

Provider Capacity Management solution — bed tracking and analytics

Providers typically lose millions of dollars to underutilized capacity and high process variability in bed management practices. This could lead to some serious downstream impacts affecting patient outcomes:

- Overcrowding of the emergency department due to held up inpatient beds
- High admission wait times
- Administrative workload on caregivers
- Dissatisfied patients With the shifting focus from volume to value-based care, providers are looking at sustainable ways to bend the cost curve by improving capacity utilization. The need of the hour is an advanced analytics system that presents real-time process visibility, relates the process inefficiency to outcomes, and proactively provides administrators the right information at the right time.

Infosys Capacity Management solution optimizes bed turnover by eliminating 'hidden beds,' unnecessary holds, forecasting bed demand, and accelerating discharges. Our solution will help you realize high bed occupancy with reduced admission wait times by coordinated, real-time communications, automated workflow, and escalation notifications.

Solution overview

Our solution leverages your existing technology investments by interfacing with existing Admission / Discharge / Transfer (ADT) and EMR systems to present real-time visibility of inpatient bed capacity. This solution helps in predicting the peak throughout the day and in identifying the bottlenecks. Using this solution helps providers uncover the correlation between bed capacity utilization and admission waiting times.



Solution features

1. Retrospective analysis and load predictions

- Provides on-demand historical patterns in bed capacity management
- Short-term forecasting of load (next 4, 8, 12, 48 hours) based on procedures expected for the patient
- Long-term forecasting based on historical data patterns combined with statistical tools
- The solution also presents the predictive accuracy for providers to view the accuracy of the load and resource predictions



2. Advanced analytics

- Effective communication about performance against benchmarks – The benchmarks are defined and constantly monitored through this system.
- Identify the misses or deviations in bed management
- Root-cause analysis – Mapping each occurrence of deviation from normal to common causes of variance

3. Real-time actionable alerts

The solution provides real-time, actionable alerts around bed status, bed transfers, and patient admission and discharge. For instance, the system will trigger an alert to housekeeping as soon as the bed status is changed to 'housekeeping'. Escalation alerts can be configured, whenever the bed has not been cleaned within a preset time after a discharge.

4. Role-based dashboards

Role-based Performance Management Dashboards deliver a real-time overview of KPIs set around bed administration – right from nurses to CEOs, empowering each participant to proactively monitor and make decisions to optimize across various objectives and look for creative ways to achieve goals.

5. Bed board

A real-time view of the status of each and every bed of a provider across various departments is readily available to ensure faster bed allocation and reduce patient wait times. In case of nonavailability of beds the in-built artificial intelligence tool can suggest / forecast the closest possible beds that would be vacated in the near future.



Solution benefits derived by our clients

- Efficient demand forecasting using analytics over diagnostics data from ED, OT, and OPD
- Improved provider capacity: Our customers have achieved 10–13 percent improvement in ED Admissions (due to improved bed utilization) and 20 percent reduction in bed assignment time
- Enhanced patient and caregiver satisfaction by reducing patient wait times and empowering caregivers with actionable real-time information

For more information, contact askus@infosys.com

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