

Control and Policy Beyond COVID-19

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Introduction

- As of now, the COVID-19 pandemic has raged on for 22 months and claimed 5 million lives worldwide
- Sooner or later the COVID-19 pandemic will end, although the SARS-CoV-2 virus will linger on as an endemic pathogen
- Although the exact endpoint of the COVID-19 pandemic is uncertain, it is time to plan healthcare policy for the world beyond COVID-19 pandemic

One thing is certain

There is no going back to the pre-pandemic health care system

This is a time to think boldly about the future

Pandemics affect every strata of society

Livelihoods

- Food and income loss from decreased economic activity and lockdown

Human Health

- High illness & potentially higher death rates
- Overstretched health facilities
- Disproportionate impact on vulnerable

Governance & Security

- Increased demand for governance & security
- Higher public anxiety
- Reduced capacity due to illness & death

Social & Humanitarian Needs

- Deterioration of coping & support mechanisms
- Interruption in public services
- Quarantine and lockdown policies

Economic Systems

- Trade & commerce disruptions
- Degraded labour force and labour migration
- Interruption of regular supply systems

Other Indirect Impacts

- Educational crisis
 - Schools closed – millions of children learning from home
 - Underprivileged and female students less likely to return to school
- Nutritional and other crisis
 - People in high- and low-income countries report skipping meals
 - Immunization programs affected
- Housing crisis
 - 23% white Americans not confident if they can make rent
 - 46% black Americans not confident if they can make rent

Impact of COVID-19 on society - Economy

- Pandemics adversely impact the economy of all affected countries
- Poor get hit the most
- Conversely, infectious diseases not only increase human mortality and morbidity, but also result in gradual erosion of State capacity and increase in poverty

The global healthcare system is dysfunctional

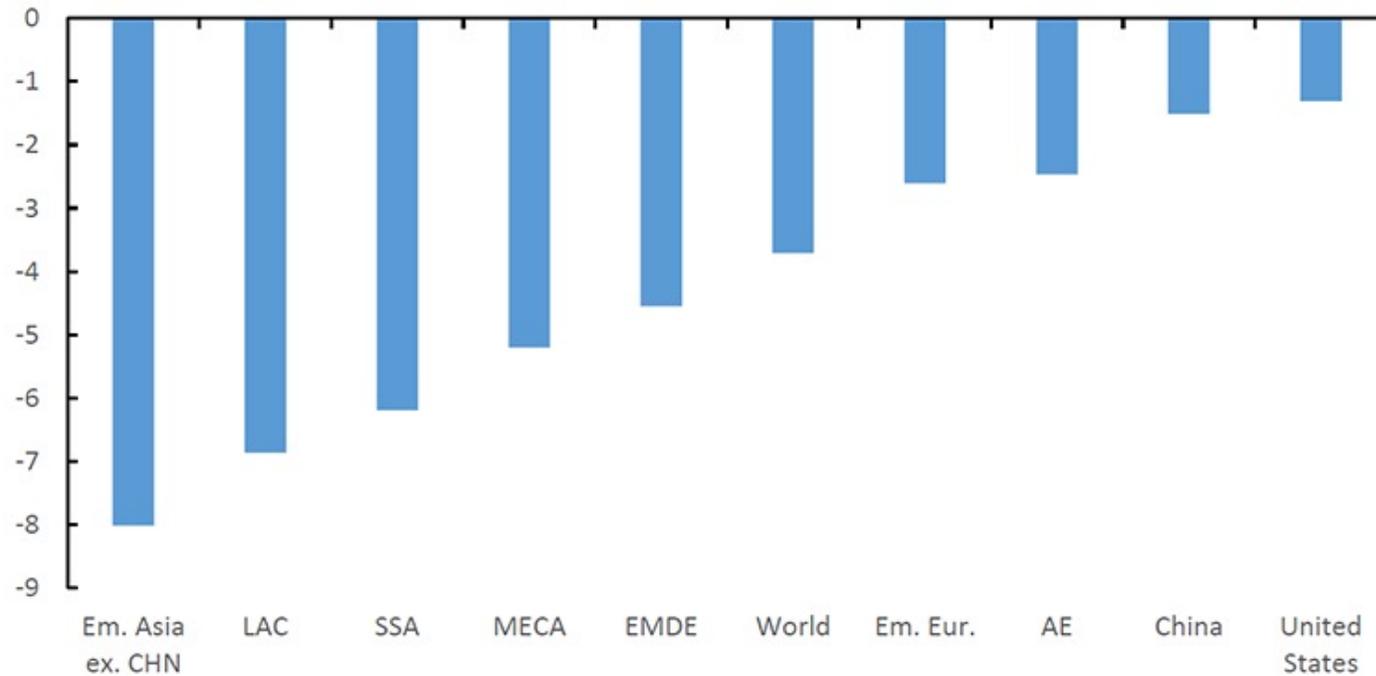
Some of its existing problems include:

