

NABH Digital Health Excellence 2026

Case Study Submission

Bedside Room Allocation: Optimizing IP Admission Through Digital Dashboards & Process Innovation

Digital Dashboards and Analytics for Clinical & Quality Decision-Making

Submitted By:

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EXECUTIVE SUMMARY

Apollo Hospitals, Financial District, Hyderabad implemented an innovative Bedside Room Allocation system that leverages digital dashboards and clinical decision-making to optimize IP (Inpatient) admissions. This case study demonstrates how process redesign, enabled by digital technology, reduced admission time by 33% (from 20-25 minutes to 15 minutes), improved patient satisfaction to 9/10, and achieved system-wide scalability across all Apollo Hospitals. The solution showcases the integration of Hospital Information System (HIS), real-time bed management dashboards, and process innovation to enhance both operational efficiency and patient experience.

Metric	Before	After	Improvement
Average Admission Time	20-25 min	15 min	33% reduction
Patient Satisfaction	~7/10	9/10	+2 points
Monthly Admissions	~1,100	1,268 (June)	+15% volume
Staff Adoption	40%	7/10	Needs training

1. BACKGROUND & CONTEXT

Apollo Hospitals, Financial District, Hyderabad is a multi-specialty tertiary care hospital serving a diverse patient population with varying clinical needs and room eligibility requirements. The IP (Inpatient) Admission department handles approximately 1,268 patient admissions per month across multiple ward categories (private, semi private, deluxe), ICU facilities, and specialty units.

Challenge Statement:

Prior to implementing the digital bedside admission system, the IP admission process followed a sequential workflow:

- Patient Arrival → Financial Counselling → Manual Room Allocation (post-decision) → Admission

This traditional approach created several pain points:

- Delayed bed confirmation: Floor managers had to manually verify room availability despite having digital systems, creating bottlenecks
- Extended admission time: 20-25 minutes per patient due to sequential decision-making
- Financial counselling delays: Insurance verification and financial clearance were time-intensive
- Dependency on key personnel: Process relied heavily on floor managers and counsellors with limited backup capability
- Patient experience gaps: Uncertainty about room allocation created anxiety for patients awaiting admission

2. THE DIGITAL SOLUTION & TECHNOLOGY STACK

Apollo Hospitals implemented an integrated digital ecosystem to address IP admission challenges. The solution leverages Apollo's enterprise-wide Hospital Information System (HIS) and specialized applications:

Technology Components:

1. Hospital Information System (HIS) - Patient Services Module

The HIS integrates patient care services, hospital support services, and allied services. The Patient Services module contains real-time bed occupancy data, room eligibility criteria (AC/Non-AC, specialty requirements), and patient acuity levels. This data feeds into admission decision-making dashboards accessible at the IP Admission desk.

2. Admission Q System (Real-Time Queue Management)

A dynamic queuing system that prioritizes admissions based on clinical acuity and room availability. The system displays real-time bed status and automatically flags available rooms matching patient eligibility criteria.

3. MedSafe Track (Patient Safety & Admission Tracking)

Tracks patients through the entire admission workflow—from arrival, screening, financial counselling to final bed assignment. Provides transparency to both staff and patients.

4. Online Payment & Digital Forms

Self-service digital admission forms reduce paperwork and manual data entry. Integrated payment gateway accelerates financial clearance.

5. Patient Navigator (Mobile Interface)

Provides real-time updates to patients about their admission status, allocated room, and next steps in the process.

3. THE INNOVATION: BEDSIDE ROOM ALLOCATION PROCESS

The core innovation is a process redesign enabled by digital dashboards:

Old Workflow (Pre-Digital):

- Patient Arrives → Financial Counselling → Manual Room Search → Admit Patient(on desk) → Move to Room (20-25 min)

New Workflow (Digital-Enabled Bedside Admission):

- Patient Arrives → Financial Counselling → HIS Dashboard Checks Room Eligibility (semi private, private, deluxe, ICU/Ward) → Room Pre-Allocated Instantly → Confirmed Admission & Patient Moves to Pre-Assigned Room (15 min)

Key Differences:

1. Room allocation happens BEFORE admission finalization, not after
2. Digital dashboard automatically matches patient condition with room eligibility criteria
3. No manual floor manager confirmation required—system provides real-time bed status
4. Patient satisfaction increases because they know their room assignment upfront (bedside admission)
5. Process is parallel (room allocation & financial counselling happen simultaneously) vs. sequential

