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Protecting Americans from Biological Threats

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Final Report of the CSIS Bipartisan Alliance for Global Health Security Working Group on Biodefense

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About the CSIS Bipartisan Alliance for Global Health Security

The CSIS Bipartisan Alliance for Global Health Security convenes an esteemed group of members of Congress, senior leaders, and subject matter experts to advance concrete, pragmatic policy options to strengthen the health security of the United States and the world. Its work covers how the United States can best position itself on a range of issues, including emerging outbreaks, the risks and opportunities of biotechnology innovation, the legacy of U.S. investments in global immunizations and the fight against infectious diseases such as HIV/AIDS, and global health diplomacy that advances U.S. national interests amid intensifying geopolitical competition. Through rigorous scholarship and a commitment to bipartisanship, the group works to define a new vision for sustained U.S. leadership, with integrated programming, strong accountability measures, and enhanced partnerships and alliances across sectors and around the world. Building on the record of prior CSIS initiatives, the alliance delivers recommendations on global health security policy and programs to key decisionmakers in Congress, the executive branch, and nongovernmental organizations to guide debates over institutional reform.

Launched in the spring of 2023, the effort is cochaired by **Senator Richard Burr**, principal policy advisor and chair of the Health Policy Strategic Consulting Practice at DLA Piper and a former senator from North Carolina, and **Julie Gerberding**, **MD**, **MPH**, CEO of the Foundation for the National Institutes of Health and former director of the U.S. Centers for Disease Control and Prevention. The alliance includes over 60 members, who are opinion leaders in the life sciences, public health, security, foreign policy, industry, and philanthropy, as well as a senior advisory group, including experts who formerly served in the Bush, Obama, Trump, and Biden administrations. **J. Stephen Morrison**, **PhD**, senior vice president and founder/director of the CSIS Global Health Policy Center, sets the alliance's strategic direction and directs its work on pandemic preparedness and response. **Katherine E. Bliss**, **PhD**, senior fellow and director of immunizations and health systems resilience with the Global Health Policy Center, directs its work on HIV and routine immunizations. **Michaela Simoneau**, fellow, leads the alliance's secretariat.

Signatories

These individuals endorse the following report's findings and recommendations. This report conveys a majority consensus of the signatories, who are participating in their individual capacity, not as representatives of their respective organizations. No expert is expected to endorse every point contained in the report. In becoming a signatory to the paper, experts affirm their broad agreement with its findings and recommendations. Language included in this report does not imply institutional endorsement by the organizations the experts represent.

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Executive Summary

Congress and the executive branch have a responsibility to defend the United States against a growing range of biological risks from natural, accidental, and deliberate origins. These threats can affect humans as well as U.S. agricultural industries. In the fall of 2025, the CSIS Bipartisan Alliance for Global Health Security (CSIS Bipartisan Alliance) launched a working group to develop a prioritized list of critical, near-term policy solutions to address gaps in U.S. biodefense capabilities. The working group identified strategic risks that could be quickly mitigated, examined numerous preexisting biodefense reviews, and generated a prioritized set of practical recommendations for the U.S. government to modernize biosurveillance, ensure biosafety and biosecurity, reverse the decline of the biodefense enterprise, and strengthen response and recovery. Together, these commonsense, immediate actions provide a vision for a feasible and affordable bipartisan path forward to improve U.S. biopreparedness.

Recommendations for Federal Leadership

- Create a White House Office of Biopreparedness (WHOBP) as a senior directorate at the National Security Council with budget integration authority for federal biopreparedness programs. Task this office to provide Congress with an integrated plan for national biodefense investments, conduct annual countermeasure preparedness reviews, develop and oversee implementation of a whole-of-government strategy to strengthen medical supply chain resilience, and coordinate response and recovery needs (1.1, 3.1, 4.1).

- Create a unit at the Office of the Director of National Intelligence (ODNI) responsible for biological threat intelligence (1.2, 2.1).
- Designate the U.S. Centers for Disease Control and Prevention (CDC) as the lead agency mandated to integrate biosurveillance data across federal departments and agencies (1.3).
- Create a capability within the Department of Commerce responsible for biosafety and biosecurity (2.2).
- Reauthorize and resource the core capabilities in the Pandemic and All Hazards Preparedness Act (PAHPA) and retain the Administration for Strategic Preparedness and Response (ASPR), the Biomedical Advanced Research and Development Authority (BARDA), and the Strategic National Stockpile (SNS) (3.2).

