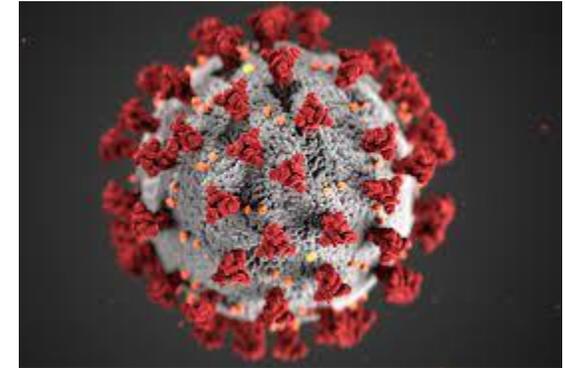
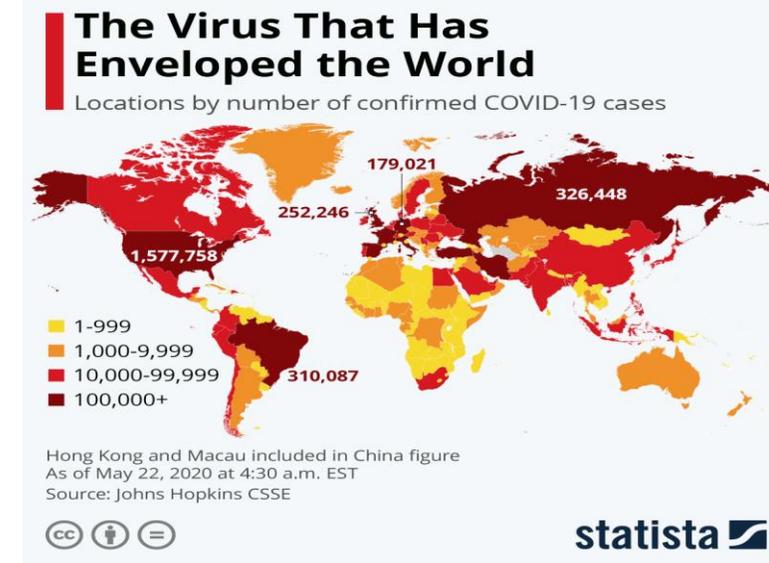


PANSYSTEMIC FAILURE DURING COVID19 PANDEMIC

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WHAT WE NOW KNOW WELL...



- COVID-19 (coronavirus disease 2019) is the now well-known and infamous infectious respiratory disease caused by SARS-COV 2 virus (Severe Acute Respiratory Syndrome coronavirus 2).
- As early as on March 11th, 2020 The World Health Organization (WHO) declared COVID-19 a pandemic considering the rapid spread of the disease to multiple countries around the world.
- To control the spread of COVID-19, health care authorities in different countries recommended isolation of sick persons, quarantine for those who may have been exposed to the virus and social distancing. A distance of at least 6 feet (2 meters) was recommended.
- Despite these measures rapid spread of the disease and tremendous loss of human lives has occurred worldwide.

SYSTEMIC FAILURE



- Defined as failure due to a flaw or flaws in a system.
- Term usually used in the political and financial circles when things go wrong. Example: stock market crash of 2008 was blamed on systemic failure in the banking system.
- Astronomical death toll due to the coronavirus pandemic has occurred due to failures in multiple systems.
- Need to critically examine some of these systemic failures and the lessons which can be learnt from them.

THE PANDEMIC WAS LIFE CHANGING IN SO MANY WAYS

- Our offices, schools, restaurants, bars, movie halls, theatres closed.
- Life came to a standstill-no work, no sports, no entertainment, no socialization, no national or international travel
- New Normal Was Established Over Time-
 - lockdown
 - stay at home
 - eat at home
 - food delivery through apps
 - binge on Netflix/OTT
 - Zoom meetings/birthdays/graduations/weddings
 - telemedicine



FIRST SYSTEMIC FAILURE: FEAR PSYCHOSIS

- Fear mongering and disinformation created fear psychosis.
- People more afraid to die from coronavirus than from cancer/stroke/heart attack.
- Reasons not hard to fathom:
 - patients admitted to the hospital with coronavirus died all alone with no family or friend around them to hold their hands on their final journey.
 - no family member available to accept the body and no priest or clergy around for the last rites.
 - many bodies remained unclaimed in the hospital morgues for days and months.
 - people afraid to touch a person with COVID-19, be in the same room/house let alone be in a hospital

COLLATERAL DAMAGE: Cancer patients and others with terminal/critical illness preferred to stay at home and not seek treatment for their disease.

