TATA COMMUNICATIONS

TATA

national health authority | Case Study

26 Cr+ underprivileged Indians benefited under ABDM and PMJAY health insurance schemes

On the back of Tata Communications' robust and resilient cloud infrastructure

12-year-old Sudha (a fictional character) fractured her hip bone while playing with her friends. Her father rushed her to the nearest clinic for treatment, only to discover that she required fixation surgery. With a daily income of not more than INR 300, Sudha's father faced immense stress in arranging finances for her surgery. Fortunately, through a friend, he learned that Sudha was eligible for treatment under the Pradhan Mantri Jan Arogya Yojana scheme (PMJAY). As a result, Sudha underwent successful surgery at a government hospital in a nearby city. Following her treatment, Sudha was able to resume her school and other routine activities without any hindrance.

Numerous individuals facing economic challenges require access to high-quality healthcare services without enduring financial burden PMJAY initiative aims to create a system of demand-led healthcare reforms to reduce catastrophic out-of-pocket health expenditure by improving access to quality healthcare for India's underprivileged population. This is supported by Ayushman Bharat Digital Mission (ABDM) initiative which enables digitisation of health records to improve patient care , safety, and streamline administrative processes, making healthcare more efficient and patient centric. Whether it is a struggling labourer with an injury, a street vendor who has suffered a stroke or a family whose child has life-threatening cancer, PMJAY increases the access and affordability of treatment and hospital care. This enables individuals and their families to prioritize their well-being without the burden of having to scramble to various locations to arrange finances.Learn how Bharati AXA Life Insurance company by partnering with Tata Communications, boosted its branch office performance and user experience by creating an agile, reliable, and performant network infrastructure, that enables its agents to operate efficiently, improve customer engagement and create new business opportunities.

Strengthening India's healthcare ecosystem

Launched in 2018, PMJAY is the world's largest health insurance scheme, fully funded by the Indian government that offers a health cover to nearly 12 crore poor and underprivileged families, which translates to 40% of India's population. This ambitious initiative ensures everyone can access quality health services when and where they need them, without any financial difficulties.

On the other hand, the ABDM initiative aims to bridge the existing gap amongst different stakeholders of healthcare ecosystem through digital highways. ABDM will digitise India's health system by connecting patients, doctors and health facilities.

Both schemes share the common goal of optimizing and upgrading India's health infrastructure to better serve its citizens.

National Health Authority (NHA) is the apex body responsible for implementing and managing PMJAY and ABDM at the national level. Implementing programs of the scale, magnitude, and complexity of PMJAY and ABDM entails numerous considerations and poses significant challenges. . With a focus on operating in a paperless, cashless and transparent mode, it is mandated that all the processes are digitally performed including identification and verification of beneficiaries, empanelment of hospitals, claim settlement etc. This requires a well-managed digital healthcare ecosystem that connects many different applications and features to improve patient experience while also boosting operational efficiency.

About National Health Authority (NHA)

National Health Authority (NHA) is the apex body responsible for implementing India's flagship public health insurance/assurance scheme called "Ayushman Bharat Pradhan Mantri Jan Arogya Yojana" & has been entrusted with the role of designing strategy, building technological infrastructure and implementation of "Ayushman Bharat Digital Mission" to create a National Digital Health Eco-system.

Leveraging Tata Communications' cloud Platform-as-a-service (PaaS) to deliver digital healthcare services

To promote the adoption of paperless and cashless services under the PMJAY scheme and foster a digital health ecosystem in alignment with the ABDM mission, extensive utilization of IT infrastructure has been implemented across various facets. This includes beneficiary identification, hospital empanelment, transactions within healthcare facilities, feedback, and grievance redressal mechanisms, as well as support services.

This rendered the technological landscape of the PMJAY and ABDM ecosystem highly expansive, encompassing numerous applications for its day-to-day operations.

This end-to-end technology enabled suite served several stakeholders including hospitals, insurance companies, and third-party administrators (TPAs). With various stakeholders involved in the scheme, IT system integration across disparate technologies, applications and systems is vital to enhance patient experience and augment efficiency. With a growing volume of system integrators (SIs), as evident from the data (5 SIs at the time of scheme launch to 200+ SIs today), streamlining data exchange became even more critical. A lack of interoperability between these various systems negatively impacted

the performance of PMJAY ecosystem thus affecting stakeholders in multiple ways including:

- Citizens / beneficiaries who will not be able to access information related to the scheme, policies and guidelines, check eligibility, find hospitals etc

- Ayushman Bharat Health Account (ABHA) card creation and digital health records

- Hospitals might face issues related to registration and empanelment, claim settlements

- State health agencies / TPAs will not be able to perform claim settlement, process payments etc

NHA needed a cloud service provider that could administer this entire infrastructure including applications and data storage. As an experienced digital ecosystem enabler and MeitY-empanelled cloud service provider, Tata Communications' Government Community Cloud (GCC) was chosen which has now become the bedrock on which NHA operates its PMJAY and ABDM schemes. As the application landscape was monolithic and running on on-premise

legacy systems, Infrastructure as a Service (IaaS) cloud service model was used to host the entire PMJAY and ABDM ecosystem on Tata Communications' GCC.

In 2022, as a part of its overall application modernization effort, NHA decided to move all its applications to Kubernetes, the next-gen technology and the biggest name in the game when it comes to cloud computing. It was to enable easy scalability, seamless automated application deployment and efficient operability. This also necessitated that NHA evolves its cloud journey from IaaS to PaaS as PaaS supports cloud native development technologies including Kubernetes.

