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COVID-19 Vaccination Drive in Informal Settlements of Mumbai, India

DOCUMENTING PROCESSES AND LESSONS LEARNED

MARCH 2022

Compiled by:
Manjula Bahuguna and Anuja Jayaraman

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Acronyms

AMC	-	Assistant Municipal Commissioner
APD	-	Associate Program Director
AEFI	-	Adverse Events Following Immunization
CEO	-	Chief Executive Officer
CO	-	Community Organizer
CSR	-	Corporate Social Responsibility
HCP	-	Healthy Cities Program
M&E	-	Monitoring & Evaluation
MCGM	-	Municipal Corporation of Greater Mumbai
MOH	-	Medical Officer Health
NGO	-	Non-governmental Organization
PC	-	Program Coordinator
PO	-	Program Officer
SC	-	SNEHA Centre
SNEHA	-	Society for Nutrition, Education and Health Action

Acknowledgements

This study is conducted by the Society for Nutrition, Education & Health Action (SNEHA). SNEHA is a Mumbai-based non-governmental organization that works at the community level in close collaboration with public health systems to improve the health and safety of women, children and adolescents. At present, SNEHA is organizing COVID-19 vaccination drives in its project areas with the support of public health systems and private partners. This report documents the processes followed and strategies adopted by SNEHA for smooth implementation of these drives in informal settlements of Mumbai.

We would like to thank SNEHA's program implementation teams for taking out the time to share details of the processes followed in the drive and the M&E team for sharing relevant data. We are grateful to the community-based volunteers and residents for patiently sharing their experiences and views with us. We thank Dr. Padmaja Keskar, Ex-Executive Health Officer (MCGM) for her impeccable guidance in organizing the drive and for valuable feedback on the report. We are also grateful to Dr. Virendra Mohite, Medical Officer of Health (G-North ward) and Dr. Nazish Shaikh, Assistant Medical Officer (G-North ward) for sharing their experiences and suggestions related to the drive. We are thankful to Dr. Kranti Rayamane and Anurag Mishra of Cipla Foundation for sharing their perspective on collaboration between private and government entities. Finally, we are thankful to Vanessa D'souza and Dr. Shanti Pantvaidya for their overall support and valuable feedback.

Introduction

The COVID-19 pandemic has impacted all individuals across the globe. Since its advent, the infection has taken more than 4 million lives globally[1] and has exacerbated underlying inequalities between people and nations.[2] The pandemic posed an unprecedented challenge of saving lives which fast-tracked the manufacturing of the COVID-19 vaccines. The vaccines came as a ray of hope to put an end to the pandemic. Subsequently, all countries have undertaken extensive nationwide vaccination drives with the hope to control the spread and the severity of the disease.

India began its COVID-19 vaccination drive on January 16, 2021, covering health and other frontline workers engaged in the delivery of essential services.[3] In the second phase of the drive, people over 60 years of age and those who were 45 years or above with co-morbidities were covered. From April 1, 2021 everyone above 45 years of age was eligible for vaccination. On May 1, 2021, the Government expanded the coverage and allowed everyone above 18 years of age for vaccination.[4] Later, on June 21, 2021, the Government rolled out a free centralised vaccination policy to expand the coverage and speed up the process of COVID-19 vaccination in India. It allowed all adults to get free vaccines using any of the government health facilities or to pay a fixed price to get the vaccine at any private hospital.[5]

January 16, 2021	March 1, 2021	April 1, 2021	May 1, 2021	June 21, 2021	January 2, 2022
Health and other frontline workers engaged in the delivery of essential services	People over 60 years and people above 45 years with co-morbidities	Everyone above 45 years of age	Everyone above 18 years of age	Free centralised vaccination policy	Adolescent (15-18 years) vaccination

Figure 1: India's COVID-19 vaccination drive timeline

The COVID-19 vaccination drive of India is the largest in the world.[6] On January 16, 2022, India completed one year of vaccination drive. Data shows that the country has been able to vaccinate 92% of its eligible adult population with the first dose and 70% have received both doses of the COVID-19 vaccine.[7] The country is now gearing up to vaccinate its adolescent (15-18 years) population and also provide a third 'precaution dose' of vaccine to the vulnerable population including frontline workers. After its rollout on January 3, 2022, India has been able to vaccinate 48% of its adolescent (15-18 years) population with the first dose.[8] Despite the tremendous work done by health systems to provide some form of protection to its people against COVID-19, the unique nature of the virus poses a great threat to such efforts. As we write this report India has already entered the third wave of the pandemic driven by the Omicron variant of the coronavirus. With emerging new strains of the coronavirus, the efficacy of the vaccines may reduce. The composition of current COVID-19 vaccines may need to be updated to protect against the evolution of the virus [9] and the Government may plan to give booster doses to eligible individuals to sustain immunity against coronavirus.

In view of uncertainty about emerging variants, modified vaccines and frequency of its booster doses, we may have to continue with the massive COVID-19 vaccination drives in the near future. In addition to the government's efforts, conducting such drives in the communities will need the collaboration of

systems, corporates, Non-Government Organizations (NGOs) and communities. Such endeavours would be specifically required in areas like urban slums where existing structural insufficiencies make following COVID appropriate behaviours very challenging. These informal settlements are extremely vulnerable and any future wave of COVID-19 can have disastrous social and financial implications on its residents. It is crucial that people living in informal settlements get the vaccine but vaccine distribution in these areas is quite challenging owing to its overgrowing population and poor access to vaccination facilities[10].

Mumbai, the metropolitan city of Maharashtra has various slum pockets spread across all its 24 administrative wards. Dharavi, one of the most densely populated places in the world, is located in the G-North ward of Mumbai. At the beginning of the pandemic, Dharavi witnessed an exponential increase in COVID-19 cases. But, due to intensive public health response by the local administration, it was later touted as a model of success in controlling the spread of COVID-19 in similar settings. Similarly, slum areas in the M-East ward and P-North ward have remained sensitive to the pandemic.

The Society for Nutrition, Education and Health Action (SNEHA) has been working in Dharavi for more than 20 years through its different programs related to maternal, child health and nutrition, adolescent health and prevention of violence against women and children. In informal settlements of P-North ward and M-East ward, SNEHA has primarily focused on maternal, child health, adolescent health and nutrition using an integrated approach with an overarching theme of gender-based violence and mental health. All the programs of SNEHA have very good community outreach and a vast network of volunteers. It has allowed SNEHA to continue its work during the pandemic and contribute to the COVID relief work in collaboration with systems and other partners.

As a public health NGO, SNEHA was closely monitoring the situation of COVID-19 vaccine availability and ensured that its staff and volunteers get vaccinated. In its intervention areas, the organization realized that people in these settlements cannot afford to pay for the vaccine and the supply crunch was making it difficult to get it in public hospitals. SNEHA decided to start vaccination drives in the communities they worked in. Procuring free vaccines and then their administration in the communities required collaboration with donors and different partners. As such, SNEHA initiated conversations with other Mumbai-based NGOs to understand their views regarding the ways to vaccinate the community against COVID-19. Post-talks, a needs assessment survey and several focus group discussions across five community-based NGOs were conducted to capture the community's attitude towards the COVID-19 vaccine and to understand the demand for the vaccine in the community. Results of the needs assessment showed that 37% of the people in the community were reluctant to take the vaccine. Vaccine hesitancy as well as the supply crunch among people were a cause of concern which prompted SNEHA to work towards increasing the demand for vaccines among community members by creating awareness and increasing its supply with help of donors and public health systems. Needs assessment survey results were shared with senior officials of municipal corporations in different wards of Mumbai.

SNEHA then asked the municipal corporation for a) In principle approval to partner with them for vaccine hesitancy communication campaign and b) Bring in private sector partners to procure and provide vaccines in the community. SNEHA used its strong relationship with corporate social responsibility (CSR) partners and the municipal corporation to initiate and drive these public-private-NGO partnerships. SNEHA mobilized two big private sector partners Citibank, whom they introduced to the Assistant Municipal Commissioner of G-North ward and Cipla foundation whom they introduced to officials of M-East and P-North ward municipal corporation. Roles were decided based on the

strength of each partner. Where SNEHA in continuation of the COVID related work, would bridge the gap between public health systems and communities by creating awareness among people and mobilizing people for vaccination, private partners would help in the procurement and administration of vaccines and the municipal corporation would provide guidelines for the whole process.

