



Review Article

The wicked game: COVID-19

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ABSTRACT

The viro-cloud that mushroomed from Wuhan, China smocked the world like an infectious umbrella looming an iniquitous grim in medical-social-economical and national-international affairs. COVID-19 pandemic underscored every other epidemic of recent past creating unique fracas and furore. WHO in 2018 prioritized zoonotic viral illnesses and anticipated Disease-X in its Epidemic Blue-Print that may initiate an outbreak with high virulence, infectivity without definitive treatment. Avian influenza, SARS, MERS, Ebola & NiV were deemed threat, however progenitor of COVID-19 that's SARS-CoV-2, was not expected to mutate to novel-corona-virus with so much aggression. As epidemic prediction is tricky and uncertain; global scientists proposed Pan-viral drugs and Pan-viral vaccines effective against most of influenza and corona viruses, but such initiative couldn't be fructified in want of financial support and visionary among world leaders. In absence of precise medicine and vaccine, WHO enunciated that people need to live with COVID-19 for days to come espousing mass preventive-protective measures to sub-due the contagion. To adapt to this wicked situation, we need to be flexible, humane, tolerant, resilient and creative in all fronts of life to contain COVID-19.

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1. The Wicked Game: COVID-19

COVID-19 pandemic has been an unprecedented public health challenge of current century representing the complex, evolving and heterogeneous realities of our world. 120 nm RNA strand weighing 0.85 atto grams has turned the world upside down bringing the mankind to its knee. First case of COVID-19 was reported in China on 31 Dec 19 following which there were many cases of novel corona virus illness in Wuhan and other provinces in China.¹ On 30 Jan 20, public health emergency of international importance was declared. Worldwide COVID-19 pandemic was declared by WHO with 1.18 lakh cases in 114 countries on 11 Mar 20.² The disease surged all around the world involving millions of people inflicting catastrophe to many lives. By first week of Jun 20, world reported 6.55 million cases with 3.87 lakh mortality while US registered 1.83 million infected including 1.06 lakh

deceased and India reported 2.26 lakh cases with 6348 lives lost.³ Many epidemics broke out in the recent past, however the infectiousness and high transmissibility of COVID-19 has been unparalleled.

The COVID-19 pandemic has been a wicked game evolving itself precipitating uncertainty in all fronts. The uncertainty emanated from many unknown unknowns about the contagion, its intricacy, heterogeneity, associated complexity of human behaviour, Govt. policies & interventions, diagnostics and treatment protocols. The wicked and uncertain nature of this pandemic made it stand out among all the recent outbreaks. Social and economic implications are inconceivable; human values depreciated with many kind of stigma attached to the illness and the global economy demonstrated 8.8 trillion-dollar mark loss on world trading front.⁴

Over the millennia, epidemics and pandemics killed large no. of people that appears equally appropriate today in the COVID-19 pandemic in spite of exhibitory technological

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and scientific progress in medical arena. Small pox might have killed 300 million in the 20th century even though an effective vaccine was available since 1796.⁵ Around 50-100 million may have died in 1918 Spanish flu epidemic where-in the virus infected 1 in every 3 people.⁶ Ebola epidemic in West Africa killed 11000.⁶ HIV estimated to have taken a toll of 32 million and infected 75 million with more being added every day. From Ebola in West Africa to Zika in South America to MERS in Middle-East, outbreaks are on the rise all over the globe added up with unleashing zoonotic infections like avian flu/NiV spilling over to humans. Hyper-connected world with super-infectious contagions facilitated spread and today we stand highly vulnerable simply because there are more of us; no. of people has doubled over last 50 years meaning more to get infected to infect others, especially so through around 4 billion air trips annually carrying the disease to remote corners of the world.

