

NOTES FROM THE FIELD - PUBLIC HEALTH

PUBLIC HEALTH RESPONSE TO COVID-19:
VACCINATION COVERAGE ACHIEVED THROUGH CAMPAIGN
MODE – “MEGA-CAMPS”, TAMIL NADU, INDIA 2021-22

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Abstract

ABSTRACT : To overcome the growing burden of COVID-19, Tamil Nadu, a southern state in India with a population of 76 million, introduced a strategy for COVID-19 vaccination by campaign mode on a large scale named as “mega-camps”. 38 mega-camps were conducted every weekend for a period of one-year from 2021-22 with 1,108,557 vaccination sessions. Of the total first, second and precaution doses provided, 29%, 53%, 75% were achieved through mega-camps. Also, it helped in reducing vaccine wastages drastically from 6% to -0.30%. In situations, where large vaccination coverage is desired over short period, campaign mode may be preferred in achieving maximum coverage.

KEYWORDS : Mega camps, Mass vaccination, Innovation in Public Health.

MAIN ARTICLE

Covid-19 pandemic has resulted in devastating impacts causing huge social and economic disruption. Nearly 15 million excess deaths have occurred globally in 2020-21.¹ Of the 1.41 billion population in India, a total of 530,824 deaths have occurred due to COVID-19 till March 2023.² Tamil Nadu, a southern State in India, faced the pandemic in three waves from 2020-22 with average daily death of 83 in first wave, 340 in second wave and 34 in third wave during the peak period.³

With the aim to provide strong protection against serious illness, hospitalization, and deaths from Covid-19, WHO have published strategy for achieving Covid-19 vaccination recommending all countries to vaccinate 10% of their population by September 2021, 40% and 70% by end of December 2021 and June 2022.⁴⁻⁵ India rolled out the world's largest vaccination drive on 16 January, 2021 in 3,006 sites in all states and union territories to vaccinate around 300 million priority groups.⁶⁻⁷

With 76 million population, the state adopted the national guidelines without any deviation for preventing pandemic spread including case management, containment measures, and, enforcing lockdown, compliance to wearing masks, and social distancing. State-wide vaccination drive was initiated on 16 January 2021 adopting the SOPs prescribed under the country guidelines in 160 Covishield and 6 Covaxin sites.⁸ The drive began with a focus on HealthCare Workers (HCW) and Frontline Workers (FLW) and extended to the old age population, then to persons aged 45 and above, adult

population and to adolescents in phases. Nearly a year after the initiation, precaution doses were taken up.

After battling first and second wave of COVID-19 pandemic, in the mid-year of 2021, to overcome the growing burden of COVID-19 cases requiring hospitalization and deaths, and more importantly to overcome the challenges such as vaccine hesitancy and vaccine avoidance, the State took on different vaccination strategies to increase the coverage viz., vaccination at workplaces, schools and colleges, focusing migrants, reaching differently abled persons through Department of disability and house to house vaccination. Till August 2021, 91,67,198 doses were given which is only 8% of the total doses given as on 31 March 2023. In September 2021, a strategy named “mega-camps” was initiated across the state which were the campaign mode of vaccination planned on every weekend, either Saturday or Sunday involving the entire public health team from 7am to 7pm accessible to the public even on holidays. Camps were placed at all the conventional booth locations allocated for Intensive Pulse Polio Immunization (IPPI) which has been



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happening since 1995.

Tamil Nadu Government was very much keen on improving the vaccination coverage and supported the mega-camps through ensuring coordination and sharing of responsibilities from other government departments, private players, industries, and motivating public through media. Directorate of Public Health and Preventive Medicine, with 100 years of its existence formulated the operational strategies and implemented mega-camps across the state involving all its field strength.

District Task Force meetings were convened under the chairmanship of the District Magistrate to bring in intersectoral coordination. Microplanning with manpower to be involved, training plans, setting up booths, camp sessions, fixing targets, supervision, monitoring, providing police protection for maintenance of queue and IEC, were communicated from the state to all district teams. District Immunization Officers (DIOs) were responsible for the planning and smooth conduct of the sessions under the overall guidance of State Immunization Officer (SIO). DIOs ensured the availability of vaccines and syringes at cold chain points well in advance and supplied necessary vaccine logistics including syringes as per the target beneficiaries identified in the micro plan for each booth. Pharmacists maintained enough number of ice packs, vaccine carriers, cold box, etc. to be used for conducting the camps. The vaccination booths were set at railway stations, bus stands, schools, Anganwadi centers, religious places, Primary Health Centers (PHCs), secondary and tertiary care hospitals, and other fixed polio booths but without compromising the effective Cold Chain Management.

