COVID-19 in Rural India

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Abstract

India is the second-worst affected country in the world by COVID-19 pandemic. Although the Government of India took various initiatives to curb the spread of corornavirus in the country which included a 3-week nation-wide lockdown to begin with (from March 25 to April 14) and which later was extended thrice up until May 31, 2020, increasing testing, setting up quarantine facilities, COVID-19 treatment facilities, contact tracing through Aarogya Setu application and many more, but these efforts fell short when it came to supressing the pandemic. Especially, because of lockdown, when the migrant workers were forced to leave cities and travel back to their homes in rural areas, the COVID-19 infection which predominantly affected the urban areas until then also reached rural areas of the country. Overtime, the proportion of COVID-19 cases in rural areas has risen. Rural districts in the states of Andhra Pradesh, Maharashtra, Karnataka, Uttar Pradesh and Assam witnessed a significant rise in COVID-19 cases. Many factors pose a big challenge for rural India in dealing with COVID-19. These include scarcity of medical staff, equipment and health facilities, social stigma, fear of ill-treatment at the health facility, fear of losing income on being quarantined etc. Post-COVID complications are also emerging as a new threat in dealing with the current crisis.

Health and Wellness Centres (HWCs) under Ayushman Bharat and Accredited Social Health Activist (ASHA) workers can play a crucial role in dealing with COVID-19 in the rural areas. ASHAs are involved in conducting house-to-house visits, reporting symptomatic cases, carrying out contact tracing, maintaining documentation, monitoring the situation and creating awareness about COVID-19 in the community. But, ASHA workers are facing many challenges such as increased work load, lack of protective equipment and training, they are underpaid, stigmatization, caste discrimination, domestic violence etc. India needs to develop a strategy specific to rural settings to deal with the COVID-19 situation.
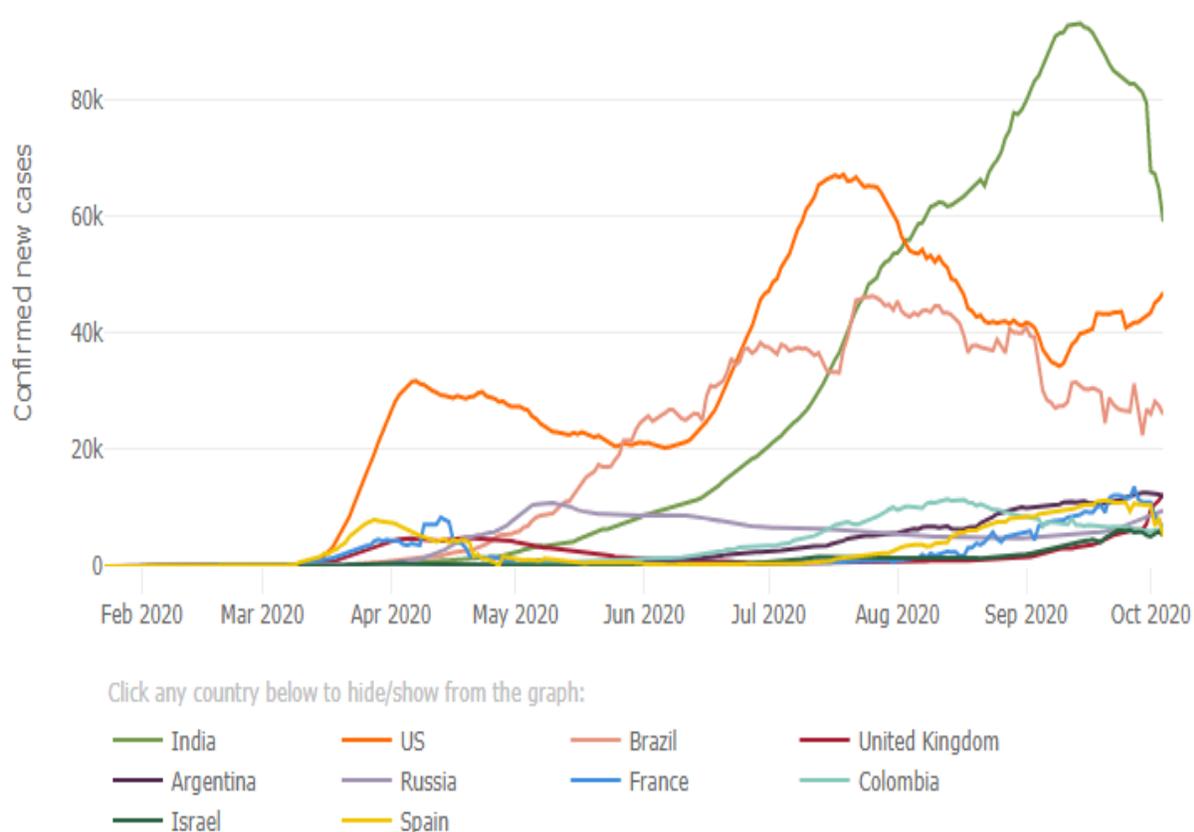
We believe that at a time when the federal and state governments are dealing with the challenges emanating from the Covid-19 pandemic, this crisis should be seen as an opportunity to strengthen the public health system in India. This would entail, among other things: 1) a much higher level of public health spending; 2) comprehensive training, effective control and oversight and timely and adequate payments for the ASHAs; 3) an effective and efficient management structure for the health facilities at the village, block and district levels; and 4) commensurate physical infrastructure and human resources in the sub-centers and the Primary Health Centers with the growing needs of the regions.

Introduction

Current Situation of COVID-19 in India

India is the second-worst hit country in the world by the COVID-19 pandemic[1]. As of December 21, there were over 10 million confirmed COVID-19 cases and over 145,000 deaths in India[2]. Despite the early lockdown in the country, the curve continued to rise, however, the decline in the curve is evident since late September 2020 (see Figure 1)(Johns Hopkins University & Medicine 2020).

Figure 1: Daily confirmed new cases (7-day moving average) from Feb 2020 to October 2020 in India and other countries

Source: Johns Hopkins University & Medicine. 2020. "New Cases of COVID-19 in World Countries." 2020. https://coronavirus.jhu.edu/data/new-cases
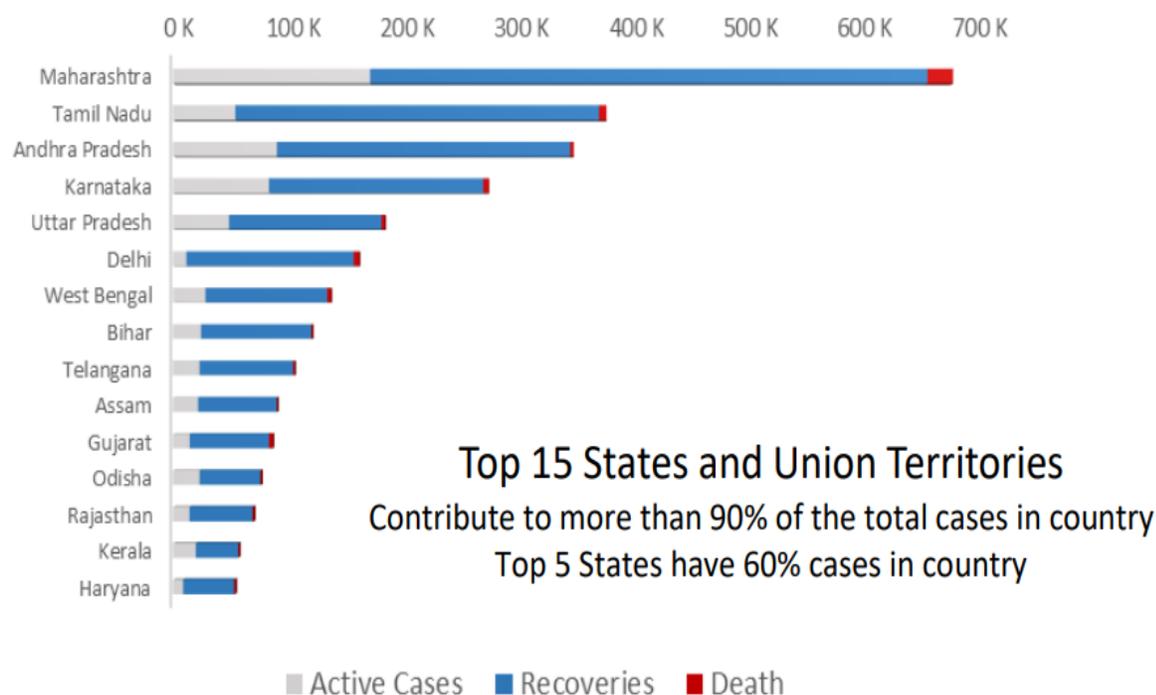
Maharashtra, Tamil Nadu, Andhra Pradesh, Karnataka and Uttar Pradesh are the worst affected states in India and contribute to 60% of COVID-19 cases in the country (World Health

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[1] https://covid19.who.int/
[2] https://ncov2019.live/data

Organization 2020a). Figure 2 depicts 15 States and Union Territories which are contributing to 90% COVID-19 cases in India.

Figure 2: Top 15 States and Union Territories contributing to 90% COVID-19 cases in India.

Top 15 States and Union Territories
Contribute to more than 90% of the total cases in country
Top 5 States have 60% cases in country
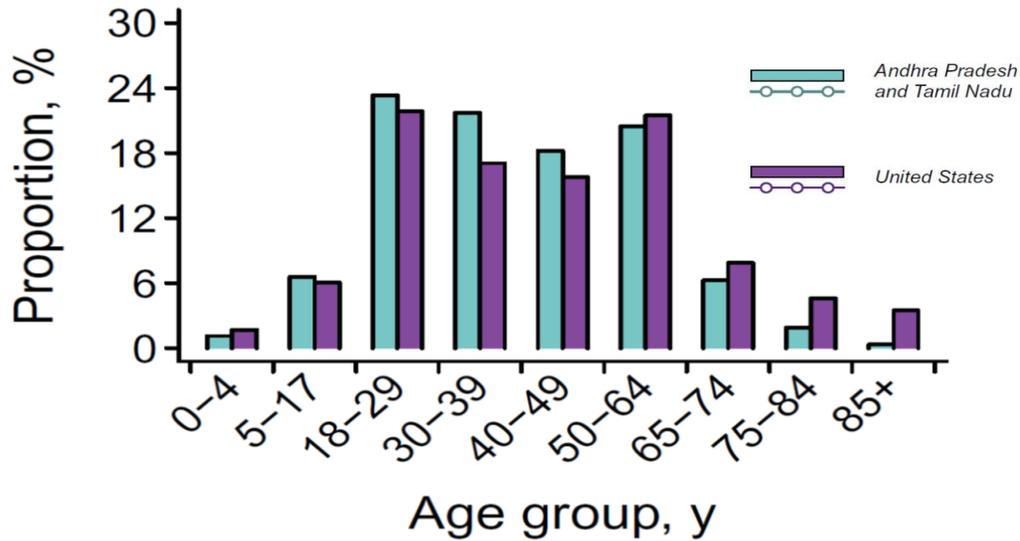
■ Active Cases ■ Recoveries ■ Death

