



## The Children's Hospital Boston Experience

Children's Hospital Boston is one of the nation's leading pediatric medical centers and the primary pediatric teaching hospital of Harvard Medical School.

### Hospital Overview

- 396-bed pediatric health care center
- 22,600 inpatient admissions each year
- 527,500 visits annually
- 23,000 surgical procedures per year

### Staff includes:

- 963 active medical and dental staff
- 897 residents and fellows
- 1,570 nursing and clinical personnel
- 5,200 other full- and part-time employees

### Radiology Department Overview

- 207,000 imaging studies per year

### Staff includes:

- 40 board-certified pediatric radiologists, neuroradiologists, nuclear medicine physicians and interventional radiologists
- 131 FTE pediatric imaging specialists
- 41 FTE specialized pediatric radiologic nurses
- 4 nurse practitioners

### Benefits with Allocade

- Accurate patient wait times and exam completion times
- Online workflow for protocoling
- Detailed metrics for meaningful process improvements
- Goals to improve room utilization and increase patient satisfaction and revenue

### The Challenge: Daily Variability and Constant Change

The inevitable variability and constant change to the daily schedule was a consistent challenge for the MRI and Interventional Radiology staff at Children's Hospital Boston. There was a need for communication improvements between the front desk staff, nurses, technologists, and radiologists in order to deliver the best quality patient care.

The Radiology Department wanted a solution that would streamline communication, improve patient throughput, and provide data and metrics for managing future process improvements in these modalities.

### The On-Cue Solution

Children's Hospital Boston chose Allocade to solve its communication and patient flow challenges. The Children's Radiology staff worked closely with Allocade to customize the On-Cue software application to meet the complex needs of a pediatric site. Interventional Radiology and MRI began using the system in the fall of 2009.

The On-Cue software automatically queues up the day's starting schedule, and staff members use the tool to update each patient's status as he or she moves through the exam process. The staff is able to view these updates in real-time on large screen displays throughout all clinical areas.

"On-Cue helped to make our processes for communication more efficient," says Sharon Silk, M.P.H., Director, Radiology Quality Management and Operations Improvement.

"With Allocade, we established a comprehensive electronic method for communication. Our front desk staff, nurses, technologists, anesthesiologists, radiologists, recovery room staff and our management team know the patient status and progression through the area or department. We have a more accurate estimation of patient wait times and exam completion times. In addition to the workflow benefits, we are now able to capture detailed metrics to help make operational improvements."

Richard L. Robertson, Jr., M.D., Acting Radiologist-in-Chief, says, "The ability to see patient status at a glance and communicate directly with the technologists performing the exam allows the radiologists to focus on image interpretation, which leads to greater efficiency in patient turnover."

## Allocade On-Cue for Business Intelligence

The On-Cue clinical operations solution captures every click in a department's workflow process and provides the ability to analyze detailed data to answer questions such as:

- What is our open room time?
- When are we getting the most add-on patients?
- What is the actual length of specific procedure times?

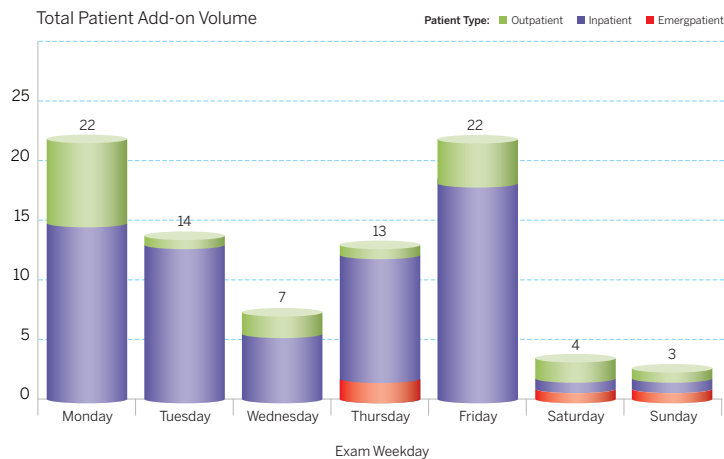
Clinical operations data that was never before measured is now available for making objective, meaningful business decisions to support an increase in department operational efficiencies.

On-Cue makes it easy to gather clinical operations data points to support and improve workflow processes, the patient experience and financial outcomes.

## Examples from Children's Hospital Boston

### Patient Add-ons

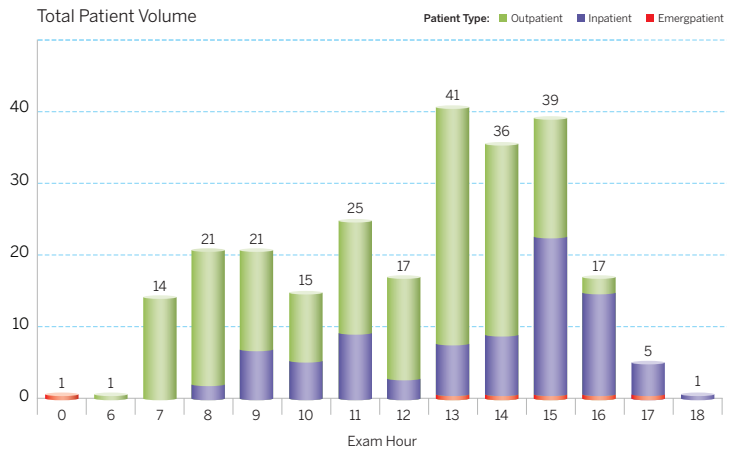
Patient add-ons were causing unpredictability in the daily schedule at Children's Hospital Boston. Using On-Cue metrics, staff can now review the data needed to determine the day and time of week when add-on patients impact current schedules. This allows for more accurate balancing of the clinical schedule.



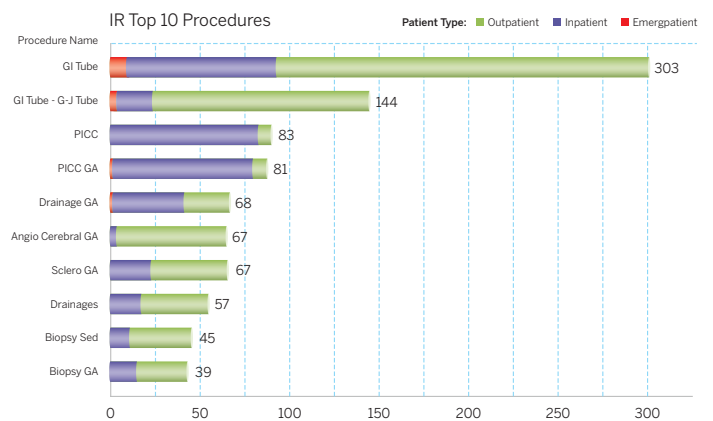
Total Patient Add-on Volume for 3 IR Procedure Rooms, one month, by weekday and patient type.

### Patient Volume and Procedures

Understanding patient and procedure volumes is critical to achieving optimal performance in a radiology department. Moving beyond the review of total volume numbers, it is important to correlate volume data to other aspects of workflow process, such as resource allocation, patient type and time of day.



Total Patient Volume for 3 IR Procedure Rooms, one month, by hour of day and patient type.



The Top 10 Procedures for IR, reviewed by patient type.