- Geographical inequalities in healthcare providers, facilities and medications
- Inadequate readiness to deal with crises
- Too costly

In addition, the COVID-19 pandemic has adversely affected the healthcare delivery for other illnesses

Impact of COVID-19 on Economy: Fall in global GDP in 2020 – *Asian emerging economies worst hit*

Figure 2. Global GDP growth 2020



Source: IMF-WEO Apr-2021. Note: AE = Advance economies; Emerging Asia ex. CHN = emerging and developing Asia excluding China; EM. Eur = Emerging and developing Europe; LAC = Latin America and the Caribbean; MECA = Middle East and Central Asia; SSA = sub-Saharan Africa.

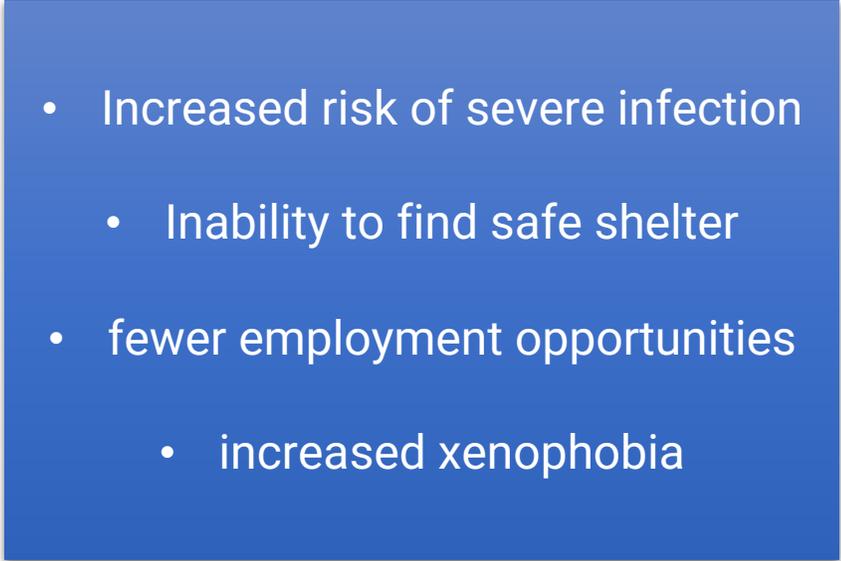
Impact of COVID-19 on Economy: Poverty

- Rapid economic progress in India and China has lifted millions out of poverty, but as of 2015, about 736 million people still lived on less than US\$1.90 a day
- Now, Oxfam estimates that the crisis could push half a billion people back into poverty.

Inequalities of the healthcare systems:

Impact of COVID-19 is more pronounced in vulnerable populations

- people living in poverty situations
- older persons
- persons with disabilities, youth
- Indigenous/tribal peoples
- migrants, or displaced persons
- homeless people

- 
- Increased risk of severe infection
 - Inability to find safe shelter
 - fewer employment opportunities
 - increased xenophobia

If not properly addressed through policy the social crisis created by the COVID-19 pandemic may also increase inequality, exclusion, discrimination and global unemployment in the medium and long term

There is
inadequate
readiness to deal
with crises:

