July 1, 2020

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

Dear Chairman Alexander:

The Association of American Medical Colleges (AAMC) appreciates the opportunity to provide comments in response to your recently issued request for feedback on “Preparing for the Next Pandemic: A White Paper.” While the country and the world are still combatting the coronavirus pandemic, the AAMC hopes to continue working with the Committee to address ongoing challenges while also supporting the efforts in the white paper to document lessons learned from the current COVID-19 response to better prepare for future pandemics. The HELP Committee has a strong and longstanding track record of bipartisan leadership in identifying and developing strategies to enhance the nation’s preparedness and response, and we look forward to continued collaborations with you, the Committee, and the full Congress toward this goal.

The AAMC is a not-for-profit association dedicated to transforming health care through innovative medical education, cutting-edge patient care, and groundbreaking medical research. Its members are all 155 accredited U.S. medical schools; nearly 400 major teaching hospitals and health systems, including 51 Department of Veterans Affairs medical centers; and more than 80 academic societies. Through these institutions and organizations, the AAMC serves the leaders of America’s medical schools and teaching hospitals and their more than 173,000 full-time faculty members, 89,000 medical students, 129,000 resident physicians, and more than 60,000 graduate students and postdoctoral researchers in the biomedical sciences.

AAMC members on the front lines are continuing to see and experience first-hand the challenges that patients, the health care system, and the nation continue to face in combatting COVID-19. As this current pandemic continues, the AAMC urges Congress to quickly pass additional legislation to equip major teaching hospitals and medical schools across the country, along with their physician partners, other providers, researchers, and public health professionals, with the resources and authorities they need to sustain a vigorous response in the near term and to lay the necessary groundwork to prevent or respond to the pandemic’s recurrence.

The AAMC continues to urge passage of additional immediate COVID-19 relief through the recommendations described in a letter sent on April 17 to Congressional leadership and Vice President Pence, including: ensuring that patients have access to high-quality care; strengthening the health care safety net; providing additional financial resources for providers; protecting the research enterprise; building upon and making permanent telehealth gains; strengthening the
nation’s public health, testing, and data collection infrastructure; and helping protect and support frontline health care workers. Congress has already established a number of critical initiatives and policies through the emergency supplemental legislation enacted to date. We believe strongly that Congress needs to act on the next supplemental legislation as quickly as possible to both sustain the efforts to date with additional investments, as well as lay the groundwork to prepare for future crises.

AAMC member institutions are major centers of cutting-edge medical research, with scientists and clinicians at medical schools and teaching hospitals conducting over 50% of extramural research funded by the National Institutes of Health (NIH). Many of our member institutions have developed much-needed tests for COVID-19, a fluid and rapidly changing area as they bring new equipment online, try to source materials, and stand up reporting procedures in extremely challenging conditions. They are also at the forefront of research efforts to identify and advance clinical care protocols, viable therapeutics and innovative vaccines to blunt the pandemic’s impact.

In partnership with their physician faculty from affiliated medical schools, AAMC-member teaching hospitals are critical institutions for delivering patient care, providing 25% of the nation’s medical and surgical intensive care beds, 36% of cardiac intensive care beds, 61% of pediatric intensive care beds, and 69% of all Level 1 Trauma Centers. Our members are well-established and respected regional referral centers and centers for tertiary care. They have years of experience in mobilizing resources during times of crisis, and often lead regional responses in collaboration with their state and local departments of health, regional emergency management systems, and all other major players in emergency response. States and localities look to our members for launching initial responses and to aid the development of regional response networks.

Major teaching hospitals, medical schools, and teaching physicians have mobilized on all fronts to contain and mitigate COVID-19. Our members continue to provide the world’s most advanced and expert patient care informed by the latest innovations in fundamental and clinical research. Our emergency rooms are open to anyone in need, with experts in medical specialties available 24/7. As we have heard from our members and seen on national news reports, COVID-19 patients tend to be sicker and require prolonged hospitalizations, including being placed on ventilators in intensive care units (ICUs). Teaching hospitals are treating most of these complex patients and, for many, the cost of care will greatly exceed the reimbursement hospitals receive.

Major teaching hospitals invest consistently to maintain a heightened level of preparedness to engage rapidly in response to any event at any time. This unique proficiency helped to lead the nation’s response to past public health emergencies and disease outbreaks such as measles, Ebola, and H1N1, and now is a key asset in combatting COVID-19. And even amid this crisis, teaching hospitals currently battling a surge in infections and managing the needs of their communities are sharing their knowledge with others, including through the COVID-19 Clinical Guidance Repository curated by the AAMC.
The AAMC appreciates the rapid passage and enactment of four COVID-19 supplemental spending bills, including the most recently passed Paycheck Protection Program and Health Care Enhancement Act (P.L. 116-139). Among other important provisions, we are grateful the Coronavirus Aid, Relief, and Economic Security (CARES) Act (P.L. 116-136) took a crucial step toward ensuring that health care providers get essential support through the establishment of the Provider Relief Fund and that the subsequent legislation invested additional resources to aid providers and funding to bolster the nation’s testing capacity. Passage of these bills has been critical in supporting the nation’s response to COVID-19 to date.

As you move forward on drafting legislation to prepare the country for future pandemics, we are pleased to provide for your consideration the following preliminary responses from AAMC staff in response to the white paper’s recommendations. Our comments focus on promoting health equity, extending telehealth gains, investing in medical research and public health, investing in the future physician workforce, and improving coordination between the federal government and local providers. The AAMC hopes to be a resource to you and your staff as you craft future legislation to address pandemic preparedness.

**Issue 1: Tests, Treatments, and Vaccines – Accelerate Research and Development**

*Recommendation 1.2: Congress and the administration should continue to support NIH research and its academic partnerships, which have provided key infrastructure to rapidly pivot to COVID-19 research and clinical trials.*

The AAMC thanks you and the Committee for your longstanding commitment to NIH, and we support this recommendation to continue robust federal support for NIH and its academic partnerships. Over half of the life-saving research supported by the NIH takes place at medical schools and teaching hospitals, where scientists, clinicians, fellows, residents, medical students, and trainees work side-by-side to improve the lives of Americans through research. Most recently, this research commitment has enabled AAMC-member institutions to use their capacity to develop much-needed tests for COVID-19, to lead research on potential vaccines and therapeutic candidates, and to continue to provide the world’s most advanced and expert patient care informed by the latest innovations in fundamental and clinical research.

