"India's health-tech startup industry supplemented govt's large scale vaccination initiatives with technology"

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From finding COVID-19 resources to booking vaccination slots, technology has been leading the revolution against the pandemic. Amongst many others, Bengaluru-based startup HealthifyMe too is a part of this journey.

HealthifyMe has recently collaborated with Amazon Web Services (AWS) to develop and launch a 'vaccination' app (VaccinateMe.in) which is being used by over half a million users on average daily. BioSpectrum got in touch with Sachin Shenoy – Co-Founder and CTO and Manan Chandan – Senior Director, New Initiatives, HealthifyMe to find out more about the potential role of technology in enhancing healthcare delivery in India.

Edited excerpts-

How is the healthcare industry in India driving large scale vaccination efforts?

Sachin Shenoy: India has always been viewed as a global vaccine manufacturing hub, and when the COVID pandemic began, the world looked to India to help scale vaccine production. But, that also meant challenges as India looked to scale its vaccination efforts for its own citizens, a daunting task given the geographic spread of its population, infrastructure limitations, information disparity, and production ramp-up challenges. This is where India's health-tech startup industry rose to the task with technology innovations and partnerships to supplement the Government's large scale vaccination initiatives.

A vaccination drive of this magnitude is only possible through collaborations between the government, the healthcare industry, corporates businesses, and startups. Under government schemes like Ayushman Bharat and Jan Aushadhi Yojana, quality health services are being provided and affordable medicines are being made available to every village in the country. Over 76,000 health and wellness centres (HWC) had been set up by the Government with an emphasis on implementing modern health infrastructure across a network of hospitals and modern laboratories.

How was the tool - VaccinateMe conceptualized? What were the roadblocks that you faced in creating this tool?

Manan Chandan: In March 2021, the Government of India opened vaccine registrations for the entire adult population of

India. However, given India's large widespread population, diversity in language, and the limited number of internet savvy citizens, it was soon apparent that there was a need to create a solution that users could easily access to receive slot availability details for vaccination via SMS and WhatsApp alerts. Two weeks after the Government's announcement, we launched VaccinateMe with technological support from AWS. Available in 10 languages, VaccinateMe uses the CoWIN application programming interface (API) to fetch data. On the first day of its launch, over 250,000 users enrolled on the VaccinateMe app.

One of the constraints we faced while creating this tool was to ensure users received notifications as soon as slots opened that matched the preferences they had subscribed to. This involved pulling the latest data from the CoWIN website and immediately notifying users via SMS or WhatsApp. It was imperative for us to bring the latency down from minutes to sub 1 second. We also needed to ensure that the tool could accommodate spikes in traffic.

To overcome these challenges, we used Amazon Elastic Container Service (Amazon ECS), a fully managed container orchestration service that is essentially a package of software that can seamlessly automate various services and workloads. Coupled with lower costs and automatic scalability, this approach was essential in helping VaccinateMe accommodate the extreme spikes in traffic on the tool. Even during the peak timings, the application was able to maintain the uptime of the portal for 99.9% of the time while also enabling responses to users within 100 milliseconds. HealthifyMe has been using Amazon ECS for over 5 years and this has been integral in launching VaccinateMe. We leveraged most of our knowledge and systems supporting our core HealthifyMe app as much as possible, but the power and capacity that AWS services offered to launch new services and scale existing ones without disruptions were significant.

How has the response been so far? Can you share details on the registration numbers and the impact of VaccinateMe tool?

Manan Chandan: The response to VaccinateMe has been tremendous. We have to-date enabled eight million people across 700+ districts in India to search for vaccination slots nearby and receive notifications as they become available. On an average, a quarter of a million users are using the platform daily while over 50 million slot availability notifications have been sent to the people who have registered on the platform. According to our surveys, 35% of those who have received these notifications claim to have found a vaccine through these alerts.

Post the funding and acquisition of Under45.in, what are the future plans for HealthifyMe and what is the impact of it on VaccinateMe tool?

Sachin Shenoy: With the phenomenal response to Vaccinate me, we wanted to supercharge our efforts for our vaccination slot booking initiative. In July 2021, we acqui-hired Under45.in, a venture that was powering vaccination slot alerts on the messaging app Telegram.

Along with Berty Thomas, Founder of Under45.in, Suchdeep Juneja who developed mhVaccineTracker and Chandraaditya Putuveru, who launched BloreVaccine Twitter bot have also joined us to further improve the VaccinateMe platform. Together, they will act as catalysts in our effort to fast-track vaccination slot bookings for millions of Indians which continues to run free of cost. All these platforms combined have enabled over 12 million people to find vaccination slots through SMS, Telegram and WhatsApp. We have also received approval from CoWin to launch our own booking application - this was launched in July 2021. Since then more than one million users have booked their slot on our platform.

How has technology played a role in enabling the large-scale healthcare movement in India during the pandemic?

Sachin Shenoy: As the world continues to fight the pandemic, India's healthcare system is receiving more attention from the Government. The National Digital Health Mission, a long-awaited reform of India's public healthcare infrastructure, is built on an all-encompassing digital backbone. A heightened awareness of health issues has increased the use and adoption of the internet and mobile applications to assist the Government in tracking infection patterns and clusters.

The pandemic also accelerated the adoption of telehealth as a viable doctor patient consultation platform, as well as technologies including artificial intelligence and machine learning, automation, data analytics, cloud computing, blockchain, chatbots, and mobile apps. Infact, today these are playing a pivotal role in ensuring scale digitization of the healthcare ecosystem across large segments of India's under-served population.

Manan Chandan: For VaccinateMe, we had to actively engage consumers, who increasingly expect healthcare to be very user-friendly and experience driven. AWS capabilities like Amazon Elastic Container Service (Amazon ECS) and Amazon Relational Database Service (RDS) allowed automatic scaling to meet traffic spikes, easy deployment of services and automation of large amounts of data. This was critical in helping us scale and meet the requirements of our increasing user base. With such solutions, we were also able to add new features reliably and cost effectively throughout the pandemic without any disruptions. For the end user, this meant a simple, navigable platform without lag that they could utilise for quick results.

Similarly, Amazon Redshift, our data warehouse, has been the lifeline of our business in helping us analyse our data to acquire new insights for the business and about our customers. This technology and data driven culture has helped us grow, solve problems, and innovate at a faster pace than we would have thought possible.

(Image caption- L-R- Sachin Shenoy – Co-Founder and CTO with Manan Chandan – Senior Director, New Initiatives)

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