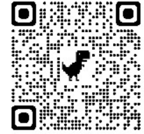
Journal link: http://kmf-publishers.com/tatscr/

Received: 14 October 2022 | Revised: 19 November 2022 | Accepted: 17 December 2022

DOI: https://doi.org/10.5281/zenodo.7528094



Article

Post COVID-19 Paradigm Shift in Social Science, Technology and Public Health

Sagar Sanap | **Surekha Bhor**

HSBPVT's Parikrama Diploma in Pharmaceutical Sciences
Kashti Tal- Shrigonda
Dist- Ahmednagar
Maharashtra
India

Correspondence
Sagar Sanap
Email: sagarsanap9719@gmail.com

ABSTRACT

The WHO announced the novel coronavirus disease 2019 (COVID-19) an 'emergency of international trouble' on 30th January 2020 and a pandemic on 11th March. According to WHO's statement Report - 79, as of 8th April 2020, the epidemic has give rise to 79235 deaths all over the world. Although it is surely nearing its end in China, where it was first noted, it is still on the stand up in Europe, in the USA and in other parts of the world, as well as in many low-income and middle-income countries (LMICs). The pandemic has triggered unprecedented measures worldwide. Many countries have put travel bans, restrict and lockdown scheme. These reactions have been accepted in an 'emergency' way, and are largely reactionary, intended at diminishes the expansion of the disease while waiting for a specific prevention and/or vaccine to be developed. Here we don't want to put down the risks produced by the pandemic, nor to question the measures taken by the WHO and governments. But we would like to convey our problems regarding four COVID-19-related issues, and support for a 'paradigm shift'— that is, a revolution in scientific technology, basic concepts, changes in the human health and experimental practices on technology —to prepare for future crises.

Keywords: Coronavirus, transmission, health, prevention, vaccine

Copyright: 2023 by the authors. Licensee KMF Publishers (www.kmf-publishers.com). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

INTRODUCTION

A shift in focus: Covid-19 in the broader global health picture-

It is prime to think of additional accept and preventable health determine, when compared with the focus that COVID-19 has activate at global and national levels. Respiratory diseases have breathe leading causes of demise and condition in the world before COVID-19. It is evaluate that, generally, four million people die ahead of time from chronic respiratory disease each year; 210 000 deaths per year was related with correctable injury in hospitals.7

Whereas transmissible infection seem to stimulate the most fright between the general and departmental, non- communicable illness are accountable for nearly 70% of all loss of life. Sadness influence 300 million people generally and is the leading cause of disability international, and nearly 800 000 people die from suicide every year.9 The universal boom in untimely mortality and morbidity from non-communicable diseases has now reached a point where some have even suggested it to be a pandemic.10 Moreover, climate change (through enlarge heat waves and disasters) and meteorological and environmental contamination are anticipate to increase deaths and injuries, especially in LMICs.11 In some debates, climate change has become more than a risk factor, with expand calls for the WHO to announce it a public health accident.

From a general fitness position, COVID-19 needs to be appraised as part of a much bigger health picture. For instance, beyond the accident and direct impermanence rates of COVID-19, awareness should be paid to the interaction with other pathogens, as well as to the more indirect effects of its reduction measures.13 Indeed, the pandemic and its containment measures interact with, and impact on, other health order and will have system-wide effects, spotlight the significance of adopting a 'systems approach' to its purpose.

A paradigm shift in global health governance-

The universal health company, national safety organization and all governments have known that a prevalent like COVID-19 was likely to come, yet global health policy has endure woefully unprepared nor fit-for-purpose. In 2015, the G7 members signify that Ebola had been a 'wake-up call' for the need for better general cooperation. It was also recognized that antimicrobial resistance (AMR) threatened to kill 300 million people by 2050, thus difficult urgent action. Yet little has been done to inscription these existing universal health governance short advancing.

