COMMISSION MEMORANDUM

Mavor Dan Gelber and Members of the City Commission TO: Jimmy L. Morales, City Manager FROM:

DATE: May 1, 2020

OFFICE OF THE CITY MANAGER

SUBJECT: COVID-19 Reopening and Recovery Planning

Background

Miami Beach continues to mitigate the threats of COVID-19 and plan for reopening and recovery. At the April 24, 2020 Finance and Economic Resiliency Committee, I provided a draft framework for reopening and recovery, leading with strategic goals to carefully reopen and rebuild a resilient economy. I reviewed our multi-faceted approach, which includes leveraging all public health, association, and best practice research, leading Miami Beach business and hotel groups, and participating in all industry, county and state task forces. I also outlined the next steps, which included tailored public health, medical expertise, and testing essential to inform our city's reopening. I shared a draft framework for discussion, with the next steps being creating a COVID-19 Public Health Advisory Team, creating detailed regulations suitable for Miami Beach, and plans for education and enforcement. This also includes careful planning for our workforce and workplace who continue to deliver services and protect our residents during this time. In addition, with hurricane season approaching, emergency management planning within the context of COVID-19 is timely for discussion.

COVID-19 Health Advisory Team

I recommend that Miami Beach continue to follow all public health indicators outlined in the Opening Up America Again plan, available public health guidance, and incorporate additional medical expertise to tailor specific reopening decisions to our unique city and for our residents and vulnerable populations. I also outlined this in the April 24, 2020 Finance and Economic Resilience Committee and advised that I would be creating a COVID-19 Health Advisory Team. I am pleased to share that I have convened a Health Advisory Team of experts who will help with:

- Advising on specific draft reopening decisions and guidelines for Miami Beach organizations and businesses;
- Advising on emerging information regarding the types and reliability of testing, expanding testing, surveillance testing, and contact tracing;
- Analysis of available public health data, and specifically Miami-Dade County and Miami Beach progress with the gating criteria as defined in the Opening Up America Again Plan; and
- Specialized analysis from infectious disease experts important to understanding additional perspectives and more localized data, such as population density and characteristics of our tourism economy.

The COVID-19 Health Advisory Team includes:

- Dr. Yesenia Diaz Villalta, Administrator for the Florida Department of Health in Miami-Dade County (DOH-Miami-Dade)
- Dr. Frederick Keroff, M.D., FACEP, Memorial Regional Healthcare System, District Medical Director of Emergency Services, Medical advisor to the Miami Beach Fire Department
- Dr. Aileen Marty, M.D., FCAP Florida International University, Director, FIU Health Travel Medicine Program and Vaccine Clinic Commander, Emergency Response Team Development Professor, Infectious Diseases, Translational Medicine; HWCOM Board, International Federation for Tropical Medicine; Co-Editor-in-Chief, One Health (Official Journal of the International Federation for Tropical Medicine)
- Dr. J. Glenn Morris, Jr., M.D., University of Florida, Director, Emerging Pathogen Institute
- Dr. Chris Woods, M.D., Duke Global Health Institute, Co-Director, Hubert-Yeargan Center for Global Health and Chief, Infectious Diseases Division, Durham VA Medical Center
- Dr. Kenneth Ratzan, M.D., Mt. Sinai Hospital, Chief of Infectious Diseases
- Dr. Bhavarth Shukla, M.D., M.P.H., University of Miami UHealth, Assistant Professor of Clinical Medicine, Medical Director, Infection Control and Employee Health,

I have personally spoken with each of these professionals and will continue to reach out to them for their advisement on reopening a healthy Miami Beach informed by public health and medical expertise.

The Rockefeller Foundation National COVID-19 Testing Action Plan

Adequate public health indicators, testing, surveillance testing, and contact tracing are essential to meet the gating criteria defined by the Opening Up America Again plan and recommended public health experts such as the Johns Hopkins Bloomberg School of Public Health. I am pleased to announce that Miami Beach has been selected to join the Rockefeller Foundation special testing collaborative as part of Greater Miami and the Beaches, our unique Resilient Cities partnership with Miami-Dade County and the City of Miami. With this partnership, Greater Miami & Beaches will be joining a collaborative group of economists, public health experts, businesses and government leaders from cities across the country, including New Orleans, Los Angeles, Detroit and Boston. The Rockefeller Foundation COVID-19 Testing Action Plan includes critical steps and specific public health goals to include:

- Launching the largest public health testing system to monitor infections and future infection waves,
- Expanding the capacities and resources of thousands of small laboratories around the country to provide much of the expanded testing;
- Establishing a medical reserve corps to distribute and oversee testing;
- Hiring as many as 300,000 people to undertake a rigorous campaign of contact tracing;
- Developing coordinated computer systems and a digital platform for information sharing and infection tracking;
- Addressing the significant challenges around medical privacy and other ethical issues; and
- Creating a Pandemic Testing Board to oversee the testing scale-up and coordination between federal, state and local jurisdictions.

Additionally, as a participating city in the Rockefeller Foundation's Testing Solutions Group, Greater Miami and the Beaches will be provided resources to participate in expansive resident programs from June 2020 through early 2021. With that, the Testing Solutions coalition has the following objectives:

- Provide immediate support to mayors to enhance their testing and data capabilities—with a focus on the most vulnerable citizens. This may include direct funding as well as technical assistance to strengthen policies and strategies;
- Drive collaboration across cities to share and implement best practices;
- Bring together expertise from industry and academia to develop strategy and policy recommendations that support mayors and their leadership teams; and
- Collect real-time data, evidence, and feedback from mayors implementing testing strategies.

I am proud to announce this partnership with the Rockefeller Foundation, as it is critical to be at the table with the most credible scientists, researchers and thought leaders. Ultimately, this is a big step in the right direction to getting all the information we need to begin to reopen our city – slowly, cautiously and successfully. Attachments 1 and 2 include the full Rockefeller Foundation COVID-19 Testing Action Plan and Press Release on the \$10 million being committed to operationalize the work in participating local cities.

COVID-19 Testing Center at the Miami Beach Convention Center

The State Office of Emergency Management has authorized the creation of a COVID-19 testing center at the Miami Beach Convention Center. The National Guard unit assigned to the current ACF at the Center will handle the testing, with the testing kits and PPE supplied by the state. The City will be responsible for creating and staffing the call center to take appointments. We will consult with DOH and the 311 unit at the County for the proper protocols for call taking. This will be the first hybrid center in the State, which will include both a drive through facility and a walk-up facility. The center should have the capacity to perform 400 tests daily. Anybody who believes they have been exposed will be tested and tests will be free of charge. This center, combined with the Rockefeller program referenced above, could be a critical piece in meeting the gating criteria for a prudent reopening program. The testing center should be up and running by May 8th.

Update on the Reopening Framework and Detailed Regulations for Rollout and Approval

Reopening a healthy Miami Beach is my top priority, and the plan must be informed by public health and medical expertise as well the actual industry owners and operators that need to follow the requirements to operate. This health crisis is without a doubt also an economic crisis for people without work, businesses without customers, our tourism, arts and culture industry, and even our city government. I was pleased to present draft reopening framework for the purposes of discussion at the April 24, 2020 Finance and Economic Resiliency Committee. Consistent with Miami-Dade County yet more restrictive, Miami Beach opened certain parks for limited use on April 29th, 2020. The same day, the State of Florida also released the "Safe. Smart. Step-by-Step. Plan for Florida's Recovery." (Attachment 3). Staff is evaluating the new State plan and, as planned, will be evaluating the Miami Beach reopening framework. Coordination is essential since Miami Beach can advocate and inform discussions with the County and State, but ultimately cannot go first nor be less stringent. We will, of course, look to our medical team to provide the best science and medical perspective on the reopening strategy.

Consistent with Miami-Dade County yet more restrictive, Miami Beach opened certain parks for limited use on April 29th, 2020. The same day, the State of Florida also released the "Safe. Smart. Step-by-Step. Plan for Florida's Recovery."

The reopening of parks on April 29th was the first effort at safely opening outside areas with restrictions. This is a learning experience, and we will discuss areas of concern and recommendations at the May 1, 2020 City Commission meeting. Major challenges include refusal to wear facial coverings and groups that are not social distancing. Just as California is now closing beaches again due to non-compliant behavior, we may want to consider closing those parks where we see the higher levels of non-compliance.

For Miami Beach's reopening efforts to succeed, they must also be tailored to our vulnerable population of seniors and those with underlying health conditions while addressing the unique issues presented by the tourism-based economy. Coordination is essential since Miami Beach can advocate and inform discussions with the County and State, but ultimately cannot go first nor be less stringent. The preparation process for reopening is thorough and stringent. Each reopening requirements strategy will be accompanied by thorough review by my staff and stakeholder groups and the Health Advisory team and will be presented to the City Commission for approval. Staff has excellent existing relationships with our stakeholders though our routine business meetings and hotel groups, which were established at the beginning of the COVID-19 response.

