



VACCINE HESITANCY TO VACCINE DESPERATION! EXPERIENCES FROM 2 VACCINATION CENTERS IN MUMBAI.

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ABSTRACT

Since the beginning of the COVID-19 Pandemic and Lockdown on March 2020 till date, measures like hand hygiene, social distancing and testing have worked only partially to contain the cases and deaths. Cooper and Nair Hospitals were amongst the nodal centres identified in January 2021 to launch the Nationwide Vaccination drive in Mumbai.

Aim: To highlight the pattern of vaccination roll-out, procedures in various phases and discuss concerns, challenges and effect on our workforce and workplan.

Methodology: We reviewed the patterns, uptake of vaccine, procedures and problems faced by our vaccination centres from January 15th till April 30th (4 months). We also looked into adverse events following immunization (AEFI) reported.

Results: Over 68,000 vaccine doses have been administered in Cooper alone by April end, and issues were analysed in detail with special reference to logistics & challenges. AEFI were very few. We found that initially anxiety about side effects, concerns about choice of vaccine and long-term effects were the major impediments to vaccination. Later on, the demand exceeded the supply.

Conclusion: Although vaccination is not the final answer, it is an important tool to improve our response to the pandemic. Reviewing, restructuring available resources is essential in pandemic situations. Proper planning, counselling and choice in the way forward in this crisis.

KEYWORDS : COVID Vaccine, Covishield, Covaxin, vaccination

BACKGROUND

India's Drug Regulator had given emergency approval to Covishield and Covaxin Vaccines in the national program launched under guidance of our Prime Minister. For both, currently 2 separate doses – 0.5 ml Intramuscular, deltoid (ideally) are recommended. Our centers (Cooper and Nair) are giving vaccines through Municipal Corporation of Greater Mumbai (MCGM) supply free of cost.⁽¹⁾ Since the beginning of COVID-19 cases early in 2020, the overall pattern so far has been an increasing trend, with a surge in the summer and a larger one in the fall. Some locations that saw a high number of coronavirus infections early on, followed by a decline, are having a "second wave" of increased cases.

Due to increasing cases of COVID-19, the urge to take vaccination is also increasing among people. Initially, there was a slow pickup of the vaccination drive. People were hesitant to take the vaccine. But increase in the COVID-19 cases have made people more anxious and concerned to take vaccine.

Timeline: as per government guidelines⁽¹⁾

16th January 2021: Healthcare workers to get Covid-19 vaccine.

2nd February 2021: Front line workers now eligible.

1st March 2021: All above 60 years of age, 45-plus with other illnesses eligible for vaccine.

1st April 2021: All above 45 years of age can receive.

1st May 2021: All above 18 years of age now eligible.

12th May 2021: Vaccination for 18-44 years of age stopped, with focus on completion of second dose.

METHODOLOGY

We reviewed the vaccination patterns in Cooper Hospital which was one of the first 10 centers identified in the national campaign, linked to Prime Minister's office. We also got inputs from both centers regarding logistic issues and challenges faced in the past few months.

RESULTS

Until now, around 68,175 doses of Covishield vaccine, starting from 16th January 2021 till 30th April 2021 were given at our centre. Table 1 and figure 1 show details of Covishield vaccine beneficiaries at Cooper hospital.

Table 1: Total doses given month-wise (Covishield, 4 months from January to April)

| | 1 st Dose | 2 nd Dose | GRAND TOTAL |
|----------|----------------------|----------------------|-------------|
| JANUARY | 1860 | | 1860 |
| FEBRUARY | 10404 | 2014 | 12418 |
| MARCH | 17222 | 5747 | 22969 |
| APRIL | 19397 | 11531 | 30928 |
| TOTAL | 48883 | 19292 | 68175 |

Table 2: Recipient profile month-wise (Covishield)

| | JANUARY | FEBRUARY | MARCH | APRIL |
|-----|---------|----------|-------|-------|
| HCW | 1860 | 9103 | 5669 | 1036 |
| FLW | 0 | 3315 | 3921 | 1265 |

| | | | | |
|----------------|---|---|-------|-------|
| 45+ | 0 | 0 | 1634 | 17516 |
| Senior Citizen | 0 | 0 | 11745 | 11111 |

