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COVID-19

THIRD WAVE PREPAREDNESS: CHILDREN'S VULNERABILITY AND RECOVERY



National Institute of Disaster Management
(Ministry of Home Affairs, Government of India)



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COVID-19 Third Wave Preparedness: Children's Vulnerability and Recovery

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Foreword



The COVID-19 pandemic in India has caused an unprecedented level of devastation, leaving no sector, no aspect of our lives untouched by its deadly consequences. During the second wave beginning in March 2021, India went through unimaginable levels of collective misery and grief, effects of which will be seen through generations.

The second wave had not even ebbed that the leading experts of the nation sounded alarm bells for a possible third wave and its possible disproportionate impact on vulnerable groups like children. Hence, before the third wave, the country needs to be prepared for minimizing the impact of pandemic among our future generations. Therefore, NIDM proposed a working group committee and organized a series of webinars that covered issues related to the 'Preparedness of the Third Wave in India'. This was done as it is understood that preparedness for the third wave actions is to be discussed and planned much beforehand in order to prevent the exponentially large loss of life that accompanied the second wave.

The present report is the outcome of a two part series of online consultative meetings hosted by National Institute of Disaster Management (NIDM, Delhi). These working group consultative meetings largely included stakeholders from diverse backgrounds- Central Government, State governments, Civil Society Organisations (CSOs), social workers, humanitarians, academicians, scientists and researchers.

Drawing lessons from the first and second wave, through the deliberations by leading experts during these meetings, we have been able to produce in the form of final outcome, recommendations for preparedness of the third wave on the issues related to children and women and their well-being.

Major General MK Bindal
Executive Director, NIDM

आपदा प्रबंधन महाविचार: पूरा भारत भागीदार

Acknowledgement



I want to extend my appreciation and gratitude to the Executive Director, NIDM, Major General MK Bindal without whose patronage and guidance this initiative would not have been possible.

We, at NIDM, extend our heartfelt gratitude to all the experts from varying backgrounds that came together and made our endeavour an astounding success, the outcome of which is this recommendation report. I want to extend special thanks to Dr. M.C. Mishra (former Director, AIIMS), Dr. Naveen Thacker (President, Indian Paediatricians Association) and Dr. Anurag Agarwal (Director, CSIR-IGIB) for their special addresses in the beginning of the first working group meeting that laid an evidence-based foundation for the group to progress. Similarly, I thank Dr. A K Pandey (Chairman, State monitoring committee on Shelter for Urban Homeless), Smt. Sudha Verghese (Padma Shri Awardee Social Worker), Dr. Gagandeep Kang (Professor, CMC, Vellore; Vice-Chair CEPI Board) for their special interventions during the second consultative meeting.

NIDM is sincerely grateful to our partners from both the government and civil society organisations for coming together through their deliberation. I would like to mention Smt. Anuradha K N IAS (WCD, Karnataka), Sh. A K Sengar (IG, NDRF), Mr. Tom White (UNICEF), Dr. Sridhar Srivastava (NCERT), Ms. Mabel Morales (MSF, India), Dr. Jyoti Bindal (VC, Sri Aurobindo University, Indore), Dr. Shobhita Rajgopal (IDS), Ms. Kritika Kulhari IAS (WCD, HP), Prof. Sibnath Deb (RGNIYD), Dr. Edmond Fernandes (CHD group), Dr. Vaishnavi K (BBMP), Dr. Brinelle D'souza (TISS), Ms. Kamal Gaur (Save The Children), Dr. Upasana Mahanta (OP Jindal University), Prof. Sunita Reddy (JNU) and Dr. Prerna Kumar (ICRW) among others for bringing forth their inputs and experience from the ground and contributing substantially to the recommendations.

I want to congratulate Dr. Kumar Raka, Mr. Ranjan Kumar and Dr. Balu I from the CCDRR centre of NIDM for successfully hosting the meetings. Specials thanks to Dr. Vartika and Ms. Dolphi Raman from CCDRR for compiling this report and Dr. Anuradha Maurya and Dr. Preeti Soni from NIDM for being part of the process.

Last but not the least, we sincerely acknowledge our front line workers who are putting their lives at risk every day for our safety. We, as a nation, will forever remain in their debt. We hope that through our effort, we are able to contribute in our nation's fight against COVID and give support to our institutions and frontline warriors during these very pressing times.



Professor Santosh Kumar
 Head (GiDRR), PD (CCDRR)
 NIDM

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Abbreviations

AIIMS	All India Institute of Medical Sciences
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
BBMP	Bruhat Bengaluru Mahanagara Palike
BMC	Brihanmumbai Municipal Corporation
CAB	COVID Appropriate Behaviour
CAMH	Child and Adolescent Mental Health
CCDRR	Child Centric Disaster Risk Reduction
CEO	Chief Executive Officer
CEPI	Coalition for Epidemic Preparedness Innovations
CHC	Community Health Centre
CHD	Centre for Health Development
CISF	Central Industrial Security Force
COVID	Coronavirus Disease
CRY	Child Right & You
CSC	Common Service Centre
CSIR	Council of Scientific and Industrial Research
CSO	Civil Society Organisation
EUA	Emergency Use Authorisation
FHH	Female Headed Household
ICMR	Indian Council for Medical Research
ICRW	International Centre for Research on Women
IGIB	Institute of Genomics and Integrative Biology
IIT	Indian Institute of Technology
ILO	International Labour Organisation
INSACOG	Indian SARS-Cov-2 Consortium on Genomics

IPA	Indian Paediatrics Association
IPC	Infection Prevention and Control
MCGM	Municipal Corporation of Greater Mumbai
MSF	Medicins Sans Frontieres
NCD	Non- Communicable Disease
NCDC	National Centre for Disease Control
NCERT	National Council of Educational Research & Training
NCPCR	National Commission for Protection of Child Rights
NDMA	National Disaster Management Authority
NDRF	National Disaster Response Force
NFHS	National Family Health Survey
NGO	Non- Government Organisation
NIDM	National Institute of Disaster Management
NTAGI	National Technical Advisory Group on Immunisation
NYKS	Nehru Yuva Kendra Sangathan
PDS	Public Distribution System
PHC	Primary Health Centre
PPE	Personal Protective Equipment
RTI	Reproductive Tract Infection
RWA	Resident Welfare Association
SARS-Cov-2	Severe Acute Respiratory Syndrome Coronavirus-2
SRHR	Sexual and Reproductive Health Rights
STD	Sexually Transmitted Disease
UNICEF	United Nations Children's Emergency Fund
WCD	Women & Child Development
WHO	World Health Organisation

EXECUTIVE SUMMARY

Leading experts have repeatedly warned of an imminent third Covid-19 wave in India. Epidemiologists predict a series of surges till we achieve herd immunity through infection or vaccination and the disease becomes endemic. Earlier, it was proposed that if 67% of the population became immune (a few by infection and rest through vaccination), herd immunity could be achieved. But this has now been complicated by the new and more virulent mutated variants of SARS Cov-2 that have the ability to escape immunity from earlier infections and in some cases even the prevalent vaccines. This has pushed the target immune population for achieving herd immunity to 80-90%. Hence, our health system and vaccines are caught in a race against the virus and are trying to catch up with risks that are evolving every day creating uncertainty all over the world.

NIDM is now taking a clue from several warnings indicating an imminent third wave, trying to understand and prepare for the third wave. With this backdrop, NIDM engaged with multiple stakeholders from diverse backgrounds in an attempt to formulate consolidated recommendations for actions that can prevent or mitigate an impending surge.

There is no sufficient data to back widespread fears that children will be hit more severely in the anticipated third wave of the pandemic. However, as the virus continues to evolve, this is going to be a major challenge for children as there is no approved vaccine for children in India yet. Children with COVID-19 infection have largely been seen to be asymptomatic or develop mild symptoms. But this becomes worrisome in case children have any comorbidity or other special needs. According to the Ministry of Health and Family Welfare, out of all the children hospitalised due to COVID, 60-70% had comorbidities or low immunity. Children have also been seen to develop MIS-C (Multi-system Inflammatory Syndrome) which is a rare but extremely serious condition developed post COVID recovery.

Paediatric facilities- doctors, staff, equipment like ventilators, ambulances etc. are nowhere close to what may be required in case a large number of children become infected. According to a parliamentary standing committee report in 2015, there is an 82% shortage of paediatricians in India's primary health centres and up to 62.8% of positions for paediatricians in community health centres were vacant. The working group committee experts suggested a holistic home care model, immediate increase in paediatric medical capacities and prioritising mental health issues among children. Additionally, COVID wards should have to be structured in a way that allows children's attendants/ parents to safely stay with them through their recovery.

Women and children, while addressing issues of pandemic, cannot be separated out rather it should be seen as complementarity. Women have been documented to be at additional risk - be it because of the pandemic itself or the associated lockdowns or restrictions- especially because of the already existing gender inequalities. These inequalities have both direct and indirect impact on girl children, adolescent girls as well as adult women which results in a vicious cycle of exploitation and marginalisation. As per our experts, zero tolerance for any kind of violence against women and children both in

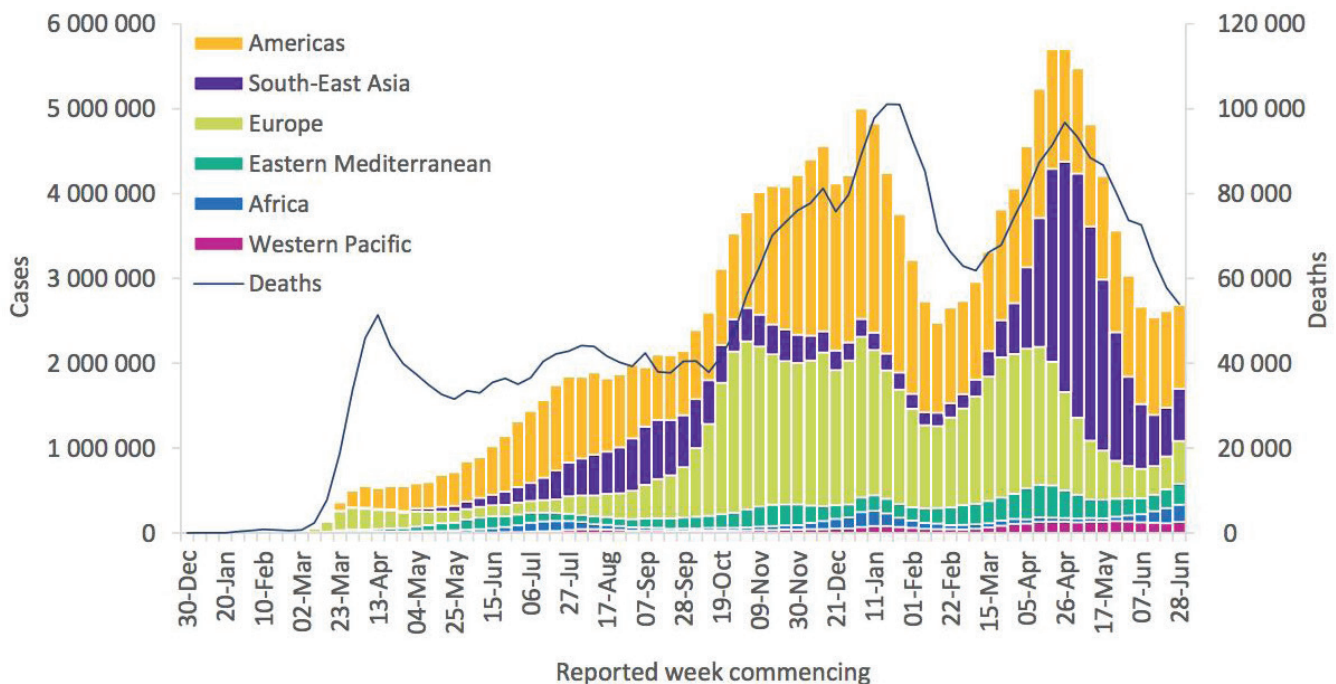
public as well as private spaces, additional livelihood support, shelter, and vaccination, accessibility to reproductive healthcare and special provisions for nurses, ASHA and Anganwadi workers must be immediately prioritised.

The present pandemic needs a special intervention in order to ensure the physical and mental wellbeing of women and children. Hence, the recommendations while taking into account these issues, attempt to adopt a comprehensive and sensitive approach which can create availability, accessibility and affordability of all resources to these groups. This also fits well with the government's approach, the 'whole of government' and 'whole of society' to navigate this current crisis.

1 INTRODUCTION

1.1 Background

India's second wave of COVID-19 has been catastrophic, with a surging increase in new cases in the past months. According to experts and media reports, the number has been much higher as most of the cases and deaths are unreported.¹ The global number of new cases reported last week was over 3.8 million, an 8% increase as compared to the previous week with the number of deaths reported increased sharply with a 21% increase compared to the previous week. The highest numbers of new cases were reported from the United States of America (500 332 new cases; 131% increase). The highest death toll has been registered in India from the South East Asia region after Indonesia with 6942 new deaths; 0.5 new deaths per 100 000; a 25% increase (Weekly epidemiological update on COVID-19 - 27 July 2021, WHO).²



Source: COVID-19 cases reported weekly by WHO Region, and global deaths, as of 25 July 2021

¹Yeung, J. (2021, April 28). As COVID sweeps India, experts say cases and deaths are going unreported. CNN. <https://edition.cnn.com/2021/04/27/india/india-covid-underreporting-intl-hnk-dst/index.html>

²World Health Organisation. (2021). COVID-19 Weekly Epidemiological Update Edition 47, published 27 July 2021. <https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---27-july-2021>

The COVID-19 pandemic in India is part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The first case of COVID-19 in India, a student from Wuhan, China, was reported on 30 January 2020. In India, there have been 30,752,950 confirmed cases of COVID-19 with 393,310 deaths from 3 January 2020 to 9 July 2021 (WHO, 2021).