For example, the lauded G7 and G20 response, the international Health reliability Agenda, continues to speak in the terms of expensive 'counter- measures' versus blockage and fitness system strengthening. Moreover, the Pandemic extremity Financing Facility (PEF) pandemics/ brief/ prevalent- emergency- financing-potential), meant to deliver up to $500 million in epidemic assistance to curb extension into a pandemic, sits idle as a complicated 'loan mechanism' at the World Bank, accessible to only a few countries (e.g., China and India do not certified for the money). There is also significant ambiguity about how the PEF divide and/or supplement the WHO's Contingency Fund for

accident (CFE). The CFE is available to more countries for more possibility, and more rapidly.

In terms of bacterium observe and reaction, the 2005 International Health Regulations, which are meant 'to help the international section and authority prevent and answer to acute public health risks that have the future to cross borders and threaten people worldwide',18 are not fully execute by many countries due to limited economic wealth and political will, and have been violated in reaction to the COVID-19 outbreak.19 What is more surprise is that many high- income countries like France have failed to fully implement the International Health management, particularly in their overseas dependency In addition, other disease control mechanisms, like the WHO Global Influenza observation and feedback System remain invade reproduce and underfunded, with too few WHO laboratories and a market-based model where a global public good (pooled influenza understanding) is turned into a private good (pharmaceutical profit), with historical partiality in terms of public health.20 Moreover, many countries, like China, are impulse not to raise the infestation alarm too soon due to fears of diminished direct foreign backing (like with severe acute respiratory syndrome, H7N9 and now COVID-19) and fears that the government will be recognize as weakly.

These order of disability at the international level are aggravate by a incapacitate WHO, whose budget has been radically reduced and ring-fenced. For example, the WHO used to receive areas of its financing from assessed donation levied on organ. However, a change to a zero real growth policy for its regular accounts in the 1980s has meant it now only receives a quarter of its budget from member donation. As a result, the WHO is dependent on extra-budgetary ring-fenced 'pet project' sponsor from contributor to fill an progressively shrinking budget.22 As the money flows to other multi- lateral health capability, the WHO's command dissipates, with countless organizations like the Institute for Health Metrics and Evaluation, the Bill and Melinda Gates Foundation and Medicines Sans Frontiers able to order greater epistemic authority,23 financial influence24 and response effectiveness.25 However, this growth of initiatives creates a surroundings of policy fragmentation, which significantly enervate coordinated global public fitness.

One real outcome of dissolution of global health governance is an incompetent division of labor, where hundreds of performer such as the WHO, Global Fund, President's extremity Plan For AIDS Relief, United Nations Programs on HIV and AIDS, commission For International Development, World Bank, the Gates Foundation and the Clinton Foundation(to name only a many) produce resembling programmers or perpendicular health silos that have neither generated overall system strengthening in high burden countries nor allowed for effective global health policy.27 28 This creates two failures. First, contrary to sector-wide approaches, 29 perpendicular ' precious- design 'global enterprise frequently fail to promote sustainable long- term original health system strengthening, which is the stylish preventative defense for complaint control(of all types, not just contagious conditions). Second, the global position is sorrowfully unrehearsed for pandemics, since global policy has remained

archconservative, symptom- grounded and dependent on vaccine discoveries without full appreciation of other upstream determinants of complaint and access to those vaccines.

Given the state of global health governance and inadequate investments in health system strengthening — as well as the failure, by numerous actors, to borrow a 'systems approach' to problem resolution14 — the spread and peril of COVID- 19 isn't surprising. What's needed, we argue, is to shift global health policymaking from a specific reactional paradigm to a systemic, holistic and preventative paradigm. There's no mistrustfulness that this approach will bear serious coffers, governance reform and political will. Nonetheless, the global profitable costs of COVID- 19 have formerly reached into at least a trillion bones .30 therefore, serious sweats to ameliorate global and original health systems would be a small bit of this cost, with a tried and true cost- saving gospel that ' an ounce of forestallment is worth a pound of cure.