Source: Ministry of Health and Family Welfare as on 21 September 2020

Source: World Health Organization. 2020. "Novel Coronavirus Disease (COVID-19)." Situation Update Report 34. https://www.who.int/docs/default-source/wrindia/situation-report/india-situation-report-34.pdf?sfvrsn=6cbd0c18_2
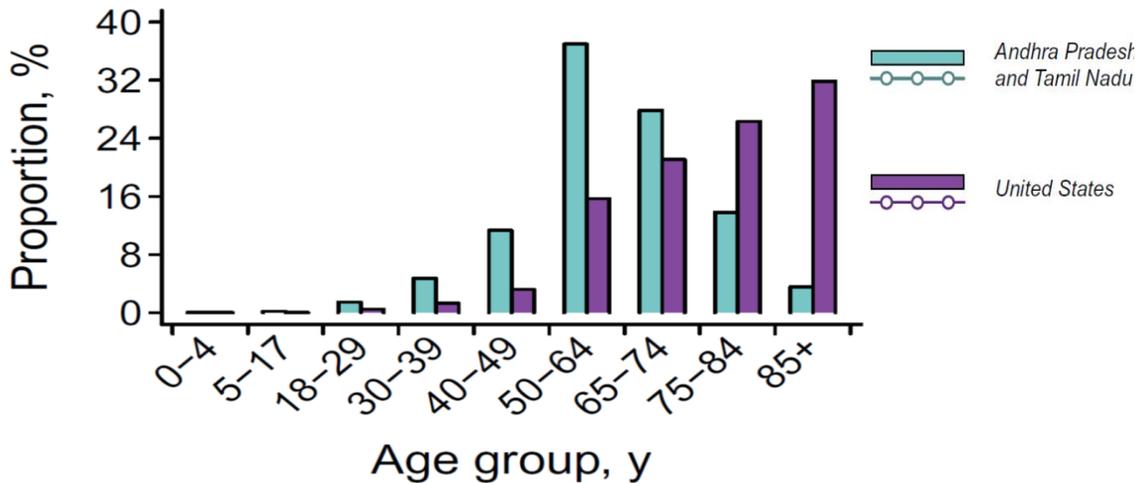
Figure 3 and Figure 4 depicts the COVID-19 case age distribution and death age distribution respectively, in Tamil Nadu and Andhra Pradesh, the two worst affected southern states of India, in comparison to the United states(Laxminarayan et al. 2020). As of August 2020, COVID-19 cases in Tamil Nadu and Andhra Pradesh showed a younger age distribution compared to the United States. However, in both the settings(the two Indian states and the United States), COVID-19 cases increased sharply between 5-17 years old and 18-29 years old age groups. In Andhra Pradesh and Tamil Nadu, COVID-19 mortality showed an upward trend until age 65 years and then declined which is in contrast to COVID-19 mortality in the United States where it continued to rise even above 65 years of age.

Figure 3: Reported case age distribution in Andhra Pradesh and Tamil Nadu

Source: Laxminarayan, Ramanan, Brian Wahl, Shankar Reddy Dudala, K Gopal, S Neelima, K S Jawahar Reddy, J Radhakrishnan, and Joseph A Lewnard. 2020. "Epidemiology and Transmission Dynamics of COVID-19 in Two Indian States," 8. https://science.sciencemag.org/content/sci/370/6517/691.full.pdf
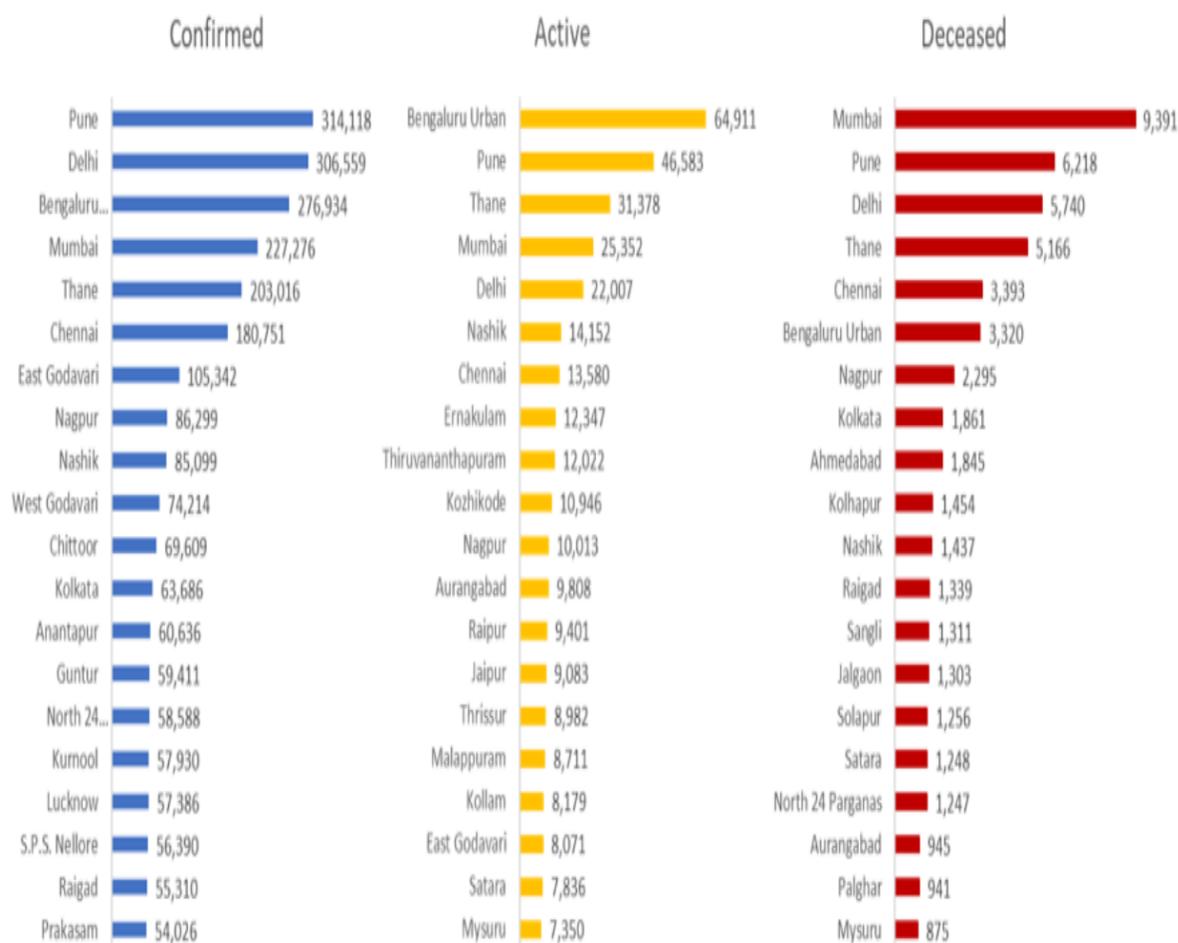
Figure 4: Reported death age distribution in Andhra Pradesh and Tamil Nadu

Source: Laxminarayan, Ramanan, Brian Wahl, Shankar Reddy Dudala, K Gopal, S Neelima, K S Jawahar Reddy, J Radhakrishnan, and Joseph A Lewnard. 2020. "Epidemiology and Transmission Dynamics of COVID-19 in Two Indian States," 8. https://science.sciencemag.org/content/sci/370/6517/691.full.pdf

Daily growth rate of COVID-19 cases and daily test positivity rate in various states in India is depicted in Figure 5. India has a low case fatality for COVID -19 at around 1.64%. Districts with

high COVID-19 burden are depicted in Figure 6. Pune, Delhi, Bengaluru, Mumbai and Thane are the top 5 districts with high COVID-19 burden(World Health Organization 2020b).

Figure 5: Daily growth rate of COVID-19 cases and Daily Test Positivity rate in various states in India

Note: Tests details not available for some states – shown white

Data source: MoHFW and State bulletins, as of 21/08/2020

Source: World Health Organization. 2020. "Novel Coronavirus Disease (COVID-19)." Situation Update Report 34. https://www.who.int/docs/default-source/wrindia/situation-report/india-situation-report-34.pdf?sfvrsn=6cbd0c18_2.

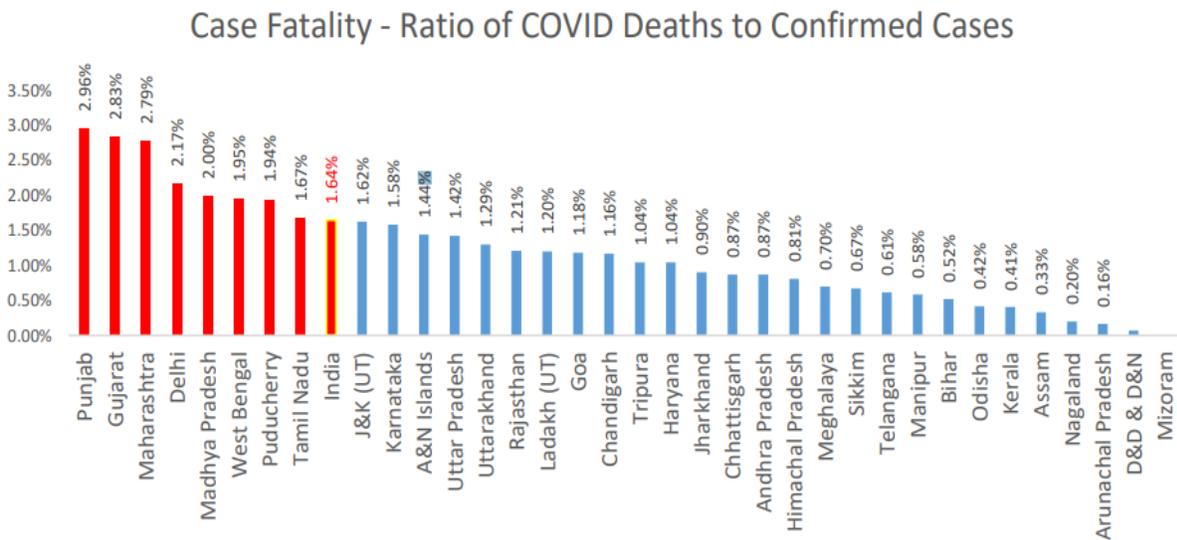**Figure 6: Top 20 districts with high COVID-19 burden in India**

*Delhi included for comparison   Data Source: MOH & State's bulletins, as of 11/10/2020

Source: World Health Organization. 2020. "Novel Coronavirus Disease (COVID-19)." Situation Update Report 33. https://www.who.int/docs/default-source/wrindia/situation-report/india-situation-report-33.pdf?sfvrsn=77c4c500_2.

