



Case Study: Texas Cancer Center Transformed with Fusionfx

The Fusionfx solution suite, a scalable, service-oriented workflow platform that integrates disparate applications to enable streamlined business and clinical processes, has changed the lives of cancer patients while boosting the productivity and efficiency of clinicians at a major National Cancer Institute-designated cancer center in Texas.

Following a speedy 90-day installation, clinicians at the Cancer Therapy & Research Center (CTRC) at The University of Texas Health Science Center (UTHSC) at San Antonio realized the following benefits:

- The ability to tap into a platform that synchronizes disparate clinical information and delivers simple access to a snapshot of cancer patients' health history.
- Substantial savings on expenses associated with deploying multiple interfaces for database integration, along with lower overall costs of ownership.
- Reduced time invested in searching for and accessing information needed to diagnose and treat patients, resulting in a significantly enhanced user experience.

In use at nearly 300 facilities nationwide, Fusionfx seamlessly presents patient information from diverse applications and databases at the clinician-interface level. This provides clinicians with a streamlined look at relevant clinical data right at their fingertips.

An opportunity for better cancer care

Recognized as a Center of Excellence by the Myelodysplastic Syndromes Foundation, CTRC (www.ctrc.uthscsa.edu) focuses on both cancer research and clinical care. A freestanding cancer center since 1974, CTRC merged with UTHSC in December of 2007

to become a leading provider of radiation and medical oncology services, handling more than 120,000 annual patient visits.

CTRC was eager to find a system that would connect and streamline access to its different information systems. Staff had worked with a niche application from Impac called Mosaic, which functioned as CTRC's electronic medical record (EMR), as well as a stand alone lab system from Orchard, a pharmacy system from Hanns On and a PACs system from Merge.

Problems ripe for resolution

While each system had been right-sized for treatment centers such as CTRC, oncology professionals still faced the all too typical problems of multiple user IDs and passwords, redundant patient queries and ongoing struggles to access data efficiently. Previous systems were too time-consuming and inefficient for nurses, physicians, pharmacists and other CTRC staff, who were required to query and view patient information multiple times within numerous applications.

Instead of performing a single search on a patient and accessing all available information, staff members typically performed a series of different tasks to access the information they needed. Clinicians and staff were frustrated from having to execute multiple log-ins and recall a string of passwords.

CTRC also sought a system to fit its niche practice of oncology. Offering both medical and radiation oncology services, CTRC needed to integrate its EMR with the other essential best of breed clinical applications. Moreover, CTRC's medical oncologists wanted to easily and quickly perform clinical practice tasks such as drug calculations.

An additional obstacle was that CTRC's 19-member staff had neither HL-7 interface experience nor the resources to build

a team that could understand it or buy a product that would integrate disparate systems. Furthermore, CTRC executives doubted they could receive funding for HL-7 development and as well as a long-term support system.

The Carefx solution emerges

When CTRC executives had a chance meeting with Carefx representatives at the 2007 annual meeting of the Healthcare Information and Management Systems Society (HIMSS), their vision of information integration changed dramatically. Boggled down by multiple user IDs and passwords, redundant patient queries and other struggles to access patient data more efficiently, CTRC staff soon realized that the Carefx solution would synchronize data from diverse systems such as labs, pharmacies, medical records and PACs into a multidisciplinary view of a cancer patient's record.

“Carefx was capable of doing everything CTRC had tried to accomplish from a requirements perspective in order to satisfy the needs of our clinicians and researchers,” said David Hotchkiss, Director of Information Systems at CTRC.

“But it did so in such a way that an organization like CTRC could provide and sustain adequate IT support. We realized that we could maintain the Carefx system with no additional staff and make CTRC more efficient, productive and financially successful than ever before.”

A five-star implementation

Adhering to a strict budget and 90-day implementation schedule, Carefx joined forces with CTRC professionals from information technology, nursing, lab, pharmacy and medical records and radiology. Hallmarks of the Carefx approach included an intense focus on CTRC needs, experienced staff support and compliance with requirements.

“Carefx worked closely with our team to understand the unique needs of CTRC and the approach we use in delivering care to cancer patients,” Hotchkiss said. “Carefx staff took the time to clearly comprehend our requirements by analyzing workflows and understanding the optimal user experience. They delivered a solution that not only met our requirements, but also beat our budget and aggressive 90-day implementation schedule.”

The collaboration between Carefx and CTRC featured extended Web conferencing sessions, interspersed with several weeks of participation by Carefx in information gathering, workflow analysis, and face-to-face visits to oncology clinics. Two pilot projects helped confirm the workability and practicality of the Carefx solution .

