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on the Coronavirus Crisis

Ensuring a Free, Fair, and Safe Election During the Coronavirus Pandemic

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Thank you Chairman Clyburn, Ranking Member Scalise and distinguished members of
the Select Subcommittee for the opportunity to testify before you today. I am extremely
grateful for your interest and commitment towards helping support the novel
Coronavirus Disease 2019 (COVID-19) pandemic efforts in the United Sates as we
attempt to contain this deadly disease and ensure we have a free, fair, and safe election
for all citizens on November 3, 2020.

I am an Assistant Professor of Medicine in the Division of Infectious Diseases at the
Medical University of South Carolina (MUSC) in Charleston, South Carolina and the
Vice Chair of the Global Health Committee for the Infectious Diseases Society of
America (IDSA), a national professional organization that represents over 12,000
Infectious Diseases physicians, researchers, public health experts, and other health
professionals. I am also an Emerging Leader in Biosecurity Fellow at the Johns Hopkins
Center for Health Security.

During COVID-19 I have served as a subject matter expert for the San Francisco
Department of Health as the city planned for a coronavirus surge and have provided
expert scientific commentary to numerous organizations and media outlets since the
beginning of the pandemic. More recently I delivered expert testimony to the U.S.
House of Representatives Financial Services Committee Task Force on Artificial
Intelligence about "Exposure Notification and Contact Tracing: How AI Helps Localities
Reopen Safely and Researchers Find a Cure."[1] On behalf of IDSA I worked closely with
the Brennan Center for Justice on joint guidelines we developed to inform "Healthy in-
person Voting."[2]

My expertise is based on my career as an infectious diseases physician that has
focused on the clinical care of vulnerable patient populations, global health, research
and clinical care of emerging infections, outbreak preparedness and response, and
biosecurity. I was on the frontlines of the 2014 West Africa Ebola outbreak in Sierra
Leone where I was the medical director of a 70 bed Ebola Treatment Unit. I
subsequently helped lead the development and implementation of a United States
government sponsored pandemic preparedness and response project in Africa and

have consulted on the development of therapeutics for emerging pathogens. I have worked on the ground in Ethiopia, India, Sierra Leone, Uganda, and Haiti. My background and experience makes me uniquely qualified to discuss policies to ensure a free, fair, and safe election during the coronavirus pandemic.

As the COVID-19 pandemic continues to spread across the United States and we prepare for the upcoming general election, I hope to give you a greater understanding of this threat and actions we can take to maximize chances of a fair and safe election on November 3, 2020. I will discuss measures necessary in the weeks leading up to the election to mitigate the risk of transmission; outline important policies and procedures to be implemented by state and local elections officials, public health leaders, poll workers, and voters to decrease risk of coronavirus transmission on Election Day; and provide recommendations to leverage resources and collaborations to ensure appropriate monitoring, testing, and contact tracing related to potential exposures at polling sites. Although November 3rd will look and feel different from every other election day in modern history, it is critical that our principles of democracy not be undermined. Election and public health officials must come together to ensure that every citizen who wants to vote in person can do so in a safe and healthy environment that minimizes their risk of contracting COVID-19.

The Coronavirus Disease-2019 (COVID-19) Pandemic

On December 31, 2019 cases of atypical pneumonia of unidentified etiology were reported in Wuhan, China.[3] Since then, Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), the virus that causes COVID-19 has been declared a Public Health Emergency of International Concern (PHEIC) by the World Health Organization (WHO). It has infected more than 27.1 million individuals globally and caused over 889,000 reported fatalities.[4]

The first case of COVID-19 was detected in the United States in January, and in the months since this occurred, cases and fatalities in this country have risen disproportionately compared to the rest of the world.[5] The United States comprises 4% of the global population, but as of September 7, 2020 accounts for 23.1% (6.28 million) of COVID-19 cases and 21.2% (189,000) of fatalities worldwide.[4] More concerning is the nationwide surge of over 40,000 cases daily that has occurred since lockdowns were lifted in the early summer months.[6]

U.S. Elections During Infectious Diseases Outbreaks

Although the United States has dealt with multiple prior infectious diseases outbreaks, we have never let one derail a midterm or presidential election.

