissemination of biological intelligence?
4. What, if any, changes have been made to the Intelligence Community's approach to biological intelligence in response to questions about the origins of COVID-19 and other diseases?

Recommendation 6: Better support and inform decisions based on biological attribution.

Hearing Topic

The Nation lacks a coordinated biological attribution apparatus with clear lines of decision-making among the participating federal departments and agencies.

Hearings should explore the need for robust biological attribution activities, identify federal roles and responsibilities for biological attribution, and examine challenges preventing the establishment of a government-wide attribution apparatus.

Committees

- House Committee on the Judiciary
- House Committee on Armed Services
- House Committee on Foreign Affairs
- House Permanent Select Committee on Intelligence
- House Committee on Energy and Commerce
- Senate Committee on the Judiciary
- Senate Committee on Armed Services
- Senate Committee on Foreign Relations
- Senate Select Committee on Intelligence
- Senate Committee on Health, Education, Labor, and Pensions

Suggested Witnesses

- Director of the Federal Bureau of Investigations
- Secretary of Defense
- Secretary of State
- Director of National Intelligence
- Director of the Central Intelligence Agency
- Secretary of Health and Human Services

Suggested Questions

1. What discussions have you had with other federal departments and agencies about the decision-making process and lines of authority for attribution of a biological event?
2. What procedures, plans, or policies do you follow for adjudicating attribution information and informing decision-making?
3. What is the current state of art in scientific tools used for biological attribution?
4. How do you determine your role and responsibilities for attribution following a biological event relative to other departments and agencies?

Recommendation 7: Increase support for the Biological and Toxin Weapons Convention.

Hearing Topic

The Biological and Toxin Weapons Convention lacks an adequate verification mechanism for investigation and attribution of biological events. The Department of State should take a more active role in promoting the Convention as a key instrument for preventing the development, production, stockpiling, and use of biological weapons.

Hearings should examine federal resources and staffing to support compliance with the Biological and Toxin Weapons Convention, the expanding threat of biological weapons from nation states, and strategies for advancing the goals of the Convention.

Committees

- House Committee on Foreign Affairs
- House Committee on Armed Services
- Senate Committee on Foreign Relations
- Senate Committee on Armed Services

Suggested Witnesses

- Director of the Office of the Biological Policy Staff, Department of State
- Deputy Assistant Secretary of Defense for Threat Reduction and Arms Control, Department of Defense
- United States Ambassador to the United Nations

Suggested Questions

1. Does the Department of State have a strategy for advancing US objectives for the Biological and Toxin Weapons Convention?
2. What goals and milestones does the government seek to achieve in verification of, and compliance with, the Convention in the next two years?
3. Are countries violating the Biological and Toxin Weapons Convention? If so, which countries and what have been the consequences?
4. How has the Biological and Toxin Weapons Convention evolved since 1971 and is it effective in addressing the speed of technological development in areas such as genomics and artificial intelligence?

Recommendation 8: Strengthen biological threat reduction.

Hearing Topic

Multiple federal departments and agencies are actively engaged in building biodefense capabilities in partner countries around the world to enhance international capabilities to counter biological threats.

Hearings should identify US roles and responsibilities in contributing to global biodefense, including coordinating among relevant US federal departments and agencies, and discuss efforts to counter mis- and disinformation about US biodefense activities internationally.

Committees

- House Committee on Armed Services
- House Committee on Foreign Affairs
- House Committee on Energy and Commerce
- Senate Committee on Armed Services
- Senate Committee on Foreign Relations
- Senate Committee on Health, Education, Labor, and Pensions

Suggested Witnesses

- Director of the Defense Threat Reduction Agency, Department of Defense
- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Administrator of the United States Agency for International Development
- US Global AIDS Coordinator and Senior Bureau Official, Bureau of Global Health Security and Diplomacy, Department of State
- Director of the Office of Chemical and Biological Weapons Affairs, Department of State
- Director of the National Wildlife Health Center, United States Geological Survey, Department of the Interior

Suggested Questions

1. How do your departments and agencies coordinate your respective biological threat reduction activities? Do you coordinate or share strategies with each other to counter biological threats?
2. What are the most critical capability gaps in partner countries' capabilities to address biological threats?
3. How can we maximize existing resources to best mitigate the impacts of future biological threats?
4. How do each of you address misinformation and disinformation campaigns about your threat reduction work?

Recommendation 9: Review and overhaul the Federal Select Agent Program.

Hearing Topic

The existing Federal Select Agent Program is becoming obsolete. Information, knowledge, and equipment to produce new pathogens have become increasingly available in the years since the establishment of the Program. Past compliance issues with program requirements illustrate the complexity of conducting safe research on select agents. Pathogens are not the only problem. Biological weapons development could also use biological materials and certain biotechnologies that fall outside of the current regime.

Hearings should focus on the roles and responsibilities of federal agencies to comply with and enforce the Federal Select Agent Program, investigate unintentional releases, and prepare for new and previously unknown biological agents that are not yet, but could be, part of the Program; previous lapses in laboratory biosafety; and actions taken to address previous recommendations for the program.

Committees

- House Committee on Energy and Commerce
- House Committee on Agriculture
- House Committee on Armed Services
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Agriculture, Nutrition, and Forestry
- Senate Committee on Armed Services

Suggested Witnesses

- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Director of the Animal and Plant Health Inspection Service, Department of Agriculture
- Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, Department of Defense
- Chair of the National Science Advisory Board for Biosecurity

Suggested Questions

1. Do federal agencies notify state and local governments about laboratories participating in the Federal Select Agent Program in their jurisdictions? Would any additional authorities be required to allow such notification?
2. Technological advances are making it increasingly easier for bad actors to develop biological weapons that fall outside the current select agent regime, both in terms of the pathogens on the select agent list and the biotechnologies utilized. What is the federal government doing to address this increasing threat?
3. What changes are needed to the Federal Select Agent Program to allow the government to be nimble and adaptable to these rapidly changing conditions?
4. In a separate but related area, federal agencies give out grants for work with Select Agents to be conducted in laboratories. What kind of federal oversight is there, or should there be, for these grant proposals?

Recommendation 10: Combat risks from the convergence of artificial intelligence and the life sciences.

Hearing Topic

Artificial intelligence increases life science capabilities and lowers tacit knowledge necessary to perform tedious laboratory tasks. As the development of technologies accelerates and access to these technologies increases, the possibility of biological weapons attacks and other high-consequence biological events also increases. The convergence of artificial intelligence and the life sciences pose numerous risks now, and more will arise as time goes on.

Hearings should examine ongoing work by federal departments and agencies to incorporate artificial intelligence into biodefense activities, the ability of artificial intelligence to exacerbate the biological threat, and strategies for responsible development and deployment of artificial intelligence in the life sciences.

Committees

- House Committee on Science, Space, and Technology
- House Committee on Energy and Commerce
- House Committee on Armed Services
- Senate Committee on Commerce, Science, and Transportation
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Armed Services

Suggested Witnesses

- Director of the Office of Science and Technology Policy, Executive Office of the President
- Chair of the National Artificial Intelligence Advisory Committee
- Director of the National Institutes of Health, Department of Health and Human Services
- Director of the Office of Advanced Scientific Computing Research, Office of Science, Department of Energy
- Director of the National Science Foundation
- Chief Digital and Artificial Intelligence Officer, Department of Defense

Suggested Questions

1. Large-language models have offered guidance that could assist in planning and executing a biological attack. How do we assess the impact of large-language model-generated text on bioweapon attack planning?
2. What, if any, safeguards are being put in place to reduce risk in utilizing artificial intelligence for designing biological weapons?
3. What steps are the federal government taking to reduce the risk of the use of artificial intelligence in facilitating or exacerbating a biological attack?
4. As artificial intelligence tools evolve, how can we proactively identify and reduce risks related to their misuse in the context of biological threats? What research strategies should be prioritized to address this emerging issue?

Recommendation 11: Establish The Apollo Program for Biodefense.

Hearing Topic

The ever-growing biological threat demands 21st Century advancements in technology to keep pace and address future biological events. The Apollo Program for Biodefense is an ambitious program to develop and deploy the science and technologies needed to defend against all biological threats, empower public health, and end the era of pandemic threats in ten years.