Implementation of the drive at the ground level involved various processes and each program at SNEHA implemented these processes with little tweaks based on their settings, partners, strengths and limitations. To capture the vaccination process along with contextual adaptation by different programs, the author, under the guidance of the Research Director at SNEHA began a documentation project in September 2021. The objective of this report is to document the processes undertaken by SNEHA to facilitate the vaccination drive across three communities in G-North, M-East and P-North wards. The unprecedented nature of the initiative posed various challenges and lead to multiple course corrections. This report will help us to look into processes and various strategies adopted for the smooth implementation of the drive. It will also help us to notify any barriers or challenges faced during implementation. In the larger context of urban informal settlements, it will help us to understand the nuances of the execution of such initiatives and provide input for similar drives in similar settings.

We started with the initial list of questions to capture the processes followed, implementational challenges faced and mitigation measures adopted by the program teams. We conducted telephonic/face-to-face interviews with key persons involved in the vaccination drive in different areas. In the beginning, the author had an interview with a Monitoring and Evaluation Coordinator, who had prepared the vaccination drive database. After getting a broader understanding of the processes author then undertook in-depth interviews with the Chief Executive Officer (CEO), Executive Director, three Associate Program Directors (APDs), four Program Coordinators (PCs) and two Program Officers (POs), three volunteers and three beneficiaries across programs. After getting insights from SNEHA, the author talked to municipal corporation officials and corporate partners to get a comprehensive view of the vaccination drive. Data from a total of 21 interviews allowed us to have a better understanding of the processes to write the documentation report.

The report has following sections:

1. Processes followed in the COVID-19 vaccination drive
2. Monitoring of the processes and data captured
3. Vaccination drive in Dharavi
4. Vaccination drive in Mankhurd
5. Vaccination drive in Malwani
6. Vaccination numbers
7. Challenges and mitigation strategies
8. Lessons learned
9. Way forward

Processes followed in the COVID-19 vaccination drive

At an organizational level, it was realized beforehand that it is a mammoth task and will require elaborate planning, manpower, intense monitoring and real-time course corrections. For smooth implementation of the drive, the process was divided into small steps. Based on these steps protocols were prepared considering all possible scenarios. The whole process can be divided into four steps: Registration, Mobilization, Vaccination and Follow-up.

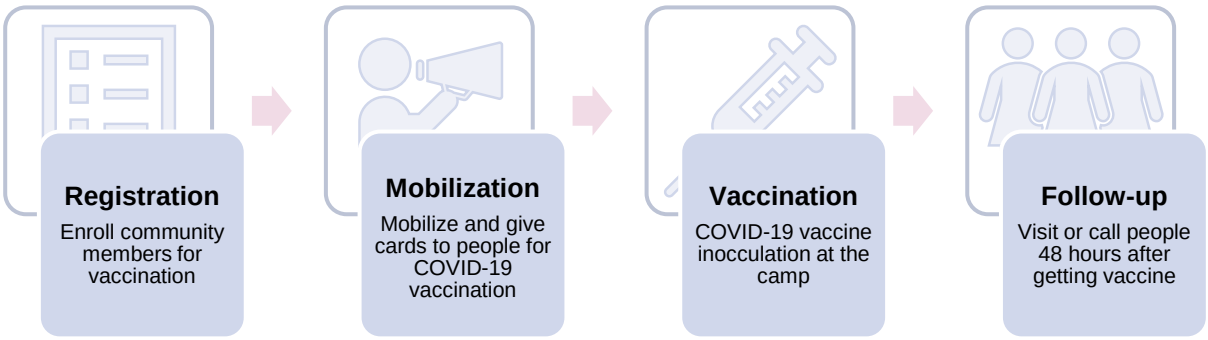


Figure 2: Steps of COVID-19 vaccination drive in SNEHA programs

Registration

To begin the vaccination drive, the first step was to make a list of all eligible people among those living in program areas. Not only the regular beneficiaries i.e., women in the SNEHA program but all eligible people were identified from residents of the area. Eligibility criteria were discussed and finalized during meetings between different partners and SNEHA. Eligibility criteria were age above 18 years, no recent infection of COVID-19 and people with the first dose of Covishield. Those with the first dose of Covaxin were ineligible as only Covishield was available in the drive. Before registration, people were given complete information about the drive and the vaccine. Any misinformation related to vaccines was tackled by SNEHA frontline workers through discussions and with the support of volunteers. After ensuring the person's willingness to take the vaccine their information was gathered for registration. Information was primarily taken on two points; 1. Demographic information (age, sex) and 2. Availability of identification cards (ADHAR card, PAN card, Voter Identification Card, Driver's license and Passport). Contact details were also taken. People were advised to register on the Government's COWIN application to get a reference ID for vaccination.

Mobilization

The next step was to refer people to the vaccination centre. For this purpose, a referral slip/card system was devised. SNEHA's frontline workers distributed cards in the community which people would take to the vaccination centre to get the vaccine. SNEHA's staff wrote essential beneficiary information on the card and suggested the scheduled day and time of going to the camp. Alongside, information regarding the dos and don'ts of the process was also given.

Vaccination

At the vaccination centre, SNEHA staff received people referred by the field staff. They checked the date on the referral slip or colour coded card of that particular day, ADHAR card and reference id of the COWIN application. In cases where the person had not registered with the COWIN application, SNEHA staff did on-spot registration on the COWIN application and then requested people to queue up for inoculation. After inoculation, they were given medicine and advised to sit in an observation room for half an hour. If all was well with the person, then he/she was asked to go home and take medicine if needed.

Follow-up

After 48 hours of receiving the vaccine, all beneficiaries were followed up by SNEHA's frontline workers either through in-person visits or over the phone. Staff enquired about any symptoms they had and assessed the severity of the symptoms accordingly. Any cases with severe symptoms like shortness of breath, chest pain, leg swelling, blurred vision etc. would be referred to the nearby public hospital. If everything was satisfactory, they suggested people to wait for the second dose. Before the due date for the second dose, frontline workers distributed referral slips to the beneficiaries and a similar process of mobilization and follow-up was repeated. On receiving the second dose staff members visited/called the person after 48 hours and if everything was satisfactory, they would close that case.

Monitoring of the processes and data captured

As described above, all the steps of the vaccination drive required an updated list of people in the community who were due for vaccination. Accordingly, a database was prepared to ensure strong monitoring of all due processes and to provide the following lists;

1. Registered beneficiaries with the pending first dose
2. Registered beneficiaries with pending second dose with a cut-off date
3. Beneficiaries registered for a second dose only with a cut-off date
4. Beneficiaries who did not access the service

For all programs, lists were generated by the Monitoring & Evaluation (M&E) team on regular basis. Any duplicate data was dropped from the list. These lists were prepared according to the unique code given to each frontline worker which helped them easily check that all those registered in their area who were still waiting to get his/her first dose and who were due for the second dose. A database was prepared in CommCare, a data collection application that allows data collection on Android-based smartphones or tablets. Apart from generating updated lists that were required for smooth implementation of the drive, training on CommCare forms helped SNEHA's staff members to understand protocols better. Online tool training was undertaken by the M&E Coordinator where mock interviews and data entry was done to ensure forms were understood properly by the frontline staff.

For the COVID-19 vaccination database two data collection forms were prepared:

1. Registration form: This form was filled out to register a person for vaccination. It captured all the necessary information about the person like name, age, sex, available documents of identification, COVID-19 vaccination status and contact details. This form allowed M&E teams to generate the frontline worker's unique id wise list of people eligible for the first dose of the vaccine.

2. Vaccination visit form: This form was filled twice; first during the follow-up visit after the first dose and the second time during the follow-up visit after the second dose. After 48 hours of the first dose, status of that person was updated on CommCare which generated a due date for the second dose. This helped to generate a list of people due for the second dose. After 48 hours of the second dose, if the person did not have any severe symptoms, the case was closed in the database. It helped in assessing the number of people fully vaccinated in the drive.