4. IMPLEMENTATION RESULTS & IMPACT

Quantifiable Metrics:

Admission Time Reduction:

- Before: 20-25 minutes per patient
- After: 15 minutes per patient
- Improvement: 33-40% reduction (5-10 minutes saved per admission)

Annual Impact (June 2026 data):

- Monthly admissions: 1,268 patients
- Annual admissions: ~15,200 patients
- Time saved annually: 1,270-2,540 staff hours
- Patient throughput improvement: 15-20% faster admission cycle

Patient Experience:

- Patient satisfaction score: 9/10 (improved from ~7/10 with traditional process)
- Reason: Pre-allocated room reduces anxiety; patients know their accommodation before admission

System-Wide Scalability:

- Implementation: ALL Apollo Hospitals across India (not limited to Financial District branch)
- This demonstrates enterprise-level digital transformation and standardization of best practices

5. CHALLENGES & ORGANIZATIONAL LEARNING

While the digital bedside admission system achieved significant time savings and patient satisfaction gains, implementation revealed important challenges:

Staff Adoption Rate: 7/10

Despite the digital system's efficiency, staff adoption remained moderate. Root causes identified:

6. Process Change Resistance: Staff accustomed to manual workflows expressed hesitation toward new digital procedures
7. Dependency Issues: Critical functions (financial counselling, floor coordination) rely on specific individuals, limiting flexibility
8. Training Gaps: Insufficient change management and hands-on training reduced confidence in the system

Residual Process Bottlenecks:

- Financial counselling delays: Despite digital room allocation, insurance verification and payment processing still create time delays
- Manual double-checking: Some floor managers still call to manually verify bed availability despite digital status, indicating incomplete trust in system data

Lessons Learned:

9. Technology alone is insufficient—process design and change management are equally critical
10. Staff training and confidence-building are prerequisites for adoption
11. Cross-functional coordination (admission desk, floor managers, financial counselling) requires clear communication protocols
12. Even with 40% time reduction, external factors (insurance processes, TPA verification) can create downstream delays

6. RECOMMENDATIONS FOR FUTURE OPTIMIZATION

To further enhance the digital bedside admission system:

1. Intensify Staff Training & Change Management

Conduct quarterly refresher training for IP Admission staff. Create "super-users" who can mentor colleagues. Develop clear escalation protocols for edge cases.

2. Automate Financial Counselling & Insurance Verification

Integrate Claimbook (insurance processing platform) with HIS to enable real-time TPA verification. Pre-populate insurance details from digital admission forms.

3. Develop Predictive Bed Management Analytics

Enhance dashboards to predict room availability based on estimated discharge times and current patient acuity. Use historical data to optimize staffing during peak admission hours.

4. Cross-Train Staff to Reduce Key-Person Dependency

Establish backup personnel for critical roles. Create standard operating procedures (SOPs) documented in digital systems to reduce individual expertise dependency.

5. Extend Patient Navigator Features

Develop mobile app or SMS-based notifications to keep patients updated on admission progress. Enable self-service check-in via kiosk or mobile interface.

7. CONCLUSION & IMPACT STATEMENT

Apollo Hospitals' Bedside Room Allocation system represents a successful integration of digital dashboards, real-time analytics, and process innovation to optimize inpatient admissions. By shifting from a sequential to a parallel workflow and leveraging HIS data for intelligent room allocation, the hospital achieved:

- 33-40% reduction in admission time (25 min → 15 min)
- 9/10 patient satisfaction score (improvement from ~7/10)
- Annual time savings of 1,270-2,540 staff hours
- Enterprise-wide implementation across all Apollo Hospitals
- Demonstrated maturity by identifying and addressing residual challenges

This case study demonstrates that digital health excellence is not merely about technology deployment—it requires thoughtful process design, staff engagement, and a patient-centric approach. The 33% improvement in admission time directly translates to better bed utilization, reduced patient wait times, and enhanced clinical outcomes. As healthcare systems worldwide grapple with operational efficiency and patient experience, Apollo's bedside admission model provides a replicable best practice for optimizing digital health workflows.

The innovation is particularly relevant for busy multi-specialty hospitals managing high patient volumes with diverse room eligibility requirements. By empowering admission teams with real-time data dashboards and intelligent room allocation algorithms, Apollo has created a scalable, patient-centered model for inpatient onboarding.

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