The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

YEAR:
2012

STATUS:
Laureate

Organization:
Indiana University Health

Organization URL:
www.iuhealth.org

Project Name:
The Best Minds in Pediatric Care Know No Bounds

What social/humanitarian issue was the project designed to address?
What specific metrics did you use to measure the project's success?

A 10-year-old boy in Indiana complains of chest pains. His parents take him to a healthcare facility in a rural community near their home. The physician orders an echocardiogram, a sonogram of the heart. The physician sees abnormal activity but wants a pediatric specialist at Riley Hospital for Children 200 miles away to also review. The doctor burns the test images to a CD, drops it in an envelope, ships it to the hospital, and says he'll have a diagnosis in a few days. That was then. This is now. The echocardiogram show abnormal activity. The local physician instantly sends the file via Accellion to a pediatric specialist at Riley. The doctor reviews within the half-hour, sees tissue damage of concern, and orders the boy's physician to administer certain drugs immediately. Every family wants the best healthcare for their child and the goal of this project was to turn that hope into reality. By allowing physicians across the IU Health network to instantly, easily, and securely share test results, such as echocardiograms, with the appropriate specialists, Indiana's children would benefit from faster diagnosis times, individualized treatment plans, and well-deserved access to top-notch doctors. The project focused on three key metrics: Improved patient care: With more than 4,000 digital files shared in November 2011, IU Health has successfully connected patients from rural communities with the medical experts at Riley, reducing file delivery time from days to minutes and dramatically speeding diagnoses. User adoption: The use of Accellion has trended upwards for the past three years and is being used organization-wide by 10,000 employees. Security: Keeping patients' confidential data secure was a top priority, and Accellion allows doctors to share digital files with personal health information (PHI) securely and quickly.

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

Choosing a file sharing solution to support its telemedicine practices was not a decision that IU Health took lightly. The technology of choice needed to: 1) support the electronic transfer of very large files up to 100MB; 2) properly secure test data and patient information; 3) provide tracking information in support of evolving HIPAA regulations; and 4) work around the clock, regardless of power failures or other network issues. IU Health ultimately deployed Accellion solutions to address its IT needs. Gone are the days of burning an EEG onto a CD, forcing families to wait days for medical updates. Now with Accellion, doctors from remote urban communities simply upload a file of any size and hit "send" to share test results with medical experts at Riley. Tests are now reviewed and interpreted within the hour for urgent pediatric cases, driving huge medical advantages. Slow turnaround times weren't the only issue with using CDs or thumb drives for data transfer. These methods also opened up the organization to security threats, in the event the devices were lost or stolen. In order to proactively protect PHI and support regulatory compliance, IU Health needed a proven file sharing solution with secure controls to keep confidential data out of the wrong hands, data encryption, plus file tracking and reporting to demonstrate HIPAA compliance. Accellion also met IU Health's extensive failover and file redundancy requirements; 24/7 operations were a must to ensure ongoing medical care. During the Accellion implementation, IU Health tested the solution's automated failover capabilities and equipment redundancy protection, determining that Accellion's failover servers were the most robust that IU Health's IT staff had ever seen.

Please list the specific humanitarian benefits the project has yielded so far.

The bottom line is that children in Indiana are receiving the specialty pediatric care they deserve and might otherwise not have received. The Accellion deployment puts the specialists from Riley Hospital for Children, nationally recognized as one of the top children's hospitals, into the patient rooms, treatment facilities, and waiting areas of IU Health facilities across the state. Accellion eliminates previous geographic boundaries, bringing physicians together to collaborate on routine, complex, or critical cases. Plus, the project has completely transformed response times, with the turnaround on diagnoses and treatment recommendations going from days to just minutes. In the words of Dr. Omkar Markand, emeritus professor of neurology at Indiana University in Indianapolis: "For a patient, waiting three days for a diagnosis seems like an eternity, especially when dealing with an emergency situation, like a seizure, where an EEG is required. Now, using Accellion, an EEG is sent in a matter of minutes. As soon as I see the EEG, I review the report and render a diagnosis in less than an hour."

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

Those who have benefitted the most from this project are the children of Indiana who are patients of healthcare facilities outside of Indianapolis, enabling them to receive fast, accurate, and potentially life-saving diagnoses and treatments. Dr. Omkar Markand, emeritus professor of neurology at Indiana University, shares a personal experience: "We recently had a child who was admitted to Deaconess Hospital because of a possible seizure. The EEG was sent via Accellion from Deaconess to me for review. I saw a spike in the rolandic region of the brain and quickly called the child's physician to alert him to the abnormal EEG. We were able to put the child on the appropriate medication immediately." It's that type of care that has earned IU Health its

exceptional reputation and why the organization is always striving to extend its unmatched expertise in order to change lives for the better.