

## American Pandemic Preparedness: Transforming Our Capabilities

### Follow-up Recommendations from the Infectious Diseases Society of America (IDSA)

January 31, 2022

IDSA and its HIV Medicine Association (HIVMA) appreciate the opportunity to expand upon our [initial pandemic preparedness recommendations](#) in several key areas and provide greater detail on how key goals can be accomplished. Our [October 12 document](#) provides greater details on our highest priorities. As OSTP continues working on pandemic preparedness, as well as the forthcoming biodefense strategy, we welcome opportunities to collaborate on policies to support the infectious diseases workforce and combat antimicrobial resistance.

In response to OSTP's interest in additional concrete recommendations, IDSA and HIVMA convened diverse cross-sectional working groups of member experts to discuss actionable recommendations in the following additional priority areas: **public health communications, surveillance, workforce incentives and support, and diagnostics**. We welcome continued dialogue and collaboration with OSTP and others in the Biden Administration in addressing the need for robust action on pandemic preparedness policy initiatives.

#### Public Health Communications

##### **Background:**

IDSA has identified misinformation as a critical challenge facing public health communication efforts. Mis- and disinformation undermine scientifically accurate public health messaging and fuel vaccine hesitancy. Increased federal support for efforts that combat public health misinformation is necessary to facilitate robust responses to future pandemics. The inclusion of frontline clinicians, who are often trusted figures in their communities and able to disseminate information directly to patients, should be a key component of these efforts. **Recommendations include:**

##### Strengthening public health communications

- Provide federal funding to train frontline clinicians in effective public health communications.
- Provide federal funding to create a public health ambassadors corps and bring them to the table early on in public health initiatives, such as vaccination campaigns. These “vaccine ambassadors” should be recruited from different underserved communities and vulnerable populations and be compensated with sufficient resources to do the job. Initial efforts in this space (e.g., anti-hate groups) have been effective and can be used as a model.
- Fund ongoing community outreach programs to increase vaccine uptake and trust in medical personnel, building off relevant efforts made to support COVID-19 vaccination in order to strengthen public health communication in between emergencies. Allocate sustained resources for ongoing training to make frontline providers community leaders in public health and vaccine communications.
- Work with ASPR and others to strengthen existing mechanisms that facilitate and incentivize collaboration on preparedness between and among health departments,

agencies, and healthcare systems. Work with professional societies and community-based organizations to ensure all relevant stakeholders are engaged in collaborations. Ensure that public health communications are a fundamental focus of these efforts in between emergencies.

- Fund continuous support of collaborative emergency response structures, including higher levels of support to “backstop” public health in underfunded areas.
- Expand funding for school and employee health programs as well as health programs embedded in childcare centers and senior centers. These permanent settings can build local trust and be utilized during emergencies to share public health information and support vaccination.

#### Facilitating frontline clinician input

- Develop a comprehensive system that engages and communicates with all specialties and support Department of Health (DOH) engagement with clinicians to share real-time updates, guidance, and resources. Not all states have equally accessible information networks for licensed medical providers; those in private practice, pediatrics, and other specialties may be siloed and disconnected, and efforts should be made at state DOH levels to connect these physicians.
- Ensure that tailored communications developed by CDC or other federal experts for physicians to use with their patients actually reach all frontline clinicians, using comprehensive system described above and expanded partnerships with professional societies and community-based organizations. These resources should specifically target vaccine misinformation and equip providers with the information needed to be the trusted messenger.

#### Supporting BIPOC and underserved communities

- Expand and sustain partnerships with grassroots community based and professional organizations launched during COVID-19 to support ongoing, targeted, culturally competent communications efforts to build trust in public health and vaccine confidence. The teams responsible for developing communications in pandemic preparedness programs should reflect the diversity of target populations.

### **Surveillance**

#### **Background:**

Early surveillance systems with more proactive, rather than reactive, capabilities are critical for providing timely data to inform outbreak responses. IDSA has recommended that the U.S. work with WHO and other global partners to establish genomic sequencing hubs throughout the world to ensure surveillance is widespread, standardized and embedded in global pandemic preparedness efforts. Similar efforts already exist for [influenza](#) and could be better leveraged for other infectious diseases. Global efforts to detect COVID-19 variants have thus far been fragmented, with countries that have surveillance capacity lacking coordination while the vast majority of countries – particularly low- and middle-income countries – lack surveillance capacity altogether. Even in the U.S., genomic sequencing has been insufficient.