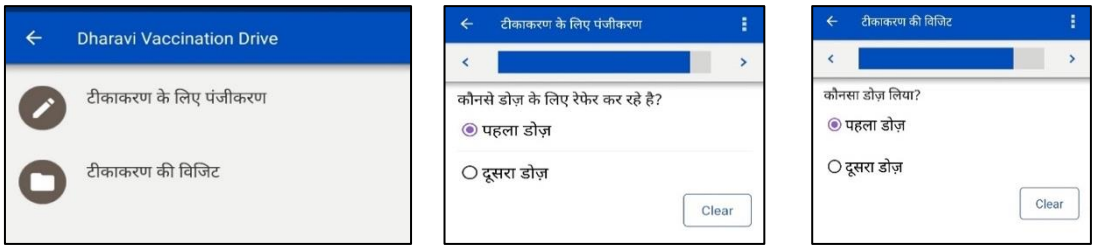


Image 1: Snapshots of digital forms used in the COVID-19 vaccination drive

In each program, implementation of the COVID-19 vaccination drive was managed by the Associate Program Director, Program Coordinators, M&E Coordinator, Program Officers, Data Officer, Community Organizers and Volunteers. Table 1 shows the main responsibilities of each staff member involved in the drive.

Table 1: Staff roles and responsibilities in the COVID-19 vaccination drive

Associate Program Director (APD)	Program Coordinator (PC)	M&E Coordinator and Data Officer	Program Officer (PO)	Community Organizer (CO)	Volunteer
Coordination with MCGM and other partners Design protocol Supervise vaccination related work in all field areas of the program Plan and strategize for smooth implementation of the drive Update senior management on progress and any challenges faced	Supervise vaccination related work in their project area Planning and implementation Devise strategies to overcome day to day challenges in consultation with POs Update senior management on daily progress and any challenge requiring management level support	Assist in protocol preparation Design database in CommCare for data collection Training of frontline workers on data collection formats Regular monitoring to ensure the quality of the data Generation of the updated lists essential for the drive Data and report generation for programs and senior management	Day to day work planning for frontline workers Supervise vaccination related work in their assigned project area Troubleshooting Crowd management at the vaccination centre Coordinate with volunteers Plan COVID-19 vaccination awareness generation campaign	Survey to register eligible people Mobilization Card distribution Follow-up COVID vaccination awareness generation Referral to public hospitals in case of adverse effect Crowd management at the vaccination centre Coordinate with volunteers Help community people in registration on the COWIN app	Support COs in the registration process Help community people in registration on the COWIN app Help COs in mobilization and follow-up Inform COs about any adverse effect COVID vaccination awareness generation Crowd management at the vaccination centre

Vaccination drive in Dharavi (G-North ward)

PARTNERS

SNEHA programs (AAHAR-CHN, SAMAGRA, EHSAS, PVWC & MNH)	MCGM	Citibank India	Jaslok Hospital & Research Centre

The vaccination drive in Dharavi started when SNEHA connected with Citibank who was interested in doing a vaccination drive with MCGM officials in the G-North ward. Thereafter MCGM in collaboration with Citibank and Jaslok Hospital & Research Center initiated a COVID-19 vaccination drive named '*Ummeed Dharavi ke liye*' in Dharavi. The initiative aimed to inoculate 100,000 people against COVID-19[11]. This initiative leverages the strength of Dharavi based non-governmental organizations to identify residents from vulnerable communities. After the initial few meetings, Assistant Municipal Commissioner (AMC) Dharavi co-opted other NGOs working in Dharavi viz. SHED, World Vision, Magic Bus, and BJS to begin the drive. SNEHA took lead and collaborated with these NGOs to facilitate the process of COVID-19 vaccination by creating awareness among people and mobilizing them to go to the centre to take the vaccine. SNEHA also helped in identifying appropriate spaces within Dharavi for setting-up the vaccination centre in compliance with Citibank/Jaslok hospital requirements.

It was decided by the senior management at SNEHA that all programs working in Dharavi would participate in the drive. It was primarily done to broaden the outreach and also to equally distribute the work across different programs so it does not affect their existing work. At present, SNEHA has different programs related to the child, adolescent and maternal health being implemented in different pockets of Dharavi along with program on the prevention of violence against women and children. After meetings with the Municipal Corporation and other partners, a core group at SNEHA with representation from all the programs working in Dharavi was formed. All programs gave their inputs and agreed on the steps to follow.

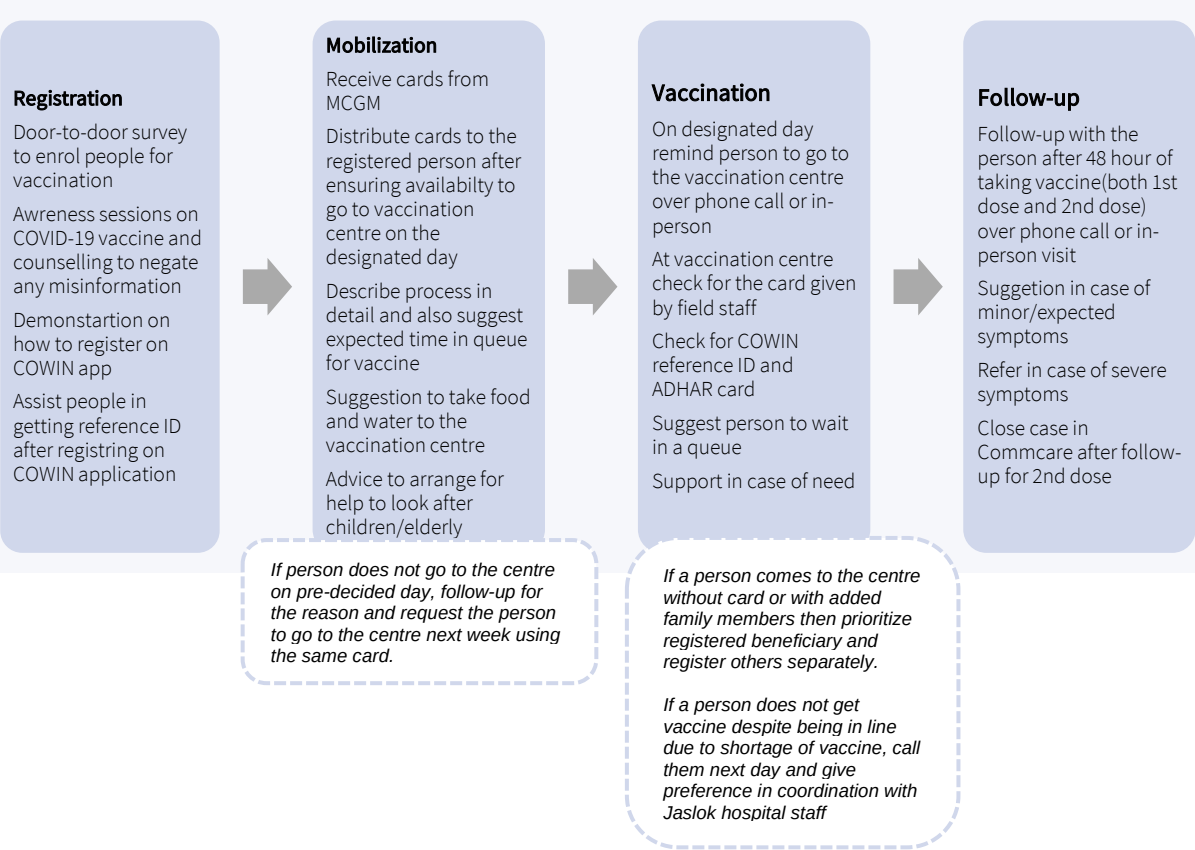


Figure 3: COVID-19 vaccination process in Dharavi based programs

The survey to register eligible people started on July 1, 2021, with an initial aim to identify 1000 people for vaccination. Later, as suggested by Jaslok hospital, program teams continued the survey and by July 12, 2021, were able to identify 8,500 people in different pockets of Dharavi. The final list was shared with MCGM and Jaslok hospital to ascertain the availability of vaccines. On receiving the lists of people from all NGOs, Jaslok hospital started the vaccination camp on July 27, 2021. For community mobilization, a card system was devised by MCGM. These cards were colour coded based on the days of the week. A registered person willing to take the vaccine on a particular day would get a coloured card for that particular day only.

