

COVID 2nd Wave in India - O2 Crisis, Mass Congregation, Statistical Fallacy and Vaccination Conundrum

*Choose Peace Over
Panic*



Prof. Chandan Ghosh
Prof. & Head- Resilient Infrastructure
National Institute of Disaster Management
Ministry of Home Affairs, Govt. of India

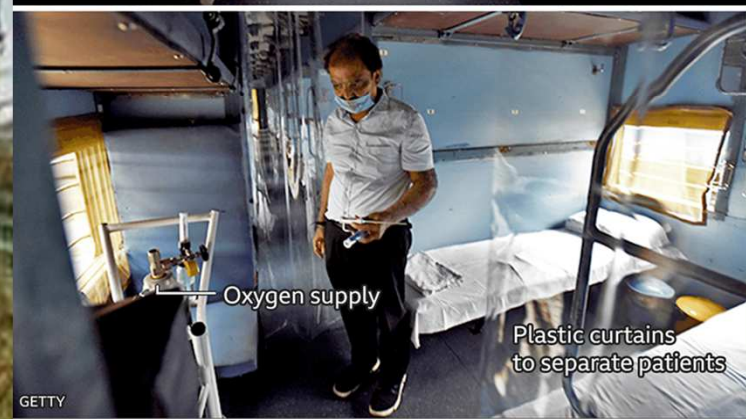
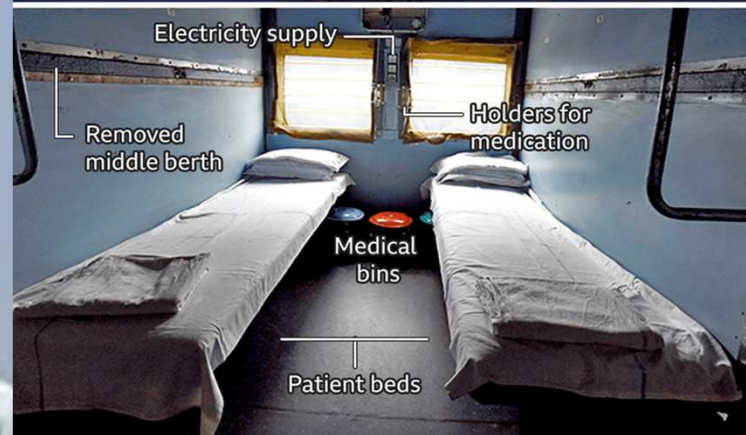




Oxygen Crisis-management



The Indian Railways coaches have basic medical facilities



GETTY

Note: Images taken in 2020

BBC

Context

- Medical profession, epidemiology of disease and deaths other than Covid or vector borne diseases
- The COVID-19 pandemic has **dramatically changed our lives, business, real-estate, tourism, aviation... industry.....constructions**
- From mandatory **mask-wearing to safe distancing, testing, tracing and isolating cases**, so as to **outwit, outplay and outlast the virus..but now even after several courses of Vaccines, drugs, ...**
- **we are completely taken aback with... an awe, worry and colossal loss that ever have affected..the mankind!**

India and COVID-19

GOVERNMENT OF INDIA

Skip to main content

हिन्दी



Login

Register



SELECT LANGUAGE : ENGLISH

हिन्दी

বাংলা

தமிழ்

తెలుగు

मराठी

ગુજરાતી

ଓଡ଼ିଆ

ਪੰਜਾਬੀ

অসমীয়া

മലയാളം

ಕನ್ನಡ

#IndiaFightsCorona COVID-19
011-23978046 , ncov2019[at]gov[dot]in

Download MyGov App
For Latest COVID Update



LATEST NOTIFICATIONS



HELPLINE
NUMBERS

1075
Health Ministry

1098
Child

08046110007
Mental Health

14567
Senior Citizens

14443
Ayush Covid-19 Counselling

9013151515
MyGov Whatsapp Helpdesk

Vaccination
Registration

CO-WIN

Aarogya Setu

UMANG
THE SPIRIT OF NEW INDIA

Get Your
Vaccination Certificate

COVID RESOURCES

As on : 15 Aug 2021, 08:00 IST (GMT+5:30)

VACCINATION DOSE
STATUS Statewise

73,50,553

VACCINATION DOSES
DAY BEFORE

54,38,46,290

TOTAL VACCINATION DOSES

SARS-COV-2
TESTING STATUS UP TO AUG
14, 2021

19,23,863

SAMPLES TESTED ON
AUG 14, 2021

49,36,24,440

TOTAL SAMPLES TESTED

CASES ACROSS INDIA

Statewise

3,85,336 2,337 ↓

ACTIVE CASES (1.20%)

TOTAL CASES

3,21,92,576
36,083 ↑

DISCHARGED
(97.46%)

3,13,76,015
37,927 ↑

DEATHS
(1.34%)

4,31,225
493 ↑

Mass congregation, Assembly Elections in
March-April 2021 => relevance to 2nd
Wave Surge in India! ? Yes/No!