The AAMC joined with three other higher education associations in a May 27 letter to Congressional leadership to outline shared impacts of COVID-19 across our institutions’ research communities, including a recommendation for Congress to provide at least $26 billion in emergency supplemental funding to federal research agencies to support the research workforce and to help institutions suspend and resume non-COVID-19 research projects while pivoting to new COVID-related research. In parallel, the AAMC supports the Research Investment to Spark the Economy (RISE) Act (H.R. 7308), authorizing $26 billion in relief funding, including $10 billion to NIH, consistent with the recent testimony of NIH Director Francis Collins, M.D., Ph.D., at a May 7 HELP Committee hearing that the pandemic could result in the loss of an estimated $10 billion of NIH-supported research.
In addition to emergency supplemental funding to restore operations to pre-pandemic levels, continued robust investment in the NIH through regular appropriations is necessary for advancements in combating human disease and preparing for the next pandemic. The AAMC thanks Congress for the bipartisan support that resulted in the past five years of meaningful increases for NIH. In FY 2021, the AAMC supports the Ad Hoc Group for Medical Research recommendation that Congress provide $44.7 billion for NIH, including funds provided through the 21st Century Cures Act for targeted initiatives. This funding level would continue the momentum of recent years by enabling meaningful base budget growth over biomedical inflation to help ensure stability in the nation’s research capacity over the long term. Securing a reliable, robust budget trajectory for NIH is key in positioning the agency – and the patients who rely on it – to capitalize on the full range of research in the biomedical, behavioral, social, and population-based sciences.

The AAMC also believes that investments in physical research infrastructure and in a larger, more diverse science, technology, engineering, mathematics, and medicine (STEMM) workforce will be crucial to not only rebounding from the COVID-19 pandemic, but also to improving the country’s global competitiveness while improving the health of everyone in the future. To facilitate a more resilient and robust STEMM workforce, the AAMC recommends that federal agencies adopt policies to strengthen the STEMM workforce pipeline, such as supporting career exploration in diverse fields and supporting institutional data collection on trainee outcomes. Additionally, to continue producing cutting-edge and adaptive medical research discoveries, the AAMC recommends that Congress invest in physical infrastructure to support the U.S. research enterprise and maintain its global competitiveness, recognizing that developing physical infrastructure where such research can take place requires complicated construction that takes many months or years to develop and build. These recommendations are further discussed in the AAMC’s April 14 response to a request for information from the House Science, Space, and Technology Committee.

What could the federal government have done to be better positioned with diagnostics, vaccines, and treatments for COVID-19?

Despite decades of public health research on the spread and containment of infectious diseases and the lessons learned through the global Ebola scare, the U.S. was largely unprepared for the task of quickly mobilizing and coordinating resources to address the threat that SARS-CoV-2 posed. As discussed later in this letter, years of chronic underfunding for preparedness and incomplete guidance weakened the nation’s ability to respond as quickly and effectively as possible. Laboratories in the United States obtained the genetic sequence for the virus soon after it was identified in China, allowing for the rapid development of the probes and reagents required to develop tests for the virus. However, the infrastructure and coordination to ramp up testing capacity and have a clear picture of where to direct supplies did not exist and arguably has not yet been entirely implemented. The federal government could have identified which components of the national response could not be developed until the virus had emerged (e.g., specific tests, treatments, and vaccines) and which components could be prepared in advance and ready to deploy (e.g., adequate personal protective equipment [PPE] for those developing and
administering tests or doing research with the infectious agent, protocols and oversight authorities).

To better prepare for diagnostic test development for the next pandemic, we must pre-determine how to secure a reliable, functional supply chain for all testing components. No test can be performed unless a lab simultaneously has adequate numbers of swabs, reagents, testing machines, trained technicians, PPE, and individuals being tested. Each component has a distinct supply chain, and throughout the COVID-19 pandemic there have been variable shortages in each of these components. Maximizing testing capacity requires a better and fully transparent federal coordination of all aspects of the testing supply chain.

The country needs clearly defined authority, a pre-established chain of command, and a decision-making rubric for directing activities during a public health emergency. During COVID-19, to maximize the efficiency and speed of diagnostic production and testing capacity, there needed to be clear guidelines and processes from the U.S. Food and Drug Administration (FDA) on use of the Emergency Use Authorization (EUA) authority for oversight of diagnostic and serological tests. In addition, the government should maintain a centralized system that is ready to be deployed at any time specifically to ensure a stockpile of testing supplies and quickly assess U.S. testing capacity based on all available testing components across sectors and geographic regions. This will give organizations, academic institutions, and private companies a roadmap of how to pivot quickly to access and/or generate the needed equipment and reagents and implement a plan with specific directions for test development and deployment. In addition to practical considerations, it is also advisable to have a deliberative body in place, such as a bioethics commission that every president between 1996 and 2017 convened, to provide guidance on difficult ethical questions about the allocation and clinical trials to develop tests and treatments.

Critically, the rapid development of diagnostic tests, treatments, and vaccines are all dependent on continued progress in scientific research, including an advanced understanding of virus biology and studies of vaccine types and efficacy. To be positioned to tackle future infectious disease challenges, the government needs to continually invest in sustained and predictable funding for biomedical research, through NIH as well as other federal research agencies, that fund interdisciplinary work and translational science.

How can the federal, state, and private sector work together to more effectively distribute and administer treatments and vaccines?

While the federal and state governments should be working with the private sector on the manufacturing and development of key components of treatments and vaccines, the public sector and academic institutions have unique perspectives and critical data on the effect of the disease on patients and communities. Partnerships between the government and the private sector that do not fully take advantage of the resources, expertise, and input from other sectors in the context of a pandemic will undoubtedly result in decisions that fall short of being efficient and effective.

In the COVID-19 experience, the federal government has relied heavily on state governments for the development of state-specific testing goals, reopening strategies, and allocation of scarce
resources such as the drug remdesivir, which was donated in limited quantities to the federal government by the manufacturer and shortens the recovery time for some COVID-19 patients. We believe the Administration has reached a reasonable approach with respect to the allocation process for remdesivir, using hospital-reported data to guide federal distribution to states based on disease burden. The allocation process for distributing this drug has become more transparent and substantially evolved over the course of 3 months. The variable and opaque process for collecting the data and making distribution decisions could have been better coordinated earlier to result in more transparent allocation decisions initially and increased public trust in the federal government’s efforts. Multiple requests for data from multiple federal agencies pose an unnecessary burden and paints an incomplete picture of what is happening on the ground, particularly when many entities are responding to data requests from state officials. A more efficient process would consolidate and streamline requests through a single source e.g. the federal government should study the use of portals maintained by the Department of Health and Human Services (HHS) and Centers for Disease Control and Prevention (CDC) to identify a preferred approach.

Prior to the next major health threat, there needs to be a process in place defining how states will receive treatment or vaccine supplies, and what the federal government’s expectations are for how states allocate and track use of these resources, with a focus on equitable and need-based distribution. (We offer specific suggestions about how to consider addressing health equity in our response to Issue 2 and in Table 2 of the appendix.)