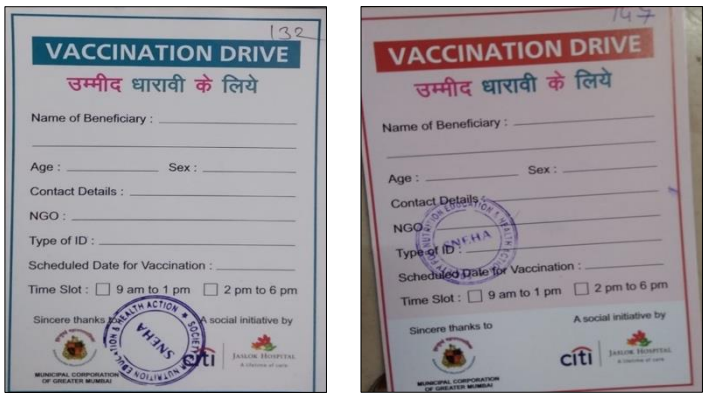
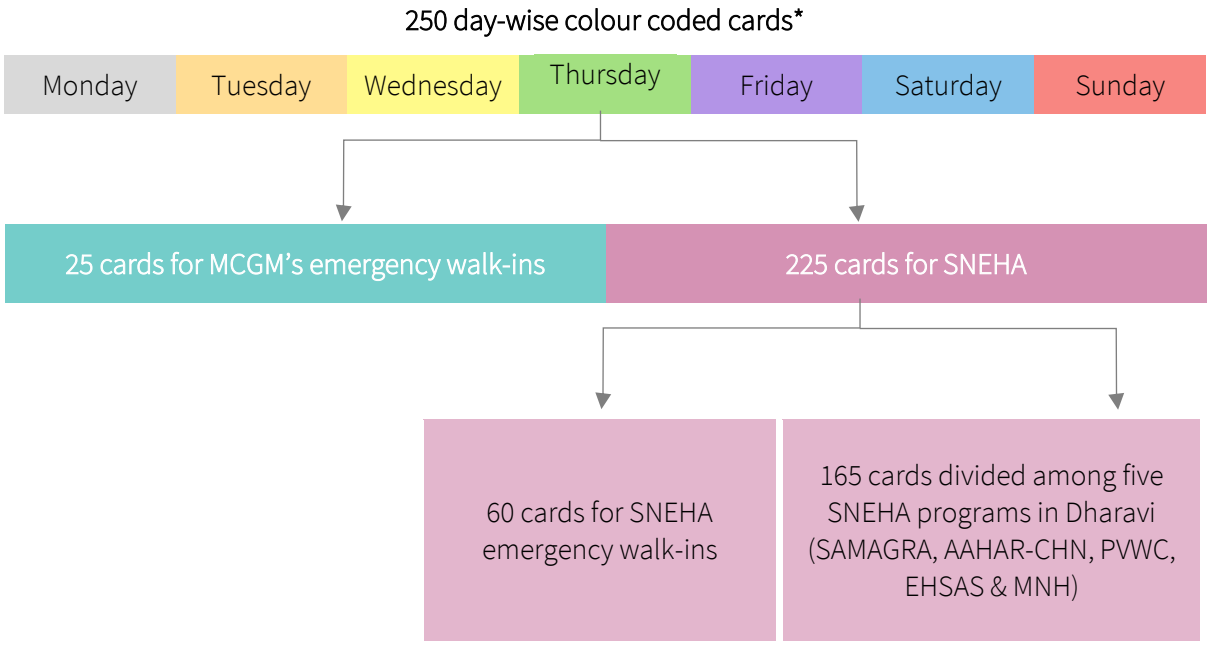


Image 2: Vaccination cards used in Dharavi based programs

SNEHA received cards from the MCGM G-North ward office to distribute to the people registered during the survey. Every Saturday, SNEHA received 250 cards from MCGM for weekly distribution. Of these 250 cards, 25 (10%) cards were blocked for emergency vaccination of MCGM referred to staff or government employees. 60 cards were kept with a program officer of SNEHA for people who had not registered during the survey but later asked for a vaccine due to job or travel related reasons. The rest of the cards were distributed among program teams.



** Onwards September 2021, 300 cards are being given to SNEHA programs in Dharavi*
Figure 4: Distribution of cards among SNEHA programs in Dharavi

Equal allocation of cards among program teams as depicted in Figure 4 allowed frontline staff to easily distribute cards in the community and follow-up people before and after vaccination. They were able to continue their regular intervention work along with vaccination drive related work. During their regular field visits, frontline workers asked the registered person about their willingness and availability to get vaccinated in the coming week. If available, then the frontline workers checked if they had received a reference id after registration on the COWIN application. On confirmation, the staff would then write the reference id and their name on the back of the card and gave the card to the person. If they had not registered on the COWIN application, the staff assisted them with registration. After handing over the cards the staff explained the process in detail. They emphasised the importance of colour-coded cards and going to the vaccination centre on that particular day only.

At the vaccination centre every person after registration with the NGO was seen by a doctor where a form was completed to ensure they were medically fit for vaccination. Citibank and Jaslok hospital took over the responsibility for the costs of vaccines and handling logistics at vaccine centres which included providing food for NGOs and MCGM staff workers. They had a fully equipped cardiac ambulance

stationed at the centre to arrange in case of Adverse Events Following Immunization (AEFI) cases. A vaccination certificate was issued to every person vaccinated.

As expected by the team, after the initial few days of the vaccination camp people in the community got enthusiastic about the drive. Those who had not registered during the initial survey started going to the vaccination centre directly for vaccines without any cards with them. To avoid chaos at the vaccination centre one key person from each NGO was identified. Contact details of the person were displayed at the vaccination centre. People reaching the centre without cards were told to contact the person for further information. This was a very important strategy that allowed doctors and staff at the centre to work peacefully without getting disturbed by people. Also, it allowed the smooth implementation of the drive. As of November 30, 2021, the SNEHA teams in Dharavi were able to vaccinate 10,363 (67%) people out of 15,582 registered. (See Table 3)

> *People were reaching the vaccination centre to get vaccines without registration or any card or sometimes just to get information. In such cases, staff at the centre would point to the board near the centre, where numbers of all NGO representatives were displayed. Then they would call me and I would give them information they needed.*
> ***Program Officer, AAHAR-CHN***

Vaccination drive in Mankhurd (M-East ward)

PARTNERS		
SNEHA program: SNEHA Centre	MCGM	Cipla Foundation

SNEHA Centre (SC) program works in the M-East ward of Mumbai. It is the most vulnerable ward of Mumbai with the lowest Human Development Index.[12] In this ward, vaccination drive was initiated by MCGM in collaboration with the Cipla Foundation. Cipla Foundation was already helping the Government in COVID-19 screening by conducting RT-PCR tests in the community and was ready to participate in the COVID vaccination drive in collaboration with health systems. After initial interaction with MCGM and SNEHA all partners agreed and came up with the guidelines.

It was decided that Cipla would procure COVID-19 vaccines with the help of Prince Ali Khan hospital while MCGM would provide the clinical/technical staff. MCGM collaborated with the "Doctors for You" Foundation for its staffing needs at the vaccination centre and with SNEHA for the execution of the drive in the community. A space for setting up the camp along with other logistics for the drive was required. SC team arranged the place for the vaccination camp. After checking out a few places one place was finalized based on certain criteria like adequate space, cleanliness, easy access to the community, etc. The place was later approved by MCGM for holding the camp. SNEHA team coordinated with Hanuman Mandir Trust for the finalization of the place. Once the place was finalized SC team contacted various vendors for services like physical setup, garbage disposal, etc. The team coordinated with various people/vendors at a local level for the drive.