Figure 7 depicts the case fatality for COVID-19 in various states in India(World Health Organization 2020c). The total number of recovered cases have crossed 4,90,000 in India, resulting in the recovery rate of 82% (se Figure 8)(World Health Organization 2020d).
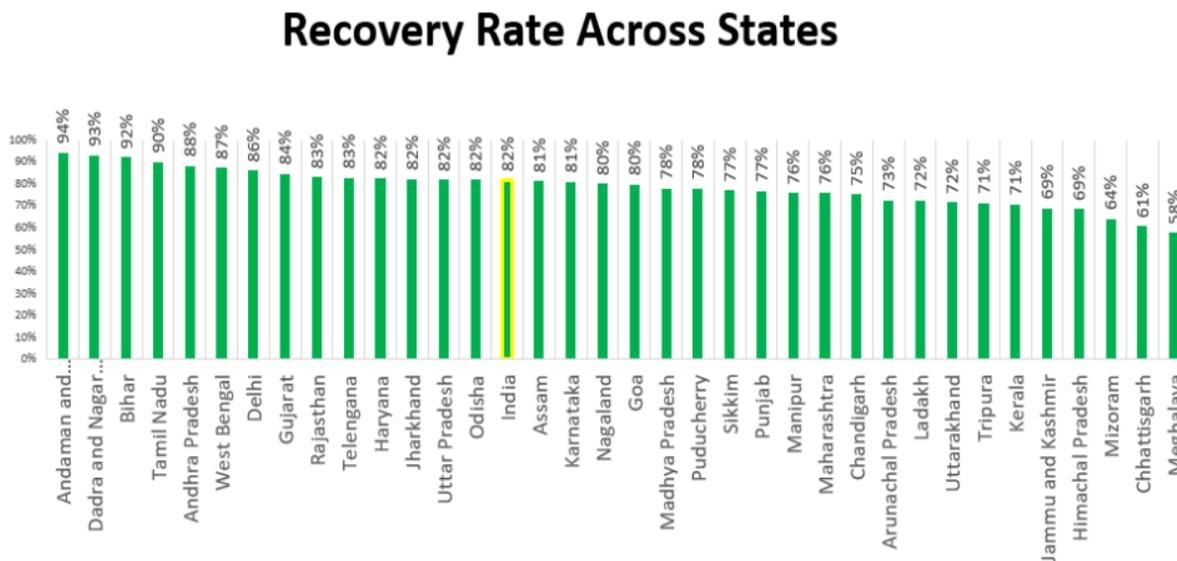
Figure 7: Case Fatality-Ratio of COVID deaths to Confirmed cases in various states in India

Source: World Health Organization. 2020. 2020. "Novel Coronavirus Disease (COVID-19)." Situation Update Report 33. https://www.who.int/docs/default-source/wrindia/situation-report/india-situation-report-33.pdf?sfvrsn=77c4c500_2
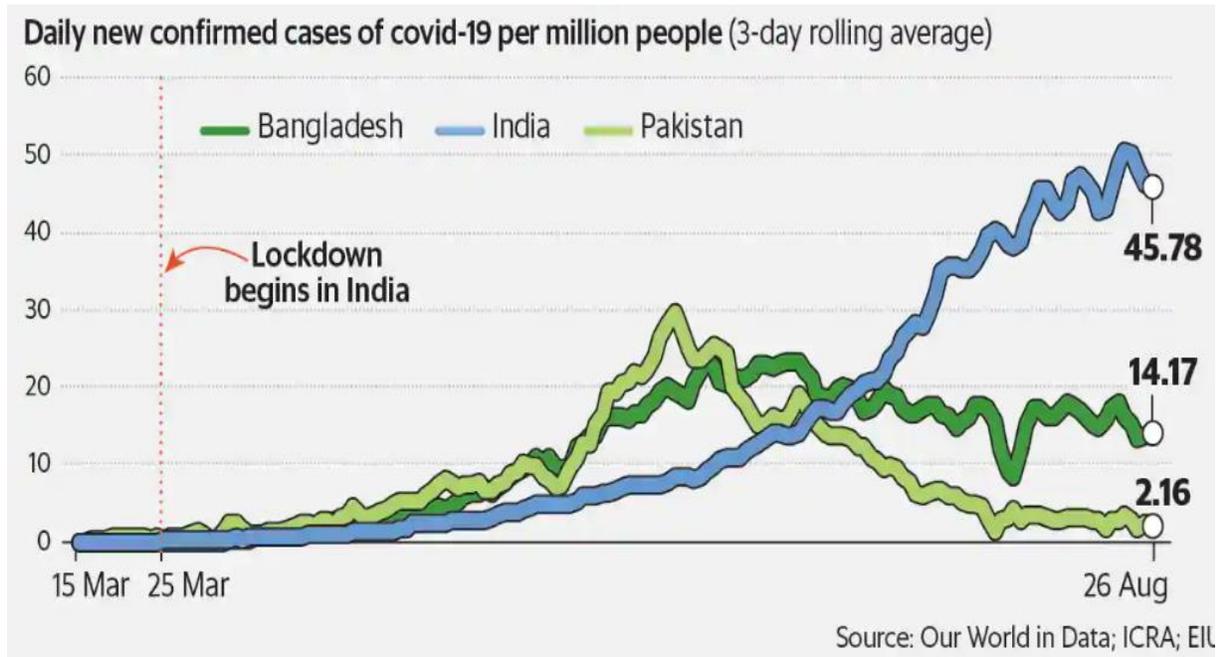
Figure 8: Recovered cases across states in India

Source: World Health Organization. 2020."Novel Coronavirus Disease (COVID-19)." Situation Update Report 35. https://www.who.int/docs/default-source/wrindia/situation-report/india-situation-report-35.pdf?sfvrsn=22c1fe2d_2

COVID-19 in Rural India

Immediately after the Government of India announced 3-weeks nationwide lockdown on 24th March, 2020, millions of migrants were forced to leave cities and return to their homes in rural areas. The impact of COVID-19 lockdown on rural India has been enormous. A national survey on the impact of the COVID-19 lockdown in rural India was conducted in 179 districts across 20 states and three Union Territories by Goan Connection (Gaon Connection 2020). The survey highlighted the difficulties faced by the rural citizens during the lockdown. Around 78% of the respondents reported their work coming to a "complete standstill" or "a standstill to a large extent". Skilled workers (60%) and manual labourers (64%) were among the worst hit. Around 23% migrant workers returned home walking during the lockdown. Around 38% of the rural households reported not receiving the required medicines or medical treatment. Around 87% of the rural housholds in Assam and 66% in Andhra Pradesh did not receive the required medical treatment. Around 42% of the rural households with pregnant women reported no pregnancy check-ups and vaccinations. The survey reported that more than 68% rural citizens faced "high" to "very high" monetary difficulty in the time of lockdown. To deal with the monetary crisis, around 23% rural Indians borrowed money or sold or mortgaged their land or jewellery.

Undoubtedly, COVID-19 lockdown brought numerous challenges for rural India. But, this was just the beginning. Basu 2020 asserts that lockdown in India backfired. The number of daily new COVID-19 cases has been on the rise since late March, 2020. Figure 9 shows the comparison of daily new cases (3-day moving average) in three neighbouring countries: India, Pakistan and Bangladesh. After the lockdown in India, all three nations were quite similar, with India being in a slightly better position. But, unexpectedly, the curve did not flatten in the case of India and cases continued to rise. The mass migration of workers from cities to the rural hinterlands of U.P; Bihar, M.P., etc. began after the lockdown was imposed. In the month of April, 23% of COVID-19 cases were in rural areas, which increased to 54% in the month of August (Basu 2020). So, the disproportionate spread of virus in rural India after the lockdown is also a reason for lockdown failure in India (Basu 2020).
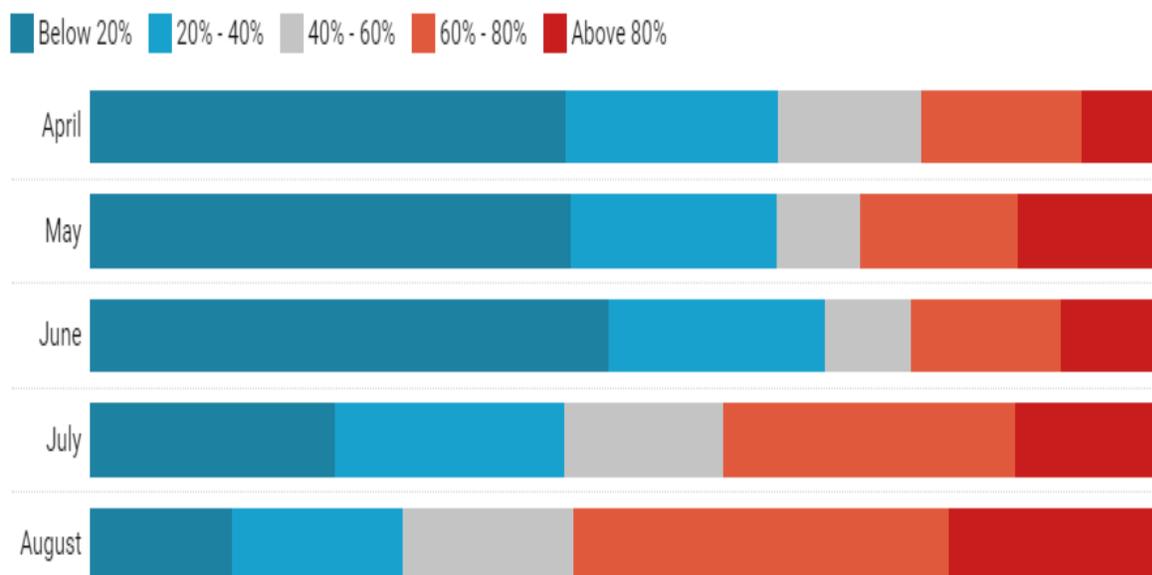
Daily new confirmed cases of covid-19 per million people (3-day rolling average)

Source: Basu, Kaushik. 2020. "India's Descent into Stepwells of Growth." 2020. https://www.livemint.com/news/india/india-s-descent-into-stepwells-of-growth-11598537915733.html

India's battle with COVID-19 has gradually shited towards villages and smaller cities. Around 55% of COVID-19 cases reported in the month of August came from 584 districts that are predominantly rural (Mohammad Kawoosa and Mullick 2020)(see Figure 10). This share has increased steadily over the months, being 23% in April, 28% in May, 24% in June and 41% in July (Mohammad Kawoosa and Mullick 2020). Figure 9: New COVID-19 cases in August, 2020 came from predominantly rural districts

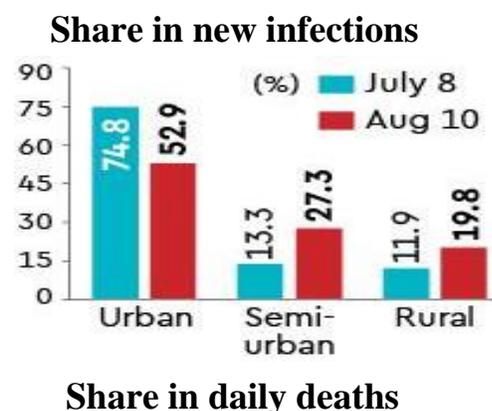## 55% of new Covid-19 cases in August came from predominantly rural districts

Districts by % share of rural population

■ Below 20% ■ 20% - 40% ■ 40% - 60% ■ 60% - 80% ■ Above 80%

The bars show % distribution of new Covid-19 cases each month by five categories of districts (based on share of rural population)

Source: How India Lives, Census, HT analysis • Created with Datawrapper

Source: Mohammad Kawoosa, Vijdan, and Jamie Mullick. 2020. "Battle Shifting as Covid-19 Threat Stalks Rural India." 2020. https://www.hindustantimes.com/india-news/battle-shifting-as-covid-19-threat-stalks-rural-india/story-GZJsSPOOpNR0RF9Yj5B59M.html

Share in new infections

Share in daily deaths

On 10th August 2020, 47% of new COVID-19 cases were reported from rural and semi-urban centres. This is almost double their share reported a month ago (see Figure 11) . On the other hand, new COVID-19 cases in urban areas during this period declined from 75% to 53%.