1918 Spanish Influenza Pandemic

The 1918 influenza pandemic caused by H1N1, infected approximately 500 million people globally with at least 50 million fatalities.[7,8] This pandemic occurred during a unique point in U.S. history as the country was actively involved in World War I (WWI) and was approaching midterm elections in November 1918.

There were three waves of the influenza pandemic. The <u>first wave</u> occurred after the infection was identified in military personnel during the spring of 1918. The <u>second wave</u> began in September 1918 near Boston and spread along the east coast leading to 195,000 deaths in October alone.[9] As the pandemic rapidly propagated and midterm elections quickly approached, public health officials implemented physical distancing and quarantine measures to help slow the spread of the infection. Public gatherings were banned around the country and schools, churches, theaters, bars, and other gathering places were closed.[8]
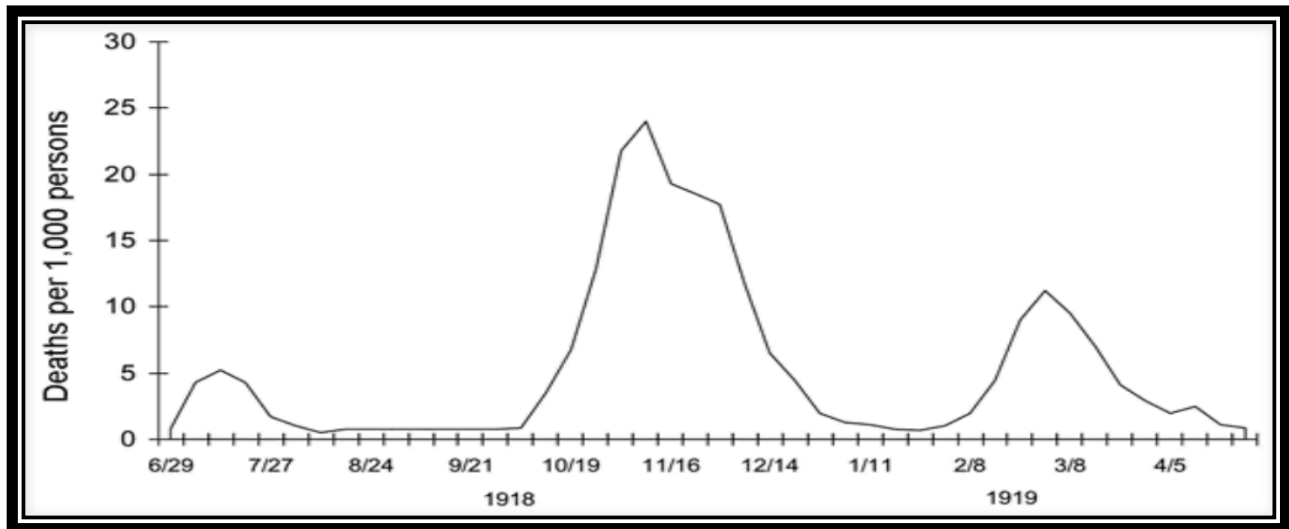

Figure 1: Three waves of 1918 Spanish Flu Pandemic

How Did the Spanish Influenza Pandemic Affect the 1918 Elections?

Due to public health measures implemented in advance of the 1918 election, candidates were not able to campaign in their usual way. They were prevented from having public rallies and unable to have direct lines of communication with the public. They had to rely on newspaper advertisements and sending campaign materials through the mail to inform voters. This led to controversy among candidates, some of whom felt that public health officials were trying to influence the outcome of the election.