Recommendations for Private Sector Partnerships

- Require the White House Office of Science and Technology Policy (OSTP) to work with frontier AI labs and other private sector entities to strengthen biosafety and biosecurity practices (2.3).
- Create authorities to enable the public and private sectors to build a technically skilled biodefense workforce (3.3).
- Authorize the Department of Defense (DOD), Department of Health and Human Services (HHS), and Department of Agriculture (USDA) to pursue public-private partnerships modeled after Operation Warp Speed (3.3).
- Require all federally funded biopreparedness and response programs to incorporate private sector partnerships (4.5).

Recommendations for Core Programs and Requirements

- Create a National Biothreat Surveillance System to replace BioWatch and deploy emerging biotechnologies to enhance biosurveillance (1.4).
- Require all institutions subject to U.S. laws, regulations, and funding to buy synthetic DNA from companies that screen their orders and customers (2.3).
- Build biosafety and biosecurity commitments and resourcing into agricultural trade agreements and U.S. grant agreements with partners working on infectious diseases with epidemic or pandemic potential (2.5, 2.6).
- Strengthen funding in biopreparedness for core public, veterinary, and agricultural agencies (3.2).
- Restore funding and enhance authorities to fulfill the National Response Framework (4.2).
- Strengthen investigative capabilities to identify and attribute deliberate biological incidents at the ODNI, Federal Bureau of Investigation (FBI), Central Intelligence Agency (CIA), DOD, and Department of State (4.2).

- Support state and local authorities to manage emerging biological threats; resource emergency reserve funds and create authorities to permit flexible hiring and licensure across states (4.3).
- Require executive agencies to engage systematically with trusted partners, including clinicians, to strengthen health communications with skeptical communities (4.4).

Recommendations for International Cooperation

- Mandate the Department of State to strengthen technical cooperation and data and sample sharing with international partners (1.5, 2.4).
- Build U.S. biopreparedness investments into U.S. diplomacy with key allies, partners, and multilateral bodies (3.4).
- Strengthen regional and global surge manufacturing capacity for medical countermeasures (4.2).
- Execute bilateral agreements that enhance response and recovery coordination (4.6).
- Mandate the USDA and U.S. Trade Representative (USTR) to negotiate agreements with trading partners that enhance the control of biological threats to agricultural animals (4.7).

The United States Must Answer the Rising Threat

Americans face greater risks from biological threats today than at any time this century—and these risks are growing rapidly. The threats affect not only humans, but also animals and plants, endangering U.S. agricultural industries. The frequency and severity of naturally occurring biological events is increasing. The risk of accidental biological threats has grown due to the proliferation of domestic and global labs conducting research on highly contagious pathogens.[1] It is becoming cheaper, faster, and easier to develop bioweapons due to the rise of AI and increasing access to rapidly evolving computational capacity and biotechnological tools. While U.S. preparedness against biological threats has declined, multiple administrations have documented that U.S. adversaries have biological weapons and may turn to biowarfare as an area of asymmetric advantage.[2]

As these threats rise, the U.S. presidential administration and Congress have a responsibility to protect Americans against the accidental or unintentional release of biological agents (biosafety), deliberate misuse of biological agents (biosecurity), and naturally occurring bioincidents. Together, these biodefense investments ensure healthy families and workers, sustain a robust economy, and enable a strong military. They advance U.S. diplomacy and industry and deter biological attacks. Ultimately, they are reliant on the strength of innovative U.S. science, medicine, and technology.

Every administration since 1996 has published a strategy or plan to mitigate the risks from biological threats, but none of these plans have been fully funded by Congress or fully implemented by any administration. With bipartisan congressional action, the Trump administration could be the first administration to successfully deliver comprehensive biodefense to ensure that the United

States has a healthy population that will sustain a robust economy and, in turn, fund U.S. national security. President Donald Trump stated in the November 2025 National Security Strategy that his administration will take action to protect the nation, its economy, and its people from any threat:

> We want a resilient national infrastructure that can withstand national disasters, resist and thwart foreign threats, and prevent or mitigate any events that might harm the American people or disrupt the American economy. . . . We want to remain the world's most scientifically and technologically advanced and innovative country, and to build on these strengths.[3]

Achieving this mission will require aligning investments across the U.S. government and with allies, strengthening incentives for private sector commitment, and supporting the public and veterinary health workforce.