In any infectious disease threat to a country of this size, there will be geographic variation in the disease’s impact, and this impact will likely change over time. While this means that state health authorities are key partners in the response to an outbreak, federal plans and coordination must recognize that a virus does not respect state boundaries. Therefore, the guidance provided to states by the federal government must ensure that data collected and provided to a central repository can be readily combined and used to quickly shift resources from one area to another. This means that the definitions, reporting standards, and specific fields that will be provided by states to the federal government are defined in advance and do not over-rely on independent state decision-making on how best to respond to a national or global threat.

What is the appropriate federal role in supporting the manufacturing of medical countermeasures, especially vaccines?

The government should provide sustainable funding and ensure coordination of the Biomedical Advanced Research and Development Authority (BARDA) with agencies within the Public Health Emergency Medical Countermeasures Enterprise (PHEMCE) to ensure efficient production/manufacturing of medical countermeasures. There need to be incentives for research labs, as appropriate, to transition into a manufacturing mode, and long-term investment and education to create appropriate infrastructure and a workforce to support manufacturing needs.

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Certainty regarding the market for vaccines, treatments and diagnostics, is necessary since companies may be reluctant to invest their own resources into projects that may be perceived to be short term problems, however widespread.

How can Congress and HHS make sure CDC and FDA are working more closely with the private sector on diagnostic tests to detect emerging diseases?

The federal government should ensure that the response to a pandemic is well-coordinated and multi-sector, including involving academic medical centers which act as the nexus of the research and patient care on which both the federal agencies and the private sector rely. With that in mind, the actions of the FDA and the CDC should be aligned with respect to the private, public, and academic sectors. Policies and guidelines for test development should be clear and equally applicable and communicated to all sectors at the same time. These key responsive agencies should consider their oversight to be substance-specific, not sector-specific, consulting key stakeholders from across the research enterprise, including academic institutions, and working quickly to identify the strengths that each bring to the collaboration.

How can the United States better leverage public-private partnerships, industry, and academic institutions?

The federal government needs to coordinate across academia, industry, and public-private partnerships to develop an effective diagnostic and therapeutic response during a public health emergency such as COVID-19. Private companies may require federal incentives to pursue public health related research and development opportunities. Academic institutions, which have developed many of the initial COVID-19 diagnostic tests, should be utilized to their full capability.

What are the lessons learned from the current fast tracking of tests, treatments, and vaccines to make them available even more rapidly?

Decisions to fast-track tests and treatments should be science-based and depend on test accuracy and precision. Any framework to speed availability of products should be developed in consultation with scientists and leadership in the federal research enterprise. In the case of COVID-19, fast tracking did not happen rapidly enough with the diagnostic PCR-based tests, and subsequently serological tests were pushed out too quickly without sufficient oversight before the FDA rolled back its permissive stance with respect to antibody tests.

After the problematic rollout of the CDC-designed SARS-CoV-2 tests, the rapid development of many effective diagnostic tests demonstrated the ingenuity and innovation of academic and private sector labs. With limited protocols and guidance from the FDA, the establishment of many types of tests allowed labs to pivot from one test to another to respond to shortages in reagents. The recently launched NIH Rapid Acceleration of Diagnostics (RADx) program, the result of your thoughtful proposal, adds structure and funding to this process, supporting scientists in the development and commercialization of effective, scalable diagnostic tests for SARS-CoV-2. To maximize our ability to achieve these goals, we must strengthen our global
supply chain to ensure that all suppliers do not rely on a single manufacturer, and that supplies and reagents are sufficient to meet testing and countermeasure demands.

**Issue 2: Disease Surveillance – Expand Ability to Detect, Identify, Model, and Track Emerging Infectious Diseases**

*Recommendation 2.1:* Ensure timely communication between health professionals, states, the CDC, and the public, as appropriate, of case data and information regarding how emerging infectious diseases affect populations, including who is at higher risk for severe disease and death, to help inform state and local response and address any potential disproportionate impact on minority populations.

*Recommendation 2.2:* CDC, states, and health professionals should work together to identify barriers to earlier identification of cases, including whether case definitions and testing recommendations were overly narrow for too long.

The coronavirus pandemic has laid bare the racial health inequities harming our Black and other underserved communities, exposing the structures, systems, and policies that create social and economic conditions that lead to health disparities, poor health outcomes, and lower life expectancy. Local data shows that Black Americans are more likely to get sick and die from the novel coronavirus. This is not because the virus is naturally more harmful to racial and ethnic minorities. Rather, this is the result of policies that have shifted opportunities for wealth and health to a narrow segment of society putting those with fewer economic resources and with preexisting health conditions more at risk and vulnerable to illnesses like COVID-19.

Acknowledging the disproportionate impact that health crises will have on communities of color, there are several actions that should be taken during a pandemic response to proactively address health inequities, importantly centered on a community-informed response effort. We urge Congress to consider concrete actions that promote and prepare us for an equitable and rapid response, and we commend to your attention a recent publication\(^2\) outlining such a framework, as summarized in the appendix to our response (see Table 2). Necessary considerations include actions such as effectively communicating health risk and implementing socio-culturally appropriate surveillance. Specifically, to enhance national data collection to better address health disparities, the AAMC recommends a data collection effort that is:

- National and standardized to accurately capture race and ethnicity data, as well as information on the social and environmental conditions in which people live, work, and play.
- Patient-centered and developed in collaboration with local community members and community-based organizations who have trusted and established relationships with local residents to identify communities disproportionately at-risk and to suggest structural

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interventions to ensure just, equitable preparedness and response during a pandemic. At minimum, broad community input should inform the development of national standards.

- Reflective of the neighborhoods to which COVID-19 patients are discharged, noting that county or zip code data are not specific enough for densely populated communities likely to be most impacted by infectious disease.

In order to create an effective framework to conduct meaningful outreach to underserved communities, health departments at all levels must engage diverse citizen- and community-leader voices when developing response plans that can better mitigate language barriers, cultural disconnects, and access to care for the most vulnerable populations. As the coronavirus pandemic emerged, many local and state government officials and public health agencies called upon nearby academic medical centers to provide guidance and assistance in leveraging relationships with trusted community partners to effectively communicate about how to access testing and treatment and provide support for underserved populations. For example:

- One institution partnered with government and nonprofit partners to distribute complimentary Community Care Kits that include isolation-grade masks, hand soap, hand sanitizers, toothbrushes, and toothpaste, which also allowed community members in need of information and guidance on COVID-19 testing and treatments to be more quickly linked to the services needed.
- Faculty and students from another medical school are partnering with the city health department to provide COVID-19 testing in neighborhoods with the highest rates of infections and for other at-risk populations such as essential workers and people living in nursing homes. The partnership also maintains a registry for people who have tested positive to look for health and health care disparities.