Also, daily deaths grew faster in rural areas compared to other areas. The share of daily deaths in rural area doubled from 5.7% on 8th July to 11.8% on 10th August. In contrast to this, share of daily deaths in urban areas fell from 84% to 69% during this period.

In terms of total COVID-19 infections, rural and sem-urban regions account for almost one-third cases on 10th August as compared to one-fifth of cases a month ago.
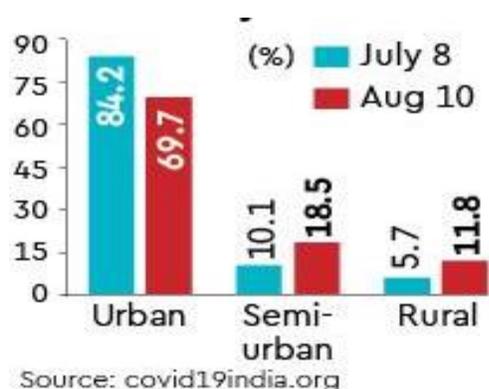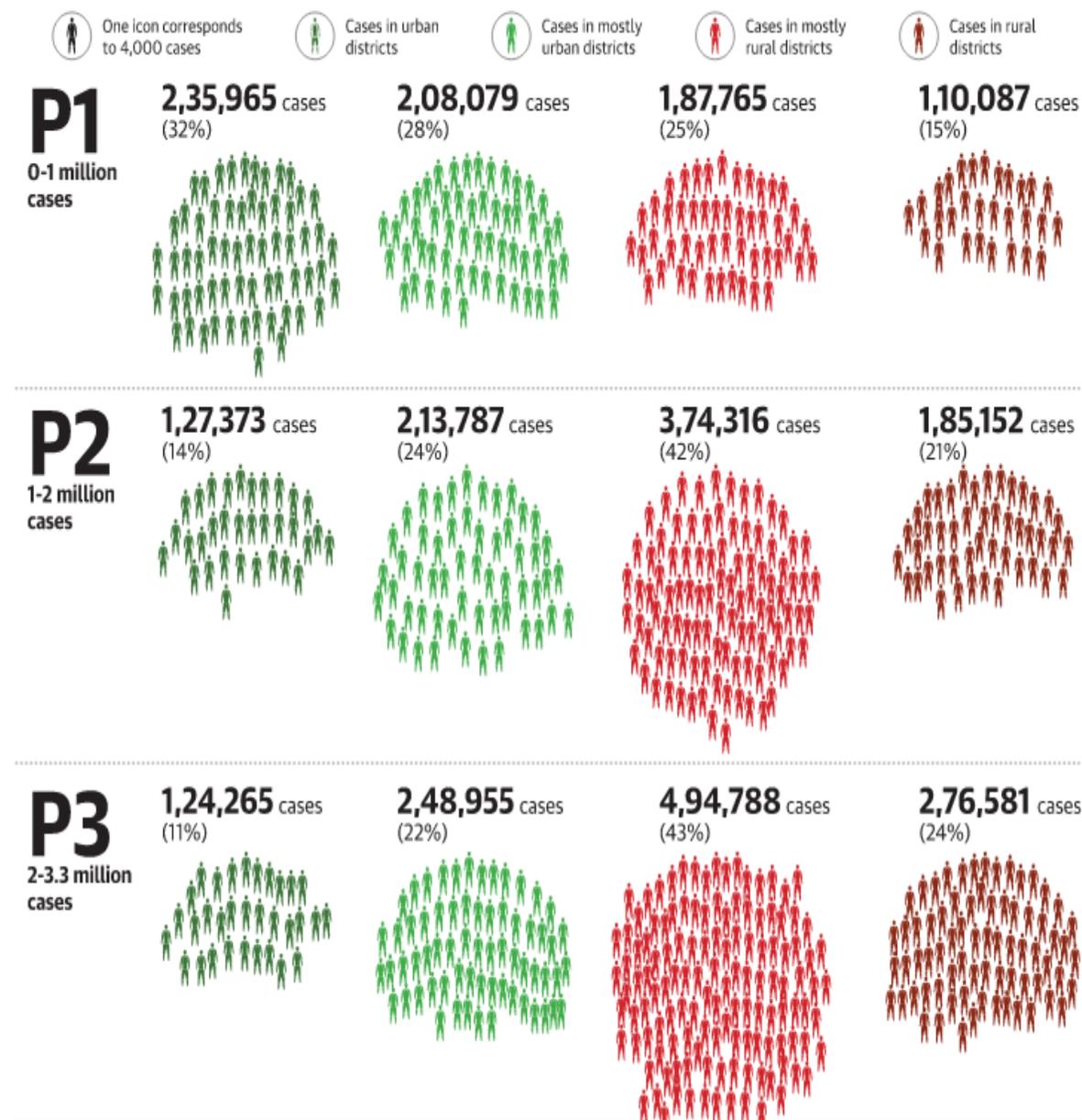
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Figure 10: Share of fresh infections and daily deaths in Urban, Semi-Urban and Rural areas on 8th July 2020 and 10th August 2020

Source: Gera, Ishaan. 2020. "Covid-19 Spreading in Rural India: Villages, Semi-Urban Areas Account for Half of New Cases." 2020. https://www.financialexpress.com/lifestyle/health/covid-spread-rural-semi-urban-areas-account-for-half-of-all-fresh-cases-now/2051034/

Figure 12 depicts the total number and % share of India's new cases recorded during three stages: P1 (cases between O and 1 million), P2 (cases between 1 million and 2 million) and P3 (cases between 2 million and 3.3 million) across urban, mostly urban, mostly rural and rural districts (Radhakrishnan, Sumant, and Singaravelu 2020). The percentage share in urban districts reduced from 32% of total cases in P1 stage to 11% in P3 stage; in mostly urban districts reduced from 28% in P1 to 22% in P3; in mostly rural districts increased from 25% in P1 to 43% in P3; and in rural districts increased from 15% of total cases in P1 to 24% in P3 (Radhakrishnan, Sumant, and Singaravelu 2020).

Figure 11: The total number and % share of India's new cases recorded during three stages: P1 (cases between O and 1 million), P2(cases between 1 million and 2 million) and P3 (cases between 2 million and 3.3 million cases) across urban, mostly urban, mostly rural and rural districts

Note: Districts with <20% rural population were classified urban; >20% but <50% rural population were classified "mostly urban"; >50% but <80% rural population were classified "mostly rural" and >80% rural population were classified as rural districts
Source: Radhakrishnan, Vignesh, Sen Sumant, and Naresh Singaravelu. 2020. "The Hindu Explains | Is COVID-19 Intensifying in Rural India?" 2020.
https://www.thehindu.com/news/national/the-hindu-explains-is-covid-19-intensifying-in-rural-india/article32476163.ece

Figure 13 depicts new cases recorded in rural districts as a % share of all cases in the state, in three stages: P1, P2, and P3. In Assam, 41% of the State's cases in P1 were recorded in rural districts which increased to 71% in P2 and 70% in P3. Similar trend was observed in states like West Bengal, Odisha, Uttar Pradesh (U.P) and Madhya Pradesh (M.P.) where the % share of cases in rural districts increased the most between P1 and P3. By contrast, rural cases decreased from P1 to P3 in states like Jharkhand, Chhattisgarh and Uttarakhand.

Figure 12: New cases recorded in rural districts as a % share of all cases in the State, in three stages: P1, P2, and P3

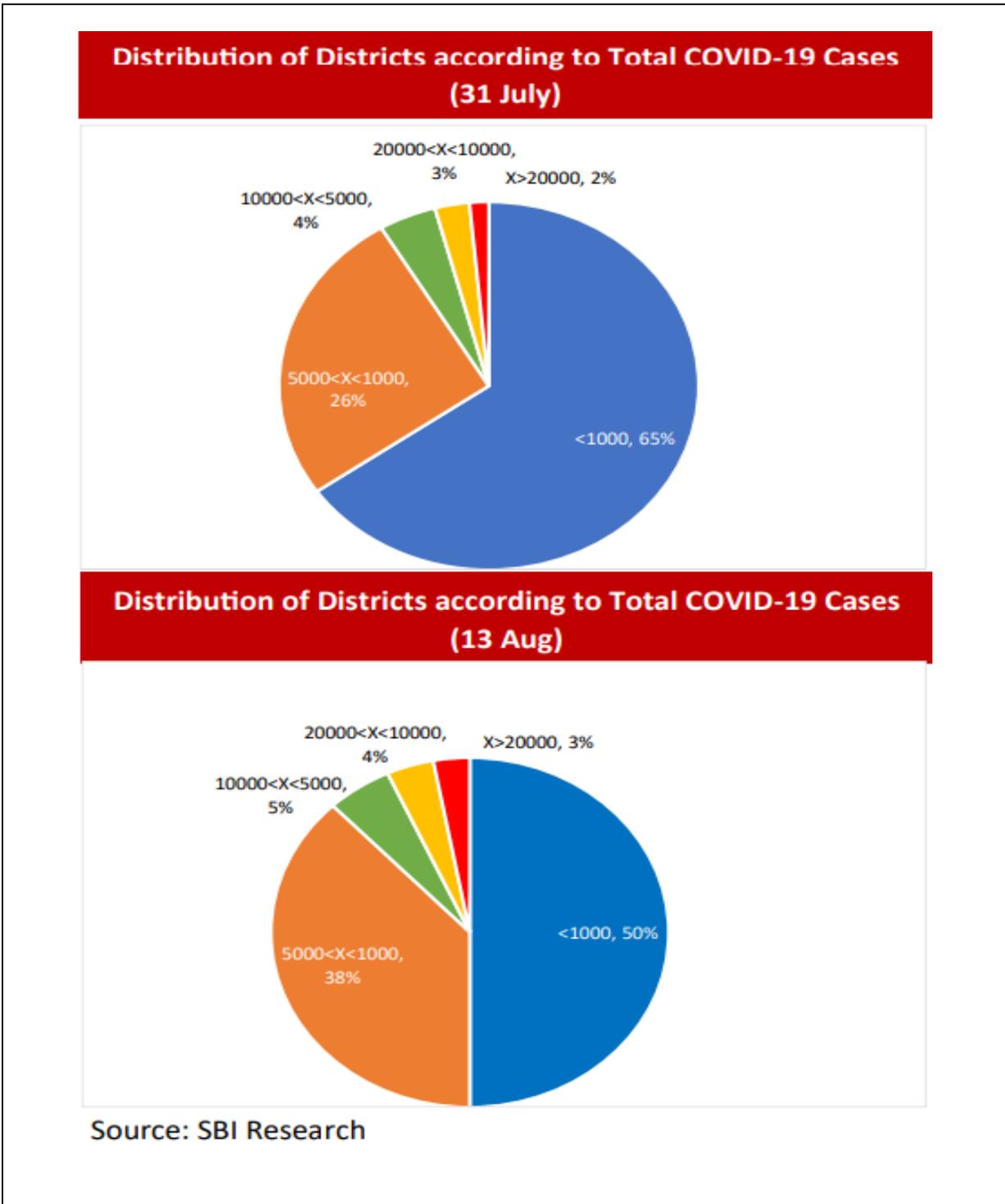| States	P1	P2	P3		States	P1	P2	P3		States	P1	P2	P3
Assam	41	71	70		T.N.	6	10	11		Punjab	5	2	3
West Bengal	15	17	29		A.P.	9	9	12		Kerala	12	11	7
Odisha	44	42	56		Gujarat	5	8	8		Rajasthan	40	40	32
U.P.	34	45	46		Haryana	6	4	8		Chhattisgarh	50	31	37
M.P.	16	26	27		Karnataka	6	6	8		Uttarakhand	33	17	20
Maharashtra	6	11	16		Bihar	82	79	83		Jharkhand	56	49	41