This goal notwithstanding, the current administration took multiple steps in 2025 that have compounded persistent vulnerabilities and eroded U.S. preparedness for future bioincidents. Deep cuts to civilian and military budgets, staff, and key programs have reduced core U.S. capabilities amid increasing biothreats, weakening the country's ability to detect potential biological threats, respond to existing threats, and prevent future threats from manifesting. The president's fiscal year 2026 budget request suggests cutting $3.372 billion of $30.276 billion in preexisting biodefense funding—over 11 percent—across departments and agencies.[4] But this figure severely undercounts the impact of cuts across the wider biomedical, scientific, and public health enterprise that sustains biodefense services and programs. The Trump administration has proposed and begun to implement large funding reductions—including over 50 percent for state and local public health, 55 percent for the National Science Foundation, 40 percent for the National Institutes of Health, and 35 percent for BARDA—and has eliminated HHS funding for research involving the mRNA platform.[5] The military will not replace capabilities that once existed in other federal departments. U.S. disengagement from international organizations further blocks global surveillance, data exchange, emergency coordination, and recovery, severely degrading the U.S. government's ability to protect Americans.

Every administration since 1996 has published a strategy or plan to mitigate the risks from biological threats, but none of these plans have been fully funded by Congress or fully implemented by any administration.

It is urgent that the United States act if it is to rebuild its capabilities and secure continued technological leadership and national security in the coming decades, especially in competition with China and other nations that are increasing funding for biotechnological research. Because of more than 10 years of strategic investments, China has surpassed U.S. outputs in 66 of 74 key technological domains, including many areas of biotechnology, and will continue to do so

without a coordinated and long-term U.S. industrial policy and a sustained commitment to the scientific enterprise.[6]

There is a path to advancing U.S. biodefense that can draw sustained bipartisan support. It is a path that requires, above all else, high-level leadership and commitment by both the Trump administration and Congress. It is a path that concentrates on restoring critical capabilities in the federal government at the White House, ODNI, CDC, and elsewhere; forging new private sector partnerships; making investments in state and local capabilities and improved policies and programs; and advancing smart U.S. diplomacy. Congress can enhance U.S. preparedness for and resilience against future biological threats through legislation authorizing and appropriating funds for departments and agencies with jurisdiction over biological defense, including through the National Defense Authorization Act (NDAA), PAHPA, and several bills advanced by the National Security Commission on Emerging Biotechnology (NSCEB).[7] It can also build on several new strategies and executive orders released by the White House that seek to improve the resilience and independence of the U.S. industrial base.[8]

These recommendations are eminently affordable, suggesting that the White House and Congress can sunset or reevaluate inefficiencies in existing programs while pursuing needed investments in known areas of vulnerability and big bets for U.S. science and technology.

In the fall of 2025, the CSIS Bipartisan Alliance launched a working group on biodefense to develop a prioritized list of critical, near-term policy solutions to address gaps in U.S. biodefense capabilities.[9] This report utilizes the 2018 National Biodefense Strategy of the first Trump administration as the framework to map a bipartisan path forward. It draws from a wealth of existing literature, best practices from recent outbreaks, and the contributions of a remarkable group of senior bipartisan experts, many of whom are listed above as signatories endorsing the report's conclusions. The working group focused on near-term actions that can be taken this year to mitigate strategic risks across four domains: modernizing biosurveillance, ensuring biosafety and biosecurity, reversing the decline of the biodefense enterprise, and strengthening response and recovery. These recommendations are eminently affordable, suggesting that the White House and Congress can sunset or reevaluate inefficiencies in existing programs while pursuing needed investments in known areas of vulnerability and big bets for U.S. science and technology. These actions will clarify federal roles and responsibilities, strengthen private sector partnerships, enhance core programs and requirements, and strengthen international cooperation. Together they provide a common-sense, bipartisan vision for a way forward. Most importantly, they answer the urgent need to better defend the United States against burgeoning biological threats. With sustained, high-level political will in the administration and Congress, Americans will become far safer, healthier, and more prosperous.