A second wave beginning in March 2021 was much larger than the first. This wave became one of the largest humanitarian crisis of the country with massive shortages of hospital beds, oxygen cylinders and therapeutic drugs and vaccines in the country. Multiple factors have been cited by experts to have potentially contributed to the sudden spike in COVID cases-including highly-infectious variants of concern such as Lineage B.1.617. 2 (Delta variant), a lack of preparedness as temporary hospitals and care centres had been dismantled in many States after cases had started to decline, and new facilities were not built. Health and safety precautions (mask wearing, social distancing, avoiding crowds) that have time and again been stressed upon globally and nationally by epidemiology and health experts were being poorly followed, implemented or enforced across the country generally and especially during weddings, festivals, sporting events leading to overcrowding in public places³.

³Scroll Staff. (2021, May 13). COVID-19: Religious and political gatherings contributed to surge in cases in India, saysWHO.<https://scroll.in/latest/994785/covid-19-religious-and-political-gatherings-contributed-to-surge-in-cases-in-india-says-who>

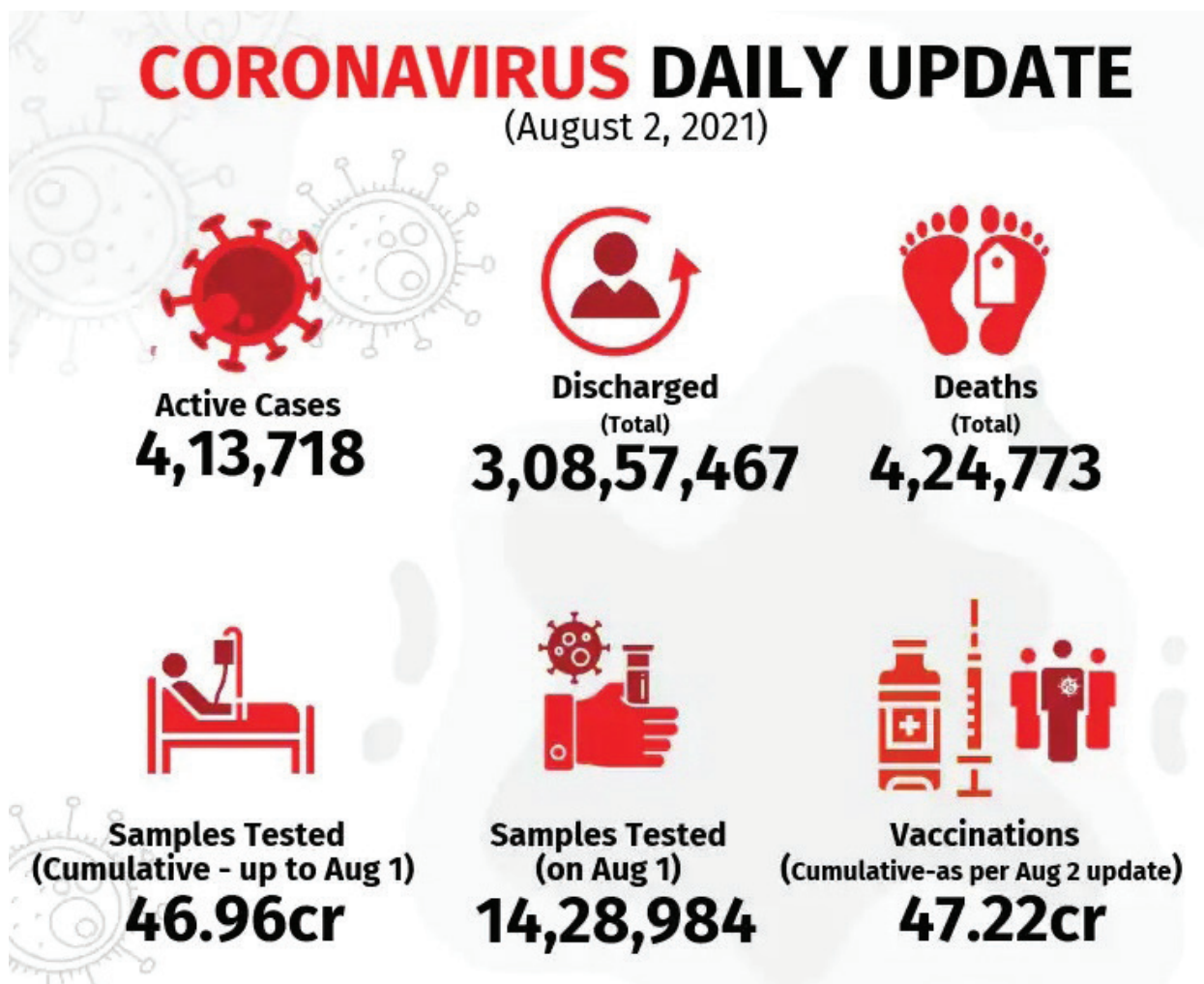


Photo credit: Money Control⁴

The second wave placed an unprecedented strain on the healthcare system with shortage of medical oxygen due to unanticipated demand, delays in transport, lack of cryogenic tankers, overburdening the healthcare workers working more than 24 hours without breaks, lack of availability of life saving drugs, families and relatives of COVID patients running pillar to post trying to search for supplies in order to save their loved ones.⁵

India's second wave of COVID-19 and the challenges posed have been alarming and need strong policy interventions at all levels with immediate, short, and medium to long term priorities, in order to be best prepared for the third wave. The pandemic has also shown us the importance of a good and resilient health infrastructure. The present report outlines key issues emerging in the second wave which may proactively be addressed in the third wave.

⁴Moneycontrol News. (2021, August). State-wise trends, vaccination data, and other key details. Moneycontrol News. <https://www.moneycontrol.com/news/india/in-charts-indias-covid-19-case-count-state-wise-trends-vaccination-data-and-other-key-details-38-7259551.html>

⁵Biswas, S. (2021, May 26). COVID-19: Has India's deadly second wave peaked? BBC. <https://www.bbc.com/news/world-asia-india-57225922>

1.2 Objectives

To assess possible scenarios in the event of a possible third wave and propose solutions for addressing the gaps therein, this study draws from open-source literature and recommendations from the experts during the consultative meetings organised by NIDM. The objective of the present report is to prepare a possible roadmap to prevent and/or mitigate the possible third wave scenario. The report has been divided into three major parts. It builds on lessons from international organisations' reports (WHO, UNICEF, CDRI etc.), government documents and newspaper articles. This is followed by other two sections where key recommendations on children and women-child complementarity have been discussed. The recommendations are the result of the consultative meetings organised by NIDM on COVID-19 and preparedness for the third wave.

1.3 Methodology

The report is a mix of primary and secondary data. The primary data has been drawn from the two consultative meetings of internal working groups organised by NIDM. A draft was prepared on the basis of secondary data- government, international organisations and newspaper reports to assess the second wave situation and the possible third wave scenario. A list of experts was prepared in order to discuss the third wave scenarios regarding children and women. The experts were contacted through emails, office telephone numbers and personal cell phone numbers.

The “First online Consultative Meeting on COVID-19 Third Wave in India: Children’s Vulnerability and Preparedness” was held on the 2nd June, 2021 from 2:30-4:30 pm. It was attended by dignitaries/ domain experts from Gol and State Govts. (Odisha, Karnataka, Kerala, Delhi, Maharashtra, Himachal Pradesh etc.) along with humanitarian organisations such as UNICEF, CSIR, AIIMS, Oxfam, ICMR, Save the Children, World Vision, Doctors Without Borders, Doctors for You and leading Scientists and Academicians. The meeting was hosted by NIDM on the WebEx platform. The key speech was given by Dr. M.C. Mishra, Former Director, All India Institute of Medical Sciences. The meeting was moderated by Professor Santosh Kumar, NIDM.

The “Second Online Consultative Meeting on COVID- 19 Third Wave in India: Differential impact on women-children (Women and Children complementarity)” was organised on 10th June, 2021. It was attended by dignitaries/ domain experts from Gol and State Govts. along with organisations such as UNICEF, Doctors Without Borders, Doctors for You, ICRW and leading Social workers and Academicians from prestigious institutions. The Special Address was given by Ms. Sudha Verghese, Padma Shri Awardee Social Worker followed by Shri AK Pandey (IAS), Chairman-State monitoring committee on Shelter for Urban Homeless. The meeting was moderated by Professor Santosh Kumar, NIDM at the WebEx platform. A completely participatory approach was adopted at the meeting where all participants interacted freely and voiced their opinions.

1.4 Scope and limitations

The report focuses on preparedness regarding children and women-child complementarity issues in

the wake of a possible third wave. The WebEx online platform allowed experts from various regions to join the meeting and share their valuable inputs and suggestions. However, the lack of COVID-19 related data, especially gender and age segregated data has been a recurring challenge for planning preparedness for the special needs and pandemic related issues of such groups. This was also cited by many of the participating experts. Limited time was also a factor in our 2 hour meetings as all the experts would have preferred more time to share their valuable experience and suggestions but had to keep it short due to lack of time.

2 THIRD WAVE SCENARIO

2.1 Third wave: The ticking timeline

Experts warned of an imminent third COVID-19 wave while the nation was still in the middle of a raging second wave. In the first week of May 2021, K Vijay Raghvan, Principal Scientific Advisor to PM, called the third wave of COVID inevitable and that it could cross age groups and may put children at similar risk as adults.^{6,7}

Some experts warned that a third wave could hit within 12-16 weeks, and others are worried about newer mutations that can weaken existing vaccines.

IIT Kanpur has predicted three likely scenarios for the third wave based on the level of unlocking:⁸

As unlocking has started, there is again a lack of COVID-appropriate behaviour due to which Dr. Randeep Guleria, Director, AIIMS said, "Third wave is 'inevitable' and it could hit the country in the next six to eight weeks." However, he added that it depends on how people go ahead in terms of COVID-appropriate behaviour and preventing crowds.

Scenario	Situation	Third wave peak	Severity
1	Back to normal	October	Lower peak than second wave (3.2 lakh per day)
2	Emergence of new and more virulent variants	September	Higher than second wave (5 lakh per day)
3	Strict interventions	Late October	Lower than second surge (>2 lakh per day)

**Does not take impact of vaccination in account*

⁶ET Bureau. (2021, May 5). Third wave of COVID 'inevitable': Government. The Economic Times. <https://economictimes.indiatimes.com/news/india/third-wave-of-COVID-inevitable-warns-governments-scientific-advisor/articleshow/82406582.cms?from=mdr>

⁷Sen, M (2021, May 5). COVID- 19 third wave 'inevitable' but not clear when it will occur: Govt's Scientific Advisor. <https://www.livemint.com/news/india/COVID19-third-wave-inevitable-but-not-clear-when-it-will-occur-govt-s-scientific-advisor-11620211842581.html>

⁸Basu, M. (2021, June 22). 3 likely scenarios for 3rd wave, peak in Sept-Oct, 2-5 lakh cases/day – IIT-K team predicts. The Print. <https://theprint.in/health/3-likely-scenarios-for-3rd-wave-peak-in-sept-oct-2-5-lakh-cases-day-iit-k-team-predict/682257/>

Reuters' opinion survey of 40 experts: arrival by October 2021⁹ has forecasted that the third wave of the COVID-19 pandemic is likely to hit India between July 15 and October 13, 2021. A peak during the first two weeks of September¹⁰ is anticipated, according to Manan Shah, an assistant professor of chemical engineering in PDEU. Similarly, SBI research report named 'COVID-19: The race to finishing line', predicts third wave to hit India in August and expects it to peak by September. The Head of Epidemiology and Infectious Diseases at ICMR, Dr Samiran Panda said "States need to look into their own COVID data and check, at which stage of the epidemic they are in. The third wave could happen around the end of August but it isn't inevitable. We need to be more careful".¹¹

According to Prof Shahid Jameel, an expert virologist, there is no definitive answer to if and when a third wave can hit the country. "All would depend upon how we follow COVID appropriate behaviour as the country opens up, how quickly we can provide good single dose vaccine coverage, and whether a far more infectious variant emerges as a driver."¹²

2.2 Delta-Plus Variant: Driver of the third wave?

The Delta-Plus variant formed due to the mutation in the B.1.617.2 (Delta variant) that drove the fatal second surge in India. This new variant of concern is a sub-lineage of the Delta variant that has acquired a spike protein mutation 'K417N' which is also found in the Beta variant (first detected in South Africa). Three patients have succumbed due to this variant so far in India, one an octogenarian with comorbidities (Maharashtra) and two unvaccinated (Madhya Pradesh).¹³