Currently, staff is carefully reviewing developing County guidelines for restaurants and interior spaces for applicability to Miami Beach. Once a draft has been thoroughly vetted by the above process, I will share with City Commission for consideration.

Education and Enforcement

When Miami Beach meets the gating criteria to begin reopening establishments, education and enforcement will be imperative to establish good behavior at the onset of reopening. Once bad habits set in, they will be hard to undue. This will be a team effort and staff is planning now. Economic Development as well as Marketing and Communications Departments are developing educational and outreach media for distribution to the business community. This material will outline provisions for City/County reopening of businesses.

The Code Compliance Department is the lead agency conducting the initial inspections and guidance in order to keep our Police and first responders available for emergencies. As requirements dictate the inspection operation can scale up to include additional resources to include but not be limited to the Community Affairs Division of the Police Department, Park Rangers and Building/Public Works Inspectors. The plan is to reach out to all the nearly 1700 businesses twice. One of those engagements would be in the week leading up to reopening in order to educate and inform the businesses of the requirements for reopening. The second contact would be an inspection of the operation of the business during the first week of opening. Our goal during this reopening process will be to educate rather than enforce during the first week unless egregious issues are identified. If necessary strict enforcement may include one or more the following: warning; ejection (customer or employee); business shutdown; and finally arrest by police. The priority will be safety of all parties including city employees, business employees and patrons. This will be a significant strain on our staff resources. Since these expenses would be Part B FEMA eligible, we may need extra Code and Park Rangers to handle the extra caseload.

Hurricane Preparation

With hurricane season approaching this June 1st the Miami Beach Fire Rescue Division of Emergency Management (DEM) is preparing within the context of COVID-19. The hurricane response is being modified to adjust to social distancing protocols and protect the most vulnerable populations. DEM has been meeting with all departments to make sure all departmental plans reflect the current COVID-19 considerations. Teams will continue practicing social distancing and working virtually. A hurricane exercise is anticipated to be conducted the week of May 26, 2020. The exercise will provide further guidance on the city's hurricane plan for this year. Miami-Dade County will open as many shelters as needed to comply with social distancing. Some aspects of evacuating will be easier in the absence of tourism activity and minimal traffic. Miami Beach Fire/EMS will assist with the evacuation of electrically dependent patients. Fire Prevention will assist with evacuation efforts and will keep a list of elderly and vulnerable populations that remain on the island. COVID-19 patients will be handled as they are today. Mount Sinai Hospital will not evacuate as the facility is designed for major storms. The Police Department (MBPD) has revised

and updated the details of its Hurricane Plan. Officers assigned to the Landfall Team will adhere to COVID-19 prevention best practices. This will consist of maintaining social distancing as much as possible, adhering to the wearing of personal protection equipment (PPE), and following all established pandemic procedures and protocols.

A minimum of four locations in the city will be identified for the staging of officers during a hurricane that is a category 3 or less. Mount Sinai Hospital and the Miami Beach Convention Center are two of the locations that will be used to house the Landfall Teams if a hurricane is a category 4 or above. At least two additional category 5 rated location will be identified. Alternate locations in the greater Miami (Miami-Dade) area will also be identified in case the need arises to use them. To mitigate and minimize COVID-19 contamination from one officer to the next, no more than ten officers will be housed at any given landfall location. In addition to the PPE gear, each officer assigned to the Landfall Team will be provided with enough supplies to sustain them for a minimum of three days.

City Workforce and Workplace

The entire city workforce has mobilized to provide help to our most vulnerable, services to the community, and we've turned into virtual city hall virtually overnight to make sure employees do everything possible to keep the economy moving while continuing to provide direct services. Reopening plans for employees and the workplace are also being carefully thought through to make sure employees stay safe. The Opening Up America Again guidance and best practices will also be followed for Phase 1, including continuing telework, staggering work shifts, modifying spaces for social distancing, and protective gear.

The Property Management and Human Resources Department are developing policies to continue fostering a safe environment for our employees. The implementation will include efforts to prevent the spread of infection by providing enhanced levels of disinfection using CDC approved chemicals, installation of sanitizing wipes for thorough cleaning of touch surfaces, installation of hand sanitizers at facility lobbies, installation of "no touch" doors and plumbing fixtures. All facilities will be sprayed nightly with electrostatic sprayers and common areas shall be cleaned no less than once every two hours. Employees will be required to wear personal protective equipment including face covering and where applicable, gloves. Reception areas and kiosks will be retrofitted with protective barriers (plexiglass) and workspaces will be issued disposable desk mats to facilitate daily disinfection of workspaces. In addition, strategic space planning is underway to define "a new maximum occupancy" that ensure social distancing in the workplace. Our facilities will have appropriate social distancing markers inside elevators (2 persons per car at any given time), designation of up or down stairwells to prevent crossover contact, and modification of meeting spaces with new occupant loads for workplace safety. Continued staggered shifts and telecommuting are an important part of the space planning strategy as well as limits on visitors to "appointment only".

I am pleased to share this update on reopening and recovery planning and the considerable progress we are making together as an organization, city and county. I look forward to continued dialogue and development.

ATTACHMENTS:

Attachment 1 – Rockefeller Foundation National COVID-19 Testing Action Plan

Attachment 2 – Rockefeller Foundation COVID-19 Testing Action Plan Press Release

Attachment 3 – Plan For Florida's Recovery



National Covid-19 Testing Action Plan Pragmatic steps to reopen our workplaces and our communities



Embargoed until 12:01am EDT, Tuesday, April 21, 2020 **Covid-19 has infected hundreds of thousands of Americans and affected millions more around the world.** Across America, shuttered schools have put 30 million children at risk of going hungry. Closed businesses have left more than 20 million workers without income. And while locking down our economy is crucial for saving lives now, it has tremendous consequences for the poorest among us – as people of color and low-income Americans are disproportionately losing livelihoods, and lives. In the face of an ineffective nationally-coordinated response, insufficient data, and inadequate amounts of protective gear and testing, we need an exit plan.

Testing is our way out of this crisis. Instead of ricocheting between an unsustainable shutdown and a dangerous, uncertain return to normalcy, the United States must mount a sustainable strategy with better tests and contact tracing, and stay the course for as long as it takes to develop a vaccine or cure. Any plan to do so must win the faith of private and public sector leaders across the country, and of individual Americans that they and their loved ones will be safer when we begin to return to daily life.

The Rockefeller Foundation exists to meet moments like this. In the past two weeks we have brought together experts and leaders from science, industry, academia, public policy, and government – across sectors and political ideologies – to create a clear, pragmatic, data-driven, actionable plan to beat back Covid-19 and get Americans back to work more safely.

Our National Covid-19 Testing Action Plan lays out the precise steps necessary to enact robust testing, tracing, and coordination to more safely reopen our economy – starting with a dramatic expansion of testing from 1 million tests per week to initially 3 million per week and then 30 million per week, backed by an Emergency Network for Covid-19 Testing to coordinate and underwrite the testing market, a public-private testing technology accelerator, and a national initiative to rapidly expand and optimize the use of U.S., university, and local lab capacity. The plan also includes: launching a Covid Community Healthcare Corps so every American can easily get tested with privacy-centric contact tracing; a testing data commons and digital platform to track Covid-19 statuses, resources, and effective treatment protocols across states and be a clearinghouse for data on new technologies; and a Pandemic Testing Board, in line with other recommendations, to bridge divides across governmental jurisdictions and professional fields.

Together, we can do this. This action plan benefits from and builds on prior proposals, current efforts, and the broad participation of experts from so many fields. Enacting it will require strong leadership and collaboration: across states, cities, and federal government, and from businesses, nonprofits, universities, community groups, and individuals.

Though our country's needs are great, so is our ability to meet them. With urgency, action, and partnership, we can channel our energy to respond, recover, and eventually rebuild – together.

Dr. Rajiv J. Shah

President, The Rockefeller Foundation



Pandemics sicken and kill people in three ways:

first by overwhelming patients' immune defenses, then by swamping hospital networks, and eventually by cutting off a community's economic lifeblood. Hence, "saving lives or saving the economy" is a false choice. As of April 19, Covid-19 had directly killed more than 163,000 people worldwide, including nearly 35,000 in the United States. But the indirect effects are still being counted. The Great Recession of 2008, for instance, killed people in the thousands by disrupting healthcare for mothers, children and those with chronic illnesses and increasing a host of deadly mental and social conditions like alcoholism, depression and domestic abuse.

With the first wave of infections from the Covid-19 pandemic cresting in much of the country, American political and business leaders rightly are considering plans to reopen the economy. This Action Plan is intended to serve as a resource guide for that allimportant project.