Hearings should individually examine the benefits and development status of each of the 15 technology priorities identified in the Bipartisan Commission on Biodefense report *The Apollo Program for Biodefense*:

- Vaccine Candidates for Prototype Pathogens
- Multi-Pathogen Therapeutic Drugs in Advance of Outbreaks
- Flexible and Scalable Manufacturing of Pharmaceuticals
- Needle-Free Methods of Drug and Vaccine Administration
- Ubiquitous Sequencing
- Minimally- and Non-Invasive Infection Detection
- Massively Multiplexed Detection Capabilities
- Point-of-Person Diagnostics
- Digital Pathogen Surveillance
- A National Public Health Data System
- An Integrated National Pathogen Surveillance and Forecasting Center
- Next-Generation Personal Protective Equipment
- Pathogen Transmission Suppression in the Built Environment
- Comprehensive Laboratory Biosafety
- Technologies to Deter and Prevent Bad Actors

Committees

- House Committee on Science, Space, and Technology
- House Committee on Energy and Commerce
- House Committee on Armed Services
- House Committee on Agriculture
- House Committee on Homeland Security
- Senate Committee on Commerce, Science, and Transportation

- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Armed Services
- Senate Committee on Agriculture, Nutrition, and Forestry
- Senate Committee on Homeland Security and Governmental Affairs

Suggested Witnesses

- Director of the Office of Science and Technology Policy, Executive Office of the President
- Director of the National Institutes of Health, Department of Health and Human Services
- Assistant Secretary for Preparedness and Response, Department of Health and Human Services
- Director of the Defense Advanced Research Projects Agency, Department of Defense
- Administrator of the Agricultural Research Service, Department of Agriculture
- Under Secretary for Science and Technology, Department of Homeland Security

Suggested Questions

1. What are each of your organizations doing to take up and carry forward the technology priorities of The Apollo Program for Biodefense?
2. What resources do you require to achieve noteworthy progress in these fields in the next decade?
3. How do you coordinate biodefense research and development activities with other departments and agencies? What is your level of awareness about other biodefense research and development activities throughout the federal government? What steps could Congress or the Administration take to better identify these activities?
4. How do you coordinate development of these technology priorities with the private sector?

Recommendation 12: Extend and develop next-generation personal protective equipment to guard against biological threats.

Hearing Topic

Despite protecting against a broad spectrum of biological threats, current personal protective equipment burdens its users, requires experience in proper usage, is seldomly reusable, is not widely available to all, and may not fit properly (e.g., on children). Shortages of personal protective equipment leave frontline and essential workers at risk, threatening their health and reducing their capacity to respond.

Hearings should examine the potential for extending the shelf-life of stockpiled personal protective equipment, research and development of next-generation personal protective equipment, and avenues for transferring personal protective equipment technology throughout the public and private sectors.

Committees

- House Committee on Energy and Commerce
- House Committee on Armed Services
- House Committee on Education and the Workforce
- House Committee on Science, Space, and Technology
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Armed Services
- Senate Committee on Commerce, Science, and Transportation

Suggested Witnesses

- Commissioner of Food and Drugs, Department of Health and Human Services
- Assistant Secretary for Occupational Safety and Health, Department of Labor
- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, Department of Defense
- Director of the Defense Advanced Research Projects Agency, Department of Defense
- Administrator of the National Aeronautics and Space Administration

Suggested Questions

1. What are your requirements and priority capabilities for next-generation personal protective equipment?
2. What are your timelines for developing next-generation personal protective equipment, and what is the transition plan for it both within and outside the federal government?
3. What are the supply chain and manufacturing gaps in the United States when it comes to personal protective equipment?
4. What work are you engaged in with the private sector to develop personal protective equipment?

Recommendation 13: Reduce pathogen transmission in built environments.

Hearing Topic

Suppressing pathogen transmission (especially in high-risk, high-traffic spaces) would reduce the spread of infectious diseases, extinguish some outbreaks by never allowing them to spread, and buy more time to combat aggressive pathogens. However, the public and private sectors have historically struggled to improve indoor air quality.

Hearings should explore current technology offerings to reduce indoor pathogen transmission, national standards and guidance to reduce transmission indoors, and research and policy needs to enhance indoor air quality.

Committees

- House Committee on Science, Space, and Technology
- House Committee on Transportation and Infrastructure
- House Committee on Education and the Workforce
- House Committee on Natural Resources
- House Committee on Armed Services
- Senate Committee on Commerce, Science, and Transportation
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Environment and Public Works
- Senate Committee on Armed Services
- Senate Committee on Indian Affairs

Suggested Witnesses

- Administrator of the Environmental Protection Agency
- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Administrator of the General Services Administration
- Assistant Secretary for Elementary and Secondary Education, Department of Education
- Assistant Secretary for Postsecondary Education, Department of Education
- Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, Department of Defense
- Director, Bureau of Indian Affairs, Department of the Interior

Suggested Questions

1. What steps do we need to take to develop and recommend robust building code standards for indoor air quality that can be adopted by states, tribes, and territories? Are you coordinating with other federal departments and agencies as part of your efforts?
2. What are your research and development plans for reducing indoor pathogen transmission?
3. How can we leverage existing technologies such as ventilation, filtration, and disinfection to reduce the risk of indoor pathogen transmission in different settings, such as schools, offices, and health care facilities?
4. What are some examples of best practices and guidelines for improving indoor air quality and preventing the spread of infectious diseases, and how can we ensure their adoption and compliance by various stakeholders, such as building owners, managers, and occupants?

Recommendation 14: Integrate national defense science and technology.

Hearing Topic

The Department of Defense bears responsibility for protecting the Nation's warfighters from all threats, including attacks with biological and other weapons of mass destruction. Organizational elements within the Department do not adequately coordinate their biodefense research and development activities. This lack of coordination increases the risk of leaving capability gaps unaddressed and making duplicative biodefense investments.

Hearings should focus on efforts to coordinate military biodefense research; inventory existing biotechnology across the Department of Defense, Department of Agriculture, Department of Health and Human Services, and Department of Homeland Security; facilitate the transition of military biotechnology throughout the Department of Defense; and address military research gaps.

Committees

- House Committee on Armed Services
- House Committee on Science, Space, and Technology
- Senate Committee on Armed Services
- Senate Committee on Commerce, Science, and Transportation

Suggested Witnesses

- Under Secretary for Research and Engineering, Department of Defense
- Director of Defense Advanced Research Projects Agency, Department of Defense
- Director of Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense, Department of Defense
- Comptroller General of the United States

Suggested Questions

1. How does the Department of Defense assess its research and development activities relative to the goals of the Biodefense Posture Review, National Biodefense Strategy, National Defense Strategy, and National Security Strategy?
2. How do you coordinate biodefense research priorities and activities with other federal agencies, such as the Department of Agriculture, Department of Health and Human Services, Department of Energy, and Department of Homeland Security? What process does the Department of Defense have for transitioning biodefense technology within the Department? To other federal departments and agencies?
3. What methods does the Department of Defense use to inventory and track the existing biotechnology assets and capabilities within its own department?
4. What are the main challenges and barriers that the Department of Defense faces in transitioning biotechnology from research and development to acquisition, procurement, and deployment for military purposes? How can these challenges be overcome or reduced?

Recommendation 15: Defend against astrobiological threats.

Hearing Topic

Human exploration of the solar system and beyond continues, and with that exploration, biological risk increases. Probes or humans visiting extraterrestrial environments must not introduce organisms from Earth into those environments. Conversely, they must also ensure that they do not bring back any extraterrestrial or mutated terrestrial microbes (that may or may not be detected using common culturing and other techniques) that could pose a threat to Earth's human, animal, plant, or ecosystem health, or to the Moon.

Hearings should examine federal activities to protect the planet from contamination from extraterrestrial organisms and astrobiological research, and to protect other celestial bodies from the same.

Committees

- House Committee on Science, Space, and Technology
- House Committee on Transportation and Infrastructure
- House Committee on Armed Services
- Senate Committee on Commerce, Science, and Transportation
- Senate Committee on Armed Services

Suggested Witnesses

- Administrator of the National Aeronautics and Space Administration
- Administrator of the Federal Aviation Administration
- Commander of Space Command, Department of Defense
- Representatives from commercial space organizations

Suggested Questions

1. What are the current scientific methods and technologies used by NASA to detect, identify, and characterize potential extraterrestrial organisms and prevent their contamination of Earth or other celestial bodies? How does NASA incorporate new science and outside perspectives in its activities to safeguard biological payloads and prevent biological hazards?
2. What are the international and national policies in place regarding astrobiodefense?
3. How does NASA coordinate with other countries and international organizations to establish and enforce planetary protection policies and standards?
4. How does NASA balance the need for astrobiological research and exploration with the ethical and environmental concerns of preserving the natural state of extraterrestrial environments?

Recommendation 16: Improve regulatory processes.