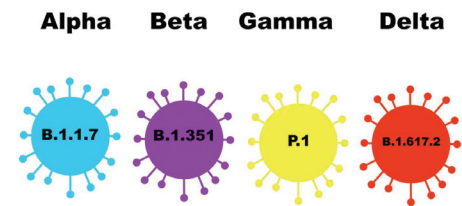


Image: By Sue Rae Edmondson/
Shutterstock

According to the Indian SARS-CoV-2 Consortium on Genomics (INSACOG), a consortium of 28 laboratories tasked with genome sequencing by the Ministry of Health and Family Welfare, Delta Plus variant has three worrying characteristics:

⁹Manral, K. (2021, June 18). India's third COVID-19 wave may arrive by October: Report. Hindustan Times. <https://www.hindustantimes.com/india-news/indias-third-covid-19-wave-may-arrive-by-october-report-101624009841199.html>

¹⁰India Today Web Desk. (2021, July 5). Third wave may hit India in August, peak in September: SBI Research report. India Today. <https://www.indiatoday.in/coronavirus-outbreak/story/third-covid-wave-may-hit-india-in-august-sbi-report-1824076-2021-07-05>

¹¹The Economic Times 'News'. (2021, July 17). COVID third wave may hit India around August end: ICMR's Dr Samiran Panda. The Economic Times. <https://economictimes.indiatimes.com/news/india/covid-third-wave-may-hit-india-around-august-end-icmrs-dr-samiran-panda/videoshow/84496737.cms>

¹²Mascarenhas, A. (2021, July 14). Explained: How worrying is Delta Plus, a variant of Covid-19? The Indian Express. <https://indianexpress.com/article/explained/how-worrying-is-delta-plus-sars-cov2-coronavirus-7380124/>

¹³Biswas, J. (2021, June 26). In-Depth | COVID-19 third wave: Will 'Delta Plus' variant trigger it? Will it affect children more? Experts weigh in. Money Control. <https://www.moneycontrol.com/news/trends/health-trends/in-depth-COVID-19-third-wave-will-delta-plus-variant-trigger-it-will-it-affect-children-more-experts-weigh-in-7091081.html>

- increased transmissibility
- stronger binding in receptors of lung cells
- potential reduction in monoclonal antibody response

Though, there is not enough evidence as of now to designate the Delta Plus variant as more dangerous than Delta, according to NCDC, as of August 2, 2021, this variant has been detected in 70 cases across 16 states from the 58,240 samples that have been sequenced so far in India. As per National Centre for Disease Control (NCDC), these states range from Maharashtra (23), Madhya Pradesh (11), Tamil Nadu (10), Chandigarh (4), Punjab (2), Gujarat (2), Uttar Pradesh (2), Karnataka (3), Kerala (3) and Telangana (2).¹⁴ The Health Ministry has categorised this Delta Plus variant B.1.617.2.1 of SARS COV-2 as a 'Variant of Concern' (VOC) and given directions to states to implement containment measures immediately.¹⁵ Along with India, this variant has also been detected in the US, UK, Portugal, Switzerland, Japan, Poland, Nepal, China and Russia.¹⁶

“The Delta Plus new variant of COVID-19, which has created fresh concerns across the country, cannot be yet linked to a third wave of the pandemic, though possibility can't be dismissed at all”, Dr NK Arora (Chief, COVID-19 Working Group).

2.3 Third wave and children

Many health experts had initially raised concerns about the possibility of a third wave affecting children more adversely than adults. However, recent scientific data suggests otherwise. The Indian Academy of Paediatrics found that there is no biological evidence that the current and the new Delta Plus variant will affect children more disproportionately than adults.¹⁷ The Lancet COVID-19 Commission India Task Force has also concluded that there is no current evidence that an anticipated third wave will target children specifically.

¹⁴The Economic Times 'News'. (2021, July 30). 70 cases of Delta Plus variant found in genome sequencing in India, Lok Sabha told. The Economic Times. <https://economictimes.indiatimes.com/news/india/70-cases-of-delta-plus-variant-found-in-genome-sequencing-in-india-lok-sabha-told/articleshow/84888808.cms>

¹⁵Express Web Desk. (2021, June 27). Delta Plus in India: All about the COVID variant that could trigger third wave. The Indian Express. <https://indianexpress.com/article/india/delta-plus-variant-everything-you-need-to-know-7376896/>

¹⁶Times of India. (2021, June 28). Coronavirus: Can The New Delta Plus Variant Affect People Who Are Fully Vaccinated? Here's What We Know So Far. Times of India. <https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/coronavirus-can-the-new-delta-plus-variant-affect-people-who-are-fully-vaccinated-heres-what-we-know-so-far/photostory/83890464.cms?picid=83890474>

¹⁷Express Web Desk. (2021, May 29). Will Covid third wave hit children hard? Here's what AIIMS director has to say. The Indian Express. <https://indianexpress.com/article/india/will-covid-third-wave-hit-children-hard-7328435/>

A serological survey (March 15-June 10, 2021 from over 45,000 samples across 4 states) by the All India Institute of Medical Sciences (AIIMS) suggests that the hypothesis of a future wave specifically targeting children (two years and above) is unfounded. The study noted a serological prevalence of 55.7% in ages 2-17 years and 63.5% among adults which clearly determines that there was statistical difference in prevalence between adults and children.

But there is a cause for worry if not panic according to public health experts, since the children below 18 years remain unvaccinated in India. Also, the existing pediatric health care facilities are not robust enough to treat children on a large scale. Epidemics have the maximum impact on a country's future, the Lancet COVID-19 Commission India Task Force report also points that though children have milder disease and low mortality rate as compared to adults, those with underlying comorbidities might be at higher risk.¹⁸ Hence, the Central Government has opted for a cautious and proactive approach and directed all hospitals to allocate 20% of their beds for children. Many states have followed this suit with Delhi, Karnataka, and Maharashtra planning to set up special task forces for children and expanding facilities to be more child-friendly. Jesal Sheth, paediatrician at Fortis Hospital, Mulund says "The equipment for children in hospitals has to be paediatric-friendly,". Looking at the specific requirements of children, the Centre and state governments are stressing preparedness to deal with paediatric Covid care. Maharashtra has set up a task force for children whereas states like Delhi and Karnataka are planning one as well.¹⁹

Institutions including the Supreme Court²⁰ and NCPCR (National Commission for Protection of Child Rights)²¹ have also expressed concerns over the third wave and its potential risk for unvaccinated children and sought guidelines from the Health Ministry and bodies like the ICMR for treatment of children.

¹⁸Koshy, J. (2021, June 25). Third COVID-19 wave unlikely to be as severe as second: ICMR. The Hindu.<https://www.thehindu.com/news/national/third-COVID-19-wave-unlikely-to-be-as-severe-as-second-icmr/article34978011.ece>

¹⁹Bhuyan, A. (2021, May 30). To deal with Covid-19 cases among children, India's hospitals need to be differently prepared. Scroll.in.<https://scroll.in/article/995924/to-deal-with-covid-19-cases-among-children-indias-hospitals-need-to-be-differently-prepared>

²⁰2021, May 31. Supreme Court Over Reports On 3rd COVID Wave Impact On Children, Rural India. NDTV.<https://www.ndtv.com/india-news/supreme-court-over-reports-on-3rd-COVID-wave-impact-on-children-rural-india-2453339>

²¹Special Correspondent New Delhi. (2021, May 21). NCPCR seeks guidelines for treatment of children in next COVID-19 wave. The Hindu.<https://www.thehindu.com/news/national/ncpcr-seeks-guidelines-for-treatment-of-children-in-next-COVID-19-wave/article34610141.ece>

2.4 School reopening and third wave

With many states like Punjab, Chattisgarh, Madhya Pradesh reopening the schools and many others planning to do so (Uttar Pradesh, Andhra Pradesh), the looming threat of third wave on unvaccinated children has again become a point of contention across the country. Offline attendance has been kept optional and flexible with guidelines for schools to adhere to all COVID protocols.²²

As per WHO, this decision should be driven by data and the safety measures and must address the concerns of students, parents, caregivers and teachers. A micro district strategy based on the local transmission levels where decisions must be taken at local administration level for opening/ closure of the schools locally.²³ The WHO has proposed the use of following four categorisation of districts depending on local levels and patterns of transmission.²⁴

Category	Transmission level and pattern in district	Strategy for decision making at district level
1 and 2	No cases or Sporadic cases	Keep all schools open and implement COVID control measures
3	Cluster Transmission	Keep most schools open and consider closing schools in the areas witnessing increase in clusters that includes schools
4	Community Transmission (with increasing trends of COVID-19 cases, hospitalisations and deaths)	Require school closure

Dr. Randeep Guleria had also advocated the resumption of physical classes of primary schools provided all the adults involved have full vaccine coverage. He also cautioned “Children mostly have mild infections and some even are asymptomatic, they, however, can be carriers of the infection, which is dangerous for the medically compromised section of society.”

²²Express Web Desk. (2021, August 2). Back to school: List of states where classes are resuming. The Indian Express. <https://indianexpress.com/article/india/covid-pandemic-lockdown-schools-reopening-states-7434929/>

²³Departmental news. (2020, December 11). New checklist supports schools to reopen and prepare for COVID-19 resurgences. WHO. <https://www.who.int/news/item/11-12-2020-new-checklist-supports-schools-to-reopen-and-prepare-for-covid-19-resurgences>

²⁴Dasgupta, Rajib. (2021, July 21). Is this the right time in India to reopen schools? Financial Express. <https://www.financialexpress.com/lifestyle/health/is-this-the-right-time-in-india-to-reopen-schools/2295061/>

2.5 Current status of Vaccination



The emergence of a third wave could be significantly challenged by expanding vaccination but only around 7.6% (10.4 Crore) are fully vaccinated.²⁵ According to the COVID vaccination dashboard of the Ministry of Health and Family Welfare, as of 2 August 2021, 47,85,44, 144 (over 47 Crore) individuals have been administered at least one dose of COVID vaccine.²⁶

According to a recent study done by professors and alumni from Pandit Deendayal Energy University (PDEU) in collaboration with Nirma University, the vaccination rate

of India is currently 3.2% which if does not improve, India can witness 6 lakh cases per day in the next (third) wave. But if the government's proposal to increase this rate by five times (1 crore doses per day) comes to fruition, India will see only 25% of the cases (seen in the Second Wave) during the third wave peak. The same study titled 'Pattern Recognition: Prediction of COVID third wave in India using time series forecasting with deep learning models' forecasts that this ramped up vaccination strategy can contract COVID infections during the third wave peak by 85%.²⁷ Hence, vaccination is the only way out of this pandemic.

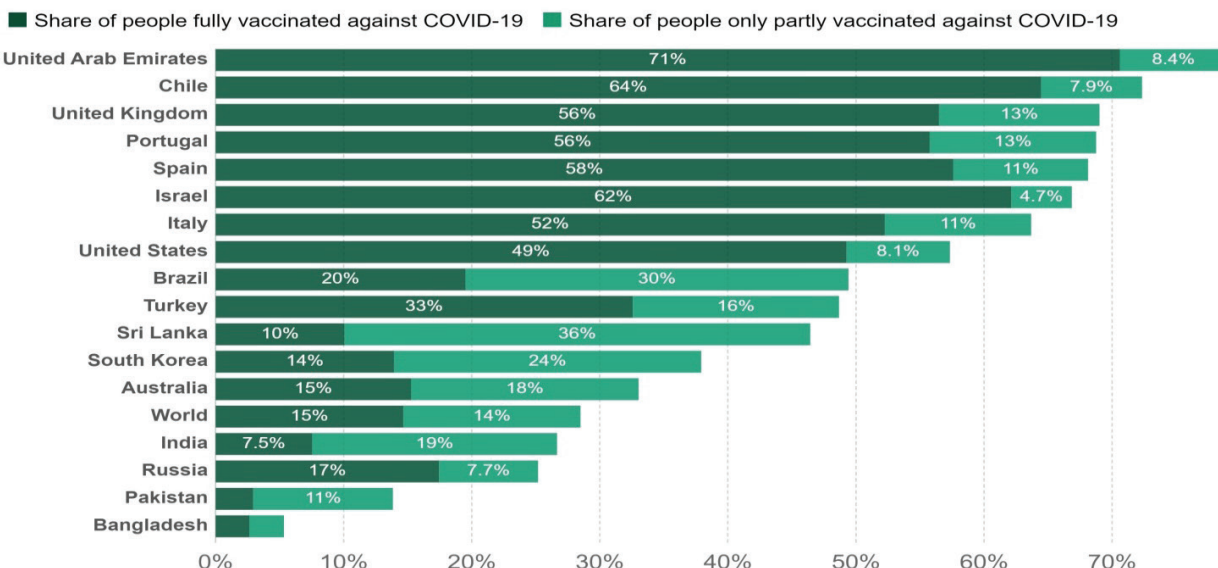
²⁵Hannah Ritchie, Esteban Ortiz-Ospina, Diana Beltekian, Edouard Mathieu, Joe Hasell, Bobbie Macdonald, Charlie Giattino, Cameron Appel, Lucas Rodés-Guirao and Max Roser (2020) - "Coronavirus Pandemic (COVID-19)".<https://ourworldindata.org/coronavirus/country/india>

²⁶Ministry of Health and Family Welfare, Government of India.<https://www.mohfw.gov.in/>

²⁷Mirror Now Digital. (2021, June 28). Govt's mega vaccination drive can cut COVID cases by 85% during third wave: Study. Times Now News.<https://www.timesnownews.com/ahmedabad/article/govts-mega-vaccination-drive-can-cut-COVID-cases-by-85-during-third-wave-study/777010>

Share of people vaccinated against COVID-19, Aug 1, 2021

This data is only available for countries which report the breakdown of doses administered by first and second doses.

