

University College London Hospitals (UCLH)

Overview

Business challenges

- Implement a management system to meet Government standards
- Track 500,000 patients annually
- Model patient treatment pathways
- Interact with huge amounts of data from a number of existing databases

Solution

- A Patient Tracking System (PTS) with Lombardi Teamworks® at its core
- Alerts signal when a patient is delayed in their treatment pathway before they go over the 18wkRTT
- Patient details entered once on to the system rather than multiple entries

Benefits

- Able to manage and demonstrate how they are meeting the 18wkRTT mandates
 - Fewer patient delays
 - Reduction in patient complaints
 - Greater insight into resource planning
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University College London Hospitals NHS Foundation Trust (UCLH), situated in the west end of London, is one of the largest NHS (National Health Service) trusts in the United Kingdom and provides first class acute and specialist services. The new state-of-the-art University College Hospital, which opened in 2005, is the focal point of the trust alongside six cutting-edge specialist hospitals.

Managing 500,000 patient pathways

UCLH handles approximately 500,000 patients every year which are referred to the Trust via General Practitioners (GPs) and other NHS hospitals. In 2004 the U.K. government stated that patients should start treatment within 18 weeks of referral from a GP (also known as 18wkRTT or 18 week Referral To Treatment). All healthcare trusts within the UK had to adhere to these challenging requirements by December 2008.



“A vital part of the PTS, is the business process management platform which provides the real-time tracking, enables parameters to be set and creates the notifications and alerts allowing us to know what stage the patient is at in their pathway and how long they have been at that stage.”

— James Thomas,
IT Director of University College London
Hospitals NHS Foundation Trust

The new targets presented the UCLH with the challenge of implementing a complex management system that could:

- Handle high volumes of data
- Pull information from 270 disparate clinical IT systems
- Model patient treatment pathways
- Crucially, provide real-time notifications and alerts. For example, provide alerts about patients in danger of breaching the 18 week target, so that resources can be proactively directed to ensure clinical services are delivered on time.

UCLH began working with their managed IT service provider in June 2007, investigating the possible technology solutions. The hospital elected to use the Lombardi Teamworks® business process management system to develop a comprehensive Patient Tracking System (PTS).

UCLH used Lombardi Blueprint® for a series of process discovery sessions, which led to a mapping of the administrative processes. Although highly complex, it was found that around two-thirds of the documented processes were identical and that the variations were concerned with how different therapy and care services needed to be handled.

The Lombardi Teamworks-based PTS enables UCLH to model and implement processes to manage various patient pathways, and link directly to those core IT systems which hold information about patient appointments, diagnostic tests and about treatment so that when treatment is first administered, whether therapeutic or a period of advised observation, this is all noted and managed. “*The new Patient Tracking System (PTS) not only enables us to better manage our clinical pathways and resources, but also helps us improve the patient experience by reducing uncertainty in the scheduling of treatments*”; explains James Thomas, IT Director of University College London Hospitals NHS Foundation Trust.

Solution Components

Software

- Lombardi Teamworks®
 - Lombardi Blueprint®
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UCLH receives about half of its referrals from other hospitals, so in many cases the 18wRTT 'clock' has already started at another hospital. Patient tracking is imperative so that the clinicians can intervene and react as soon as delays, blockages or lack of progress in the patient pathway are highlighted. An additional consideration for UCLH is that its patient pathways are particularly complex because of the variety of clinical services that are delivered. It can be difficult to know where a patient is in their pathway as particular complaints and conditions can be dealt with by different individual specialists.

Thomas says: "As an illustration of the magnitude of the task, our Trust cancer team previously tracked every one of its cancer patients, about 270 yearly, manually through their treatment pathway from outpatient, through diagnostics and therapy. There is a target of 62 days for the treatment of cancer patients and the management of this process took a team of seven full-time people. If we extrapolate that then we are talking about the Trust needing to employ an extra 800-900 people to manage the treatment of our 500,000 patients annually."

Looking at the 18wRTT it is clear to see that the system needed to be significantly different to a manual process—it had to be automated and it had to work seamlessly with the existing core information systems. These core systems had been developed over time or specifically designed for an individual function and offer a disparate set of systems from which to extract information. The new Patient Tracking System needs real-time details about the patient in order to track progress.

Patient Tracking System in action

The new PTS is configured such that if, for example, the process between a patient being seen in outpatients and being booked for a diagnostic MRI scan is more than 2 weeks, an alert will be sent. The Trust at this stage already knows that it is going outside the pathway it has set in order to deliver 18 Week RTT for this individual and this allows it time to get back on track. Previously, each appointment list was managed individually by the department concerned with no awareness of where a patient had to wait in the pathway or for how long. As an automated process it is much more efficient and allows much earlier rectification of issues.

Lessons

Mapping processes—Due to time constraints UCLH conducted a top-down process review at the beginning of the program which enabled them to quickly put a pilot in place and demonstrate its value. However, a more in-depth process discovery and mapping exercise involving input from people at all levels would offer more insight into the process. UCLH found that its six hospitals did not have standard approaches, but had legitimate variations which needed to be configured into the platform.

Impact

UCLH has not only been able to manage and demonstrate how it is tracking the patient process, it has also found additional benefits to introducing the PTS. A review of the introduction of the PTS at the National Hospital for Neurology and Neurosurgery (NHNN) (part of the UCLH NHS Trust) demonstrated a number of positive outcomes from the deployment of the system.

- Fewer patients “slip through the cracks” in terms of their appointments or admissions being delayed—Based on data for a two week period it appears that the PTS was able to highlight that about 45 patients per day were not progressing as planned along the pathway from referral, through outpatients to admissions or discharge. Of these 45 patients a day, 16 patients’ issues were resolved within 24 hours. Without the new Teamworks platform, it is likely that these issues would not have been recognized and rectified so quickly.
- Reduction in patient complaints regarding administrative processes—Prior to implementation the NHNN received on average 5 complaints a month regarding cancellations and waits. Following the introduction of the PTS there were on average 1.5 complaints per month regarding cancellations and waits, a 70 percent decline in complaints.

- Reduction in data errors caused by patients being entered multiple times on the system. Although there is no historical data for this, making it difficult to quantify the impact, it is clear that less manual inputs will have had a positive influence on data errors.
- Recovery of an additional GBP3 million of fee—Before the introduction of the PTS, the manual administration processes meant that patients and services were not always accurately tracked, as a result UCLH was not being paid for all the services that it provided. Following the initial deployment UCLH estimates that it will be able to recover an additional GBP3 million in fees per year from the health authorities that refer patients to its hospitals.

The introduction of the Patient Tracking System has demonstrated the value of business process management at UCLH. Senior management is now reviewing how BPM can be introduced at enterprise level within the Trust.

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