



Improving operations to streamline radiology workflow

Philips Healthcare Transformation Services at work with Lowell General Hospital

Who/where

Lowell General Hospital
Lowell, Massachusetts, U.S.A.

Most Wired Hospital Award 2012

Best Place To Work 2012,
Boston Business Journal

Breast Imaging Center of Excellence,
American College of Radiology

Challenge

Gain a clear understanding of the hospital's existing CT workflow, identify bottlenecks, and pinpoint opportunities to develop more efficient processes and support the delivery of quality care.

Solution

Philips Healthcare Transformation Services employed a radiology workflow simulation tool to analyze existing CT processes and develop both current and future state representations of the environment. Guided by the findings, the team presented a detailed plan for improving workflow.

Results

After implementing recommended process, workflow, and examination schedule adjustments, Lowell General improved CT workflow and streamlined daily processes. This led to increased patient throughput and higher staff productivity.

As the leading community hospital in the Merrimack Valley, Lowell General Hospital has earned a reputation for delivering comprehensive health and wellness services, compassionate care, and clinical excellence.

While in the midst of a major construction project – building a five-story patient tower, expanding the ER, adding operating rooms, and installing a new CT scanner – the hospital's radiology department took the opportunity to strategically partner with Philips Healthcare Transformation Services.

“Philips came to us with this opportunity to work on an operational improvement project that would use a radiology workflow simulation tool to look at current workflow processes and pinpoint bottlenecks within the department. The objective was to identify opportunities for possible improvement,” said Judy Canal, Director of Imaging Services.

Understanding the dynamics

The Philips Healthcare Transformation Services team met with staff members at Lowell General Hospital to discuss all aspects of the CT workflow and patient throughput and to collect performance data during in-depth, on-site visits (see fig. 1). Team members drew on years of management consulting experience to analyze the current processes and utilized a simulation tool to create current and future state representations of the environment.

“The Philips team came in and basically embedded themselves in the department. They actually worked with our entire staff to understand our workflow to really get an idea of how it worked currently and how it could work in the future. We provided them with inputs like the number and type of scans we do, how long they take, and other operational data,” said Ms. Canal.

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Taking a strategic approach

The Philips Healthcare Transformation Services team used constraint-based modeling capabilities to highlight improvement opportunities within the complexities and interdependencies found amongst the Lowell General facilities, processes, and the CT department staff. As a result, they clearly understood the constraints and root causes behind each contributing factor.

The simulation model also enabled Philips to create a virtual CT workflow environment that was used to construct a number of what-if scenarios and weigh the potential current and future impact of each variable. What if work volume increased? What if the department decided to add a dressing room? What if they incorporated an intravenous prep room for patients? Using this dynamic modeling system, the consulting team was able to quickly provide the answers and communicate the benefits of proposed changes (fig. 2).

Achieving improvements

The analysis led to a detailed, data-driven proposal for CT workflow improvement for Lowell General Hospital administrators. Patient process changes were implemented, including workflow and examination schedule adjustments. Within three months of making these changes – some simple and some complex – Lowell General improved patient throughput issues, streamlined daily processes, and improved CT workflow.

“The expertise and collaborative approach, along with the sophistication of the tool itself overlaid on typical radiology operations, provided valuable information for our department and staff to use in a very practical way,” says Ms. Canal. “Philips was instrumental in helping us pinpoint our CT workflow problems and streamline our process.”

Learn more

Philips Healthcare Transformation Services provide an end-to-end, patient-centric approach to helping you achieve cost reduction and performance improvement goals. For more information, please visit us at www.philips.com/healthcareconsulting.

“Philips offered us a continuum of process improvements we could work with. With some very simple things we could do early on, and some more challenging things that would take us a little bit longer to fully implement. They worked with us every step of the way and provided a great end product.”

Judy Canal

Director of Imaging Services, Radiology
Lowell General Hospital



Figure 1. On-site observations and data analysis determine the operational baseline, which is used as an input to the patient flow simulation.

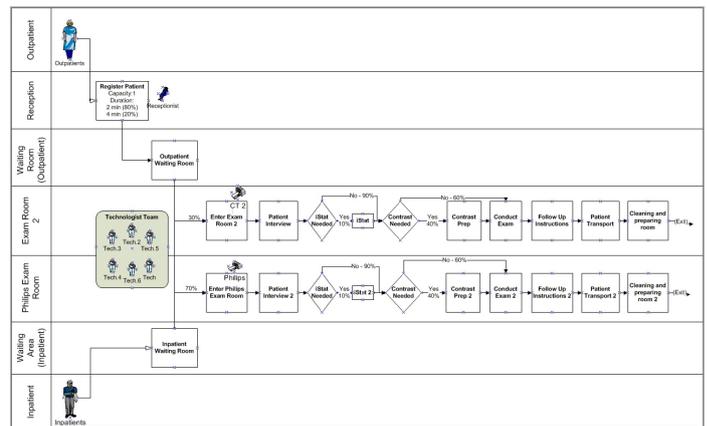


Figure 2. Data input flow through a mapped process results in the identification of operational constraints in various scenarios.

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www.philips.com/healthcare
healthcare@philips.com

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