The arrangements at booths such as seating, drinking water facilities, signage board and IEC materials for display etc. were supported by local elected representatives or revenue departments. Each booth had micro plan with number of eligible beneficiaries in the respective area and number of days required, and conducted sessions on morning, afternoon, and evening at three different places as camp sites. In each booth or camp site, a minimum of 4 personnel was involved – a vaccinator, a person for data entry and two supporting staff for mobilization. Vaccinators were the Village Health Nurses, Urban Health Nurses from field level, and staff Nurses, ANMs from PHCs. Nursing staff from secondary and tertiary hospitals, nursing students from both Government and private were also deputed as vaccinators. Data entry persons in PHCs and from other departments were deputed for data capturing and, for mobilizing beneficiaries, Anganwadi workers were involved through the

support of ICDS. Anaphylaxis kits were kept in the booths to manage AEFI cases. 108 Emergency Ambulance Services were stationed at strategic places during the camp timings. Booths were functioning the whole day and separate plan for vaccine distribution and cold chain maintenance with vaccine delivery route chart were formulated, for which vehicles from all departments were diverted and used. Independent mobility arrangements were also made for delivery of food and refreshments for the workforce involved.

Performance of the camp sessions were reported through Google Sheet on real time including vaccine utilization, in addition to prompt entries in the Co-WIN portal by concerned vaccinator, Data Entry Operators and volunteers. One supervisor at block level was assigned for 5-8 booths. District level Supervision was also ensured by second level officials from the Public Health department and officials from other Departments. Independent transport arrangements were made for each of the supervisors and were a part of the micro-plan.

Social Mobilization and IEC activities were initiated much prior to the campaign such as public announcements in streets, marketplaces, festivals, fairs, schools, issuance of banners, leaflets, usage of local cable TV and social media like twitter, website for informing on the sites and timings of sessions to public. In addition, press news appealing the public to take vaccination were issued by the District Collector. Elected representatives like Panchayat President and other members were approached for sponsorship of IEC activities. NGOs, Rotary, professional bodies like IMA, IAP, religious leaders, community leaders, local influencers and resident welfare associations were approached and involved in motivating public to get vaccinated. Special efforts were given to high-risk areas like urban slums, peri urban, remote, sparse, and inaccessible population settlements.

National Health Mission, Tamil Nadu supported this initiative of Mega-camps with funds of Rs.14.33 Crores towards contingency and incidental expenses for the camps. UNICEF supported magnanimously with all IEC such as Audio Jingles, Video Jingles, posters, and rallies disseminating the importance of COVID Vaccination.

Since the launch of COVID-19 vaccination in January 2021, among all states in India, TN had shown a slow pace in coverage and was ranked as “very low performing state” with 55% coverage for 1st dose and 30% for 2nd dose till August 2021. So, to make the vaccination accessible both in terms of place and time, vaccination was converted as a “People Movement” through mega vaccination camps. Mega-camps were started from September 2021, eight months after the

initiation of COVID-19 vaccination and was implemented for a year till September 2022 across the state. All the eligible population aged 12 years and above were covered in the camps.

Totally 38 mega-camps were conducted with 1,108,557 vaccination booth sessions in one-year period. Through mega-camps, 17,798,199 first doses, 30,421,674 second doses and 6,910,703 precaution doses were provided which shares about 29%, 53% and 75% of the total first, second and precaution doses respectively, provided in the state till March 2023. Of the overall first and second doses, 41% of the doses were achieved through mega-camps only. In addition to achieving coverage, mega-camps helped to reduce the vaccine wastages drastically from 6% in August 2021 to -0.30% in September 2022.⁹⁻¹¹

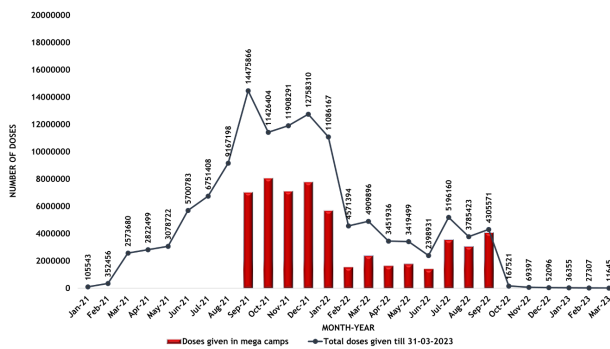


Figure 1: COVID-19 vaccination performance achieved overall till Mar 2023 and contribution of mega-camps from Sept 2021-Sept 2022, Tamil Nadu, India