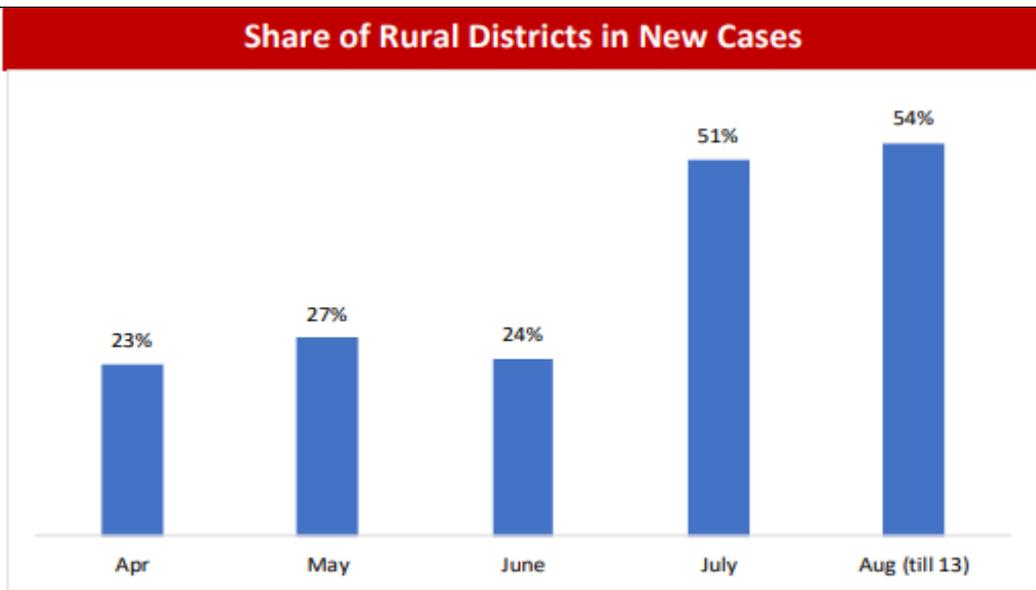Source: Radhakrishnan, Vignesh, Sen Sumant, and Naresh Singaravelu. 2020. "The Hindu Explains | Is COVID-19 Intensifying in Rural India?" 2020. https://www.thehindu.com/news/national/the-hindu-explains-is-covid-19-intensifying-in-rural-india/article32476163.ece

 As per the State Bank of India (SBI)'s economic research department report, the number of districts with cases between 1000 and 5000 have increased significantly in the month of August, 2020 (data till 13th August 2020) (see Figure 14). The virus has significantly penetrated in the rural areas in the last few months. In the month of July 2020, 51% of the new COVID-19 cases were reported from rural districts, while this share increased to 54% in the month of August 2020 (data up to 13 August 2020). By contrast, only a quarter of cases were reported from rural districts in the months of June (24%), May (27%) and April (23%). Further, the number of rural districts with less than 10 COVID-19 cases have also reduced significantly. It has fallen to 14 in the month of August, from 55 in June, 96 in May and 415 in April.
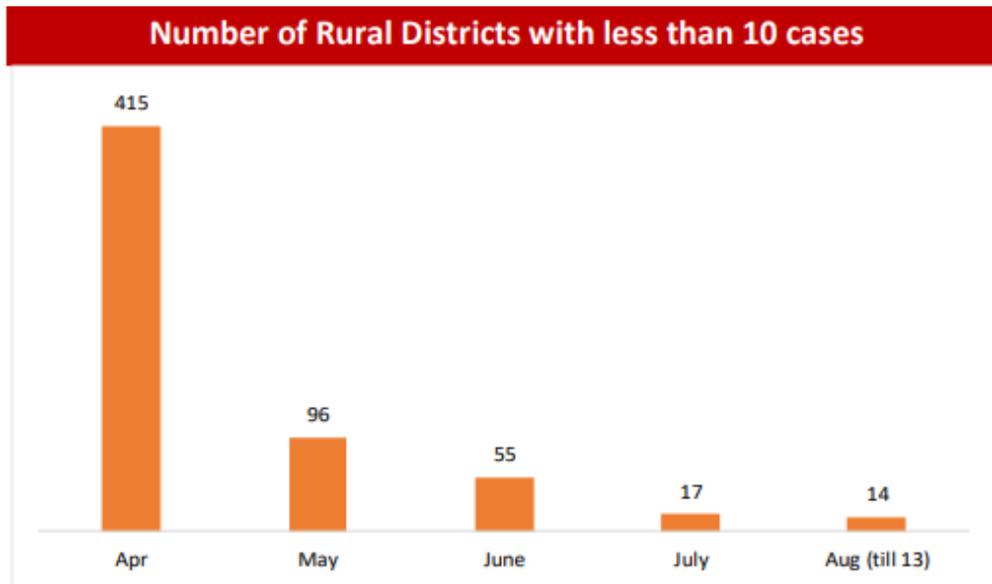
SBI research team found that among the top 50 districts where new cases have occurred in maximum number in the month of August, Andhra Pradesh tops the list with 13 districts out of which 11 districts are rural. Maharashtra comes next with a total of 12 districts out of which 6 districts are rural. Among the rural districts, East Godavari district in the state of Andhra Pradesh was worst-hit, followed by Jalgaon in Maharashtra, Ganjam in Odisha, Srikakulam in Andhra Pradesh and Ballari in Karnatak (see Figure 15). Other rural districts that are witnessing a significant rise in COVID-19 cases include Vizianagaram in Andhra Pradesh, Ahmednagar, Satara and Kolhapur in Maharashtra, Udupi and Davanagere in Karnataka, Gorakhpur in Uttar Pradesh (U.P.) and Cachar in Assam (see Figure 15).

Figure 13: The State Bank of India (SBI)'s economic research findings

Source: SBI Research

Share of Rural Districts in New Cases

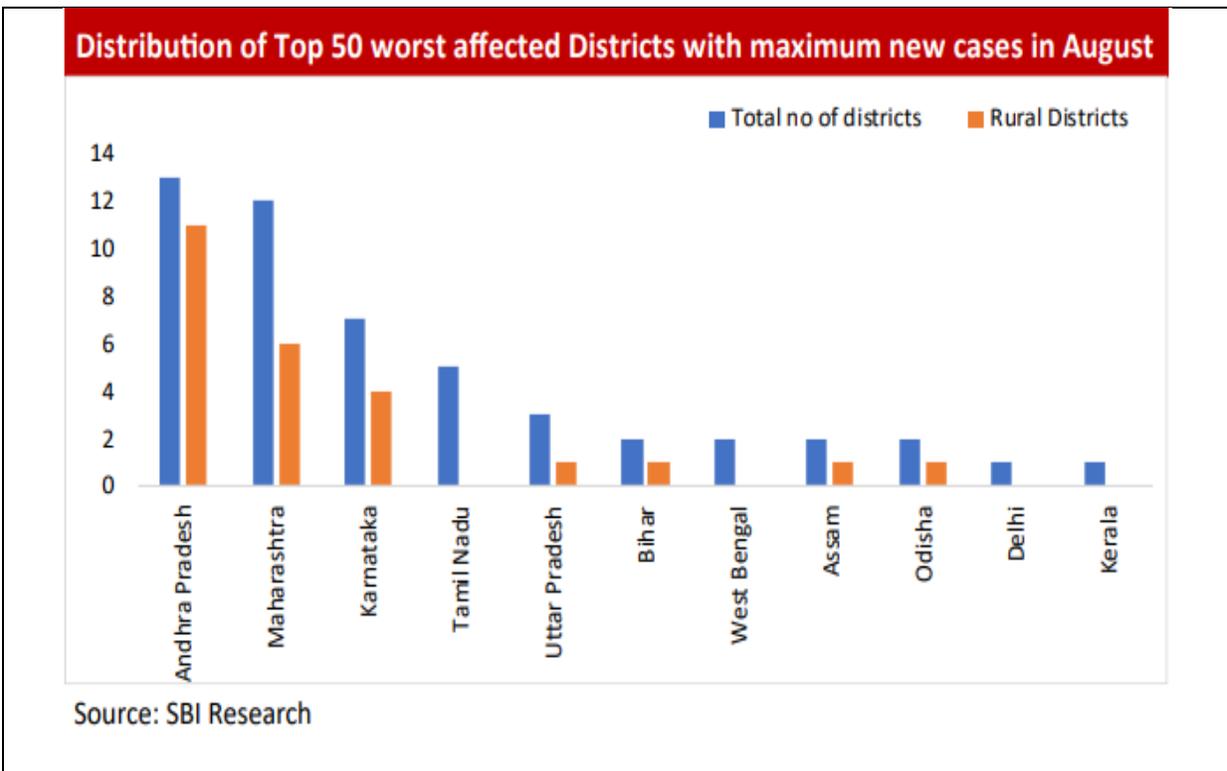
Source: SBI Research

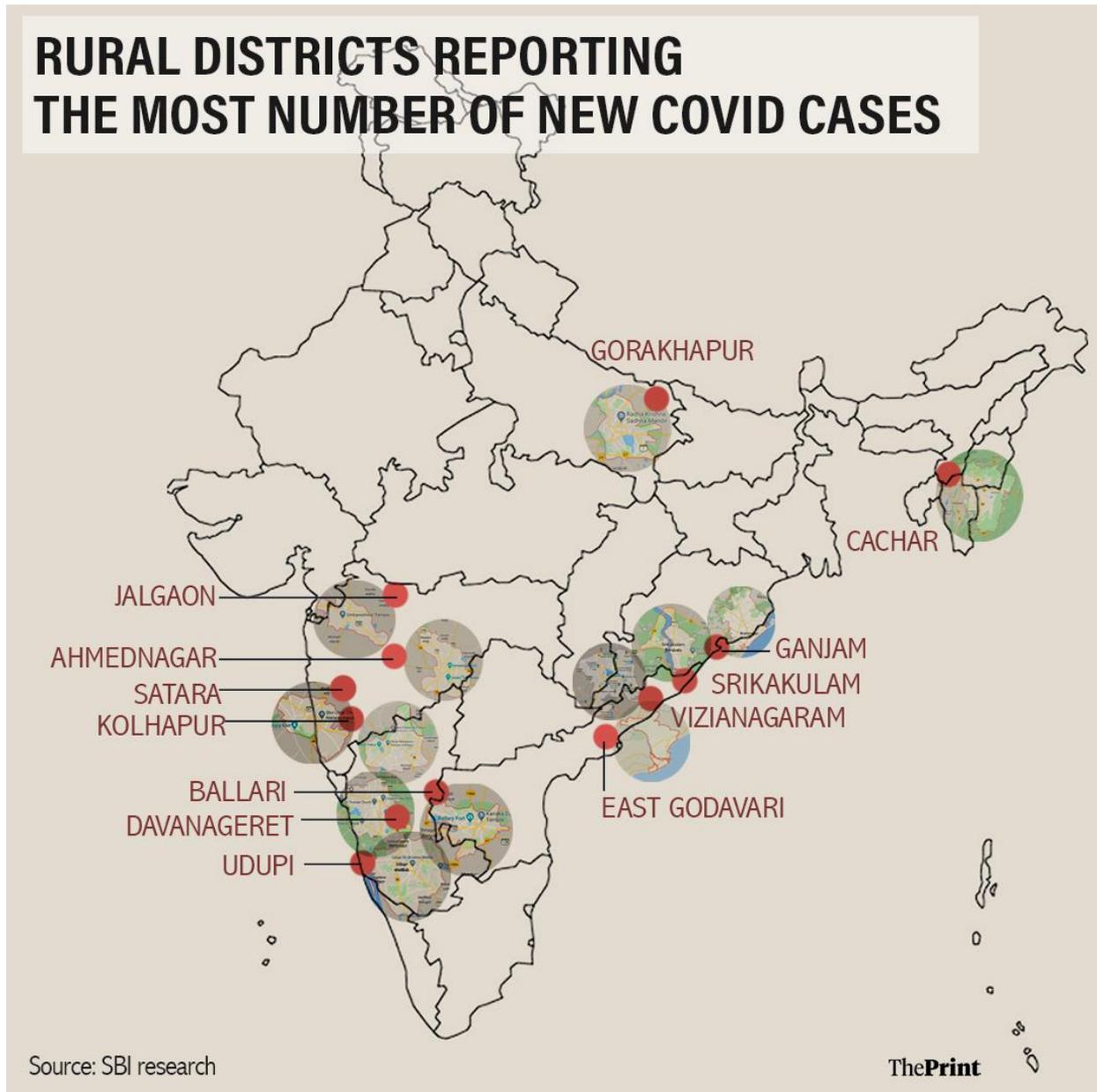**Number of Rural Districts with less than 10 cases**