Additionally, there must be more thought, guidance, and coordination as they relate to how hospitals, clinics and nonprofit social service providers can best support populations of people experiencing homelessness, people who are justice involved, and people with disabilities in a pandemic response. During the COVID-19 pandemic, a number of issues have surfaced for each of the aforementioned groups.

- People experiencing homelessness face a number of barriers, including an inability to participate in stay-at-home orders due to a lack of housing, an inability to wash hands frequently because many cities lacked an abundance of handwashing stations, and an inability to self-isolate in shelters because of space constraints.
- Jails and prisons pose significant risks for the spread of coronavirus for the incarcerated population and the people who work in them because of the lack of ability for individuals to socially distance and common movement of justice involved people in and out of facilities. Additional testing and reporting for inmates and staff, more protective equipment, guidelines for inmate medical treatment, and clearer cleaning protocols in jails and prisons could help reduce the number of future infections.
- People with disabilities and their caregivers rely on services and businesses that have not been deemed essential in many states. Service providers and translators are often low-
wage workers and provide critical assistance to people with disabilities, often in the home setting. Benefits that increase financial security and stability, including paid leave, unemployment insurance expansion, and increasing Medicaid coverage to expand access to testing and treatment, would better support people with disabilities and the services they rely on. In addition, guidance should be provided to states and health care providers setting forth clear requirements to ensure that the health care rationing decisions comply with federal nondiscrimination laws.

In addition to an explicit focus on integrating equity into pandemic planning and response efforts, the AAMC strongly believes that robust contact tracing is essential not only in responding to COVID-19 but also to prevent future outbreaks. As the nation’s response to the coronavirus pandemic enters a new phase, the AAMC recommends that Congress provide emergency supplemental funding to encourage and facilitate cross-sector collaboration among medical schools and teaching hospitals, public health departments, social service agencies, and local community groups and residents to mitigate the impact of the pandemic. The competitive grant funds would be intended to promote cross-sector connections and activities that support safe and timely re-opening and “Phase 2” plans for which federal funding is otherwise not available.

To ensure the public’s health and assure businesses and consumers that it is safe to resume some level of pre-COVID-19 operations, the appropriate infrastructure must be in place to contain the current outbreak and prevent and/or quickly detect and respond to its potential recurrence. As part of these efforts, state and local health departments must be equipped to establish and implement robust contact tracing plans with federal support and guidance, and the AAMC supports the public health community’s recommendations to fund and sustain these efforts and to take the necessary steps to reverse the chronic underfunding of public health.

To serve their communities and support their public health colleagues, medical schools and teaching hospitals are also engaged in these efforts. For example, academic medical centers have described conducting diagnostic and serological testing, developing contact tracing processes and training protocols used by the state, offering data and analytic support, launching surveillance studies, promoting public education campaigns, extending outreach to marginalized and under-resourced populations, and engaging in community-partnered research and surveillance, among other efforts. Ideally, these activities would be aligned between the academic medical centers and the health departments, social service agencies, and local community groups that all are working toward the same mutual goal. However, the pre-existing relationships among these entities varies greatly, and there is currently no federal funding available to explicitly support this purpose.

In addition to supporting the public health community’s recommendation to implement a robust contact tracing program, the AAMC proposes the creation of a competitive grant program to promote greater and stronger collaborations between academic medical centers and their local public health and community organizations in support of the local and national response to the pandemic in both the near-term and the long-term. Specifically, funding from this program
would be conditioned on submission of a successful joint application demonstrating a well-conceived partnership proposing synergistic community benefits that would be available to support activities spanning academic medicine’s missions of research, medical education, community engagement, and patient care. Examples of activities that could be conducted through these partnerships to support the community by leveraging academic medicine’s strengths are provided in Table 3 of the appendix.

**Issue 3: Stockpiles, Distribution, and Surges – Rebuild and Maintain Federal and State Stockpiles and Improve Medical Supply Surge Capacity and Distribution**

*Recommendation 3.1: Utilize existing authorities to build public-private partnerships, such as vendor managed inventory contracts with manufacturers and distributors, to create excess medical supplies managed by private sector partners that could be needed for the next pandemic or public health emergency. Additionally, the Strategic National Stockpile could contract with manufacturers to maintain manufacturing capability for certain products, such as N95 masks or other personal protective equipment, to rapidly manufacture supplies needed for a future pandemic.*

*How can the Strategic National Stockpile be better managed and how can Congress increase oversight and accountability?*

As the white paper notes, access to PPE and other necessary supplies has been an ongoing challenge for health care facilities, with hospitals reporting difficulty both in accessing the Strategic National Stockpile (SNS) and in acquiring product through their own processes. As it became clear, the SNS has been under-resourced. A real-time dashboard that is kept up-to-date and takes into consideration other state, local, private sector, and hospital supplies, should be shared with key stakeholders. There also needs to be consideration regarding what is needed in different health emergency scenarios and back-up plans made based on this composite view of supplies. It should be clear to hospitals that the SNS is not the first source of supplies; however, it should also be clear how hospitals can access the SNS during a public health emergency. This process has been very confusing and unclear since the beginning of the COVID-19 pandemic and has led to an inefficient pandemic response. Clear communications about the role of states relative to the federal SNS are essential to ensure that hospitals and other entities have an understanding of how to acquire needed supplies. The SNS also showed how our U.S. systems of just-in-time inventory management failed to take into account the possibility of international disruptions. That should be a core expectation of the SNS that the federal government might need to backstop suppliers who are dependent on overseas manufacturing.

*How can states and hospitals improve their ability to maintain a reserve of supplies in the future to ensure the Strategic National Stockpile is the backup and not the first source of supplies during emergencies?*

*What steps should be taken to ensure that health care providers and first responders have the supplies they need, such as personal protective equipment?*

States and local public health teams must work with hospitals and others to coordinate reserves of supplies, recognizing that hospitals often face constraints limiting their reserves to no more
than a few days. Congress should work to ensure adequate funding for hospitals to maintain the needed public health emergency supplies to adequately serve their communities. There should also be consideration for the cost of storing and maintaining such supplies.

Considerations also should be made for the PPE needed for other entities as well. For example, under the current pandemic, many academic medical centers needed PPE for researcher communities and testing, in addition to health care providers. Other entities that typically do not access the SNS entered an already crowded supply chain. In considering the composition of the SNS, it is important not only to consider current use patterns but also the needs of nontraditional entities.

As states and hospitals establish or build their own stockpiles, how will they know what supplies to stockpile? What guidance should the federal government provide on what medical supplies are appropriate?

There should be clear guidance from the federal government regarding the quantity and types of supplies states and hospitals should have on hand based on their local population and to be able to respond to different types of public health emergencies. Hospitals and states should have the appropriate level of flexibility on how the meet the recommended federal guidelines.

