2020

Lessons Learnt from COVID-19: How Can We Prepare for Another Pandemic?

M. I. Ehrlich
Zucker School of Medicine at Hofstra/Northwell

M. W. Saif
Zucker School of Medicine at Hofstra/Northwell

HHS Public Access

Author manuscript

Arch Cancer Biol Ther. Author manuscript; available in PMC 2020 July 29.

Published in final edited form as:

Arch Cancer Biol Ther. 2020 ; 1(1): 22–24. doi:10.33696/cancerbiology.1.005.

Lessons Learnt from COVID-19: How Can We Prepare for Another Pandemic?

Matthew I. Ehrlich, **M. Wasif Saif***

Northwell Health Cancer Institute, Feinstein Institutes of Research and Zucker School of Medicine, Lake Success, New York, USA

Five months into the COVID-19 pandemic, the U.S. death toll from the virus has now surpassed 100,000 people [1]. Many more cases remain nationwide, while an unknown number of patients currently harbor the virus asymptomatically. While health officials are now optimistic regarding the decline in prevalence and number of deaths due to COVID-19 and the possibility of a vaccine by the fall, we cannot lose sight of the bigger picture: the next pandemic. In the last century, the world has seen its fair share of outbreaks, including polio, HIV/AIDS, and the previous two coronavirus outbreaks, SARS and MERS [2]. What we have learned is that pandemics don't work on schedules – and the next one could be right around the corner [3].

The United States is currently over 2 million confirmed cases of COVID-19 – more than 2.8 times as many as the next closest country, and about one third of the total cases worldwide [4]. Moreover, it is clear that our country is particularly susceptible to the inevitability of pandemics. On a basic level, the United States has obviously underinvested in population health [5]. At baseline, our population is unhealthier than most of the world – as evidenced by the high rates of chronic disease burden, obesity and life expectancy [6,7]. To compound these facts, the USA is crippled by various socioeconomic conditions that further promote health disparities on our own soil. Taken together, it is no surprise that this country has the potential for perpetuation of deadly pandemics.

Furthermore, our response to the virus showed that we have much to improve upon in order to prepare for future threats. Our efforts to start testing for COVID-19 began at a much slower pace than most developed countries, while our number of cases rose much more quickly [8]. The Centers for Disease Control and Prevention (CDC) were poorly equipped with the information and testing capabilities needed to adequately respond to the surge of infected patients. Developing and distributing tests proved to be a major issue, delaying the identification of cases and thus the ability to isolate them. From an intelligence standpoint, we did not act quickly enough in learning from countries that were affected first, further lengthening our time to action. The availability and use of hospital beds, personal protective equipment (PPE) and ventilators became even more of a challenge.

*Correspondence should be addressed to M. Wasif Saif; wsaif@northwell.edu.

The field of oncology is one that has faced drastic changes in light of COVID-19. On a daily basis, oncologists manage a myriad of complications that arise in cancer patients including infections of all sort, but COVID-19 posed a new threat. The possibility of asymptomatic carriers means that anyone can potentially transmit the virus [9]. Even more, in-person visits to medical offices and hospitals became risky for cancer patients, thus delaying surveillance and treatments. Not only were standard chemotherapy treatments stopped, delayed or modified, but the pandemic also disrupted clinical trials – which are essential to cancer care [10]. All phases of cancer research were cancelled, thereby posing a real problem to both the development of new agents or treatments as well as the patients who rely on them for survival [11]. The resulting financial consequences are an issue as well, as a major portion of revenue for clinical research comes from industry-sponsored trials [11].

But now is not the time to blame each other for our missteps, rather, we must use this crisis as a chance to learn and better prepare for the future. In the field of cancer care, the pandemic allowed for the growth and development of a new tool in the management of patients – “telehealth” [12]. This mode of communication provided a safe way for the entire oncology team to interact with immunocompromised patients. Similarly, multidisciplinary tumors boards were carried out via new networking methods, providing a space for prompt consultation on the treatment of patients.

COVID-19 also changed our outlook on cancer treatment and clinical trials, in many ways. First and the foremost ensuring patient safety has become the highest priority. Second, we needed to determine whether certain treatments should be continued, or whether either a chemotherapy break or a less toxic oral regimen should be pursued [13]. Many researchers also published retrospective data on cancer care during this crisis, allowing us to stratify how to tailor therapy to patients during a second epidemic of COVID-19, which seems quite imminent [14]. It is prudent that we critically analyze the outcomes of these measures in accordance with the quality of life of cancer patients.