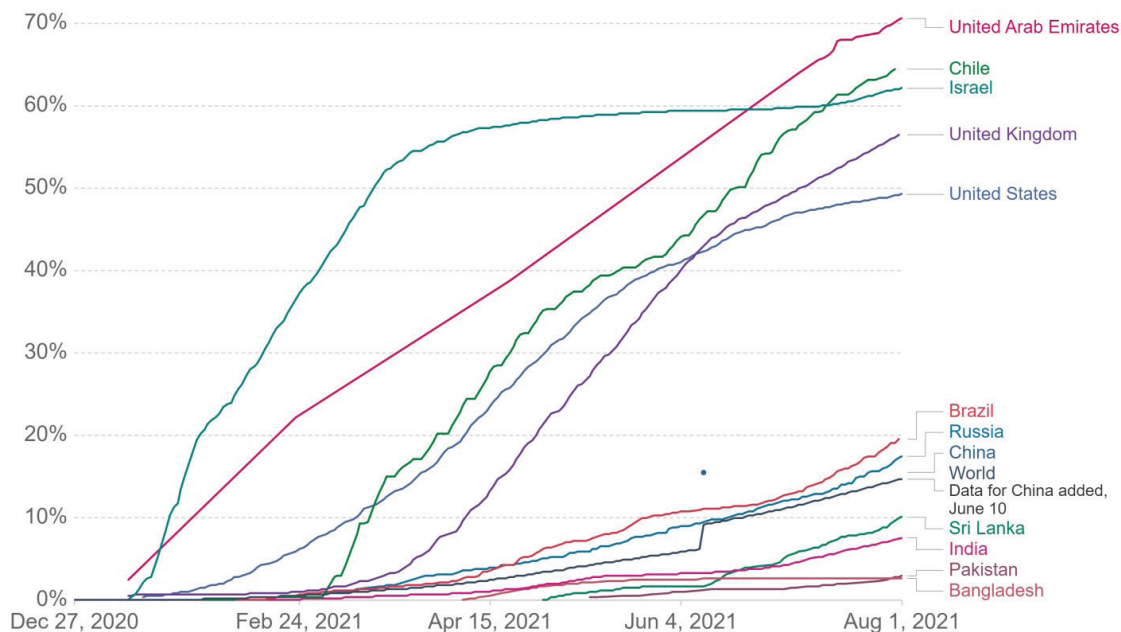


Source: Official data collated by Our World in Data

Figure: Coronavirus (COVID-19) vaccination as of August 1, 2021, Source: 'Our World In' Data

Share of the population fully vaccinated against COVID-19

Share of the total population that have received all doses prescribed by the vaccination protocol. This data is only available for countries which report the breakdown of doses administered by first and second doses.



Source: Official data collated by Our World in Data - Last updated 2 August 2021, 16:30 (London time) OurWorldInData.org/coronavirus • CC BY

Figure: Coronavirus (COVID-19) vaccination as of August 1, 2021, Source: 'Our World In' Data

2.6 Children and vaccination

The government on 27 June 2021 has suggested that COVID vaccination for children (12-18 years) may begin in July or August. According to Dr. NK Arora, Chairman, National Technical Advisory Group on Immunisation (NTAGI), the trials for Zydus-Cadila are almost complete and the government on 26 June 2021 told the Supreme Court that its administration to children from 12-18 years can start soon subject to approval from the Drug Controller General of India.²⁸

As per Dr. Randeep Guleria (Director, AIIMS), Bharat Biotech's Covaxin could be available for children in India around September when data from Phase two and three trials for the age group of 2-18 years is expected. If and when the Pfizer vaccine (the only COVID vaccine being administered to children worldwide) gets approval in India that too can be a viable option for vaccinating children. Vaccinating children would be a milestone in our fight against this pandemic and children can resume learning and can be expected to go back to school.²⁹

2.7 Women and vaccination

According to data from the CoWin portal, out of the total 30.9 crore doses administered since January 2021 till 25 June 2021, 14.3 Crore went to women vis-a-vis 16.7 Crore to men that brings the proportion of vaccine coverage to 856 doses to women for every 1,000 doses for men not matching India's current sex ratio of 924 women per 1,000 men. The largest state in India, Uttar Pradesh, has 42% vaccination of women, West Bengal has 44% female coverage, Dadra and Nagar Haveli (predominantly rural UT) 30%. Only a few states- Kerala and Andhra Pradesh have more vaccine coverage for women than men. Rural women are even more marginally placed vaccination-wise. Reasons for the current gender disparity in vaccine coverage (54% in men and 46% in women)³⁰ include- hesitancy due to rumours about side effects on fertility, menstruation; inaccessibility to technology due to a clear digital gender divide (NFHS-5)³¹; lack of mobility, requirement of husband or male guardian's permission and company to visit vaccination centres and undervaluing of her health by family members among others.³²

"This vaccine gender gap is reflective of the gender inequality prevalent in India, and even internationally," said Bhagyashri Denge, executive director of Asia Pacific and gender transformative policy and practice for Plan International.

²⁸The Times of India. (2021, June 28). COVID vaccine for kids above 12 likely to be available by July-end or August: Govt. The Times of India. <https://timesofindia.indiatimes.com/india/COVID-vaccine-for-kids-above-12-likely-by-july-end-or-august-govt/articleshow/83892012.cms>

²⁹Ray, M. (2021, June 28). When can kids go back to school?: AIIMS director has an answer. Hindustan Times. <https://www.hindustantimes.com/india-news/when-can-kids-go-back-to-school-aiims-director-has-an-answer-101624846206379.html>

³⁰Singh, P.K. (2021, July, 19). Delta variant may soon become the most dominant Covid strain globally: WHO. Mint. <https://www.livemint.com/news/india/delta-variant-may-soon-become-the-most-dominant-covid-strain-globally-who-11626714967415.html>

³¹Sheriff M, K. (2020, December 14). NFHS data shows urban-rural, gender gaps in Internet use. The Indian Express. <https://indianexpress.com/article/india/nfhs-data-shows-urban-rural-gender-gaps-in-internet-use-7103710/>

³²Guha, N. (2021, June 28). India's COVID gender gap: women left behind in vaccination drive. The Guardian. <https://www.theguardian.com/global-development/2021/jun/28/india-COVID-gender-gap-women-left-behind-in-vaccination-drive>

Government's initiative for walk-in and door to door vaccination drives along with approval for vaccination of lactating mothers and pregnant women is a welcome reprieve for closing this very injurious vaccine gender gap.³³



2.8 Recent alarming trends: Global and domestic

2.8.1 Spike in cases in Israel and now in the US

The highly transmissible Delta variant has resulted in the surge of new cases in the US and across the globe - largely among those who are unvaccinated.

Israel with more than 50% population fully vaccinated and over 65% with one dose witnessed a recent surge in COVID cases.

Despite being one of the first countries to re-open, cases surged by 50% in July.³⁴ A New England Journal of Medicine study observed 2.6% breakthrough cases in Israeli healthcare workers. Unvaccinated people have been described as the carrier of infections.³⁵ This has resulted in re-imposition of tighter restriction, indoor mask mandates and reimplementation of COVID protocols.^{36 37}

“A sharp rise in COVID Delta variant cases in Israel shows the need for caution when ending restrictions”, Dr Asher Salmon, Deputy Director General, Ministry of Health, Israel.

The United States of America has recently seen an alarming rise in COVID cases reaching more than 1 Lakh a day. As per the statistical analysis, this current fourth wave had been brewing in the country since April-May with increasing positivity rate, increasing R-value and a near stagnant vaccination drive. Vaccine hesitancy and the highly contagious Delta variant are together being seen as the cause of this wave. States with lower vaccination rates such as Florida, Texas, Mississippi and Louisiana are reporting higher caseload and hospitalisation.^{38 39} The US Centre for Disease Control and Prevention (CDC) has advised mask wearing once again after it had in May relaxed mask mandates for fully vaccinated. This has been done as the preliminary evidence suggests that vaccinated people are acting as carriers of infection.⁴⁰

³³Sharma, N.C. (2021, June 25). Centre approves COVID-19 vaccination for pregnant women. Livemint.<https://www.livemint.com/news/india/centre-approves-COVID-19-vaccination-for-pregnant-women-11624635010798.html>

³⁴DW News. (2021, July 5). COVID-19: Israel sees delta infection surge despite high vaccination rate. DW News. <https://www.dw.com/en/covid-19-israel-sees-delta-infection-surge-despite-high-vaccination-rate/av-58161625>

³⁵Beusekom, M.V. (2021, July 29). Israeli study finds 2.6% COVID breakthrough infection rate. Center for Infectious Disease Research and Policy.<https://www.cidrap.umn.edu/news-perspective/2021/07/israeli-study-finds-26-covid-breakthrough-infection-rate>

³⁶TOI Staff. (July, August 3). Daily COVID cases surge past 3,800; ministers to mull new restrictions. The Times of Israel.<https://www.timesofisrael.com/daily-covid-cases-surge-past-3000-ministers-to-mull-new-restrictions/>

³⁷Lieber, D. (2021, June 25). Delta Variant Outbreak in Israel Infects Some Vaccinated Adults. The Wall Street Journal.<https://www.wsj.com/articles/vaccinated-people-account-for-half-of-new-covid-19-delta-cases-in-israeli-outbreak-11624624326>

³⁸<https://covid.cdc.gov/covid-data-tracker/#datatracker-home>

³⁹Lovelace, B. (2021, July 28). CDC reverses indoor mask policy, saying fully vaccinated people and kids should wear them indoors. CNBC. <https://www.cnbc.com/2021/07/27/cdc-to-reverse-indoor-mask-policy-to-recommend-them-for-fully-vaccinated-people-in-covid-hot-spots.html>

⁴⁰Musumeci, M. (2021, July 28). CDC: The coronavirus could be 'just a few mutations' away from evading vaccines. Business Insider India. <https://www.businessinsider.in/science/news/cdc-the-coronavirus-could-be-just-a-few-mutations-away-from-evading-the-vaccines/articleshow/84809277.cms>

US CDC also recently gave a statement that SARS-CoV-2 is just a few mutations away from evading the present COVID vaccines available globally, indicating the dreaded scenario of **vaccine escape**.⁴¹

2.8.2 Early statistical indicators of third wave in India

2.8.2.1 Slowdown in rate of decrease in COVID infections

There has been a slowdown in the downward trend of daily COVID infections and a slight increase in the positivity rate as per the Ministry of Health and Family Welfare (MoHFW). The new infections are not rising, but they also are not falling fast enough. Secondly, the positivity rate has already reversed its falling trajectory.⁴²

2.8.2.2 Increasing R-value

The R-value, which is the reproduction rate of Covid-19 in India has increased from 0.96 to 1 over the few last days of July and has been flagged as matter of concern by AIIMS.⁴³ R-value measures the number of people that are being infected by one COVID-positive person on an average. The numbers of infections keep rising if the R-value is more than 1. If the value declines, the infection will eventually stop spreading because there will not be enough new cases for the outbreak to continue. Kerala that is reporting the highly daily caseload of COVID infections (over 20,000 cases daily) is currently showing an R-value of 1.11.⁴⁴ This indicates that a third wave is upon us and these indicators must not be ignored.

⁴¹Musumeci, M. (2021, July 28). CDC: The coronavirus could be 'just a few mutations' away from evading vaccines. Business Insider India. <https://www.businessinsider.in/science/news/cdc-the-coronavirus-could-be-just-a-few-mutations-away-from-evading-the-vaccines/articleshow/84809277.cms>

⁴²Singh, Nishant. (2021, July 9). Third wave knocking? India's COVID-19 case trajectory shows worrying trend. TimesNow.<https://www.timesnownews.com/india/article/third-wave-knocking-indias-covid-19-case-trajectory-shows-worrying-trend/782432>

⁴³Kapoor, S.M., Bhasin, S. (2021, August 1). India Coronavirus Cases: Forty-six districts in the country have a positivity rate of more than 10 per cent, the government said on Saturday. NDTV.<https://www.ndtv.com/india-news/india-coronavirus-cases-indias-r-value-inching-up-cause-of-concern-aiims-chief-to-ndtv-2499777>

⁴⁴Scroll Staff. (2021 August, 1). India's Covid R value rising to 1 is a matter of concern, says AIIMS chief. Scroll.in. <https://scroll.in/latest/1001678/indias-covid-r-value-rising-to-1-is-a-matter-of-concern-says-aiims-chief>

2.9 Third wave preparedness: An immediate priority

Therefore, the need of the hour is to prepare for the third wave if and when it hits the nation. Dr. Chandrakant Lahariya, a public policy and health systems expert, suggested COVID appropriate public behaviour, gradual opening of the economy and implementation of protocols at "a localised level" will largely determine the course of the next wave in India.⁴⁵

Taking this in mind, the Tamil Nadu government has already started working on the infrastructure in pediatric wards and sensitising pediatricians to COVID-19 treatment protocols and management.⁴⁶ Talking about the same, Dr Devi Shetty, who heads the expert committee of doctors set up by the Karnataka government to prepare for a possible third coronavirus wave says that vaccination will be the key to tackle the possible third wave. He also talks about addressing and campaigning for vaccination as a lot of people are reluctant to get vaccinated. He added that children, especially those below the age of 12 will be the worst affected as most adults may already be infected or immunised. Therefore, there is a need for a separate treatment protocol for children and also vaccinating parents of young children within the next three months.^{47 48}

Nonetheless, the challenges posed by the second wave are alarming and need strong policy interventions from the immediate, the short, and the medium to long term, in order to be best prepared for the third wave. The pandemic has also shown us the importance of a good health infrastructure.

