

Centricity Opera helps enhance patient care, powers productivity and unlocks financial gains at UHCW

University Hospitals Coventry and Warwickshire NHS Trust (UHCW) is one of the largest acute teaching hospitals in the UK. It prides itself on advanced patient care, clinical teaching and innovation.

The Centricity Opera* system is used to power theatre productivity in 32 ORs across 2 hospital sites by helping to improve throughput, scheduling and forward planning of surgical procedures.

The Centricity Opera system has also helped to unlock financial savings for the Trust. Unused theatre lists have been reduced resulting in over £3.4 million in savings per year. A material management module also supports traceability that has resulted in additional revenue gains and the ability to accurately calculate the cost of each procedure.

In summary:

- All 32 theatres monitored in real-time
- Over £3.4 million worth of in-hours capacity released per year by reducing unused theatre sessions
- Around £1 million material revenue gains per year by tracing all consumables used in procedures
- Smoother planning of routine and emergency caseload with less impact on patients
- Improvements in closed lists resulting in 96% of elective theatre capacity used by 2013-14
- Over 700 active users including surgeons, theatre staff, secretaries and ward staff
- Integrated 'efficiency' monitoring and reporting
- Increased patient safety with electronic surgical safety check lists
- Enhanced reporting to clinicians, staff, hospital management and national bodies



“Before Centricity Opera, someone had to physically walk around or call 32 theatres to see what was happening. Now we can see everything in real time on one screen.”



Amardeep Johal,
Theatres Performance Manager
University Hospitals Coventry and
Warwickshire NHS Trust

By having sight of all procedures in-progress or scheduled, the Trust can be better organised for routine and emergency work. If a case is overrunning this is seen on the screen and it can be arranged for people to stay on shift. If there are staff shortages, for example when people are off sick, remaining staff can be coordinated to work in different theatres during the day based on the skills required for each procedure. Emergency coordinators can also schedule procedures much more easily by slotting in or moving non critical cases by dragging and dropping cases on the screen.



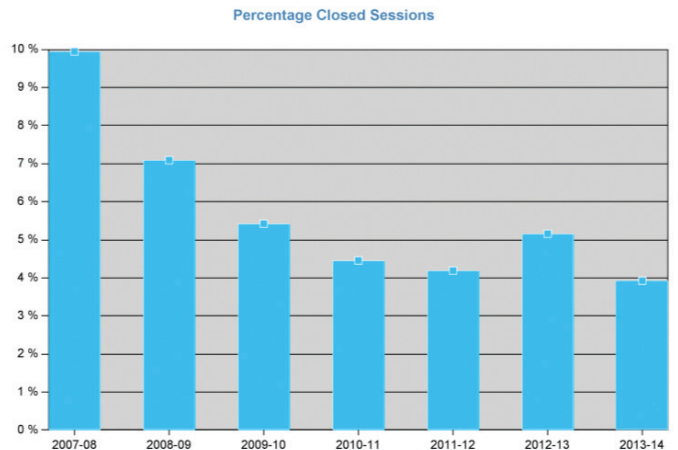
The Centricity Opera system gives sight of all procedures in-progress or scheduled.

Over £¾ million in savings each year from reducing unused theatre sessions

Unused theatre sessions are a waste of capacity as the operating theatre stands empty and theatre teams are under-utilised. In the UK, surgeons are traditionally allocated a theatre list and if on leave, capacity often goes unused. UHCW seized on the opportunity of recycling the wasted capacity of unused sessions to gain ultimate efficiency.

Instead of relying on surgeons to verbally communicate free theatre slots, a central mailbox is informed. The Centricity Opera system then indicates where capacity is available for other surgeons and specialties to use.

In 2007, the year the Centricity Opera system was introduced, 10 to 16% of theatre lists were consistently closed each month. In 2013-14 this had been reduced to 4% (a 42.2% improvement); meaning that 96% of elective theatre capacity is now used, allowing patients to be seen in a more timely manner and saving UHCW over £¾ million annually in Waiting List Initiative Costs.



Graph to show reduction in closed theatre sessions from 2007-8 to 2013-14.