India & COVID Stats

@COVIDNewsByMIB

#IndiaFightsCorona

18000.00

16000.00

14000.00

COVID-19 **Cases per million** population, amongst the lowest in the **World** for **India**

(WHO Situation Report 170, dated July 08, 2020)

*Cases per million population in **USA** is more than **16 times** that in **India***



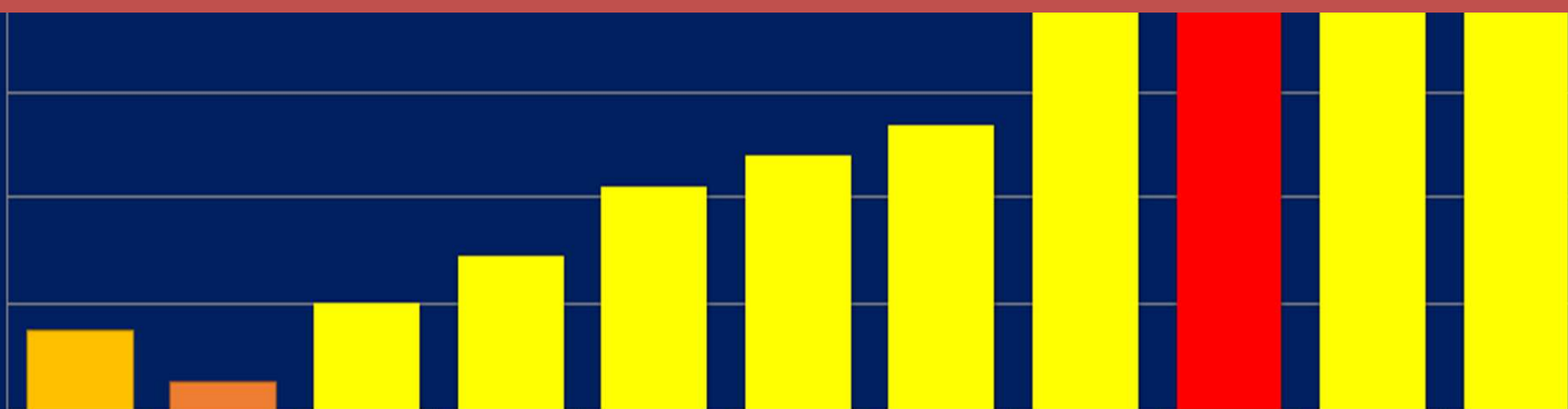
The WHO estimates released in 2020 report on trends for more than **160 diseases** and injuries annually from **2000 to 2019**