3 CONSULTATIVE MEETINGS

Looking at the gravity of the problem, NIDM organised two consultative working group committees to cover issues related to the preparedness of the third wave in India. The first online consultative meeting titled "COVID-19 Third Wave in India: Children's Vulnerability and Preparedness" was organised on 2nd June, 2021 and the second working group meeting on "COVID- 19 Third Wave in India: Differential impact on women-children (Women and Children complementarity)" was held on 10th June 2021.

⁴⁵Pandey, V. (2021, June 24). Delta plus variant: Can India prevent third COVID wave? BBC News. <https://www.bbc.com/news/world-asia-india-57577138>

⁴⁶Josephine M, Serena. (2021, June 19). Ready for a third wave, Tamil Nadu ramps up infrastructure in paediatric wards. The Hindu <https://www.thehindu.com/news/national/tamil-nadu/readying-for-a-third-wave-tamil-nadu-ramps-up-infrastructure-in-paediatric-wards/article34862019.ece>

⁴⁷Bhatia, A. (2021, June 17). India Needs To Be Well Prepared For The Third Wave: Cardiologist Devi Shetty. NDTV.<https://swachhindia.ndtv.com/india-needs-to-be-well-prepared-for-the-third-wave-cardiologist-devi-shetty-60334/>

⁴⁸Mathur, B. (2021, May 18). Third Wave Of COVID-19 Likely To Attack Children, Vaccinate The Parents Quickly: Dr Devi Shetty Of Narayana Health. NDTV.<https://swachhindia.ndtv.com/third-wave-of-COVID-19-likely-to-attack-children-vaccinate-the-parents-quickly-dr-devi-shetty-of-narayana-health-59277/>

The following recommendations have been suggested by the participating experts in these meetings. The recommendations has been divided into different sections to make them more precise and focused. Few key points of discussion have been discussed in the beginning of the sections containing recommendations which give a broad understanding of the domain experts' ideas on different topics. The first part includes the recommendations from the first meeting on “COVID-19 Third Wave in India: Children’s Vulnerability and Preparedness”. Many dignitaries/domain experts from Gol and State Governments (Odisha, Karnataka, Kerala, Delhi, Maharashtra, Himachal Pradesh etc.) along with humanitarian organisations such as UNICEF, CSIR, AIIIMS, Oxfam, ICMR, Save the Children, World Vision, Doctors Without Borders and leading scientists and academicians from prestigious institutions participated in the event. The second online consultative meeting on “COVID- 19 Third Wave in India: Differential impact on women-children (Women and Children complementarity)” was also attended by dignitaries/domain experts from Gol and State Governments along with organisations such as UNICEF, Doctors Without Borders, ICRW and leading Social workers and Academicians from prestigious institutions. (list of experts in Annexure 7.2)

3.1 FIRST CONSULTATIVE MEETING:

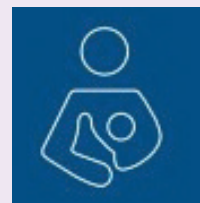
COVID-19 Third Wave in India: Children’s Vulnerability and Preparedness



Picture credit: Atul Loke for TIME

3.1.1 Keys points of discussion

- No biological basis for any variant that selectively affects children.
- Child care and safety is incomplete without the safety of the entire family, hence focus on family and community health care to be prioritized.
- The policies should take note that ‘children’ are not a homogeneous group and the policies cannot be the same for different groups of children. Therefore, special programmes and policies for different groups of children such as urban, rural, street and special needs children are required.
- Indirect impacts of the pandemic on children must be considered and planned for. These include services like routine immunization, nutrition, education etc.
- Access to education and continuity of learning should be ensured. The consequences of not addressing this will be profound for many generations to come - in terms of workforce, productivity, public health, development and economy for preparedness as well as response for children.
- Need to stay on guard even when cases go down in order to prevent the possible third wave.
- Lack of health care workers at community and village level.
- Need to ramp up response for rural India.
- Multi-ministerial and multi-departmental coordination and streamlining are required.



3.1.2 Recommendations

- ❖ **Awareness programmes** which make people understand that children are different from adults and their needs are different. Teachers and guardians should be trained as to what to do if a child is infected. Child care and safety is incomplete without the safety of the entire family, hence focus on family and community health care to be prioritised.
- ❖ **Vaccination** among young children and children with comorbidities should be an immediate future priority. However, vaccination in children needs to be done with a lot of caution. There needs to be solid peer-reviewed clinical data before vaccinating children against COVID with the vaccines that have been given Emergency Use Authorisation (EUA). Teachers and school staff must be vaccinated as essential workers throughout the country.

- ❖ Identification of need for **rehabilitation** of COVID affected children- both short as well as long term. Hospitals should be well equipped with a **comprehensive child care model**. Example: If a child is positive then there should be a place where hospitals can accommodate the parents as well and vice versa. Trained paediatric health staff to take care of children. It should have algorithms such as level 1, 2, 3 and 4 (as per the severity of the patient).
- ❖ **Protocols** for children with comorbidities, malnutrition, disabilities and special needs to be developed and publicized widely. Detailed child protective COVID 19 appropriate behaviour protocol needs to be listed for parents/caretakers, doctors and health care professionals.
- ❖ Special provisions for **parent-child hospital accommodation** facilities should be in place. The hospitals and care centres should have provision for the stay of parents with COVID infected children.



Photo Credit: The Indian Express

- ❖ **Shelter facilities** for both COVID suspects and COVID affected children. It should also have a special task force and welfare schemes for children.

- ❖ **Children with Disability** are the most excluded among children during this pandemic. Hence, it is important that the Department of Social Justice and Empowerment is also brought on board.
- ❖ Everyone dealing with a child in any setting must know basic psychological first aid so training regarding this must be provided. **Child and Adolescent Mental Health (CAMH)** to be integrated at PHC level. Mental health care provisions to be made available for children outside the formal system- children on the streets, homeless or displaced children. Mental health support to be given to children with disabilities and their caregivers. Ensuring that resources for child support are neither urban-oriented nor mal-distributed. Grief counseling for kids and families should also be prioritised.
- ❖ The schools are not open and a whole host of children are missing out because a lot of poor children do not have access to smartphones or internet facilities. Lack of face-to-face interaction has resulted in lack of learning. Majority of the children in the country, especially in rural areas, are dependent on the **Public Education System**. Hence,
 - The governments should ensure that they provide learning materials such as textbooks and stationery and ensure access to the children even in the remotest parts of the country.
 - There should be innovative/ alternative/ blended ways of teaching and learning such as through story books in vernacular languages, arts and crafts along with life skills learning. This will support children to continue learning at home.
 - Moreover, school is not just for learning but for other support too, such as Mid-Day meals etc. Hence, holistic measures are needed to be taken.
 - There is a need to have policies to include rural children in online education.
 - Many girls lose out on the teaching-learning process due to existent gender inequality in the society so special provisions regarding this have to be carved out.
 - Training of teachers for better communication through available and accessible technology along with specialised skills to reach out to students with special needs and those in rural India.

3.2 SECOND CONSULTATIVE MEETING: COVID- 19 Third Wave in India: Differential impact on women-children (Women and Children complementarity)



Photo Credit: The Economic Times



Photo Credit: UNICEF

3.2.1 Keys points of discussion

- ❖ Sensitivity among the people and institutions regarding gender, socio-economic status and health has to be on the priority list.
- ❖ Zero tolerance to sexual harassment, violence and abuse.
- ❖ Vaccination should not be stratified by gender, location and socio-economic status.
- ❖ Identification of children who need to be vaccinated as a priority (ex: young children, children with comorbidities).
- ❖ Hierarchical structure for the referral system.
- ❖ School education, social groups and nutrition are critical for the development of children and to ensure that these services continue to be provided to children.
- ❖ Data on 'missing pregnant women' and 'missing children' as there has been a record reduction in the number of pregnant women and children between the ages of 0-1 years.
- ❖ Post COVID recovery plan/healthcare needs to be on priority.
- ❖ Impact on girls is greater than boys because of gender inequality. Also, due to extra care burden while in quarantine or home isolation, many girl children have had to drop out. The drop outs and loss of income in the family has further morphed in to an additional crisis of increase in child marriages and hence, physical, emotional and sexual abuse of women.



3.2.2 Recommendations

Special focus on Women and children health: Women and child issues cannot be seen as mutually exclusive and it was very much reflected in the recommendations from the meetings.



❖ Mother and Child care:

- Prevention of neonatal mortality due to separation from the mother who is a COVID suspect/patient.
- Special medical equipment for reproductive, maternal, new-born and child health such as paediatrics ventilators.
- Pregnant women to be treated as a priority group and ante-natal as well as postnatal, including mental health care to be ensured to all women through ASHA workers, ANMs, tertiary and referral services. Vaccination for pregnant women should also be a priority as these women are more vulnerable once they test COVID positive.

❖ **Sexual and Reproductive Health and Rights (SRHR)**-menstruation, contraception, safe termination of pregnancy, pregnancy and delivery services along with medical facilities for addressing sexually Transmitted Diseases (STDs) and Reproductive Tract Infections (RTIs) for adolescent girls and women at all stages.



❖ **Protection from domestic violence and abuse** at homes to be part of the home care model.

- Institutions like One Stop crisis centres need to be strengthened to address issues of violence against women.
- Training of workers on ground that can help recognise abuse and violence in both public as well as private spaces. Equipping these workers with tools and techniques to deal with such cases and facilitating them to access support (medical, legal, psychological etc.) and alert concerned authorities.

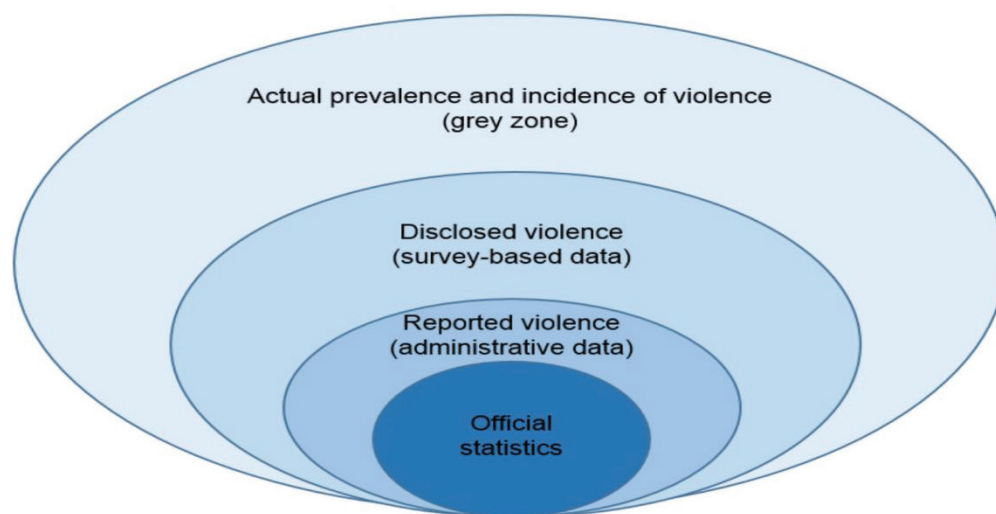


Figure: Gap between actual incidence of violence against women and official data,

Source: European Institute of Gender Equality (EIGE)

- ❖ **Livelihood rehabilitation and support:** India has one of the lowest women's labour force participation rates and many women lost jobs during COVID as well, and data shows that they are the ones who are left out.
 - Concerted efforts and commitments from the government and private sector need to be made to ensure women are able to get back to work.
 - Government must create support systems for child care, expand the maternity leave to parental leave for both women and men to level the playing field and ratify the ILO conventions and implement it.
- ❖ **Special focus on the vulnerable among the vulnerable:** Women and children are not a homogeneous group as their status depends on a lot of factors such as caste, religion, ethnicity, class and region. These stratifications make them even more susceptible to certain risks (both intrinsic and extrinsic), hence, we need to cater to these women and children placed unequally, through specially designed interventions.
 - Care and support facilities for **institutionalised women and children** in shelter homes, detention centres, prisons, mental hospitals, old age homes etc, to be carefully charted out. These institutions are to be brought under regular inspection and surveillance to ensure the safety of its residents.



