



## Streamlining patient placement to maximize capacity and optimize patient flow

Philips Healthcare Transformation Services collaborates to improve patient placement at a large academic medical center

### Who/where

A large non-profit academic medical center and Level I trauma center in the northeast.

### Challenge

Improve daily patient placement by redefining roles and responsibilities, developing new processes, and creating new management tools.

### Solution

Philips Healthcare Transformation Services led a consulting engagement which included executive interim leadership, in-depth analysis of existing procedures, and application of industry best practices.

A large academic medical center that has one of the busiest trauma and emergency services centers in the northeast. However, high patient volume was taxing existing bed control management with bed assignments being handled in an inefficient, decentralized fashion.

Philips was engaged to provide an executive interim leader consultant to develop processes and strategies to help improve capacity management and organizational flow. The changes supported a positive impact on patient throughput and bed availability including daily consideration for prioritization of placements.

## Results\*

The executive interim leader consultant leveraged best practices to help redesign bed management workflows upon which change initiatives were based. The medical center has begun to implement new procedures and processes to realize capacity improvement.

The identification and transparency of potential discharges aided in the appropriate prioritization of beds, with **68% – 80% of potential discharges converted to actual discharges**, significantly adding to bed availability.

## The challenge

As many hospitals do, the medical center struggled to achieve efficient, timely centralized bed assignment. Demand appeared to often outpace availability. The challenge was how to manage and assign beds while acknowledging and accommodating the many variables related to patient prioritization.

### Addressing the need

Philips assigned a seasoned consultant to serve in an executive interim leadership role, overseeing capacity management. The primary focus was to create transparency within the organization to reach agreement on the need for better capacity management and determine how to effectively assign beds while considering all the various points of patient entry into the hospital.

Two parallel events would impact the medical center's capacity management effort. The IT team was involved in a major EPIC software upgrade and two separate campuses were consolidating into a single entity. Both projects necessitated intense coaching and mentoring, and consideration of each was also critical to a successful outcome of the patient placement initiative.

The consultant partnered with hospital leadership to explore strategies to improve organizational flow and bring all involved stakeholders to the table – nurses, clinicians, and physicians. Workflow analysis, on-site observations,

and stakeholder interviews were conducted with the intent to redesign roles and responsibilities, create new processes, and develop new implementation tools.

Performance improvement activities and project management were woven into patient placement efforts with involved stakeholders. With standard work processes implemented, a heightened organizational sensitivity developed for the misalignment between bed demand and bed availability.

### A focus on people

Critical to improving patient throughput and bed control is the ability for everyone involved in the process to 'be on the same page'. By working cohesively toward the same goal, variability in process is reduced. To achieve this, the Philips consultant initiated three daily staff huddles – at 11:30 AM, 4:00 PM, and 9:00 PM. Nurse managers needed a collective understanding of the expectations for the day – how many beds were going to open, how they would be prioritized, and how they would handle transfers from other hospitals, and from within the organization.

**Defined as improvements in People, Process, and Technology, the engagement took a three-pronged approach.**

**A summary of results includes:**



Close coordination between the post-anesthesia care unit (PACU) and emergency department (ED), and better communication with admitting was crucial to success. Every morning at 11:30 AM huddle, staff gathered to plan for the day. Postoperative patient times for each unit were identified and a prioritized plan created for:

- Direct admissions and transfers
- Emergency department
- ICU transfers
- Post-anesthesia care unit

Each unit was reviewed for current census, expected admissions, transfers in/out, and actual discharges. The admitting department weaved in the direct admissions and ED patients for a more effective flow. Tasks were assigned with updates expected throughout the shift and a formal hand-off to the 4:00 PM and 9:00 PM huddle. Process documentation for each step was developed.

Defining the roles and responsibilities for nurse managers (including off-shift nurse managers), expect nurses, and bed control nurses put clear parameters around expectations. Close, ongoing collaboration between staff, with active involvement in admissions, discharges, and transfers, now supports productivity goal accountability for each unit.

### A focus on process

A formal hand-off process was needed for shift changes and report sharing. The consultant developed a comprehensive chronological workflow for bed control – a day in the life – that explains all of the substantive touchpoints required over the course of 24 hours.