6000.00

4000.00

2000.00

0.00



World

India

Mexico

Iran

UK

Russia

Spain

Brazil

USA

Peru

Chile

■ Cases per Million

1497.06

537.98

2030.13

2925.10

4218.14

4802.10

5392.60

7636.85

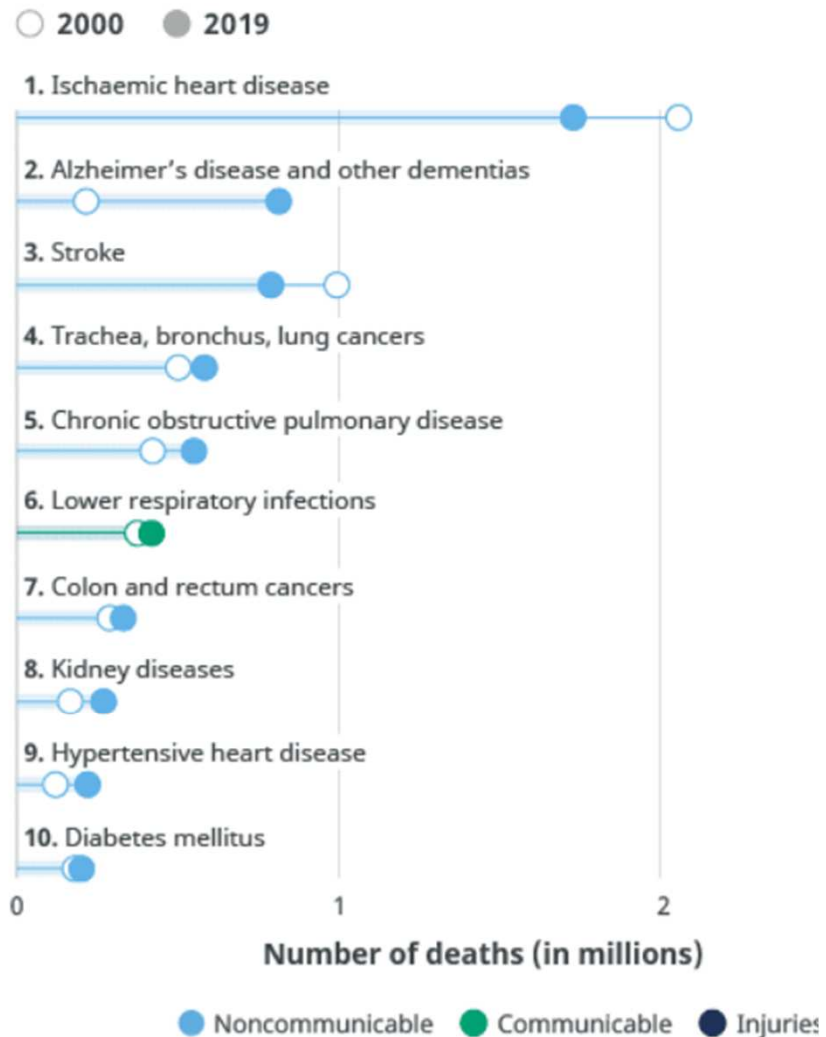
8832.05

9271.64

15746.80

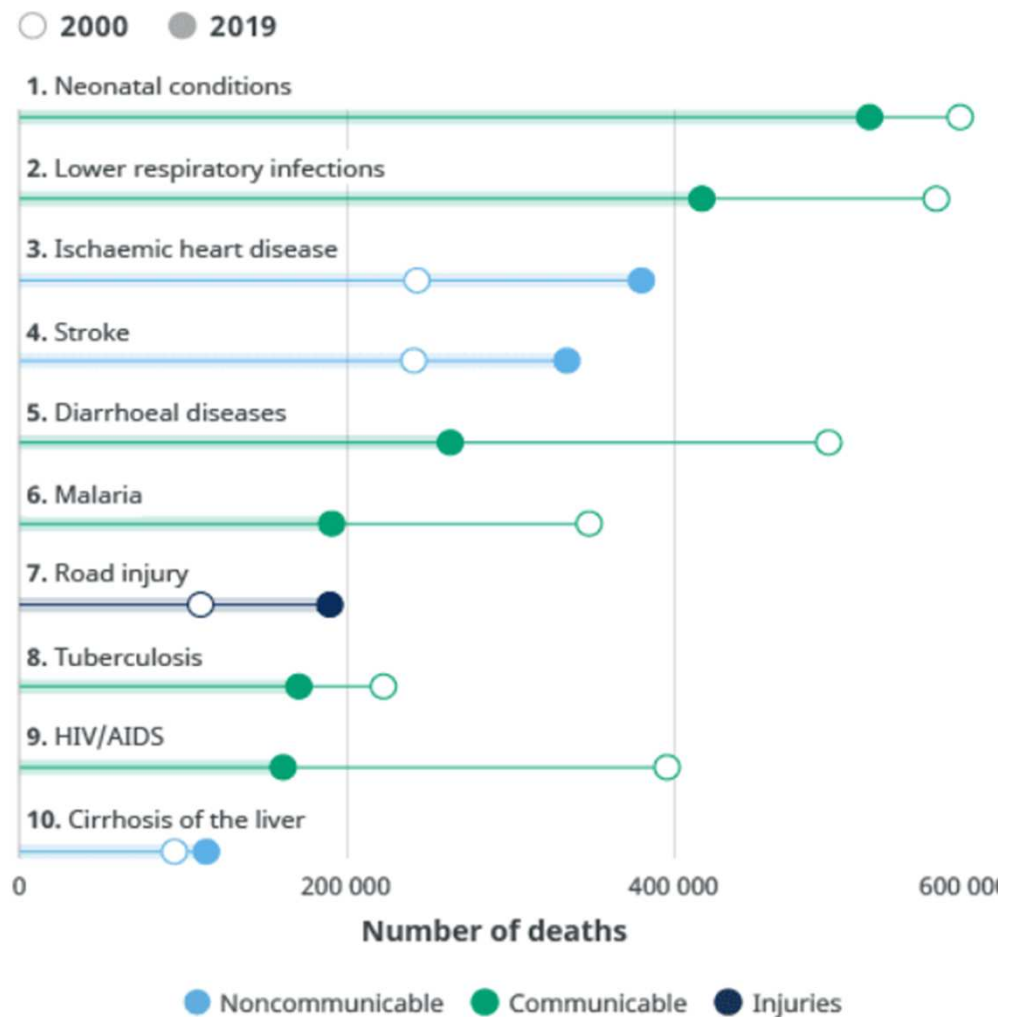
Low vs. high Income – leading causes of death

Leading causes of death in high-income countries



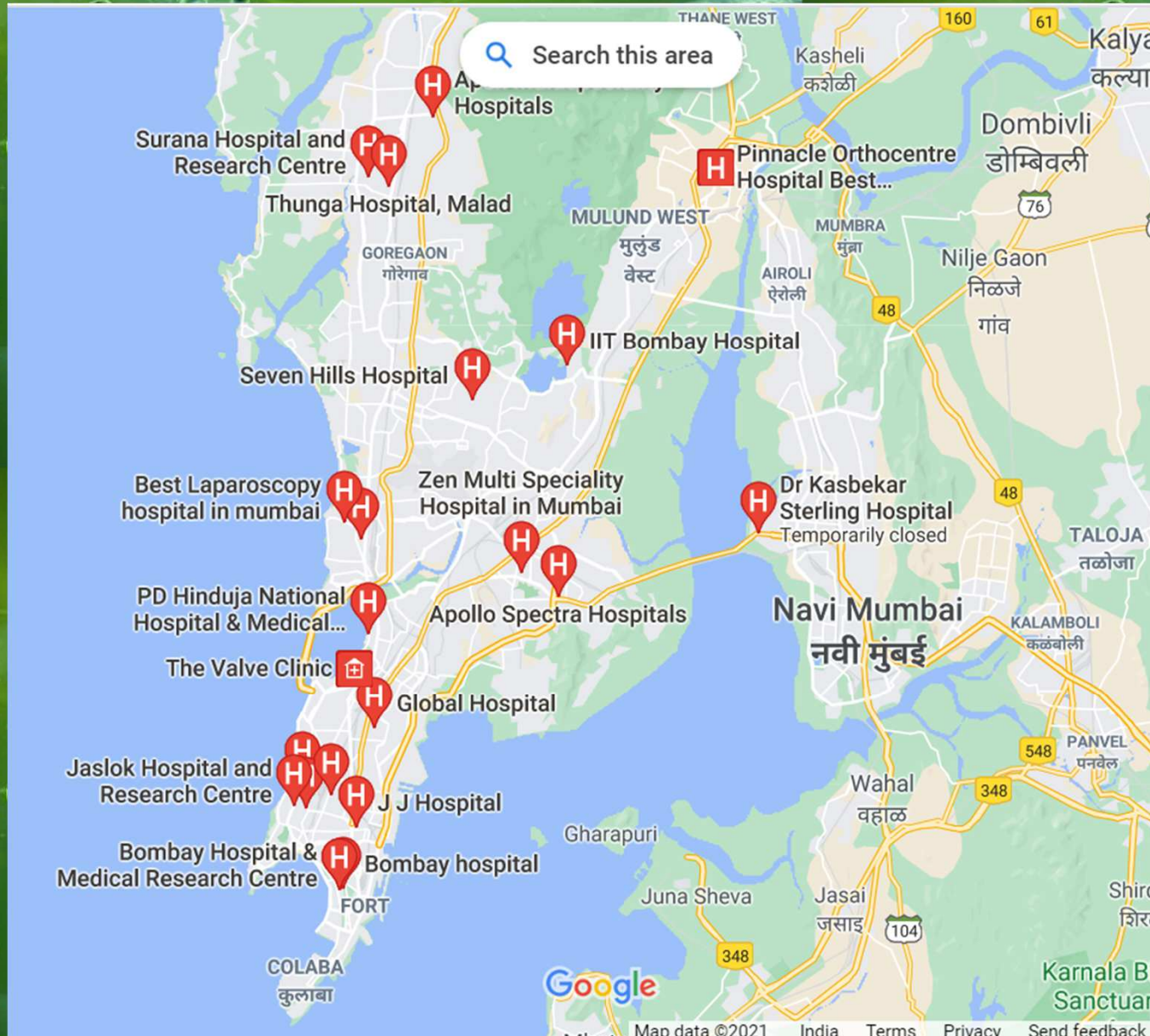
Source: WHO Global Health Estimates. Note: World Bank 2020 income classification.