- **Single women/ Single mothers/ Female Headed Households (FHH)**- special support system to be created for economic, food and nutrition, health and social security coverage for COVID widows and orphans, abandoned women and children and female headed households who are at additional risk of poverty and exploitation due to loss of livelihoods, informal nature of work, trafficking and abuse.
- **Migrant women, homeless women, transgenders and sex workers** have lost their livelihood accompanied with loss of housing, food security and access to health care during the COVID times. Also, lack of documentation should not become a barrier in accessing health care (testing and treatment) and vaccination for these women.
- ❖ **Explicit attention to the female frontline workers**-nurses, ASHAs, ANMs, Aanganwadis, Safai Karamcharis etc.
 - There is a need to regulate their wages, working hours, ease their burden, and capacitate them to deal with the evolving COVID situation.
 - There should be 100% vaccination of these female frontline workers as an immediate priority.
 - There is also a need to create availability and accessibility of PPE kits, sanitisation and first responder kits for these ground workers.

4 OVERLAPPING RECOMMENDATIONS FROM BOTH THE MEETINGS

In case of any public health crisis such as the current COVID-19 pandemic, an individual's safety and health depends on another's and that of the whole community. This is even truer when concerning women and children as they are most vulnerable and are seen as dependents and passive actors of our society. Hence, in order to prepare for their overall care, **general family and community health needs to be strengthened** as well. This was a consensus found in both the meetings regarding future preparedness for the possible third wave.

- ❖ **Mental health and psychosocial care:** Lack of mental health professionals- psychiatrists, clinical psychologists, psychotherapists for addressing the mental health crisis that has engulfed India needs an urgent plan for completing the Mental Health Pyramid.

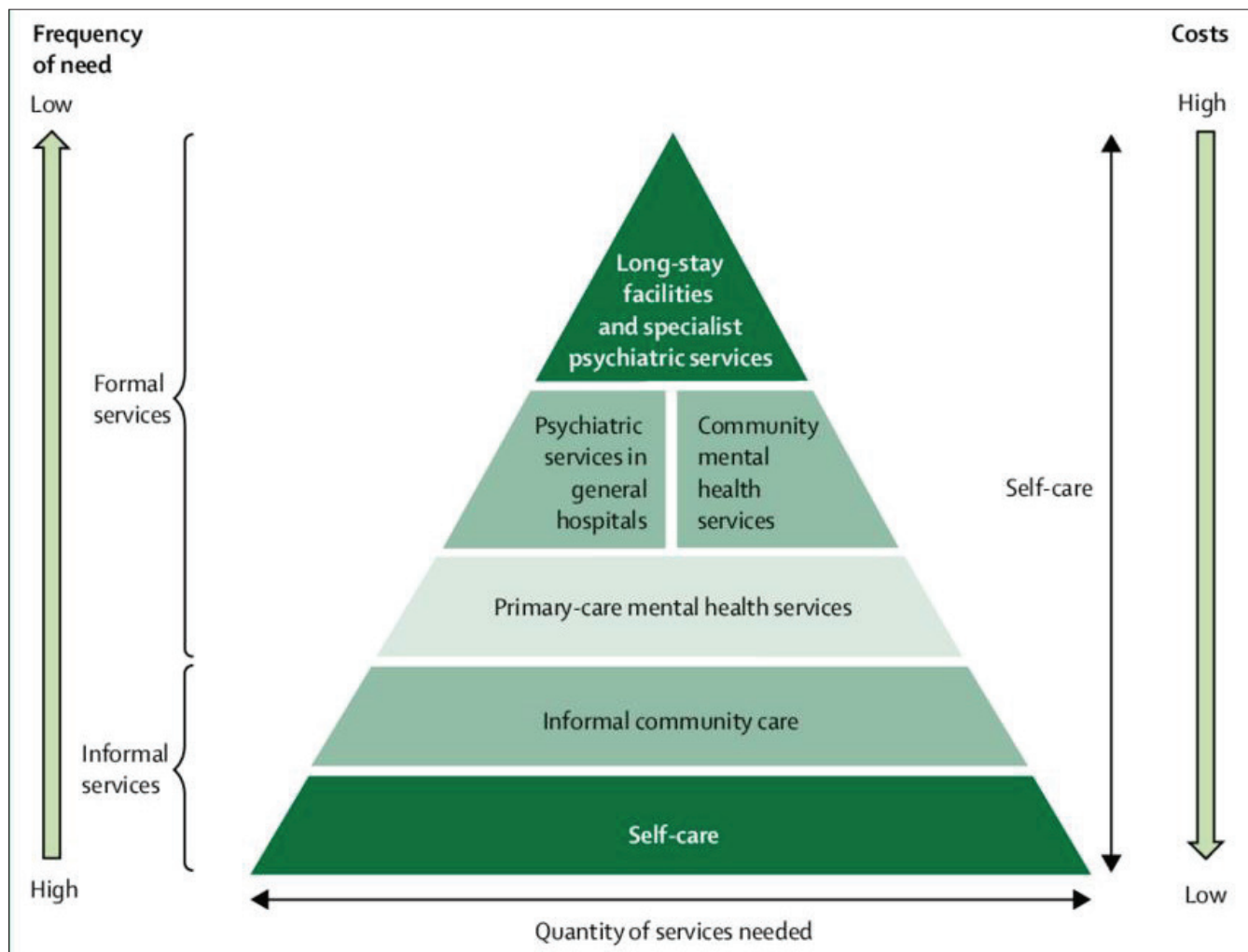


Figure: Mental Health Pyramid, Source: World Health Organisation (WHO)

- This pyramid can be supported urgently in the short term by- peer support groups, helplines, mental health social workers, mental health nurses, psychological first aid workers etc.
- Training of new cadres of mental health workers (for suicide prevention, psychological first aid, risk and harm prevention) by running courses through colleges and training institutes.
- For pre-existing mental illnesses and conditions- availability, accessibility and affordability of medicines and therapeutic interventions to be ensured.
- Sensitive handling of calls informing about death of loved ones and ensuring that the bereaved has access to a support system and counselling services if need be.



- Grief counselling and emotional support for frontline workers- doctors, nurses, ward boys/ girls, crematorium workers, ASHAs, volunteers etc, especially those who are at the village level.
- Helplines have to be linked with medical care, counselling services and other support services. Child lines could be used wisely to access counselling services.
- Developing a cadre of trained psychosocial support providers.

❖ Information and Communication:

- Public health messaging and communication with respect to COVID Appropriate Behaviour (CAB) and vaccination should be based on community engagement and must address specific concerns of the community members, especially in rural areas. Risk communication must aim to create awareness by reasonably explaining the reasons behind the do's and don'ts so that people are able to follow them by using logical reasoning rather than blindly following directives and guidelines.
- To have a good app for smartphones. There are many households without smartphones or limited internet so SMS, television and radio can be used for communication purposes.
- Preparing short films to sensitize children- for COVID Appropriate Behaviour (CAB) along with daily and regular messaging through community radio could be used for dissemination of information. Additionally, Common Service Centres (CSCs) and Anganwadis could be used for sensitizing children and immediate caretakers.
- Frontline workers should be capacitated with necessary risk reduction messages as well.
- Community level engagement-for following COVID precautions (do's and don'ts), reporting symptoms to local health workers, COVID home care, vaccine hesitancy. Capacity building of doctors, nurses and community workers- Anganwadis, ASHA, ANMs etc. to manage children with COVID. Training programmes to be conducted and each Panchayat should be involved.



Photo Credit: The wire

- Awareness programmes regarding COVID among rural people with special focus on Dalit and Mahadalit communities who have largely remained at the periphery of COVID response.
 - Special vaccination awareness team has to be formed in order to educate people about vaccination and alleviate their fears and apprehensions by using specialised and innovative tools and techniques.
 - There is a need to create a web of COVID isolation and COVID care centres in rural areas as they lag far behind urban centres in COVID care facilities. This will also prevent crowding at urban centres and thereby also localise the spread of COVID.
- ❖ **Transportation:** Transportation has been one of the major concerns during the second wave. There was a dearth of ambulances so this has to be taken care of in order to prepare for the possible third wave.
 - Rural India has to be well connected with the hospitals and ambulance service along with well-trained paramedic personnel.
 - Special service for pregnant women and children.

❖ Training and capacity building:

- Training for COVID case management (to all healthcare workers) should become a priority while cases are low so as to be ready for the next wave.
- **Upskilling**- the student nurses and nurses shall be updated with new COVID treatment guidelines from time to time. The student nurses shall work under the supervision of the Nursing Officer or the Nursing faculty.
- Abridged programmes for training doctors and nurses through which the gap created by lack of manpower can be filled in the short term.

❖ Effective and efficient Data Management:

- Scientific collection, organisation, analysis and presentation of quality data pertaining to serological surveillance, case fatality, immunisation. The data to be used to forecast requirements like beds, oxygen, drugs etc, and plan effective preparedness strategies.
- Data collection and dissemination-There is an urgent need to assess and understand the overall impact of the COVID-19 pandemic and associated lockdown on women and children across India.
 - This pan India survey should be conducted by the government and supported by civil societies. There is a need to conduct more consultation (regional state wise) to collect data.
 - Gender segregated data across, testing, treatment, mortality etc, must be collected and put in the public domain.
 - Reporting of cases of infected children under a proper action plan. Coordination between the scientific groups regarding the on-going research regarding COVID and vaccination.
 - Availability and transparent sharing of the data to the public on COVID caseload increase, genome sequencing of variants and effectiveness of the vaccines as a good public health policy is based on a good data set.
 - Data collection of patient vitals, radiological images, sequencing data, serological survey data and vaccination data etc, all bound to one ID say Aadhar card and the data should be anonymized to another cryptic ID to de-identify the patient and then make it public to researchers, not for profit organizations etc. for better evidence based pandemic management.
 - There is a need for timely sharing of local epidemiological data to enable quick and targeted response to contain the virus. Utilize public health professionals to engage in field epidemiology.

- The relief and rehabilitation of COVID affected women and children to be devised and guided by gender segregated data across age, region, class and caste.
- ❖ **Need to ramp up health facilities in rural India along with tier-I and tier-II cities** in order to contain the further spread of the disease. This can be done through:

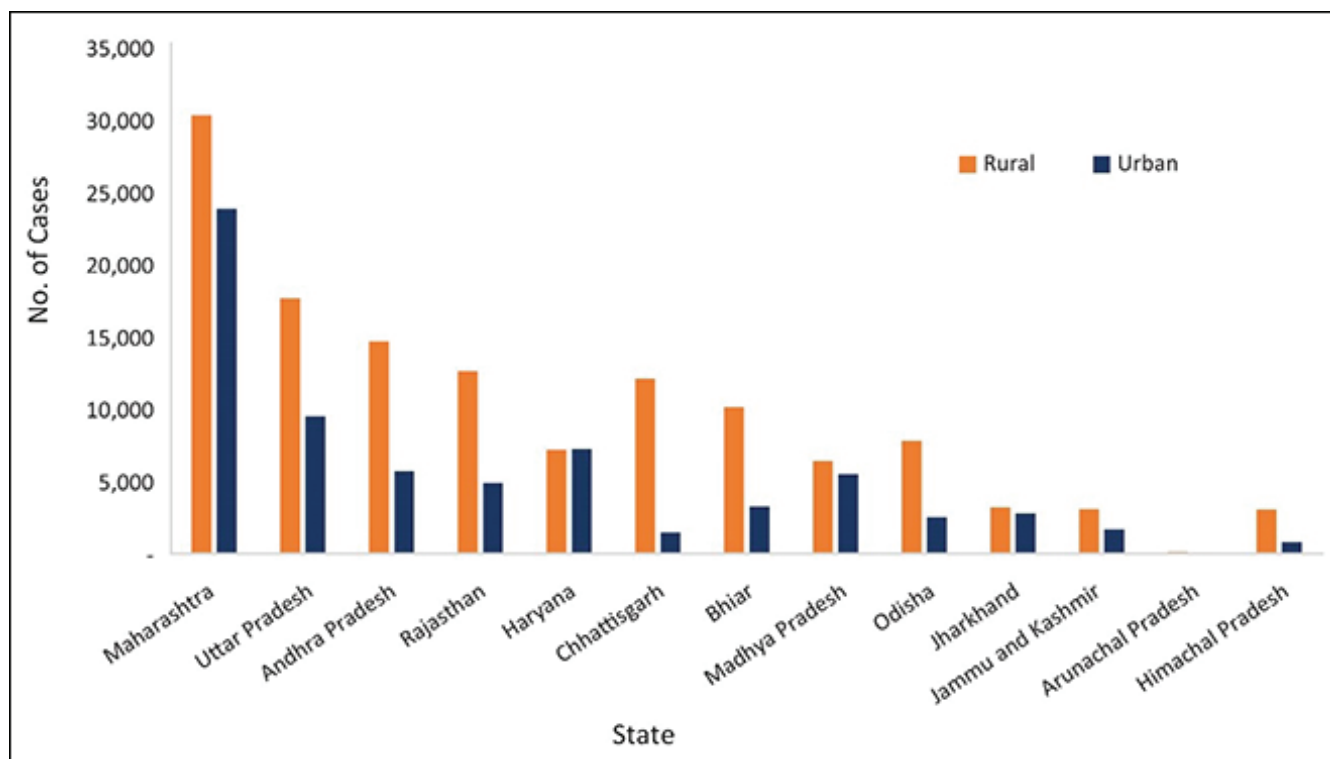
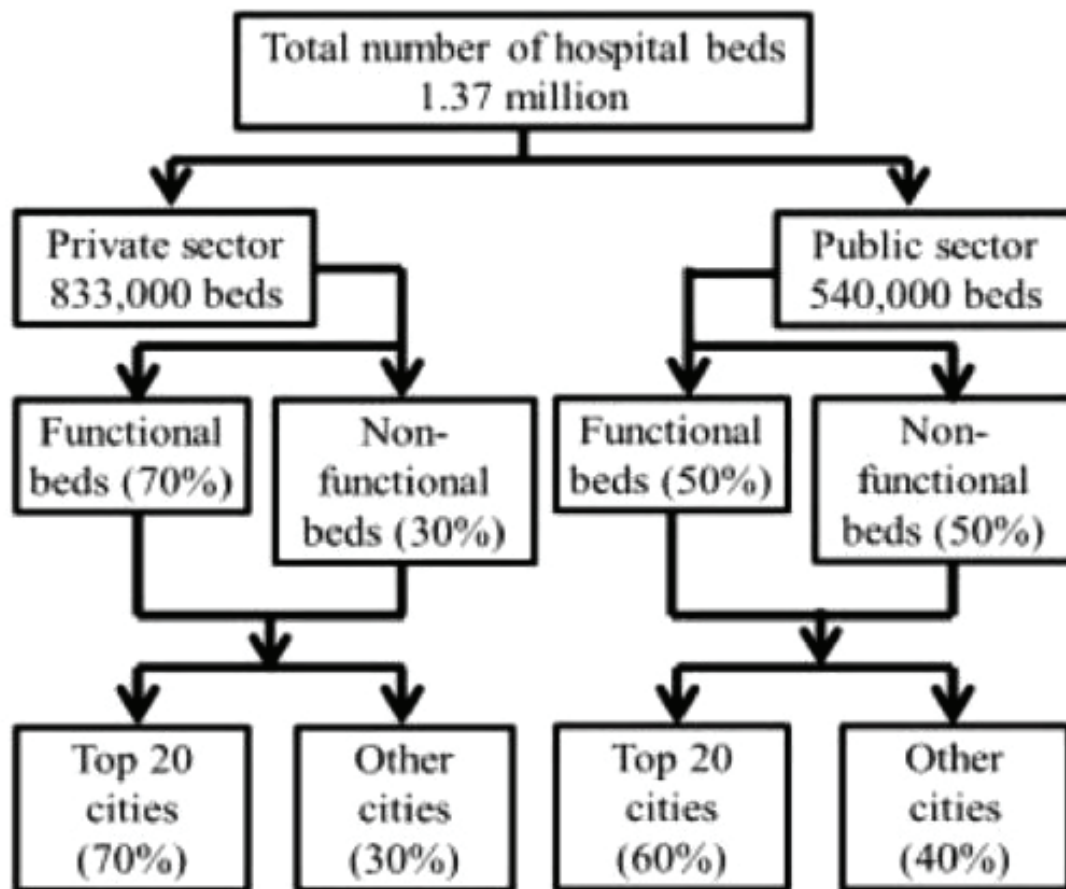


Photo credit: Times of India

- Effective implementation of public health principles (test, isolate and treat) down to the taluka and village level.
- Vacant positions at PHC/ CHC level to be filled on priority basis, paediatric care to be available at CHC/ PHC level.
- Strengthening the CHC/ PHC not only with oxygen but also providing better quality of bed, water, food, toilets etc.
- **Infection, Prevention and Control (IPC)** measures are critical especially in the rural areas as the second surge witnessed COVID wards with staff without PPE kits, along with patients' relatives inside those COVID wards at a visibly high risk of catching infections while caregiving.



Distribution of available hospital beds in India (20 May 2021), Source: The Indian Express

- ❖ **Focus on holistic family care-** which in turn ensures that children are safe within families. **Good home care model-** that doesn't just mean home isolation and doctor consultation but a responsive system wherein the COVID suspects/patients are in constant communication with health workers. Test results and vitals must be tabulated and monitored by the concerned doctor and regular updates to be given to the patients and their families. This will also help the doctors to estimate/ gauge the emerging/ potential needs of their patients like oxygen, antiviral drugs or any other lifesaving facility which should then be communicated to the authorities so that they can be made available without any time lapse.
- ❖ COVID guidelines should be clear as to how to **integrate COVID care in the regular health programs** to ensure that patients with severe diseases do not suffer. Due to COVID, most of the hospital facilities, especially in the rural areas, are focusing only on COVID; the rest of the programs are not functional. This creates other health problems like pregnant women delivering at home, NCD patients are lost of follow up, same for malnourished children, so the guidelines should be very clear for integration of COVID care in the regular services provided in the health facility.

- ❖ **Structured coordination of the overall response** according to technical pillars (which may involve multiple sectors):
 - Case management; Diagnostics & Research; Infection Prevention & Control; Risk Communication & Community Engagement; Vaccination.
 - Developing plans for isolation centers at community level.
 - Step up community medicine physicians to manage mild cases across the spectrum.
- ❖ **Ensuring food security** especially among Dalit and Mahadalits. Loopholes in the Public Distribution System (PDS) have to be immediately taken care of and food relief programmes to be strengthened- dietary and nutritional requirements of women and children to be the basis for the quality, quantity and composition of ration distribution.



Photo credit: The Economic Times

- ❖ **Coordination among agencies-** Government (Central, State, District and local level), private sectors, NGOs, faith based organisations, RWAs and other CSOs. There should be a convergence of various departments to issue concrete uniform guidelines rather than multiple guidelines from different departments. This will eliminate duplication of work and bring more efficiency.

5 HOW CAN NIDM SUPPORT

The objective of this document is also to make NIDM available recommendations on third wave preparedness in one easy-to-access document for NIDM faculty and professionals, policy-makers, programme managers and health professionals. NIDM as the nodal training and research institution for disaster management in the country can harness its resources to contribute in the preparedness efforts for the third wave in the following manner:

- ❖ NIDM can work towards capacity building, human resource development, training of trainers and policy advocacy.
- ❖ Known for being at the forefront in capacity building for Disaster Risk Reduction (DRR), NIDM will play an important role in risk communication and community engagement. Through its online content and process trainings, webinars and other events, NIDM is already participating in sensitisation of people from varying backgrounds regarding CAB, coping strategies for dealing with challenges of the pandemic, role of different stakeholders etc.
- ❖ NIDM has also been playing an active role in creating strategic partnerships with various ministries and departments of the Central, State and local governments, academics, research, technical organizations and CSOs to help develop resources to raise awareness to contain the spread of COVID in the country.
- ❖ The special cooperation with the Ministry of Women and Child Development, NDMA, NDRF, Department of Social Justice and Empowerment and Department of Public Relations will play a vital role in documentation, management, development and dissemination of national level policies and guidelines relating to the current pandemic situation.

6 CONCLUSION

We have just stepped out of a fatal catastrophe in the form of a second surge that has alarmed scientists globally and domestically alike, with many countries gearing up to prepare for a subsequent wave after witnessing the COVID aftermath in India. But, we seem to have again thrown caution to the wind with markets buzzing with crowds, zero social distancing, opening of offices and abandoning of masks. As the famous saying goes, *'Those who do not learn from history are doomed to repeat it'*, hence, this lackadaisical attitude and 'business as usual' behaviour will bring the third wave sooner than later as suggested by experts. Therefore, the situation is already dire, and might worsen due to lack of adherence to COVID Appropriate Behaviour (CAB), insufficient medical facilities and lagging vaccination.

The vaccination is hailed as the only light at the end of this very dark tunnel but the recent cases of COVID among vaccinated people (breakthrough cases) are an alarm that vaccines are not enough. We need to follow COVID Appropriate Behaviour (CAB) together with strengthening of our medical infrastructure. This requires immediate attention for when the country witnesses a third wave: public medical infrastructures are weak with severe shortages in qualified medical staff especially for children, then there is a huge gap between rural and urban India. The vaccine rollout (deemed as the only way out of this pandemic) has also been slow as compared to other countries (India's 7.6% vaccination rate vis-a-vis US's 50%). It is the absolute responsibility of the government to provide security and safety to its citizens even more so during this pandemic, a scientific approach coupled with focused public spending must be at the anvil of the government's strategy. This will not only help to mitigate the current impact, but also increase readiness for the next wave.

Therefore, the consultative meetings strongly recommended: a home care model, ramping up of vaccination especially for parents, nurses and other front-line workers, immediate recruitment of healthcare staffs and medical facilities for children, guarantee food security especially for the vulnerable amongst vulnerable, strengthen the community level engagement and risk awareness and communication, zero tolerance towards sexual abuse of children and women and raising awareness through a massive public outreach campaign. There is a huge gap between urban and rural India in terms of awareness, digitisation and medical facilities. It seems like the pandemic outbreak has only exacerbated social inequities and highlighted shortcomings of our society. Hence, the government must prioritise rural India and vulnerable groups in order to cope with the ongoing pandemic. This special report also outlines the women-children complementarity, suggesting that a child's inclusive growth largely depends on that of the mother.

7 ANNEXURE

7.1 ANNEXURE 1: MHA ORDER No. 40-3/2020-DM-I (A) dated 29.06.2021

No. 40-3/2020-DM-I(A)
Government of India
Ministry of Home Affairs

North Block, New Delhi-110001
Dated 29th June, 2021

ORDER

Whereas, an Order of even number dated 29th April 2021, was issued to ensure compliance to the containment measures for COVID-19, as conveyed vide Ministry of Health & Family Welfare (MoHFW) DO No. Z.28015/85/2021-DM Cell dated 25th April 2021, which was further extended for a period upto 30.06.2021 vide an Order of even number dated 27.05.2021;

And whereas, considering the need for containment of COVID-19 cases across the country, MoHFW vide DO No. Z.28015/85/2021-DM Cell dated 28th June 2021, has issued an advisory to all States and Union Territories (UTs), for implementing targeted and prompt actions for bringing the pandemic under control;

Whereas, in exercise of the powers under section 6(2)(i) of the Disaster Management Act, 2005, National Disaster Management Authority (NDMA) has directed the undersigned to issue an order, for containment of COVID-19 in the country;

Now therefore, in exercise of the powers, conferred under Section 10(2)(l) of the Disaster Management Act 2005, the undersigned, hereby directs the State/ Union Territory Governments and State/ Union Territory Authorities to consider implementation of targeted and prompt actions for COVID-19 management, as conveyed vide aforesaid MoHFW advisory dated 28.06.2021, as per **Annexure-I**, until 31.07.2021. States/ UTs, will take the necessary measures, under the relevant provisions of the Disaster Management Act 2005. It is further directed that:

- (i) The National Directives for COVID-19 Management, as specified in **Annexure II**, shall continue to be strictly followed throughout the country.
- (ii) All the District Magistrates shall strictly enforce the above measures. For the enforcement of social distancing, State/ UT Governments may, as far as possible, use the provisions of Section 144 of the Criminal Procedure Code (CrPC) of 1973.
- (iii) Any person violating these measures will be liable to be proceeded against as per the provisions of Section 51 to 60 of the Disaster Management Act, 2005, besides legal action under Section 188 of the IPC, and other legal provisions as applicable.


Union Home Secretary

and, Chairman, National Executive Committee (NEC)

To:

1. The Secretaries of Ministries/ Departments of Government of India
 2. The Chief Secretaries/Administrators of States/Union Territories
- (As per list attached)



राजेश भूषण, आईएएस
सचिव

RAJESH BHUSHAN, IAS
SECRETARY



ANNEXURE-I

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare
D.O No. Z.28015/85/2021-DM Cell
28th June 2021

This is in reference to my earlier DO letter of even number dated 25th April, 2021 wherein Ministry of Health and Family Welfare had shared with all States/UTs an implementation framework for intensive action and local containment in specific and well defined geographic units, to break and suppress the chain of transmission of SARS COV-2. This was also later reiterated by the Ministry of Home Affairs and orders regarding the same were issued under the DM Act 205 vide letter no. 40-3/2020-DM-I(A) dated 29th April 2021.

2. With a rise in COVID 19 trajectory across the country in April and May 2021, many States and UTs have undertaken restrictions and containment measures as per the aforesaid implementation framework. As a result, the trajectory of COVID 19 pandemic in the country is presently showing a steady decline.

3. In view of the declining number of cases being reported many States have initiated the implementation of relaxation measures. In this context it is critical that the lifting of restrictions/providing relaxations be carefully calibrated with continued focus on containment efforts to curb the spread of infection.