#### Innovating and integrating surveillance systems

Facilitate a One Health approach in surveillance to bridge animal and human health, particularly since many emerging pathogens are zoonotic. Support the development of a national, unified surveillance system and data reporting repository utilizing integrated data systems (“US epinome” project) as a moonshot strategy. **Additional recommendations to strengthen surveillance systems include:**

- Engage EMR companies to define a universal harmonized basic data set that includes private laboratories.
- Invest in healthcare infrastructure (workforce, laboratory systems) to ensure the capacity to detect pathogens and identify patterns.
- Fully fund human-animal quarantine stations at U.S. borders to detect imported threats, as well as an integrated system housed at CDC to gather nationwide data.
- Increase infrastructure for surveillance that is not dependent on accessing the healthcare system: wastewater surveillance (currently used for polio, SARS-CoV-2), pharmacy surveillance, school absenteeism, google searches (google flu), animal surveillance. Support and expand on similar initiatives that already exist in other parts of the world with funding and expertise (e.g., Africa CDC, Nigeria CDC).

#### Partnerships

IDSA (in partnership with other organizations) is well positioned to provide training and education as surveillance programs and tools are launched. With collaboration from OSTP and appropriate federal agencies, we can provide technical support and expertise, as well as support from our diverse member experts.

#### **Workforce Incentives and Support**

##### **Background:**

COVID-19 has exacerbated the already existing strain on the infectious diseases (ID) workforce pipeline. While ID physicians are on the frontlines of managing the current pandemic and future outbreaks, burnout threatens their ability to respond effectively and has contributed to poor retention. Financial challenges have further limited the ability to recruit new ID physicians. The ID specialty requires 2-3 years of additional training beyond general internal medicine and general pediatrics, and average salaries are below general internal medicine and nearly all other medical specialties despite high rates of medical student loan debt.

Previous IDSA recommendations for supporting the ID workforce have focused on loan repayment, reimbursement, NIH training support, and mental health. These areas remain high priorities for us, and we would welcome the opportunity to work closely with you to advance policies in these areas. **Additional recommendations include:**

##### Strengthening workforce recruitment and retention

- Facilitate federal partnerships (e.g. NIH, NIAID, etc) with private entities (e.g., Google, Apple, Amazon) to fund data-driven ID work, infrastructure, and researchers and provide access to scalable technology and cloud computing capabilities.
- Embed training funds into large clinical trials to allow for broader experience and mentorship for younger researchers.

- Attach training grants to large, multi-institutional grants to increase training, mentorship and support early stages of ID pipeline.

#### Advancing loan repayment and reimbursement initiatives

- When dedicating emergency funds to hospitals, require a portion of funds go specifically to frontline clinicians; there are currently no requirements that federal emergency hospital funding be set aside to compensate physicians leading the response and taking on the majority of the increased, uncompensated workload.
- Issue direct payments to hospitals and healthcare facilities for meeting national benchmarks in critical areas (e.g., pandemic preparedness, antimicrobial stewardship) to encourage training in these areas.
- Implement a ROTC-like approach to recruitment and repayment for infectious diseases physicians and other health care professionals central to pandemic preparedness: provide funding for tuition and other expenses during training and then allow repayment with specified years of service (e.g., clinical work, research).

#### Supporting underrepresented groups in the ID workforce

- Increase federally supported programs at academic institutions to send medical and graduate students to underrepresented and underserved communities to facilitate mentorship and encourage more individuals from underrepresented populations to pursue careers in medicine, infectious diseases, pandemic preparedness and public health.
- Increase the availability of J1 waivers under the Conrad State 30 Program, which are rarely available for ID specialists, create additional waiver slots at academic medical centers regardless of whether the facility is in a HPSA if the physician's work is in the public interest, and create additional J-1 visa waiver FLEX slots for each state for specialties deemed essential to pandemic response, and permit these FLEX slots to be used in all geographic areas, given the extensive impact of pandemic-related workforce shortages.
- Remove requirements that trainees supported by NIH T32 grants be US citizens or permanent residents to expand the workforce to include additional foreign medical graduates.

#### Addressing burnout and mental health support for ID workforce

- Fund evidence-based mental health initiatives targeted at the healthcare workforce. Create partnerships with existing organizations to facilitate expansion of existing initiatives.

## **Diagnostics**

### **Background:**

The White House pandemic preparedness plan highlights the need for resilient supply chains and the ability to quickly develop accurate diagnostic tests in response to viral outbreaks. IDSA has [recommended](#) developing clinical trial networks that facilitate rapid diagnostic testing and subsequent linking of clinical trials for patient enrollment. Over the course of the COVID pandemic, laboratories ran into critical shortages of nasal swabs, viral transport media, and PCR reagents that could have been averted. It is critical to identify diagnostics supply chain and logistical bottlenecks and ensure that backups and alternatives are in place. This includes the

deployment of general-purpose Nucleic Acid Amplification and Nucleic Acid Sequencing devices in clinical settings for ordinary use, so that they will be ready and available when the next new pathogen hits. The early deployment of these technologies could feed data directly into CDC database for real-time analysis, which is less costly than developing therapeutics but relies on sustained infrastructure and supplies. Finally, to increase existing regulatory capacity, it may be useful to consider expanding oversight of testing to credentialed third party reviewers, such as the College of American Pathologists, via proficiency testing.