Lessons to learn: we could and should do better in the next pandemic. **PREVENT MASS HYSTERIA**

- Critical evaluation of pathogenicity and mode of spread. Then decide what precautions are needed to prevent spread.
- Laptops, mobile phones using the platforms of WhatsApp, FaceTime and Zoom should be employed so that disease stricken patients in hospitals stay in touch with loved ones at home.





FEAR PSYCHOSIS: bodies floating in Ganga and make shift mass graves in Brazil.



SECOND SYSTEMIC FAILURE: POLITICAL INSTITUTIONS AND OUR ELECTED LEADERS (POLITICIANS)

- COVID-19 disease laid bare the political failure which plagues different countries around the world even developed countries such as the United States of America.
- In USA the simple and lifesaving act of wearing a mask itself became a political issue. If you were a republican supporting President Trump; you went around mask free and if you were a democrat supporting Biden for president; you wore a mask.
- The simple and lifesaving act of social distancing and quarantining also became embroiled in political controversy.
- Leaders at state, national and international level sent out different messages to their people mudding the water and creating confusion. Resulting there was varying degree of adherence to the World Health Organization (WHO) recommendations.
- Prime Minister Modi locked down India. This initial lockdown was criticized as too harsh. While it did cause hardship, in hindsight it protected Indians from the first wave of the pandemic.
- The pandemic exposed a lack of political leadership at individual country and global level. Federal/Central governments in different countries instead of coordinating the response chose to defer it to their individual state administrations. This resulted in confusing and at times conflicting recommendations and lockdown guidelines been issued.

Lessons to learn:

A viral pathogen does not respect party affiliations or political ideologies.

A future pandemic warrants a coordinated response at an individual country and global level.



THIRD SYSTEMIC FAILURE: LACK OF A UNIFIED COMMAND AND CONTROL AT NATIONAL & INTERNATIONAL LEVEL



- Wikipedia defines Command and control as a "*set of organizational and technical attributes and processes employing human, physical, and information resources to solve problems and accomplish missions*" to achieve the goals of an organization or enterprise.
- The absence of unified health command and control systems contributed to policymakers and world leader's confusion and contradictory statements.

Lessons to learn:

-a pandemic needs a military style response.

-we need to develop "health" command and control centers at National and International level.



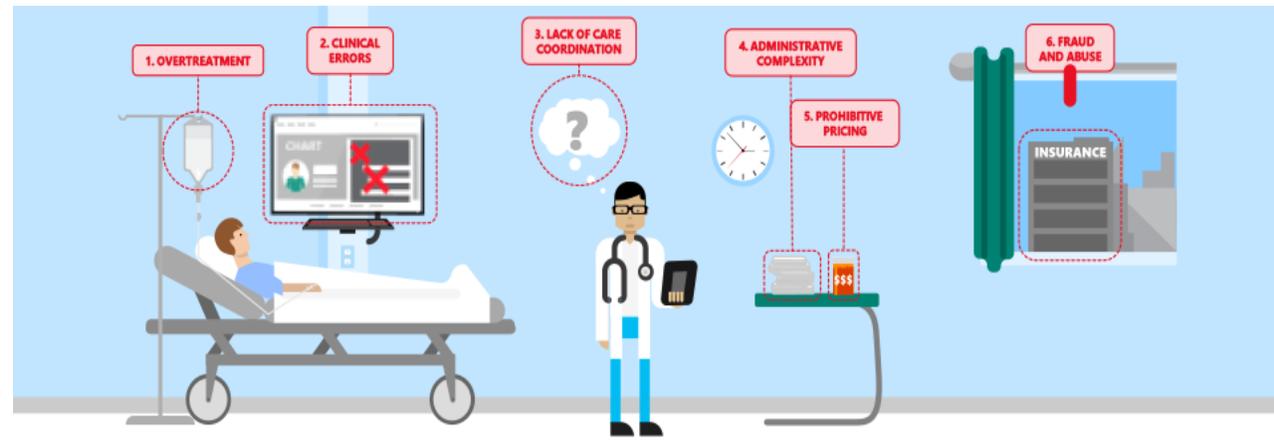
FOURTH SYSTEMIC FAILURE: MISPLACED PRIORITIES AND LACK OF REDUNDANCY IN OUR HEALTHCARE SYSTEMS

- COVID-19 pandemic reminded us that while we remain preoccupied with North Korea or Iran becoming a nuclear threat, a military conflict with Pakistan or China and other hotspots around the world, the real danger to our existence may come from an invisible microorganism.
- We do mock war drills to prepare for armed conflicts, no drill is done to prepare for pandemics.
- As cases started to rise, in nearly all countries alarms rang out about the lack of personal protective equipment (PPE), hospital beds and ventilators. It did not matter whether it was a developing country like India or a nation with the best medical care in the world such as the United States.
- Nowadays hospitals are run like corporations and everything is about the profit margin at the end of the day. If a hospital has 10 intensive care unit beds, then it shall only buy 10 ventilators at the maximum.
- Redundancy in engineering is defined as the inclusion of extra components which are not strictly necessary to functioning, in case of failure in other components.
- Unfortunately, there is no redundancy built into our health care system and when a global pandemic hit, we lacked the health care resources to meet the challenge and mount an effective response.

