SARS-CoV-2 infection and the COVID-19 pandemic: a call to action for therapy and interventions to resolve the crisis of hospitalization, death, and handle the aftermath

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The SARS-CoV-2 (COVID-19) pandemic has been the greatest challenge to medical practice in our lifetimes. Among vast populations, there has been fear, panic, confusion, division, and a wide array of regulatory and public health responses to the crisis [1]. We believe it is important for patients and physicians to keep in mind this pandemic is an emergency crisis and is not a usual context for public health measures, drug development, guidelines, and recommendations for patient practice [2].

In this bold issue of Reviews in Cardiovascular Medicine, we present the most comprehensive and scalable early ambulatory treatment program for high-risk patients who have contracted SARS-CoV-2 [3]. No such published regimen has received so much acclaim and the concepts embodied in this paper have been responsible for saving hundreds of thousands of lives and sparing millions of hospitalization [4, 5]. Since it took months for the large body of information to congeal on the pathophysiology and rationale for treatment, we cannot go back in time and estimate avoidable losses [6]. Going forward, available sources of data from Zelenko and Procter, suggest available drugs used in combination can reduce hospitalizations and death by 85% and that no high-risk patient with COVID-19 should go untreated at home [7, 8]. Lack of home treatment can only lead to long durations of illness, more intense symptoms, and increases the risk of hospitalization, death, and potentially post-COVID-19 syndromes. At this point in time, there is no justification in any part of the world for denial of available, appropriately prescribed off label intracellular anti-infectives, corticosteroids/colchicine, and antithrombotics.

In this issue we address the interface between important micronutrient deficiencies including vitamin D, endothelial dysfunction, and poor outcomes [9, 10]. These and other papers are the basis for the “nutraceutical bundle” recommended by our comprehensive treatment guidance. The cardiovascular system is affected in COVID-19 and we explore the manifestations and potential therapeutics for SARS-CoV-2 myocardial injury [11]. Additionally we highlight the post-COVID-19 issues of protracted symptoms and need for rehabilitation [12]. It is our hope with more early ambulatory treatment and the avoidance of prolonged and severe symptoms, that rates and intensity of post-COVID-19 syndromes declines over time.

Finally we put forward some important societal and public health issues for the readers to consider. We are deeply concerned that the peer-review process has become politicized with major journals making overt statements about political candidates and original papers clearly slanting interpretation of results to further political gain [13]. This hurts science, physicians, and most importantly patients [14]. We also pick up on the value of public health interventions and technologies which have never been attempted in the modern era including telemedicine, machine learning, travel restrictions, isolation, and lockdowns [15–18].

In summary, Fig. 1 demonstrates that the largest public health gain in terms of hospitalization and death benefit is for early multidrug regimens for high risk patients who are acutely ill with COVID-19. This population should be our highest priority and should be tended to with patient treatment guides, immediate access to research protocols, and engagement with physicians either by telemedicine or in-person who are familiar with the signals of benefit and the safety information available for these commonly prescribed drugs [19]. Access to monoclonal antibodies available under Emergency Use Authorization should be ensured and featured by emergency departments, urgent care clinics, and nursing homes at the point of care where high-risk patients receive a positive SARS-CoV-2 result [3]. It is our sincere hope that this issue of Reviews in Cardiovascular Medicine will touch and save more lives than any of our prior efforts.
SARS-CoV-2 pandemic and the COVID-19 crisis has been a call to arms for all medical professionals and it is our highest calling to respond to acutely ill patients in their greatest time of need.

![Fig. 1. Relative benefit of reduction in COVID-19 hospitalization for individual and population interventions taken as part of the pandemic response.](image)

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