As the election approached, the pandemic was improving on the east coast so officials lifted public health restrictions on schools and businesses before the election. On the west coast things were worsening and in early October 1918, influenza quickly escalated from 169 to over 2,000 cases in one week. This led San Francisco to issue a facemask ordinance for those in public as well as poll workers and voters at polling stations.[9]

The 1918 election presented numerous challenges including poll workers refusing to participate due to illness or fear of getting sick, the need for inspectors to guard against overcrowding, voting booths moved outside, and the inability to open some polling locations on the west coast due to a lack of healthy citizens.[8,10] Overall about 40% of eligible voters cast a ballot in the 1918 midterm elections, which was a decrease of 10%

from the prior midterm election.[8] The pandemic and WWI were the causative factors in the decline in voting.

The third wave of the pandemic occurred in the aftermath of the midterm elections. This was related to lifting of public health measures before the election and the WWI armistice days after the election. These two events prompted Americans to leave their houses for the first time in weeks. Celebrating the end of WWI and the arrival home of soldiers while ignoring physical distancing and mask requirements resulted in a surge of influenza cases across the country and around the world.[7,8]

Global Elections During the COVID-19 Pandemic

The COVID-19 pandemic has downstream impacts on elections globally as governments are forced to balance health and safety concerns of the public against the need for maintaining a democratic process. Thus far more than 50 countries have proceeded with elections during the pandemic and though they are of varying scope, the United States must learn from these experiences as we prepare for our own General Election on November 3, 2020.[11]

South Korea

On January 20, 2020 South Korea identified its first case of COVID-19 and nearly three months later, on April 15, 2020, this country of 40 million people with nearly 10,600 confirmed cases and more than 220 deaths became the first country to hold a national election during the pandemic.[11]

Previous investment in outbreak preparedness and response allowed South Korea to respond expeditiously, to develop innovative methods to ensure widespread testing and contact tracing, and to institute policies to protect those at highest risk for infection (elderly, vulnerable populations, and healthcare workers).

The South Korean government maintained clear communication and transparency throughout their response. Amid debate about whether an election could be safely held during the pandemic, President Moon Jae-in believed in South Korea's sound public health capacity and pushed forward with the implementation of strong measures. In the weeks leading up to the election, cases of COVID-19 declined from a peak of 900 cases per day at the end of February to about 30 cases per day by the time the election occurred on schedule.[11]The election had record turn out with 66.2% of the population voting, which was the highest in 20 years.[12] This was in large part due to the government's effectiveness at gaining public trust and providing a safe voting environment for its citizens during the pandemic.

The types of voting available for the election included resident voting, overseas voting, early voting, and general voting.[12] Before the elections the South Korean National Election Commission (NEC) produced a strong informational campaign to provide guidelines regarding the election.[13] Additionally, early advance voting was extended and used by 26.7% of voters.[11,12]

On Election Day polling stations were sanitized prior to initiation of voting with extra attention paid to high touch areas. Stringent safety measures were implemented which included:

a. Everyone wearing a mask
    - Only removed when a poll worker confirmed voter identification
b. Making voters maintain appropriate physical distance
c. Having voters undergo temperature checks
    - If >99.5 F they voted at a secluded polling location and were then tested for COVID-19
d. Providing plastic gloves
e. Arranging pre-designated times for quarantined individuals to vote
f. Allowing vote by mail or at a early voting location

Individuals with confirmed COVID-19 staying at hospitals or treatment centers and unable to visit polling stations were able to vote through residential voting. These patients had to submit an application to receive a ballot by mail that was returned to the NEC. The 13,642 people in quarantine who applied to vote were allowed to leave their houses at the end of the day after everyone else had voted.[11,12,13]

Overall the strict public health measures worked and South Korea had successful safe and healthy elections. According to Director General for public health policy Yoon Tae-Ho " Twenty-nine million voters participated in the April 15th parliamentary election…Not one case related to the election has been reported during the 14 days incubation period."[12,14]