Leading causes of death in low-income countries



Source: WHO Global Health Estimates. Note: World Bank 2020 income classification.

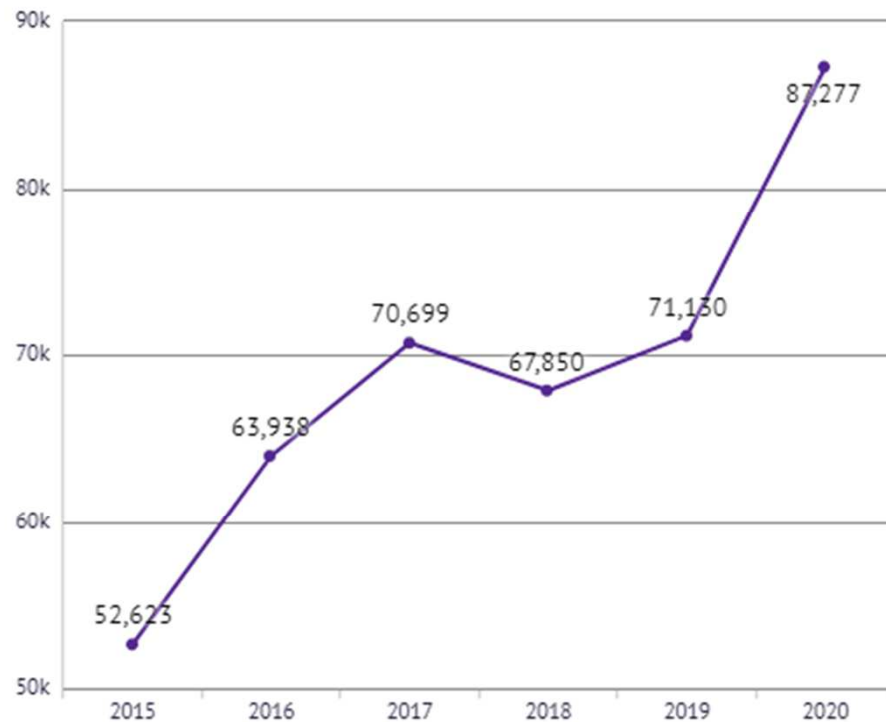
Hospitals in Mumbai, India



Drug overdose Death in US

US: Total Number of Drug Overdose Deaths

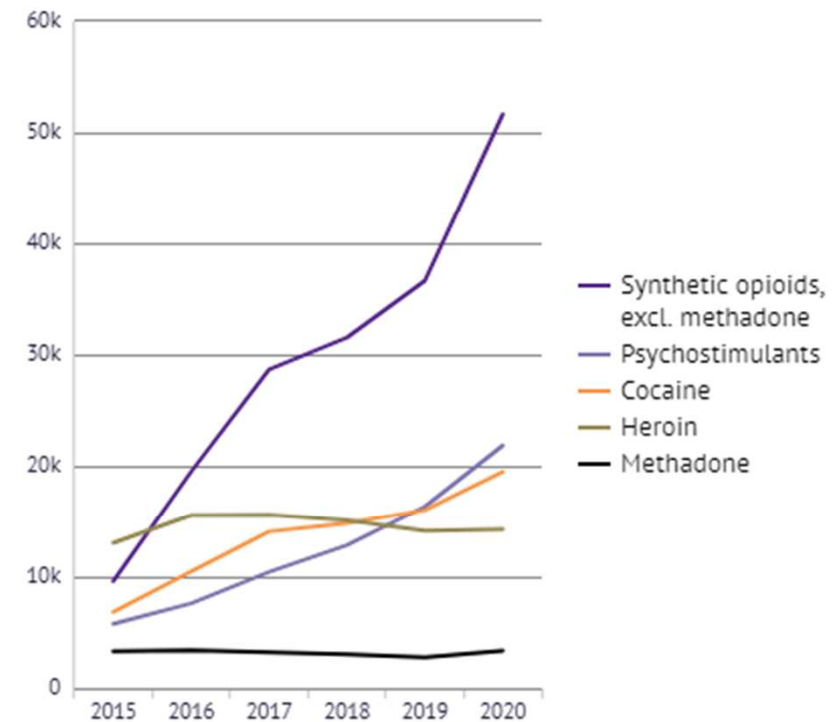
2015–2019 use Jan-Dec. data. Data for 2020 is Aug. 2020 12-month rolling value.



Source: U.S. Centers for Disease Control and Prevention, Vital Statistics Rapid Release (VSRR): Provisional Drug Overdose Death Counts by State in U.S.

US: Drug Overdose Deaths by Type of Drug

2015–2019 use Jan-Dec. data. Data for 2020 is Aug. 2020 12-month rolling value.



