Hospital Bed utilization is a key component for measuring the throughput in many hospitals. One of the major problems many hospitals face today is the inefficient management of beds. Beds left unoccupied as a result of waiting for the staff members to service the beds, and to get it ready for the next patient is a significant cost to the Health Industry. The Bed Turnaround Time in question extended from the time discharge instructions were given to the patient to the time a new patient arrives. Though cleaning the bed and making it disinfected takes around forty minutes, much of the time is elapsed by physically checking the rooms and communicating statuses between units and cleaning staff.

Our dashboard on Hospital Bed Management will improve this bed turnaround process and provide bed statuses and alerts through visuals and charts. Here is a quick demo of the Hospital Bed Management dashboard.

The Hospital Bed Management dashboard is divided into 3 sections. The Left Section gives an overview of Bed occupancy rates and the bed status across Units. The Right Section provides the Admissions, Discharges and Transfers details. And the Middle Section displays the Bed Turnaround Time statistics.

The layout at start gives the overview of all units first, which will be helpful for Hospital Managers and Central Bed Coordinator to see statuses across the entire hospital units. To see each individual unit or compare between units, we have added Unit filters.

We will now see each of the charts in detail.

**The Left Section:** The Stacked bar chart gives the number of occupied beds versus unoccupied beds by Unit. It will give a quick indication of where beds are ready to be occupied etc. Unit filter can be applied to see the numbers to specific to a unit. Bed status map layout will then pinpoint bed statuses to specific bed number. Units are aligned to represent the original hospital layout, for example 1N is placed in the top North corner.

The color coding of each bed indicates the occupancy status. Red means dirty beds, amber indicate the bed is in cleaning stage and clean beds are indicated by green coding. Tooltips allow to browse through the status of individual beds. This layout will be useful to Unit clerks, Bed Coordinators to communicate with House-keeping staffs to quickly attend to services where needed.

**The Middle Section**: Displays the bed turnaround time statistics. The top chart displays the average Bed Turnaround Time across each hour. Hour Slider is provided to slide through a particular hour of interest. The stacked bar chart in the center displays the composite view of bed turnaround time over the past months. Brush filter is designed to focus on specific range of dates to compare the statistics across the units. Bottom chart displays the average bed turnaround time over the current week by Unit. Hovering over the bar will give the details of each unit.

**The Right Section**: The top chart provides the current Admissions, Discharges and Transfer numbers by Unit. It will be helpful to prioritize bed readiness and allocation depending on ADT rate. The bottom chart displays the Admissions, Discharges and Transfer trends over the past 2 months. This Stacked Area chart is designed for selection of Admissions, Discharges and Transfers individually. Also, the dates could be zoomed in by rectangular selection to see patterns over a specific time period. Double clicking on the chart will revert back to its original position. All the Information is easy to access and is provided with simple charts and filters that will allow users to navigate to information quickly.