Source: SBI Research

Source: State Bank of India (SBI). 2020. "Ecowrap."
https://www.sbi.co.in/documents/13958/3312806/170820-SBI+Ecowrap+-
+The+Good%3B+The+Bad%3B+The+Ugly.pdf/38684abb-d48c-6f80-45ad-
bd1351c51c05?t=1597644350762

Figure 14: Rural districts reporting the most number of new COVID-19 cases

Source: Nair, Remya. 2020. "Rural Districts New Hotspots, Account for over 50% New Covid Cases in July, Aug — SBI Report." 2020. https://theprint.in/economy/rural-districts-new-hotspots-account-for-over-50-new-covid-cases-in-july-aug-sbi-report/483412/.

The first national sero survey conducted by the the Indian Council of Medical Research (ICMR) found that 69.4% of people were infected in rural areas, 15.9% were infected in urban slums and 14.6% were infected in urban non-slums (India.com News Desk 2020). The survey found that the seropositivity was highest at 43.3% in the age-group of 18-45 years, followed by 39.5% in

the age group 46-60 years and 17.2% in those above 60 years of age (India.com News Desk 2020).

Tackling COVID-19 in rural India would be a big challenge for the Indian Governement. As per the National Health Profile 2019, only one allopathic doctor is available for a population of 10,926 in rural areas against the World Health Organization (WHO) norm of one doctor for every 1000 population (Central Bureau of Health Intelligence (CBHI) 2019). Further, in rural India, there are 21,403 government hospitals with a total capacity of 265,275 beds, making just one bed available for 3,100 people (Central Bureau of Health Intelligence (CBHI) 2019). The rural healthcare system in the country has been unable to handle emergeincies in the past such as the death of more than 150 children due to malnourishment in Muzzafarpur in Bihar, dengue outbreaks, persisting communicable diseases like Tuberculosis etc.(Kumar, Rajasekharan Nayar, and Koya 2020). Besides, many health care workers in rural India are unregistered and lack training to handle an emergency.

An extensive primary healthcare infrastructure provided by the government exists in rural India. However, it is inadequate in terms of coverage of the population and grossly underutilized because of the dismal quality of healthcare being provided. In most public health centers which provide primary healthcare services, drugs and equipments are in short supply, there is shortage of staff and the system is characterized by endemic absenteeism on the part of medical personnel due to lack of control and oversight. As a result, most people in rural India, even the poor, choose expensive healthcare services provided by the largely unregulated private sector. Not only do the poor face the double burden of poverty and ill-health, the financial burden of ill health can push even the non-poor into poverty.

"The first challenge that villages will likely face is of testing. Most of the RT-PCR labs are currently located in big cities or district headquarters, and are very rare if one looks for them at the subdistrict level. There is also the issue of the lack of medical equipment and physicians. Machines like pulse oximeters and radiology facilities such as good quality chest X-rays, which are crucial tools to monitor the health of Covid patients, are not as easily found in rural areas" (Dr Suresh Kumar, medical director, Delhi's Maulana Azad Medical College) (Mohammad Kawoosa and Mullick 2020).

"We've seen the disease spread like wildfire in cities such as Delhi, Mumbai and Chennai. But equally fast, the state governments were able to bring the outbreak into relative control. What we are likely to see in villages will not be like this – it will be a slow- and long-burning fire, which will be much harder to contain. But in general, villages are already disadvantaged because of their inadequate health care system, so this may end up becoming a much longer battle," (Dr T Jacob John, professor emeritus and former head of virology at Christian Medical College, Vellore) (Mohammad Kawoosa and Mullick 2020).

Role of HWCs during COVID-19

In the times of COVID-19 pandemic, Health and Wellness Centres (HWCs) have been a vital part of the public health system. Being close to the community, these centres have played a crucial role in the delivery of non-COVID-19 essential primary healthcare services at a time when the country is dealing with the pandemic. In just five months time since 1st February, 2020, 88 million people availed healthcare services at the HWCs (Ministry of Health & Family Welfare, Government of India 2020c). Strikingly, this figure is almost equal to the number of footfalls recorded at the HWCs for the period of 21 months, from April 14th, 2018 to January 31st, 2020 (Ministry of Health & Family Welfare, Government of India 2020c). In just five months time, 14.1 million people were screened for hypertension, 13.4 million were screened for cervical, oral or breast cancer, 11.3 million were screened for diabetes and 653,000 yoga and wellness sessions were organized at the HWCs (Ministry of Health & Family Welfare, Government of India 2020c). Further, during the period January to June, 2020, an additional 12,425 HWCs were operationalized and as of 24th July 2020, a total of 43,022 HWCs are operational in the country (Medicircle Media Private Limited 2020).

Health and Wellness Centres (HWCs) have also made an extraordinary contribution in the fight against COVID-19. Few examples of HWCs contribution are as follows:

- As a part of a State wide Intensive Public Health Survey Week, HWC teams in the state of Jharkhand conducted screening for Influenza Like Illness (ILI) and Severe Acute Respiratory Illness (SARI) and facilitated COVID-19 testing.
- In Grandhi, Rajasthan, HWC teams supported the district administration in carrying out COVID-19 screening of all the travellers at the Bikaner-Jodhpur border check post.
- In Tynring Meghalay, HWC teams carried out orientation of school teachers and community leaders on measures to prevent the spread of COVID-19 in the community.
- In Subalaya Odisha, HWC teams conducted health check-ups, carried out wellness sessions for migrant workers at the quarantine centres, created awareness about the COVID-19 preventive measures, such as wearing masks in public spaces, frequent handwashing with soap and water, physical distancing etc.

Since the HWC teams had already undertaken population-based screenings for non-communicable diseases, a list of people with chronic disease burdens already existed with them which was very helpful in rapidly screening individuals with co-morbidities and provide them advice for protection against the COVID-19 infection.

Role of ASHAs during COVID-19

The Ministry of Health and Family Welfare, Government of India launched the National Rural Health Mission (NRHM) in April 2005(National Health Mission Department of Health & Family Welfare, and Ministry of Health & Family Welfare, Government of India 2020b). Under this mission, Accredited Social Health Activists (ASHAs) were deployed to connect the rural and marginalized communities with the mainstream healthcare services. ASHA worker is

a community health worker and is the first point of contact for any health-related demands especially for women and children in rural India and now even in urban areas as well. To become an ASHA worker, she must be the resident of the same village or area, preferably in the age group 25-45, formally educated upto 10th grade and needs to undergo a series of trainings (National Health Mission Department of Health & Family Welfare, and Ministry of Health & Family Welfare, Government of India 2020a). The general norm is of 'One ASHA per 1000 population', however, in tribal, hilly, desert areas it could be relaxed to 'one ASHA per habitation', based on the workload. ASHAs , along with Auxiliary Nurse Midwives (ANMs) and Anganwadi Workers (AWWs), are commonly known as India's frontline health workers. The general roles and responsibilities of ASHA are given in the Annexure 1.

To deal with the COVID-19 situation in the country, the responsibilities of ASHAworkers were expanded. As outlined by Minsitry of Health and family welfare, the role of ASHA workers in containment of COVID-19 in the country is given in Figure 16.

Figure 15: Role of ASHA workers (Under guidance of ASHA facilitator & CDPO)

- **Community awareness through inter-personal communication**

    (a) Uptake of preventive and control measures including social distancing
    (b) Addressing myths and misconceptions;

- **Support ANM/Supervisor in house to house surveillance** including

    (a) Identification of High Risk Group (HRG) and probable cases
    (b) Ensure uptake of medical services in urban and rural areas and
    (c) Psychosocial care, stigma and discrimination

- **Reporting and feedback across different phases of COVID-19 pandemic (no cases, imported/sporadic cases, clusters and community wide transmission)**
- **Personal Safety and Precautions**
- **Use of COVID 19 IEC materials**

Source: Ministry of Health & Family Welfare, Government of India. 2020a. "COVID-19 Facilitator Guide: Response and Containment MeasuresTraining Toolkit for ANM, ASHA, AWW." https://www.mohfw.gov.in/pdf/FacilitatorGuideCOVID19_27%20March.pdf.

As per the Model Micro Plan for Containing Local Transmission of Coronavirus Disease (COVID-19) introduced by the Ministry of Health and Family Welfare, Government of India, ASHA workers are required to conduct house-to-house visits, report symptomatic cases, carry out contact tracing, maintain documentation, monitor the situation and create awareness about COVID-19 in the community(Ministry of Health & Family Welfare, Government of India 2020b). Hence, it is important to highlight that the COVID-19 cases reported every day from ground zero, i.e. each village, ward, block, district or state is largely the work of these ASHA workers.

"ASHAs are the foot soldiers in India's battle against the dreaded Covid-19. They are out there in the villages and slums all over the country since March 25, creating awareness about the pandemic, and collecting data on travel histories of people as well as coronavirus symptoms. The entire Covid-19 battle rests on the information and services they provide at the grassroots level." (State president of the Karnataka ASHA Workers' Union)(Changoiwala 2020)

Figure 16: ASHA workers during a door-to-door survey, to screen people for COVID-19 symptoms, during a nationwide lockdown imposed in wake of the coronavirus outbreak, in Bengaluru

Source: Awasthi, Puja. 2020. "The Life of ASHA Workers in the Time of COVID-19." 2020. https://www.theweek.in/news/india/2020/04/10/the-life-of-asha-workers-in-the-time-of-covid-19.html.