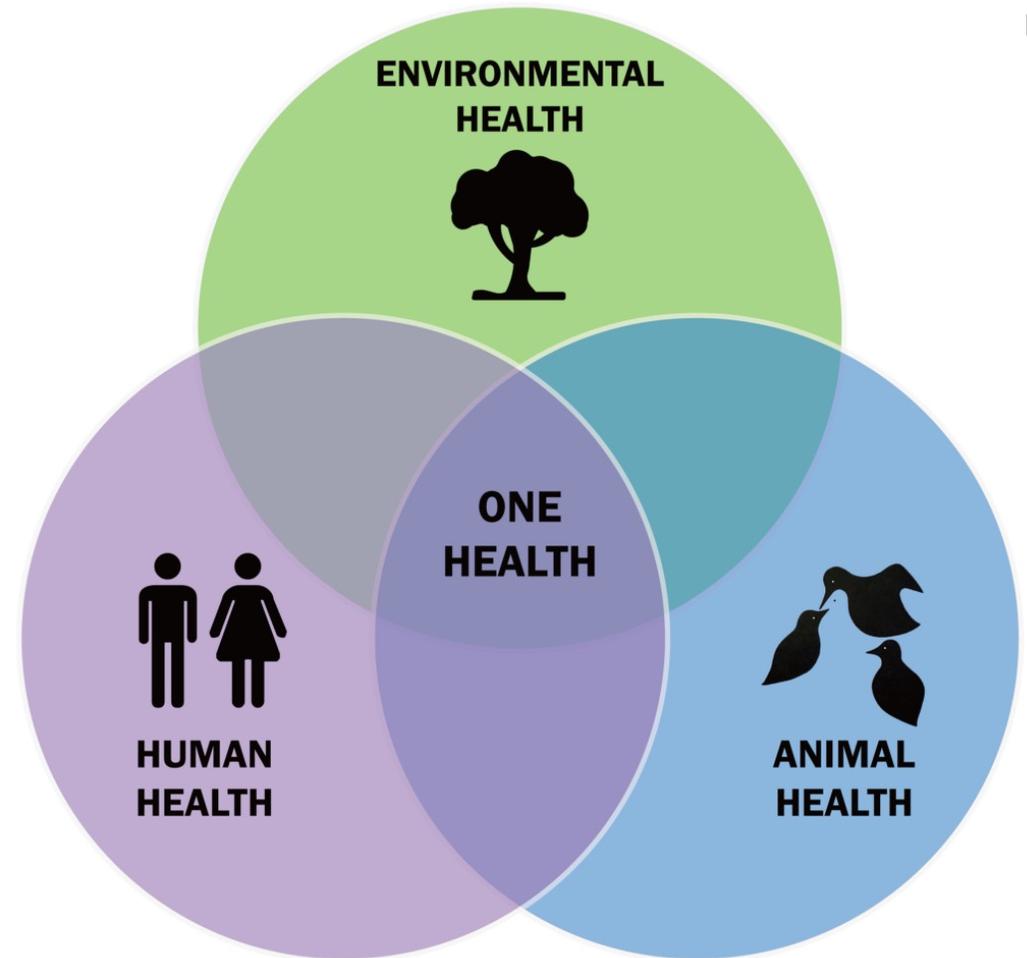
*while the number
of infectious
disease threats
are rising*

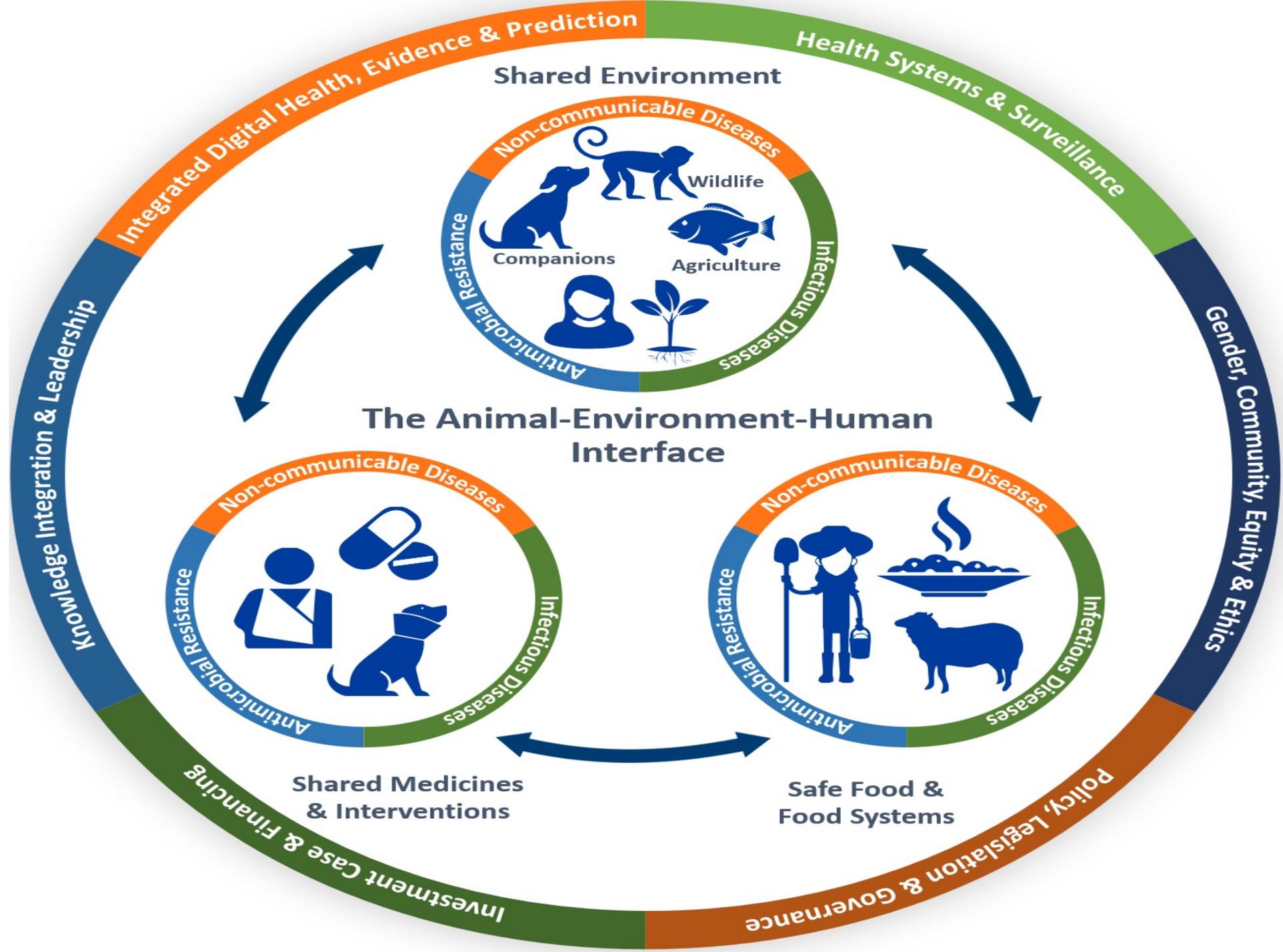
Reasons for the rise of pandemics in the 21st century