Hearing Topic

The Food and Drug Administration plays a significant role in reviewing many of the technologies that comprise national biodefense. Measures must be taken to create and institutionalize procedures and processes to insulate agency experts and regulatory activities from undue political pressure to ensure public confidence in the safety and efficacy of the products the agency approves during public health emergencies.

Hearings should include discussion of pathways to approve medical countermeasure platform technologies before, during, and after biological events, and the incorporation of lessons learned from COVID-19 into regulatory processes.

Committees

- House Committee on Energy and Commerce
- Senate Committee on Health, Education, Labor, and Pensions

Suggested Witnesses

- Commissioner of Food and Drugs, Department of Health and Human Services
- Director of Biomedical Advanced Research and Development Authority, Department of Health and Human Services
- Representatives from the pharmaceutical and biotechnology industries

Suggested Questions

1. (To the industry witness): What was the experience of coordinating with the government like for your organization during the development, approval, and distribution of your product during the year when COVID-19 emerged?
2. What lessons from COVID-19 and other pandemics have already been identified and incorporated into the medical countermeasure regulatory review process?
3. How are regulatory processes for diagnostics, vaccines, and therapeutics communicated to, and coordinated with, the private sector during the emergence of a new biological threat?
4. What hurdles remain to developing a regulatory framework for rapidly reviewing and approving medical countermeasure platform technologies when a biological event becomes a public health emergency?

Recommendation 17: Invest in medical countermeasures for biological agents and diseases.

Hearing Topic

The responsibility for developing medical countermeasures for human biological threats rests primarily with the National Institute of Allergy and Infectious Diseases (which focuses on early-stage research) and the Biomedical Advanced Research and Development Authority (which focuses on advanced research and development). Their efforts lack transparency to stakeholders and Congress, as well as funding commensurate with the biological threat.

Hearings should assess resources for medical countermeasure development, multi-year funding, and medical countermeasure research and development investment planning within and across federal departments and agencies.

Committees

- House Committee on Energy and Commerce
- House Committee on Science, Space, and Technology
- House Committee on Armed Services
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Commerce, Science, and Transportation
- Senate Committee on Armed Services

Suggested Witnesses

- Director of the National Institute of Allergy and Infectious Diseases, National Institutes of Health, Department of Health and Human Services
- Director of the Biomedical Advanced Research and Development Authority, Department of Health and Human Services
- Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, Department of Defense
- Director of the Office of Management and Budget, Executive Office of the President

Suggested Questions

1. What has been the funding for the past ten years for medical countermeasure procurement? How can we expect continued year-to-year funding of these activities to impact our national biodefense capabilities?
2. What coordination is there between the National Institute of Allergy and Infectious Disease and the Biomedical Advanced Research and Development Authority regarding the transition of early-stage medical countermeasure development to advanced research and development?
3. How do you define, quantify, and measure a successful outcome at the Biomedical Advanced Research and Development Authority?
4. What are the most concerning capability gaps in our medical countermeasures enterprise and how can Congress support closing these gaps?

Recommendation 18: Innovation in medical countermeasures.

Hearing Topic

By investing in vaccines for at least one prototype pathogen in each of the 26 viral families known to infect humans, we could reduce the global burden of infectious disease while simultaneously preparing for the next unknown biological threat. Single-pathogen diagnostics are not readily available, or available at all, for some pathogens.

To ensure that we have a multitude of drugs ready at the beginning of the next pandemic, we need to make investments in the development of multi-pathogen therapeutics—those that can be effective against multiple phylogenies of viruses. Hearings should review existing medical countermeasure programs, advanced manufacturing capabilities, research and development into vaccine candidates and therapeutic drugs for known pathogens, and coordination of federal medical countermeasure research and development.

Committees

- House Committee on Energy and Commerce
- House Committee on Armed Services
- House Committee on Agriculture
- House Committee on Science, Space, and Technology
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Armed Services
- Senate Committee on Agriculture, Nutrition, and Forestry
- Senate Committee on Commerce, Science, and Transportation

Suggested Witnesses

- Assistant Secretary for Preparedness and Response, Department of Health and Human Services
- Director of the National Institutes of Health, Department of Health and Human Services
- Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, Department of Defense
- Director of the Agricultural Research Service, Department of Agriculture

Suggested Questions

1. What are your current efforts to develop vaccine candidates and antiviral drugs for each of the 26 viral families?
2. How are you coordinating medical countermeasure research and development activities with other agencies and the private sector?
3. What challenges has the Department of Agriculture, Department of Defense, and Department of Health and Human Services encountered with previous efforts to facilitate advanced development and manufacturing? What lessons did we learn from COVID-19, other pandemics, and biological events?
4. How should we develop these capabilities moving forward?

Recommendation 19: Strengthen stockpile supply and distribution.

Hearing Topic

The current Strategic National Stockpile distribution and dispensing system is inadequate and unacceptable. The likelihood that medical countermeasures could reach individuals in short periods on a mass scale is still exceptionally low. This program lacks clear and consistent directives for, and coordination with, state, local, tribal, and territorial governments; clear goals and objectives for response; and sufficient consideration of various scenarios.

Hearings should assess the current missions, goals, and objectives of the federal government's stockpiles, capability gaps in logistics and training for distributing stockpiled contents, and the benefits and challenges of establishing state and territorial stockpiles.

Committees

- House Committee on Energy and Commerce
- House Committee on Homeland Security
- House Committee on Oversight and Accountability
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Homeland Security and Governmental Affairs

Suggested Witnesses

- Secretary of Health and Human Services
- Secretary of Homeland Security
- Postmaster General of the United States
- Comptroller General of the United States

Suggested Questions

1. What role is the Strategic National Stockpile intended to serve during a biological event or other public health emergency? What information/planning informs stockpiling decisions? How does the Stockpile's stated mission differ from state, local, tribal and territorial demand for Stockpile assets during COVID-19?
2. How does the Department of Health and Human Services make decisions about distributing the contents of the Strategic National Stockpile?
3. How does the Department of Health and Human Services coordinate and exercise with state, local, tribal, and territorial partners to receive and distribute stockpile contents?
4. What lessons did we learn from recent pandemics (e.g., COVID-19, Mpox) about distribution and dispensing of Stockpile contents? How have these lessons been taken up by policy and implemented?

Recommendation 20: Authorize the Centers for Disease Control and Prevention.

Hearing Topic

The Centers for Disease Control and Prevention lack comprehensive authorizing legislation to clarify its mission, structure, and budget. The agency has no unified budget. It depends on bits and pieces of authorization in a variety of bills and the direction provided by annual appropriations.

The Centers for Disease Control and Prevention are not operating outside of the law. Congress has authorized the Secretary of Health and Human Services to control and prevent diseases, and the Centers for Disease Control and Prevention derive their authorities to act from the Secretary's authorization. While this may have been acceptable in previous years, it is no longer acceptable. Congress cannot adequately hold the agency accountable without comprehensive authorizing legislation.

Hearings should explore the historical role, authorities, and mission of the Centers for Disease Control and Prevention; agency successes and challenges in recent public health emergencies (including biological events); and needed authorities and resources for the agency to achieve its mission.

Committees

- House Committee on Energy and Commerce
- Senate Committee on Health, Education, Labor, and Pensions

Suggested Witnesses

- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Executive Director of the Association of Public Health Laboratories
- Executive Director of the Council of State and Tribal Epidemiologists
- Executive Director of the American Public Health Association
- Chief Executive Officer of the National Indian Health Board

Suggested Questions

1. What authorities do the Centers for Disease Control and Prevention require to effectively prevent the introduction and spread of infectious diseases? Would the Centers for Disease Control and Prevention benefit from legislative clarification of existing statutory authorities, roles, and responsibilities?
2. How can the Centers for Disease Control and Prevention better support state, local, tribal, and territorial governments in addressing biological threats and safeguarding public health?
3. What steps are the Centers for Disease Control and Prevention taking to further coordinate and communicate its infectious disease mission with other elements of the Department of Health and Human Services and state, local, tribal, and territorial public health officials?
4. Aside from reorganizing the agency yet again, and engaging in another strategic planning effort, what are the Centers for Disease Control and Prevention doing now that is different than what it did in the past to better align its activities with the intent of Congress and expectations of the American public?

Recommendation 21: Increase the public health security workforce.

Hearing Topic

The COVID-19 pandemic revealed the dire consequences of both immediate and long-standing workforce shortages in public health. Staffing shortages, lack of authorities to surge or hire experts, and burnout resulted in a lack of critical expertise and disruptions in the federal response to the pandemic.