Elections in the United States during the COVID-19 Pandemic

To optimize our chance of a safe election from a public health perspective, all citizens must play a role in reducing community transmission. A low community transmission rate on Election Day will minimize the chance of exposure and infection in voters, poll workers, and elections officials. The scientific evidence demonstrates the following practices help to prevent the spread of COVID-19:[15]

a. Hand hygiene with soap and water or hand sanitizer with at least 60% alcohol
b. Respiratory hygiene by sneezing or coughing into your arm
c. Maintaining at least 6 feet of physical distance from others
d. Wearing a mask that covers your nose and mouth and fits against the face

What can we do prior to Election Day?

With coronavirus cases surging across the United States, we must take bold steps to break chains of human-to-human transmission to improve both the short-term and long-term health of our populations and economic recovery of our country. The federal government should strengthen our national response to COVID-19 with the following actions to significantly reduce community transmission in advance of Election Day:

(1) Issue a National Mandate Requiring the Use of Masks or Face Coverings

Until we have a vaccine or a preventative therapeutic, facemasks and physical distancing are the most effective public health measures we have to prevent COVID-19. The scientific evidence clearly demonstrates that viral load is highest in the 48-72 hours prior to developing symptoms of COVID-19 and a facemask helps to prevent the spread of infectious droplets when worn correctly. A meta-analysis of 172 studies published in *The Lancet* showed that wearing facemask use could reduce the risk of infection by 85%.[15]

Most recent recommendations from the Centers for Disease Control and Prevention (CDC) states individuals over the age of 2 years old should wear facemasks in public that have the following components:[16]

> a. Two or more layers of washable, breathable fabric
> b. Covers the nose and mouth
> c. Fits snugly against the side of the face

(2) Expand Testing and Contact Tracing Capacity for COVID-19

It has been over seven months since the first case of COVID-19 was detected in the United States, yet one of the greatest challenges remains the development and scale up of accurate and reliable testing. The Kaiser Family Foundation compared models to calculate national-level testing capacity and determined that a robust strategy would require about 1.25 million tests/day or 8.75 million per/week, which is about 2.7% of the U.S. population tested weekly.[17] We continue to fall far below these targets due to lack of innovative testing, swabs, reagents, and trained personnel.

Any new testing strategy must ensure equitable distribution throughout all communities with special emphasis on high-risk populations such as essential workers, elderly, racial/ethnic minorities, homeless, and those with co-morbid medical conditions or living in congregate housing. In addition, outbreaks related to re-opening of colleges and universities places the institutions and surrounding communities at risk. This is also a challenge that needs to be proactively addressed.[18]
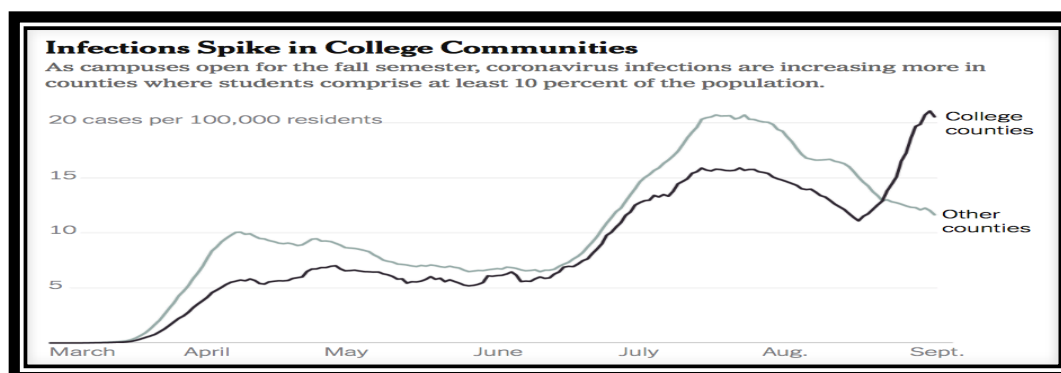

Infections Spike in College Communities
As campuses open for the fall semester, coronavirus infections are increasing more in counties where students comprise at least 10 percent of the population.