With Tata Communications' GCC PaaS offering, it is easier for NHA to scale the growing IT requirements in the wake of increased demand and constantly rising targets at government level. It also allows better control over applications and improve time-to-market as applications can be built quickly, without worrying the developers about configuring their platforms and backend structures.

A connected ecosystem to improve user experience while protecting sensitive patient information

With advanced cloud capabilities, Tata Communications' GCC accelerates time-to-market and has an open application programming interface (API) architecture for easy integration with various stakeholders. The open API approach has ensured that various Indian states could rapidly integrate and configure their IT systems to meet the states' healthcare needs. NHA's systems are also designed for scale and performance.

Digitisation of all processes as part of the PMJAY scheme implies data simultaneously resides in multiple places including hospital systems, patient devices etc thus creating vulnerabilities for cyberattacks. With exponentially increasing volume of data generated from patient records, medical devices, imaging tests, and other source, there was an urgent need for stronger cybersecurity measures to protect sensitive patient information, prevent data breaches and ensure the smooth functioning of healthcare operations. For healthcare, cyberattacks can have ramifications beyond financial loss and breach of privacy, as any loss of patient data can put lives at risk.

According to the Cost of a Data Breach Report, healthcare continues to have the highest data breach cost of any industry, averaging $10.10 million per incident

Tata Communications' GCC being physically isolated and reserved for use by the Government of India, secures the confidential healthcare data hosted on it by confining it within the Indian geographical borders. This infrastructure setup has integrated security and well-defined disaster recovery norms that safeguards data and protects patients' privacy.

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NHA IT infrastructure that supports PMJAY is probably one of the best in the world.

Dr Vipul Aggarwal,
Deputy Chief Executive Officer,
NHA

Automate mundane tasks to focus on patient care

With Tata Communications' strong Artificial Intelligence for IT Operations (AIOps) capabilities in place, it is easier to know in real-time whether there are problems that could disrupt the system's performance and the root cause thus enabling a faster incident resolution. It allows NHA to improve its operations and better serve the patients. Issues can now be troubleshooted instantly thereby decreasing service disruptions and ensuring application availability even during incident remediation.

From operations management standpoint, the team has seen 40% reduction in business-impacting (priority1) tickets when the infrastructure is completely down.

In addition, Tata Communications' managed services model providers 24/7 help desk support including infrastructure management and security with engineers available in Tata Communications' office as well as NHA office to make sure that the PMJAY and ABDM infrastructure is running smoothly.

> *The PMJAY scheme is setting new definitions of success every year. As it completed 5 years since its implementation, it has achieved new milestones, crossing 5.7 crores + hospital admissions. This wouldn't have been possible without a robust IT infrastructure built by Tata Communications. With a strong foundation we have been able to innovate and serve people the way we do it today. When we were tasked to implement the IT infrastructure for the PMJAY ecosystem, our first thought was how can we do things more efficiently and in a way that positions us for the future. However, with Tata Communications' technical expertise and leadership skills, we have been able to resolve critical challenges including application compatibility issues while migrating from IaaS to PaaS. The team played a key role in segregating ABDM and PMJAY infrastructures, thereby leading to significant reduction in ticket resolution time. With better visibility into our cloud environment, we have been able to keep a check on costs, performance and security.*

NHA spokesperson

Patient safety and uninterrupted care delivery

PMJAY has significantly improved the quality of life of the weaker sections of society as they get timely care and finances to tackle health related issues. The benefits under this scheme are portable across the country. Technology has helped people with cancer, cardiac and other tertiary care diseases to seek care outside their states in some of the top medical institutions which was not possible prior to PMJAY. Below data speaks volumes about the impact of PMJAY in revolutionizing healthcare in India:

- 26 Cr+ Ayushman cards created under ABDM program
- 27K+ hospitals empanelled
- 5.7Cr hospital admissions worth more than Rs. 70,000 Cr thus, saving more than 1 lakh crore out-of-pocket expenditure of poor and deprived families.
- 60% reduction in the out-of-pocket expenditure
- 65% increase in access to tertiary care
- 15 days claim processing time with PMJAY vs 45 days taken by a typical insurance company

The success of this scheme is underpinned by a robust and agile infrastructure offered by Tata Communications as evident from the below operational metrics:

- 15lac concurrent portal users
- 99.9% SLA compliance
- 30% reduction in provisioning
- 40% reduction in critical business incidents
- Foiled several cyberattacks on NHA database during G20 with a foolproof cybersecurity

Once PMJAY is successfully implemented in all Indian states and union territories, it would be a game changer for the 500 million or so beneficiaries who cannot otherwise afford any secondary or tertiary treatment.

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Foolproof Cybersecurity

Build your future through a digital customer experience

If you are a healthcare enterprise looking to transform the way your customers experience your product, talk to your Tata Communications representative about your company's digital transformation.

- How you can reach your high value customers in the most convenient way?

Transform Now

About Tata Communications

A part of the Tata Group, Tata Communications (NSE: TATACOMM; BSE: 500483) is a leading global commtech (communications technology) player powering today's fast-growing digital economy in more than 190 countries and territories. Leading with trust, it enables digital transformation of enterprises globally with collaboration and connected solutions, core and next gen connectivity, cloud hosting and security solutions and media services. 300 of the Fortune 500 companies are its customers and the company connects businesses to 80% of the world's cloud giants. For more information, please visit www.tatacommunications.com

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