Could states and hospital systems establish their own vendor managed inventory programs with manufacturers and distributors? Should the federal government or states contribute to such hospital stockpiles?

Hospital systems are going to need to establish or expand their own vendor-managed inventory programs to help manage immediate inventory need. Hospitals should receive federal guidance on necessary supplies and amounts of each to maintain as well as funding from the federal government to establish and maintain these inventories, since the stockpiles would not be used for regular patient care. The federal government should contribute supplies to regional distributors and hospitals when there are shortfalls or vendor shortages.

**Recommendation 3.4: The federal government, states, and the private sector must work more effectively together to distribute tests, treatments, and vaccines. Plans should be established in advance for how the federal government, states, and the private sector will coordinate to assess needs and distribute newly developed tests, treatments, or vaccines.**

The AAMC agrees with this recommendation. Using the lessons learned and early missteps in the critical first days and weeks of the coronavirus pandemic, we should establish and widely disseminate plans for the development, oversight, and allocation of resources to detect, diagnose, treat, and prevent any future infectious disease. A multisector response is essential but requires clearly defined roles for the companies that manufacture supplies, the institutions that provide both critical research and patient care, and the specific federal agencies that coordinate the efforts.
Issue 4: Public Health Capabilities – Improve State and Local Capacity to Respond

Recommendation 4.1: Get Americans back to their routine health care safely, and develop better plans for the future so that doctors and hospitals can continue to provide health care services and outpatient treatment during a pandemic.

As described in the response to Recommendation 4.2, facilitating continuation of current telehealth expansions will be key to maintain continuity of care across the country. It will also be essential to ensure that individuals are able to receive routine and non-emergent care even under pandemic conditions. For example, the inability for individuals to access routine vaccinations (e.g. measles, influenza), routine lab testing, and routine x-rays, mammograms, and other screenings, ultimately could lead to life-threatening delays in preventing, diagnosing, and treating other health threats.

Recommendation 4.2: Ensure that the United States does not lose the gains made in telehealth

The AAMC strongly supports this recommendation as telehealth is a critical tool to ensure access to health care for patients. To help address the crisis caused by COVID-19, Congress and the Centers for Medicare and Medicaid Services (CMS) created new coverage and payment policies that have facilitated the widespread use of telehealth and other communication-based technologies and provided other important relief through additional waivers and regulatory changes. Many state health care licensing boards made changes to allow health care providers in good standing in another state to practice in their state during the emergency. Hospitals, physicians, and other providers have responded by rapidly implementing telehealth in their practices in order to provide continued access to medical care for their patients. Physicians have been able to monitor non-critically ill COVID-19 positive patients, follow up on other individuals with chronic disease who can be cared for without risking a visit to the hospital or clinic, and provide care for many Medicare beneficiaries without imposing the burden of travel. In addition to treating ambulatory patients through telehealth, and remotely triaging COVID-19 patients, academic medical centers have deployed sophisticated telehealth technologies to monitor the sickest ICU patients.

The development of telehealth capabilities has required investing significant resources in the technology, training, and infrastructure. The result is that in a matter of weeks, a transformation occurred in the way in which health care is delivered, opening the door to a future that will increase access, maintain quality, and work to the advantage of patients and providers. We have heard from some faculty practices that they are providing approximately 50% of their ambulatory visits through telehealth during the COVID-19 pandemic, a dramatic increase from the use of telehealth prior to the crisis.

The flexibilities provided by CMS for telehealth coverage and payment have enabled teaching hospitals, teaching physicians, and other health care providers and their patients, to experience the benefits of telehealth. Beyond aiding with the COVID-19 response, telehealth offers the long-term promise of expanding quality health care in the future, particularly to individuals with limited access to services, individuals with disabilities, and elderly patients who have difficulty
traveling. Telehealth can reduce the time it takes to seek medical expertise for diagnoses and treatments and can allow for monitoring of chronically ill patients.

We recognize that the current flexibilities are limited to the Public Health Emergency (PHE); however, given the massive changes that have occurred, as well as the improvements to patient access and patient satisfaction, these changes cannot be rolled back with the push of a button, nor should they be. It is imperative that the progress that has been made since March continue when the PHE ends. Therefore, we urge Congress and CMS to make changes to legislation and regulations that will make permanent the current changes and will ensure that reimbursement remains at a level that will support the infrastructure needed to provide telehealth services. While many of these necessary improvements will require action beyond the HELP Committee’s jurisdiction, we encourage the committee to strongly consider legislation within its authority, such as the bipartisan Expanding Capacity for Health Outcomes (ECHO) 2019 Act (S. 1618), that would increase access to health care services for rural and other medically underserved populations. We appreciate the attention the Committee continues to bring to this important issue.

Specifically, the AAMC recommends the following:

- **Patient Location:** Telehealth services should be covered for patients in any geographic location and at any site, including the patient’s home.
- **Payment:** Providers should receive the amount of Medicare Physician Fee Schedule payment as if the services had been provided in-person.
- **Hospital Payment:** Hospitals should be allowed to bill a facility fee when the patient is an established patient of an outpatient department and receives the service at their home via telehealth.
- **Expansion of Telehealth Services:** CMS should expand the list of covered telehealth services to include services that were added during the pandemic.
- **Relationship with Patient:** Allow telehealth services to be provided to new and established patients.
- **State Licensure/Practitioner Locations:** Remove Medicare and Medicaid requirements that physicians and non-physician practitioners be licensed in the state where they are providing telehealth services to allow payment across state lines, including providing a temporary national license that would allow physicians and other providers to work across state lines.
- **Residents:** For evaluation and management (E/M) services, allow residents to provide telehealth services if supervision requirements are met.
- **Telephone evaluation and management (E/M) codes (99441-99443):** Maintain the increased payment rates for these codes to equal Medicare’s established in-person codes (99212-99214) to ensure that patients without advanced video-sharing capabilities are able to access care.
- **Encourage ERISA participation in telehealth after the PEH:** Build upon telehealth advancements and work with providers to encourage or incentivize Employee Retirement
Income Security Act (ERISA) group health plans to, at a minimum, provide coverage for the same telehealth and phone services covered by Medicare.

Recommendation 4.4: Remove red tape and allow states to use Public Health Emergency Preparedness and Hospital Preparedness Program funds to respond to a public health emergency and report back to HHS on how they were used, rather than having to wait for written approval from Washington.

What changes can be made to Public Health Emergency Preparedness and Hospital Preparedness Program to help states prepare and respond more quickly?