Beyond the Pasteurian paradigm: A holistic view of health-

The emergency responses to COVID- 19 so far are grounded on the so- called 'Pasteurian paradigm ', which states that each complaint is due to one pathogen; therefore, for each complaint there's one cure, targeting the responsible pathogen. In this case, laboratories are contending to find the cure or the vaccine against COVID- 19 — a vaccine which will come too late for the current epidemic, and will have limited efficacy if the contagion mutates in the coming months or times. Yet it's easy to see how the further pathogens there might be in the future (which there will be) the less this paradigm makes sense. Also, the Pasteurian paradigm has assessed its favored exploration system — videlicet, randomized control trials that try to insulate one variable from all possible variables — as the gold standard of wisdom, relegating other approaches as near charlatanism.

Still, there's a multitude of substantiation indicating that beyond a single pathogen, the development of a complaint, as well as its outgrowth, is vastly affected by the physical and social parameters in which it operates, and that this is vastly affected by social, political, environmental and individual factors. This seems widely known by the public as far as chronic non-communicable Conditions are concerned, but is also the case for contagious conditions, especially for arising infections, in which the pathogenic part of social inequalities is recognised.33 also, the traditional borders between communicable and non-communicable conditions are being blurred by substantiation of ' biosocial contagion '.34 In this light, the globalized world is now facing a ' syndemic' — that is, a community of pandemics that ' co-occur in time and place, interact with each other to produce complex sequelae, and share common underpinning societal motorists '.35 COVID- 19 is no exception, since its mortality rate varies significantly according to age, coitus and comorbidities.36

As a volition, we argue that it would be more effective, effective and indifferent to borrow a holistic approach to health. How to attack the silent killers and how to prepare populations — including the most vulnerable37 — against unborn pandemics should be on the top of public and global health policy and exploration dockets.

This should reflect both a security approach (fighting characteristic issues) and a health development approach (diving upstream causes and determinants). In doing so, the objects shouldn't be simply be the response mode, but a more combined trouble to limit environ- internal factors, cover biodiversity, 38 reduce social health injuries, strengthen original health systems for preventative health, help populations reduce their individual threat factors and compound their natural impunity — specially through colorful ' healthy behaviors ' and diets that are proven to strengthen the general vulnerable system.39 – 46 Like what lately took place in the field of evaluation of complex systems and programs, 47 a ' realist ' revolution of medical exploration is presumably demanded to help support this.

From global solution to local adaptations-

It's eventually important that the performing programs aren't copy- pasted from other countries, but acclimated to each environment, and backed by strong original health systems. By description, preventative health programs must be acclimatized to original particularity, including original surroundings, and health systems must be strengthened at the original position so as to be suitable to respond to a population's requirements and prospects. This is also the case for the response to COVID- 19. Contagions and pandemics have always was, and will always live, and should be anticipated.48 49 Coronaviruses are a well- known family of contagions, and indeed if this bone is particularly aggressive, its genome has been fleetly linked. The difference with this epidemic which is causing the semi collapse of health systems is that it has revealed a profound lack of public forestallment and preparedness. In response to the epidemic, the most hit countries so far have faced a lack of outfit and critical care beds. In the UK and France, as just two examples, decades of austerity programs and a preoccupation with assessing health installations grounded on specialized effectiveness (i.e., minimizing inputs and adding labors) have vastly dropped the capacity of health systems to respond to over- average frequentation.50

The COVID- 19 emergency responses of numerous countries have revealed important inconsistencies. In numerous European countries, the authorities have espoused a one- size- fits- all policy and assessed the same measures far and wide. Further worryingly, some governments ---especially in Africa haven't performed their own acclimated threat assessment before dupe- pasting strategies from abroad.51. This is problematic, since it makes little sense to use a prophetic model developed from a country where the median age is 47 and restate it to a country with a median age of 18, without conforming the parameters. In addition, current programs fail to regard for indigenous or transborder contextual parameters, where either more strict or relaxed measures could be more suitable depending on geographical determinants. The universal lockdown of a whole country may not be necessary when there are only one or two epidemic outbreaks separated by hundreds of long hauls, especially if constraint is quick and determined. What we suggest, in order to be effective, is that programs should fit each environment and be adaptive at the territorial or ecosystem position, versus being unreflectively and slightly bounded by public authorities. This is the stylish way to not

put measures that are too coercive, which may face legal constraints and may be counterproductive, eroding public trust and cooperation.52 53

In thepost-COVID-19 recovery phase, we hope the assignments learnt from original, public and global responses to this epidemic will foster support, by policymakers and by the public, for acclimatized policy responses that support stronger and further intertwined original health systems.

