# Ensuring equity against odds- COVID-19 Vaccination outreach to the remotest area of Himachal Pradesh-India, a first-hand experience

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#### CITATION

Rattan S, Jindal N, Kumar R, Sharma GA. Ensuring equity against odds- COVID-19 Vaccination outreach to the remotest area of Himachal Pradesh-India, a first-hand experience. Journal of the Epidemiology Foundation of India. 2024;2(2):73-77.

DOI: https://doi.org/10.56450/JEFI.2024.v2i02.008

#### ARTICLE CYCLE

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#### Abstract

Background: The COVID-19 vaccination drive Himachal Pradesh (HP), lead from the front by vaccinating 50,21,659 eligible beneficiaries for the 1st dose. Govt of India had given target of saturating the state with the first dose by the end of the month. By 16<sup>th</sup> of August, 2021, Distt Kangra had already administered 10.73+ lakh doses covering 92.2% of the eligible target. Objective: The target would not be achieved factually without considering the vaccination in far-flung remote village of 'Bara Bangal'. Methods: The village is sandwiched between two passes. The most accessible access is located behind the scenic 'Dhauladhar mountain ranges, following vigorous trails for 3 days. The target of 100% for the 1st dose could not be achieved without vaccinating the left-out beneficiaries. Hence, extra efforts were made to vaccinate estimated 120 beneficiaries. The Chief Minister's Office approved for the proposed vaccination team outreach session at 'Bara Bangal', Kangra, by the stateowned helicopter. Authorities decided to take 20 vials of the Covishield vaccine with a team of 5 individuals. Results: The team vaccinated 111 beneficiaries at 'Bara Bangal' out of which 103 were administered the 'first' and eight were administered the 'second' due dose. This dedicated vaccine campaign is a landmark event in the HP vaccination coverage of the entire population for the 1<sup>st</sup> dose. Interpretation: A coordinated and committed effort by the state authorities thereby ensured vaccine equity against all odds, as inaccessible one's of the remotest areas were outreached & vaccinated. On the 29th of August, HP became the 1st state in India to achieve a 100% vaccination of the eligible population. The state has ensured that no one is left out even from remotest area.

#### **K**EYWORDS

COVID-19, Vaccination drive, Campaign, Vaccine-equity

### INTRODUCTION

In August 2021, the vaccination drive of COVID-19 in India had been in full swing, with Himachal Pradesh (HP) leading the drive from the front by vaccinating 50,21,659 beneficiaries for the first dose out of the total 53,77,082by on the 16<sup>th</sup> of August, 2021.(1) As per Census 2011 projections on 1st March 2021, HP is inhabited by projected population of 7.3 million.(2) Govt of India had given a herculean task of saturating the state with the first dose of vaccine by the end of August, 2021.Only 6.4% of beneficiaries were left out as per target based on eligibility. State authorities had taken the task positively with making sure the supply chains of the vaccine remain intact across the state and ensuring maximum vaccination of left-outs in the shortest possible time.

All 12 districts of the predominantly hilly state (HP) were eyeing the target, with numerous Covid-19 vaccination sessions planned and total run-in capacity alongwith maximum resource utilization. Kangra is one of the largest districts in the state, also had an uphill task in hand. By the 16<sup>th</sup> of August, 2021, District Kangra had already administered 10,73,380 doses out of the 11,64,173 total target given as per census data, covering 92.2% of the target. Under the guidance of state & district authorities, the health workers were not leaving any stone unturned. District administration further decided to take the vaccination session to the village level by planning sessions in each panchayat district at least once to ensure accessibility. There are 814panchayats, and further sessions were planned in all panchayats in three days. However, the district's first dose target would not be achieved factually without considering the far-flung village of 'Bara Bangal'.