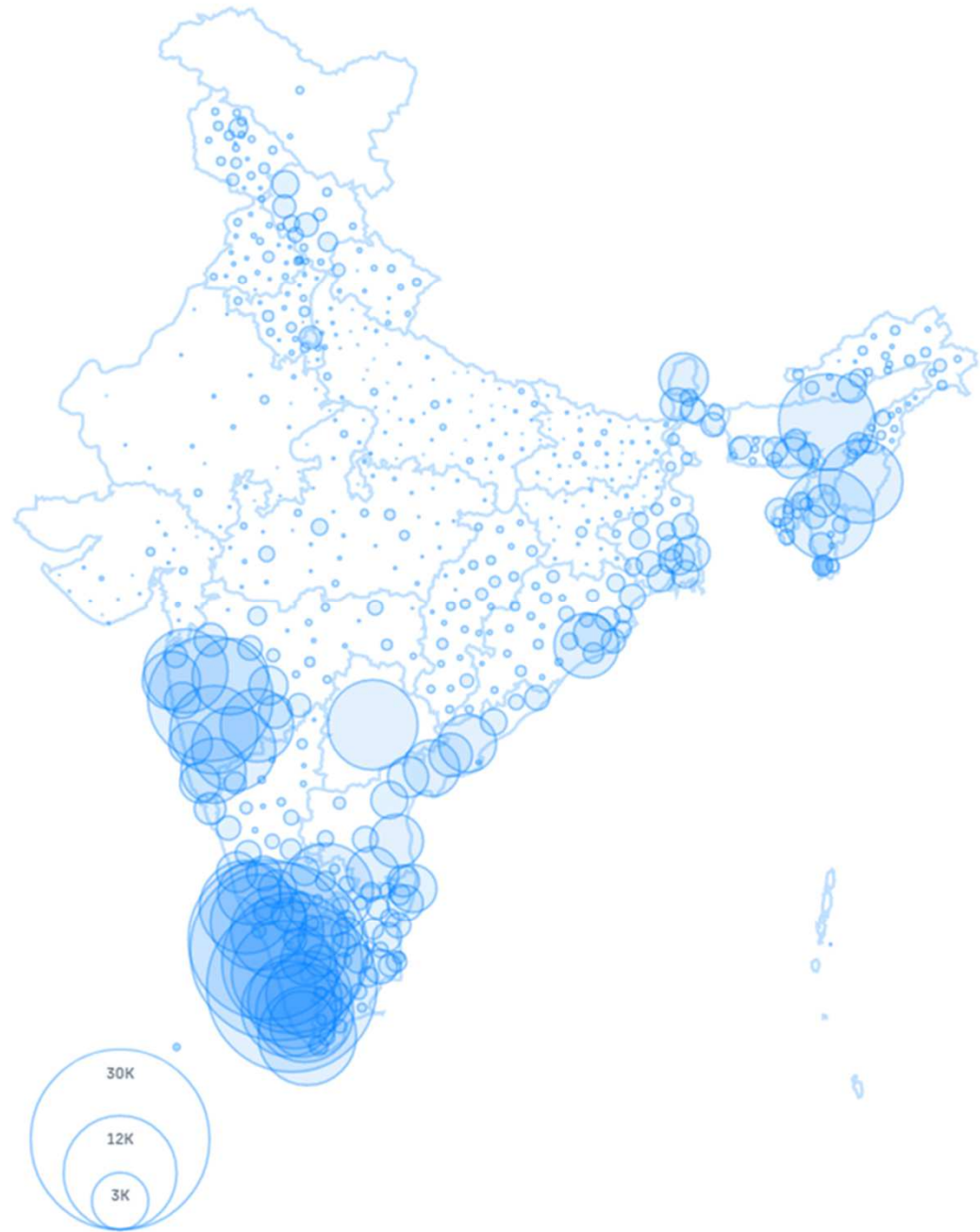
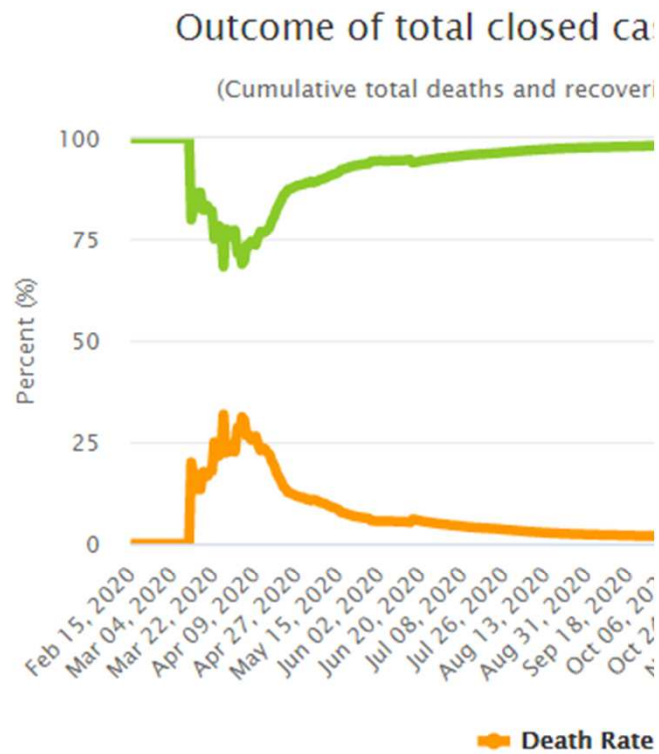
Source: U.S. Centers for Disease Control and Prevention, Vital Statistics Rapid Release (VSRR): Provisional Drug Overdose Death Counts by State in U.S.