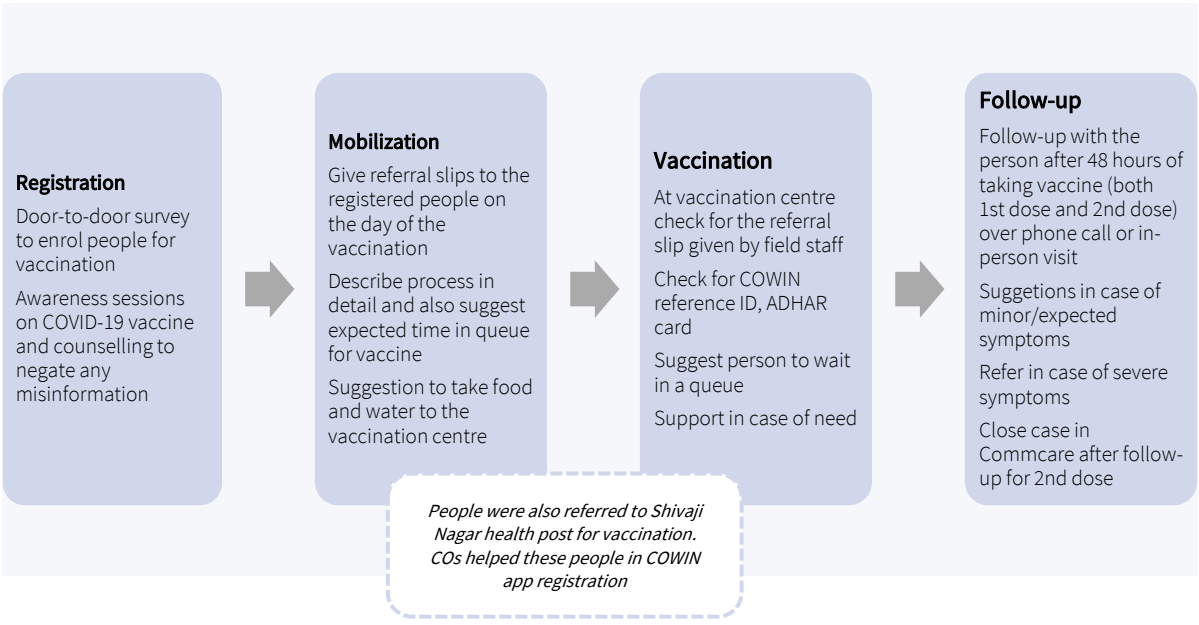


Figure 5: COVID-19 vaccination process in SNEHA Centre

In SC door to door survey to register eligible people started on August 10. 2021. In two days SC registered nearly 2000 people in the community. On August 12, 2021, the vaccination camp started after which the process of registration and mobilization was done simultaneously. Every day, MCGM personnel informed the SC team about the doses available. Usually, 150-500 doses were available in one day. This number was equally divided between SNEHA field staff of different centres for mobilization. Based on the list provided by the M&E Coordinator, COs gave referral slips to the registered people. This referral slip/pamphlet was prepared by SNEHA itself, which captured all necessary beneficiary information and gave all the information about the process. It also has the symptoms expected post vaccine to manage people's concerns and fear about getting COVID due to the vaccine. (See Image 3) COs advised people to take their ID along with them to the centre.

At the centre, COs received people at separate tables set for two program areas (Janta Nagar and Indira Nagar). They then checked the serial number of the referral slip and matched it with a google sheet shared among team members. People were then advised to stand in queue as the MCGM staff registered them on the COWIN application. After receiving the vaccine, SNEHA staff updated the sheet with an OK. It helped the SC team to get a real-time count of the people vaccinated on a particular day. SC team also referred people to the MCGM's Shivaji Nagar health post. Before referring people to this centre SC team ensured that they were registered on the COWIN application. The last four digits of the reference id were written on the referral slip and people were asked to go to the health post. This was primarily done to support the staff at the health post who did not have time to register people on the COWIN application. This strategy helped SC to mobilize people from all program areas for vaccination and cover maximum people. As of November 30, 2021, the SC team was able to vaccinate 11,869 (87%) people out of 13,622 registered. (See Table 3)

> *They (staff) filled a form. Then they told me to take my ID card and form to the centre. I went to the centre and received vaccine…No, I did not face any problem.*
> ***Female beneficiary, 38 years, SNEHA Centre Program***

Image 3: Referral slip used by SC and HCP

Table 2: Roles and responsibilities of all partners in COVID-19 vaccination drive in different SNEHA programs

Location	Roles and Responsibilities		
	Awareness generation, Demand creation, mobilization and follow-up	**Vaccination guidelines Vaccination centre management and service provision**	**Vaccine procurement and supply**
Dharavi-based SNEHA programs in the G-North ward	SNEHA in collaboration with other NGOs	MCGM and Jaslok Hospital	Citibank
SNEHA centre program in the M-East ward	SNEHA	MCGM and Doctor's for You. SNEHA (logistic support at the local level)	Cipla Foundation
Healthy Cities Program in P-North ward	SNEHA	MCGM	Cipla Foundation

Vaccination drive in Malwani (P-North ward)

PARTNERS		
SNEHA program: Healthy Cities	MCGM	Cipla Foundation

Healthy Cities Program (HCP) works in the informal settlements of the P-North ward of Mumbai. Similar to SC, HCP also worked in collaboration with MCGM and Cipla foundation for the vaccination drive. However, unlike SC, HCP requested MCGM to assign one of the 22 MCGM vaccination centres in the area for people referred by SNEHA. It was decided during initial meetings with MCGM and CIPLA that the HCP team would do the mobilization only as they wouldn't be able to arrange for the vaccination centre given various constraints like manpower, time and expertise. It was primarily done given program's intervention work which has just started in the area. A specific time slot in a specific vaccination centre of MCGM was requested for SNEHA referrals from the community. It helped the team avoid any chaos at the centre and easily manage vaccination work with routine program work.

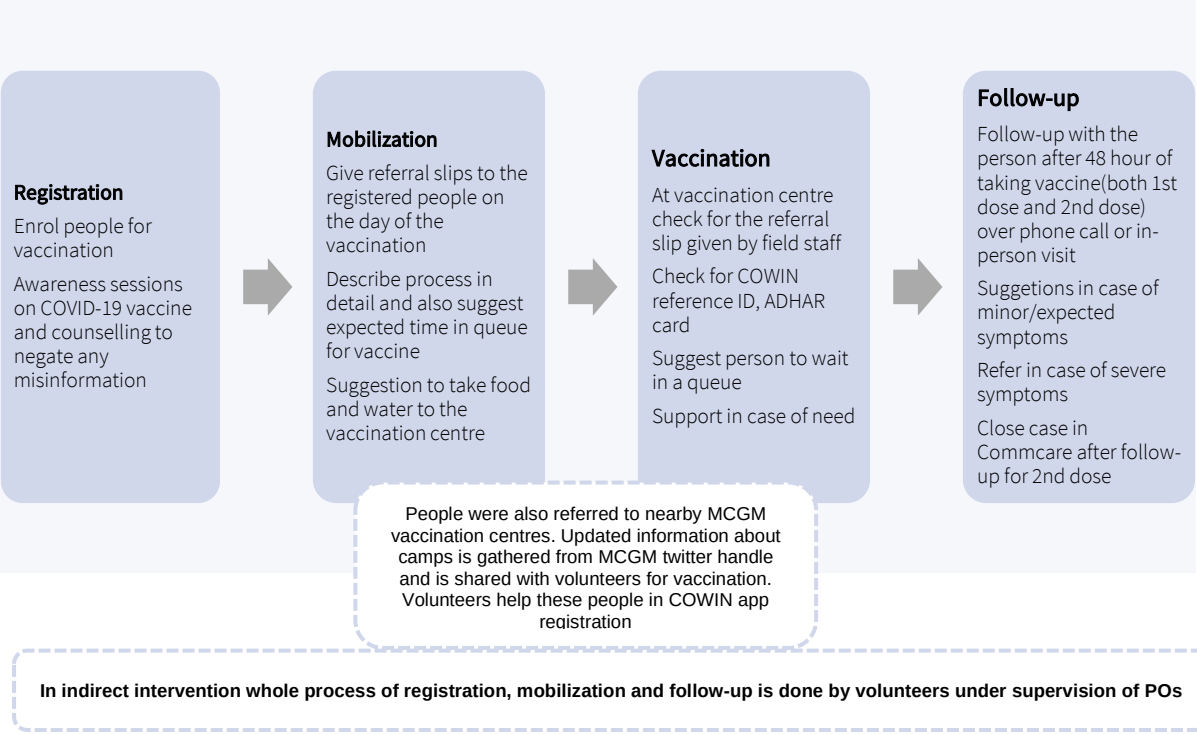


Figure 6: COVID-19 vaccination process in the Healthy Cities Program

COVID-19 vaccination camp in the HCP area started on August 9, 2021. The HCP team started their on-spot registration and referrals. MCGM informed the HCP team about the number of doses available a day before and accordingly, the team mobilized people and gave them referral slips. Entry on a referral slip was done using colour pens to avoid any confusion among people about the day of vaccination. People went to the centre with referral slips where COs and volunteers guided them to the vaccination queue. HCP team requested MCGM for a time slot of 9 am to 12 pm during which most of the vaccination was done. Apart from the vaccination in this assigned camp, the HCP team also referred people to the other MCGM vaccination centres. The team followed MCGM's Twitter handle for updates on the day and timings of such camps in the area. Then screenshots of the information were shared with volunteers who mobilized people for vaccination.