Figure 2: COVID-19 cases by college counties vs. other counties

In advance of the election, we need to scale up testing to appropriately screen poll workers before and after the election. In addition, testing strategies and resources are imperative for in-person voters who become ill or come into contact with an ill individual. Finally, we need to focus on scaling up new modalities of testing that have recently been approved by the Food and Drug Administration (FDA) such as saliva and rapid tests.

Contact tracing, often called the linchpin of an infectious diseases outbreak response, needs to be expanded. Identifying those who have been exposed and halting onward transmission is vital to contain the outbreak. While many states have hired contact tracers, additional federal resources, infrastructure, and training are required.[19] Based on the current population and data, experts estimate each case requires 10-25 contacts to be traced which requires at least 180,000-300,000 contact tracers.[20,21] Recognizing the importance of contact tracing, Johns Hopkins University has developed a free online course dedicated to training people in the principles of contact tracing https://coronavirus.jhu.edu/contact-tracing.

(3) Increase the Supply of Personal Protective Equipment (PPE)

Due to inadequate supplies of PPE, healthcare professionals remain at risk for COVID-19. The CDC, reports that over 143,000 health care personnel have become infected with COVID-19, with 1,077 deaths.[22] The risk is exacerbated by a lack of a dependable PPE supply that forces healthcare workers to extend and reuse these resources, even in areas where cases have declined. Concerns regarding further strain on PPE supplies have arisen as polling locations around the country require them for Election Day. Adequate PPE (masks, gloves, gowns, N95 respirators, and face shields) must be available in advance of the election so all poll workers can adequately protect themselves.

(4) Address Health Disparities

The COVID-19 pandemic, like many infectious diseases, disproportionately affects vulnerable and disenfranchised populations. Individuals at risk for COVID-19 are racial and ethnic minorities who tend to have jobs as essential workers. It is difficult for them to access health care or take sick leave without worrying about losing wages or their job. Non-Hispanic Black, Non-Hispanic American Indian/Alaska Natives, and Hispanic/Latinos have hospitalization rates of 4.6-5.3 times that of Non-Hispanic Whites. The COVID-19 mortality rate in African Americans is 2.1 times higher than for Whites.[20] Given these disparities, resources must be allocated to address and respond to the disproportionate impact of COVID-19 on vulnerable populations.

(5) Provide Support for Individuals in Isolation and Quarantine

Although isolation and quarantine are vital to break the chains of transmission on a societal level, the process can result in significant emotional distress for the individual. As a society, we must identify and provide safe locations for isolation and quarantine, ensure people have appropriate emotional support as well as paid sick leave, food, and access to medical care.

Minimizing community transmission will maximize are ability for a free, fair and safe Election Day.

What can we do on Election Day?

Fundamental to a democracy is the notion that all citizens have equal access to political participation. In this era of COVID-19, personal health concerns have the potential to skew voter participation unless we provide viable nationwide alternatives to a single day of in-person voting. Consideration must be given to options such as mail-in voting, early/longer voting (more days and/or longer hours), more polling locations, ballot drop boxes, and/or curbside voting.

For those individuals who will need to vote in-person it is important to have clear scientifically based guidance on how to safely conduct voting. The following recommendations are based on evidence from science and public health to minimize risk to in-person voters to make the 2020 general election as safe as possible.[2,23]

This joint document published by the Brennan Center for Justice and the Infectious Diseases Society of America, which I was proud to help author, provides detailed guidelines for safe in-person voting.

(1) Government and Elections Officials

A uniform, evidence-based, public health message about what voters should expect at polling sites is critical. Messaging should emphasize that hand hygiene, physical distancing of at least 6 feet, and facemasks that cover the nose and mouth are imperative to prevent the transmission of COVID-19.