1. Modernize Surveillance

In 2025, the United States cut multiple civilian and military biodefense programs, reducing its core detection capabilities amid increasing biothreats.

Surveillance, the first goal in every biodefense strategy, has been chronically deficient and has dangerously declined. Comprehensive risk awareness requires capabilities that capture the full spectrum of biological threats to humans, animals, and plants. The CDC and the USDA play essential roles in monitoring civilian health security threats, including through support of and funding to state, tribal, local, and territorial (STLT) jurisdictions. The CDC Data Modernization Initiative has made significant strides toward enabling real-time data sharing from hospitals and care centers across the country, lowering the reporting and cost burdens borne by healthcare providers. The DOD plays a critical role in surveilling for threats to men and women in uniform. Without these surveillance systems, the United States risks being too slow to detect and contain the next inevitable biological threat.

STRATEGIC CHALLENGES

Chronic Fragmentation: Surveillance and forecasting efforts are stovepiped across the CDC; the former bio unit at the ODNI; animal and plant centers within the USDA; BioWatch, a legacy system deployed after the anthrax attacks in 2001 and last updated in 2011; military surveillance and intelligence capabilities that rightfully prioritize warfighting requirements; and surveillance data from the Veterans Health Administration. Data from commercial partners is underutilized. Existing data is poorly integrated, and recent actions have further reduced surveillance capacity and capabilities.

Outdated Capabilities: The U.S. government still relies on faxes to share some public health data and has insufficiently leveraged emerging technologies and industry capabilities. AI will augment existing surveillance systems. Data from the healthcare industry, personal wearable devices, and social media can provide early signals of an emerging outbreak. The same is true of using advanced molecular detection; new computational, AI, and open-source intelligence tools; and expanded wastewater sampling at overseas embassies, military installations, airports, and other U.S. locations.

Increased Blindness to the Global Picture: The United States' withdrawal from the World Health Organization (WHO) significantly decreases the country's access to essential global surveillance data, including a 60 percent reduction in international samples. The WHO has implemented almost all of President Trump's suggested reforms, opening the door to negotiation of a new U.S.-WHO partnership.[10] The 2025 America First Global Health Strategy relies on rapidly concluding new bilateral agreements with key partners, including for biosurveillance data.

RECOMMENDATIONS

Congress and the executive branch should ensure the following:

1. **The White House:** The National Security Council should include a White House Office of Biopreparedness (WHOBP) as a senior directorate with budget integration authority similar to the ODNI. This will synchronize interagency biosurveillance activities and assessments.

2. **ODNI:** The ODNI should reinstitute an office that analyzes and disseminates biological threat intelligence and expedites annual assessments of evolving risks related to rapidly advancing biotechnological, AI, and computational enhancements.
3. **Integrated Data:** All federal departments and agencies that collect and analyze biosurveillance data should institute measures that enhance data protections to enable rapid sharing—including with the CDC, which will serve as the lead agency that will integrate this data to inform decisionmakers and verified users at the local, county, state, tribal, territorial, regional, and national levels.
4. **BioWatch:** BioWatch should be decommissioned. The CDC should establish a National Integrated Biothreat Surveillance System that augments existing legacy systems, including the Biothreat Radar, the National Wastewater Surveillance System, metagenomic next-generation sequencing, and traveler-based genomic surveillance. This integrated system will develop, deploy, and sustain emerging biotechnologies that enhance biosurveillance.
5. **Global Health Security:** The Department of State should be required and resourced to negotiate strategic technical cooperation, as well as data and sample sharing, between the United States and international partners, including the WHO. It should maintain and resource CDC country and regional offices and put in place mechanisms to surge support during outbreaks.

2. Ensure Biosafety and Biosecurity to Prevent Bioincidents

As the risk of deliberate, accidental, and naturally occurring biological events grows, the United States should prepare to detect and respond to these events and should proactively prevent them whenever possible.