The Public Health Emergency Preparedness (PHEP) program plays an important role in rebuilding the public health infrastructure, and the Hospital Preparedness Program (HPP) complements PHEP in enhancing preparedness of health care partners. While structural changes may result in greater efficiencies in some areas, such efficiencies will be unattainable without sufficient resources. Funding for the PHEP program has dropped nearly 30% over the last two decades, while HPP is funded at nearly half its FY 2004 funding level. As funding has decreased, potential and existing threats have only increased.

Hospitals and health systems had great challenges during the COVID-19 pandemic because public health infrastructure was very limited in many communities. Public health infrastructure needs to have adequate personnel and expertise to respond to public health emergencies. Hospitals and health systems often had to fill in the gaps in the public health infrastructure and used their limited resources, which should have been focusing on the acute setting, to try to ensure safe post-hospitalization care for vulnerable patients. Hospitals and health systems also had to fill in gaps in testing, contact tracing, and many other public health activities.

Recent pilot grants to Massachusetts General Hospital and Nebraska Medicine have helped illustrate the potential for direct engagement of health care partners in developing a regional disaster response system. We encourage additional efforts to support the hospital community directly in preparedness and response work and strongly urge such investments to supplement the critical PHEP and HPP programs that serve a broad array of public health and health care constituencies.

What specific changes to our public health infrastructure (hospitals, health departments, laboratories, etc.) are needed at the federal, state, and local levels?

To enhance resilience against the current crisis and to prevent a potential recurrence of COVID-19 and the emergence of other future pandemics, robust investment in the nation’s public health infrastructure, including the CDC, is necessary. Chronic underfunding has taken its toll on the nation’s preparedness framework, and, as described above, under-resourced state and local health departments have been forced to manage a growing list of threats without commensurate support. A strong public health infrastructure is also a key component to generating health equity preparedness (Table 1).
Academic medical centers take seriously their role in emergency preparations and response, and a robust and strong public health infrastructure is necessary to optimize this work. Funding patterns that infuse resources only from crisis to crisis do not support a sustainable preparedness strategy to keep the country safe and healthy. We need dramatically increased and sustained investments in these efforts. In addition to robust investment in CDC in FY 2021, the AAMC supports the public health community’s recommendation of $4.5 billion in additional annual funding for core public health infrastructure to support sustained, long-term investments in essential disease surveillance, epidemiology, preparedness, community partnership development, and other activities.

**Issue 5: Who Is on the Flagpole? – Improve Coordination of Federal Agencies During a Public Health Emergency**

_Recommendation 5.1: Congress must clarify who is in charge and has the ability and authority to keep a continued focus on preparedness for pandemics and other major public health threats when other priorities may seem more pressing, and improve how federal agencies will coordinate during a pandemic. These roles and responsibilities must also be clearly communicated to states and local governments so they can include this information in their own preparedness planning._

The federal government, including CDC and Assistant Secretary for Preparedness and Response (ASPR), needs to provide clearer guidance on the role of states to ensure that the nation as a whole is taking steps to address – and, ideally, prevent – a public health emergency. If federal guidelines are vague on reopening, for example, individual states may make a broad range of determinations that may not be effective, or stringent enough to meet recommended guidelines. Leaving all decisions up to a state, when a pandemic does not change depending on state borders, is problematic. We believe that both the federal government and states need to have roles during a pandemic, and these should be delineated ahead of time and confirmed at the beginning of the pandemic (as the roles could vary depending on the pandemic).

_What is the right balance between specific and limited statutory authority and more flexibility for federal preparedness and response programs?_

The AAMC is appreciative of the temporary health care-related regulatory flexibilities and emergency authorities granted by the federal government in response to the coronavirus. These flexibilities have been granted by the White House, HHS, and CMS, among others. To better coordinate these flexibilities, the AAMC recommends that all health-related waivers be consolidated under the authority of the HHS Secretary. For example, Section 1135 waivers have offered essential relief and assistance for health care providers during the pandemic by relaxing several requirements, including practice across state lines and timelines for federal reporting requirements. For the 1135 waivers to remain in effect, both a public health emergency and a national emergency must be declared by the HHS Secretary and president, respectively. The AAMC recommends that all health-related flexibilities be under the direction of the HHS Secretary, and not reliant upon the declaration of a national emergency.
Additional Recommendations

Do Not Limit the Nation’s Ability to Invest in Health Security

The most effective preparedness is the result of long-term, ongoing actions before a crisis strikes, including reliable, robust investment to support such actions. Because key agencies, such as CDC, ASPR, and NIH, are subject to discretionary spending limits, however, Congress is hampered each year in its ability to invest sufficiently and consistently in the nation’s health security over the long term as former Senate Majority Leader Bill Frist and other witnesses in your June 23 hearing indicated. To enable the necessary support for the broad range of critical federal priorities, the AAMC urges Congress to exempt from the FY 2021 budget cap key agencies and programs that support the nation’s COVID-19 response and encourages Congress to establish mechanisms that allow sustained, robust funding for these critical programs on an annual basis.

Supporting the Health Care Workforce

In addition to the topics raised in the white paper, the AAMC urges you to consider the role of our health care workforce in preparing for and responding to a public health emergency. We offer the following recommendations, both for the HELP Committee and other key committees in Congress, to fortify the nation’s physician workforce infrastructure.

Expand federal support for physician training

The AAMC projects that the United States will face a shortage of up to 139,000 physicians by 2033, in both primary care (between 21,400 and 55,200) and specialty care (between 33,700 and 86,700). If everyone had the same health care access and the same utilization rates regardless of race, where they live, and whether they have health insurance, the report estimates the country would need an additional 74,100 to 145,500 doctors today, on top of the projected shortages by 2033. These shortages strain patients’ ability to access timely care under even the best of circumstances, but the consequences of such deficits are particularly acute during a crisis, as COVID-19 has demonstrated.

The major factor driving demand for physicians continues to be a growing, aging population. With the demand for physicians simply outstripping our expected supply, we must advance a multifaceted strategy to ensure that people have access to the care they need when they need it. The AAMC strongly supports the bipartisan Resident Physician Shortage Reduction Act of 2019 (H.R. 1763, S. 348) as a critical component of any comprehensive workforce strategy to strengthen the physician workforce in both primary and specialty care. This important legislation would increase teaching hospitals’ ability to train physicians by lifting the current freeze on Medicare support and adding 3,000 new Medicare-supported residency positions each year for the next five years.

Establish a provider loan program

While we greatly appreciate the Provider Relief Fund and strongly support increasing its size, teaching hospitals and faculty practice plans remain concerned about their ability to access
adequate resources and capital. Even with allocations from the Provider Relief Fund, it is likely that providers will not be made whole. Another challenge facing many teaching hospitals and faculty practice plans is that they will not qualify for the Small Business Administration loan programs included in the CARES Act. Congress also created the Main Street Lending Program for businesses between 500-10,000 employees. This program includes lower interest rates but does not offer the same benefits afforded to nonprofit academic medical centers and smaller physician practices. Specifically, it does not provide the same opportunity for loan forgiveness as the small business loan program. For this reason, the AAMC supports the creation of a targeted provider loan program that would offer not-for-profit health care providers access to low-interest loans. These loans could be an additional mechanism to help providers offset revenue shortfalls and support additional expenses following a pandemic response.