Hearings should examine needed hiring and pay authorities for federal public health agencies, workforce resource needs (including placement of Public Health Service officers), and the establishment or strengthening of a ready reserve workforce.

Committees

- House Committee on Energy and Commerce
- House Committee on Natural Resources
- House Committee on the Judiciary
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Indian Affairs
- Senate Committee on the Judiciary

Suggested Witnesses

- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Assistant Secretary for Health, Department of Health and Human Services
- Assistant Secretary for Preparedness and Response, Department of Health and Human Services
- Director of the Indian Health Service, Department of Health and Human Services
- Director of the Bureau of Prisons

Suggested Questions

1. What hiring and workforce authorities do you currently have?
2. What have been the impacts of the inability to surge workforce capacity during recent public health emergencies?
3. What hiring and personnel authorities do federal departments and agencies require to build a robust biodefense workforce and to scale efforts quickly to address biological events? Are there things about the way the Federal Emergency Management Agency does this that might work for your organizations?
4. How can Congress further support the commissioned officers in the US Public Health Service? What funding, authorities, or structures would build on past successes?

Recommendation 22: Establish a stratified biodefense hospital system.

Hearing Topic

The Nation lacks a stratified biodefense hospital system similar to other hospital systems that stratify according to specialized capabilities (e.g., trauma, stroke, cardiac care, burns). Establishment of this system will require federal guidance and incentives for hospital participation, as well as standards for each stratum.

Hearings should examine the biodefense capabilities of healthcare institutions, hospital biodefense accreditation requirements, medical surge capabilities for biological events, and efforts to enhance hospital preparedness for biological events, particularly at the regional level.

Committees

- House Committee on Energy and Commerce
- House Committee on Ways and Means
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Finance
- Senate Committee on Banking, Housing, and Urban Affairs

Suggested Witnesses

- Administrator of the Centers for Medicare and Medicaid Services
- Assistant Secretary for Preparedness and Response, Department of Health and Human Services
- Representatives from accreditation organizations with deeming authority

Suggested Questions

1. What is the extent of medical surge capacity and planning among the Nation's hospitals for large-scale biological events?
2. How can we further incentivize healthcare institutions to plan for these scenarios?
3. What additional work is required to grow the existing Regional Emerging Special Pathogen Treatment Centers into a national stratified biodefense hospital system, using a categorical rather than disease-specific approach?
4. What incentives and guidance would be needed for hospital participation if the Department of Health and Human Services established a stratified biodefense hospital system?

Recommendation 23: Strengthen biodefense of warfighters.

Hearing Topic

The delivery of healthcare during military actions (including war) is of particular concern. Long transit times between areas of operation and locations of health care delivery put injured and ill military personnel at greater risk. The active-duty military must increase and maintain its own expertise to provide specialized care following a biological event, especially in light of decreased and often non-existent facilities in areas where injured and ill military personnel were once supposed to be evacuated for needed care.

Hearings should discuss military research, healthcare, and public health capability needs (including infrastructure) to address the biological threat and safeguard the warfighter.

Committees

- House Committee on Armed Services
- Senate Committee on Armed Services

Suggested Witnesses

- Assistant Secretary of Defense for Health Affairs, Department of Defense
- Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, Department of Defense
- Commander of the US Army Medical Research Institute of Infectious Diseases, Department of Defense

Suggested Questions

1. How did COVID-19 impact military awareness of naturally occurring biological threats to the warfighter? What vulnerabilities did you identify, and what actions are you taking to address those gaps?
2. The National Defense Authorization Act for Fiscal Year 2017 consolidated responsibility for military healthcare infrastructure within the Defense Health Agency. Has the agency assessed—or does the agency intend to assess—baseline healthcare needs for warfighters and their families in the event of a biological attack domestically or in theaters of war? If not, how is the Department planning for the impact of a biological attack on its healthcare infrastructure and the health of its personnel?
3. How can we improve our ability to treat military personnel (including animals) operating in a theater contaminated by enemies' use of biological weapons during combat?
4. How do you coordinate with the private sector and foreign health care establishments, especially in those countries in which the Department of Defense no longer maintains or supports healthcare infrastructure?

Recommendation 24: Produce clinical infection control guidelines.

Hearing Topic

Many hospitals have become far more proficient at, and capable of, treating patients after diseases spread and create outbreaks, epidemics, and pandemics. However, as time passes, crises lessen and cases desist, making it less likely that these institutions will maintain the same level of infectious disease-specific proficiency over time.

Hearings should examine the need for clinical infection control guidelines before events occur, the generation and incorporation of feedback regarding clinical infection control guidelines during biological events, and interagency coordination of the development of clinical infection control guidelines.

Committees

- House Committee on Energy and Commerce
- House Committee on Education and the Workforce
- Senate Committee on Health, Education, Labor, and Pensions

Suggested Witnesses

- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Assistant Secretary for Occupational Safety and Health, Department of Labor
- President of the Association for Professionals in Infection Control and Epidemiology

Suggested Questions

1. Have the Centers for Disease Control and Prevention and the Occupational Safety and Health Administration discussed developing and implementing a process for producing clinical infection control guidelines in advance of biological events?
2. Have you begun executing such a program? If not, how would you execute such a program?
3. What kind of training or exercises would be needed for implementing such guidelines?
4. How do the Centers for Disease Control and Prevention and the Occupational Safety and Health Administration currently solicit, gather, and incorporate feedback from other federal and nonfederal stakeholders regarding clinical infection control guidelines during biological events?

Recommendation 25: Enable schools to protect against biological threats.

Hearing Topic

Some biodefense responsibilities belong to and are already undertaken by the Department of Education. The Department conveys guidance to schools, students, and their families about biological events affecting national security. The Department of the Interior also shares responsibilities for school biodefense because it is responsible for American Indian and Alaska Native educational activities.

Hearings should assess federal activities to actively manage biological events in school settings, convey biodefense guidance to schools throughout the Nation, develop and distribute educational resources about managing biological events in school settings, and support implementation of disease control strategies in school settings.

Committees

- House Committee on Education and the Workforce
- House Committee on Energy and Commerce
- House Committee on Natural Resources
- House Committee on Transportation and Infrastructure
- House Committee on Homeland Security
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Energy and Natural Resources
- Senate Committee on Indian Affairs
- Senate Committee on Commerce, Science, and Transportation
- Senate Committee on Homeland Security and Governmental Affairs

Suggested Witnesses

- Assistant Secretary for Elementary and Secondary Education, Department of Education
- Assistant Secretary for Postsecondary Education, Department of Education
- Director of the Bureau of Indian Education, Department of the Interior
- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Director of Cybersecurity and Infrastructure Security Agency, Department of Homeland Security

Suggested Questions

1. What guidance do the Department of Education and Department of the Interior currently convey to schools to safeguard student populations from biological threats and minimize the disruption from biological events?
2. What changes have federal agencies made to school policies, requirements, and guidance due to COVID-19 and other biological events affecting schools?
3. How does the Department of Education develop such policy guidance?
4. How were American Indian and Alaska Native schools impacted by COVID-19? What unique infrastructure challenges do those communities face in safeguarding their students from biological threats, and what assistance does your department provide or would like to provide?

Recommendation 26: Protect critical infrastructure against biological threats.

Hearing Topic

When biological events occur, they affect critical infrastructure and put our national, economic, and public health security in jeopardy. It is highly unlikely that a biological event will affect just one critical infrastructure sector. As with the anthrax events of 2001 and COVID-19, an event might affect some or all sectors directly, and indirectly impact other sectors. Further complicating matters, multiple sectors often need to execute national critical functions together.

Hearings should address the federal mission to defend critical infrastructure against biological threats, manage biological risk to critical infrastructure, estimate critical infrastructure needs for vital medical countermeasures and essential medical supplies, and ensure execution of national critical functions by taking sector-specific biodefense actions.

Committees

- House Committee on Homeland Security
- House Committee on Transportation and Infrastructure
- House Armed Services Committee
- House Committee on Agriculture
- House Committee on Energy and Commerce
- Senate Committee on Homeland Security and Governmental Affairs
- Senate Committee on Commerce, Science, and Transportation
- Senate Committee on Armed Services
- Senate Committee on Agriculture, Nutrition, and Forestry
- Senate Committee on Energy and Natural Resources

Suggested Witnesses

- Director of the Cybersecurity and Infrastructure Security Agency, Department of Homeland Security
- Assistant Secretary of Defense for Industrial Base Policy, Department of Defense
- Assistant Secretary for Preparedness and Response, Department of Health and Human Services
- Director of the Office of Homeland Security, Department of Agriculture
- Under Secretary for Infrastructure, Department of Energy
- Director of the Office of Intelligence, Security and Emergency Response, Department of Transportation

Suggested Questions

1. How have previous biological threats compromised our critical infrastructure?
2. How does the Department of Homeland Security intend to update Sector Specific Plans, incorporating lessons learned from COVID-19, other pandemics, and biological events affecting national and homeland security?
3. How is your department working with sector partners to address the biological threat?
4. How are federal departments and agencies responsible for protective critical infrastructure sectors identifying and addressing vulnerabilities to biological events?