Biosafety—protecting the United States and the world against the accidental release of biological agents—and biosecurity—protecting against the deliberate deployment of biological weapons—are essential capabilities to prevent bioincidents. The risk of deliberate biological threats has grown, fueled by the convergence of AI, biotechnology, and computational power. Russia and North Korea have bioweapons, and other state and non-state actors are seeking to develop them. The risk of accidental biological threats has grown due to the rapid proliferation of high-containment laboratories with limited training and oversight. Uncertain federal leadership and weakened U.S. capabilities raise the imperative for legislative action to improve domestic and global biosafety and biosecurity.

STRATEGIC CHALLENGES

Heightened Risk of Deliberate and Accidental Bioincidents due to AI and Emerging Technology: As the cost of gene synthesis plummets, state and non-state actors who seek to achieve a military or economic advantage over the United States will more easily misuse these technologies in novel ways that put Americans and others at higher risk of harm. The Trump administration has eliminated the requirement for private companies that sell synthetic DNA to

track purchasers. Steps to reduce risk, such as the screening of DNA synthesis orders, have been insufficiently resourced and implemented.

Threats from High-Containment Labs: Human error remains the leading cause of unintentional lab accidents in the United States. In the aftermath of the Covid-19 pandemic, many countries are building new research facilities, but most lack an experienced workforce or sophisticated oversight mechanisms. The International Organization for Standardization (ISO)'s bio-risk management standard, ISO 35001, establishes helpful standards for biosafety and biosecurity, as does recent guidance from the WHO. Yet there has been insufficient effort at the international level to build capacity in high-containment labs around the world to implement these standards.

No One in Charge: There is no single U.S. entity responsible for oversight of laboratories conducting biological research. The USDA, HHS, Environmental Protection Agency (EPA), and other federal departments and agencies have varied responsibilities for monitoring compliance with or setting policies on biosafety and biosecurity. There is no established mechanism for integrating these efforts across the U.S. government and with industry and global partners outside government.

RECOMMENDATIONS

Congress and the executive branch should ensure the following:

1. **Bioweapons:** Reestablish the ODNI bio unit to resume monitoring for foreign development of bioweapons, and fund the DOD to protect the United States from them.
2. **Commerce:** As recommended by the NSCEB, establish and resource an empowered, unitary entity within the Department of Commerce that is mandated to advance safe, secure, and responsible biotechnology innovation. This entity should develop systems to monitor compliance, report biosafety or biosecurity incidents, and interrupt irresponsible research; conduct applied research on biosafety and biosecurity; provide training and education to biosafety and biosecurity professionals; promulgate standards (e.g., ISO 35001) for field and laboratory biosafety and biosecurity; and provide other oversight and enforcement capabilities and technical assistance to any labs working with pathogens of pandemic potential that may infect humans or other species of interest (e.g., commercial cattle and wheat).
3. **OSTP Guardrails:** Require the OSTP to work with frontier labs and other private sector entities to establish and implement safety and security practices to guide the responsible convergence of AI technologies and synthetic biology, including confidence-building measures to monitor for compliance with the Biological Weapons Convention (BWC) and to prevent bioterrorism. Identify and implement new mechanisms, such as domestic purchase preferences and tax incentives, to encourage private sector investment, training, and best practices in biosafety and biosecurity. Require all institutions subject to U.S. laws, regulations, or funding agreements to buy synthetic DNA from companies that screen their orders and customers. These measures, in sum, will greatly raise the probability that AI, synthetic biology, and other evolving biotechnologies will reach their potential to bring optimal benefits to Americans.

4. **Diplomatic Leadership:** Sustain technical coordination with international partners, including NATO, the G7, and the United Nations—especially the World Organization for Animal Health, the Food and Agriculture Organization, the Pan American Health Organization, and the WHO—to reduce vulnerabilities to accidental, deliberate, and naturally occurring biological threats outside of U.S. borders. Prioritize strengthening the enforcement of the BWC. Accelerate biosafety and biosecurity cooperation in bilateral discussions, especially with China, by including these issues on the agenda if Presidents Xi and Trump meet in Beijing in April 2026 and in the United States later in the year for the G20 summit.
5. **Grantmaking Practices:** Require biosafety and biosecurity resourcing in terms and conditions for U.S. government grants awarded in infectious disease research and programming whenever such grants concern pathogens with epidemic or pandemic potential.
6. **Trade Agreements:** Mandate that all trade agreements that involve the importation of products into the United States that could lead to a biological incident in humans, animals, or plants include provisions for the exporting nation to mandate commensurate biosafety and biosecurity standards.