Adopting and enforcing measures such as mask requirements now will decrease community transmission rates prior to the election and will increase compliance on Election Day.

(2) Polling Locations

The following should be considered when establishing polling locations:

   a. Polling locations should provide masks and hand sanitizer for all voters as a courtesy.
   b. Increase the number of polling locations to avoid overcrowding.
   c. Relocate polling locations from nursing homes, long term care facilities, and senior living facilities to protect older adults at greater risk for COVID-19.
   d. Relocate polling locations to large well-ventilated areas that can accommodate physical distancing measures between individuals, voting booths, and poll workers. Some considerations are utilizing:
      • College and professional sports arenas
      • Convention centers

- Large music venues
- School gymnasiums or cafeterias
- Large warehouses
- Parking lots (weather permitting)

e. If polling locations are changed, vulnerable communities may be disproportionately affected which requires clear, advanced communication.
f. Conduct check-in activities outdoors if weather and space permits.
g. Use plexiglass barriers between poll workers and voters.
h. Minimize lines as much as possible.
i. Have unidirectional flow into and out of the polling location and minimize the number of ingress/egress locations (preferable only one of each).
j. Have spaces marked on the ground to delineate appropriate physical distancing.
k. Polling locations should provide appropriate personal protective equipment (PPE) and training for all poll workers.

(3) Infection Prevention and Control (IPC)

The virus that causes COVID-19 is primarily spread through respiratory droplets and to a lesser extent, via contaminated surfaces. Close, sustained contact to an infected individual increases the risk of transmission. Routine hygienic procedures such as hand hygiene, environmental surface cleaning, and disinfection will lower COVID-19 spread at voting locations.

General Recommendations

a. All polling locations should have adequate supplies of:
- Soap
- Hand sanitizer with at least 60% alcohol
- Paper towels
- Disinfectant Wipes
- No touch trash cans
- EPA approved disinfectants[24]

b. All individuals at polling locations (voters, poll workers, monitors) should wear a mask, practice hand hygiene and maintain physical distancing to prevent spread of COVID-19.

Hand Hygiene

a. Hand sanitizer with at least 60% alcohol should be available at entrances, exits, and each step in the voting process. Voters should sanitize their hands
- Upon entering the polling location
- Before removing and placing masks to confirm identity
- Before and after voting
b. Having poll workers at key sites throughout the voting process to place hand sanitizer into the hands of voters may optimize compliance with hand hygiene.

c. Handwashing stations should be available with soap and water, disposable paper towels, and no touch trash cans.

Masks

a. Polling sites should offer facemasks to individuals without one.
b. All voters, elections officials, and poll workers should wear facemasks at all times.
c. A voter should only remove their mask when the poll worker is confirming their identity.
d. Information should be provided on how to appropriately wear, remove, and keep masks clean.

Physical Distancing

a. Voters, elections officials, and poll workers should remain at least 6 feet apart at all times.
b. Polling locations should provide signs or other reminders such as floor markings to remind voters to keep their distance.
c. There should be plans for line management to ensure physical distancing is maintained.
d. There should be unidirectional flow and points of entry/exit clearly marked.

Polling Locations

a. Voting should occur in large well-ventilated spaces to accommodate physical distancing measures necessary between individuals, voting booths, and poll workers.
b. Ventilation systems should operate correctly and use of recirculated air should be avoided.
c. Prior to the polling site being opened for voting it should be thoroughly cleaned with an EPA approved disinfectant.[24]
   • Special attention should be given to high touch surfaces such as voting booths, door handles, registration desks, chairs, etc.
d. Once the polling site is open, high touch areas and public restrooms should be cleaned at least every four hours.
e. Plexiglass barriers should separate poll workers from voters.
f. All reusable items should be routinely disinfected (voting machines, laptops, tablets, etc.).
g. Consider wipeable covers for electronics.
h. Give people disinfectant wipes so they can sanitize the voting booth surface.
i. Where possible, voters should be provided with disposable pens, pencils, or other devices to mark their ballots.
j. For voters with disabilities who use headphones, they should be single use or disposable. If reusable, they should be cleaned between each use.
k. For those with a disability or who are ill, curbside voting should be available with poll workers wearing a higher level of personal protective equipment.

l. After the polling location closes, the entire facility should be cleaned and disinfected.