Some aspects Beyond our perceptions

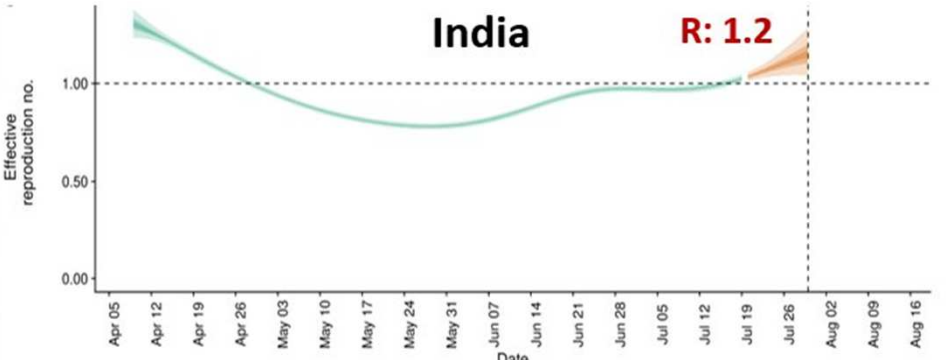
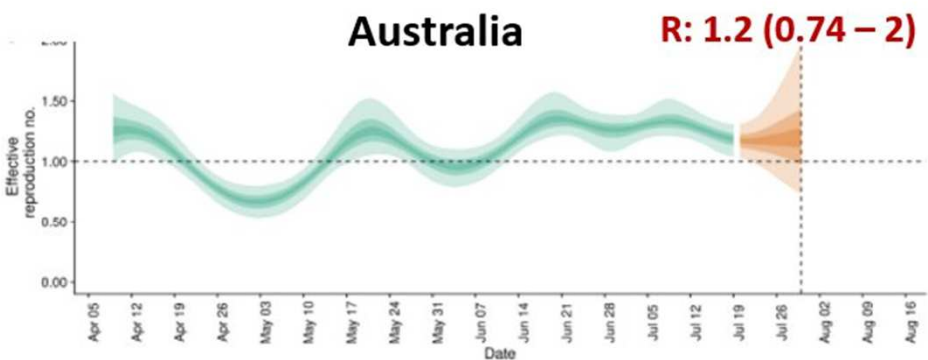
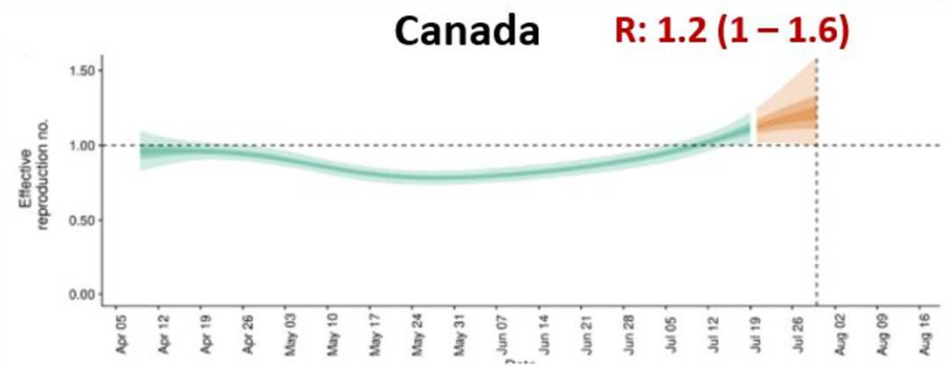
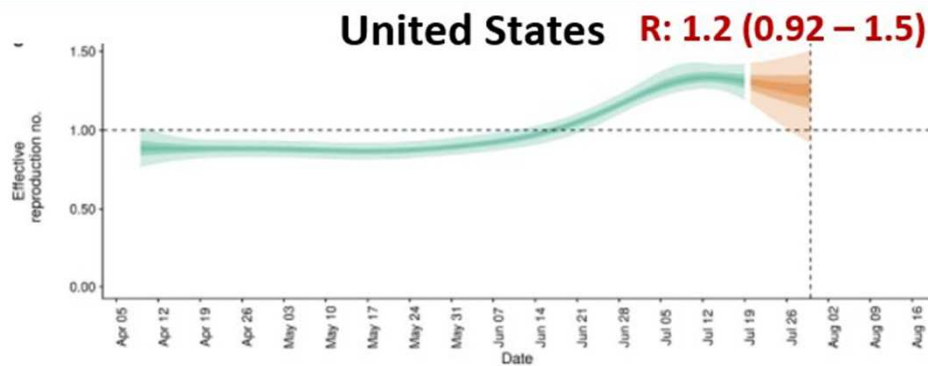
- Is this pandemic - **truly natural or motivated one?**
- Why the more virulent 2nd wave after a gap of few months of the 1st one - what **mathematical/computational models** in presence of humongous DATABASE are up to?
- Is there projections for the **3/4th one in the offing**, if so what are **rudiments of footprints as on date?**
- **Health system, wellness, immunity perceptions and drugs** - where is the key **for survival?**
- Scope of arranging **more health workers or more congruent planning?**
- Shortage of **Oxygen & Essential drugs** - production, supply, delivery, **awareness campaign?**
- Vaccination production, acceptance criteria and delivery gap - how well all countries, including **India, to cope up with?**