The bad news is that the U.S. is not yet administering enough coronavirus tests each week to adequately monitor the entire U.S. workforce or rapidly detect recurrent Covid-19 outbreaks. Such outbreaks can be expected for the foreseeable future given the low level of population immunity¹ as well as the virus's contagiousness and wide geographic dispersion. The location and size of recurrent outbreaks are difficult to predict. Close monitoring of the medically vulnerable, institutionalized, poor and imprisoned is vital. The good news is that in the coming weeks the country could have the tools needed to allow governors and other officials to lift the most severe lockdowns and begin a phased reopening of some businesses. The goal is to allow enough economic activity to forestall a full-blown depression while keeping Covid-19 infection rates low enough to prevent hospitals from being overwhelmed and thereby causing a wider and more deadly health crisis.

This will be a delicate balancing act. Adjustment inevitably will need to be made based on close monitoring of the pandemic. Reopening the economy will be most successful if we move decisively to both increase testing capacity and optimally deploy testing supplies. The goal of the Action Plan is to build a state-led national program of Covid-19 testing that supports reopening the economy through the goals of workforce monitoring, early detection of recurrent outbreaks, and diagnostic and home testing.

This would be the largest public health testing program in American history. Success will depend on the active engagement of the government, business, philanthropy, and the public.

THE ACTION PLAN HAS THREE MAJOR OBJECTIVES

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- Launch a 1-3-30 Plan to Dramatically Expand Covid-19 Testing
- **2.** Launch a Covid Community Healthcare Corps for testing and contact tracing
- Create a Covid-19 Data Commons and Digital Platform



ACTION STEPS



Create an Emergency Network for Covid-19 Testing (ENCT) to coordinate and underwrite the testing market.

To drive rapid scale-up of Covid-19 testing, the ENCT will engage with: producers of testing equipment, reagents, and other lab consumables; national, state and local purchasers; public and private healthcare funders; and financial institutions. The ENCT will also work to identify and resolve choke points in the test supply chain. The ENCT should convene a consensus group of national, state, business, and academic leaders on the use of testing for workplace monitoring and early detection of Covid recurrences. An overarching analysis of the testing supply chain both in the United States and globally should be undertaken immediately.



Launch an eight-week National Testing Laboratory Optimization Initiative to increase current U.S. testing from 1 million to 3 million per week within the next eight weeks.

This will be achieved by unleashing the untapped potential of existing test capacity at national, university, and local labs. Importantly, this program would bolster the capacities and resources of thousands of small laboratories around the country. Supply constraints will be identified and eliminated.



Invest in a public-private Testing Technology Accelerator to further grow U.S. testing capacity from 3 million to 30 million per week within six months.

This increase will depend on realizing and rolling out the best mix of new technologies for higher efficiency laboratory testing, point-of-care office testing, and home-testing. In addition, some of this increase can be achieved through process efficiencies and lab techniques such as batch sampling. The powers of the Defense Production Act may will be need to be invoked given the inherent commercial uncertainties in this 10-fold production increase.

Launch a 1-3-30 Plan to Dramatically Expand Covid-19 Testing

We are proposing our nation come together around the bold, ambitious, but achievable goal of rapidly expanding testing capacity to 30 million tests per week over the next six months. This 1-3-30 Plan would be achieved by: (1) creating an Emergency Network for Covid-19 Testing to coordinate and underwrite the testing market, (2) launching an eight-week National Testing Laboratory Optimization Initiative to increase output to 3 million tests per week from the current one million, and (3) investing in a Testing Technology Accelerator to further grow U.S. testing capacity from 3 million to 30 million tests per week.

The steady increase in U.S. testing that began in late February has now plateaued. During the first two weeks of April, the number of tests per day averaged 143,000 (~ 1 million tests per week) with no appreciable upward trend.² As of April 18, 2020, the U.S. had completed 3,698,534 tests of which 722,182 were positive (19.50%)

This undoubtedly reflects just the tip of the Covid-19 pandemic in the U.S. Current barriers to rapid increases in American test production, supply, distribution and administration include uncertainty over financing and payment; lack of coordination of local, state, and national purchases; uneven distribution of test kits; severe shortages of reagents; regulatory barriers; and a severe lack of staffing.

The 1-3-30 Plan aims to overcome these barriers and progressively expand testing from the current one million to three million and then to 30 million tests per week through three action steps.



Launch a Covid Community Healthcare Corps for testing and contact tracing

The taking and preparation of samples, analysis of testing, and human-centered privacy-protected contact tracing will require a massive amount of manpower that can be stood up in the next few weeks by federal, state, and local hiring authorities with funding offered via block grants to states.

The number of tests needed to successfully prevent recurrent outbreaks while allowing some relaxation of social distancing will depend on the vigilance of contact tracing. With the kind of high-precision contact tracing used in South Korea, just 2.5 to 5 million tests per day would be required. With the imprecise tracing of a country like Taiwan, 30 million tests per day would be needed – a level far beyond present capacities.

ACTION STEPS

A Covid Community Healthcare Corps (CCHC) should be launched at state public health departments, an effort that will involve massive investments in manpower and equipment.

At least 100,000 people and perhaps as many as 300,000 must be hired to undertake a vigorous campaign of test administration and contact tracing, and they must be supported by computer systems networked with regional and national viral datasets and as many electronic health records from local hospital systems as can be provided. The CCHC should designate staff to distribute, administer and oversee testing.



A national system to track Covid-19 status must be created.

Policy makers and the public must find the balance between privacy concerns and infection control to allow the infection status of most Americans to be accessed and validated in a few required settings and many voluntary ones.



Digital apps and privacy-protected tracking software should be widely adopted to enable more complete contact tracing.

Whenever possible, incentives should be used to nudge the voluntary use of these apps rather than require them.



Create a Covid-19 Data Commons and Digital Platform

Real-time analyses of resource allocations, disease tracing results and patient medical records will enable policy makers and researchers to make best use of available resources to identify the most promising areas for surges in testing volumes to snuff out Covid-19 recurrent outbreaks and identify the most promising therapeutic treatments and algorithms.

ACTION STEPS



Integrate and expand Federal, state, and private data platforms to cover the full range of data required to monitor the pandemic, deploy resources, and remove bottlenecks.

This effort would support recent Department of Health and Human Services Federal and State collaboration with leading edge data technical firms to develop an integrate, real-time data platform so testing levels can be aligned at regional levels with illness burden. This platform can enhance procurement, distribution and deployment of tests as those tests evolve in quantity and function. It should also enable state and local authorities to track testing results and capacities to identify spot shortages. This will help identify any supply and demand constraints so that testing levels can be aligned at regional levels with illness burdens.



Innovative digital technologies can improve workforce monitoring and early detection of recurrent outbreaks.

When integrated into national and state surveillance systems, such innovations may enable the same level of outbreak detection with fewer tests. Promising techniques include anonymous digital tracking of workforces or population-based resting heart-rate and smart thermometer trends; continually updated epidemiological data modeling; and artificial intelligence projections based on clinical and imaging data.



Digital health records and insurance claims data of hospitalized Covid-19 patients should be used to improve Covid-19 diagnosis and treatment.

This requires that such data be aggregated and examined, while anonymizing personal identification, to determine optimal treatment paradigms and give leads for structured clinical trials. Recent reports from the American Enterprise Institute³, Center for American Progress⁴, Duke Margolis Center⁵, Harvard University Safra Center for Ethics⁶, and Johns Hopkins University⁷ each provide unique, complementary perspectives toward a comprehensive approach for relaxing social distancing and reopening our communities and our economy.

Monitoring the pandemic and adjusting social distancing measures will require launching the largest public health testing program in American history. Successful implementation of a national plan to fasttrack Covid-19 testing should allow the country to reopen and respond to recurrent outbreaks. The effort will ultimately grow to billions of dollars per month although innovations in testing technology should eventually drop costs. But with widespread business closures costing the country \$350 billion to \$400 billion each month, the expense will be worth it. This testing infrastructure is intended to tide the country over until a vaccine or therapy is widely available. Coordination of such a massive program should be treated as a wartime effort, with a public/private bipartisan Pandemic Testing Board established to assist and serve as a bridge between local, state, and federal officials with the logistical, investment and political challenges this operation will inevitably face. Harvard's Edmond J. Safra Center for Ethics has done an excellent job of outlining possible options (Appendix A). We recommend a combination of federal and state appointed members who would actively serve throughout the crisis.



The Covid-19 pandemic caught the United States unprepared, with inadequate emergency stockpiles of protective equipment, ventilators and vital medicines. In addition, the country has little of the industrial capacity needed to manufacture vaccines, antibiotics and other crucial supplies that may go wanting when international borders close.

In some ways, the complaisance that led to this unfortunate vulnerability may have arisen because of a window of viral calm unique in human history. The country's middle-aged leaders are the first generation ever whose parents did not face the bleak terror of polio outbreaks among their children's friends. They were the first to reach puberty without fear that mumps would render them sterile, the first to reach adulthood without fear that cervical cancer would end their or their partners' lives, the first to reach child-bearing age without fear that rubella would cause birth defects in their children and the last generation to be vaccinated against smallpox, history's great viral scourge.