Recommendation 27: Redouble efforts to bolster state, local, tribal, and territorial biological emergency preparedness.

Hearing Topic

Although much of the Nation's biodefense activity focuses on the threat to humans, a biological event impacting plants, food, or agriculture could devastate our country and its economy. Federal food and agro-biodefense efforts are not only underfunded, but they are also uncoordinated.

Hearings should examine the national agro-biodefense enterprise, and federal activities to safeguard food and agriculture from biological threats, address gaps in animal and plant health emergency preparedness, and the role that other institutions (i.e. land-grant universities) can serve in addressing the biological threat.

Committees

- House Committee Agriculture
- House Committee on Energy and Commerce
- House Committee on Education and the Workforce
- Senate Committee on Agriculture, Nutrition, and Forestry
- Senate Committee on Health, Education, Labor, and Pensions

Suggested Witnesses

- Administrator of the Animal and Plant Health Inspection Service, Department of Agriculture
- Administrator of the Agricultural Research Service, Department of Agriculture
- Commissioner of Food and Drugs, Department of Health and Human Services
- President of the Association of Public and Land-Grant Universities

Suggested Questions

1. What is the implementation status of the National Agriculture and Food Defense Strategy?
2. Do the Department of Agriculture and Department of Health and Human Services intend to update the National Agriculture and Food Defense Strategy, in alignment with the National Biodefense Strategy and National Security Memorandum 16 (Strengthening the Security and Resilience of United States Food and Agriculture)?
3. What are the Nation's capability gaps in addressing biological threats to plant health? To food? What are the Department of Agriculture and the Food and Drug Administration doing to address those threats?
4. What resources, programs, or policies are necessary for enhancing preparedness?

Recommendation 28: Replace BioWatch.

Hearing Topic

The White House launched the Nation's environmental biodetection program, BioWatch, in 2003. Two decades later, the federal government has tried and failed to acquire, develop, and deploy an adequate national biodetection system to replace the aging and limited BioWatch technology.

Hearings should examine available biodetection technologies, mission requirements for the BioWatch program, federal coordination in biodetection research and development, technology transition activities, and BioWatch technology replacement efforts.

Committees

- House Committee on Homeland Security
- House Committee on Armed Services
- House Committee on Science, Space, and Technology
- House Committee on Energy and Commerce
- Senate Committee on Homeland Security and Governmental Affairs
- Senate Committee on Armed Services
- Senate Committee on Commerce, Science, and Transportation
- Senate Committee on Health, Education, Labor, and Pensions

Suggested Witnesses

- Assistant Secretary of Countering Weapons of Mass Destruction, Department of Homeland Security
- Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, Department of Defense
- Director of the Defense Advanced Research Projects Agency, Department of Defense
- Director of the National Aeronautics and Space Administration
- Assistant Secretary for Preparedness and Response, Department of Health and Human Services
- National Laboratories Representatives
- Industry Representatives
- Representatives of State, Local, Tribal, and Territorial Governments

Suggested Questions

1. What technological capabilities do state, local, tribal, and territorial governments require for a continuous capability to detect, validate, and warn of any biological agent within US borders?
2. How effective is Biowatch? What are its technical limitations?
3. What technologies are currently available to the government to detect biological agents in the environment? What is the universe of the possible with biodetection technology today? In five years?
4. What has prevented the government from updating or replacing Biowatch to date? How many more decades will it take to achieve 21st Century biodetection for the program?

Recommendation 29: Develop national diagnostic testing for biological events.

Hearing Topic

The symptoms caused by many emerging diseases and biological agents can be nonspecific. We must develop advanced molecular diagnostics, including multiplex pathogen-agnostic diagnostics, particularly when new biological threats emerge. Without access to definitive diagnostic tests for new pathogens, healthcare providers are unlikely to differentiate illnesses caused by these diseases from more common and routine infections.

Hearings should examine innovation in developing rapid diagnostics, federal coordination of the development and distribution of diagnostic tests, and federal stockpiling of diagnostic test kits.

Committees

- House Committee on Energy and Commerce
- House Committee on Armed Services
- House Committee on Agriculture
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Armed Services
- Senate Committee on Agriculture, Nutrition, and Forestry

Suggested Witnesses

- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Assistant Secretary for Preparedness and Response, Department of Health and Human Services
- Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, Department of Defense
- Director of the Animal and Plant Health Inspection Service, Department of Agriculture
- Director of the Agricultural Research Service, Department of Agriculture

Suggested Questions

1. How have the lessons of the diagnostics response to previous biological events impacted current federal diagnostics plans and policies?
2. Do we have a national diagnostics response plan that we can turn to when the next biological threat arises? If not, why?
3. Do the Department of Agriculture, Department of Defense, and Department of Health and Human Services coordinate diagnostics research and development, supply chain resilience, and assignment of roles and responsibilities for diagnostics response during a biological event? Explain how this coordination takes place, and how this coordination has influenced specific policies, products, or programs.
4. How does the government coordinate with the private sector and nonfederal agencies to develop, distribute, and track the results from diagnostics?

Recommendation 30: Improve national public health data infrastructure and collection during biological emergencies.

Hearing Topic

As past outbreaks, epidemics, and pandemics demonstrated, impactful and effective decision-making during a crisis depends on reliable, accurate, and comprehensive data. Timely and relevant information makes it possible to prioritize resources and interventions, coordinate efforts, and respond in a manner the American people deserve. Unfortunately, our country lacks a national public health data system to integrate and share information among state, local, tribal, and territorial and federal entities.

Hearings should review public health data challenges during recent biological events, federal data infrastructure and access requirements, and criteria for safeguarding patient data.

Committees

- House Committee on Energy and Commerce
- House Committee on Agriculture
- House Committee on Armed Services
- House Committee on Veterans' Affairs
- House Committee on Homeland Security
- Senate Committee on Health, Education, Labor, and Workforce
- Senate Committee on Agriculture
- Senate Committee on Armed Services
- Senate Committee on Veterans' Affairs
- Senate Committee on Homeland Security and Governmental Affairs

Suggested Witnesses

- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- National Coordinator for Health Information Technology, Department of Health and Human Services
- Administrator of the Animal and Plant Health Inspection Service, Department of Agriculture
- Director of the Defense Health Agency, Department of Defense

- Assistant Under Secretary for Health for Patient Care Services, Department of Veterans Affairs
- Director of the Cybersecurity & Infrastructure Security Agency, Department of Homeland Security

Suggested Questions

1. During COVID-19, it became clear that sharing state, local, tribal, and territorial data with the federal government (beyond using those systems and requirements that were already established) and vice versa was, at the very least, problematic. In some cases, laws need to be changed. What challenges do you face in obtaining needed data from, and sharing needed information with, the populations you serve? How can we better educate the public about the importance of these efforts, and how can we better safeguard patient data as part of the data collection process?
2. Do the Centers for Disease Control and Prevention have access to the public health data of other federal departments and agencies? Have there been discussions to arrange needed access?
3. What authorities might the Centers for Disease Control and Prevention require to get the public and private data that it needs, particularly during a public health emergency?
4. What technological issues remain to achieving data interoperability? What efforts are federal departments and agencies making to address these issues?

Recommendation 31: Integrate and improve biosurveillance.

Hearing Topic

As past outbreaks, epidemics, and pandemics demonstrated, reliable, accurate, and comprehensive data are necessary for effective decision-making during a biological crisis. Biosurveillance can help to identify and characterize biological agents, monitor their spread and impact, assess the risk and vulnerability of populations, and inform public health authorities and other stakeholders.

Hearings should examine current federal biosurveillance capabilities; explore innovations in, and modernization of, biosurveillance activities; and increase collection of human, animal, and plant biosurveillance data.

