VIEW POINT

Application of Historical Constructs of Pandemic in COVID 19

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ABSTRACT
Pandemics have been there since the start of human civilisation. Every pandemic event has its own unique identity; yet similarities are there. To understand in quick time the cataclysmic unfolding and the human response of the recent COVID 19 pandemic, it is imperative we take lessons from historical case studies and constructs identified therein. This can show the gaps in our response and help us prepare better for future events. The unique power of history to cater all kinds of population, from scholars to general public, can be used as an effective public health tool in this context.

KEYWORDS
COVID-19, Pandemic, Historical Constructs

INTRODUCTION
Currently India and most other countries the world over are facing a 2nd wave of the COVID 19 pandemic and situation in India is getting grimmer every day with infections and death rising at an alarming rate. This should implore us to soul search about our lessons learnt from previous pandemics. The exercise can help us understand the fault lines in our response and prepare for better future.

While analysing this pandemic, we can identify similar themes from past pandemics being played out now also. These themes were discussed and pointed out by dedicated pandemic and infectious disease historians in pandemic history workshops and documented thereafter in books and journal articles. Help can be sought from these contents in understanding our response, identify gaps and improve the present but most importantly to prepare for the future.

HISTORICAL CONSTRUCTS:

To this effect two historical constructs are cited -

1. Rosenberg's four-act play metaphor (1)- American medical history writer Charles E. Rosenberg scoured the history of the three great cholera pandemics of 1833, 1845 and 1866 and equated the unfolding and public response to four dramatic events –
   A. "Progressive revelation" in which members of a community begin to acknowledge causalities resulting from the spread of a particular contagious disease.
   B. "Managing randomness" in which community members seek an explanation of often religious nature for the seemingly arbitrary profile of infection.
   C. "Negotiating public response", in which community members demand collective answers.
   D. "Subsidence and retrospection" which often leads to complacency as the memory of the events fades over time.
2. Leitmotiv Model of Markel (1)- While in a more recent work, medical historian Howard Markel has come up with a model that identifies common patterns referred to as major 'leitmotivs' or recurring themes. They are-
   A. Public understanding about how a disease is transmitted will affect the course of a pandemic or epidemic
   B. The economic consequences of the event has an immense influence on the public's response to the crisis

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C. The extent and speed of travel of both people and goods are major factors in the spread of the pandemic disease
D. Microbes that kill relatively few people, but do so quickly and spectacularly like Ebola haemorrhagic fever, anthrax, get more attention than ongoing pandemics that kill millions slowly and steadily like the HIV pandemic
E. Media coverage which can both inform and misinform the public impacts the course of the pandemic.
F. Tendency of the Governments to conceal outbreaks from the world at large, typically to protect against economic losses and setbacks.
G. Social groups are sometimes implicated to spread the epidemic and/or unfairly treated in the name of preventing disease transmission.

In a pandemic disease workshop in Washington DC, America Professor, David L Heymann, WHO Expert Advisor on Infectious diseases, (1) discussed following issues as event commonalities in major pandemics/epidemics:

a) Warning signals are almost invariably ignored before an emerging infection takes on pandemic proportion
b) The pandemics almost invariably follow socio-political fault lines.
c) Weakening of public health infrastructure and tensions between individual liberty and collective responsibility characterize an early pandemic.
d) Most often the diseases leading to pandemic spread along the routes of human commerce and business.
e) The frontline care givers are the early victims of any pandemic.

In the following table (Table 1), different scenarios in different phases of the present COVID 19 pandemic, (e.g. 1st wave, 2nd wave, and mitigation phase) is mentioned where better appreciation and application of the history could have improved our pandemic outcome.

TABLE 1 APPLICATION OF HISTORICAL CONSTRUCTS IN DIFFERENT PHASES OF COVID 19 PANDEMIC

Pandemic phase	Recent scenarios identified in COVID 19 Pandemic	Constructs and themed cited
1st wave	Progressive revelation in 1st Wave	Rosenberg four act play metaphor
	Blaming economic consequences for shaping pandemic outcome	Leitmotiv model of Markel
2nd wave	Warning signals ignored for 2nd wave	Heymans' discussion in pandemic workshop outcome themes
Mitigation	Vaccine optimism	Negotiating public response act from Rosenberg metaphor.
	Learning to live with fallouts	Subsidence and retrospection in Rosenberg four act play.

