



Making CT Operations 20 Ways Better

UK Healthcare

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UK HealthCare at a Glance

The UK Chandler Hospital is a 473-bed teaching facility, with 600 faculty physicians and dentists, 400 resident physicians and a staff of 3,200 health professionals. It offers more than 80 specialty services, programs, and centers that include organ transplantation, neuroscience, oncology, trauma, surgical, cancer, cardiac, geriatric, OB/GYN and burn treatment care.



Making CT Operations 20 Ways Better

By virtue of their academic orientation, university hospitals are true believers in the value of scientific inquiry as a path to discovery. This is certainly the case at UK HealthCare, where hospital leadership has pursued a continuing effort to identify and establish best practice processes and workflow in key areas throughout the organization.

Not long ago, the Diagnostic Radiology department at UK HealthCare in Lexington, KY decided to increase the capacity of its CT services by adding a new, high-performance CT system and upgrading three existing CT systems. While others may have stopped right there, department management seized the moment to inquire into the operational efficiency of its CT services and possibly identify the means to improve internal performance coincident with the planned increase in CT system capacity.



Compass Assignment

As part of its investigation, UK HealthCare engaged Siemens Healthcare Consultants to perform a Compass study. Compass, a propriety consulting service, was developed by Siemens to assist customers in the assessment of current-state operations and to recommend actionable items to measurably improve performance metrics and drive both physician and patient satisfaction. Siemens was asked to look closely at the CT department's overall workflow and seek ways to improve both patient flow and technologist workflow.

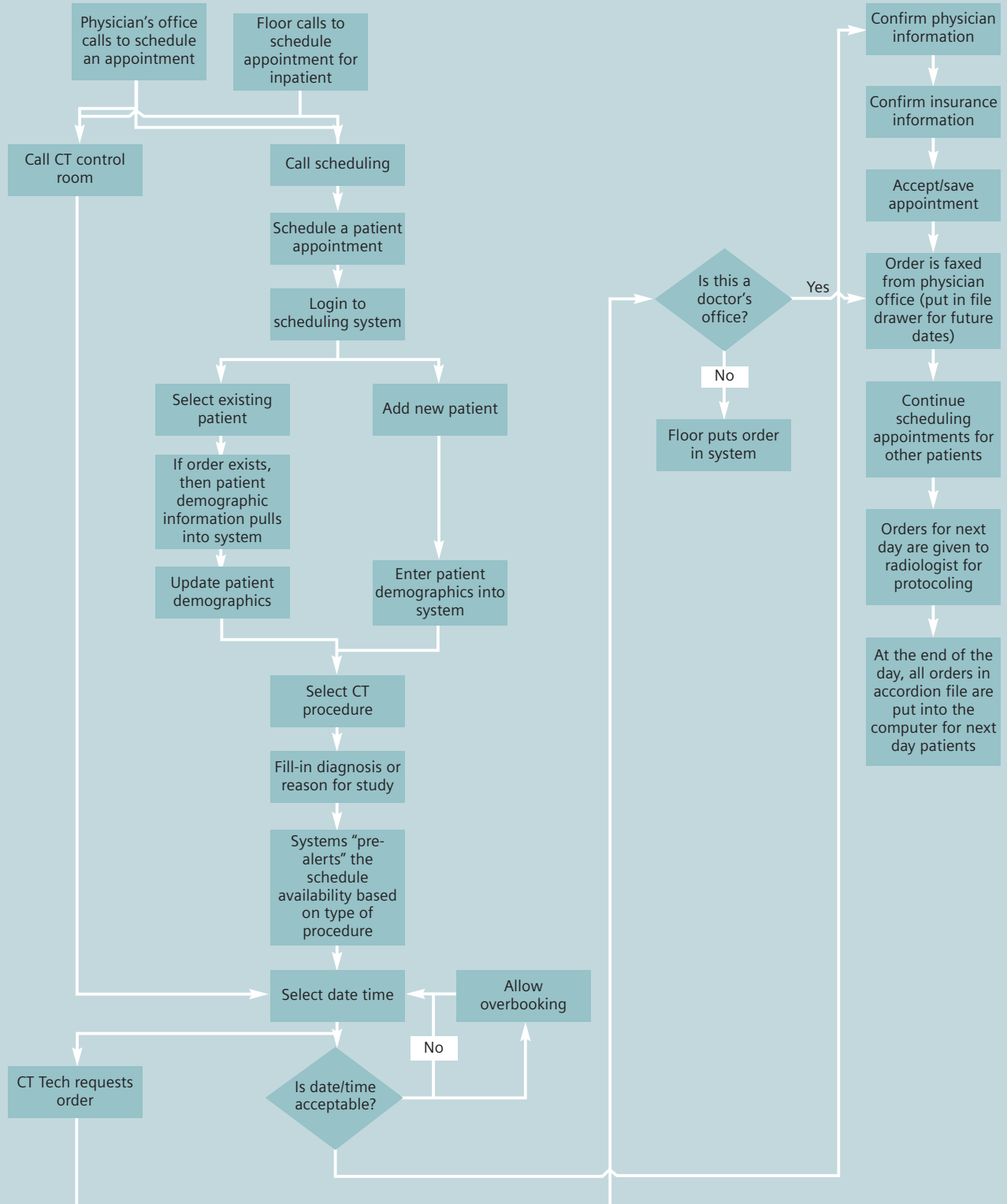
In the course of the study, Siemens focused on the CT patient process, including scheduling, reception, patient preparation, imaging procedures, filming and image reading. Patients were also observed by their class of admission, including inpatient, outpatient and ER.