- Travel, trade and connectivity
- Growing urbanization allowing outbreaks to develop
- Encroaching into new environments bringing humans closer to animals
- Global warming

“One Health” Concept

- *“Human health and animal health are interdependent as well as being linked to the health of the ecosystems of which they are part”*
- Hence, we need to work on solutions at a local and a global level to prevent future pandemics keeping in mind:
 - The interconnection of human and animal health
 - The interconnection of human health and ecosystem
 - The interconnection of animal health and ecosystem





How has the COVID pandemic affected healthcare delivery for non-COVID illness?

Disruption of routine childhood immunizations

Fewer people seeking care for non-COVID emergencies

Shortages of funding & infrastructure for non-COVID-19 services

Over 90% of countries reporting one or more disruptions to essential health services

1 May 2020

Imperial College COVID-19 response team

Report 19: The Potential Impact of the COVID-19 Epidemic on HIV, TB and Malaria in Low- and Middle-Income Countries

Modeling of the impact of the COVID-19 pandemic suggests that in high-burden settings, infectious disease-related deaths over 5 years might be increased for the following:

- **HIV: up to 10%**
- **TB: up to 20%**
- **Malaria: up to 36%**

Indian healthcare system

- Both the public and private sectors are involved in healthcare delivery
- Public healthcare
 - focuses on delivering primary healthcare through community-level health programmes
 - follows a tiered system of infrastructure, wherein basic services are provided in decentralized primary health centres, whereas advanced care is provided in secondary and tertiary centres in district or state headquarters
- Private healthcare
 - Comprises 60% of all inpatient admissions in India
 - Highly concentrated in tier-1 and tier-2 cities

Impact of COVID-19 on Indian healthcare system

- As previously mentioned, the public healthcare delivery of services to treat illnesses other than COVID-19 has been hampered
- Private hospitals and labs witnessed a sharp decline in revenue due to delayed medical tourism and elective processes
 - The pandemic is speculated to trim the private hospitals' operational profit by approximately 40 per cent this fiscal year
- The OPDs (outpatient departments) had also been closed almost throughout the year as per the government advisory

Potential avenues for healthcare policy

- Upgrading medical infrastructure in tier-2 and tier-3 cities
- Health insurance schemes and awareness
- Increased use of technology (e.g., telemedicine)
- Government policies for pandemic preparedness
- Vaccination programmes