The century-long interval since a viral respiratory pandemic circled the globe with just the right mix of lethality and infectiousness may have led many to stop believing in the inevitability of such a plague. And while HIV/AIDS struck just as many were becoming sexually active, the concentration of infections in the United States among men who have sex with men and people who inject drugs may have increased a sense of invulnerability among those not in those high-risk groups. But the AIDS epidemic demonstrates why Covid-19's assault could be lengthy and appallingly lethal. Nearly six years passed between the identification of AIDS and the emergence of the first effective treatment, and no meaningfully effective HIV vaccine is on the horizon despite nearly 40 years of diligent scientific effort.



The need for action is urgent. The number of confirmed Covid-19 infections in the country is approaching 700,000, with deaths nearing 35,000. Social distancing measures have successfully slowed the epidemic's implacable march but have led more than 21 million people to lose their jobs. The monthly economic loss is projected to be between \$350 billion and \$400 billion, with the gross domestic product expected to decline by as much as 7 percent in 2020. A growing number of Americans worry that lives are being spared in the immediate term at the cost of a long term economic slowdown rivaling that of the Great Depression. Indeed, what is sometimes lost in the debate between "saving lives" and "saving jobs" is that shutdowns increase alcoholism, depression, domestic abuse and a host of other social woes that together contribute to higher mortality - particularly among the poor. After the market crash of 2008, the United States saw a measurable decline in life expectancy. Depending on the severity and length of the shut-down, we run the risk of losing more lives from the economic downturn than from Covid-19.

Something has to change and fast. But how?



Action Plan



Scale Up Covid-19 Testing Capacity

Until Americans feel they can return to work without risking their or their family members' lives, the national economy will remain somewhere between comatose and moribund. Routine Covid-19 diagnostic tests – amplifications of nucleic acid sequences that are signatures of the virus – offer the best chance short of a vaccine to provide that kind of reassurance.



According to some epidemiological analyses, halting the epidemic entirely while allowing nearly everyone to return to work requires testing between 20 million and 30 million people daily, And in most cases, the tests should offer nearly instant results – or at least information quickly enough to allow someone to be tested before re-entering the workplace.

Unfortunately, the country's present Covid-19 testing capacity is less than 1/100th of that goal, and with most results delivered days and sometimes more than a week after being taken. And almost no one with experience in the diagnostic industry believes the epidemiologists' goal is reachable in the next five months with present technologies and infrastructure.

But over the next eight weeks, the country could conceivably get to the point where 3 million people – roughly one percent of the population – are tested weekly. It is a level that, combined with vigorous contact tracing, would allow crucial parts of the economy to restart. After another six months of intensive supply-chain oversight and the roll-out of new testing paradigms, that number could increase 10-fold to 30 million people a week. At least a year will be needed before the nation's labs will be capable of testing 30 million people every day.

Coronavirus Tests:

There are two type of coronavirus tests: molecular tests for SARS-CoV-2 infection and serological blood tests for antibodies. Molecular tests are usually taken with a nasal swab. The focus right now is choosing the right mix of molecular tests: highly accurate high-end PCR (polymerase chain reaction), middle point-ofcare diagnostics (POC) and low-end home tests. Finding the optimal mix is important, but will evolve over time as new tests come on the market, with different levels of accuracy and costs. Serological tests are appropriate for population-based surveillance and research projects. Currently available serological tests should not be used for individual assessment of protection from future infection or back-to-work decisions.



Create an Emergency Network for Covid-19 Testing (ENCT) to coordinate and underwrite the testing market.

The Rockefeller Foundation and its finance partners will help create an emergency procurement network, the Emergency Network for Covid-19 Testing, that can leverage public-private credit guarantees, define pooled procurement requirements for critical testing and supplies and negotiate medium term (3-6 month) contracts with suppliers to make sure large volumes of critical supplies are accessible to purchasing cooperatives, health systems, state and local governments, working alone or together, and other buyers. The Foundation will also offer ongoing guidance to these networks.

The aim of the ENCT would be to support and complement the work of Federal and State agencies by engaging with producers of testing equipment, reagents, and other lab consumables; national, state and local purchasers; public and private healthcare funders; and financial institutions. The intent is to overcome market, government, logistical, and diagnostic industry challenges that have plagued the dramatic scale up in Covid-19 diagnostic testing required to reopen the economy.



THE EMERGENCY NETWORK FOR COVID-19 TESTING WOULD PARTNER WITH STATES TO:

- Optimize the use of existing state and regional purchasing arrangements and, as needed, work to restructure such arrangements to secure urgently needed Covid-19 testing equipment and supplies.
- 2. Support financial guarantees to equipment manufacturers and lab purchasers
- Create state or regional Covid Diagnostic Testing Control Centers to coordinate lab needs, capacities and financing tools, and to solve problems as they arise.
- Offer computer equipment, interfacing, and expertise to any participating CLIA labs that are not yet able to immediately accept test orders (requisitions) and report test results digitally.
- Guarantee a fair market reimbursement (e.g. \$100) for all Covid-19 assays regardless of testing platform, previously established provider-lab contracts, payor relationships, and with no in-network or out-of-network payer distinctions.
- Provide a platform to qualify vendors and then offer guarantees to labs that order from the approved list.

THE EMERGENCY NETWORK FOR COVID-19 TESTING WOULD PARTNER WITH LABORATORIES TO:

- 1. Report all Covid-19 test results to health care providers as well as to state digital platforms within 24 hours of receiving samples while ensuring HIPAA compliance.
- 2. **Report daily test volumes** and 5 day forward-looking capacity estimates.
- Provide Covid-19 Diagnostic Testing Control Centers specific plans to increase present Covid-19 test volumes according to the estimated needs of each state.



Diagnostic tests have long been used almost exclusively to identify illnesses and help the sick. In a viral pandemic, testing is used to slow infections, benefiting society as much or more than the individual patient. In most cases, positive tests for Covid-19 do little to change treatment or life decisions for people suspected of having the virus, since treatments are symptom-specific and quarantine recommendations almost universal.

For these reasons, Covid-19 diagnostic tests when still in short supply must largely be reserved for front-line medical, municipal, grocery and other workers in vital sectors since presymptomatic people can become super-spreaders. As more tests become available, they should be distributed according to a detailed hierarchy of economic, medical and social need. Mildly and moderately symptomatic patients should be next on the priority list, since positive results will lead them and many of their family members to self-quarantine. As a result, drive-through and clinic testing programs should be expanded. Among the last on the priority list should be hospitalized patients, since x-rays and other diagnostic tools can effectively suggest a Covid-19 infection and treatment decisions will not change with a test's confirmation until effective treatments become available. Refusing to test the most desperately ill will be difficult for family members and others to accept, but it is the right course.

ACTION: SCALE UP COVID-19 TESTING CAPACITY



Create an Emergency Network for Covid-19 Testing (ENCT) to coordinate and underwrite the testing market.

To drive rapid scale-up of Covid-19 testing, the ENCT will engage with: producers of testing equipment, reagents, and other lab consumables; national, state and local purchasers; public and private healthcare funders; and financial institutions. The ENCT will also work to identify and resolve choke points in the test supply chain. The ENCT should convene a consensus group of national, state, business, and academic leaders on the use of testing for workplace monitoring and early detection of Covid recurrences. An overarching analysis of the testing supply chain both in the United States and globally should be undertaken immediately.



Expand current U.S. testing from 1 million to 3 million per week within the next eight weeks.

This will be achieved by maximizing the use and throughput of existing testing at national, university, and local labs. Most important, a crash program to bolster the capacities and resources of thousands of small laboratories around the country must be undertaken. Supply constraints would be identified and eliminated.



Grow U.S. testing capacity from 3 million to 30 million per week within six months.

Some of this increase can be achieved through process efficiencies, lab techniques such as batch sampling, and a broad rollout of point-of-care and home-testing. Given the commercial uncertainties inherent in this 10-fold increase in production, however, it is likely that the Defense Production Act will be needed.



Establish a COVID Community Healthcare Corp

Testing millions of people per week will require hiring a large number of community health workers. The disease is so infectious that reaching and quarantining potential contacts quickly is an urgent priority and maximizes the effectiveness of testing. A humancentered approach to administering tests and contact tracing is labor intensive but does not require specialized skills training and protects privacy. A combination of shoe-leather contact tracing and new digital tools can help target relevant populations for testing while minimizing privacy risks. South Korea successfully used aggressive contact tracing to target and maximize its own testing capacity to avoid just the sort of rapid spread and subsequent lockdowns that have bedeviled the United States. So contact tracing would seem in order. But the United States has had only limited contact tracing because of constrained resources. There are also heightened concerns about the privacy and the liberty of the infected and their contacts in the U.S..

In addition, such a workforce can be used to provide other services, such as providing meals on wheels and other necessary assistance.