3. Reverse the Decline of the Biodefense Enterprise

The strength and innovative capacity of the national science and technology base are essential to U.S. national security, economic prosperity, health and well-being, and competitiveness. When paired with public and veterinary health services across the county, this network of American talent and ingenuity forms the core of U.S. biodefense. That infrastructure is used to research, invest in, develop, manufacture, procure, distribute, and dispense medical countermeasures to the American people in peacetime and in emergencies.

The first Trump administration leveraged its 2018 National Biodefense Strategy (NBS) to create Operation Warp Speed, a public-private partnership that built on decades of federally funded research into coronaviruses and the mRNA delivery platform to deliver safe and effective tests, treatments, and vaccines, saving millions of lives and trillions of dollars. Recent outbreaks and reviews, including the NSCEB, now offer opportunities to update the U.S. strategy for preparedness and resilience. Public biodefense officials need to develop and exercise local, nationwide, and international response capabilities, including risk communication and community engagement plans. New technologies promise to further reduce risk by improving indoor air quality, in addition to using viral vector, recombinant protein, and mRNA platforms to produce vaccines much faster and at greater scale than other, older technologies. The mRNA platform is proving to be highly safe and effective as a means of delivering drugs that treat cancer, stimulate the immune system, and potentially improve health in other ways.

STRATEGIC CHALLENGES

Weakened Federal, State, and Local Capabilities: More than 80 percent of state and local response capabilities were funded by the federal government; those funds have been cut by 50

percent or more, threatening the health of families, workers, and agricultural industries.[11] In the meantime, the administration has not clarified the mission of or future funding for ASPR, BARDA, or the SNS.

Diminished Competitive Edge: U.S. scientific capability, clinical research output, and industrial power were built through sustained investments over decades. But over the past 20 years, the United States has ceded leadership in most critical biotechnology research and development (R&D) domains to China.[12] Recently proposed executive funding levels will further reduce American innovation. The 2025 NDAA may begin to slow the United States' decline by directing new biotechnology-related rules and requirements as well as by authorizing new programs.[13]

Weak Industrial Policy: The United States has faced intermittent shortages of medical products and personal protective equipment (PPE) for over 15 years.[14] Unlike most other industrialized nations, the United States lacks an effective industrial policy for biomedical products and has not invested in sustaining a durable and scalable industrial base for these products. Private industry is encouraged to pursue divergent goals: to onshore manufacturing while also reducing prices, without certainty of future demand or government stockpiling requirements. The result is confusion, uncertainty, and deferred investment. The United States' reliance on China for R&D, raw materials, generic medicines, and antibiotics creates an economic and national security vulnerability similar to China's control over rare earth minerals. China has previously shown a willingness to leverage these advantages. As geopolitical tensions rise, medical supply chains could be disrupted by conflict or weaponized as a negotiating tactic.[15]

RECOMMENDATIONS

Congress and the executive branch should ensure the following:

1. **The White House:** Mandate and staff a White House Office of Biopreparedness (WHOBP) as a senior directorate on the National Security Council with authority to integrate budget requests and spending plans. This office should be tasked to update the NBS and develop an integrated national plan for biodefense investments that aligns defense requirements with human, animal, and plant health responsibilities; provide Congress with annual countermeasure preparedness reviews; and develop and oversee implementation of a whole-of-government strategy to strengthen medical supply chain resilience.
2. **Federal, State, and Local Capabilities:** Five related actions can strengthen federal, state, and local capabilities in unison: (1) Require that the HHS retain ASPR, BARDA, and the SNS in their established roles and fund requirements validated by the WHOBP; (2) restore—and, where appropriate, expand—funding in core public, veterinary, and plant health preparedness and response capabilities; (3) restore funding to regain world leadership in R&D, including in mRNA, recombinant protein, and viral vector vaccine research, and expand investments in other pathogen-agnostic platform technologies and the improvement of indoor air quality; (4) reauthorize and resource the core capabilities in PAHPA to guarantee the design, development, manufacturing, and deployment of medical countermeasures within 100 days of the identification of a pathogen of concern; and (5)

authorize and fund the HHS and the USDA to develop U.S.-based, regional, and global surge manufacturing capacity for tests, treatments, vaccines, and PPE.