Topics detailed included:

- Hand-off received from night off-shift nurse manager
- Discussion of tools needed during shift
- Troubleshooting of equipment
- Guidance for collaboration with admitting
- Questions about throughput
- Code yellow initiation
- ED huddle and 11:30 AM huddle
- Suggested timestamps to monitor

Using this document as a guide, more concise tools were developed for certain elements. For example, a huddle checklist and worksheet were created to help standardize

workflow and eliminate staff variation. The checklist mapped out the entire huddle process in chronological order and included troubleshooting of equipment and actionable priorities for end of huddle summary. The online huddle worksheet tool was developed to capture all discharges with clinical milestones. This allowed staff to see the bookable business through the day and be able to determine if they had enough beds to accommodate all patients, and if not, to plan accordingly. Use of this tool helped them determine that 68% to 80% of the clinical milestones and potential discharges converted to an actual same-day discharge and hence an available bed.

### Huddle worksheet

Code yellow bed documentation was previously done manually however with the campus consolidation, better tracking was critical. An online tool was created to manage these overcapacity beds and provide a daily documentation of all code yellow phases.

The screenshot displays a complex dashboard with multiple data tables and summary boxes. At the top, there are summary boxes for 'Admissions', 'Discharges', and 'MIS Status'. Below these are several smaller tables, including one for 'MIS Status' and another for 'MIS Status'. The main part of the dashboard is a large table with columns for 'Unit', 'Patient', 'Admission', 'Discharge', 'MIS', and 'Status'. The table contains numerous rows of data, likely representing individual patients and their status over time. The dashboard is designed to provide a comprehensive overview of bed control activities and patient flow.

### A focus on technology

Working closely with the IT team, the Philips consultant developed a Capacity Management Dashboard – a real-time visualization of bed placement activities across the organization. This hospital-level synopsis allows leadership to view performance metrics at any moment of the day. The tool captures the number of discharges per unit as they are entered into the system, and then maintains a running total of all discharges. This data rich environment provides previously unseen insight to the daily ‘churn’ and assists with adherence to the organizations key performance indicators (KPIs).

Technology needs changed throughout the course of the engagement, while the organization implemented a new version of EPIC. Completion of the upgrade helped with the development of additional support tools such as a Bed Planning tool and a PACU tracking board.



## Results\*

Successes gained during the consulting engagement triggered organizational capacity management momentum and heightened awareness for efficient throughput. This created a strong foundation to build future capacity management initiatives. The medical center is pushing forward to fully staff and implement all recommendations including assignment of a nurse leader to oversee capacity management operations.

As the engagement concluded, the Philips consultant, together with the medical center stakeholders, identified a series of KPIs which the organization would strive to meet. The internal IT team is planning to build a set of reporting tools to track performance against these goals.

## Key performance indicators

Bed control and admitting	Nursing units and procedural areas	Environmental services (EVS) and transportation
<ul style="list-style-type: none"> <li>• Bed request to bed assigned</li> <li>• ICU downgrade and upgrade turnaround time</li> <li>• Diversion for MICU, MedFlight, and transports to a children's hospital</li> <li>• Discharges by time of day and specialty</li> </ul>	<ul style="list-style-type: none"> <li>• ED and PACU boarding hours</li> <li>• Clinical milestones versus actual discharges</li> <li>• Patient transfer order written to transfer completed</li> <li>• Daily ICU transfers completed</li> </ul>	<ul style="list-style-type: none"> <li>• Total turnaround time in minutes – request to completion</li> <li>• Time of request to time assigned</li> <li>• Time assigned to time initiated</li> <li>• Transports within 30 minutes</li> <li>• EVS cleaning within 60 minutes</li> </ul>

## Learn more

Through collaborative and people-focused engagements, Philips Healthcare Transformation Services can help develop innovative solutions to solve your most complex challenges of care delivery. We can help you achieve meaningful and sustainable improvements in clinical excellence, operational efficiency, care delivery, and financial performance to improve value to your patients.

For more information, please visit [www.philips.com/healthcareconsulting](http://www.philips.com/healthcareconsulting).