Committees

- House Committee on Energy and Commerce
- House Committee on Armed Services
- House Committee on Agriculture
- House Committee on Veterans' Affairs
- House Committee on Natural Resources
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Armed Services
- Senate Committee on Agriculture, Nutrition, and Forestry
- Senate Committee on Veterans' Affairs
- Senate Committee on Energy and Natural Resources

Suggested Witnesses

- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Director of the Defense Health Agency, Department of Defense
- Director of the Animal and Plant Health Inspection Service, Department of Agriculture
- Assistant Under Secretary for Health for Patient Care Services, Department of Veterans Affairs
- Director of the National Wildlife Health Center, US Geological Survey, Department of the Interior

Suggested Questions

1. Within your departments and agencies, how are you working to integrate your own biosurveillance efforts to enable better situational awareness? What authorities, funding or support do departments and agencies require to establish digital pathogen surveillance, and modernize and standardize state, local, tribal, and territorial disease reporting?
2. How are your federal departments and agencies integrating wastewater surveillance into their biosurveillance and forecasting activities?
3. Concerns remain about sharing information and data between and among federal departments and agencies. What are your concerns about sharing information and data with others in the US government? What can be done to overcome security and other challenges inherent in information and data sharing?
4. What are each of your agencies doing (if anything) with regard to international biosurveillance, using either your own assets or working with foreign and international partners?

Recommendation 32: Provide emergency service providers with the resources they need to respond to biological events in their communities.

Hearing Topic

Local emergency medical service providers, firefighters, and police will be among the first to respond to certain biological incidents, particularly those deliberate in origin. In most cases, they will not know with which disease they are dealing. It will be too early for anything but cursory, preliminary diagnosis and identification. Threats affect these responders disproportionately because they work with insufficient data in the midst of emergencies and disasters.

Hearings should assess state, local, tribal, and territorial first responder capabilities to respond (including technical assistance and training needs) to biological events, emergency medical services reimbursement, and resource needs.

Committees

- House Committee on Homeland Security
- House Committee on Energy and Commerce
- House Committee on Armed Services
- House Committee on Transportation and Infrastructure
- House Committee on Ways and Means
- Senate Committee on Homeland Security and Governmental Affairs
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Armed Services
- Senate Committee on Commerce, Science, and Transportation
- Senate Committee on Finance
- Senate Committee on Banking, Housing, and Urban Affairs

Suggested Witnesses

- Administrator of the National Highway Traffic Safety Administration, Department of Transportation
- Assistant Secretary for Preparedness and Response, Department of Health and Human Services
- Administrator of the Federal Emergency Management Agency, Department of Homeland Security
- Assistant Secretary of Defense for Health Affairs, Defense Health Agency, Department of Defense

- Administrator of the Centers for Medicare and Medicaid Services, Department of Health and Human Services
- Administrator of the Animal and Plant Health Inspection Service, Department of Agriculture
- Local emergency medical service provider

Suggested Questions

1. What technical assistance and training do federal departments and agencies offer state, local, tribal, and territorial responders to address biological threats?
2. Do the Centers for Medicare and Medicaid Services require congressional intervention or approval to expand medical necessity rules for pre-hospital emergency medical services reimbursement? If not, what other barriers are preventing this action?
3. There has been much discussion about moving the federal responsibility for emergency medical services out of the Department of Transportation and to the Department of Health and Human Service. Do you believe this should occur? Why or why not?
4. Tactical medicine is a challenging field. Some at the Department of Homeland Security addressed this requirement but did so after the Department eliminated its effort (previously housed in the Federal Protective Service), and the Department of Health and Human Services picked it up (diverting funding from the National Disaster Medical System to pay for it). In either case, resources to provide tactical medicine training were lacking. Where should a tactical medicine program officially reside in the federal government, in which department or agency?

Recommendation 33: Ensure consistent and adequate public health emergency funding and guidance.

Hearing Topic

Successful response to a biological event depends upon the commitment of funding before an incident occurs to ensure it is readily available for emergency response. The availability of these funds allows federal, state, local, tribal, and territorial agencies to begin responding without waiting for congressional action. Delaying our Nation's response until Congress provides supplemental appropriations may come at great cost in lives and money.

Hearings should examine public health emergency funding levels and availability across the federal government and clarify eligibility for sources of federal funding to be used for biological response activities, including the Public Health Emergency Fund, the Disaster Relief Fund, and homeland security grants.

Committees

- House Committee on Homeland Security
- House Committee on Transportation and Infrastructure
- House Committee on Energy and Commerce
- Senate Committee on Homeland Security and Governmental Affairs
- Senate Committee on Health, Education, Labor, and Pensions

Suggested Witnesses

- Administrator of the Federal Emergency Management Agency
- Assistant Secretary for Preparedness and Response, Department of Health and Human Services
- President of the National Emergency Management Association
- Chief Executive Officer of the National Association of County and City Health Officials

Suggested Questions

1. How can federal departments and agencies better communicate regarding available sources of funding to address biological events, and allowable expenses for those funding streams?
2. Do we need to reconsider the categories of assistance for nonfederal partners under programs like the Stafford Act?
3. How much emergency funding do federal departments and agencies need on hand (through an account like the Public Health Emergency Fund) to ensure a strong, uninterrupted federal response in the first three months of a large-scale biological event? Six months?
4. How much money did federal agencies spend in the first six months of the response to COVID-19?

Recommendation 34: Buttress all laboratory networks that test for biological agents.

Hearing Topic

During a biological event, public health and safety officials must identify the organism(s) involved in order to respond effectively and efficiently. Decision-making, disease management, and law enforcement depend on the availability of quick and geographically close laboratory testing. Not all laboratories, however, possess the same capabilities.

Hearings should examine authorization, requirements and resource needs for the Nation's laboratory networks, and biosafety and biosecurity standards, capabilities, and challenges.

Committees

- House Committee on Energy and Commerce
- House Committee on Armed Services
- House Committee on Agriculture
- House Committee on Natural Resources
- Senate Committee on Health, Education, and Resources
- Senate Committee on Armed Services
- Senate Committee on Agriculture, Nutrition, and Forestry
- Senate Committee on Energy and Natural Resources

Suggested Witnesses

- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Commissioner of Food and Drugs, Department of Health and Human Services
- Assistant Secretary of Defense for Health Affairs, Department of Defense
- Administrator of the Animal and Plant Health Inspection Service, Department of Agriculture
- Administrator of the Environmental Protection Agency
- Director of the Integrated Consortium of Laboratory Networks, Department of Homeland Security
- Directors of federal laboratory networks

Suggested Questions

1. What additional authorities and resources do the Nation's laboratory networks require?
2. How often do the Department of Health and Services, Department of Agriculture, Department of Defense, and Environmental Protection Agency review biosafety and biosecurity capabilities and challenges? What form does this review take, and what do the relevant departments and agencies do to address the findings?
3. Aside from the Centers for Disease Control and Prevention supported Laboratory Response Network, other laboratory networks received less support from their federal sponsors. Some of them are referred to as "vapor networks," referring to how insubstantial they are. What can be done to strengthen these other networks and get them contributing to national biodefense?
4. One of the problems with federal sponsorship of these laboratory response networks is that information and data generated by state and local member labs bypass state and local leadership and are only provided to the federal sponsors. What can be done to ensure that information goes to state and local leadership simultaneously?

Recommendation 35: Increase national environmental decontamination and remediation capacity.

Hearing Topic

After a biological crisis ends, reduction and elimination of pathogens in areas contaminated with organisms require long-term environmental monitoring to avoid further illness, re-exposure, and development of pathogen reservoirs.

Hearings should examine federal leadership of environmental remediation of biological events, including roles, responsibilities, and capabilities.

Committees

- House Committee on Natural Resources
- House Committee on Homeland Security
- House Committee on Transportation and Infrastructure
- House Committee on Energy and Commerce
- Senate Committee on Energy and Natural Resources
- Senate Committee on Homeland Security and Governmental Affairs
- Senate Committee on Commerce, Science, and Transportation
- Senate Committee on Health, Education, Labor, and Pensions

Suggested Witnesses

- Administrator of the Environmental Protection Agency
- Administrator of the Federal Emergency Management Agency
- Director of the Centers for Disease Control and Prevention, Department of Health and Human Services
- Representatives from state, local, tribal, and territorial public health and environmental agencies

Suggested Questions

1. Who is the federal lead for environmental decontamination following biological incidents?
2. What procedures are followed following a biological event that contaminates or risks contamination of the environment?
3. Has the Federal Emergency Management Agency or the Environmental Protection Agency exercised the roles and responsibilities set forth in the *Biological Incident Annex to the Response and Recovery Interagency Operational Plans*?
4. Localities respond to biological events first. How do your agencies support state, local, tribal, and territorial public health and environmental health agencies, and other organizational elements involved in environmental decontamination and remediation? (For state, local, tribal, and territorial representatives): What do you need from federal agencies to respond to biological incidents in your localities?