3. **Private Sector:** Authorize the DOD, HHS, and the USDA to pursue public-private partnerships modeled after Operation Warp Speed and recent U.S. actions to reduce Chinese control of rare earth minerals. Authorize funding and contracting authorities for the Defense Advanced Research Projects Agency (DARPA), Project BioShield, and the USDA. Direct the WHOBP to incorporate the private sector more fully into preparedness plans, tapping private sector infrastructure and manufacturing capabilities and increasing investments to achieve nearshoring goals. Fund programs to increase a technically skilled biodefense workforce.
4. **International Burden Sharing:** Require departments and agencies to ensure that U.S. biopreparedness investments leverage commitments to biopreparedness by key allies, partners, and multilateral bodies. Incorporate biopreparedness into exercises with partners to reduce supply chain vulnerabilities and promote U.S. innovations abroad.

4. Strengthen Response and Recovery

President Trump's 2018 National Biodefense Strategy highlights the need to rapidly respond to future bioincidents in order to limit domestic health, educational, economic, and national security impacts. Multiple recent events and exercises have validated sustained gaps in these areas. Failure to plan for and execute a successful response and recovery is likely to result in a smaller national workforce, fuel economic decline, and compromise national security. Innovative communication plans are needed to rebuild trust. It is essential that deliberate biological attacks are characterized rapidly and accurately, and that the perpetrators are identified and held accountable. Rapidly evolving technologies offer new ways to identify and attribute the sources of deliberate biological incidents if the United States invests in these capabilities. A well-coordinated response across all levels of government and the private sector is achievable if roles and responsibilities are clearly defined and response capabilities are adequately funded and regularly exercised.

Successful recovery after a bioincident is critical to restoring the community, economy, and environment. It creates societal resilience and deters adversaries from considering the use of biological weapons against the United States. Presently, recovery planning remains stuck in a confused, rudimentary stage.

In the wake of the Covid-19 pandemic, many countries now face excessive debt burdens with limited prospects for economic recovery, precluding investments in biopreparedness. In 2026, the United States will host the G20 summit, which could advance disaster recovery initiatives and debt swap proposals through joint compacts and action by the International Monetary Fund, World Bank, and regional banks.

STRATEGIC CHALLENGES

A Decentralized, Inadequately Resourced System: The federated U.S. government structure impedes a unified response plan, clear communications, shared commodities, and coordinated action. Few federal or STLT plans make effective use of the private sector. The Federal Emergency

Management Agency, responsible for fulfilling the National Response Framework (NRF), has seen its budget, staff, and programs decline in 2025, weakening U.S. preparedness. The elimination of the ODNI unit focused on biological threats degrades the United States' ability to manage deliberate biological events and to identify and hold perpetrators accountable.

Weak Surge Capabilities: Recent reductions in federal support for state and local authorities and infrastructure exacerbate long-standing weaknesses. Baseline compacts and legislation are ambiguous and underfunded, including the Regional Disaster Health Response System, the National Disaster Medical System, the Public Health Emergency Fund, the Infectious Diseases Rapid Response Reserve Fund, and the Stafford Act. The United States is projected to have a shortage of 141,000 physicians and hundreds of thousands of other healthcare workers by 2038, which will stymie response and recovery efforts.[16] There are inadequate tools to support surge capacity, including mechanisms to deploy additional staff through direct hiring authorities, incentives for retired and volunteer workers, agreements to recognize licensure across state lines, and flexible pay authorities. There are few reliable pathways to leverage the U.S. private sector and academic bench to fill research and capacity gaps.

Public Mistrust: Public mistrust in public health rose post-Covid-19 and worsened in 2025. Humility, transparency, and intensive community engagement are the path to restoring trust. Until public confidence is restored, biodefense leaders will be unable to carry out even the most elementary and well-designed emergency response plans.

Overly Narrow Recovery Planning: Long-term recovery rests on supporting the frontline workforce, regaining educational losses, and conducting ongoing research into long-term impacts. While it is difficult to forecast disasters, long-term recovery has been insufficiently integrated into pandemic plans and budgets.