Rapidly hire an additional 100,000 to 300,000 people using existing hiring authorities:

Considering the asymptomatic nature of much of the viral spread, Johns Hopkins University School of Public Health and The Association of State and Territorial Health Officials (ASTHO) estimates that about 100,000 would be needed for contact tracing alone. That is less than half the rate deployed in Wuhan. Testing administration and other services for vulnerable populations who are at-risk or under home isolation or quarantine would require additional workers, with estimates ranging as high as 300,000 needed to provide all essential services. At \$40,000 for wages and benefits per employee per year, the cost could range from \$4 billion to \$12 billion when training and administrative costs are included.



Skills Training:

The skills needed for both test administration and contact tracing are not specialized, and training can be provided virtually through the CDC and their partner organizations such as the National Network of STD Clinical Prevention Training Centers, public health schools, and companies.



Management and oversight:

Covid-19 responders should be under the management of state and local authorities, particularly for contact tracing. Federal responders should be deployed by invitation and under the authority of governors and mayors. For core public health functions such as contact tracing, there should be a single, coordinated system in each jurisdiction, managed by local authorities.



Direct hires, contractors and volunteers:

An "all of the above approach" must be taken to maximize the ease and speed of hiring. Peace Corps Volunteers forced to return from postings early, although limited in number to approximately 7,000, are prime candidates for rapid re-hiring. The Corporation for National and Community Service, the federal agency that oversees Americorps, the Senior Corps and the Volunteer Generation Fund, could be used. The National Guard can fill gaps, and nonprofits can provide volunteers. (See Box) Some privacy concerns must be set aside for an infectious agent as virulent as Covid-19, allowing the infection status of most Americans to be accessed and validated in a few required settings and many voluntary ones. The loss of privacy engendered by such a system would come at too high of a price if the arrival of a vaccine early next year was a certainty. But vaccine development and manufacture could take years, and when it comes certain populations may be excluded from receiving it for health reasons. In the meantime, infection status must be known for people to participate in many societal functions. Legislation protecting people from being fired over infection status must be passed.

Those screened must be given a unique patient



identification number that would link to information about a patient's viral, antibody and eventually vaccine status under a system that could easily handshake with other systems to speed the return of normal societal functions. Schools could link this to attendance lists, large office buildings to employee ID cards, TSA to passenger lists and concert and sports venues to ticket purchasers. Such connections should be made in a way that protects personally identifying information whenever possible. For example, accessing the viral and antibody status of an individual can be done by using a cryptographic hash of an individual's private information without actually sending any personally revealing details.

This infection database must easily interoperate with doctor, hospital and insurance health records in an essential and urgent national program to finally rationalize the disparate and sometimes deliberately isolated electronic medical records systems across the country. Analytics across myriad platforms must be operationalized so that population-level health information can be used to identify at-risk populations, perform contact tracing, facilitate decision support, and evaluate interventions for effectiveness.

Unfortunately, obtaining the necessary clinical data to bring these powerful analytic tools to bear has been difficult due to information-blocking tactics of electronic health records (EHR) vendors. Among the longtime tactics used by such vendors has been charging unreasonable fees for data access, requiring providers to sign restrictive contracts, and claiming patients' clinical data is proprietary.

On March 9, the Department of Health and Human Services (HHS) released two long-awaited final rules that would prohibit information blocking in health care and advance more seamless exchange of health care data. But publication in the Federal Register, necessary to activate the rules, has been inexplicably delayed. This delay must end.

The Rockefeller Foundation's Equity and Economic Opportunity and Health Initiatives is piloting a Community Health Workers Corps (CHW's) in Baltimore as a dual response to the pandemic and as a way to create quality employment opportunities for up to 1,000 displaced workers. A public/private partnership composed of the City of Baltimore, State of Maryland, University of Maryland, Johns Hopkins and various private sector partners are all coordinating and collaborating in launching the CHW Corps. Investing in the launch of a health workers corps would allow every community to not only have testing and contact tracing capability but also have a "social distancing/public health workforce." CHW's could undertake everything from sanitizing spaces to enforcing separation to spraying sanitizer on people's hands regularly, particularly where crowds gather. As trusted members of their cities they would also have a close understanding of the community served. Pending some approvals, the target launch is June 1, 2020.

Similarly, The Rockefeller Foundation has been working with The Community Organized Relief Effort (CORE) in Los Angeles to scale up testing in LA County, statewide, and ultimately nationwide through the training of volunteers to administer tests and record results.

ACTION: LAUNCH A COVID COMMUNITY HEALTHCARE CORPS FOR TESTING AND CONTACT TRACING



A Covid Community Healthcare Corps (CCHC) should be launched at state public health departments, an effort that will involve massive investments in manpower and equipment.

At least 100,000 people and perhaps as many as 300,000 must be hired to undertake a vigorous campaign of test administration and contact tracing, and they must be supported by computer systems networked with regional and national viral datasets and as many electronic health records from local hospital systems as can be provided. The CCHC should designate staff to distribute, administer and oversee testing.



A national system to track Covid-19 status must be created.

Policy makers and the public must find the balance between privacy concerns and infection control to allow the infection status of most Americans to be accessed and validated in a few required settings and many voluntary ones.



Digital apps and privacy-protected tracking software should be widely adopted to enable more complete contact tracing.

Whenever possible, incentives should be used to nudge the voluntary use of these apps rather than require them.



Create a Data Commons and Digital Platform

Federal, State, and Private Data Platforms

There is a need to develop a real-time common data-sharing platform to better understand available testing capacity. This could take the form of a stateby-state heat map of laboratories to help governors and other elected officials make informed decisions on how to allocate scarce resources. States should be encouraged to use a common platform, as there are multiple competing platforms in place, limiting the effectiveness of existing data. This should be in done in partnership with the National Governors Association. To further encourage the uptake of this data commons, a set of compelling use cases should be put forward for how certain states have optimized data and its impact on curtailing the impact of Covid-19.

Analytical tools can be developed to help anticipate shortages of lab materials and equipment and to ensure efficient ordering and distribution of supplies. And as epidemiological modeling is improved and married with digital tracking information, it can become more predictive and anticipate outbreaks or non-compliance with public health guidance to direct surges in testing capacity. This work will require



careful attention to geographic and racial imbalances in existing data collection procedures so that bias is not baked into models. The integration of diverse data sets from public health systems, social media, and mobility data into a shared platform with open-source modeling tool development and appropriate security and compliance controls will accelerate the experimentation and development of prediction algorithms that power the monitoring and decision-making components of the digital platform.

Marrying much of this information into easy-to-understand dashboards to improve decision-making by both public and private sector leaders will be an ongoing challenge as a flood of data threatens to create a thickening fog of information. Such a platform should allow users to integrate multiple datasets on the fly, model interventions, and track disparate impact on minority communities.

Platforms and apps can be used not only to identify emerging hot spots but also for developing and operating back-to-work predictive models. Such models can help make decisions about which regions at which times should move from shelter-at-home to work, and, as necessary, back to shelter-at-home again. DOING THIS QUICKLY AND ETHICALLY WILL REQUIRE AN UNPRECEDENTED EFFORT ON THE PART OF GOVERNMENT, INDUSTRY, AND ACADEMIA. THE DEVELOPMENT OF THESE TOOLS SHOULD FOLLOW FOUR PRINCIPLES



Whenever and wherever possible data should be open.

We know from prior crises that openness creates efficiency and enables collaboration. This will require marshaling not just an army of engineers and scientists but also an army of lawyers to negotiate data sharing agreements.



Computer upgrades: Local and state health departments are famously shoestring operations.

These departments will need rapid computer upgrades so they can receive listings of the newly infected directly from laboratory uploads, with contact information included as part of the record.



Focus relentlessly on user needs.

Now is not the time for fancy new features or sophisticated interfaces. Developers must do rapid user research to identify specific decisions and pain points where digital tools can help.



Build for interoperability and modularity.

New tools must play well with existing systems. This means developers should build on existing interoperability standards from the Centers for Medicare and Medicaid Services (CMS) and the Office of the National Coordinator for Health Information Technology (ONC).



Earn public trust for new technologies through ethical action and transparency.

Companies like Apple and Google are leading the way by engaging directly with privacy advocates, allowing individuals to opt-in to new tools, and publishing extensive documentation. Others across the private and public sectors should follow their lead or risk losing buy-in from the populations at large.

Fit-bits, smartphones, smart thermometers and other digital tools can be used to uncover clusters of infections before patients flood local emergency rooms, allowing public health officials to redirect testing resources and rapidly initiate contact tracing. Apple and Google are working on a contact-tracing app to alert people – on an opt-in basis – if they've been in touch with someone known to have the novel coronavirus. An active symptom-checker app is in development. Even data such as Google searches for "I can't smell" help to identify infection localities. Fully controlling the Covid-19 epidemic requires that we test the majority of the population weekly. Since we are far from that kind of capacity, the United States must undertake immediate and intense efforts to invest in new tests and ways of providing near-immediate diagnostic results. We must also invest in research that analyzes the electronic medical records of hospitalized Covid-19 patients to determine best treatment strategies and pathways for clinical trials that must be undertaken immediately.