(4) Voters

a. The safest way to prevent transmission of COVID-19 is to vote by mail.
b. If a person is unable to vote by mail, they should check with local elections officials for alternative voting options in their area.
c. Verify your voter registration, polling location, and special requirements prior to presenting to the site.
d. Fill out a sample ballot prior to Election Day to make in person voting time-efficient.
e. Try to vote at an off-peak time, such as in the mid-morning.
f. Arrive to the polling location early and be prepared to wait.
g. Come alone and do not bring non-voting family members, friends, children, or extraneous items to the polling location.

(5) Voters who are Sick

a. Alternative voting options should be provided for voters with symptoms, those who are sick, or known to have COVID-19 to minimize exposure of voters and poll workers.
b. This should be a designated polling site or curbside voting.
c. Poll workers should be provided PPE and trained in proper donning/doffing.
   - Respiratory Protections (N-95 masks)
   - Face Shields
   - Gowns
   - Gloves
d. Consider having testing available for sick individuals.

(6) Poll Workers

a. Wide scale campaigns to recruit extra poll workers, particularly those from lower risk populations.
b. Poll workers at higher risk for severe disease from COVID-19 can be assigned tasks that limit direct interaction with voters and other poll workers.
c. Should be provided and trained in how to appropriately don, doff, and use personal protective equipment.
d. Should be offered free testing for COVID-19 before and after their shifts at the polling locations.
e. Individuals concerned about their personal risk for COVID-19 as a poll worker should consult their healthcare provider.

(7) Mail in Ballots

a. Individuals handling mail in ballots should use appropriate physical distancing and frequent hand hygiene.

b. Machines used to process ballots should be cleaned and disinfected routinely per the manufacturer's guidance and instructions.

What we can do after Election Day?

After the election, continued vigilance for COVID-19 cases necessitates expanded testing for voters and poll workers. Public health departments need to monitor for outbreaks associated with polling locations in order to assess patterns of transmission and to perform contact tracing and exposure notifications.

Summary of Key Recommendations

The current pandemic is an unprecedented event of our lifetime. A free, fair, and safe election can be achieved with bipartisan support of an evidence-based approach to the voting process. We encourage local elections officials to work closely with public health and infectious diseases experts to proactively develop an election plan. The following key recommendations should be considered:

1. In advance of the November 3rd election, communicate a uniform message encouraging all citizens to wear facemasks, physically distance, and use hand hygiene to decrease rates of community transmission.
2. Make numerous methods of voting available to the public.
3. Establish polling locations in large, well-ventilated areas with adequate space for physical distancing between voters, poll workers and voting booths.
4. Provide adequate supplies to support healthy hygiene at all polling sites.
5. Recruit poll workers of all ages (and back-ups) to assist at polling locations and have mechanisms in place to test them before and after Election Day.

Unifying as a country and working to decrease rates of COVID-19 in our communities will not only help us have a safe election but also allow our country to emerge from this pandemic. Now is the time to emphasize action for the greater good rather than for the individual.

Looking Forward

COVID-19 is the greatest social, health, and economic threat of our generation, this election and how we manage it will be a critical turning point in our history. No one should have to choose between the right to vote or to be healthy. We have the evidence, knowledge, and science, to keep our public safe and we must use it, because one new infection is one too many.

Thank you again for the opportunity to testify before you, and I look forward to answering your questions.

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