Recommendation 36: Lead the establishment of a functional and agile global public health emergency response apparatus.

Hearing Topic

The fragility of the human-animal disease boundary is more pronounced in developing nations where resources, public health, and animal health infrastructure are particularly limited. The United States must proactively engage with other countries and international bodies to strengthen our collective global public health response capabilities. Our Nation cannot afford to ignore these global public health security concerns.

Hearings should examine implementation of the Global Health Security Agenda, international global health programs, and challenges to strengthening global biodefense.

Committees

- House Committee on Foreign Affairs
- House Committee on Armed Services
- House Committee on Energy and Commerce
- House Committee on Agriculture
- Senate Committee on Foreign Relations
- Senate Committee on Armed Services
- Senate Committee on Commerce, Science, and Transportation
- Senate Committee on Health, Education, Labor, and Pensions
- Senate Committee on Agriculture

Suggested Witnesses

Panel 1: USG

- US Global AIDS Coordinator and Senior Bureau Official, Bureau of Global Health Security and Diplomacy, Department of State
- Assistant Secretary of Defense for Health Affairs, Defense Health Agency, Department of Defense
- Assistant Secretary for Global Affairs, Department of Health and Human Services
- Administrator of the US Agency for International Development

Panel 2: International Organizations

- Chief Executive Officer of the Coalition for Epidemic Preparedness Innovations
- Executive Director of the Health Emergencies Programme, World Health Organization
- Global Director for Health, Nutrition & Population and the Global Financing Facility, World Bank
- Director General of the World Organization for Animal Health

Suggested Questions

1. How can responding countries better coordinate efforts to respond to emergencies?
2. What level of funding would be necessary to develop robust biosurveillance capabilities abroad?
3. What lessons can be learned from the 2014 Ebola outbreak and the COVID-19 pandemic?
4. We understand the challenges associated with engaging in global response when different countries possess different capabilities and resources. Do you believe that every country should meet some minimum capability and capacity, and that other countries should help them meet those standards?

APPENDIX

Recommendations and Action Items from the 2024 *National Blueprint for Biodefense*

LEADERSHIP

1

Reinforce White House leadership of the national biodefense enterprise.

- a. Provide biodefense policy and strategy advice and assistance to the President of the United States.
- b. Codify responsibilities of the National Security Advisor for biodefense.
- c. Codify and maintain a White House Directorate for Biodefense and Global Health Security.
- d. Add responsibilities for pandemic recovery and mitigation to the White House Office of Pandemic Preparedness and Response Policy.
- e. Assign responsibilities to the White House Office of Science and Technology Policy for coordinating biodefense research and development.
- f. Assign responsibilities to the White House National Economic Council for the bioeconomy.
- g. Provide dedicated appropriations for biodefense activities undertaken by the White House.
- h. Elevate Department of Defense Weapons of Mass Destruction leadership.
- i. Establish an Assistant Secretary of Agriculture for National and Homeland Security.

2

Implement, maintain, and update a comprehensive national biodefense strategy.

- a. Institute a quadrennial national biodefense review.
- b. Produce a national biodefense science and technology plan.
- c. Produce departmental and agency biodefense strategies.
- d. Conduct and implement a quadrennial military biodefense posture review.

3

Unify biodefense budgeting.

- a. Institutionalize biodefense as a discreet portfolio at the Office of Management and Budget.
- b. Strengthen the annual crosscutting biodefense budget analysis.
- c. Develop a budget plan for the National Biodefense Strategy.
- d. Align budget items to the National Biodefense Strategy.
- e. Provide predictable and multi-year funding for biodefense programs.
- f. Produce a future years biodefense budget program plan.
- g. Develop and submit a unified biodefense budget request.

4

Establish a clear congressional agenda to ensure national biodefense.

- a. Establish a congressional working group on biodefense.
- b. Convene annual biological threat briefings to Congress.
- c. Establish biodefense subcommittees or make biodefense the focus of existing subcommittees in the House of Representatives and Senate.
- d. Align biodefense appropriations and budgets.

INTELLIGENCE, ATTRIBUTION, AND DETERRENCE

5

Increase, improve, and prioritize management of biological intelligence.

- a. Create a National Intelligence Manager for Biological Threats.
- b. Make biological weapons programs and related activities a discrete intelligence topic.
- c. Increase biological threat expertise within, and available to, the Intelligence Community.
- d. Permanently authorize Section 702 of the Foreign Intelligence Surveillance Act to protect the Nation against biological attacks.
- e. Increase federal domestic biological intelligence efforts.
- f. Enable fusion centers to address the biological threat.

6

Better support and inform decisions based on biological attribution.

- a. Establish a national biological attribution decision-making apparatus.
- b. Make the Federal Bureau of Investigation responsible for the National Bioforensic Analysis Center.
- c. Update US Postal Inspection Service biological investigation and attribution capabilities.
- d. Draw upon the Smithsonian Institution for assistance with biological attribution.

7

Increase support for the Biological and Toxin Weapons Convention.

- a. Increase Department of State staff support for the Biological and Toxin Weapons Convention.
- b. Propose increasing staff for the Biological and Toxin Weapons Convention Implementation Support Unit.

8

Strengthen biological threat reduction.

- a. Clarify international biodefense capacity-building roles and responsibilities.
- b. Develop and implement a plan to counter misinformation and disinformation about cooperative threat reduction programs.
- c. Update National Science Foundation grant funding policy for dual-use, gain-of-function, and enhanced pathogen research.
- d. Update and implement a DNA/RNA synthesis screening framework.

9

Review and overhaul the Federal Select Agent Program.

- a. Undertake a major reassessment of the Federal Select Agent Program.
- b. Overhaul the Federal Select Agent Program.

10

Combat risks from the convergence of artificial intelligence and the life sciences.

- a. Identify risks posed by the convergence of artificial intelligence and the life sciences.
- b. Develop an artificial intelligence/life sciences risk assessment framework.
- c. Develop an artificial intelligence/life sciences risk reduction strategy.

SCIENCE AND TECHNOLOGY

11 Establish *The Apollo Program for Biodefense*.

- a. Develop vaccine candidates for prototype pathogens (see *Recommendation 18*).
- b. Develop therapeutic drugs in advance of outbreaks (see *Recommendation 18*).
- c. Develop flexible and scalable manufacturing of pharmaceuticals (see *Recommendation 18*).
- d. Develop needle-free methods of drug and vaccine administration (see *Recommendation 18*).
- e. Identify and increase ubiquitous sequencing (see *Recommendation 29*).
- f. Develop minimally- and noninvasive infection detection (see *Recommendation 29*).
- g. Develop massively multiplexed detection capabilities (see *Recommendation 29*).
- h. Develop rapid point-of-use diagnostics (see *Recommendation 29*).
- i. Establish digital pathogen surveillance (see *Recommendation 31*).
- j. Develop a national public health data system (see *Recommendation 30*).
- k. Bolster the national pathogen surveillance and forecasting center (see *Recommendation 31*).
- l. Develop next-generation personal protective equipment (see *Recommendation 12*).
- m. Suppress pathogen transmission in the built environment (see *Recommendation 13*).
- n. Establish comprehensive laboratory biosafety and biosecurity (see *Recommendation 34*).
- o. Screen DNA synthesis providers and users and purchase genetic material from verified vendors (see *Recommendation 8*).

12 Extend and develop next-generation personal protective equipment to guard against biological threats.

- a. Extend the shelf-life of personal protective equipment stockpiled for use in biological emergencies.
- b. Research and develop next-generation personal protective equipment for use in healthcare settings and areas containing or contaminated with biological agents.
- c. Transfer technology for biodefense personal protective equipment throughout the public and private sectors.

13 Reduce pathogen transmission in built environments.

- a. Conduct research on pathogen transmission reduction in built environments.
- b. Develop and advance technologies to reduce viability and transmission of pathogens in built environments.
- c. Reduce pathogen transmission in built environments.
- d. Develop health-based biodefense standards for reducing pathogen transmission in built environments.

14 Integrate national defense science and technology.

- a. Integrate military research to defend the warfighter against biological threats.
- b. Produce a defense biotechnology inventory.
- c. Facilitate defense technology transition.
- d. Address military biodefense research gaps.

15 Defend against astrobiological threats.

- a. Authorize the Office of Planetary Protection.
- b. Establish a planetary biodefense board.

16 Improve regulatory processes.

- a. Authorize or approve innovative technologies before, during, and after biological events.
- b. Incorporate lessons learned from pandemics into regulatory processes.