The reason for both is that this country's gravest test may arrive around Labor Day as students pile into school buses and classrooms with the beginning of the next school year. Children and teens are particularly efficient viral vectors for Covid-19, since they are often asymptomatic and tend to be less careful than adults about social distancing.

Another vital research target is determining whether people who were previously infected with Covid-19 can be infected again. Anecdotal reports from other countries suggest quick re-infection is possible. Research is needed to explore under what circumstances this troubling outcome could occur. This research should also confirm which antibodies and serological tests are truly predictive of past exposure as well as future immunity.

Additionally, much has been posited about the risk to healthy, young people. Therefore, this research program should also determine whether age or underlying health disorders mitigate immunity and complicate the predictive power of antibody assays.



ACTION: CREATE A COVID-19 DATA COMMONS AND DIGITAL PLATFORM

International and U.S. Covid-19 Testing experiences

Federal, state, and private data platforms must be expanded to cover the full range of required Covid-19 data.

This will help identify any supply and demand constraints so that testing levels can be aligned at regional levels with illness burdens.



Innovative digital technologies can improve workforce monitoring and early detection of recurrent outbreaks.

When integrated into national and state surveillance systems, such innovations may enable the same level of outbreak detection with fewer tests. Promising techniques include anonymous digital tracking of workforces or population-based resting heart-rate and smart thermometer trends; continually updated epidemiological data modeling; and artificial intelligence projections based on clinical and imaging data.



Digital health records and insurance claims data of hospitalized Covid-19 patients should be used to improve Covid-19 diagnosis and treatment.

This requires that such data be aggregated and examined, while anonymizing personal identification, to determine optimal treatment paradigms and give leads for structured clinical trials. Experiences from countries that are making progress in containing the spread of Covid-19 point to the vital role of an early and aggressive public health response to SARS-CoV-2, the highly contagious virus that causes Covid-19. This includes administering testing on a large scale; isolating and monitoring infected people; and tracing recent contacts who may have been infected and testing them too. This public health response has also appeared to minimize the need for blunt, economically damaging restrictions such as lock-downs to reduce the spread of infections.

A detailed exploration of the exemplar countries and territories, notably South Korea, Singapore, Hong Kong, Iceland, Norway, South Africa, and Ghana, reveal emerging best practices for mounting an early and aggressive public health response to Covid-19: Start as early and quickly as possible, Scale diagnostic testing in at-risk populations, not just those with symptoms, invest in the health workforce, and leverage technology. South Korea is one of the few countries to experience a serious Covid-19 outbreak and successfully flatten its curve through widespread testing and intensive contact tracing without shuttering its economy or overwhelming the health care system.⁹ South Korea offers a useful point of comparison with the United States, as both countries confirmed their first cases of Covid-19 within a day of each other. However, since then South Korea has registered a Covid-19 mortality rate that is half that of the United States, and South Korea has tested three times as many people for the virus per capita as the United States has.^{10,11} A crucial reason is that the Koreans prioritized quick action on Covid-19 testing.

Less than a week after the country detected its first case, health officials met with medical and pharmaceutical companies to discuss the production and approval of test kits. Within two weeks, even as confirmed cases remained below 100, thousands of test kits were shipping daily.¹² To spare hospitals and clinics from being overwhelmed by increased demand for testing, South Korean officials opened 600 testing centers. At drive-through stations, patients are tested without leaving their cars.¹³ When people test positive for Covid-19 in South Korea, health workers retrace their recent movements to find, test and isolate anyone the person may have had contact with. People ordered into self-quarantine must download an app that alerts officials if a patient leaves isolation.¹⁴

In recent weeks, there have been encouraging signs of a more aggressive and coordinated approach to testing and contract tracing in Massachusetts, Utah and Washington State.^{15,16,17} There have also been new efforts announced by major U.S. technology companies - Apple and Google have announced a joint effort to bolster contact tracing by building software into smartphones that relies on Bluetooth technology to track users' proximity to one another. Facebook is participating in a similar effort led by the Massachusetts Institute of Technology.¹⁸



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The Rockefeller Foundation is

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Proposal for a Pandemic Testing Board

Danielle Allen, Julius Krein, Ganesh Sitaraman, & E. Glen Weyl

While stay-at-home orders are working to slow the spread of the coronavirus, the reopening of the economy and society could be achieved more safely and more swiftly under the following conditions: (1) deployment of a vaccine, which is projected to take 12-18 months, in which time there will be significant costs to the economy and harm to the social wellbeing of individuals and communities, or (2) a regime of almost universal testing. Widespread testing for both presence of the virus and for antibodies - on the order of millions of tests per day¹ will enable those who have antibodies or are not infected to re-enter the economy. It will also make it possible to quarantine only those who have been infected or who have been in contact with the infected, massively reducing the number of people who are required to stay-at-home.

The problem is that we cannot wait 12-18 months for a vaccine, and we do not have anywhere near the scale or coordination of resources needed to produce or deploy millions of tests per day. Further, travel and commerce will not truly be able to reopen unless there is sufficient global production and deployment of tests and ultimately vaccines. Although the Trump Administration established a **Supply Chain Stabilization Task Force** to source and deploy PPE, ventilators, and other equipment last week, so far as we are aware, there has not been a similar effort around testing.

We therefore propose the creation of a Pandemic Testing Board (PTB), akin to the War Production Board that the United States created in World War II, in order to massively scale up production and deployment of testing. The Pandemic Testing Board would consist of leaders from business, government, academia, and labor and would be tasked with two projects:

(1) Pandemic Testing Supply Initiative.

The PTB's goal would be to develop the scale of testing needed first to stabilize the United States, and then to offer exports to foreign countries that are facing shortages. It would have authority to identify supply chain elements necessary for manufacturing, procuring, scaling, and deploying any items related to testing, the power to procure these materials via contracting with producers and servicers, and the power to mandate production or services, akin to authorities in the Defense Production Act. Contracting firms would be required to follow all existing labor laws, including maintaining collective bargaining agreements.

(2) Pandemic Testing Deployment Initiative.

In order to deploy testing at scale, there will need to be sufficient personnel to test individuals outside of hospitals and doctors' offices. The PTB would:

- Craft recommendations for states to use the national guard to deploy testing in conjunction with business, labor, nonprofits, and academia
- If necessary, be authorized to create a Pandemic Response Corps, comprised of tested civilians, to assist in the testing
- Make recommendations on tracking the spread of the virus
- Before disbanding, craft recommendations on long-term preparedness.

¹ As of April 6 the US has tested at a rate of approximately 5316 tests per million, compared with 9062 per million in South Korea. Both the Center for American Progress and McKinsey recommend testing rates on par with those of South Korea. The American Enterprise Institute proposes raising testing to the level of 750,000 week. These levels of testing would support disease control in conjunction with a likely need for further applications of social distancing orders. Estimates of the level of testing that would be needed to replace collective quarantine orders with voluntary individual quarantine in a sustainable way from the Edmond J. Safra Center for Ethics Study Group (Harvard University) range from 5 million to 20 million tests a day, depending on the accuracy of contact tracing regimes used in support of testing. A serious commitment to testing would require the CDC and Department of Health and Human Services to engage the epidemiological community in full modeling of the possible testing pathways in order to determine the appropriate level to target.

The Pandemic Testing Board could be designed in one of two ways:

- Nationalist Model: The board would consist of no more than 9 members, chosen either by the President or the director of the NIAID, and would be required to include members from business, labor, academia, and current government officials.
- Federalist Model: Congress would pass a law authorizing the states to create an interstate compact. The lead states would select a board of no more than 9 members including members from business, labor, academia, and government. On this model, the board would serve the states – rather than work through the federal government – but it would be funded by a congressional appropriation.

Transparency, Anti-Corruption and Ethics Measures, and Oversight

To ensure transparency, anti-corruption, and oversight, the PTB would be required to:

- Transparency Measures
 - Make immediately public all procurement contracts, including the terms, timing, and delivery
 - Make immediately public its deployment decisions
 - Produce a report to Congress and the American people detailing the PTB's activities and progress, on no less than a monthly basis
- Anti-Corruption and Ethics Measures
 - Prohibit contracting firms of raising CEO pay or offering bonuses for contracting years and two years thereafter
 - Prohibit stock buybacks for the contracting years and two years thereafter
 - Prohibit members of the PTB from purchasing stock in any company related to the PTBs activities for the duration of their time on the PTB plus an additional year

Oversight

The President or director of NIAID (if the nationalist model) or board (if federalist model) shall appoint an inspector general who will be tasked with (a) monitoring contracts for waste, fraud, and abuse, (b) producing a report of the PTB's progress every two months, (c) monitoring the anti-corruption and ethics requirements, and (c) conducting any other relevant oversight of the PTB's activities.

Appropriations

We recommend Congress appropriate sufficient resources to fund the Board and massively scaled up testing production and deployment.