Nearly all the new infectious diseases of recent significance originated from animals and so will be the emerging diseases of tomorrow. HIV began in monkeys, SARS in Chinese horseshoe bats and influenza in aquatic birds. At some point the animal pathogens jump the species barrier to humans; a spill-over, further accelerated by environmental change wrecked by humans. Such trends orchestrated the recent outbreak undoubtedly. Humans are a nouveau-riche-oblige species as regards infectious disease.⁷

Covid-19 is very much an illness of concern of the present instant, emerged in a crowded city in a newly prosperous and connected China before spreading to the rest of the world like contagious canopy in a matter of months. But our responses have been fairly ultra-modern and primeval as well. Scientists used cutting-edge tools hastily to sequence the genome of COVID-19, disseminated information about its virulence, redressed on all possible antidotes, counter-agents and vaccines in flickering swiftness than could have been expected.

But when the virus surprisingly became aggressive, our only effective response was to shut down society and turn off the assembly line of global capitalism. Keeping aside the texting and video-conferencing, what we instituted wasn't different from what our forefathers might have tried to halt a respiratory infection spate by isolation, segregation, quarantine, hand hygiene, masking, social distancing and travel restrictions resulting in sagging business activity bringing big slump in global economy.

It could have been managed differently; ways could have been little more proactive than reactive as of now. COVID-19 was not completely unknown to the scientific world; its progenitor was circulating in nature as SARS-CoV-2. Both influenza and corona viruses are known pandemic threat; but they are far from the only ones. WHO anticipated an impending crisis, therefore made an Epidemic Blue-Print

for diseases that may cause an outbreak and out of a list of probable ten, dubbed a Disease-X meant to represent a novel, highly infectious virus, with a moderately high mortality lacking explicit treatment or specific preventive measures.⁸ Because it is almost impossible to predict what might cause the next pandemic, researchers had long argued that it was essential to design pan-viral drugs and pan-viral vaccines that would be effective against a wide range of strains: all types of influenza or a substantial group of corona viruses rather than just one.⁹ But the real obstacle in making pan-viral drugs or vaccines has been the disinclination to pay for their development; society doesn't invest in problems that are not kicking the door down.

Global Virome Project realizes the potential of zoonotic viral threats and develops mitigation strategies to prevent infection and spilling of viruses from animals to humans preventing future pandemics.¹⁰ Estimations show that there are more than 1.6 million mammalian viruses, restricted to 25 viral families bearing possible potential of human infections as against only 260 strains of known human viruses.¹¹ USAID fostered a program called PREDICT that used biological surveillance and predictive modelling to identify the most likely sources of zoonotic disease.¹² During the 10 years the program existed, researchers found more than a thousand new potential zoonotic viruses, including an unknown Ebola strain. However, the program funding ceased little before the blitzkrieg of current pandemic.

The Global Virome Project would rely on a broad mix of funding from governments, development agencies, research organisations, private foundations and industries.

Considering the increasing inevitability of pandemics and their substantial economic impact, the next generation of scientists and field workers trained through this project will have the capacity to monitor viral evolution throughout the coming years. Furthermore, the project's open data base will catalyse technological advances in risk assessment, diagnostics and counter measures.

It is no doubt that the world is facing one of the most serious public health crises in generations. Acknowledging the extreme uncertainty and wicked nature of the ongoing COVID-19 pandemic, what eventually and fundamentally needed are the robustness, flexibility, resilience, creativity and entrepreneurship of people-organizations-governments as well as sharing and collaboration across disciplines, professions and regions, to deal with any unpredictable-undesirable-unforeseen future scenarios.¹³ Belligerent and restrictive public health measures such as large scale social distancing and prohibition of public gathering, will continue to remain in place for months. This will hopefully blunt the spread of the virus while treatments and a vaccine are being developed to abrogate it. The Global Virome Project will crack newer concepts to identify the impending viral threat to human or animal health; use artificial intelligence

across the largest viral data set ever assembled, similar to machine learning techniques that are used in genomics to identify gene function, expression and disease biomarker.¹⁴ The project will benefit the world, enabling us to identify risks and mitigation measures and ultimately tackle future iniquitous problems more efficiently.

2. Conflict of Interest

None.

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