Upgrading medical infrastructure in tier-2 and tier-3 cities

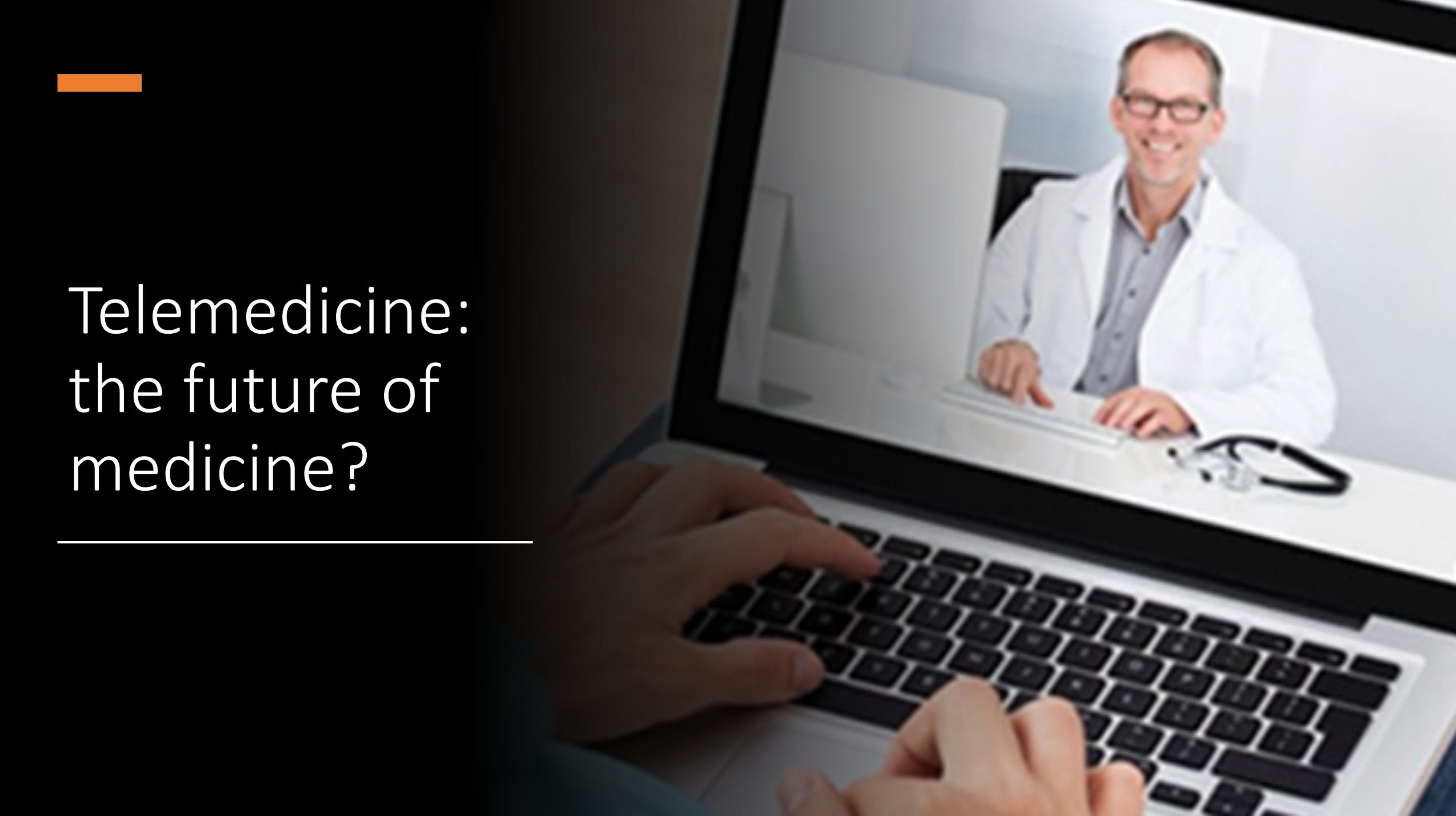
- Shortfalls such as required number of beds or the accessibility of advanced equipment in smaller cities were highlighted during the worst-hit times of the pandemic
- Government efforts are ongoing to:
 - increase the number of hospital beds per thousand population
 - close the accessibility gap mainly in sub-urban and rural parts of the country
- More government medical colleges are being started in underserved areas
- Hospital chains and specialty centres are coming forward to build more capacities, especially in Tier II and III cities

Health Insurance Schemes and Awareness

- There has been an increased awareness of health insurance programs in the past few years
- People are investing in private health insurance with each passing year
- Government efforts in achieving a universal health cover under 'Health for All' schemes, such as Ayushman Bharat have sped up during the pandemic

Increased use of technology

- The government has adopted use of technology (e.g., mobile applications) for contact tracing – the Aarogya Setu app
- Technology has also helped in the vaccination campaign to reach out to a population of more than a billion
- Online consultations and technology platforms are in high demand since the advent of the pandemic

A close-up photograph of a person's hands typing on a laptop keyboard. The laptop screen displays a smiling male doctor in a white lab coat and glasses, sitting at a desk with a stethoscope. The background of the screen shows a computer monitor and a bright office setting. An orange horizontal bar is located in the top left corner of the image.