Weakened Global Capabilities and Partnerships: The U.S. capacity to integrate and steer international recovery from biological emergencies has declined in 2025 as a result of reductions in budgets and staff, the shuttering of the U.S. Agency for International Development, the weakening of disaster response at the Department of State, and the U.S. withdrawal from the WHO. The consequence is a higher level of risk to U.S. citizens and businesses abroad, as well as to U.S. national security overall.

RECOMMENDATIONS

Congress and the executive branch should ensure the following:

1. **The White House:** Establish a White House Office of Biopreparedness (WHOBP) as a senior directorate on the National Security Council to coordinate the national response to and recovery from biological emergencies, with integration authority over budgets at the U.S. Departments of Defense, State, Veterans Affairs, Health and Human Services, Energy, Justice, Agriculture, and the Interior; the EPA; and the intelligence community. Align federal, private sector, and academic partners behind a unified research agenda; incentivize STLT data sharing and scope STLT needs; coordinate medical countermeasure supply and deployment; and forecast recovery needs.

2. **Essential Capabilities:** Restore funding and enhance authorities to fulfill the NRF. Restore and invest in domestic and global investigational capabilities to identify and attribute deliberate biological incidents at the ODNI, FBI, CIA, DOD, and Department of State.
3. **STLT:** Support state and local authorities in preparing for and responding to deliberate, naturally occurring, and accidental biological threats. Resource STLT emergency reserve funds and ensure flexible hiring and licensure recognition across state borders.
4. **Communications:** Require executive branch agencies to invest in a network of trusted partners, including clinicians, to make health communications more accessible and trustworthy to skeptical communities.
5. **Private Sector:** Require all federally funded response and recovery planning to involve private sector partners. Create a public-private partnership model built on technological contributions, resource needs, information sharing, and support for excess capacity and liability protections.
6. **International Partners:** Execute bilateral agreements that enhance response and recovery coordination; leverage the U.S. leadership of the G20; restore funding for bilateral, multilateral, and regional partners; create emergency reserve facilities; and create flexibility to adapt bilateral contracts to crisis needs. Press international financial institutions to expand rapid financing vehicles to support low- and middle-income countries during biological emergencies.
7. **Trade Agreements:** Mandate that the USDA and USTR begin negotiating agreements with trading partners that enhance the control of biological threats to agricultural animals.

To Act or Not to Act

The United States faces increasingly worrisome biological threats.

Rapid advances in biotechnology, AI, and computational power provide U.S. adversaries with the means to advance bioterrorism against the United States. Spillover of known pathogens like influenza or unknown viruses can quickly and unexpectedly threaten the entire U.S. population.

The United States' biopreparedness is regressing.

This places Americans in danger, poses national security risks, and compromises U.S. global competitiveness in biotechnology innovation.

There is a path forward.

U.S. capabilities have never met the true need, but the essential actions needed to secure U.S. biodefenses are clear. Congress can clarify federal, state, and local roles and responsibilities and incentivize government, academic, and private sector entities to streamline efforts and collaborate more effectively. Foundational public health and veterinary infrastructure and workforce investments can be combined with reserve funding, hiring flexibilities, and exercised response plans to ensure that surge capacity is in place for emergencies. Investments in more diversified supply chains for tests, treatments, vaccines, and PPE can assure the needed scale and speed of medical countermeasure deployment. A modernized surveillance system can provide early detection and real-time situational awareness of emerging biothreats to rapidly mobilize resources

and initiate effective responses. Investments in the improvement of air quality can reduce the risk of related illnesses, both in the workplace and in schools.

U.S. capabilities have never met the true need, but the essential actions needed to secure U.S. biodefenses are clear.

This report from the CSIS Bipartisan Alliance for Global Health Security Working Group on Biodefense lays out a vision to enhance U.S. biodefense built on actionable, affordable, bipartisan steps. The working group drew upon a strong bipartisan foundation of knowledge and expertise, as well as decades of analytical and policy work. Clarifying federal leadership, strengthening private sector partnerships, enhancing core programs and requirements, and sustaining international cooperation are the essential areas that the working group argues must be prioritized in order to bolster U.S. defenses against biological threats.

Ultimately, success rests on the high-level leadership and political will of Congress and the administration.

The hope of this working group is that this report helps to clarify the threats facing the United States and informs decisions that will mitigate risks to the American people, economy, and national security.

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