

A path forward for reopening a nation in a SARS-CoV-2 pandemic.

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Abstract

The health care benefits of reopening a nation exceed the benefits of continued pandemic related closure. The magnitude of continued closure may ultimately represent a greater societal burden of danger, morbidity and death than the SARS-CoV-2 pandemic itself. A planned coordinated action, not fear, is the path forward.

Keywords: COVID-19, SARS-CoV-2, Visual impairment, Macular degeneration.

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About the Study

Since early 2020, the world's nations have repeatedly addressed the challenge of Severe Acute Respiratory Syndrome Coronavirus SARS-CoV-2 infections causing COVID-19 by mandating national closures. This continued closing approach to dealing with SARS-CoV-2 surges can be more damaging to a nation and its people than an approach of reopening or remaining open through a plan of action, not fear, illuminating the path forward [1]. Local and national closures are more destructive and even deadly in the long term. With closures, the price of missed healthcare examinations and treatments, scarcity and disappearance of food, the inability to work and earn a living, increases in suicide and death rates, drug and alcohol abuse, and depression must all be considered [2-8]. The long-term and short-term costs of continued closures exceed benefits. The benefits of reopening or remaining open far exceed any perceived benefits of closure. Closure does not require a plan. A plan to safely stay open is an effective and less costly option. A clear understandable plan that nations can implement is required to reopen and limit morbidity, death, and societal destruction from the virus. Closing has proven to accelerate the process of systemic societal damage, impairment and decline. Closing may have irrecoverably and forever damaged the fiber and structure of society.

SARS-CoV-2 is a member of the large family of coronaviruses including those variants that cause spring and winter respiratory illnesses, "common colds". The etiology of SARS-CoV-2 remains a mystery, with no clear animal intermediary host confirmed. Infected transmission from person to person occurs primarily by respiratory droplets exhaled by carriers of this disease or individuals that are actively infected. Like coronaviruses causing the "common cold", the SARS-CoV-2 causes mild to moderate upper respiratory tract illnesses in most patients. Symptoms typically include cough, rhinorrhea, pharyngitis, fever and fatigue. The range of patients with SARS-CoV-2 infection includes asymptomatic to severe illness

that occurs mostly in high-risk patients and can result in death. Worldwide, the number of new cases of SARS-CoV-2 continues to rise; however, the death rate is declining. This decline in death rates results from multiple factors including: improved testing that allows earlier disease recognition, earlier treatment of symptomatic patients, improvements in overall medical management, vaccinations, administration of targeted monoclonal antibodies, and adjunctive therapies. Early testing, identification of high-risk patients, vaccination, and improved therapeutic interventions all appear to be key to successful treatment outcomes and decreased morbidity and mortality.

Environmental aerosols occur as a result of infected people speaking, coughing, sneezing, singing, shouting, exercising or any other vigorous exhalatory effort or even just normal breathing [9]. SARS-CoV-2 spreads through the inhalation of infected respiratory droplets. Specific measures to reduce the spread of SARS-CoV-2 are available [1]. Interdisciplinary discoveries as workable guidelines demonstrate how to reduce viral environmental load or inactivate the virus so that it cannot replicate. These interdisciplinary guidelines are part of a practical pathway forward to safely opening a nation or preventing the closure of opened nations [1].

The benefits of reopening a nation exceed the continued pandemic-related closures. Closures result in countless delayed or avoided medical evaluations. Routine care of illnesses including evaluations, diagnosis, and treatments have all been delayed. Specific ophthalmologic examples include: Vision threatening uncontrolled glaucoma, advancing lens cataracts, under treated wet macular degeneration or even visual impairment due to refractive errors and use of contact lens prostheses. Social isolation, loss of income, doubt, fear, and worry have resulted in exacerbations of mental health illness. Ultimately closures have resulted in an inestimable degree of danger, morbidity and even death [10,11]. The pandemic atmosphere of fear from closing has directly and indirectly injured the world's population. Increasing morbidity and mortality, created through economic chaos, institutional

collapse, and educational system dismantlement has resulted in immeasurable damage that is yet to be determined.

Alternatively, a well described plan forward provides guidelines that illuminate a path forward to safely reopening nations and restoring national integrity. Physicians by their extensive education, training and experience across specialties are uniquely qualified to comprehend, coordinate and teach effective guidelines necessary for reopening a nation and reestablishing national integrity. Using guidelines physicians can lead the administrations of nations to reopen including businesses, educational facilities, and religious establishments, while mitigating the risk of additional SARS-CoV-2 infection [9]. Physicians by drawing on an interdisciplinary approach that includes adherence to guidelines with respect to considerations of environmental air, sanitation with social interactions, medical testing, vaccinations creating disease prevention and safety, virology, allow for the design of identifiable interventions which either reduce the viral load in the environment or inactivate the virus from replicating. Each guideline is based on the principle of elimination or inactivation of the viral particle. With a reduction in environmental viral load or inactivation of viral replications the implementation of these guidelines will allow the reopening a nation with an increased level of safety.

The guidelines including air exchange (ventilation), air filtration, personal effective filtering devices (masks), hand hygiene, social distancing, screening and testing, vaccines, high risk patient protection, medical management, and adjunctive therapies result in a unique systematic approach to eliminating the virus from the living environment or inactivating the virus so that it is no longer functional [1]. Pandemics are primarily a public health issue, as such; the path forward is best organized by local, regional, and national physicians. Physicians with a breath of experience are uniquely positioned and trusted to coordinate and implement these interdisciplinary guidelines. The use of these guidelines is a planned coordinated action resulting in the replacement of fear with a path forward; plan of action. Nations utilizing these principles will decide that opening verses closing is in fact the correct path forward resulting in less damage to the nation's economy and to the health and safety of its citizens.

Conclusion

The sacrifice of physicians, from the beginning of the SARS-CoV-2 pandemic, has been immeasurable. Physicians have selflessly served to stabilize communities both local and national throughout the course of the devastation caused by this pandemic. Reopening nations will require further commitment, dedication, and sacrifice by physicians as they implement the guidelines for reopening a nation. A planned coordinated action, not fear, is the path forward.

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