> *I went to centre around 9.30 am in the morning. Staff took us inside in the hall. Then in groups of five people they took us to do verification of ADHAR card. Then they gave me the injection and told me to wait for half an hour in the adjacent room. After that they gave me medicine. It took around an hour.*
> ***Male beneficiary, 45 years, Healthy Cities Program***

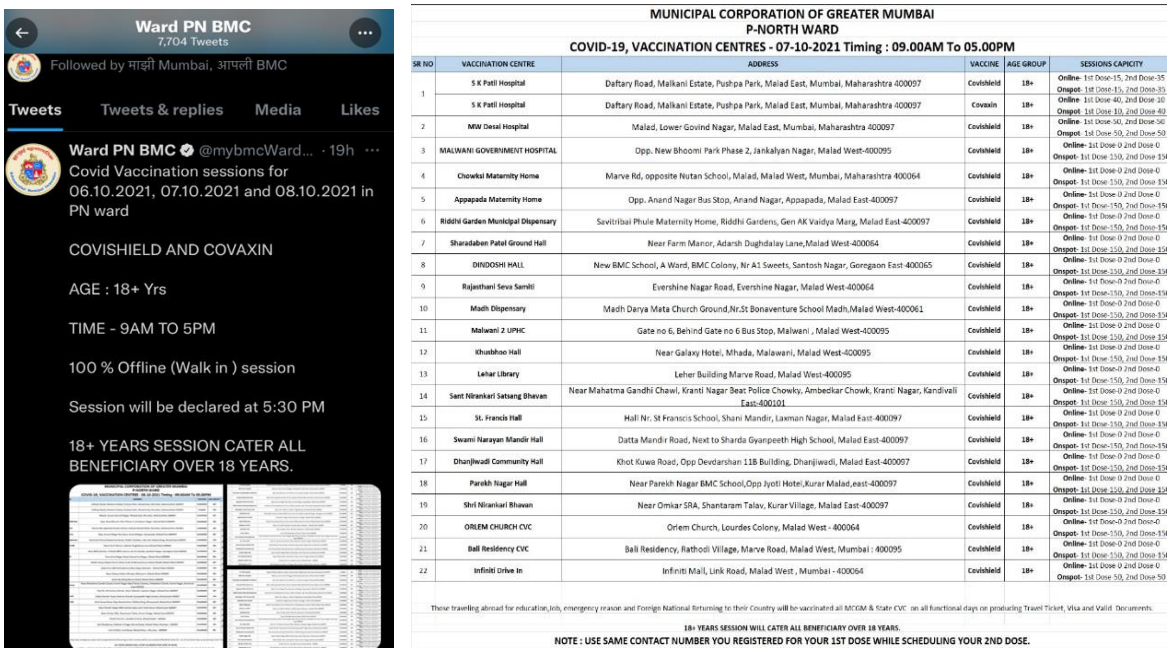


Image 4: Screenshot shared with the community about MCGM's COVID-19 vaccination centres

HCP intervention model involved two approaches: 1. Direct intervention 2. Indirect intervention. In direct intervention, registration, distribution of referral cards for the COVID-19 vaccination drive were done by COs in the community. But as indirect intervention did not have COs and relied on volunteers for the activities this work was done by volunteers under the supervision of POs. Volunteers registered people at the centre and then mobilized them according to the referral slips available. As of November 30, 2021, the HCP team has been able to vaccinate 5,227 (76%) people out of 6,877 registered. (See Table 3)

Vaccination numbers

Table 3 shows that in SNEHA programs nearly 76% of the registered beneficiaries received the vaccination. Of 34622 people registered for the first dose, 26500 (77%) received the vaccine and of 1499 people registered for the second dose, 959 (64%) received the vaccine. Data shows that the majority 29000 (80%) of the people who registered with SNEHA for vaccine belonged to the younger age group of 18-45 years. Similarly, 22211 (81%) of those who received vaccine in the drive across programs were in the younger age group. In terms of gender, 55% of males registered and received vaccines a little more than females (45%).

Table 3: COVID-19 vaccination status in different SNEHA programs as of November 30, 2021

Location	G-North ward (Dharavi)	P-North Ward (Malwani)	M-East ward (Mankhurd)	Total
Programs	AAHAR-CHN, Samagra, EHSAS, PVWC & MNH	Healthy Cities	SNEHA Centre	
Total beneficiaries registered for vaccination	15582	6877	13622	36081
Total beneficiaries who received vaccination	10363 (67%)	5227 (76%)	11869 (87%)	27459 (76%)
Dose distribution				
Registered for the first dose	14323	6762	13537	34622
Received the first dose	9489 (66%)	5156 (76%)	11855 (87%)	26500 (77%)
Registered for the second dose	1259	115	125	1499
Received second dose	874 (69%)	71 (62%)	14 (11%)	959 (64%)
Age distribution (registered for vaccination)	**N=15582**	**N=6877**	**N=13622**	**N=36081**
18-45years	12078 (78%)	5398 (79%)	11524 (85%)	29000 (80%)
46-59 years	2546 (16%)	1129 ((16%)	1685 (12%)	5360 (15%)
above 60	958 (6%)	350 (5%)	413 (3%)	1721 (5%)

Age distribution (received dose)	N=10363	N=5227	N=11869	N=27459
18-45years	8050 (78%)	4111 (79%)	10050 (85%)	22211 (81%)
46-59 years	1688 (16%)	848 (16%)	1449 (12%)	3985 (15%)
above 60	625 (6%)	268 (5%)	370 (3%)	1263 (4%)
Gender (registered for vaccination)	**N=15582**	**N=6877**	**N=13622**	**N=36081**
Female	7245 (46%)	3050 (44%)	5999 (44%)	16294 (45%)
Male	8337 (54%)	3827 (56%)	7663 (56%)	19827 (55%)
Gender (received dose)	**N=10363**	**N=5227**	**N=11869**	**N=27459**
Female	4736 (46%)	2341 (45%)	5258 (44%)	12335 (45%)
Male	5627 (54%)	2886 (55%)	6611 (56%)	15124 (55%)

Challenges and mitigation strategies

SNEHA has vast experience of working in the area of child immunization but participating in the COVID-19 vaccination drive for adults was a completely new experience. Based on their experience some of the challenges were assumed by the team beforehand for which they took steps at the beginning of the drive. Later, as problems arose all partners brainstormed and came out with solutions.

Vaccine hesitancy and misinformation

The initial response of the community during the survey was not very enthusiastic in Dharavi. People denied getting registered citing various reasons like *"there is no COVID now" "we don't want it" "it may have side effects" "we will take it in a private hospital"* etc. Another reason mentioned was that earlier also various people took their names but no one got back with the vaccine. SNEHA field staff gave them complete information about the drive and continued its awareness generation work to tackle any misinformation regarding the vaccine. Slowly as people received vaccines and shared their experiences in the community people got motivated. Community-based volunteers also helped in raising awareness and became role models for taking the COVID-19 vaccine. In SC and HCP there was no time lag between registration and initiation of the vaccination camp so people agreed to register without much persuasion. However, all teams reported dealing with misinformation related to COVID vaccine in the community for which they continued awareness campaigns, talked to the local leaders and doctors.

> *At the beginning covid vaccination created a lot of confusion. Even we were confused. Whether it's good or not? How many times we have to take it? Which one is better? Initially there were some cases of serious reactions to the vaccine. It created a mindset in the community that we would get weak. Dharavi had mouth to mouth publicity so people waited for their neighbours to get vaccinated first. Similarly, controlling social media was the biggest challenge. People shared videos like empty injections of vaccine being given. These things spread very fast in Dharavi.*
> ***Medical Officer of Health, G-North ward, Mumbai***

> *Local doctors sometimes tell people that they themselves have not taken vaccine. It sends an unsaid message. A lot of misinformation on WhatsApp is already there. In such drives, participation of all key stakeholders is extremely important.*
> ***Associate Program Director, Healthy Cities Program at SNEHA***

Vaccine availability and administration

During the initial period of the Government vaccination drive, vaccine availability was an issue. People went to the health post and stood in line for hours without getting a vaccine. It was a setback and created a negative perception in the community. All this led the Government to bring in corporate partners and NGOs to ensure vaccine procurement and awareness generation respectively. So, there were two types of vaccination centres operating in the areas 1. By MCGM only. 2. By MCGM in collaboration with NGOs and private partners. MCGM only centres were serving a larger population whereas other centres with corporate partners were catering to the population mobilized by the NGOs from their intervention areas. MCGM officials ensured that a fine balance was maintained in terms of dose availability in both types of centres. It was done to avoid any misunderstanding in the community. As the ultimate aim of each partner was to vaccinate people as much as possible without any confusion and disorder, everybody accepted and followed the guidance provided by MCGM.