Lessons to learn:

-build redundancy in our healthcare systems-more hospitals, more staff, more ventilators, stock of essential medicines, oxygen generators and plants.

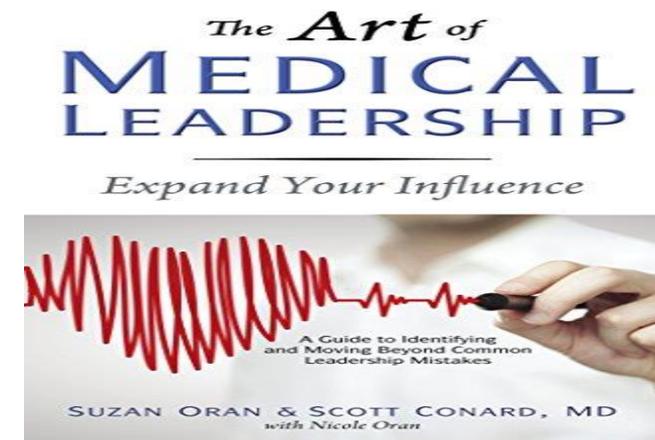
-treating medicine like any other business where it is all about balance sheets is ill-advised.



FIFTH SYSTEMIC FAILURE: FAILURE OF MEDICINE AND MEDICAL LEADERSHIP

- COVID-19 pandemic exposed the vacuum in medical leadership.
 - As COVID-19 disease spread across the world, the medical community scrambled to find an effective treatment strategy.
 - In the initial stage of the pandemic there was little consensus about how best the patients should be triaged, who could be managed at home and criteria for admission to the hospital.
 - Many patients were discharged home only to present later in a decompensated state. Others were admitted and intubated when their oxygen saturations declined.
 - Experience has now taught us that many of these patients with low oxygen saturations do not need to be intubated and put on mechanical ventilation. They tend to handle oxygen desaturation well and in some intubation causes more harm than good.
- In the absence of consensus treatment guidelines, treatment protocols varied from institution to institution. Various treatments were recommended in the absence of scientific data to back them up. These included hydroxychloroquine, remdesivir and other antiviral cocktails. Likely in many patients these treatments caused more harm than good.
- Our medical leadership failed to stand up to our political leadership. Medical leaders lacked moral strength and courage to stand up to the politicians and resist politicization of medicine.

Lessons to learn: we need to have morally strong medical leaders who speak in one voice and can stand up to political pressure if needed.

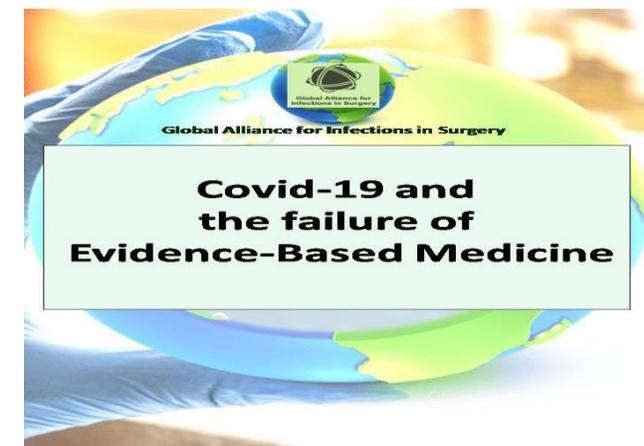


FIFTH SYSTEMIC FAILURE: FAILURE OF MEDICINE AND MEDICAL INSTITUTIONS

- Respected institutions such as the Centers for Disease Control (CDC), World Health Organization (WHO) and FDA (Food and Drug Administration) failed.
- **FREQUENTLY CHANGING PPE PROTOCOLS AND TREATMENT GUIDELINES**
 - Recommendations and protocols issued by these institutions changed at times from one day to another and many issued treatment guidelines seemingly at odds with each other.
 - Medicines like hydroxychloroquine, remdesivir and antiviral cocktails such as Lopinavir and Ritonavir were used widely by doctors around the world to treat sick patients.
 - Later controlled studies have found some of these drugs to be ineffective against the SARS-COV2 virus.
 - In the absence of uniform treatment guidelines, doctors struggled to treat patients. There was confusion about which guideline to follow-WHO or the FDA?
- Lack of a coordinated approach caused confusion and distrust not just among the public but also in the physician community. Health care workers worried about their own safety with mask and PPE recommendations changing seemingly based on what was available rather than what should be the standard of care.
- **ITCH TO PUBLISH FIRST ENTERS MEDICAL JOURNALS:** During the COVID-19 pandemic the basic safeguards which have been established to ensure that false and misleading medical information does not get published were abandoned as every journal rushed and competed to be the first to publish COVID-19 articles. This “first to report” mentality resulted in articles getting published which later had to be redacted.