CTRC also hosted a series of half-hour, face-to-face training sessions for every employee who would interact with the Carefx system. Groups of six to eight employees covered topics such as registration for the single sign-on and context management functions, with plenty of time to complete exercises and experiment with system features. A user's guide allowed staff to review system basics before and after the go-live date.

Even though merger talks between CTRC and UTHSC led executives to contemplate abandoning the Carefx solution, CTRC staff remained adamant in their loyalty and support of Carefx. “Having just completed training and participation in go-live, CTRC's staff was excited about putting the Carefx solution into practice,” says Hotchkiss. “Nothing -- not even a potential merger — could break the bonds of faith in this platform.”

Results for clinicians and patients

The result of the collaboration between Carefx and CTRC was a single sign-on (Imprivata OneSign) and context-enabled workflow solution that ties together applications for labs, pharmacies, electronic medical records, and PACs. Professionals ranging from receptionists and clinical researchers, to nurses, physicians and pharmacists use a portion, if not all, of the Carefx system.

Where CTRC care providers once invested excessive time accessing and retrieving information from disparate systems, Fusionfx now saves clinicians employees time and energy by facilitating navigation of multiple, separate systems using a single login and patient information search.

“Fusionfx allows our care providers to access comprehensive summaries of patient data that parallel cancer care processes in a fraction of the time it took previously,” said Hotchkiss. “With Fusionfx, members of our multidisciplinary clinical care team experience the benefits of streamlined workflow and make more informed patient care decisions.”

Using Carefx solutions, clinicians can pull up a patient's medical record and review lab results within Orchard's Harvest LIS without having to repeat a record search or execute an additional sign-in to an additional program.

“Removing multiple sign-ons and passwords constitutes a huge win for clinicians,” said Hotchkiss.

“Physicians save a fraction of time with each record search or interaction using the Carefx solution, but they generate a significant close-of-business time reservoir they can use in their personal or professional lives.”

The time savings translates into enhanced practice productivity and efficiency and better patient care. “When physicians are less burdened by having to search for information, they can more easily stay on schedule, give more time and attention to patient interactions, and perhaps even see more patients,” said Hotchkiss.

Cancer patients reap both tangible and intangible rewards through Fusionfx. “Patients no longer have to wait for physicians, who may already be behind schedule, to search for medical records,” said Hotchkiss. “Patients and families appreciate the extra time they can spend with their oncologist and the comfort, security and sense of well-being those close relationships bring.”

CTRC was also able to save on expenses associated with deploying multiple interfaces for the databases and has kept its overall cost of ownership at a manageable level.

Lessons learned

Hotchkiss suggests these lessons learned for those interested in implementing such information management solutions:

- 1 Bring all critical internal constituencies together to share expectations, reservations, priorities and targets. Be sure to include nursing, lab and pharmacy as well as representatives from medical records, clinical research and medical staff.
- 2 Motivate people to embrace technology by showing what it can accomplish for the organization, as well as for individual productivity and satisfaction.

- 3 Avoid technical edicts and pronouncements in favor of an educational, coaching or mentoring approach to technology diffusion and innovation.
- 4 Prepare for physician resistance to system use. Although CTRC physicians participated in planning sessions, Hotchkiss is convinced they would have welcomed more opportunities to experiment with the system early on.
- 5 Plan for potential mental, physical and emotional roadblocks. CTRC, for example, had to contend with merger-related issues such as loss of staff and the emergence of a shared IT department.
- 6 Adjust timeframes to organization size. While CTRC worked with a 90-day implementation timetable, Hotchkiss acknowledges that other, larger organizations might take longer to complete to complete the process.
- 7 Work in advance to identify and package all top clinical and administrative applications.
- 8 Keep an open mind toward interface and non-interface solutions, examining upfront investment, subsequent investments in people, tools and resources needed to maintain the solution following implementation.

“Carefx worked diligently with CTRC to assemble the right team, review existing applications and complete the implementation on time,” said Hotchkiss. “Given CTRC’s available resources and the size and skill of its team, our clinicians, staff and patients couldn’t be more pleased with the results Carefx has achieved.”

“Carefx understands that CTRC, and every other healthcare organization, needs to leverage their existing technology investments,” said Andrew Hurd, Chairman and CEO of Carefx. “We take great pride in solving the challenge of accessing patient data from multiple systems and removing time-wasting workflow obstacles, rapidly and cost effectively. As a company, we are driven by the desire to play our part in helping our customers improve clinical efficacy and quality care.”