4. In order to bring uniformity in implementing graded restriction/relaxation measures for COVID 19, the need for following the framework earlier shared with the States for either imposition of restrictions or allowing relaxations based on the burden of disease and strain on healthcare infrastructure still remain important. Prompt and targeted actions need to be implemented by the States as detailed below:

A. Guiding Principles

- Monitoring of cases with districts as administrative units be done on a regular basis. Necessary action for containment and health infrastructure upgradation be done, by further micro analysis based on clusters of cases at the district level
- Case positivity calculated based on total positive cases vis-a-vis samples tested during the week is one of the prime indicators of the spread of infection in a district. Higher case positivity would imply the need for stringent containment and restrictions so as to control the spread of infection
- Similarly, each district needs to analyze bed occupancy (oxygen and ICU beds) vis-a-vis the available health infrastructure to ensure that it doesn't get overwhelmed and seamless patient admission and follow up can be done. Higher bed occupancy is an indicator that the district needs to undertake specific measures to upgrade the available beds while focusing on containment activities equally vigorously. It is important to emphasize that a lead time is required to upgrade health infrastructure (a month or more) and hence districts need to plan such upgrades after having duly analyzed the case trajectory on a regular basis

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Tele : (O) 011-23061863, 23063221, Fax : 011-23061252, E-mail : secyhw@nic.in

: 2 :

- In view of the above, for prioritizing districts which need intensive follow up, States may continue to utilize the classification of risk profile of districts as already communicated by Ministry of Health and Family Welfare on 25th April 2021. Accordingly:
 - i) States/UTs may identify districts which require highest level of restrictions
 - ii) Remaining districts may be allowed higher degree of relaxations based on **lower weekly case positivity or a relatively low Bed occupancy (Oxygen and ICU beds) rates.**
 - iii) District with **high weekly case positivity or a high Bed occupancy (Oxygen and ICU beds)** as **detailed above**, would need intensive monitoring and hence State may consider appointing a senior officer from State headquarter as the Nodal Officer for these districts.
 - iv) **District Nodal Officer** will work in coordination with District Collector /Municipal Commissioner to identify cluster of new cases and ensure implementation of required containment activities including intensive action in areas reporting higher cases
 - v) Restrictions once imposed will remain in force for a minimum period of 14 days
 - vi) In remaining areas of the district not under containment action, clearly defined relaxations/restrictions may be provided.

B. Monitoring mechanism

- State government may consider monitoring the status of classification parameters on a weekly basis and ensure their wide publicity so as to inform community at large and obtain their support in management of Covid-19 while restrictions are imposed or relaxations are allowed.
- While positivity rates and bed occupancy rates are vital criteria that need to be monitored for selection of high focus districts requiring intensive public health action, States/UTs shall also regularly monitor districts with higher numbers of active cases per million population as it is an important indicator to predict need for upgrading health infrastructure and logistics so as to manage the cases.

C. Continued focus on 5-fold strategy for effective management of COVID-19

- COVID-19 is an ongoing challenge and hence it is important that States continue working on five pillars of COVID-19 Management i.e. **“Test-Track-Treat-Vaccinate and adherence to COVID Appropriate Behavior”**.
- Early identification of cases is important for curbing the spread, and for this **adequate testing is crucial**. RT-PCR machines and sufficient kits to ensure required level of testing should accordingly be maintained (both RT-PCR and RAT) in all districts.

: 3 :

- **Tracking and tracing** through active case search by special teams and contact tracing and screening should be undertaken proactively.
 - In addition to **following Clinical Management Protocol**, States should focus on **upgradation of health infrastructure, timely commissioning of PSA Plants in hospitals, adequate planning for availability of medical oxygen, availability of logistics, maintaining buffer stock of drugs** and taking up necessary action for **creation /redesigning of appropriate COVID dedicated healthcare infrastructure**, especially in peri-urban, rural, and tribal areas.
 - There is need for **upskilling/reskilling of human resources** on latest Clinical Management Protocol.
 - Furthermore, **effective planning for vaccination focusing on prompt coverage of priority groups and hubs of economic activity should be prioritized.**
 - COVID-19 management can succeed only through a whole of government & whole of society approach. Community engagement is critical & **adherence to Covid appropriate behavior** is crucial to guard against any surge in infection. This involves diligent use of masks/face covers, following physical distancing (2 gaj ki doori) and practicing respiratory & hand hygiene.
5. This normative advisory will aid the States/UTs to clearly define their policies and streamline their approaches for implementing graded restrictions/calibrated relaxation for management of Covid-19.
6. States/UTs can also plan additional public health measures as deemed necessary, based on their local context and situational analysis at the field level.
7. I am sure under your able leadership; we will be able to keep the momentum going and build on the progress made so far to bring the pandemic situation under control. Ministry of Health & Family Welfare will continue to provide requisite support to the States/UTs in this ongoing and collective effort

Yours sincerely

(Rajesh Bhushan)

Additional Chief Secretary/Principal Secretary/Secretary (Health) of all States/UTs

Copy to : Chief Secretary/Administrator of all States and UTs

(Rajesh Bhushan)

✓ Copy for information to : Cabinet Secretary, Cabinet Secretariat, New Delhi
Home Secretary, Ministry of Home Affairs, New Delhi

(Rajesh Bhushan)

Annexure II

NATIONAL DIRECTIVES FOR COVID-19 MANAGEMENT

1. **Face coverings:** Wearing of face cover is compulsory in public places; in workplaces; and during transport.
2. **Social distancing:** Individuals must maintain a minimum distance of 6 feet (*2 gaz ki doori*) in public places.

Shops will ensure physical distancing among customers.

3. **Spitting in public places** will be punishable with fine, as may be prescribed by the State/ UT local authority in accordance with its laws, rules or regulations.

Additional directives for Work Places

4. **Work from home (WfH):** As far as possible the practice of WfH should be followed.
 5. **Staggering of work/ business hours** will be followed in offices, work places, shops, markets and industrial & commercial establishments.
 6. **Screening & hygiene:** Provision for thermal scanning, hand wash or sanitizer will be made at all entry points and of hand wash or sanitizer at exit points and common areas.
 7. **Frequent sanitization** of entire workplace, common facilities and all points which come into human contact e.g. door handles etc., will be ensured, including between shifts.
 8. **Social distancing:** All persons in charge of work places will ensure adequate distance between workers and other staff.
-

7.2 ANNEXURE 2: List of experts consulted*

7.2.1 Experts list for First Online Consultative Meeting on COVID- 19 Third Wave in India: Children's Vulnerability and Preparedness

S. No	Name	Designation & Affiliation
1	Sh. AK Sengar	Inspector-General, NDRF
2	Dr. Amit Murari	Commandant, Medical, NDRF
3	Sh. Amitabh Behra	CEO, Oxfam India
4	Sh. Anuradha KN IAS	Director, Women & Child Development, Karnataka
5	Dr. Anurag Agarwal	Director, Council of Scientific and Industrial Research- Institute of Genomics and Integrative Biology (CSIR-IGIB)
6	Sh. Bivash Modi, ACS	Director, Social Welfare (Woman & Child Development sector), Assam
7	Sh. Blesson Samuel	Head, Emergency Relief, World Vision India
8	Dr. Debasis Dash	Chief Scientist, CSIR-IGIB
9	Dr. Edmond Fernandes	CEO, CHD group, Mangalore
10	Smt. Geetanjali (DCPO, Malappuram (Representative of Ms. Anupama, IAS)	District Child Protection Officer, Kerala
11	Sh. K.A. Jaya Kumar	Director- CR, World Vision India
12	Smt. Kamal Gaur	Director - Education, Save the Children
13	Prof. Kasi Sekar	Head, Centre for Psychosocial Support in Disaster Management, National Institute of Mental Health and Neurosciences (NIMHANS)
14	Smt. Kritika Kulhari IAS	Director, Women & Child Development, Himachal Pradesh
15	Smt. Lamchonghoi Sweety Changsan	Joint Secy., Department of School Education & Literacy
16	Dr. M. C. Mishra	Former Director, AIIMS

* arranged alphabetically

17	Sh. Nachiketa Rout	Director, National Institute of Empowering Persons with Multiple Disability
18	Smt. Namrata Sharma	Counseling Psychologist, Young Women's Christian Association (YWCA)
19	Dr. Naveen Thacker	M.D. (Pediatrics), F.I.A.P., Executive Director, International Paediatric Association
20	Smt. Pooja Priyamvada	Consultant, Mental Health and Gender Empowerment advocate
21	Sh. Prabodh Chandra	Commandant, CISF, Govt. of India
22	Smt. Pramila Manoharan	Education Specialist, UNICEF
23	Smt. Preeti Mahara	Director, Policy Advocacy & Research, CRY
24	Prof. Rajib Das Gupta	Chairperson, Center of Social Medicine & Community Health, Jawaharlal Nehru University, New Delhi
25	Dr. Ramachandra Kamath	Professor & Head, Kodagu Institute of Medical Sciences, Karnataka
26	Smt. Rosy Taba	Member, NCPCR
27	Dr. Sangeeta Yadav	Vice-President (North), Indian Academy of Pediatrics
28	Sh. Saurav Kumar Shah	Director General, NYKS
29	Prof. Sibnath Deb	Director, Rajiv Gandhi National Institute of Youth Development (RGNIYD)
30	Dr. Somsekhar Nimbalkar	Pediatrician, Fellowship in Neonatology, Centre for Research Services
31	Dr. Sridhar Srivastava	Director, National Council of Educational Research and Training
32	Sh. Sudarshan Suchi	CEO, Save the Children
33	Sh. Tom White	Chief, Emergency & Disaster Risk Reduction, UNICEF
34	Dr. Vaishnavi (KAS)	Nodal Officer, BBMP COVID War Room, Bengaluru
35	Sh. Varun Pathak	Child Rights Specialist, Child Welfare Committee
36	Sh. Vikam Srivastava	Child Rights Specialist, iThought
37	Sh. Vivek Coelho	Director, MACY Sustainable Future (OPC) Pvt Limited

7.2.2 Experts list for Second Online Consultative Meeting on COVID- 19 Third Wave in India: Differential impact on women/children

S.No	Name	Designation & Affiliation
1	Sh. Anil Kishor Yadav (IPS)	ADGP- Weaker Section, Bihar
2	Sh. Aravind Kumar Pandey (IAS Retd.)	Chairman- State Monitoring Committee on Shelter for Urban Homeless
3	Dr. Ashutosh Sharan	Independent medical practitioner
4	Dr. Brinelle D'Souza.	Assistant Professor, TISS
5	Smt. Evelyn P Kannan	Secretary-General, The Trained Nurses' Association of India (TNAI)
6	Dr. Farhat Saiyed	Nutrition Officer, UNICEF, Chattisgarh
7	Dr. Gagandeep Kang	Professor, Christian Medical College, Vellore; Vice-Chair, CEPI Board
8	Dr. Jyoti Bindal	Vice Chancellor, Sri Aurobindo University, Indore
9	Smt. Mabel Morales	Emergency Medical Coordinator, Doctors Without Borders (MSF India)
10	Smt. Pooja Priyamvada	Individual Consultant, Mental Health and Gender Empowerment
11	Dr. Prerna Kumar	Senior Technical Specialist, International Centre for Research on Women (ICRW)
12	Dr. R. Subasree	Professor, Madras School of Social Work
13	Dr. Ramachandra Kamath	Professor, Kodagu Institute of Medical Sciences
14	Prof. S. Narayan	Professor Emeritus and Chairman of 'Society for Empowerment'
15	Dr. Santosh Gaikwad	Dy. Executive Health Officer. (Public Health Dept MCGM/BMC, Mumbai)
16	Prof. Shobita Rajagopal	Professor, Institute of Development Studies (IDS)

17	Smt. Sudha Verghese	Social Worker
18	Prof. Sunita Reddy	Associate Professor, Centre of Social Medicine and Community Health, JNU
19	Dr. Upasana Mahanta	Professor and Director, Centre for women, Law and Social Change, OP Jindal Global University
20	Dr. Vaishnavi K (KAS)	Nodal Officer, BBMP, COVID War Room, Bengaluru
21	Smt. Vatsala Ghursale	Advisor to CM Haryana

7.3 NIDM officials and team

S. No	Name	Designation
1.	Major General Manoj Kumar Bindal	Executive Director
2.	Professor Santosh Kumar	Head (GiDRR), Project Director, CCDRR
3.	Dr. Kumar Raka	Programme Officer, CCDRR
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9.	Ms. Dolphi Raman	Junior Research Officer, CCDRR

The National Institute of Disaster Management (NIDM) was constituted under an Act of Parliament with a vision to play the role of a premier institute for capacity development in India and the region. The efforts in this direction that began with the formation of the National Centre for Disaster Management (NCDM) in 1995 gained impetus with its redesignation as the National Institute of Disaster Management (NIDM) for training and capacity development. Under the Disaster Management Act 2005, NIDM has been assigned nodal responsibilities for human resource development, capacity building, training, research, documentation and policy advocacy in the field of disaster management.

NIDM is proud to have a multi-disciplinary core team of professionals working in various aspects of disaster management. In its endeavour to facilitate training and capacity development, the Institute has state-of-the-art facilities like class rooms, seminar hall and video-conferencing facilities etc. The Institute has a well-stocked library exclusively on the theme of disaster management and mitigation. The Institute provides training in face-to-face, on-line and self-learning mode as well as satellite based training. In-house and off-campus face-to-face training to the officials of the state governments is provided free of charge including modest boarding and lodging facilities.

NIDM provides Capacity Building support to various National and State level agencies in the field of Disaster Management & Disaster Risk Reduction. The Institute's vision is to create a Disaster Resilient India by building the capacity at all levels for disaster prevention and preparedness.



Resilient India - Disaster free India

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