# **Objective: Out of Sight, But Not Out of Mind**

*'Bara Bangal'* village wrapped in legend is sandwiched between the Kalihanipass (4,850 meters), (3) and 'Thamsar pass' (4,665 meters),(4) protected by impregnable mountains on the third side and the raging Ravi River on the fourth. Although captivating from the description, it is inaccessible for the whole of the year because it remains cut off from the rest of the world, as there is no motorable or even convenient walkable road to the village. The most accessible access to this village is located behind the scenic 'Dhauladhar' mountain ranges of Dist. Kangra is from Bir village, which takes longer, vigorous hiking, usually following trails for three days.

Due to geographical and operational constraints, 'BaraBangal' did not have any vaccination camp in the village in the ongoing vaccination drive leading to inequity. However, a few people of the village had gotten themselves vaccinated while they otherwise travelled to the lower regions, which was not substantial enough. The target of 100% for the first dose could not be achieved without vaccinating the left out beneficiaries of the area. Hence the district authorities decided on vaccinating the beneficiaries of the 'Bara Bangal' area and reach out to the marginal ones.

# MATERIAL & METHODS

Although it was difficult for the health workers to reach there by taking that long a journey, the real problem would have been carrying the vaccine to the village. The closest Cold Chain Point was three days away, and there would have been Cold Chain failure for sure as the guidelines recommended that the Covishield vaccine be stored at 2-8º C unless it is to be opened. Vaccine carriers used by health workers usually can last for 48 hours if the lid is not opened and Open vial has a shelf life of 6 hours maximum at room temperature.(5,6) The other daunting task was to know how many were still left unvaccinated for COVID-19. The challenge was accentuated further with the non-availability of connectivity in the village. The total population of'Bara Bangal', according to the 2011 census, was quoted 484 but few of them had been already vaccinated at various session sites across district Kangra. (7) Multiple attempts were made to connect with the only satellite phone available in the area, and after several hours our team was successful to estimate of around 120 beneficiaries, who were due for a vaccination. It was also conveyed that a few beneficiaries had gone to the fields a few days back and might return on the day of vaccination only.

Finally, when the team and the vaccine arrangements were made, the District Authorities approached the state government and floated a request for the use of a helicopter. The government was serious enough to the commitment, to the extent that the Chief Minister's Office approved for the proposed vaccination team outreach session at 'BaraBangal', Kangra, by the state-owned helicopter of the Honourable Chief Minister of Himachal Pradesh.(8)

#### COVID-19 vaccination at 'Bara Bangal':

With the permission granted and the means of transport arranged, District health authorities decided to take 20 vials (200 doses) of the Covishieldvaccine with a team of five individuals. The team constituted at the district level was personally led by Deputy Commissioner District Kangra and further included Additional Deputy Commissioner, Chief Medical Officer, Dist. Immunization Officer and a Staff Nurse/Vaccinator.

After crossing over the majestic 'Dhauladhars' and witnessing the serene scenic beauty enroute, the vaccination session site was established in the only high school premises. A group of people was already there who helped the team set up the session at a quick pace. It was an encouraging scene to see that people were enthusiastic enough to get the jab participation for reflecting community vaccination. The local Anganwadi worker (AWW) had already motivated people enough for vaccination. The AWW helped the vaccination team make the line list and gather the details as it had to be an offline session, and the details of all the beneficiaries were to be added later on after returning to the central govt owned CO-WIN portal.

# **RESULTS & DISCUSSION**

All the beneficiaries were informed about the vaccine being administered and the possible side effects that could be encountered. The team vaccinated 111 beneficiaries at *'Bara Bangal'* out of which 103 were administered the 'first' dose and eight were administered the 'second' due dose. One of the eight 'second dose' beneficiaries expressed his gratitude to the government as he recalled his first dose

journey. The eldest individual was a 91 years old male who received the first dose of the Covishield vaccine. All the beneficiaries were asked to wait for half an hour to check for any immediate Adverse Event Following Immunization (AEFI), but none of the beneficiaries reported the same.