Real-time electronic documentation with Centricity Opera allows accurate and detailed theatre efficiency monitoring

UHCW is a pioneer in integrating Theatre Efficiency Scoring as part of its Key Performance Indicators (KPIs). A method to measure theatre efficiency was introduced by J. J. Pandit, S. Westbury and M. Pandit¹ in the paper, 'The concept of surgical operating list 'efficiency': a formula to describe the term.' They noted that it was possible to achieve high theatre 'utilisation' despite patients being cancelled or theatre lists starting and finishing late. They argued that an efficient theatre session is the one during which there are no avoidable cancellations and all scheduled operations are completed within the time available without suffering an under/over-run.

An alternative measure of 'efficiency' was therefore proposed which UHCW has integrated as part of its routine monitoring of each theatre session and specialty.

¹ The concept of surgical operating list 'efficiency': a formula to describe the term. Pandit JJ, Westbury S, Pandit M, Nuffield Department of Anaesthetics, John Radcliffe Hospital. Published: Anaesthesia, 2007 Sep;62(9):895-903

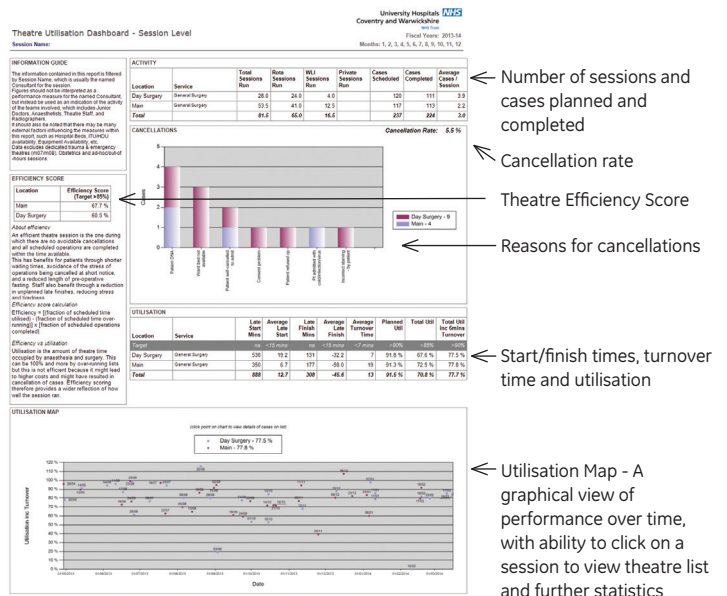
Efficiency Score Calculation:

Efficiency = [(fraction of scheduled time utilised) - (fraction of scheduled time over-running)] x [fraction of scheduled operations completed]

UHCW has developed a Theatre Utilisation Dashboard which is populated automatically with data from the Centricity Opera system and includes key information on each surgeon's theatre session including efficiency, cancellations, delays and utilisation. Dashboards are automatically emailed to surgeons on a monthly basis.



Amardeep Johal, Theatres Performance Manager and Mrs Meghana Pandit, Chief Medical Officer at University Hospitals Coventry and Warwickshire NHS Trust.



- Number of sessions and cases planned and completed
- Cancellation rate
- Theatre Efficiency Score
- Reasons for cancellations
- Start/finish times, turnover time and utilisation
- Utilisation Map - A graphical view of performance over time, with ability to click on a session to view theatre list and further statistics

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Mrs Meghana Pandit, Chief Medical Officer at University Hospitals Coventry and Warwickshire NHS Trust states, "We hope that striving for high 'efficiency', rather than 'utilisation' alone, will benefit patients through avoiding the stress of operations being cancelled at short notice, reducing waiting times and reducing length of pre-operative fasting. Staff will also benefit through a reduction in unplanned late finishes, avoiding stress and tiredness."

Full traceability of materials nets extra £1 million of revenue English Payment by Results national tariff remunerates hospitals for the procedures they carry out. Further revenue can be gained by fully tracing every Healthcare Resource Group (HRG) excluded device used in a procedure. Examples include endovascular grafts used in aortic aneurysm repair operations, biological meshes and robotic consumables.

"By 2013/14 we have gained over £1 million of additional revenue per year by tracing the theatre consumables used on each patient. This could only be achieved via the materials management module in Centricity Opera system and the use of barcode readers that quickly and easily log what was used in each procedure," concludes Amardeep Johal.

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