

The background of the slide is a dense field of 3D-rendered numbers in various shades of blue and white. The numbers are of different sizes and are scattered across the entire frame, creating a sense of depth and data. Some numbers are in the foreground, appearing larger and more detailed, while others are in the background, appearing smaller and more blurred. The overall effect is a vibrant, digital landscape of numbers.

Data Science Summit'21

Business Analysis Challenge

Team – Extra Miles

Team Members

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Problem Statement

- ChemX is a new company which aims at gaining the covid19 vaccine market share.
- The maximum revenue generated is a key target, as well as providing vaccine to as many people as possible.
- ChemX would not want to tap into the markets where the revenue could fall short of cost of operations.
- The price range of competitor's vaccine is in the range of Rs. 800 – Rs. 3000 per person.

Objective:

- Where are the best opportunities for ChemX?
- Prepare a chart for the number of ChemX Vaccine distribution across the top 5 states. (Distribution is only done through Govt and Private Hospitals)
- What should be the optimal pricing for the vaccine?
- What should be the optimal marketing and finance plan ?

Note:

- *Foreign Investment in Covid19 vaccine is null.
- * One person requires one dose for complete vaccination.

Sorted at Active Cases (Ascending) as of 20-Feb-2021

Data

[Coronavirus Outbreak in India - covid19india.org](https://covid19india.org)

State/UT	Confirmed	Active	Recovered	Deceased	Other ⓘ	Tested	Vaccine Doses Administered	Active Ratio	Recovery Ratio	Case Fatality Ratio	Test Positivity Ratio	Population
Kerala	↑4,650 10,30,588	58,609	↑5,841 9,67,630	↑13 4,075	274	↑66K 1.1Cr	↑12.8K 4.4L	5.7%	93.9%	0.4%	9.4%	3.5Cr
Maharashtra	↑6,281 20,93,913	48,439	↑2,567 19,92,530	↑40 51,753	1,191	↑64.4K 1.6Cr	↑62.3K 9.2L	2.3%	95.2%	2.5%	13.4%	12.2Cr
Karnataka	↑490 9,47,736	5,978	↑389 9,29,447	↑5 12,292	19	↑58.4K 1.8Cr	↑24.9K 6.5L	0.6%	98.1%	1.3%	5.2%	6.6Cr
Tamil Nadu	↑438 8,47,823	4,120	↑459 8,31,246	↑6 12,457	0	↑51K 1.7Cr	↑20.6K 3.7L	0.5%	98%	1.5%	5%	7.6Cr
West Bengal	↑193 5,73,580	3,579	↑235 5,59,755	↑4 10,246	0	↑20.5K 84.1L	↑32.1K 6.8L	0.6%	97.6%	1.8%	6.8%	9.7Cr
Chhattisgarh	↑263 3,10,732	3,102	↑198 3,03,835	↑2 3,795	0	↑22K 46.5L	↑14.7K 3.6L	1%	97.8%	1.2%	6.7%	2.9Cr
Punjab	↑352 1,78,111	2,883	↑264 1,69,480	↑8 5,748	0	↑20K 48.3L	↑6.8K 1.4L	1.6%	95.2%	3.2%	3.7%	3Cr
Uttar Pradesh	↑114 6,02,706	2,433	↑200 5,91,559	↑2 8,714	0	3Cr	11.5L	0.4%	98.2%	1.4%	2%	22.5Cr
Madhya Pradesh	↑257 2,59,128	1,994	↑213 2,53,284	↑4 3,850	0	↑14.3K 56.6L	↑18.2K 6.4L	0.8%	97.7%	1.5%	4.6%	8.2Cr
Telangana	↑157 2,97,435	1,715	↑157 2,94,097	1,623	0	↑23.7K 84.3L	↑1.8K 3.7L	0.6%	98.9%	0.5%	3.5%	3.7Cr
Gujarat	↑258 2,66,821	1,672	↑270 2,60,745	4,404	0	↑30.9K 1.1Cr	↑25.4K 8.8L	0.6%	97.7%	1.7%	2.3%	6.8Cr
Rajasthan	↑98 3,19,461	1,300	↑66 3,15,376	↑1 2,785	0	↑17.5K 61.8L	↑21.3K 8.2L	0.4%	98.7%	0.9%	5.2%	7.7Cr
Delhi	↑152 6,37,755	1,025	↑179 6,25,832	↑1 10,898	0	↑62.1K 1.2Cr	↑26.1K 3.1L	0.2%	98.1%	1.7%	5.4%	2Cr
Haryana	↑111 2,69,609	816	↑108 2,65,751	3,042	0	↑17.1K 55.4L	↑5.6K 2.3L	0.3%	98.6%	1.1%	4.9%	2.9Cr
Jammu and Kashmir	↑68 1,25,783	700	↑70 1,23,129	1,954	0	↑26.2K 49.9L	↑12.3K 2.1L	0.6%	97.9%	1.6%	2.5%	1.3Cr
Andhra Pradesh	↑54 8,89,210	604	↑70 8,81,439	7,167	0	↑26.4K 1.4Cr	↑23.7K 4.9L	0.1%	99.1%	0.8%	6.5%	5.2Cr
Odisha	↑65 3,36,578	558	↑73 3,34,053	1,967	0	↑23.8K 81.5L	↑31.4K 5.3L	0.2%	99.2%	0.6%	4.1%	4.4Cr
Bihar	↑57 2,62,066	501	↑57 2,60,030	↑2 1,534	1	↑32K 2.2Cr	↑10.9K 5.6L	0.2%	99.2%	0.6%	1.2%	12Cr
Goa	↑57 54,523	493	↑62 53,243	787	0	↑1.8K 4.8L	↑1.2K 16.2K	0.9%	97.7%	1.4%	11.3%	15.4L
Jharkhand	↑37 1,19,565	459	↑45 1,18,022	1,084	0	↑15.6K 54.3L	↑7.2K 2.6L	0.4%	98.7%	0.9%	2.2%	3.7Cr

Solution

- Where are the best opportunities for ChemX?