Telemedicine:
the future of
medicine?

Telemedicine and COVID-19

- Telemedicine has existed since the mid 20th century
- However, the use of telemedicine had remained restricted
- The use of telemedicine has dramatically increased during the COVID-19 pandemic
- It is anticipated that telemedicine will remain a frequently utilized modality for patient encounters in the future

The Government of India released telemedicine guidelines in March 2020

- In August 2019, the Ministry of Health and Family Welfare introduced the 'eSanjeevani' app, an integrated web-based telemedicine solution
- Telemedicine has been extensively utilized in the care of COVID-19 patients
- It has enabled triage and home management of COVID-19
- It has facilitated follow-up of patients with chronic illnesses during lockdown

BOARD OF GOVERNORS
In supersession of the Medical Council of India

Telemedicine Practice Guidelines
Enabling Registered Medical Practitioners to Provide Healthcare Using
Telemedicine

[This constitutes Appendix 5 of the Indian Medical Council (Professional Conduct, Etiquette and Ethics Regulation, 2002)]

25 March 2020

Way ahead –
*Need for
government
policies for
Pandemic
preparedness*

Surveillance systems

Laboratories with biosafety facilities

Trained public health officials and existing public health framework to deal with outbreaks

Research capacity to quickly develop medicines and vaccines

Government Program for Pandemic Preparedness

Cabinet

Cabinet approves "India COVID 19 Emergency Response and Health Systems Preparedness Package: Phase II" at a cost of Rs 23,123 crore

Posted On: 08 JUL 2021 7:34PM by PIB Delhi

The Union Cabinet chaired by Hon'ble Prime Minister Shri Narendra Modi today has approved a new scheme 'India COVID-19 Emergency Response & Health System Preparedness Package: Phase-II' amounting to Rs. 23,123 crore for FY 2021-22. This scheme aims to accelerate health system preparedness for immediate responsiveness for early prevention, detection and management, with the focus on health infrastructure development including for Paediatric Care and with measurable outcomes.

The Phase-II of the Package has Central Sector (CS) and Centrally Sponsored Schemes (CSS) components.

India COVID 19 Emergency Response and Health Systems Preparedness Package: Phase II Central Sector Components

- Support to be provided to Central Hospitals, AIIMS, and other Institutions of National Importance for repurposing 6,688 beds for COVID management
- National Centre for Disease Control (NCDC) would be strengthened by providing Genome Sequencing machines, besides sanctioning Scientific Control room and Epidemic Intelligence Services (EIS)
- Support for implementation of Hospital Management Information System (HMIS) in all the District Hospitals under the National Digital Health Mission (NDHM)
- Expansion of National Architecture of *eSanjeevani* Tele-consultation platform to provide upto 5 lakhs tele-consultations per day from the present 50,000 Tele-consultations per day
- Support for IT interventions, including strengthening the Central War room at DoHFW, strengthening Country's COVID-19 Portal, 1075 COVID help lines and COWIN platform

India COVID 19
Emergency
Response and
Health Systems
Preparedness
Package: Phase II
Centrally
Sponsored
Schemes

- Create Paediatric units in all districts and also, to establish Paediatric Centre of Excellence in each State/UT
- Augment 20,000 ICU beds in public healthcare system out of which 20% will be paediatric ICU beds
- Provide care closer to the community due to the ingress of COVID-19 in rural, peri-urban and tribal areas, by creating pre-fabricated structures for adding additional beds at the existing CHCs, PHCs and SHCs (6-20 bedded units)
- Install 1050 Liquid Medical Oxygen Storage Tanks with Medical Gas Pipeline System (MGPS)
- Support for testing to the States to maintain at least 21.5 lakhs tests per day

A major lesson
from the COVID-
19 pandemic:
*Basic public
health measures
are still the best
way to mitigate
pandemics and
epidemics*