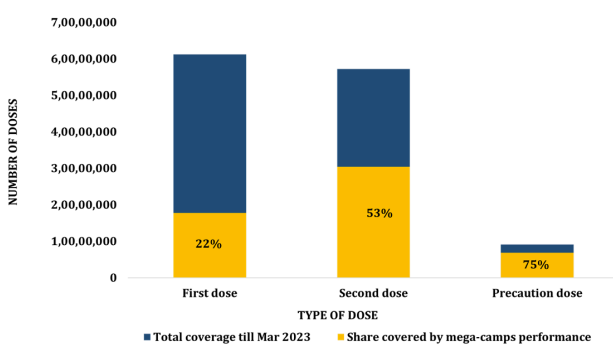


Figure 2: Vaccination coverage among target population by doses and proportion achieved through mega-camps, 2021-23, Tamil Nadu, India

Few challenges were faced like difficulties in bringing the workforces both from within the department and from other departments, short supplies in the initial periods and since the entire team had to work for 12 hours, staff became fatigued and exhausted. Fund support was provided only for

the initial few camps. Poor internet connectivity in rural and tribal areas hindered updating the COWIN portal in time. Vaccine hesitancy in few pockets and vaccine avoidance by the due beneficiaries during the post peak period affected the coverage.

In three years of the COVID-19 vaccination journey, nearly two-fifths of the state coverage of first and second doses were through mega-camps, using existing resources with no additional workforce and with limited funding. Thus, this intervention is sustainable and can be replicated in similar settings and situations. Mega-camps helped to overcome vaccine avoidance and hesitancy by creating mass awareness. Since conducted on weekends, it not only made the vaccines available at the doorsteps but also helped the working population to take the jabs without affecting their working schedule. Daily wagers benefited much without loss of their wages.

In circumstances such as pandemics, where large coverage vaccination is desired over a short period of time, campaign mode of vaccination may be preferred in achieving the maximum coverage.

REFERENCES

- World Population Data Sheet 2022 Highlights Excess Deaths Due to COVID-19 | News | SDG Knowledge Hub | IISD [Internet]. [cited 2023 Apr 7]. Available from: <http://sdg.iisd.org/news/world-population-data-sheet-2022-highlights-excess-deaths-due-to-covid-19/>
- Total confirmed deaths due to COVID-19 vs. population, Feb 28, 2023 [Internet]. [cited 2023 Apr 7]. Available from: <https://ourworldindata.org/grapher/total-confirmed-deaths-due-to-covid-19-vs-population?country=TZA~IND>
- Media-Bulletin-31-08-21-COVID-19.pdf [Internet]. [cited 2023 Apr 7]. Available from: <https://stopcorona.tn.gov.in/wp-content/uploads/2020/03/Media-Bulletin-31-08-21-COVID-19.pdf>
- WHO Strategy-to-achieve-global-covid-19-vaccination-by-mid-2022.pdf.
- Watson OJ, Barnsley G, Toor J, Hogan AB, Winskill P, Ghani AC. Global impact of the first year of COVID-19 vaccination: a mathematical modelling study. *Lancet Infect Dis.* 2022 Sep;22(9):1293–302.
- Juyal D, Pal S, Thaledi S, Pandey H. COVID-19: The

vaccination drive in India and the Peltzman effect. J Fam Med Prim Care. 2021;10(11):3945.

7. India rolls out the world's largest COVID-19 vaccination drive [Internet]. [cited 2023 Apr 7]. Available from: <https://www.who.int/india/news/feature-stories/detail/india-rolls-out-the-world-s-largest-covid-19-vaccination-drive>

8. Covid Vaccines -operational guidelines by ministry of health and family welfare.pdf

9. Directorate of Public Health & Preventive Medicine; Immunization; Press meet report Tamil -30-09-2022.pdf.

10. Directorate of Public Health & Preventive Medicine; Immunization; Press meet report Tamil_31-03-2023.pdf.

11. CoWIN Dashboard [Internet]. [cited 2023 Apr 7]. Available from: <https://dashboard.cowin.gov.in/>