CONCLUSION

In summary, the current extremity calls for a paradigm shift in public and global health programs. We'll not be prepared for the coming epidemic unless we take bold way. First, global health programs shouldn't be designed on a response mode to case- by- case pitfalls, but should borrow a systems approach that can support a holistic picture of global complaint burdens, pitfalls and health conditions, as well as better consider the system-wide goods of espoused measures. Second, fighting current fragmentation in global health governance will bear a substantial shift in global health policymaking from a reactional paradigm to a systemic and preventative paradigm, with meaningful commitments to mortal health security. Third, there's a need to shift our focus from short- term restorative programs grounded on the Pasteurian paradigm, to long- term preventive and promotional programs grounded on a holistic view of people's health, which specially implies limiting environ- internal factors, reducing social health injuries, helping populations reduce their individual threat factors and accelerating their natural impunity. Incipiently, similar holistic, preventative programs must be acclimated to original surrounds and enforced through strong original health systems suitable to have the ‘ bumper ’ capacity to respond to extremities

REFERENCES

1. World Health Organization. Coronavirus disease 2019 (COVID-19) Situation Report – 79 [Internet]. Geneva, Switzerland: World Health Organization, 2020. Available: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200408-sitrep-79-covid-19.pdf?sfvrsn=4796b143_4
2. Kuhn TS. *The structure of scientific revolutions*. Chicago: University of Chicago Press, 1962.
3. Forum of International Respiratory Societies. The Global Impact of Respiratory Disease – Second Edition [Internet]. Sheffield, UK: European Respiratory Society, 2017. Available: https://www.who.int/ gard/publications/The_Global_Impact _of_Respiratory_Disease.pdf
4. World Health Organization. Up to 650 000 people die of respiratory diseases linked to seasonal flu each year [Internet]. News release, 2017. Available: https://www.who.int/news-room/detail/14-12-2017-up-to-650-000-people-die-of-respiratory-diseases-linked-to- seasonal-flu-each-year
5. World Health Organization. *World malaria report 2019*. Geneva,Switzerland: World Health Organization, 2019.

6. World Health Organization. Trends in maternal mortality 2000 to 2017: estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division [Internet], 2019. Available: http://documents.worldbank.org/curated/en/793971568908763231/pdf/Trends-in-maternal-mortality-2000-to-2017-Estimates-by- WHO-UNICEF-UNFPA-World-Bank-Group-and-the-United-Nations-Population-Division.pdf

7. James JT, New A. A new, evidence-based estimate of patient harms associated with hospital care. *J Patient Saf* 2013;9:122–

8.World Health Organization. Noncommunicable diseases [Internet], 2020. Available: https://www.who.int/health-topics/noncommunicable-diseases#tab=tab_1

9. World Health Organization. Time to deliver - Report of the WHO Independent High-level Commission on Noncommunicable Diseases [Internet]. Geneva, 2018. Available: https://apps.who.int/iris/bitstream/handle/10665/272710/9789241514163-eng.pdf?ua=1

10.Allen L. Are we facing a noncommunicable disease pandemic? *J Epidemiol Glob Health* 2017;7:5–9

11.IPCC. Climate Change 2014: Impacts, Adaptation, and Vulnerability.

12. Harmer A, Eder B, Gepp S, *et al*. Who should declare climate change a public health emergency? *BMJ* 2020; 368:m797.