- Hand hygiene
- Masks
- Social distancing

These old-fashioned measures are still the most effective to control spread of epidemics like COVID-19 and Ebola, while waiting for effective vaccines

The Lesson from the COVID-19 Pandemic:

Social distancing and masks are still the cornerstone of pandemic response

Data from the 1918 pandemic in America suggest that places with the tightest restrictions fared best

Necessary precautions

United States, 1918 flu mortality and the growth in manufacturing employment
By city and intervention*



Source: "Pandemics depress the economy, public health interventions do not: evidence from the 1918 flu" by S. Correia, S. Luck and E. Verner, 2020

*Non-pharmaceutical measures, e.g. social distancing, closing schools and churches, mandatory face masks

COVID-19 Vaccine programme in India

- April 2020: Formation of National Expert Group on Vaccination Administration for COVID-19 (NEGVAC)
- October 2020: States were asked to set up state-level mechanisms for vaccine programme including cold chains
- November 2020: Under COVID Suraksha Mission, Rs 900 crore infused into DBT for development of COVID vaccine
- 2021 Budget: Rs 35000 crore allocated to vaccine procurement

Vaccines rolled out in India

- India initially approved two vaccines:
 - ChAdOx nCoV-19 (AstraZeneca/Serum Institute of India) – **Covishield**
 - Viral vector vaccine (chimpanzee adenovirus)
 - Bharat Biotech – **Covaxin**
 - Inactivated vaccine
- On 12th April, India approved use of a third vaccine:
 - **Sputnik V**
 - Adenoviral vector vaccine
- On 7th August
 - **Johnson and Johnson's** single-dose approved
- On 20th August
 - **ZyCoV-D** Plasmid DNA vaccine approved, 3doses



Indian Landscape

Vaccines

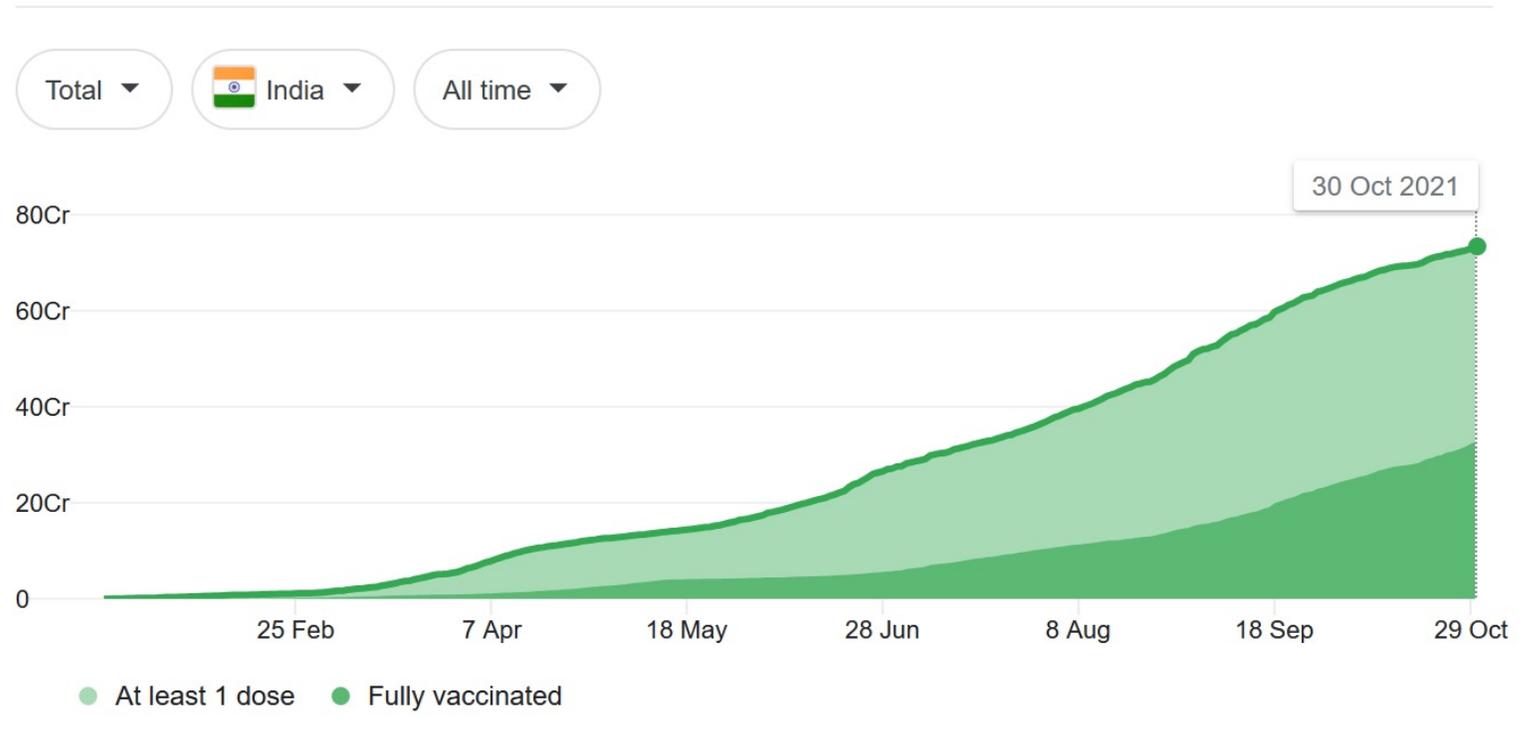
- Covishield - Serum Institute of India.
- Covaxin - Bharat Biotech.
- ZyCoV-D - Zydus Cadila.
- Sputnik V - Dr. Reddy's Laboratories
- NVX-CoV2373 – SII
- Recombinant Protein Antigen based vaccine - Biological E Ltd
- mRNA based vaccine HGCO 19 - Genova, Pune
- Inactivated rabies vector platform vaccine by Bharat Biotech are in various stages of pre-clinical trial

