

From Manual Patient Reporting to Automated Physiological Monitoring

AMBITION

Chronic disease management was compromised by low patient compliance with prescribed therapeutic regimens and a lack of objective, real-time health data. Manual tracking methods created informational gaps that hindered the ability of healthcare providers to identify physiological changes or predict deterioration episodes. The organization required a technical framework to transition from inconsistent reporting to a continuous, data-driven monitoring environment.

ACTION

Wipro Engineering – Connected Services developed a three-tier architecture comprising an ingestible sensor, wearable patch firmware, and a centralized analytics platform. The system was designed to absorb real-time data on medication ingestion, heart rate, and activity levels — including walking and exercise metrics — to identify physiological patterns. Technical teams implemented automated workflows that trigger alerts and behavioral nudges to improve medication timing and compliance. This architecture consolidated high-frequency data streams into a unified dashboard, enabling caregivers to monitor for deterioration episodes and adjust treatment protocols based on health patterns.

AMBITIONS REALIZED

The implementation established a proactive monitoring environment that facilitates informed patient self-care and medical oversight.

The Business Impact:

- **Continuous vital sign monitoring** including heart rate and activity metrics to detect health shifts.
- **Automated medication verification** using ingestible sensors to provide objective adherence data.
- **Improved compliance rates** through automated behavioral nudges and patient alerts.
- **Proactive care intervention** enabled by real-time insights into disease deterioration patterns.
- **Standardized remote oversight** through an integrated mobile and analytics infrastructure.

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