The Siemens Approach

A four-part approach was utilized in the UK HealthCare Compass study.

- Identify goals and metrics through in-depth interviews with department leaders, physicians and key staff. In the case of UK HealthCare, the goals included a reduction in the number of process hand-offs, an increase in average procedures per technologist and total for the department as well as the development of a clinical workflow for the new CT technology, including complete process maps detailing the current and desired workflow, a two-technologist workflow, and an actionable plan.
- Recommend action items were established based on the customer's goals and a gap analysis between the UK HealthCare's current and desired state. This required compiling benchmark information comparing UK HealthCare's performance with the national and/or regional averages of similar institutions concerning CT utilization procedure volumes, average procedures per patient, average procedures per patient visit, share of procedures by patient admission status and procedure volume per CT scanner and per technologist. Review of current-state processes in the CT department resulted in approximately 60 noteworthy observations, which were distilled into 20 recommended actionable items for performance improvement.
- Create an implementation plan including recommended actionable items supported by a detailed timeline schedule. The Compass study team formulated a hot list of recommendations, together with implementation time estimates for each. Priorities and responsibilities were decided jointly with the UK HealthCare staff.
- Verify the results following the implementation of the actionable items and assist with the establishment of a metric tracking system for continuous performance measurement.

Recommended Future-State Scheduling Process



Compass Study Results

Based on the interviews, review, and analysis, the study team recommended 20 opportunities for change to create a future-state environment in the UK HealthCare CT department featuring more efficient processes and workflow. The expected outcomes from these measures will significantly increase key performance metrics.

Performance Outcome Goals

Parameter	Target Metric
Process Optimization	10% reduction in process steps
Technologist Efficiency	25% increase in procedures per CT technologist
Procedure volume	10% overall increase in procedure volume

Additionally, the team outlined patient throughput efficiencies to be gained by adopting a “two-technologist staffing model” as part of the workflow re-design.

About Siemens Healthcare Consulting

Utilizing expert resources and proven methodologies, Siemens Healthcare Consulting assists customers to improve clinical, operational, and financial performance by optimizing their healthcare delivery capabilities and workflow processes. Siemens credentials are based on a worldwide knowledge of healthcare combined with a leadership position in integrated medical and information technologies.





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