17 Invest in medical countermeasures.

- a. Require a biodefense budget plan from the National Institute of Allergy and Infectious Diseases.
- b. Fund the medical countermeasure enterprise to no less than authorized levels.
- c. Reestablish multi-year biodefense funding for medical countermeasure procurement.
- d. Eliminate Office of Management and Budget review of BioShield procurements.

18 Innovation in medical countermeasures.

- a. Review existing medical countermeasure programs.
- b. Develop vaccine candidates for prototype pathogens.
- c. Develop antiviral drugs in advance of outbreaks.
- d. Develop needle-free methods of drug and vaccine administration.
- e. Develop flexible and scalable manufacturing of pharmaceuticals.
- f. Set requirements for all biological agents deemed material threats to the Nation.
- g. Establish an antigen bank.
- h. Establish regional food and agriculture advanced development and manufacturing.

PREPAREDNESS

19 Strengthen stockpile supply and distribution.

- a. Assess the mission, goals, and objectives of the Strategic National Stockpile.
- b. Authorize provision of expiring biodefense vaccines to first responders and critical infra-structure personnel.
- c. Develop a strategy and implementation plan for distributing at-home diagnostic tests and therapeutics.
- d. Produce a comprehensive framework for medical countermeasure distribution and dispensing.
- e. Require periodic evaluation of smallpox medical countermeasure stockpile needs in consideration of the threat.
- f. Fund state-level stockpiles for biodefense.
- g. Determine logistics and funding needs to forward deploy stockpiled biodefense assets.
- h. Implement forward stockpile deployments of national stockpiles for biodefense.
- i. Improve, expand, enhance, and sustain state, local, tribal, and territorial training to receive and distribute stockpile contents during biological events.
- j. Authorize and bolster the National Veterinary Stockpile.
- k. Develop and pre-position medical countermeasures in military areas of operation.

20 Authorize the Centers for Disease Control and Prevention.

- a. Authorize the Centers for Disease Control and Prevention.

21 Increase the public health security workforce.

- a. Provide direct hiring authority for mission critical biodefense positions.
- b. Provide flexible pay authorities during biological emergencies.
- c. Enable hiring of reemployed annuitants during biological emergencies.
- d. Employ Medical Reserve Corps volunteers during biological emergencies.
- e. Establish an emergency response-ready cadre fund for the Centers for Disease Control and Prevention.
- f. Ensure military health care and public health readiness for biological events.

22 Establish a stratified biodefense hospital system.

- a. Stratify hospitals for biodefense.
- b. Develop biodefense accreditation standards, incentives, and reimbursements for each stratum.
- c. Establish medical surge capability and capacity for large-scale biological events.
- d. Authorize the Regional Disaster Health Response System.

23 Strengthen biodefense of warfighters.

- a. Increase military biodefense health care, public health, and research.
- b. Restore health care and public health infrastructure for biodefense.

24 Produce clinical infection control guidelines.

- a. Develop clinical infection control guidelines before biological events occur.
- b. Obtain and incorporate feedback regarding clinical infection control guidelines during biological events.

25 Enable schools to protect against biological threats.

- a. Actively manage biological events in school settings.
- b. Issue biodefense guidance to schools throughout the Nation so they are better prepared.
- c. Develop and distribute high-quality educational resources about biological events in school settings.
- d. Implement effective disease control strategies for school settings.

26 Protect critical infrastructure against biological threats.

- a. Defend critical infrastructure against biological threats.
- b. Manage biological risk to critical infrastructure.
- c. Estimate critical infrastructure sector needs for vital medical countermeasures and essential medical supplies.
- d. Ensure execution of national critical functions by taking sector-specific biodefense actions.

27 Redouble efforts to bolster state, local, tribal, and territorial biological emergency preparedness.

- a. Assess and strengthen state and territorial biodefense activities.
- b. Authorize and provide sustained funding for the Public Health Infrastructure Grant Program.
- c. Provide robust funding for Public Health Emergency Preparedness cooperative agreements.
- d. Make Public Health Emergency Preparedness cooperative agreement funding available directly to the tribes.
- e. Authorize a Vaccine for Adults Program.
- f. Help the homeless and those living in low-income housing prevent, prepare for, and respond to biological events.
- g. Provide additional biodefense planning and technical assistance to the territories and freely associated states.
- h. Reduce barriers to transporting resources to territories and freely associated states during biological emergencies.
- i. Bolster tribal biological emergency preparedness.
- j. Implement national food and agro-biodefense policies.
- k. Address plant biodefense research and development.
- l. Address gaps in plant emergency preparedness.
- m. Revise, implement, and comply with the National Agriculture and Food Defense Strategy.
- n. Authorize the Extension Disaster Education Network.
- o. Make tribal land-grant universities eligible for capacity formula funding.

DETECTION AND SURVEILLANCE

28 Replace BioWatch.

- a. Implement a domestic biological detection research and development plan.
- b. Replace outdated BioWatch technology.

29 Develop national diagnostic testing for biological events.

- a. Establish a biodefense diagnostics coordination group.
- b. Develop and implement a national diagnostics plan.
- c. Develop rapid point-of-use diagnostics.
- d. Develop and deploy plant disease diagnostics.
- e. Develop minimally- and non-invasive infection detection.
- f. Maintain a diagnostic test kit for each disease that stockpiled vaccines address.
- g. Increase diagnostics reimbursement and testing for diseases likely to impact national security.
- h. Identify and increase ubiquitous sequencing.
- i. Develop massively multiplexed detection capabilities.

30 Improve national public health data infrastructure and collection during a biological emergency.

- a. Establish a National Public Health Data System.
- b. Develop a data interoperability plan.
- c. Form data sharing agreements in Advance of biological events.
- d. Improve the collection and sharing of data among the federal government, private sector organizations, and other non-federal entities during a biological emergency.

31 Integrate and improve biosurveillance.

- a. Establish a biosurveillance federal advisory committee.
- b. Establish a food and agricultural biosurveillance planning committee.
- c. Modernize and expand national biosurveillance.
- d. Establish digital pathogen surveillance.
- e. Collect and share food, agriculture, plant, and wildlife disease data.
- f. Implement targeted plant biosurveillance.
- g. Strengthen territorial biosurveillance and data collection.
- h. Bolster the national pathogen surveillance and forecasting center.

RESPONSE, RECOVERY, AND MITIGATION

32

Provide emergency service providers with the resources they need to respond to biological events in their communities.

- a. Assess state, local, tribal, and territorial emergency medical service capabilities to respond to domestic biological terrorism and warfare.
- b. Establish a biological emergency response assistance program.
- c. Inform the delivery of emergency medical services during biological events and other national emergencies.
- d. Expand medical necessity rules for pre-hospital emergency medical services reimbursement.
- e. Provide food and agriculture biological emergency response technical assistance.
- f. Establish biological event direct assistance for tribal first responders.

33

Ensure consistent and adequate public health emergency funding and guidance.

- a. Provide robust public health emergency funding.
- b. Clarify eligibility for biological disaster assistance under the Stafford Act.
- c. Delineate federal assistance to non-federal governments for public health emergency response.
- d. Support urgently needed public health measures for research during biological events.
- e. Make emergency public health research eligible for homeland security grant funding.
- f. Allow emergency waiver authorities for beneficiaries and the uninsured during public health crises.

34

Buttress all laboratory networks that test for biological agents.

- a. Authorize all laboratory networks that test for biological agents.
- b. Establish requirements for all laboratory networks that test for biological agents.
- c. Authorize national laboratories collaborative biodefense research in the virtual environment.
- d. Eliminate the risk of accidental release during hazardous biological material transport by constructing and maintaining an incinerator for Fort Detrick, MD.
- e. Reduce the risk of funding shortfalls at military laboratories that conduct biodefense research.
- f. Review adequacy of laboratory biosafety and biosecurity standards, practices, and oversight.
- g. Review laboratory biosafety and biosecurity capabilities and challenges.

35

Increase national environmental decontamination and remediation capacity.

- a. Make the Environmental Protection Agency responsible for environmental decontamination and remediation after biological incidents.
- b. Exercise environmental remediation plans.
- c. Conduct studies of those exposed to biological agents.

36

Lead the establishment of a functional and agile global public health emergency response apparatus.

- a. Sustain US contributions to international global health security and related programs.
- b. Develop a global public health response strategy for biological events.
- c. Strengthen the role of the Office of Foreign Disaster Assistance.
- d. Allow use of Commodity Credit Corporation funding to protect against global biological threats to food and agriculture.



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