13. Paul E, Ridde V. Évaluer les effect's des différentes mesures de lutte contre le Covid-19, mission impossible? [Internet]. The Conversation, 2020. Available: https://theconversation.com/evaluer-les-effets-des-differentes-mesures-de-lutte-contre-le-covid-19- mission-impossible-135060#comment_2189947

14. De Savigny D, Adam T. Systems Thinking for Health Systems Strengthening [Internet]. Alliance for Health Policy and Systems Research and World Health Organization, 2009. Available: http:// www.who.int/alliance-hpsr/resources/9789241563895/en/

15.https://www.globalpolicyjournal.com/sites/default/files/inline/files/Brown%20%20The%202015%20G7%20summit,%20A%20missed%20opportunity%20for%20global%20health%20leadership.pdf

16.Brown GW, Wills O, Loewenson R. Global emergency financingand health system strengthening [Internet]. Harare: University of Sheffield, TARSC, EQUINET, 2016. Available: https://www.equinetafrica.org/sites/default/files/uploads/documents/EQ%20Emergency%20Funds%20brief%202016.pdf

17.Essack SY. Environment: the neglected component of the one health triad. *Lancet Planet Health* 2018; 2:e238–9.

18. World Health Organization. International Health Regulations (2005) Second edition [Internet], 2008. Available: https://apps.who.int/iris/bitstream/handle/10665/43883/978

9241580410_eng.pdf? sequence=1

19. Habibi R, Burci GL, de Campos TC, *et al*. Do not violate the International health regulations during the COVID-19 outbreak. *TheLancet* 2020;395:664–6.
20. Elbe S, Voelkner N. Viral Sovereignty: The Downside Risks of Securitising Infectious Diseases. In: Brown G, Yamey G, Wamala S, eds. *Global health policy*. London: Wiley & Sons, 2014: 305–17.
21. Buckley C, Lee Myers S. As New Coronavirus Spread, China's Old Habits Delayed Fight. The New York Times [Internet],2020.Available: coronavirus.html?searchResultPosition=1
22. Sridhar D, Gostin LO. Reforming the world Health organization. *JAMA* 2011; 305:1585–6.
23. Shiffman J. Knowledge, moral claims and the exercise of power inglobal health. *Int J Health Policy Manag* 2014;3:297–
24. Frenk J, Moon S. Governance challenges in global health. *N Engl JMed* 2013;368:936–42.
26. Chonghaile C. Ebola spending: will lack of a positive legacy turn dollars into dolour? *The Guardian* 2015.
27. Kickbusch I, Reddy KS. Global health governance - the next political revolution. *Public Health* 2015; 129:838–42.
28. Brown GW, Held D. In: Gridlock B, Hale T, Held D, eds. *Global health: new leadership for devastating challenges*. Cambridge: PolityPress, 2017: 162–83.
29. Swanson RC, Atun R, Best A, *et al*. Strengthening health systems in low-income countries by enhancing organizational capacities and improving institutions. *Global Health* 2015;11:5.
30. Organization for Economic Coordination and Development,. Working Party on aid effectiveness, task team on health as a tracer sector (OECD/WP EFF/TT-HATS). progress and challenges in aid effectiveness. *What Can We Learn from the Health Sector? OECD/ WP EFF/TT-HATS* 2011.
31. World Economic Forum. This is how much the coronavirus will cost the world's economy, according to the UN [Internet], 2020. Available: https://www.weforum.org/agenda/2020/03/coronavirus-covid-19- cost-economy-2020-un-trade-economics-pandemic/ [Accessed cited 2020 Apr 1].
32. Evans RG, Barer ML, Marmor TR. *Why are some people healthy and others not? The determinants of health of populations [Internet]*. Taylor & Francis, 1994. https://www.taylorfrancis.com/books/e/ 9781315135755
33. Marmot M. The health gap: the challenge of an unequal world: the argument. *Int J Epidemiol* 2017; 46:1312–8.
34. Farmer P. Social inequalities and emerging infectious diseases. *Emerg Infect Dis* 1996; 2:259–69.
35. Seeberg J, Meinert L. Can epidemics be non-communicable? Reflections on the spread of 'noncommunicable' diseases. Medicine Anthropology Theory