Following section elaborates the different scenarios:

Scenario 1 – Our initial response to the pandemic was lethargic as in "progressive revelation" whereby community members took time to acknowledge the magnanimity of the pandemic induced damage. For example, the US authorities and public took time to acknowledge the pandemic and precious time to contain the virus was eventually lost (2).

Scenario 2 – "Blaming economic consequences for shaping pandemic outcome" was the mainstay of media news especially in India during the 1st wave of the pandemic as has been pointed out in Markel model. India enforced one of the strictest lockdowns in the world (3). Yet its pandemic outcome was arguably shaped partly by the movement of the large migrant population leaving large unsafe zones of virus hot bed due to obvious economic fallout.

What could have been- History would have enabled us to anticipate this scenario quicker and apply our lessons well. Here the important lesson is to frame economic packages as a mean to shape pandemic outcome and not just as a reliever of economic stress

Scenario 3.- "Warning signals"- The second wave of this pandemic too had obvious warning signals, yet many countries failed to recognize it and act early (1,4,5). Where we failed- oversight of early signals, warning signal fatigue and lack of appreciation of warning.

What could have been – History would have been a great teacher at every level but more specifically at the political level continuously reminding us about the possible dangers and

helping build consensus and public opinion about our countering mechanism. In future, history would also remind us the grim consequences that India faced against warning signal fatigue seen in the 2nd wave of this pandemic.

Scenario 4 –"Vaccine optimism"- politicians, doctors, scientists, and people, in general, subscribed or hesitated to the idea of vaccines with differing assumptions. (6). Optimism and hesitancy both were high at the initial period. While vaccination as a potential tool to combat SARS COV2 virus seems to have strong biological plausibility, WHO had this cautionary note- "The availability of a safe and effective vaccine for COVID-19 is well-recognized as an additional tool to contribute to the control of the pandemic. At the same time, the challenges and efforts needed to rapidly develop, evaluate and produce this at scale are enormous. "(7)

What could be - History would have taught us to explore every possible opportunity against a pandemic but also guard against undue optimism or hesitancy coming out of pressure for a collective answer. This should have resulted in better utilization of resources and better anticipation of reality as there is not enough evidence from history that vaccines alone can flatten a full-scale pandemic. This fact has been evidenced with the recent 2nd wave of the pandemic where logistical and other constraints of carrying out a large-scale vaccination programme have made our vaccination drive partially ineffective in controlling the steep spike of the second wave.

Scenario 5- "Learning to live with fallouts and faded memory"- a predominant theme at the scientific levels and alluded to by the WHO and national governments quiet frequently nowadays (8).

What could be- History teachings can really prepare us for this scenario as we relate to our ancestors the most and learning how they lived their time after the pandemic will enable us to live ours better and avoid often-repeated mistake of faded memory over subsidence and retrospection.

APPLICATION OF HISTORICAL LEARNING IN PANDEMIC:

While these events may be well known in scholarly circles, the idea of application of historical learning in pandemic should be to –

a. Create opinion and consensus among general public.
b. Be able to rationalize social events based on historical evidence.
c. Create a dedicated workforce conversant with history and thereby with ground realities.
d. Fill up the specific gaps identified in infrastructure and gear up the individual country wise mechanism of disaster management.
e. Prepare better for our future after pandemic.

CONCLUSION

The history of learning from pandemics is quite young. So, there is enough room for significant improvements in the exploration of the subject too. This can potentially change the outlook of a pandemic. Context-specific and localized historical learning will determine individual country's success and failure in combating the pandemic. More in-depth learning of past events can lead to important discoveries. In this context, it can be rewarding to learn about important escape groups (9, 10) after the event passes. Learning from the limited success of the 2003 SARS pandemic prevention and why despite identifying it as a potential warning signal, we have failed to combat COVID 19 will give us many insights. More exploration of the subject is especially important in a developing country like in India, where recorded pandemic historical data is non-existent. Unless we use our own historical data to base our own prediction models and interventions, it is destined to fail (11). As pandemics are here to stay and it is probably going to get more frequent in days to come, it is imperative that we start applying historical constructs to understand and predict human behaviour which is the key to pandemic prevention and mitigation.

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