Contact Tracing

During the time of COVID-19 lockdown, ASHAs have played a crucial role in tracking migrant returnees in various parts of India. Around 160,000 ASHAs assisted Uttar Pradesh state government in tracking more than 3,043,000 migrant workers who returned to the state during the lockdown (NDTV Convergence Limited 2020). The tracking of the migrant returnees was carried out in two phases in Uttar Pradesh. In the first phase, 1,124,00 migrant returnees and in the second phase 1,919,000 migrant returnees were tracked (NDTV Convergence Limited 2020). The Union ministry presented a case study of ASHAs work on tracking migrant workers (See Figure 18). A key role was also played by the 'Nigrani Samitis' (Vigilance Committee) which have been established under the 'Gram Pradhan' in all the villages. These Samities have assisted ASHAs in tracking migrant workers. In the state of Uttar Pradesh, ASHAs have helped in the

identification of 7,965 persons with symptoms and regularly followed up with them on their health status.

Figure 17: Case Study

Suresh, a 20-year-old native of Bahraich district (Huzorpur Block, Nibuhi Kala village), who worked at a juice shop in Mumbai returned home along with other migrant workers in a truck in early May after travelling for five days. As soon as Suresh reached home, the local ASHA — Chandra Prabha — met him and recorded his details. She informed the Rapid Response Team (RRT) of the district, which advised Suresh to quarantine himself at home. Chandra Prabha also counselled the family members and explained in detail the steps to be taken during home quarantine. She undertook regular follow up visits and kept in touch with the family. Her alertness, motivational skills and support ensured that as soon as Suresh began experiencing symptoms, he was sent to the Community Health Centre in Chitaura, which is also a designated COVID Care facility. Chandra Prabha also ensured that Suresh's family members and his fellow migrant workers were referred for COVID testing.

Source: NDTV Convergence Limited. 2020. "ASHA Workers Played Critical Role In COVID-19 Management In Uttar Pradesh, Tracked 30.43 Lakh Migrant Returnees." 2020. https://swachhindia.ndtv.com/asha-workers-played-critical-role-in-covid-19-management-in-up-tracked-30-43-lakh-migrant-returnees-46495/

Community Awareness on COVID-19

"ASHAs have played a critical role in sensitising the communities about the preventive measures to be adopted such as regular hand washing with soap and water, importance of wearing masks when out in public spaces, and maintaining adequate physical distancing."(The Union Ministry)(NDTV Convergence Limited 2020)

ASHA workers are using unique ways for raising awareness on COVID-19. *"Sunaina Devi, a corona warrior, and ASHA worker of Ward 9 in Motipur block in Bihar, found a new way in spreading awareness on Covid-19 and brain fever in her neighbourhood. With a smile on her face and a song on her lips, Sunaina is creating awareness about these diseases and people are listening too. She has created her own lyrics to educate people about the deadly diseases and the precautions to be taken. Sunaina says that she leaves home at 6 a.m. and starts singing in front of a few houses. People, including children, enjoy her songs and lyrics.*"(Outlook Poshan 2020)

Pandemic management work

"With the surge in the cases of COVID-19 in the country and the influx of migrant population from hotspot areas, one of the major challenges in Uttar Pradesh was to cater to the

healthcare needs of returnees and arrest the spread in its rural population. ASHAs have played a critical role in supporting the state's COVID-19 management during this crisis." (The Union Ministry) (NDTV Convergence Limited 2020)

"ASHAs have assisted the Panchayati Raj Department in development of the community quarantine centers, in buildings like Anganwadi centres and primary schools. They have ensured adoption of Aarogya Setu app at the community level through awareness generation and supporting in its installation." (The Union Ministry) (NDTV Convergence Limited 2020)

Delivery of non-COVID essential services

In the times of lockdown due to COVID-19 pandemic, ASHA workers have ensured continued delivery of non-COVID-19 essential services like Reproductive Maternal Neonatal and Child Health (RMNCH) services in rural areas.

"To ensure minimal disruption of health services during lockdown, the government has allowed Village Health and Nutrition Day (VHND), door-to-door checkup and follow-ups etc. We are ensuring that proper health services are delivered to beneficiaries. We have 11 pregnant and 7 lactating mothers in our area and we are regularly in touch with them for guidance on health issues and regular checkups." (Sheela Yadav, an Asha worker)(Outlook Poshan 2020)

Challenges faced by ASHAs during COVID-19

Overburdened

The COVID-19 pandemic has increased the quantum of work for AHSA workers. Before the pandemic, they worked for an average of 7-8 hours per day, but during the pandemic, despite the suspension of usual tasks, the average number of hours of work increased by 2-3 hours per day (Niyati and S. Nelson 2020). This is largely due to the additional tasks related to COVID-19 containment and increase in commute time due to unavailability of public transport.

"I have to survey 50 households every day to screen them for symptoms. My workload has gone up as more migrant workers return home, and I have to monitor their quarantine as well. And, now that transport is not available, I have to walk to my health sub-centre, which is four kms away from my home. These days, I go out at 8 in the morning and can only come back by 7 in the evening." (An ASHA Worker, North Dinajpur, West Bengal)(Niyati and S. Nelson 2020)

Due to lockdown, the commute time for ASHA workers increased tremendously. In West Bengal, ASHAs reported walking almost 10 kms or taking private vehicle to the Primary Health Centres (PHCs) to report to the medical officer after completing the household surveys (Niyati and S. Nelson 2020). In Haryana, one of the ASHAs reported about collecting masks from the PHC and distributing them to the ASHAs assigned to her. This was an additional responsibility for which she had to travel extensively and pay for expenses out of pocket (Niyati and S. Nelson 2020).

Before the lockdown, we used to conduct four Ante-natal Care (ANC) tests and blood tests. Earlier, it used to be easier but now due to the social distancing measures, we are facing constraints in proper care. However, this has not stopped us from doing our duty. We advise people to use gloves, masks and face covers when they visit the health workers and that if they have any symptoms like fever, cough, flu or breathing problem, then they should immediately inform at the COVID help line numbers. I have given my personal contact number too for emergency. The biggest challenge before us is transport and excessive police checking in the lockdown." (Sulekha, ANM worker, Azamgarh, UP) (Outlook Poshan 2020)

Apart from their routine work, the influx of migrants have substantially raised their hours of work. ASHAs were responsible for screening, monitoring and gathering health-related information from migrant workers, lorry drivers, students who returned to villages during the lockdown.

"We are not only working with the pregnant women in our area to ensure safe delivery and proper care but are also gathering information on the arriving migrants. We are facing a lot of challenges in our work these days. Particularly in the case of monitoring of arriving migrants and gathering information on their health and well-being, we have to be very vigilant and cautious. Many people are not very co-operative but we are doing our duty." (Rani Devi, ANM Worker, Sikrodhi Village, Uttar Pradesh) (Outlook Poshan 2020)

"Sometimes, the PHC facilitator calls up in the middle of the night to inform us that a few migrant workers have returned to the village; we are expected to go to the village at that hour to screen them for symptoms." (An ASHA Worker, Mulugu district, Telangana) (Niyati and S. Nelson 2020)

No formal or elaborate training
On 27th March, 2020, the Ministry of Health and Family Welfare (MOHFW), Government of India released a training toolkit for frontline health workers for the containment of COVID-19 (Ministry of Health & Family Welfare, Government of India 2020a). However, a survey conducted with 31 ASHAs in six states in India found that except for a few ASHAs in Assam and Haryana, none had received any COVID-19 specific training (Niyati and S. Nelson 2020).

"There was no formal or elaborate training, explaining the precautions or nuances. Of course, I am scared, aware that I am at risk of contracting the virus. But I have to continue work for the health and safety of over 100 families that fall under my purview." (Meera Negi, ASHA worker, Uttarakhand) (Changoiwala 2020)

"As they are community workers, their education level is not to the extent where they are able to understand online communications. You cannot expect these workers in remote villages, back of beyond India, to actually understand those instructions via an online medium. Some states like Kerala and Tamil Nadu are proactively training ASHAs in handling Covid-19, but we are not sure if other Indian states are following suit." (Bhattacharya)(Changoiwala 2020)

Lack of Protection

In order to safeguard the healthcare workers who are at forefront in the fight against COVID-19, the Ministry of Health and Family Welfare issued guidelines directing the state governments to ensure proper provisions of safety equipments like Personal Protective Equipment (PPE) to healthcare workers. However, the bar of protection for ASHA workers was set lower compared to other healthcare workers. ASHA workers were considered as low risk and only triple layer masks and gloves were recommended for their protection. However, getting even this minimal protection has been a big challenge for these ASHA workers.

"We go every day and ask questions to people whether they have any symptoms. But we are totally exposed without any mask, gloves etc. The shawl I tie across my face is just something for my solace. It won't really protect me, I know." (an ASHA Worker, Surul district, Maharashtra)(Amnesty International India 2020)

"We were asked to go to the hotspot area of Islampur where 22 of a 25-member family had tested positive for the virus. Many ASHA workers refused to go, but I agreed. I know this work is important. We were sent there without any masks or gloves. It is only after we gave a TV interview, we received 10 masks each. It is an ordinary mask which we wash and keep using again since we have not been given more" (an ASHA worker, Islampur, Sangli District, Maharashtra) (Amnesty International India 2020)

"When ASHAs first set out to conduct Covid-19 surveys in mid-March, they were given one disposable mask and half a bottle of sanitizer each. After the association voiced concern, the state helped the health workers with a bottle of sanitizer each and multiple single-use masks" (Shiva Dubey, president of the Uttarakhand ASHA Workers' Association)(Changoiwala 2020)

"Three of my ASHAs have refused to work. They say 'we have children, we have families'. How can we work without protection? How can we put them at risk?" (Kaushalya Devi, ASHA Sangini, Lucknow's Gosaiganj Block)(Awasthi 2020)

"Do we not risk our lives too? Are our lives not important?" (ASHA workers, Maharashtra ASHA and Block Facilitators Women's Union)(Amnesty International India 2020)

We are asked to monitor persons at quarantine shelters in the containment zone that exposes us to a high risk of contracting the infection. When we ask for PPE, the medical officers say PPE supply is inadequate and cannot be provided to all. Aren't our lives of any importance to the Government?(An ANM Worker, Krishna district, Andhra Pradesh)(Niyati and S. Nelson 2020)

Underpaid

ASHA are usually not paid a monthly fixed wage, but task based incentives only. In some states, where they do receive a fixed monthly remuneration, it remains very low with their core incentive ranging between INR 2000 to INR 3000 in most of the states in India. ASHAs are considered as "volunteers/activists" and not as "workers". They are excluded from the protection

under labour laws and do not have any social security benefits like insurance, paid leave, maternity leave etc.

Due to lockdown, many incentive based tasks such as immunization drives, awareness campaigns were suspended which have lowered their earnings. Though due to COVID-19 relief work, an additional remuneration of INR 1000 was announced, but many irregularities have been reported in the payment. As a part of Pradhan Mantri Garib Kalyana Yojna, the Government of India has announced an insurance of upto 50 lakhs for all the healthcare workers, but it fails to take into account the risks faced by ASHA workers on job (Ministry of Health & Family Welfare, Government of India 2020d). Due to COVID-19 crisis, some of the states like Haryana have announced doubling the salaries of healthcare workers, but ASHA workers were not included in the list.