> *Initially vaccine availability was an issue. We had to close our centre 2-3 days in a week. This was a hurdle and people started blaming us. They said that you tell us to take vaccine but there is no vaccine. There were lines but no vaccine which was a setback. Then Citibank and Jaslok hospital contacted us and gave us free one lakh doses of vaccine in Dharavi. It was a gamechanger in Dharavi vaccination drive.*
> ***Medical Officer of Health, G-North ward, Mumbai***

> *Earlier vaccines were less in supply and highly priced. We had vaccines and we wanted to vaccinate people as much as possible. But government infrastructure is limited and we were assigned few booths. We adapted to their pace as workforce is limited. One time, we had vaccines but MCGM centre did not. So, they told us that if we allow you to give vaccine and close our centre then there will be a law-and-order problem. We also agreed and followed protocols.*
> ***Head, CSR Operations, Cipla Foundation***

Operational issues in field

In Dharavi, other NGOs were also mobilizing people for vaccination so households needed to be divided among NGOs to optimize effort. SNEHA initiated a meeting of all the participating NGOs to discuss the boundaries of their intervention areas. Another strategy SNEHA followed was to put a star sign at the door of the household they had registered during the door-to-door survey so that other NGOs would leave that household in case of any confusion about the boundaries. This issue was not reported by the SC and HCP since SNEHA was the only NGO appointed for the vaccination drive by Cipla Foundation.

One of the SNEHA programs in Dharavi, EHSAS deals with issues related to adolescents' health and nutrition. They primarily have a centre-based intervention. Frontline workers of EHSAS did not have much experience in doing door-to-door surveys and taking information from families. Before the survey, they were given proper training on COVID-19 and on negating any misconception related to the

COVID-19 vaccine. On the field, they were supported by staff from other programs where mixed groups of all staff members were sent out for the survey.

During the survey, frontline workers informed people about mandatory registration on the COWIN application. A video on "how to register on COWIN' was shared through WhatsApp. In the case of elderly people or people without smartphones, frontline workers supported them in registering and using their phones or taking the help of volunteers and youngsters in the lane. Despite that, it was observed that some people reached the vaccination centre without registration on COWIN. SNEHA supported them in COWIN registration at the centre itself. The staff members and volunteers with knowledge of registering were deliberately posted there.

Another issue faced by teams was restricting people from other areas of Mumbai from coming to their program areas to get vaccinated. These people-mostly the relative of people living in program areas-did not register through frontline workers but asked for cards/referral slips. Initially, the staff tried to ascertain their residence by checking the ADHAR card, but the address on the ADHAR card was not always updated to the current address. So, the staff talked with their landlords and other people in the area. This took a lot of time and effort. The team strictly informed people that the drive was only for those living in the area while simultaneously explaining the procedure of vaccination in other MCGM centres where anyone could get the vaccine. In the later phase of the drive, as more and more people got vaccinated, the criteria were relaxed and the drive accepted people from nearby areas for vaccination.

Crowd management and maintaining COVID appropriate behaviour at the vaccination centre

Mandatory COVID vaccination for those travelling in local trains and going back to their offices increased the demand for COVID-19 vaccination. Despite giving different time slots to different people, all of them would reach the centre at the same time based on their convenience. It led to chaos at the centre and crowd management became a major task. All teams took the help of volunteers for the purpose. In Dharavi, SNEHA hired a few volunteers on a contract basis for crowd management at the centre. Maintaining COVID appropriate behaviours and cleanliness at the vaccination centre was also mentioned as a challenge. Frontline workers and volunteers made sure that people wore masks and wait in queue for their turn.

> *Initially, during the survey, we did not get a very enthusiastic response in the community. We knew it would get better when the camp started, and that is what happened. People started getting the vaccine and shared their experience in the community. Now, demand for vaccines has increased.* ***Program Coordinator, SAMAGRA Project at SNEHA***

Teams also shared some risks of participating in COVID-19 vaccination drives. It was extremely important to take care of certain aspects. First, that vaccination drive itself could become a super-spreader event if not done properly. It was vital that the number of people going to the centre is controlled and well managed. Everyone, including staff and community people had to follow COVID appropriate behaviours. Second, handling the raised expectations of the people in the community.

People from the community sometimes confronted staff members about vaccines. In such cases, their queries needed to be addressed politely and clearly. According to program teams, the drive has strengthened the collaboration with systems and their relation with the community.

> *I asked people to go and take vaccines. I informed them that I have also taken it and everything is fine. People also see that vaccine is safe and is needed to go to jobs and take trains. They themselves ask me to give coupon and tell them about the vaccination centre.*
> ***Volunteer, AAHAR-CHN program***

Restricting Political influence

Keeping vaccination drives out of political influence was also important. This issue was reported in all three areas. In such cases, all teams communicated their concerns to MCGM and local corporators and devised some strategies to avoid misunderstandings. The HCP team met with MCGM and corporator and asked for a specific time in the morning for assigned doses after which people referred by corporators can take vaccines. It was a little trickier but absolutely essential to inform local leaders about the process of the drive. It allowed programs to set boundaries and avoid conflict with politicians.

Focusing on the larger objective of vaccinating vulnerable communities

COVID-19 vaccination of all eligible adults in the community was a challenging task and required all partners to ignore minor differences and focus on the larger objective. In the words of a senior corporate partner;

> *Challenges are natural. All three entities (MCGM, SNEHA, Cipla) in this collaboration work in different sphere. For MCGM one lakh doses is nothing and they may want to vaccinate everybody. For SNEHA their beneficiaries are important and for us all families in informal settlements are vulnerable. But we all agreed on a structure which is required to reach the most vulnerable.*
> ***Head, CSR Operations, CIPLA Foundation***

At SNEHA, another challenge reported by all teams was to maintain their routine intervention work with vaccination work. It required better planning and time management of all levels of staff in all programs. Supervisors supported frontline workers by suggesting ways to multitask and manage their time. Senior management guided programs to work towards the broader agenda and told them not to worry about minor setbacks in outcomes of the regular intervention work.

Lessons learned

Building relationship of 'trust' in the community helped in the implementation of the vaccination drive

SNEHA has been working in the informal settlements of Mumbai for more than 20 years. It works in close collaboration with public health systems and also builds community capacity to enable them to take care of their health. SNEHA's relationship with the community is based on the trust which has strengthened over the period. People value SNEHA's work in the community and also help the organization in the implementation of any new initiative. SNEHA's investment in building a strong community connection played an important role in implementing the COVID-19 vaccination drive. Some NGOs with poor community outreach faced problems in mobilizing people for vaccination but in SNEHA people came forward, especially those who wanted to get vaccinated but were struggling due to low supplies and long wait times at government vaccination centres.

Leveraging the strength of each partner- collaboration between NGOs, health systems and corporates

SNEHA has always worked in collaboration with health systems and has partnered with various NGOs on various agendas. During COVID-19 this collaboration took another leap when health systems and NGOs joined forces with only one objective of providing services and support to the people living in vulnerable communities. Before the vaccination drive, during lockdown distribution of fruits and vegetables took place in the Dharavi community under a similar partnership. This experience came in handy when SNEHA had to participate in the vaccination drive. The roles and responsibilities of each partner were clearly defined. The partnership leveraged the strength of each partner; SNEHA has excellent community outreach so it was responsible for the mobilization of people for vaccination, MCGM provided the guidelines for the management of the vaccination centre and looked after technical staff for service provision, and other private partners helped in vaccine procurement. At the beginning of the drive, expectations from each partner were also clearly communicated which helped in setting up the boundaries and accountability and prevented any diversion. All the partners had regular meetings for updates and to brainstorm about any challenges faced. Active engagement of MCGM senior officials, NGOs and donor partners in the drive helped in smooth implementation of the drive resulting in vaccination of a large number of people in the community.

