



The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

Status:

Laureate

Year:

2013

Organization Name:

Christiana Care Health System

Organization URL:

Christianacare.org

Project Name:

eSignout The Clinician Hand-Off Tool

Please select the category in which you are submitting your entry:

Health

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

According to the Joint Commission Center for Transforming Healthcare, an estimated 80 percent of serious medical errors involve miscommunication between caregivers when patients are transferred or handed-off. Healthcare organizations have long struggled with the process of passing necessary and critical information about a patient from one caregiver to the next, or from one team of caregivers to another. A team of Christiana Care Health System clinicians and technologists came together to address the issue of inconsistent and inefficient hand-offs and designed a custom software program which captures patient information, care plans, and progress notes in consistent, detailed, and useful formats. The system, named eSignout, is a way for a clinician to quickly and easily view the notes from the previous clinician caring for the patient. eSignout is unique in that clinician feedback was used to create an intuitive tool with only that information that is pertinent to hand-off. This includes changes or potential changes in patient conditions that alert clinicians to problems and concerns important to and for the patient.

This is different from clinical systems used for ordering tests and treatments and documenting care in that this tool allows clinicians to document not just what is happening, but what can happen, and the clinicians associated recommendations. The tool also makes clear the name of the clinician caring for the patient at any moment. Project Goals: Eliminate the tracking of hand-off information via Word, Excel, and Outlook, and hand-written documents. Eliminate the need to manually enter patient demographics. Enable easy management of key patient information including Problems, Allergies, Consultations, Labs/Studies, Medications, and To-Dos. Facilitate printing of on-demand reports for rounding/shift turnover. Standardize transition of care, improving Clinician communication. Centralize personal contact information shared within Clinician teams.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

The eSignout application was originally introduced in 2007 with a totally rewritten improved application formally launched in October 2011 and further improvements in May 2012. The latest updates launched an all new Intensive Care Unit handoff process which accomplished major performance improvements in our Medical ICUs at Christiana and Wilmington hospitals. The software used in the implementation was Windows Server 2003, IIS, ASP.NET, Microsoft SQL Server 2005, and SQL Server Reporting Services. Hardware used includes HP desktops, servers, and printers. While not a requirement for the launch, some Clinicians are also accessing the application using iPads and iPhones for quick reference on the go.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

eSignout is in full production use for 20 distinct service groups at Christiana Care. Over the last year, it has been used by 495 unique users to manage handoffs for 300-400 inpatients a day. eSignout is organic software, designed to grow and evolve as Clinician and Patient needs change over time. Because it was developed based on Clinician feedback, a process for receiving, evaluating, and implementing enhancements has been established, and releases are planned at least annually. One example of the flexible nature of the application occurred during this year's Flu Season, where the hospital received an influx of patients and had to open non-traditional spaces up to care for patients. As a result, eSignout changes were made to reflect these non-standard locations so Clinicians had the latest location information for their patients. For each new team that comes online with eSignout, we work with clinicians to analyze their workflow and data needs. Then, custom forms are developed that plug in to the eSignout architecture, which are designed to perfectly suit the needs of their clinical service. For example, an obstetrics specialist's information needs about a high risk pregnancy are very different from a trauma surgeon's needs about a different patient. However, even with this customization, information can still be viewed across services for communication between specialties on complex shared patients.



Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

eSignout has been well received across the healthcare system. From our May 2012 Intensive Care Unit implementation: Rapid satisfaction with 100% use in less than 72 hrs, which was well ahead of our pilot schedule. 100% buy-in from clinicians. Reduction in group handoff times by more than 50% were realized. This improves clinician availability for patient care, which was confirmed by a follow-up poll of nursing staff. More time can be spent listening to and discussing the handoff report rather than writing, because all the information is printed from the electronic system. This enables better communication between providers for our most acutely ill patients. Below is more feedback from our clinicians: "eSignout brings standardization to the sign-out process. Whereas before, you had 80 residents inputting a slew of different data (some much more verbose than others) into different formats, now you have one standard format to use. It's easy to find, and is much easier to use than our previous program." Chief Medical Resident "It's very easy to use and self-explanatory. The imported patient information is very convenient, and makes it superior to what we used to use." Medicine-Pediatrics Resident "The resident signout program is easy to use and has standardized the transition of care, improving communication between physicians." Internal Medicine Resident "Just wanted to let you know that prior to going to eSignout, our typical signout last[ed] about 45mins, sometimes up to an hour. The last 2 days, we have managed to shorten that to an average of 20 mins, or less than half our prior time. The residents have commented that they are able to listen more, and not worry so much about writing." Surgical Physician Assistant

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

This project was not only an innovation, but also a best practice. As a teaching organization that has staff recruited from other leading healthcare organizations across the country, feedback about the tool has been overwhelmingly positive. There has been no vendor product or other custom tool uncovered that fits the need. eSignout is not only a tool to improve communication, improve efficiency, and increase patient safety, but it also decreases the time a physician spends during the hand-off process. This allows them more time with the patient, and facilitates a more targeted discussion with the patient. Now the discussion does not center on an introduction or overview of the patient's condition and care, but is more targeted to following up on where the previous physician specifically left off.