Active cases and recovery/death trends

Outcome of Cases (Recovery o



Pandemic is far from over – Increase in R_t being noted Globally



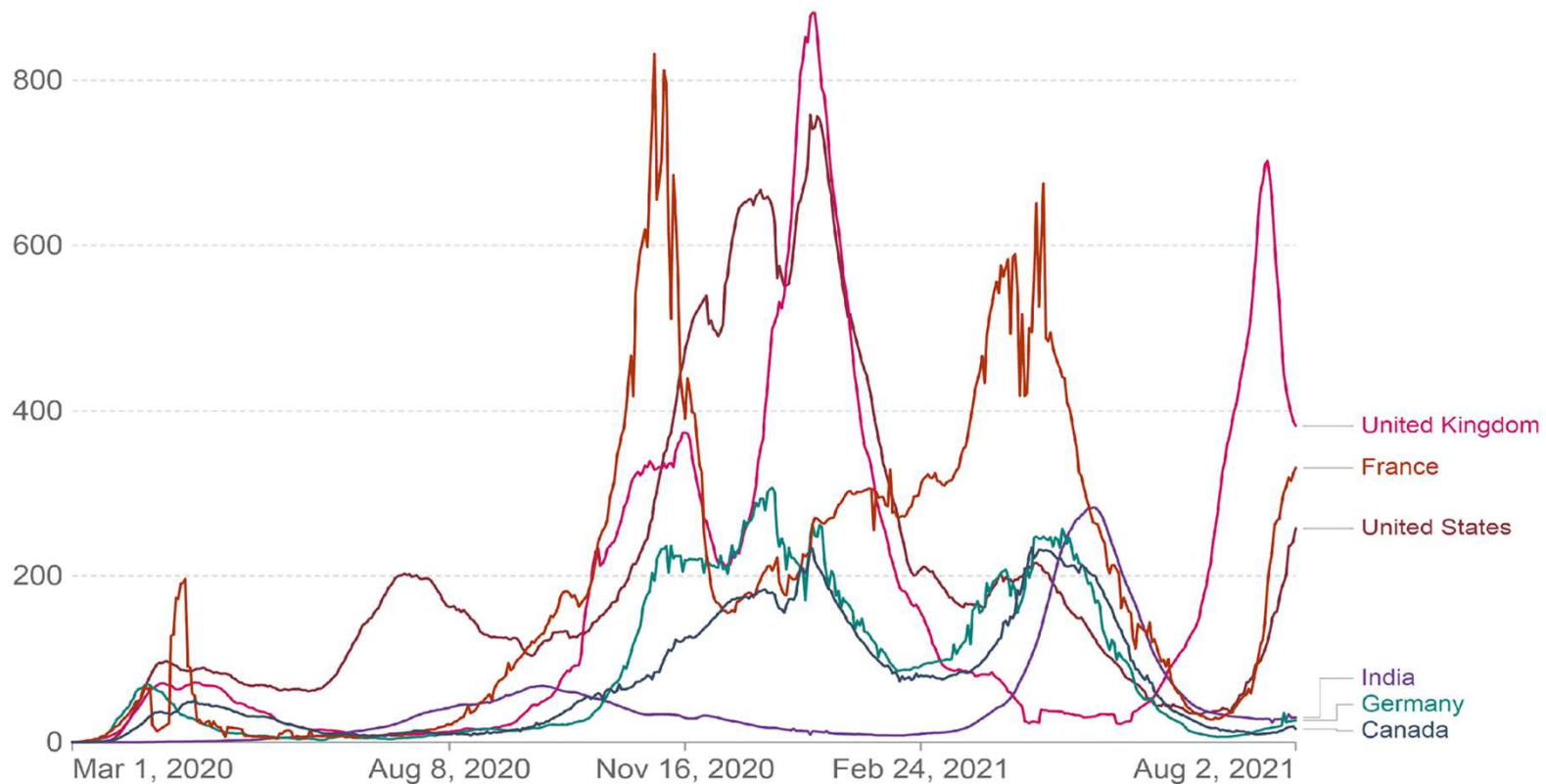
Reproduction Number (R_t) is the average number of new infections generated by one infected individual during the entire infectious period. $R_t > 1$ denotes a spreading infection. R_t for India is 1.2

India currently poignantly waiting for 3rd wave...?? Vaccination 40% of population

Daily new confirmed COVID-19 cases per million people

Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.

