

Century City Doctors Hospital: Is paperless possible? (English)

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Century City Doctors Hospital (CCDH) is a Los Angeles, California-based acute care medical center that is one of the largest physician-owned and -operated hospitals in the United States. The 178-bed facility was designed and built to be fully digital, paperless, and state-of-the-art, with integrated information systems and technology.

The highly automated facility follows the philosophy that, when fewer people are involved in the processing of orders, the smaller the chance of making errors. This article explores CCDH's technologically advanced environment and how streamlining operations brought the focus back to their patients.

More than 1 year after opening, CCDH offers insight into what the hospital of the future might look like and how this will affect the quality of patient care.

You adjust your bed to a comfortable position and choose a box-office hit from the movies-on-demand feature on your flat-screen TV.

Twenty-four hour room service promises to deliver your gourmet dinner shortly, leaving you a few minutes to check your e-mail via your bedside computer and confirm the weekend's restaurant reservations with the concierge.

Enjoying your stay at a five-star resort? Hardly. You're a patient at Century City Doctors Hospital (CCDH), where world-class medical care and luxury amenities meet.

The Los Angeles, California-based acute care medical center is one of the largest physician-owned and -operated hospitals in the United States. Salus Surgical Group, the physician group who acquired the hospital, purchased it with more than 170 physicians investing approximately USD 100 million in refurbishment and equipment.

The 178-bed facility, which opened in October 2005, is designed to be fully digital and paperless, with integrated information systems and technology. It includes wireless and remote access, as well as digital operating rooms complete with robotic surgical systems.

The hospital was completely stripped, rewired and configured to ensure the highest level of patient safety and to meet the demands of this new digital model. Some of CCDH's sophisticated technologies include: advanced medical imaging and diagnostic equipment, comprehensive IT systems plus fully integrated voice, data, video and nurse call systems.

"Located in a predominantly academic market and because we did not inherit complex legacy systems," said Greg Harrison, Vice President of Marketing, "the physician owners of Century City Doctors Hospital raised the bar and worked from a vision of creating a facility that uses systems identified by the medical profession as being the best for efficiency, patient care and safety.

By building a technologically advanced facility," he continued, "the guiding philosophy is that the fewer people involved in the processing of orders, the less the chance of error."

Streamlining operations brings the focus back to patient care. *"We are seeing definite improvements in certain areas," said Harrison. "Particularly promising is our ability to transmit reports and results in a rapid manner."*

Physicians have instant access to test results and medical charts through the digital environment. Highly efficient automated technologies allow CCDH to provide its clinicians with accurate and rapid turnaround time for inpatient and outpatient diagnostic test results.

Comparing multidepartmental data from areas like radiology, pharmacy and the laboratory helps minimize medical errors.

The facility's critical care systems will make the data available to physicians via smart phones, PDAs and other wireless devices, improving access while enhancing safety and cutting costs. Members of the healthcare team will be able to make faster, more informed decisions from any location.

"We are piloting a program that allows physicians to view lab results, as well as other patient information

such as diagnostic images, via their PDAs," Harrison commented. "Physician response has been very positive. We are seeing positive results and will be expanding the program in coming months."

Technology trims the paper trail

While *"still a work in progress,"* Harrison said, departments will become paperless in phases, with a goal of becoming 100 % paperless as soon as possible.

The admission process, however, is already paper-free. Patients go directly to their rooms and get registered, complete with electronic signatures, at the bedside.

To ensure patient safety and identification, all patients are given a barcoded wristband ID.

This barcode will be scanned by nurses and other hospital personnel to provide accurate tracking of a patient's treatments, lab tests and medications.

In the future, patients might also receive a *"Century Card,"* which contains a microchip with an encrypted code that allows CCDH to access personal admitting information quickly and easily.

At each future admission, patients simply show the card and registration is then akin to swiping a credit card.

CCDH's electronic medical records are linked to the clinical laboratory's information system so that caregivers get electronic results at their fingertips, thanks to technology that trims the paper trail.

Any samples or specimens taken from patients are also barcoded to interface with the patients' files. Specimens sent to the laboratory are processed by state-of-the-art equipment.

During CCDH's year-long renovation, Laboratory Director Sarina Rodriques, CLS, MT(ASCP), DLM, oversaw the creation of new laboratories, built from ground zero using the latest technology available, like the open automation system from a major laboratory

industry vendor that includes a hematology system, clinical chemistry analyzers, immunoassay systems and a coagulation system.

The open system provides a comprehensive menu of automation and preanalytical components, and integrates with all other attached instruments. The lab is able to automate sample management, while having the flexibility to integrate or make changes in laboratory operations as the testing demands change over time.

With such cutting-edge technology and computerization, laboratorians could perform testing without ever touching a piece of paper.

Because it is so highly automated, the laboratory can run with just three medical technicians on the day shift: one in microbiology, one in the blood bank and one handling other lab responsibilities. *"This system,"* Rodriques commented, *"enables our laboratory staff to optimize testing workflow and speed time to reliable results."*

Further, because the automation solutions are designed to make the lab more efficient, our staff are able to dedicate more time to doing what they like to do best – focusing on the science and determining the clinical significance behind any outlying patient test results."

Is paperless possible?

Now that CCDH has completed its first year of operations, is a paperless healthcare environment really possible? Although not fully paperless yet, CCDH does offer insight into how the hospital of the future may operate, and how technology can affect the quality of patient care.

"The greatest benefits to date are in the operating room, radiology and emergency room," said Harrison. *"We are seeing clear improvements in the efficiencies of these departments."*

"For example," he continued, *"from January to December 2006, we saw an increase from about 100*

patient visits per month in the emergency room to more than 1,000 patient visits per month."

We reduced wait times 15 % while seeing our patient satisfaction skyrocket to being in the top 5 % in the western United States (and the top 10 % nationally), driven by nursing scores that were in the top 5 % nationwide."

We have seen double-digit increases in patient volume in both the operating room and in diagnostic imaging, while turnaround times and total time in the units have decreased significantly."

"All of this is being done," said Harrison, *"while maintaining high levels of patient care and safety with acuity levels as high as 1.9. Our employees in all of these areas clearly are spending more time on patient care with continually improving quality outcomes."*

Part of CCDH's mission is to *"embrace technology, build a highly integrated healthcare system through collaboration, and be leaders in applying technology to increase productivity, quality and safety."* The facility describes itself as *"committed to the use of advanced technology to provide outstanding patient care."*

"As we are able to bring to reality a fully digital, fully paperless hospital," Harrison said, *"physicians and patients can expect to see a significant decrease in errors and complications while greatly improving timeliness of reporting results."*

As CEO Joel Bergenfeld commented, CCDH is *"improving outcomes and speeding recovery."*

Not bad for a 1-year-old.

For more information, visit www.ccdoctorphospital.com, call 310-772-4000, or e-mail info@ccdoctorphospital.com.