Among the beneficiaries for the first dose were 35 males and 68 females. It was observed that the males of the village commuted to the lower plain regions more frequently for routine work, which could be why more females were left out for the first dose; thereby, this outreach session addressed gender parity also. Figure 1 depicts the distribution of beneficiaries across three key eligible categories for vaccination as notified by the Government of India.





The government of India decided to rollout vaccination for age 60 above on the 1<sup>st</sup> of March, 2021 for aged 45 above on the 1<sup>st</sup> of April, 2021and the 1<sup>st</sup> of May for 18 years &above respectively.(9-11) But after inoculating 19, 35 & 49 beneficiaries for the age categories of >60, 45-59 & 18-44 respectively, it seems that due to the difficult terrain, people in the region were not able to visit the lower regions for vaccination despite being eligible. Specifically, 19 beneficiaries above 60 years category were eligible since March 2021 but couldn't avail the opportunity plausibly due to geographical inaccessibilities. Hence, this organized camp fulfilled the aim with which the district authorities had reached' BaraBangal'.

At the interface, the first encounter of the local diaspora, a female beneficiary visited the

vaccination centre with h/o amenorrhoea for six months. The female was worried that she was not having any sign of pregnancy shared with her by the elders of the village. She was examined by the District Immunization Officer, and it was observed that the findings of the examination did not match with the period of gestation (POG) according to her date of last menstrual period (LMP). She was counselled by the doctor to get an examination done as she was planning to visit the lower regions and was provided with the mobile number of the doctor for follow-up along with any assistance required. She opted in for vaccination, confirming if it is safe to get the vaccine in pregnancy, for which she was counselled extensivelyand vaccinated with specific instructions to follow up in any case of exigency. (12) She was further counselled for a healthy diet with the inclusion of locally available food items till she approached a doctor.

Keeping in mind the inaccessibility's of the region and the visiting team had taken essential medicines which could be distributed to any ailing member in the village at the spot only. The medicines were kept in the only Anganwadi centre with directions on how to use them, and the same information was circulated among all the visiting beneficiaries. A 72-year-old male who complained of generalized weakness and loss of appetite for one week was also identified to be airlifted back with the vaccination team for tertiary care services.

Although two team members could not be taken back on the same day as the second sortie of the helicopter was cancelled due to bad weather. Additionally, this turned out to be blessings in disguise for community confidence, as villagers were assured of medical services during the night in case of any urgency, reassuring some beneficiaries with an element of anxiety during the vaccination process. The villagers showered their hospitality on the team members and took good care of the team, which returned back through the first available sortie the following day. This dedicated vaccine campaign is considered a landmark event in the HP vaccination coverage of the entire population for the first dose.

### Interpretation

As we all know, that scrouge of the COVID-19 pandemic can be best addressed through vaccination only, but WHO concerns of inequities on vaccine delivery in low and low middle-income countries were also profound and indeed relevant. (13) This drive relates to the state government (Himachal Pradesh, India) commitment to vaccinating everyone left out, surpassing the geographical and gender disparities, addressing the inequity. A coordinated and committed effort by the state authorities ensured vaccine equity against all odds, as inaccessible ones of the remotest areas of HP were outreached and vaccinated. On the 29th of August, 2021, HP became the first state in India to achieve a 100% vaccination of the eligible adult population.(1) Globally, the communities are worried about the inequity in the distribution of vaccines, the state of HP had ensured that no one was left out even in the remotest area while covering the whole population for the first dose.

# CONCLUSION

It could be concluded that equity in health could be achieved when intersectoral coordination is prioritized. An approach with holistic and dedicated involvement of stakeholders from top to bottom can deliver exceptional results in larger interest of health of the communities.

# **AUTHORS CONTRIBUTION**

All authors have contributed equally.

FINANCIAL SUPPORT AND SPONSORSHIP Nil

#### **CONFLICT OF INTEREST**

There are no conflicts of interest.

# DECLARATION OF GENERATIVE AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

Authors have used only Grammarly AI tool for grammatical corrections

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