**Invest in health professions students and education**

To be prepared for future pandemics, the nation must invest in our health education infrastructure to better support health professions students and practitioners in the field. To that end, the AAMC supports robust funding for the Health Resources and Services Administration (HRSA) Title VII health workforce and Title VIII nursing workforce development programs.

The HRSA National Center for Health Workforce Analysis, including seven Health Workforce Research Centers across the country, conducts research and data analysis to advise future decision making on America’s health workforce preparedness. Vital to the country’s response to any future pandemic, the HRSA Public Health Workforce Development program trains our nation’s public health workforce to identify underlying causes of health issues, health disparities, and other public health issues.

The HRSA Health Career and Opportunity Programs, Centers of Excellence, Scholarships for Disadvantaged Students, and Nursing Workforce Diversity programs support students from diverse backgrounds throughout the health workforce pipeline. These programs aim to mitigate persistent health inequities, such as those seen during the COVID-19 pandemic, by recruiting and training a more culturally competent health workforce.

Elderly populations may be more vulnerable to future pandemics, as we saw with COVID-19 disproportionately impacting older Americans. The HRSA Geriatrics Workforce Enhancement Programs and Geriatrics Academic Career Awards prioritize interprofessional and team-based care to improve treatment of the nation’s aging patient population.

Other HRSA programs are structured to train health professionals to adapt to changing delivery systems and models of care, such as telehealth that has increased during COVID-19. For example, Area Health Education Centers (AHECs) support interdisciplinary, community-based training programs for healthcare professionals and provides support for health care delivery in rural and urban underserved areas. Investing in training programs such as AHEC prioritizes the specific health needs of local communities.
Currently, over 117 million Americans live in Health Professions Shortage Areas (HPSA) and may be more vulnerable during public health emergencies. The National Health Service Corps (NHSC) helps build a health care infrastructure in rural and other underserved areas by recruiting physicians to HPSAs through scholarships and student loan repayment. The AAMC recently endorsed the Strengthening America’s Health Care Readiness Act (S. 4055), which would provide the NHSC with $5 billion in supplemental funding over the next 2 years. The legislation also creates an “Emergency Corps for Surge Capacity” that establishes a pool of physicians and other health professionals who will serve in emergency capacities for future pandemics.

Our nation’s medical and health professions schools are also critical to preparing the next generation of providers for future pandemics. Recognizing the financial impact the coronavirus pandemic has levied on colleges and universities, the AAMC appreciates that Congress designated $12.6 billion for institutions of higher education in the CARES Act’s Education Stabilization Fund. However, independent health professions schools are underrepresented in the current formula since their student bodies primarily consist of graduate and professional students who are not eligible for Pell Grants. As a result, these institutions will receive disproportionately less funding to help their students during COVID-19 and to help restart their programs. The AAMC urges Congress to increase the Education Stabilization Fund and to adjust the formula to reflect the importance of graduate and health professions education to preparing our country for the next pandemic.

Provide Funding for a New Network of Pandemic Centers

To enhance preparedness for future pandemics, the AAMC proposes that Congress provide funding for a new network of U.S. hospitals to be designated as pandemic centers. The regional Ebola and Other Special Pathogens Network established after the Ebola threat in 2015, has illustrated the success of an approach to develop regionalized centers with enhanced capabilities. Building on this success, these new pandemic centers will act as regional hubs with enhanced capabilities to respond quickly to potential pandemics, including, for example, informing strategies to secure sufficient stockpiles of medical equipment and PPE and leveraging staff who have received additional training and who regularly participate in pandemic preparedness drills.

To complement these clinical centers, providing support on an ongoing basis for a number of academic medical centers to develop and deepen a research agenda on pandemic planning, including activities such as data collection and dissemination, disease modeling, and conducting training for contact tracers, will help ensure that the health care community has a strong evidence base to pull from in developing preparedness and response strategies. Designating and funding select hospitals and academic medical centers across the country with enhanced preparedness capabilities will allow the country as a whole to more quickly respond to infectious disease pandemics affecting the United States.
Thank you again for your efforts to document lessons learned from the COVID-19 response to better prepare for future pandemics. We welcome the opportunity to expand on the information we have provided above and serve as a resource to you as you continue these efforts. Please feel free to contact Christa Wagner, Ph.D., Senior Legislative Analyst, Government Relations, at chwagner@aamc.org, Tannaz Rasouli, Senior Director, Government Relations, at trasouli@aamc.org or (202) 828-0525, or me, with any questions.

Sincerely,

Karen Fisher, J.D.
AAMC Chief Public Policy Officer
Appendix

Table 1: Essential Multi-Sector Actions for Pandemic Health Equity Preparedness
Adapted from Alberti, PM et al.

**Build Strong Public Health Infrastructure That Includes:**
- Stockpiles of essential materials to prevent exposure (e.g., high-quality masks, hand sanitizer, personal protective equipment, etc.).
- Stockpiles of essential materials for testing, diagnosis, antibody testing.
- Plans for the equitable distribution of stockpiled materials.
- Access to rapid disease testing, antibody testing, diagnosis and follow up.
- Rapid contact tracing.
- Increases in funding to local, state, regional, tribal and federal public health agencies.

**Ensure the Material Conditions of Health for All (as defined by the World Health Organization):**
- Strong food access and security systems.
- High levels of housing security and affordability.
- Low levels of housing crowding.
- High levels of air and water quality.
- Prohibitions on evictions and significant rent hikes during epidemics/pandemics.
- Prohibitions on water and other utility shut-offs during epidemics/pandemics.
- Financial access to health care (health insurance coverage).
- Strong health care safety net system, including community health centers and public health clinics.
- Sufficient health care providers (doctors, nurses, psychologists, community health workers, etc.) to meet all communities’ needs.

**Ensure Basic Economic Security for Individuals and Families:**
- Living wage policy to reduce poverty and economic hardship in communities.
- Paid sick leave.
- Rapid and easy access to unemployment benefits and other public assistance.
- Consider Universal Basic Income (UBI) proposals.

**Provide/Subsidize Access to Important Technology for Information, Home Schooling, Public Services, Personal Finances, Public Health Surveillance and Voting:**
- Widespread access to free or low-cost internet for individuals and families.
- Technology support for home-schooling and home-based work.
Financial technology: Widespread access to online banking, automobile registration and licensure, rent or mortgage payments, etc.
Design and implementation of efficient and user-friendly systems for applying for and receiving public assistance, financial assistance and social services.
Smart-phone technology for infectious disease exposure and contact tracing.
Clear policies that make voting by absentee ballot and by mail easy and secure.