> *We (SNEHA, CIPLA) actually looked at the deficiencies - meaning what was lacking in the process. Needs assessment was done to understand reality in the community. Then we went to the Government with a plan which they accepted. Availability of the vaccine was our (Cipla) responsibility, mobilization was SNEHA's responsibility… they (Government) accepted immediately. If we follow a robust process, then chances of success are likely.*
> ***Head, CSR Operations, Cipla Foundation***

> *NGOs did the ground work. They told us how many beneficiaries are there, how many of them have taken first dose, what are their problems and any registration issues. We finalized the guidelines through regular meetings and introduced colour coded card. With systematic planning it worked and there was a good response in the community.*
> ***Medical Officer of Health, G-North ward, Mumbai***

> *As supply of vaccine improved, people who initially had reservations about vaccination, came forward by themselves to ask to be registered for vaccination. Thus, the real concern seemed to be the inconvenience of getting the vaccination done, rather than fears of the vaccine, which was mitigated when this well-organized vaccine drive was conducted.*
> ***Chief Executive Officer (CEO), SNEHA***

The type of MoU prepared between partners guides the whole process in any initiative. Based on their strengths or limitations program teams opted for either a financial or non-financial MoU. It helped in drawing boundaries to 'how far can we go'. It also helped in clarifying the role definition of each partner which ensured accountability. In this case who will mobilize, who will procure vaccines and who will manage the vaccination centre was clear from the beginning. Despite that, partners had to go back to discuss a few minor issues like arranging for water at the vaccination centre, security at the centre and maintaining hygiene at the centre. All participants shared that this initiative had originated out of a dire need to vaccinate people against COVID-19. All partners unanimously agreed on this and despite certain differences, they kept going.

> *Public private partnerships can be used everywhere given that all the partners come together and participate. For COVID-19 related work, all the partners actively participated which may not be the case in other chronic issues like malnutrition where funders may not see the results immediately. For COVID-19 people came voluntarily and participated. NGO, public health system even community responded positively. So, it was a win-win situation for all.*
> ***Ex-Executive Health Officer, MCGM***

> *I think this drive is an excellent example of a public-private partnership. In this, all partners came together for a public cause. NGO presence is quite strong in other areas of Mumbai also. I think this strength can be leveraged for similar drives in those areas as well.*
> ***Associate Program Director, EHSAS***

Role definition needs to be clear for each partner. It helps in understanding who is responsible for what. In many ways SNEHA played an important role in bringing all partners together. Whenever there were issues, we went back to understand what was the original agreement and what we should do to go back to that agreement. We kept reminding ourselves to think of the higher cause.
Chief Executive Officer (CEO), SNEHA

Maintaining the 'Feedback Loop' through regular planning and review meetings is important

The success of the COVID-19 vaccination drive in SNEHA relies on the excellent feedback loop which involved partners and staff members at all levels. Senior management was updated immediately for any change in the situation. Strategies to overcome any challenge were discussed among all team members, and suggestions were taken from the senior management. Quick solutions were provided and follow-up was done in the next review meeting. It motivated staff members and gave them actionable points to work upon. Constant engagement with the teams to understand ground level realities allowed senior management to discuss and communicate the community needs with senior MCGM officials and funding partners. Open communication between partners allowed SNEHA to collaborate, manage expectations and solve problems faced during the process.

We have those meetings where everybody comes. They give ideas and share their problems. These meetings were also done because our program teams were new to this area (adult vaccination). It was a new disease and we didn't know how community will react. There might be vaccine hesitancy or vaccine eagerness. It is not a problem with polio or MMR vaccine as there is a target group but this was new.
Executive Director (Programs), SNEHA

In Dharavi, many NGOs were participating in the COVID-19 vaccination drive. Initially, there were a lot of issues as all the NGOs were different and had different areas of operation. Some were working on education, some on health. So, MCGM provided the leadership for this vaccination drive and coordination meetings between all the partners helped in sorting out all the issues.
Ex-Executive Health Officer, MCGM

We cannot work in isolation. Everything needs to be done in collaboration essentially with the Government. We need to a take flexible approach, co-learn, cocreate and do mid-course correction if possible and do it together. I appreciate that SNEHA involved people from field in our meetings with Assistant Municipal Commissioner. So, it was a collective wisdom. It is a dynamic process. No vested interest, no agenda.

Head, Health Projects, Cipla Foundation

Technology helped in real time monitoring and communication between partners

The use of technology for program implementation, monitoring and evaluation has always been SNEHA's strength. SNEHA's approach to the COVID-19 vaccination drive was similar to other programs where it prepared a database and data collection formats. It helped in the process of mobilization and referral of people to the camp and also kept an updated record of people being vaccinated. It allowed teams to closely monitor progress and any issue that may arise.

For real-time communication, data sharing and any updates WhatsApp was frequently used. In Dharavi, a WhatsApp group of G-North ward representatives, Jaslok hospital's staff, and representatives of all NGOs was formed. It allowed everybody to know about doses available and people due for a vaccination. Every week data on indicators like cards remaining, people due for vaccination etc. was updated on WhatsApp. In HCP information about the upcoming MCGM vaccination camp was gathered from Twitter and then shared on WhatsApp. Meetings with MCGM officials of P-North and M-East wards were done through Google meetings.

Different strategies were used by program teams to manage core work along with work related to the vaccination drive

Program teams took up the work of the vaccination drive in addition to their existing routine work. COVID-19 vaccination in their communities was a priority but they also didn't want their existing work to suffer. Programs used different methods to assign their resources and manpower so they could manage the extra work. In HCP specific time was assigned for mobilization and data entry in a day, whereas in Dharavi and SC, the program was doing it simultaneously. With prior experience of coming together for fruits and vegetable distribution, SNEHA programs in Dharavi continued the similar approach of convergence for the vaccination drive. Despite having different objectives and processes these programs came together and planned the drive. A core committee with representation from all programs in Dharavi was formed which worked on the protocols and processes of the drive. Set processes granted enough flexibility to the programs for their regular intervention work.

Strategic volunteer engagement helped in better mobilization in community and crowd management at the vaccination centre

The engagement of volunteers in the drive was done strategically based on the requirement. Their role was to provide support to field staff in awareness generation activities, mobilize and follow-up and manage crowds at the centre. Volunteers were not given vaccination cards/referral slips for distribution in the community. It was primarily done to avoid any malpractice and to keep more control over the processes. Once everything was in place and the drive picked the momentum, a few more responsibilities were given to the volunteers. Later, some volunteers were hired by SNEHA on a contract basis to work at the vaccination centres. A non-cash incentive was given in form of ration coupons/dry ration kits worth rupees 800-1000/-.

> *I made a list of people in my area and gave it to madam here for vaccination. Some people took form and didn't fill. Some directly reached the vaccination centre. A few had an old mobile so they could not register on the COWIN application. I helped them. I went to the centre and made people queue up. People listen when I ask them to be in line.*
>
> ***Volunteer, SNEHA Centre Program***

Way forward

COVID-19 vaccination drive in all SNEHA program areas is running smoothly with a few challenges. Context-specific adoption of the drive has allowed all teams to take up the vaccine work along with their routine work. At present, for all teams, second dose inoculation of people who have received their first dose of the vaccine is a priority. For registration on the COWIN application, teams can develop a technical support system in the community which can help program teams in future interventions and also builds the technical know-how of the people in the community. Given set processes and initiation of adolescent vaccination in the community, the drive can continue with the support of all partners.

From a broader perspective, the COVID-19 vaccination drive at SNEHA put forward an excellent model of the tripartite partnership of public health systems, private partners and NGOs. Similar models can be replicated in other urban informal settlements to make vaccines available to all. Coronavirus is evolving which may require the development of new vaccines, inoculation of booster doses and coverage of a larger population including children. In such a case, similar vaccination drives will help increase population immunity and will reduce the risk of new variants. It will also protect health systems, will help economies to fully restart and will accelerate the end of the pandemic.

Vaccination of the people against COVID-19 in the vulnerable communities emerged as a dire need for all the partners which led them to collaborate. These models of partnership however, set an example to deal with other issues like malnourishment, sanitation, school health program, etc. For a better partnership, CSR can move beyond fund dispersal and utilization report to understand the operation of such initiatives at the ground level and NGOs can show a little flexibility and follow a tedious procedure of compliance with the corporates. Partnerships based on a common agenda, open communication and set accountabilities can provide collective strength and wisdom to solve the challenges put forward by any crisis.

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