

FieldStrength

Publication for the Philips MRI Community

Issue 38 – Summer 2009

Realizing the full potential of a 3.0T MRI system

Utilization Services use a Kaizen Event to improve productivity



This article is part of
Field Strength issue 38,
Summer 2009

PHILIPS

Realizing the full potential of a 3.0T MRI system

Utilization Services use a Kaizen Event to improve productivity



After close to three years using their Achieva 3.0T X-Series, the management of the Al Zahra Hospital in Sharjah, close to Dubai in the United Arab Emirates, observed they had not yet reached the expected return on their investment. They were averaging 62 minutes to examine each patient, the same productivity as they had managed on their previous, 1.0T system. In the second half of 2008, they decided to look at ways to increase the patient throughput. Philips Utilization Services suggested a Kaizen Event to identify and implement improvements in the examinations and the patient change-over times.

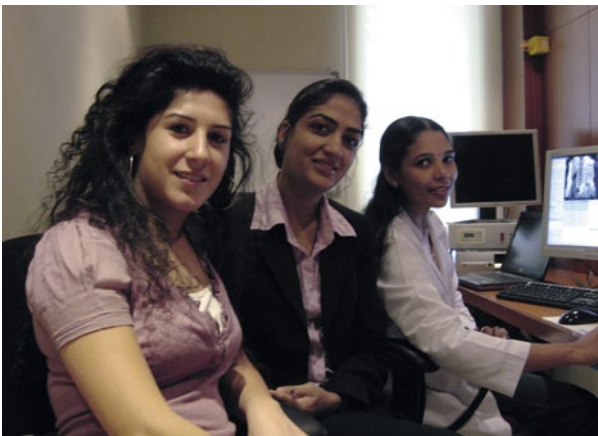
“The Philips specialists were really good and professional at finding out the causes of delays and making recommendations.”

Kaizen is the Japanese word for “change for the better”. It is also the term given to a continuing, quality improvement method. But there is a special form, a Kaizen Event, that makes a concentrated effort over a couple of days to achieve a well-defined improvement.

Before the Kaizen Event in the Al Zahra hospital, Philips Utilization Services monitored the use of the MRI scanner over three months. This provided data to compare key performance indicators, such as scan times for exams and the ratio between scanning and change-over time, with other private hospitals. The main finding was the long change-over times – often because the next patient was not yet available.

Identifying and altering inefficient use of time

Two Philips workflow consultants and a Philips MR application specialist worked with a team of radiologists, technologists, receptionists and IT staff in a three day Kaizen Event in the hospital, in January 2009. Based on the monitoring data, the recommended goal was to shorten the interval between patient appointments to 45 minutes. To do this, the team had to identify opportunities to eliminate or shorten activities, or to transfer them out of the examination room. These were ranked by effectiveness, and the top four were implemented. “The Philips specialists were really good and professional at finding out the causes of delays and making recommendations,” says Dr. Abidi, Senior Manager, Administration and Quality Control.





“We have carried out the recommendations of the team, and have already reduced the process time for MRI from 60 to 40 minutes.”

While the goal to switch to 45-minute patient scheduling was immediately accomplished manually, the team decided the most sustainable solution was to implement this electronically. During the three days of the Kaizen Event, the hospital IT specialists and the stakeholders from radiology discussed how this could best support the scheduling, and defined the requirements for an update of the scheduling application. They also took this opportunity to implement a few quick wins – like an area to include comments to the clinical request, and improved printing.

The team also created a temporary second changing-room in the corridor near the MR room – the permanent solution was approved for construction – and added a second technologist. This reduced average change-over times, measured during the Kaizen Event, from 17 to 8 minutes. The last change tackled during the Event was the consistency of the ExamCards between radiologists. All the radiologists were interviewed, and a local Philips MR specialist continued to work on this after the event.

Working toward sustainable improvement

“We have carried out the recommendations of the team, and have already reduced the process time for MRI from 60 to 40 minutes,” confirms Dr. Abidi. “We have definitely benefited from their advice,” he continues, “and we can now handle a minimum of 20 to 21 cases a day, whereas on average we are dealing with 14.” The challenge now is to get 5 or 6 more referrals a day from local practitioners to make the most of their productivity gains. Staff at the hospital are already working on marketing the benefits of 3.0T MRI to the referring doctors to achieve this.

The Al Zahra is opening a second hospital in Dubai at the end of 2009. The Kaizen Event has influenced how they are setting up the new MRI suite too. “We are making use of this experience,” says Dr. Abidi. “We have learned a lot.”



The Al Zahra Hospital team and Philips consultants gathered during the Kaizen Event.