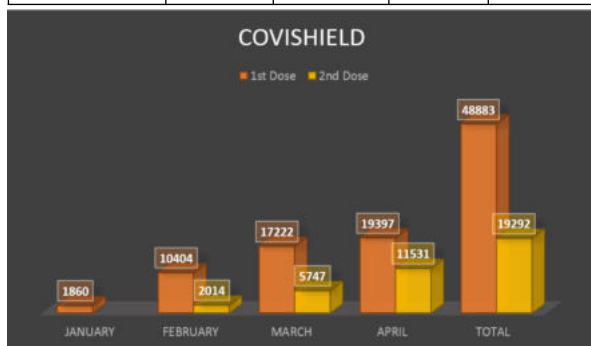


Figure 1: Total doses given month-wise: Cooper Hospital (Covishield)

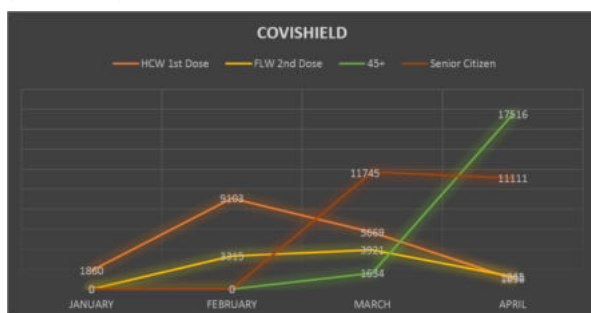


Figure 2: Recipient profile month-wise (Covishield)

Initially, only few doses of Covaxin were given to beneficiaries on their demand. After the Prime Minister took Covaxin, demand for Covaxin increased. 1st dose of Covaxin was stopped from 3rd April 2021 due to unavailability of enough stock. People for 2nd dose were called on particular days (Tuesday and Friday) to reduce vaccine wastage. Until now (16-03-2021 to 30-04-2021), around 751 doses of Covaxin were given at our centre. Table 3 and figure 3 shows details of Covaxin beneficiaries at Cooper hospital.

Table 3: Total doses given month wise (Covaxin, 2 months)

| | 1 st Dose | 2 nd Dose |
|-------|----------------------|----------------------|
| MARCH | 519 | 0 |
| APRIL | 468 | 283 |
| TOTAL | 987 | 283 |

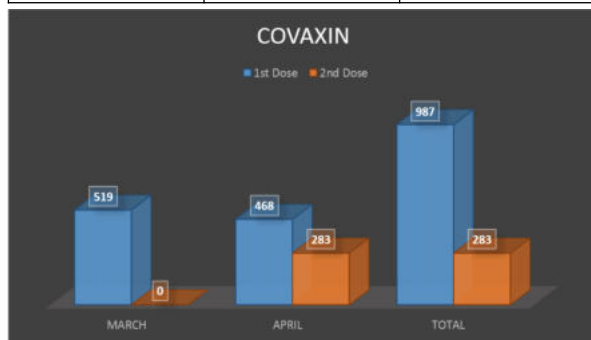


Figure 3: Total doses given month wise in Cooper hospital (COVAXIN)

Adverse Events Following Immunization (AEFI):

Initially, we could see various immediate side-effects and vaccine related adverse events during phase 1 and 2 which included minor reactions like fever, malaise, body ache and heaviness of arm.⁽¹⁾ In phase 3, we could see only few AEFI, which declined to almost nil within 30 minutes as well as after 30 minutes following vaccination. The reporting to ward office was also tracked. Figure 4 shows the details of AEFI from

January to April. Almost all were minor, including fever/ malaise/body ache/heaviness of arm/sleepiness

- One doctor required admission and 2 days observation for high fever
- One case of cellulitis
- One case of chorioretinitis



Figure 4: AEFI following vaccination in Cooper Hospital (4 months, January to April)

DISCUSSION

Our centers (Cooper and Nair) are giving Covishield and Covaxin through MCGM supply free of cost. In Cooper hospital alone over 37,000 doses have been given from the start of the program. The pickup of the drive took a while. As of 2nd March 2021, 15,620,749 vaccine doses had been administered in India.⁽²⁾

The Government of India has advised people to receive the complete schedule of two doses irrespective of past history of infection with Covid-19 as this will help in developing a protective immune response against the disease. Central Government had mentioned the five key principles for Covid-19 vaccination, which we put into practice in our centers.⁽³⁾

Vaccine Hesitancy?