Answer:-

The best opportunity for ChemX will be where the number of Active COVID-19 cases are most prevailing in INDIA. By considering the top 10 States of India (According to the data in slide 4), we can also make sure that

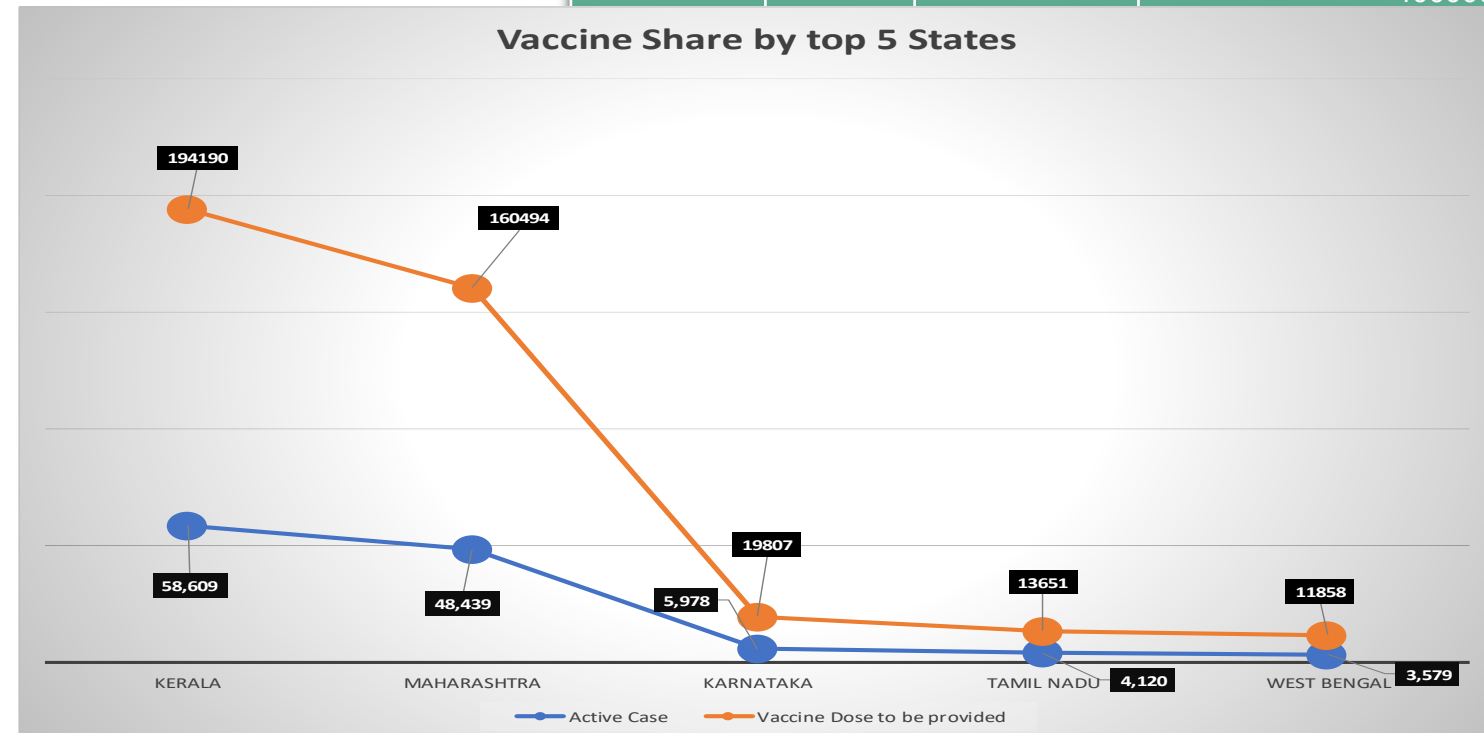
- There will be a decrease in the operations cost.
- As the population in these states are high, maximum people will be vaccinated and it will maximize the revenue of the company

Solution

- Prepare a chart for the number of ChemX Vaccine distribution across the top 5 states. (Distribution is only done through Govt and Private Hospitals)

Answer:- The following table and chart shows vaccine share for top 5 states as per the active COVID-19 cases.

Covid-19 Cases			
Top 5 States	Active Case	Active Case Share	Vaccine Dose to be provided
Kerala	58,609	0.49	194190
Maharashtra	48,439	0.40	160494
Karnataka	5,978	0.05	19807
Tamil Nadu	4,120	0.03	13651
West Bengal	3,579	0.03	11858
Total			400000



Solution

- What should be the optimal pricing for the vaccine?

Answer:- Considering the optimal price should be average of Market prices

Minimum Market Cost	800
Maximum Market Cost	3000
Average Market Cost	1900

ChemX Cost Should be (per dose)	1900
ChemX Profit (20%)	380
ChemX Ops (35%)	665
Medicine Cost (45%)	855

Solution

- What should be the optimal marketing and finance plan ?

Answer:-

Marketing Plan:

- Collaboration with Indian Government
- Sharing research and trial data to public
- Doing advertisement on top 10 States
- Providing Free doses to Hospital Staff
- Insurance cover and compensation for any side effects

Finance Plan

- Financial Goals:
 - Short term
 - Medium Term
 - Long Term
- Budget and Cashflow planning
- Insurance and Risk Management
- Taxation planning
- Net Worth statement – Total Asset, liabilities included
- Contingency funds

Thank You

