

"Case Management is able to get to the documents more easily now through Sunrise Record Manager to confirm that the patient signed each consent."

– Bunnie Overby
Director of Patient Financial Services,
Alamance Regional Medical Center
Burlington, NC

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ARMC Adopts Electronic Consent Solution Using Logical Ink®

Company Background:

- Alamance Regional Medical Center (ARMC) is a 238-bed community hospital serving the Triad community of North Carolina.
- ARMC offers a full spectrum of inpatient and outpatient services to more than 194,000 patients annually.
- ARMC has been recognized as one of the nation's leading hospitals for adopting new technologies that improve patient care.
- In 2005, ARMC was recognized by Microsoft Healthcare Users Group (MS-HUG) for being one of the first in the country to adopt a computerized physician order entry system (CPOE).

Challenge

Terri Andrews, Clinical Systems Manager at ARMC, was part of a hospital-wide task force that examined where paper was being used and sought ways to replace it with an electronic solution. Andrews discovered that ARMC was still using paper consent forms in patient access. Alamance had 9 consents that had to be filled and signed by patients including:

- Advanced Beneficiary Notice (ABN)
- Consent
- Elon Release
- HIPAA Privacy Practices
- Important Message from Medicare
- Important Message from CHAMPUS
- Insurance Liability Waiver
- Patient Directory
- Procedure Denial

"Going paperless was more about operating efficiency than anything else," said Jesse Long, CIO of ARMC. ARMC looked at several solutions, including digital pen. Because ARMC has both Allscripts™ Sunrise Clinical Manager and Siemens® Document Imaging, registrars had to scan completed forms into both EMRs which wasted time. ARMC was also moving primarily to bedside registration in the ER,

requiring a solution that was mobile and didn't require the registrars to carry around a lot of paper on their computer on wheels (COWs).

"We had paper forms all over the place and it was difficult to keep track of which forms had been signed by the patient," explains Andrews. "Scanning forms was really time-intensive. Additionally, documents were misplaced or lost and not entered into the EMR until much later." ARMC estimated a 5% failure rate.

Andrews recognized that the tablet was a perfect form factor and began researching software vendors that were using the tablet for this purpose.

Solution

The Logical Ink solution gave ARMC a platform for e-forms workflow, utilizing handwriting recognition to provide a natural pen and paper interface for data collection. Logical Ink was paired with Fujitsu® to provide ARMC with a slate form factor that would give them the largest screen size, battery life and mobility for patient satisfaction.

The Logical Ink Forms Kiosk solution was implemented for ARMC to enable forms to be completed on the tablet and automatically synchronized with the ARMC Siemens EDM and Eclipsis EMR.

First, all 9 consent forms were converted into electronic templates with the forms design tool. An HL7 interface for the Logical Ink Server was implemented to accept an ADT feed from ARMC's Siemens MedSeries 4 HIS. Workflow rules were built to automatically create an electronic packet for the patient based on insurance type, service and primary language, as well as pre-fill the form templates with demographic information. Custom validation rules were implemented for each form template to highlight required fields for the patient, as well as to keep the registrar from saving an incomplete form.

ARMC deployed the Logical Ink smart-client on 20 tablets. The initial go-live was limited to the inpatient/outpatient areas and then a week later ARMC rolled it into the ED. Each registrar has a tablet and after looking up the patient, they have the patient read and complete each form. To search for a patient, users simply ink the last name or account number. They can override the workflow rules by selecting from a list of forms. Forms are available in both English and Spanish, resulting in an improved patient experience. The software walks the patient through the process with color highlights for required fields and validation rules to ensure all required information is completed before the patient is registered. Registrars can easily review the packet for validation errors before completing check-in and sending the form images to both Siemens and Eclipsys EMRs where they are indexed automatically.

Results

ARMC has been using the solution since August 2007. They estimate the admission process has been cut by 5 minutes per patient using the Logical Ink solution.

"We've eliminated a step in the process for our registrars," says Bunnie Overby, Director of Patient Financial Service for ARMC. "Registrars no longer have to scan paper consents into Siemens Document Imaging and Medical Records no longer has to scan charts into Eclipsys Clinical Record."

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"We are very impressed with our new tablet PC solution and with our partners in this project. Both the staff and the patients love the solution and the support we've received has been fantastic," said Overby.

Future Plans

Now that ARMC has implemented electronic consents, Overby is planning to use the Logical Ink solution in other areas of the hospital such as rehab and the cancer center. The next phase is to implement procedure consents on the floors for when a patient needs to sign a consent in the OR.

Benefits

- Paper consent forms were eliminated
- Savings of more than 673 man-hours per year by eliminating scanning and automatically indexing and integrating with EMRs
- Better patient experience by adopting new technology

Technology

- Siemens MedSeries 4 HIS
- Siemens Document Imaging and Eclipsys Sunrise Clinical Manager EMRs
- Logical Ink Forms Kiosk
- Microsoft® .NET® and SQL Server® 2005
- Fujitsu ST 5112 Tablet PC

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Corporate Headquarters

Portsmouth, NH 03801 USA
tel 1.800.472.1321, +1.603.436.0700
email info@bottomline.com

Europe, Middle East, Africa

Reading, Berkshire RG17 JX UK
tel +44.118.925.8250
email emea-info@bottomline.com

Asia-Pacific

Hawthorn East, VIC, 3123 Australia
tel +61.3.9824.6888
email ap_info@bottomline.com