Further discussion is needed to examine important factors in test development and supply chain logistics, ensure the inclusion of relevant stakeholders, and build a comprehensive plan to ensure diagnostic preparedness. **Specific recommendations for strengthening diagnostics**

**infrastructure, workforce, supply chain, and emergency capabilities are as follows:**

*Advancing pandemic response capabilities*

- Facilitate nationally centralized assay development to support early detection of novel pathogens.
- Collaborate with state public health departments to rapidly produce and distribute quality reagents for clinical laboratories to deploy on their respective platforms in the event of an outbreak or public health emergency.
- Strengthen collaboration between CDC and WHO on surveillance and diagnostic standards to facilitate a more rapid, targeted pandemic response.
- Establish and fund additional biosafety level 4 (BSL4) laboratories to facilitate additional safe research on the most dangerous pathogens—the ones that can cause serious disease and for which no treatment or vaccines exist—to increase our readiness to combat these pathogens when needed.
- Promote the evaluation of novel diagnostics across the lifespan (pediatrics to geriatrics) and across the health lifespan (healthy to medically fragile).
- Deploy NAAT and sequencing technology to community hospitals for use in day-to-day infection control, to ensure these technologies can be seamlessly and rapidly utilized during an emergency.
- Engage academic medical centers, community hospitals and other health care facilities in the development of new diagnostics technologies. Provide funds to support personnel training on new technologies as well as the necessary equipment and reagents to facilitate rapid adoption of new technologies.

*Supporting the diagnostics workforce*

During the pandemic, the clinical microbiology workforce was overwhelmed. Many community hospitals have had to outsource to outside labs as a result, which increases turnaround times when rapid diagnoses are needed. To support pandemic preparedness, we need to bolster this workforce as a central component of our testing capacity:

- Develop federal tuition assistance programs that support the development of laboratory personnel.
- Standardize training and certification requirements across states, instead of current state by state certifications. This can help with attrition rates and bolster the workforce in emergency conditions where there is a need for increased staff.

- Compile data on attrition in the field to help identify factors leading to the workforce collapse – professional societies can collaborate and provide data to support a comprehensive federal review.
- Conduct an awareness campaign on laboratory science careers targeting high school and college students.

#### Strengthening the diagnostics supply chain

- Develop a federally guided supply chain and distribution plan involving all manufacturers of products relevant to diagnostics and pandemic response. The Association of Supply Chain Management should be involved in developing this plan, and the government should contract with suppliers to improve the Strategic National Stockpile.
- Incentivize manufacturing of diagnostics materials in the US to avert the need for importing a majority of products in the event of a public health emergency.
- Require manufacturers to validate diagnostic products on at least two alternative devices so that laboratories that lack the budget and space to purchase additional instruments or platforms are able to run tests on existing devices. Vendors have an incentive not to do this currently, and laboratory use of unvalidated alternatives can void the device warranty.
- Initiate national inventory of diagnostic equipment. Ensure the federal government has identified choke points and establishes and funds a plan to address them, including through back up plans and redundancies to avoid breakdowns in access to testing supplies. Include inventory of research labs with smaller machines (e.g., thermocyclers). A national database, accessible by all laboratories, could identify available equipment and ensure necessary resources do not go unused.
- Designate pandemic assessment centers – i.e., institutions partnered with state health departments to coordinate activities to improve responses and alleviate supply chain issues. These partnerships can work strategically to maximize utilization of existing resources and decrease turnaround times on testing.

#### Increasing collaboration across stakeholders

- Create a centralized database to disseminate successful diagnostic testing protocols achieved by a laboratory during emergency conditions for use by other laboratories and health centers. This will prevent duplicative efforts and speed up validations to get tests online faster.
- Fund additional public health outreach and partnerships to educate underserved communities on decentralized testing options (clinic, community, at-home).

#### Improving the EUA process for diagnostics

- Establish laboratory networks pre-authorized by FDA to develop infectious diseases diagnostics in pandemic conditions.
- Facilitate easy access to samples and QA standards in order to build and utilize tests. Build infrastructure to broadly deploy routine genome sequencing on the ground.

#### Additional Issues

IDSa and HIVMA welcome continued collaboration on these outlined recommendations. If you have questions about these comments or would like to connect, please contact Amanda Jezek, IDSA Senior VP, Public Policy and Government Relations at [ajezek@idsociety.org](mailto:ajezek@idsociety.org).