[Internet], 2015. Available: http://www.medanthrotheory.org/read/5313/can-epidemics-be-non- communicable
36.Swinburn BA, Kraak VI, Allender S, *et al*. The global Syndemic of obesity, under nutrition, and climate change: the Lancet Commissionreport. *Lancet* 2019; 393:791–846.
37.Worldometer. Age, Sex, Existing Conditions of COVID-19 Cases and Deaths [Internet], 2020. Available: https://www.worldometers.info/coronavirus/coronavirus-age-sex-demographics/ [Accessed cited 2020 Apr 1].
38.Ridde V, Ramel P. The migrant crisis and health systems: Hygeia instead of panacea. *Lancet Public Health* 2017; 2:e447.
39.Muraille E. Why biodiversity is key to our survival [Internet]. The Conversation, 2018. Available: https://theconversation.com/why-biodiversity-is-key-to-our-survival-108184 [Accessed cited 2020 Apr1].
40. Martineau AR, Jolliffe DA, Hooper RL, *et al*. Vitamin D supplementation to prevent acute respiratory tract infections: systematic review and meta-analysis of individual participant data. *BMJ* 2017; 356:i6583.
41.Di Rosa M, Malaguarnera M, Nicoletti F, *et al*. Vitamin D3: a helpful immune-modulator. *Immunology* 2011; 134:123–39.
42.Muraille E. The unspecific side of acquired immunity against infectious disease: causes and consequences.
43.Harrison CA, Taren D. How poverty affects diet to shape the microbiota and chronic disease. *Nat Rev Immunol* 2018; 18:279–87.
44.Duggal NA, Niemiro G, Harridge SDR, *et al*. Can physical activity ameliorate immunosenescence and thereby reduce age-related multi-morbidity? *Nat Rev Immunol* 2019; 19:563–72.
45. Glaser R, Kiecolt-Glaser JK. Stress-Induced immune dysfunction: implications for health. *Nat Rev Immunol* 2005; 5:243–51.
46.Julia V, Macia L, Dombrowicz D. The impact of diet on asthma andallergic diseases. *Nat Rev Immunol* 2015; 15:308–22.
47.Scrimshaw NS. Historical concepts of interactions, synergism and antagonism between nutrition and infection. *J Nutr* 2003; 133:316S–21.
48.Pawson R, Tilley N. *Realistic evaluation*. London: Sage, 1997.
49.Garrett L. *The coming plague: newly emerging diseases in a world out of balance*. Farrar, Straus and Giroux. New York, 1994: 772.
50. Global Preparedness Monitoring Board. A world at risk: annual report on global preparedness for health emergencies [Internet]. Geneva: World Health Organization (acting as the host organization for the Global Preparedness Monitoring Board), 2019. Available: https://apps.who.int/gpmb/assets/annual_report/GPMB_Annual_Report_English.pdf
51. Eurostat. Healthcare resource statistics - beds [Internet], 2019. Available: https://ec.europa.eu/eurostat/statistics-explained/index.

php/Healthcare_resource_statistics_-_beds
52. Broadbent A, Smart BTH. Why a one-size-fits-all approach to COVID-19 could have lethal consequences [Internet]. The Conversation, 2020. Available: https://theconversation.com/why-a-one-size-fits-all-approach-to-covid-19-could-have-lethal-consequences-134252?fbclid=IwAR0NVcR9C2c0z9T4MuGOLXvDLxdJ7NM9ukAbRfWEJ9DdEEwMxDkLiz7N2ho
53. Parmet WE, Sinha MS. Covid-19 — the law and limits of quarantine. *N Engl J Med Overseas Ed* 2020;382:e28 https://www.nejm.org/doi/ full/
54. Gostin LO, Hodge JG. US Emergency Legal Responses to Novel Coronavirus