Our World
in Data

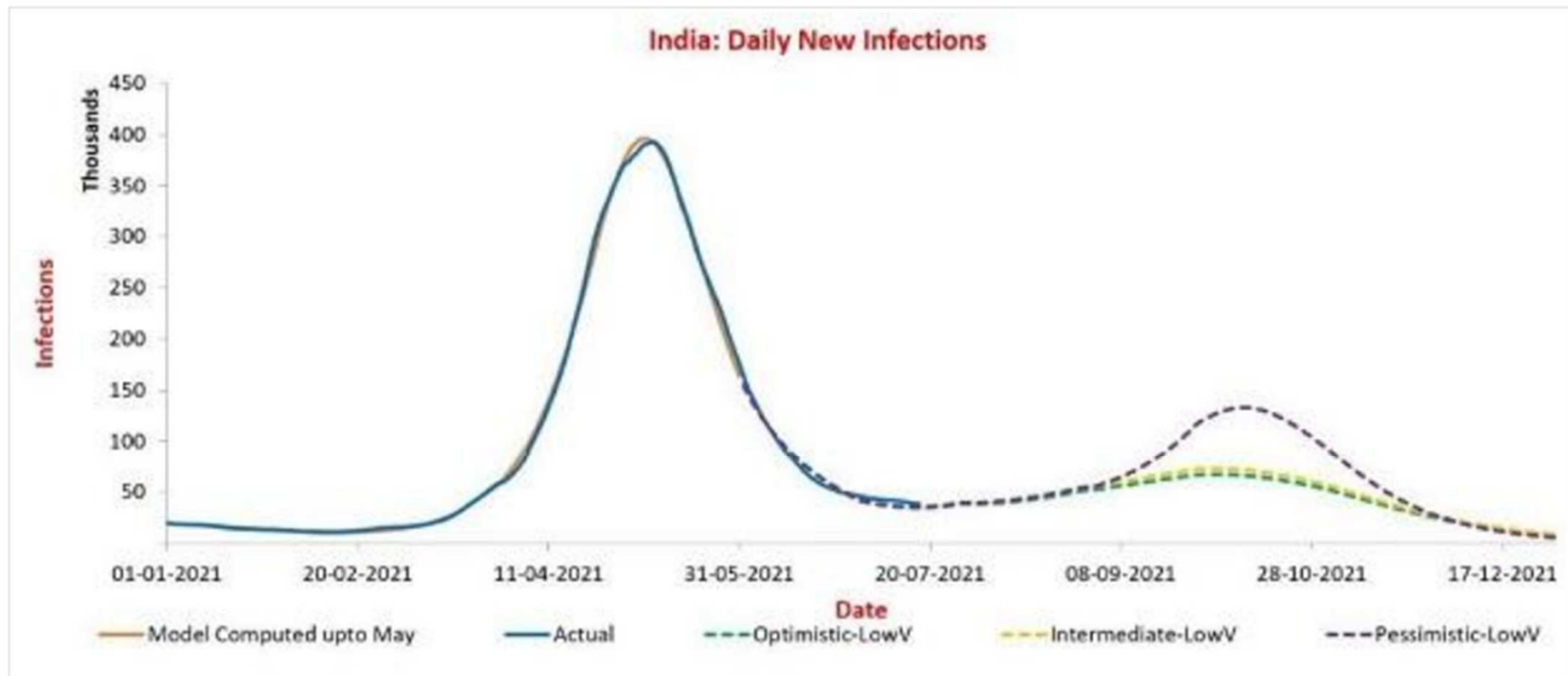


Source: Johns Hopkins University CSSE COVID-19 Data

CC BY

Infection Models – Vidyasagar (IIT-H) and Agarwal (IIT-K)

India is likely to see a rise in Covid-19 infections building into a new -- though smaller ($1/4^{\text{th}}$ of peak in May 2021) -- virus wave that may peak in **October 2021**





India 31.1 million cases, 0.431 million death (**official**) <1.3%

- regional lockdowns, reduced social interaction and an increasing number of antibodies against Covid among the general population were helping to bring down the infection rate in India. Vaccinations too have helped to continue the downward trend in cases.
- A national blood serum survey which tests for antibodies (known as a sero survey) was released on Tuesday which showed that **two-thirds of India's** population have antibodies against Covid

Pandemic - panorama

MORE FROM CNBC

CDC study shows 74% of people infected in Massachusetts Covid outbreak were fully vaccinated

Pfizer's CEO says Covid vaccine effectiveness drops to 84% after six months

Delta variant: Third Covid shot may be way around masking, says Dr. Peter Hotez

Should you be wearing a mask again? Here's a map of the Covid hot spots subject to the CDC's new guidance

Get vaccinated or fired — Ken Langone says his businesses will mandate it after full FDA approval

WHO officials try to figure out why delta is so much more dangerous than earlier Covid strains

Vaccine Conundrum – unassuming apprehensions and maddening world!



Israel to give Pfizer Covid booster shots to people over 60 as efficacy appears to wane amid delta

Berkeley Lovelace Jr.



Dr. Scott Gottlieb estimates up to 1 million Americans infected with Covid daily a...

Kevin Stankiewicz



WHO doesn't recommend Covid booster doses right now, citing lack of...

Robert Towey



Delta variant: The epidemic will sweep across the U.S. at different times, Dr...

Emily DeCiccio



Delta variant 'absolutely' driving Covid breakthrough cases, says...

Emily DeCiccio

Global Issue

- Currently, just over **one billion people** around the world are fully vaccinated against COVID-19, with many countries, particularly in **Africa and South America**, yet to start widespread rollouts **due to lack of supply**.
- "Thus, a truly global vaccination effort may be necessary **to reduce the chances of a global spread of a resistant strain.**" (???)
- But ultimately, dealing with the emergence of a **vaccine escape strain** is really a global issue, not a national one...!!!

Roadmap

- 1. Me
vaccin
- 2. Alte
friend
- 3. Sys
other
- 4. Contemplating into

BT ECONOMY CORPORATE MARKETS MONEY INDUSTRY TECH OPINION PHOTO

Ayush Ministry launches nationwide distribution campaign of herbal medicines

Multiple studies have been conducted on AYUSH-64, an Ayurvedic formulation developed by the Central Council for Research in Ayurvedic Sciences (CCRAS), and Kabasura Kudineer, a classical Siddha formulation

BusinessToday.In | May 7, 2021 | Updated 17:55 IST



The Ministry has stated that the efficacy of these drugs has been proven through robust multi-centre clinical trials

forms of :

of
citizen
any

adopting natural means
to cure from the root cause – where India has
the enormous potential!

Cleaning water (Natural/Ayurveda ways), land, air..key to sustainability (cost: less than Electric Power bill for STP/day/hector (100mx100m) area of water body)

Pre Treatment conditions
on 4th June, 2020



Jheelwala Park is a designated green area in the Rohini region of North-West Delhi, near Jaipur Golden Hospital. Spread over more than 5 acres,

Conclusions

- A national antibody survey by the Indian Council of Medical Research study last month found that two-thirds of Indians above the age of six had been exposed to the [coronavirus](#).
- The next wave is likely to be smaller than the second wave that peaked at a record **400,000-plus daily cases on May 7, 2021** and declined sharply thereafter.
- But the forecast still underscores the need for India to accelerate **its vaccination campaign**, deploy surveillance methods to catch emerging hotspots and stay **vigilant through genome sequencing**; given the potential for **new variants to emerge**.

India – a revolution taking place in erosion control & landslides by Vetiver Grass

Labours employed under MGNREGS at Udna, Tantishal G.P.



After plantation of vetiver at Udna, Tantishal G.P., for erosion protection of Mundeswari river, W.B.



Thank you

<http://disasterresilientindia.blogspot.in/>

<https://www.facebook.com/chandan.ghosh.9887117>

<https://twitter.com/cghosh24>

email: cghosh24@gmail.com