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The Rockefeller Foundation Launches Covid-19 Action Plan to Reopen Workplaces, Protect Lives

\$10 million is committed to operationalize "plan of plans" in nearly 10 places

New York, April 21, 2020 — The Rockefeller Foundation, in consultation with leading economists, public health experts, and business leaders, released a new comprehensive **National_Covid-19 Testing Action Plan** rooted in data and science and using testing and contact tracing to provide a roadmap for U.S. leaders to reopen the economy while safeguarding public health. The Foundation is committing \$15 million to the work, \$10 million will be to support steps to operationalize in nearly 10 places, including: Boston, Detroit, Los Angeles, Greater Miami and the Beaches (a partnership including Miami, Miami Beach, and Miami Dade County), the Navajo Nation, New Orleans, and the White Mountain Apache Tribe.

"We know this is an ambitious Plan, but we are facing an economic slowdown that rivals the Great Depression," **said Dr. Rajiv J. Shah, President of The Rockefeller Foundation**. "A crisis of this magnitude requires bold action."

As Covid-19 has swept across the U.S., killing over 30,000 Americans, leaders have been forced to issue strict social distancing guidelines and shut down many parts of the economy. More than 22 million Americans filed for unemployment in recent weeks, a record high. Government officials, business leaders and many employees are anxious to restart the economy, but with no vaccine available and limited testing capacity, it has been unclear how to achieve this without causing a second wave of infections that would further devastate communities and the economy.

"Without a vaccine, treatment or other preventive measures and lacking a sufficient supply of diagnostic tests, a partial reopening will require a delicate balancing act with a significant scale-up of testing alongside extensive contact tracing," said **Dr. Rajiv J. Shah, president of The Rockefeller Foundation**. "It requires hard work, but with great care and collaboration we believe the most severe lockdowns can be lifted and a phased reopening of some businesses could begin."

The Rockefeller Foundation's Treatment Action Plan will require extensive investment and the largest public health testing program in U.S. history, including:

- launching the largest public health testing system to monitor infections and future infection waves,
- expanding the capacities and resources of thousands of small laboratories around the country to provide much of the expanded testing,
- establishing a medical reserve corps to distribute and oversee testing,
- hiring as many as 300,000 people to undertake a rigorous campaign of contact tracing,
- developing coordinated computer systems and a digital platform for information sharing and infection tracking,
- addressing the significant challenges around medical privacy and other ethical issues,
- creating a Pandemic Testing Board to oversee the testing scale-up and coordination between federal, state and local jurisdictions.

The Rockefeller Foundation hired **Dr. Jonathan Quick** to lead the Foundation's pandemic response. Quick has extensive experience in international public health with the World Health Organization, Management
Sciences for Health and the Duke Global Health Institute among others. He is the author of <u>The End of</u> <u>Epidemics: The Looming Threat to Humanity and How to Stop It</u> and an often sought adviser on managing pandemics.

"Time is of the essence: In early April Covid-19 has surpassed cancer as the second leading cause of death in the U.S., claimed the lives of nearly 40,000," **said Dr. Jonathan Quick, Managing Director for Response, Preparedness, and Prevention at The Rockefeller Foundation.** "We have passed the peak for new cases, but we know the economic disruption caused by the virus will linger, causes additional deaths and increasing the risk of alcoholism, mental health problems, and domestic abuse."

Implementing the recommendations in the Action Plan could cost as much as \$3 billion a day, or \$90 billion a month. However, with widespread business closures costing the country \$350 billion to \$400 billion each month, a testing regimen that could sustain a partial reopening of the economy until a vaccine is widely available would pay for itself in within the first month.

To drive action and implementation in the coming weeks and months, the Foundation is building a coalition called the Testing Solutions Group. Participating cities and states will be able to repeatedly and consistently test their citizens for Covid-19 from June 2020 through early 2021, learn from each other and share best practices. To achieve this vision, the Coalition has four objectives:

- Provide immediate support to mayors to enhance their testing and data capabilities—with a focus on the most vulnerable citizens. This may include direct funding as well as technical assistance to strengthen policies and strategies.
- Drive collaboration across cities to share and implement best practices.
- Bring together expertise from industry and academia to develop strategy and policy recommendations that support mayors and their leadership teams.
- Collect real-time data, evidence, and feedback from mayors implementing testing strategies.

There are significant challenges involved in implementing this Treatment Action Plan, including expanding critical lab supplies, hiring and training 100,000 to 300,000 community health workers to manage the extensive contact tracing needs, and balancing medical privacy issues with public health needs. All are needed to ensure that as people return to work, they do not put others and themselves at risk of infection. Finding solutions to these challenges will require participation, coordination, and collaboration across all sectors of society.

The Rockefeller Foundation refers to this National Covid-19 Testing Action Plan as the "plan of plans" because it was built with extensive consultation and contains the most agreed elements of other institution's plans.

About The Rockefeller Foundation

The Rockefeller Foundation advances new frontiers of science, data, and innovation to solve global challenges related to health, food, power, and economic mobility. As a science-driven philanthropy focused on building collaborative relationships with partners and grantees, The Rockefeller Foundation seeks to inspire and foster large-scale human impact that promotes the well-being of humanity throughout the world by identifying and accelerating breakthrough solutions, ideas, and conversations. For more information, sign up for our newsletter at <u>rockefellerfoundation.org</u> and follow us on Twitter <u>@RockefellerFdn</u>.

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Safe. Smart. Step-by-Step.

PLAN FOR FLORIDA'S RECOVERY



GUIDING PRINCIPLES for Re-Opening



Public Health & Safety

The first priority in re-opening is maintaining the health and safety of all Floridians. Every measure taken by state and local governments, businesses, and individuals should consider the general health and safety of the public.



Health Care System Readiness

Health facilities should be able to return to normal operations through a prudent approach that ensures available capacity to treat COVID-19 patients in the event of a medical surge. Health care systems also need to develop models for the sustainability of medical supplies and preservation of medical resources without the need for public augmentation of medical supplies.



Protection of the Vulnerable

Targeted measures should focus on Floridians over the age of 65 and those who have serious underlying medical conditions to prevent exposure to COVID-19.



Economic Recovery

The **Safe. Smart. Step-by-Step.** plan to re-open Florida should support the highest practicable level of business operation while maintaining public health and safety, so that all Floridians can return to work and the economy can recover.

GUIDING PRINCIPLES for Re-Opening



Protection of Civil Liberties & Maintaining Individual Rights

Measures taken by the government must not impair the fundamental rights of Floridians, and when restrictive measures are imposed they should be the least restrictive measures feasible to accomplish a specific medically necessary objective.



Public Confidence

The **Safe. Smart. Step-by-Step.** plan to re-open Florida must be rooted in sound medical judgement and driven by health metrics so every Floridian feels safe as they return to work and their daily activities. An effective communications strategy is critical to ensuring public confidence in the COVID-19 mitigation strategies.



Partnership with Local Communities

Local communities are partners with the state as the **Safe. Smart. Step-by-Step.** plan to re-open Florida is implemented. Florida is a geographically large and diverse state and each of our local communities has unique insight into their individual circumstances. Local communities will play an important role in the plan to re-open Florida.

FLORIDA'S PLAN AGAINST COVID-19

- **1. Protect the Vulnerable**
- 2. Increase Testing
- 3. Promote Social Distancing
- 4. Support Hospitals and Protect Health Care Workers
- **5.** Prevent Introduction from Outside of the State



FACTS VS. FEAR





WASHINGTON EXAMINER

APRIL 1, 2020

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PLAN FOR FLORIDA'S RECOVER'

FLORIDA COULD BE THE NEXT NEW YORK IN THE CORONAVIRUS OUTBREAK

"Florida has reported more than 6,700 confirmed coronavirus cases in the last week, with 85 deaths and 850 hospitalizations. The state is quickly becoming the next national hot spot for the COVID-19 virus, yet health experts are concerned its government is woefully unprepared."

COVID Fatalities

Fatalities per 100,000 | April 28, 2020



Safe. Smart. Step-by-Step.

Florida fatality data from FL DOH, other sate fatalities data from worldometers.com, population data from U.S Census Bureau

COVID Hospitalizations

Currently Hospitalized per 100,000 | April 28, 2020



Florida hospitalization data from AHCA Emergency Status System (ESS), other sate hospitalization data from covidtracking.com, population data from U.S Census Bureau

FLAPOL — MAR 20, 2020

DEMOGRAPHER SAYS FLORIDA COULD BE 'LIKE AN UBER-ITALY' DURING CORONAVIRUS OUTBREAK

Some scientists are pointing toward Florida with grave concern for a potential major outbreak of COVID-19 and deaths, due to the Sunshine State's large populations of older and younger generations and largely unchecked spring break celebrations in the past week.