Among other challenges that we face, the most difficult one to deal with will be the fear of patients and their families in returning to cancer centers and undergoing their usual treatments. In the future, assigning different facilities to COVID-free versus COVID-positive would allow us to keep the operations to some level of normality. We must work to keep our patients informed and safe, so that we can continue to deliver life-saving care.

As this pandemic winds down, we expect a surge of patients who were delayed in undergoing screening or initiating treatment – thus the looming possibility of progression of disease may require the development of new treatment plans. This requires us to think outside the box and use home-based tests for screening in order to avoid facing another challenge of increased cancer incidence and migration to later stages.

Last but not the least, we also must focus on resuming clinical research and move urgently on the development of new cancer drugs simultaneously with treatments for COVID-19. COVID-19 in disguise brought various teams to work together, which in normal routine lacks to some extent. In addition, people went beyond their comfort zone and adapted to work in the field outside of their expertise. Finally, prioritization became the rule prevailing

every decision. If we adapt all these actions in the field of clinical research, we can definitely can make an impact on it.

In short, now is the time to act on all what we learnt from this intense experience and work towards creating a safer future. At the regional, national and global levels, we must act to prepare for not just a resurgence of COVID-19, but continue to maintain the coordination that was built during the crisis. We need to enhance our ability to share data and information among different institutions. In addition to governmental agencies, such as CDC we need to build private sector groups where the researchers and key opinion leaders can work and guide beyond any political agenda in the times of pandemic and others. And most importantly, we must continue to adapt the landscape of clinical care and communication through technology and innovation so that we maintain critical relationships with patients and care teams.

Acknowledgments

This study is supported by US NIH grants 2UG1CA189850.

References

1. https://www.cdc.gov/nchs/nvss/vsrr/COVID19/index.htm
2. https://www.forbes.com/sites/williamhaseltine/2020/05/08/putting-covid-19-behind-us-a-a-research-agenda-to-prepare-for-the-next-pandemic/#a29465761a3
3. https://foreignpolicy.com/2020/03/30/coronavirus-trump-us-government-must-prepare-now-for-the-next-pandemic/
4. https://coronavirus.jhu.edu/map.html
5. https://www.milbank.org/quarterly/articles/covid-19-and-underinvestment-in-the-health-of-the-us-population/
6. Tikkanen R, Abrams M. U.S. health care from a global perspective, 2019: higher spending, worse outcomes? New York, NY: Commonwealth Fund https://www.commonwealthfund.org/publications/issue-briefs/2020/jan/us-health-care-global-perspective-2019. Published 2020 Accessed 4/12/2020, 2020.
7. National Research Council, Institute of Medicine. U.S. Health in International Perspective: Shorter Lives, Poorer Health. Washington, DC: National Academies Press; 2013.
8. https://www.vox.com/science-and-health/2020/3/12/21175034/coronavirus-covid-19-testing-usa
9. Liang W, Guan W, Chen R, Wang W, Li J, Xu K, et al. Cancer patients in SARS-CoV-2 infection: a nationwide analysis in China. Lancet Oncology. 2020 3 1;21(3):335–7. [PubMed: 32066541]
10. Patel R, Saif MW. Management of Pancreatic Cancer During COVID-19 Pandemic: To Treat or Not to Treat?. JOP: Journal of the Pancreas. 2020;21(2):27–28. [PubMed: 32377176]
11. Flores S, Kurian N, Yohannan A, Persaud C, Saif MW. Consequences of the COVID-19 Pandemic on Cancer Clinical Trials. Cancer Medicine Journal. 2020;4(1); 38–43. [PubMed: 32601623]
12. Elkaddoum R, Haddad FG, Eid R, Kourie HR. Telemedicine for cancer patients during COVID-19 pandemic: between threats and opportunities. Future Oncology. 2020 6;16(18):1225–1227. [PubMed: 32356460]
13. Patel R, Park J, Shah A, Saif MW. COVID-19 and Cancer Patients. Cancer Medicine Journal. 2020;3(1):40–48. [PubMed: 32405629]
14. Kuderer NM, Choueiri TK, Shah DP, Shyr Y, Rubinstein SM, Rivera DR, et al. Clinical impact of COVID-19 on patients with cancer (CCC19): a cohort study. The Lancet. 2020 6 20;395(10241):1907–1918.