"I used to roll and pack beedis, and I made Rs 1,200 per month. I have not received the honorarium for the last five months, and I am unable to do beedi work as well because of the lockdown."(An ASHA Worker, Tirunelveli district, Tamil Nadu) (Niyati and S. Nelson 2020)

"Of what use is the insurance when our lives are lost? The ASHA workers do not have any other social security protection and they are expected to afford treatment themselves with these low wages." (Shobha Shameel, ASHA workers Union Pune).(Amnesty International India 2020)

"They say that the government has announced an additional INR 1000 for COVID-19 survey work. I don't know if it's true but that is very less. We are risking our lives here. I have a child and I am also the sole bread winner of the family. I am very afraid for my child's life." (an ASHA worker, Pune, Maharashtra)(Amnesty International India 2020)

"On regular months, besides the INR 3000 we get, we earn extra by doing other work like delivery assistance and vaccination. But now because we are only involved in the COVID-19 survey, we are not able to go for such work which is greatly affecting our already little income." (ASHA worker)(Amnesty International India 2020)

"The government raised the minimum wages last year for all unskilled, semi-skilled and skilled workers. But the wages of ASHA workers continue to remain low. We have been submitting this demand for many years but to no avail. The government refuses to even acknowledge the ASHAs as part of official definition of "worker" under relevant labour laws and therefore conveniently escape from their obligation of addressing the concerns of the workers. Now, the ASHA workers are putting their lives at risk without being adequately compensated." (Shankari Pujari, Secretary of Maharashtra ASHA and Block Facilitators Women's Union) (Amnesty International India 2020)

"We are at the forefront of the battle against Covid-19, but our pay is not proportional to the work we do. The government had given Rs 5,000 to construction workers and auto drivers during the lockdown. And we are paid just Rs 4,000, including Rs 1,000 for Covid duty. The government should think about us too," (Usha Thakur, the general secretary of Delhi Asha Workers' AssociationDAWA, Najafgarh) (Chitlangia 2020)

"I'm the only earning member in my family, as my husband lost his job in February. As part of Covid-19 duty, we have to cover 50 or more houses daily for the survey. We are on duty all the time. Sometimes I get a call at night to locate a Covid-19 positive patient. After putting in long hours, all we get is Rs 4,000, including Rs 1,000 for Covid-19 duty," (Rajan Bidhuri, ASHA worker, Tughlaqabad village)(Chitlangia 2020)

"I have been on Covid-19 duty since April. But I didn't even get Rs 4,000 (the amount assured by the government). It is difficult for us to do our other routine jobs along with Covid-19 duty. Moreover, a lot of migrant workers have gone back to their villages due to which there aren't enough people, especially pregnant women and children, whom we can take to the dispensary for routine check-ups," (Priti, ASHA worker, Vasant Vihar)(Chitlangia 2020)

"They are risking their lives like all other essential service providers. Then why this disparity? Due to Covid-19, a majority of them are unable to do their regular work and are losing out on incentives. The order passed by the Delhi government regarding payment of core incentive is not being implemented at all the dispensaries. We request the government to look into our demand and ensure timely payment of salaries" (Kavita Yadav, the state coordinator for Asha workers, All India United Traders Union Centre)(Chitlangia 2020)

Stigmatization and domestic violence

During the pandemic, ASHA workers are facing strong opposition from their own families. ASHA workers' family members view their work as that of spreading the pandemic rather than curbing it.

"They said that I was putting their lives in jeopardy, and that I should make alternative arrangements. On April 15, I visited a family that has been quarantined, as they're suspected to be coronavirus carriers. Thereafter, my husband has made me sleep outside the house. That's hardly safe, but what choice do I have?"(Urmila Patil, an ASHA worker, Surul village, Maharashtra) (Changoiwala 2020)

"What will we get out of this? For a paltry amount of INR 3000, we are putting the whole family in danger. My husband blames me every day" (an ASHA worker, Delhi) (Amnesty International India 2020)

"I have been sleeping on the veranda outside at night. I have a two-year old child, I am terrified about her being infected."(Urmila, an ASHA worker) (Amnesty International India 2020)

"The fear is natural. Those ASHAs who are more educated have got over it. My husband, who is very supportive of my work otherwise, keeps telling me, 'what is the need to work so hard. What if you fall sick?"(Mamta Rani, an ASHA Sangini, Gosaiganj block, Lucknow)(Awasthi 2020)

A strong sense of stigmatisation is attached to door to door survey conducted by ASHA workers. ASHA workers are encountering violence during their home-to-home visit for conducting surveys related to COVID-19. ASHA workers are facing hostility from the same community which they have served for many years and which used to address them as 'Didi' (elder sister). Because of lockdown, men of the household stay at home and these ASHA workers have to face disdain and violent behaviour from them. Reportedly in the state of Karnataka and many other states like Uttar Pradesh, Haryana, Telangana, Bihar, Odisha, groups of ASHA workers were assaulted by a mob of around 100 people when they were collecting data related to symptoms like cough, cold and fever (Changoiwala 2020).

 "Some people shut their doors on us. They warn us to keep away from their children." (Mamta Rani, ASHA Sangini) (Awasthi 2020)

"These women health workers have been abused, assaulted, pelted with stones and spat on during their Covid-19 surveys in the past few weeks," (Shankar Pujari, president of the Western Maharashtra ASHA Workers' Union) (Changoiwala 2020)

"There is immense stigma attached to the disease, and people don't want to declare symptoms, or that they could be Covid-19 carriers. When ASHAs approach them, they get irked and attack. Many others abuse them, suspecting that ASHAs might be infected as they're constantly on the field." (Shankar Pujari, president of the Western Maharashtra ASHA Workers' Union) (Changoiwala 2020)

Rumours about COVID-19 on social media have made ASHA workers' work even more challenging. *"People are fearful that contracting the virus means immediate death. I tell them, 'look at me. I have a dupatta to cover my face. I wash my hands every half an hour. Has anything happened to me? Women are afraid to go for deliveries to hospitals for fear of contracting the infection".* (Urmila Devi, an ASHA , Nagar, Lucknow)(Awasthi 2020)

Other healthcare services hampered

Due to COVID-19 pandemic, non-emergency healthcare services have taken a backseat. Due to nation-wide lockdown, supply of essential medicines, vaccines etc. was hampered.

"For the pregnant women who say that their vaccines are due, I only offer them the solace that I have made a note in my register and will get to them as soon as the vaccines are available. If a pregnant woman cuts her finger on a knife and is at risk for tetanus, there is no way for me to get her an injection for even that." (Asha Pandey, an ASHA worker in Gudumba area of Lucknow)(Awasthi 2020)

*"Men are not used to being at home. The women complain of the physical demands their husbands make on them. Women come to me begging for condoms, asking me to buy some but I am helpless."(*Asha Pandey, an ASHA worker in Gudumba area of Lucknow)(Awasthi 2020)

"*We are facing a number of challenges due to the lockdown. People are worried about availability of routine hospital check-up for pregnant women and institutional delivery. Due to*

the lockdown, there was a disruption in immunization services and health checkups.
Therefore, we have been reaching out to pregnant and lactating mothers to inform them on
precautions like masks and maintaining hygiene etc." (Ranjita, An ASHA worker,
Farrukhabad) (Outlook Poshan 2020)

Other challenges

Caste based descrimiantion
ASHAs belonging to the Scheduled Caste category reported facing caste-based discrimination
while carrying out COVID-19 surveys. For instance, while conducting Covid-19 surveys, an
ASHA worker from West Godavari district in the state of Andhra Pradesh reported casteist slurs
from upper-caste men in the village who had objection to receiving health advice from a woman
belonging to Dalit Caste (Niyati and S. Nelson 2020). In one of the cases even the police had to
intervene to instruct respondents to stop threatening ASHA workers and cooportate with the
COVID-19 survey (Niyati and S. Nelson 2020).

Double burden of work
During the time of lockdown, ASHA workers is faced dual burden of work. One, the intensified
field work outside home due to COVID-19 and other the intensive domestic work especially
cooking (Niyati and S. Nelson 2020). Before lockdown, children used to get food from the
anganwadi centres (as a part of mid-day meal) and men from worksites. Post lockdown, cooking
food for the family became an additional responsibility for ASHA workers. During the lockdown
period, many ASHA workers reported being the sole bread winners for the family because their
husbands lost their jobs (Niyati and S. Nelson 2020).

"My husband is a daily wage worker. Last year, he received only 30 days of work under
MNGREGS. Even agricultural opportunities are few in the village in this season. He has been
unemployed for the last two months. No dues have been paid till now." (An ASHA Worker,
Karnal district, Haryana) (Niyati and S. Nelson 2020).

Way Forward

Eventhough the daily cases and deaths have steadily been on the decline in India since mid-
September, the crisis is still quite severe than most people realize. There is virtually no testing in
the rural settings and hence no concept of contact tracing or quarantining. Hence, the disease can
spread far and wide completely unchecked. It is high time that the government focuses now on
providing training and handholding to healthcare workers, especially to the ASHAs in the rural
areas. Massive education programme to educate people and establishing a strong surveillance
system can help in reducing the COVID-19 spread and fatality in rural areas. ASHA workers
should be provided with adequate support by providing the necessary protective equipments,
monetary support, social protection and adequate training to deal with not only the current
pandemic, but to bolster our own readiness for any future health crisis in the country. Efforts
should also be directed towards raising public awareness about post-covid care. Dedicated
facilities and protocols to provide post-covid-care should be in place in all the states across India.

In India, despite the availability of vaccines[3], say from early 2021, physical distancing, hand hygiene and use of face mask/cover will still remain the mainstay to protect from COVID-19.

We believe that at a time when the federal and state governments are dealing with the challenges emanating from the Covid-19 pandemic, this crisis should be seen as an opportunity to strengthen the public health system in India, a long over due exercise. This would entail, among other things: 1) a much higher level of public health spending; 2) comprehensive training, effective control and oversight and timely and adequate payments for the ASHAs; 3) an effective and efficient management structure for the health facilities at the village, block and district levels; and 4) commensurate physical infrastructure and human resources in the Health and Wellness centers and the Primary Health Centers with the growing needs of the regions.

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[3] It may take anywhere between 1-3 years to get the entire population vaccinated.

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Annexure 1: Roles and Responsibilities of ASHA Workers

S.No.	Roles and Responsibilties
1.	**Create Awareness** • Health • Nutrition • Basic sanitation, hygienic practices, healthy living and working conditions • Information on existing health services and need for timely utilization of health • Nutrition and family welfare services
2.	**Counseling** • Birth preparedness •Importance of safe and institutional delivery • Breast-feeding • Immunization • Contraception •Prevention of RTI/STI. • Nutrition and other health issues.
3.	**Mobilization** • Facilitate to access and avail the health services available in the public health system at Anganwadi Centers, Sub Center(SC), Primary Health Centre (PHC), Community Health Centre (CHC) and district hospitals.
4.	**Escort/ Accompany** • Escorts the needy patients to the institution for care and treatment • She will accompany the woman in labor to the institution and promote institutional delivery
5.	**Village Health Plan** • Work with the village Health and sanitation Committee to develop the village health plan
6.	**Provider of Primary Care** • Minor ailments such as fever, first aid for minor injuries, diarrhea. A drug kit will be provided to ASHA • Provider for DOTS (Directly observed treatment, short-course) • Depot Holder ORS, IFA, DDK, chloroquine, oral pills and condoms • Care of new born and management of a range of common ailments
7.	**Inform Births, deaths and unusual health problem or disease out break**
8.	**Promote Construction of household toilets**

Source: Bajpai, Nirupam, and Ravindra H. Dholakia. 2011. "Improving the Performance of Accredited Social Health Activists in India." Center for Sustainable Development, Earth Institute, Columbia University. https://academiccommons.columbia.edu/doi/10.7916/D8988G63