COVID-19 Hospitalizations

Currently Hospitalized per 100,000 | April 28, 2020



from U.S. Census Bureau, other country population data from worldometers.com

COVID-19 Fatalities

Fatalities per 100,000 | April 28, 2020



Florida fatalities data from FL DOH, state population data from U.S. Census Bureau, other country fatalities data population data from worldometers.com



"In Florida, the model predicts 465,699 people will be hospitalized because of COVID-19, the illness caused by complications from the virus, by April 24 but there will only be 36,384 hospital beds available by that date."

'THE COST OF HAPPY TALK': MEDICAL EXPERTS WARN OF DEATH TOLL IF SHUTDOWNS DON'T HAPPEN NOW







" "Projections say the state could <u>run out</u> of ICU beds by April 14."

EARLIER DATE PREDICTED FOR FLORIDA'S CORONAVIRUS PEAK



FACT:

Florida's ICU Bed Availability is 36.5%





APRIL 3, 2020

WHEN NO MORE VENTILATORS ARE LEFT

"As political and health leaders look into the face of rapidly approaching peaks in COVID-19 cases, the need for ventilators has hit crisis levels."

"There will likely come a point when there will be no more ventilators to shuffle around, and when that happens, what next?"



FACT:

Florida has <u>never</u> had a shortage of ventilators.

We currently have 74.6% available



AVAILABLE VENTILATORS IN FLORIDA

Available ventilators and ventilator use for COVID in Florida





Source: Image adapted from COVID Act Now: "Hospitalizations in Florida," Projected March 19, 2020.

STATE GATING CRITERIA



Cough-Associated Admissions





Influenza-Like Illness Visits



Florida COVID-19 Cases



New Case Positivity Rate Trend





ALL HOSPITAL BED AVAILABILITY

	FLORIDA	MIAMI-DADE	BROWARD	PALM BEACH	HILLSBOROUGH	ORANGE	DUVAL
TOTAL LICENSED BEDS	68,735	9,455	6,816	4,332	4,378	4,751	3,927
TOTAL STAFFED BEDS	58,742	8,102	5,403	4,044	3,982	3,743	3,794
TOTAL AVAILABLE BEDS	22,060	2,991	1,739	1,815	1,470	1,204	1,684
AVAILABLE CAPACITY	37.55%	32.19%	32.19%	44.88%	36.92%	32.17%	44.39%
HOSPITALIZATION CHANGE IN LAST 24 HRS	30	38	-12	7	4	-1	-3
HOSPITALIZATIONS	2,131	767	324	230	41	52	58



% of Class 1 Beds Available on Selected Dates



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Includes data reported by facilities in the AHCA Emergency Status System (ESS).

Case Rate per 100,000 Population





Currently Hospitalized per 100,000 | April 28, 2020



Florida hospitalization data from AHCA Emergency Status System (ESS), other state hospitalization data from covidtracking.com, population data from U.S Census Bureau

Currently In ICU per 100,000 | April 28, 2020



PLAN FOR FLORIDA'S RECOVERY

Florida hospitalization data from AHCA Emergency Status System (ESS), other state hospitalization data from covidtracking.com, population data from U.S Census Bureau *New York state ICU data last reported on covidtracking.com April 23

Currently Hospitalized per 100,000 | April 28, 2020



Florida hospitalization data from AHCA Emergency Status System (ESS), other state hospitalization data from covidtracking.com, population data from U.S Census Bureau

Currently In ICU per 100,000 | April 28, 2020



Florida hospitalization data from AHCA Emergency Status System (ESS), other sate hospitalization data from covid/tracking.com, population data from U.S. Census Bureau *New York state ICU data last reported on covidtracking.com April 23

COVID FATALITIES

Fatalities per 100,000 | April 28, 2020



Florida fatality data from FL DOH, other sate fatalities data from worldmeters.com, population data from U.S. Census Bureau

LONG-TERM CARE FACILITIES PROTECTING MOST VULNERABLE

- Suspended visitation, mandated strict staff screening, and directed ALL staff that interact with residents to wear masks in long-term care and residential facilities.
- Deployed Rapid Emergency Response Teams to more than 300 long-term care facilities to train staff on infection controls and augment clinical patient care.
- Deployed 50 mobile testing teams with the Florida National Guard tested more than 6,000 resident and staff at facilities throughout Florida.
- Deployed 120 ambulatory assessment teams to long-term care facilities that visited over 3,800 facilities to complete needs-assessments.
- Directed the Florida Division of Emergency Management to send PPE to ALL 697 Nursing Homes and 3,098 Assisted Living Facilities.
- To date, the Division of Emergency Management has delivered nearly 7 million masks, nearly 1 million gloves, more than 500,000 face shields, and 160,000 gowns.

COVID-19 Deaths by Day, Florida



PLAN FOR FLORIDA'S RECOVERY

WALK-UP TESTING SITES: 6,330 people tested

Focus on underserved communities CURRENTLY OPEN:

- 2 in Broward County
- 1 in Duval County
- 2 in Hillsborough County
- 1 in Leon County
- 1 in Palm Beach County
- Several Sites in Orange County that rotate day-to-day.

NEW:

- <u>MIAMI-DADE</u> Holy Family Catholic Church opened yesterday. Focused on the Haitian community, with Creole speakers.
- **PALM BEACH** Site in Riviera Beach is opening early next week.
- <u>COLLIER COUNTY</u> Site in Immokolee is opening.

****Total of 11 state-supported walk-up sites across the state.**
DRIVE THRU TESTING SITES

CURRENT STATE SUPPORTED SITES:

- Miami Hard Rock
- TIAA Bank Stadium Lot J
- Orange County Convention Center
- CB Smith Park in Broward County

- Marlins Stadium
- FITTEAM Ballpark of the Palm Beaches in Palm Beach County
- South County Civic Center in Delray Beach
- Raymond James Stadium

**The state is opening five drive thru testing sites in the coming week, which will bring our total to 13 state-supported drive-thrus. To date, these sites have already tested 88,000 individuals.

NEW STATE SUPPORTED SITES:

- **BROWARD COUNTY** The War Memorial in Fort Lauderdale is opening a site tomorrow.
- **ESCAMBIA COUNTY** UWF is opening a site on Friday.
- <u>LEE COUNTY</u> Early next week, we will be opening a site at the Minnesota Twins spring training stadium.
- <u>SARASOTA/MANATEE COUNTY</u> We are opening a site near the University Town Center mall to serve the area. Opening early next week.
- <u>MIAMI-DADE COUNTY</u> Next week, we are opening a site that can do drive-thru and walk up tests at the Miami Beach Convention Center. One side walk up, one side drive thru.

MOBILE LAB

- The State has secured a mobile lab that can conduct 3,500 tests per week through a deal with Cepheid.
- 3,500 cartridges per week to <u>support rapid testing 45 minute results.</u>
- This testing will start early next week, and we expect to have the cartridges on Tuesday.
- The State are going to use it to test long-term care facilities and will be able to get results same day.
- As testing continues, it has multiple applications homeless, homebound, underserved populations, etc.



CONTACT TRACING

- The Florida Department of Health has recruited hundreds of professors and students from universities to assist with the COVID-19 response, including contact tracing.
- The Florida Department of Health has more than 500 epidemiologists dedicated to responding to COVID-19, this includes 223 epidemiologists hired during the response and approximately 300 others not including the HIV, STD, TB programs.
- The schools that are contributing students for contact tracing efforts are the following:
 - FSU, USF, UF, FAMU, UCF, FIU, UM, Columbia, Nova Southeastern University, George Washington University, University of Kentucky, and Brown School at Washington University in St. Louis.



FLORIDA PHASE 1



FLORIDA PHASE 1

Received input and advice from prominent physicians, health care system executives, small business owners, elected officials, unemployed Floridians, and law enforcement

Convened the Re-Open Florida Task Force, which produced a report with recommendations

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FLORIDA PHASE 1 (Continued)

- Schools remain distance learning.
- Visits to senior living facilities are prohibited.
- Elective surgeries can resume.
- Restaurants may offer outdoor seating with six foot space between tables and indoor seating at 25% capacity.
- Retail can operate at 25% of indoor capacity.
- No change for bars, gyms, and personal services such as hair dressers.



FLORIDA PHASE 1 (Continued)

- Vulnerable individuals should avoid close contact with people outside the home.
- All individuals, when in public, should maximize physical distance from others.
- Avoid socializing in groups of more than 10 people in circumstances that do not readily allow for physical distancing.
- Face masks are recommended for all those in face-to-face interactions and where you can't social distance.

Safe. Smart. Step-by-Step.

PLAN FOR FLORIDA'S RECOVERY

FLORIDA'S NEXT STEPS

Key metrics to consider as we move to next steps:

- The state maintains the health benchmarks of the Safe. Smart. Step-by-Step Plan
- Maintaining hospital bed capacity
- Monitoring COVID-19 test positivity rate

This does not need to take months. It will be based in our health metrics and guided by medical authorities.



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PLAN FOR FLORIDA'S RECOVERY