Implement and Enforce Infectious Disease Prevention and Control in Congregate Settings:
- Better enforcement of current regulations in nursing homes, psychiatric hospitals, rehabilitation centers, jails and prisons, shelter, transitional housing, etc.
- Plans for prevention/control of infectious disease in community epidemics/pandemics.
- Reduce number of people incarcerated.

Safety Standards/Plans for Public Transportation:
- Protection of drivers and other essential workers.
- Plans for physical distancing boarding, disembarking and traveling.
Table 2: Pandemic Health Equity Rapid Response Tactics
Adapted from Alberti, PM et al.

Effectively Communicate Health Risk:
- Engage trusted community organizations and leaders to develop and disseminate messaging.
- Develop messaging that is relevant to socially vulnerable communities and recognizes the varying socioeconomic needs and differing levels of trust of health systems and government.
- Create materials at the appropriate reading level for broad audiences.
- Make information available in multiple languages using processes beyond translation that include a cultural understanding of specific communities with limited English proficiency.
- Use channels viewed as trusted and credible by socially vulnerable communities.

Implement Socio-culturally Appropriate Surveillance and Risk Reduction Strategies:
- Create community-based surveillance programs that leverage community assets.
- Use community health workers and public health educators to collect surveillance data and share risk reduction information.
- Distribute information and supplies for risk reduction such as masks and hand sanitizer via community and faith-based organizations.

Have Emergency Policies/Executive Orders Ready to Be Rapidly Implemented:
- Determine before a crisis what constitutes “essential” versus “non-essential” services.
- Require employers of front-line service providers (e.g., grocery and other retail stores, pharmacies, food plants, delivery services, etc.) to provide workers with PPE and paid sick leave.

Ensure Timely and Easily Accessible Testing:
- Use community-level data such as social vulnerability indices, availability of transportation, and population density to determine location and hours of operation for testing sites.
- Locate testing within the most socially vulnerable communities, ideally co-located with trusted community organizations.
- Provide testing at no cost, regardless of insurance status.
- Offer free transportation to testing sites.
- Monitor testing access data disaggregated by race, ethnicity and language, and rapidly shift or expand testing based on identified inequities.
- Provide resources and post-testing information in multiple languages.

Provide Equitable and Rapid Access to Quality Health Care:
- Broadly disseminate maps and location details of health care providers and clinics.
- Deploy mobile testing and treatment units in communities with limited transportation access.
• Engage trusted community organizations in messaging and ensure information is available in multiple languages.
• Extend hours of access and provide free transportation.
• Suspend any requirements for insurance or documentation of residence.

• Prioritize support for health care providers in socially vulnerable communities.
  o Local, state and national funds should give priority to safety net providers and recognize differential needs given availability of resources at baseline.
  o Government, public health and health systems with greater resources should share tools, protocols and knowledge to enable community-level response.
• Compare hospitalizations, use of specific treatments, and deaths by race, ethnicity, language, as well as social risk factors and determinants and create plans to address any differences identified.
• Ensure treatment and discharge information is available at the appropriate reading level and in multiple languages.
• Provide follow up care at no cost.

Provide Equitable and Rapid Access to Social and Economic Relief Programs:
• Prioritize distribution of economic relief to communities identified as having the most urgent need based on surveillance data.
• Provide financial support to community- and faith-based organizations and other social service agencies to ensure service continuity and capacity.
Table 3: Examples of Activities in Academic Medicine’s Mission Areas to be Conducted Through Community Partnerships

**Research**

- Develop patient- and community-engaged, COVID-19-related research projects to gather information crucial to developing effective local intervention and communication strategies.
- Assist and/or create local community-based public health surveillance efforts, particularly in historically under-resourced and marginalized communities, to facilitate testing and tracing, gather social risk data, connect to appropriate social service and public health departments, and, importantly, to evaluate these efforts.
  - Use community health workers and public health educators to collect surveillance data and share risk reduction information.
- Augment health services and quality improvement research to identify and address necessary health care related-improvements to COVID-19 care and treatment.
- Use community-level data such as social vulnerability and area deprivation indices, availability of transportation, and population density to determine location and hours of operation for testing sites.
- Compare hospitalizations, use of specific treatments, and deaths by race, ethnicity, language, as well as social risk factors and determinants and create plans to address any differences identified.

**Education**

- Develop experiential learning opportunities for individuals at academic medical centers, including health profession learners (e.g. medical students, nursing students, pharmacy students, medical residents, etc.), to assist the public health and social service workforce with testing, contact tracing, patient navigation, answering hotlines, developing and disseminate public health information through social media, communicating with local health care providers, etc.
- Enable learners to provide additional services in chronic disease management; screenings; wound care; telehealth visits; mental health support and other assistance as needed.
  - Learner activities would be matched to individual ability and level of expertise, with proper supervision and use of remote technologies as appropriate and attention to safety of both the patient and the learner.
- Support local health departments/other public agencies and medical schools/teaching hospitals to develop a memorandum of understanding (MOU) with each other to create an ongoing partnership with the ability to rapidly expand during emergencies. These partnerships would also include Medical Reserve Corps units.
- Co-develop, between the local public health agencies and the teaching hospital/medical school, an ongoing curriculum for medical students, residents and
fellows. Both real-time and asynchronous learning opportunities would be embedded about prevention, control and treatment of COVID-19 or other infectious diseases in general. Learning modules would also include handwashing/disinfection, personal protective equipment, quarantine, social distancing, clinical aspects of COVID-19, treatment options, testing and screening, and other related topics.

**Community Engagement**

- Leverage relationships with local community- and faith-based organizations to develop messaging that is relevant to marginalized communities and recognizes the varying socioeconomic needs and differing levels of trust of health systems and government.
  - Ensure these materials are at the appropriate reading level for broad audiences and available in multiple languages using processes beyond translation that include a cultural understanding of specific communities with limited English proficiency.
- Distribute information and supplies for risk reduction such as masks and hand sanitizer via community and faith-based organizations.
- Locate testing within the most socially vulnerable communities, ideally co-located with trusted community organizations.
- Broadly disseminate maps and location details of health care providers and clinics.
- Ensure funding is made directly available to local social service, community- and faith-based organizations to ensure sustainability of efforts.
- Leverage the health care workforce (faculty, various providers including community health workers, environmental and administrative staff, etc.) to assist in community health efforts as appropriate.

**Health Care**

- Prepare for a “wave” of chronic disease resulting from untreated illness during the pandemic. This could include expansion of telehealth services, deployment of health professional learners in service of well visits or disease management visits (see above).