Lessons to learn:

- During a pandemic medical institutions such as FDA, WHO, CDC should coordinate and bring together the leading virologists and infectious disease doctors in the world to issue a uniform set of treatment guidelines.
- Do not forget evidence-based medicine.

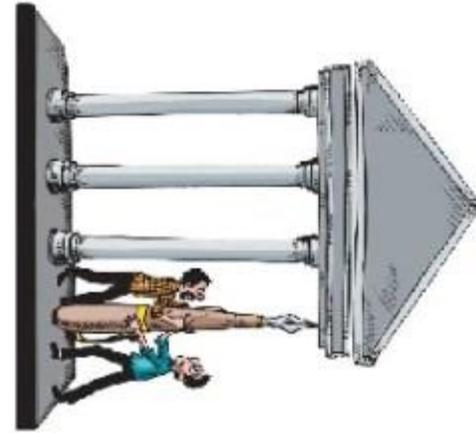


SIXTH SYSTEMIC FAILURE: FAILURE OF OUR MEDIA INSTITUTIONS AND JOURNALISTS

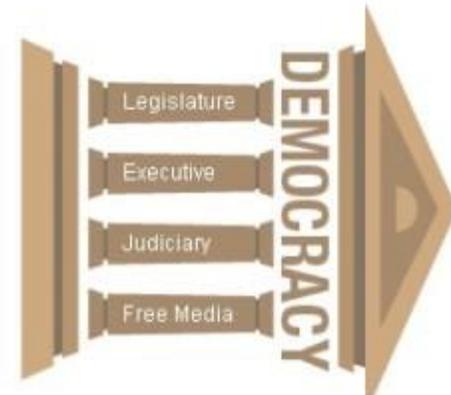
- The term fourth estate or fourth power refers to the press and news media not without a reason.
- They wield tremendous power to frame political issues, keep the legislature in check and frame and inform public opinion.
- The fourth estate and its respected members need to be apolitical and objective reporting facts and only facts.
- During COVID-19, media becomes a megaphone for politicians. In the United States, the liberal leaning left media was not objective about the pandemic and its sole mission was to generate hysteria and turn the public against President Trump. On the other side of the fence the conservative media too lost all objectivity. Instead of informing the public of the pandemic in a responsible fashion, it decided to deny the severity and at times the very existence of the pandemic.
- **ITCH TO “BREAK NEWS” :**
 - Objective sensible reporting to help frame the political discussion and inform the public was replaced by news cycles of polarized “BREAKING NEWS” which served no useful benefit other than sowing confusion and mistrust in the public.
 - Medical experts and scientists were relegated to the background with politicians and TV doctors taking centerstage.
 - Everyone had an opinion about the disease and how best to control it and everyone had a stage and megaphone to voice it no matter how ill-informed their opinion.
 - All kinds of cure were hawked including in India the use of “gaumutra” (cow urine) to ward off the pathogen.

Lesson to learn:

- we need to have objective media reporting.
- media needs to realize that along with great power comes great responsibility



4TH PILLAR



SEVENTH SYSTEMIC FAILURE: FAILURE OF OUR SOCIAL MEDIA AND TECHNOLOGY GIANTS

- Social media has emerged as the Fifth Estate.
- This non-traditional media enjoys tremendous reach and popularity influencing public sphere and public opinion. Facebook, WhatsApp, Tik-Tok, Twitter have millions posting on their platform from Presidents, Prime ministers, celebrities to the common man.
- False and misleading health information about the pandemic posted on the Internet spread in matter of seconds with the potential to cause tremendous harm.
- During the COVID-19 pandemic, instead of harnessing the power of the Internet to galvanize the global population to wear masks and maintain social distancing, there were sites purposely disseminating misinformation and lies to further their vested interests be it political or financial.

Lessons to learn: The COVID-19 pandemic has revealed now more than ever that these platforms and the technology giants who own and run them need to be regulated.



“From inability to let well alone; from too much zeal for the new and contempt for what is old; from putting knowledge before wisdom, science before art, and cleverness before common sense; from treating patients as cases, and from making the cure of the disease more grievous than the endurance of the same, Good Lord deliver us”

The physician’s prayer