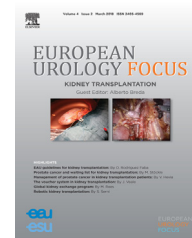




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Editorial

COVID-19: A Call for Action, Collaboration, Reason, and Unity

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When the first cases of severe respiratory illness associated with a novel coronavirus came to medical attention in Wuhan, China, in late 2019, the world did not anticipate the rapidly evolving pandemic that would ensue and lead to widespread human suffering, bring national health care systems to breaking point, enhance geopolitical divisions, and derail the global economy in ways not deemed possible since the Great Depression. The full genome of the causative virus was soon sequenced and found to be of zoonotic origin, sharing 80% sequence homology with another beta coronavirus (CoV) that caused severe acute respiratory syndrome (SARS) some 18 yr earlier [1]. On the basis of this link, the novel coronavirus was named SARS-CoV2 and the World Health Organization (WHO) later referred to the illness that it causes as coronavirus disease of 2019 (COVID-19) [2].

The first confirmed case of COVID-19 in the USA was reported on January 20, 2020, around the same time as the first case in France. However, a French case report of a retrospectively identified, previously undetected COVID-19 patient with no direct travel link to China who was admitted to a Paris hospital on December 1, 2019 suggests that there might have been community transmission of SARS-CoV2 both within and outside of China predating the official case count [3,4].

The low official US case numbers by late February and early March lulled Americans into a false sense of security fueled by trivializing statements from the federal government. The sluggish initial federal response to SARS-CoV2 with woefully inadequate testing and contact tracing led to the skyrocketing of infection and mortality numbers, particularly in densely populated urban areas. This dealt a serious blow to the sense of American exceptionalism and started a game of blame and deflection as to the origin of the virus and responsibility for its global spread. In a mind-blowing turn of events, this led to defunding of the WHO by its largest contributor in the midst of a pandemic.

In the USA, SARS-CoV2 amplified issues of profound socio-economic inequity and health disparities that plague a precarious workforce and many minority populations [5]. These communities tend to live in crowded conditions and are unable to work remotely or practice social distancing. They often have inadequate access to health care and disproportionately suffer from comorbid conditions such as cardiovascular disease, diabetes, and obesity, which have been shown to adversely impact COVID-19 severity and mortality [6–9].

The pace of the COVID-19 epidemic in New York City (NYC) in particular has truly been breathtaking. The first case of COVID-19 in the city was confirmed on March 1, 2020; by May 12, almost 200 000 cases had been identified, resulting in more than 20 000 confirmed and probable attributable deaths [10]. At the presumed peak of the epidemic, the daily census of COVID-19 inpatients in the Mount Sinai Health System, my home institution, surpassed 2000, including approximately 450 who required intensive care with noninvasive or invasive mechanical ventilation.

The sheer volume of critically ill patients throughout NYC has posed a number of unprecedented challenges. In addition to shortages of personal protective equipment, a medical workforce sickened in significant numbers by SARS-CoV2, and a lack of testing supplies and infrastructure, sedatives required to safely ventilate patients were in short supply [11]. Since a significant portion of ventilated COVID-19 patients in NYC required some form of kidney replacement therapy, the capacity for hemodialysis was overwhelmed at many hospitals, forcing creative solutions such as delaying dialysis initiation, modifying treatment schedules, and even resorting to acute peritoneal dialysis [12]. Another complicating factor with implications for both resource utilization and nosocomial infections has been the prolonged time for which COVID-19 patients remain ventilator-dependent [13].

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As COVID-19 case numbers in New York State are now decreasing, we have the opportunity to reflect on our experience [14]. We are beginning to learn more about how COVID-19 causes endothelial inflammation/dysfunction and coagulopathy predisposing patients to systemic thromboembolic complications and about the potential role of anticoagulation [15–17]. Some of the up to 20% of COVID-19 patients with severe illness experience progression to acute respiratory distress syndrome (ARDS), and speculation about cytokine release syndrome (CRS) as part of the underlying pathophysiology has prompted the study of therapeutics suppressing CRS [18]. An update in this issue of *European Urology Focus* will provide an overview of recent and ongoing clinical trials of antiviral, immune-modulating, and anti-inflammatory agents to combat COVID-19.

This is a crucial time for scientific discourse and collaboration. The study of COVID-19 is moving at warp speed, as evidenced by the research showcased in this issue of *European Urology Focus*. But just as a delicate balance must be struck between public health considerations and the real and painful economic and psychological impacts of mitigation measures to curtail SARS-CoV2, the scientific community must hold itself accountable to maintain data-driven, unbiased, reproducible, and ethical publication standards. We all must resist the temptation to rapidly produce poorly validated data with sloppy statistics and uncritical peer review just because a receptive audience craves answers. To maintain our professional integrity, we must do everything within our power to prevent science from being subjugated to political and financial agendas. This is of particular urgency since we live in an era in which emotion and belief often supersede facts and logic, and in which the boundaries between truth and falsehood, and between scientific fact and fiction have become increasingly blurred.

Conflicts of interest: The author has nothing to disclose.

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