COVID-19 Vaccine Rollout in India

- India has rolled out vaccines in 4 phases:
 - Jan'21: Healthcare & frontline workers
 - Mar'21: Age 65+ and 45+ with comorbidities
 - Apr'21: Age 45+
 - May'21: Age 18+

Vaccinations

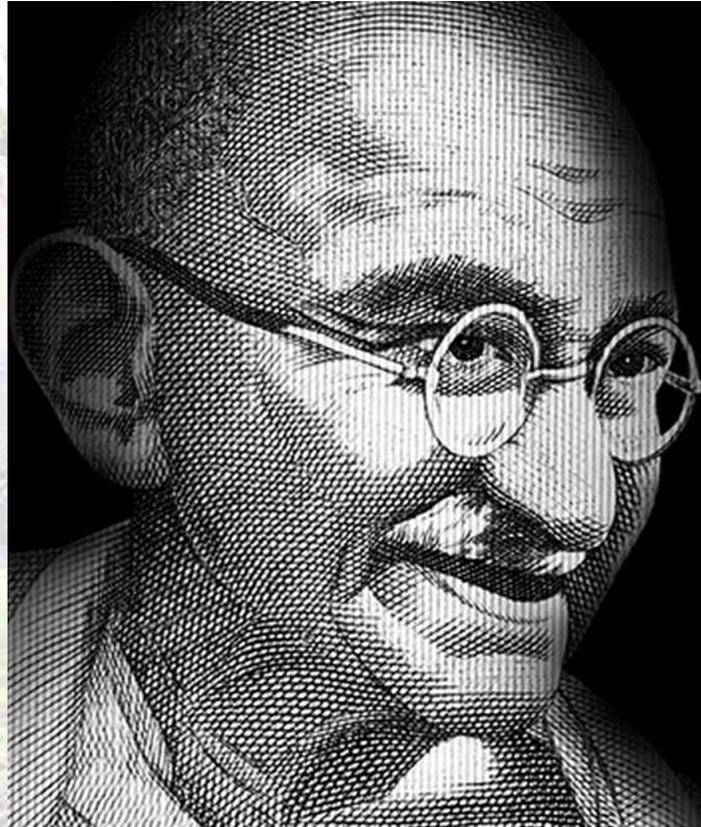
From [Our World in Data](#) · Last updated: 2 days ago



As of 31st October 2021, over 73 crore Indians have received at least 1 dose of the COVID vaccine (53% of the population)

Conclusions

- The COVID-19 pandemic has exposed the existing shortcomings in the health systems worldwide
- Pre-pandemic health systems were unequal, costly and not prepared to tackle a pandemic of the magnitude of COVID-19
- We need to brainstorm on health policies beyond the end of the COVID-19
- A significant change is required to deliver effective and affordable health to all
- Expansion of medical facilities to underserved areas, increased coverage of public & private healthcare insurance, and active health planning for future pandemics are all key priorities



“
**The future
depends on
what you do today.**

”
Mahatma Gandhi

Thank you