There was initially a slow pickup of the vaccination drive, particularly in the first week even amongst our Hospital staff although there was work place exposure to COVID to all.⁽¹⁾

Concerns cited included

- Rotation duty and work schedules
- Lack of data on efficacy and dosage intervals
- Possibility of adverse reactions (AEFI)
- Already had COVID – 19, should we take?
- Long term concerns

To address these issues, following suggestions were implemented across the departments with intensive counselling and sharing of information to the teams

- Seniors to set an example by getting vaccinated
- Encourage juniors in your team
- Keep shift duties, time off after vaccination
- Give leeway for human nature!
- Motivate positively by using social media, internal WhatsApp groups
- Have discussions, audits, review meetings within the departments

Once public became more aware and cases started increasing in the community, people started rushing for vaccination, ranging on disregard for COVID-appropriate behavior and no social distancing.

Key concerns and challenges faced at our centers

- **Walk-in versus appointment:** The initial plan at both Hospitals was to have 10 vaccination booths in operation with registration and observation areas set up before and after respectively. It was realized early on, that the bottleneck was not at the point of vaccination but at registration. Even though many people came as per their scheduled visit, which made the process smoother, the large number of walk-in beneficiaries was difficult as the registration process is time consuming. This would lead to large

gatherings outside the vaccination center and longer waiting time. Social distancing was difficult to maintain in such a scenario. The patient people who had booked their slot would feel agitated and those who came walk in would not take no for an answer. Eventually this became so rampant that the government stopped walk-in registrations completely.

- **Access for the differentially abled and elderly:** While the set-up for vaccination was done in great time, the issue of repurposing a tutorial room as a vaccination center became apparent. Many stalwarts of the city who have been around since before the country's independence now no longer have the strength to stand and walk for long distances. Even though there are chairs to sit, continuously getting up to move forward in queue is taxing. Those who have fractures or are wheelchair bound are similarly inconvenienced. The latest drive-in vaccination sites reduce these issues.
- **Vaccination shortage:** This hurdle came into the limelight near the end of April 2021. Most beneficiaries aged above 45 years wanted to complete their second dose before the portal was accessible for all adults aged above 18 years. In addition, many who had not taken the jab yet feared the long waiting period after May so wished to get vaccinated as soon as possible. However, the supply of vaccines could not keep up with this demand. Many centers including ours had to stop the vaccination process early with the center being closed for the whole day too. This shortage has led to the government rolling back the vaccination drive for the 18-44 years age group.
- **Duration changes:** This is particularly seen with Covishield where the initial recommended gap was 4 weeks. This was later increased to 6-8 weeks and then even further to 12-16 weeks.^[4] Whether due to vaccine shortage or based on new evidence published in the Lancet,^[5] changes cause panic in both groups. Those who are not getting their second dose are scared of falling ill in the interim while those who have already taken both doses 4 weeks apart are doubting its efficacy. This has made patient counselling even more difficult in this crunch time.

We should expect repeated outbreaks in the next one to two years till we will reach herd immunity. It is possible only through repeated infections and/or vaccinations. The best solution to fight off the pandemic is to increase vaccinations rapidly and to ensure that people follow COVID norms. Although vaccination is not the final answer, it is an important tool to improve our response to the pandemic. Restructuring available infrastructure is essential in pandemic situations. Proper procedure, counselling and choice in the way forward in this crisis.

CONCLUSION

We should expect repeated outbreaks in the next one to two years till we will reach herd immunity. It is possible only through repeated infections and/or vaccinations. The best solution to fight off the pandemic is to increase vaccinations rapidly and to ensure that people follow COVID norms.

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