

## Mi-Forms Case Study: Kershaw County Medical Center

### *Mi-Co Reseller Integrates Tablet PC Diabetes Management Solution with MEDITECH*

#### Benefits

- Diabetes reports are now online in MEDITECH ITS for doctors/nurses
- Paper forms were eliminated
- Time savings
- Better patient care

#### Technology

- MEDITECH Client/Server HIS and MEDITECH Imaging and Therapeutic System (ITS)
- Mi-Forms v6.1
- Mi-Co Partner HL7 and MEDITECH ITS components
- Tablet PC



#### Background

Kershaw County Medical Center (KCMC) is comprised of a 121-bed acute care facility, 88-bed long-term facility, health resource center and a home health/hospice facility serving the Camden, South Carolina community. KCMC provides an innovative diabetes self-management program that helps patients better manage the disease through better lifestyle choices and proper diabetes care. This program uses several detailed assessment forms to gauge a patient's current health and progress. By recording and tracking this information, patients worked with clinicians to develop a plan that reduced the need for expensive hospital care and improved quality of life.

#### Challenge

According to Amy Kinard, Director of Education at KCMC, one of the most challenging aspects of running the diabetes self-management program was maximizing the time that nurses spent providing care while ensuring that they continue to gather valuable and accurate information.

Amy's nursing staff was required to fill out multiple paper assessment forms including:

- **Diabetes Pre-Assessment** – a questionnaire about lifestyle, nutrition, physical activity used to calculate health scores
- **Diabetes Post-Assessment** – a similar questionnaire that measures the patient's health score
- **Diabetes Program Initial Assessment** - a comprehensive medical assessment that includes the type of diabetes, the patient's dietary habits/past diets, medical history, allergic reactions, education, etc.
- **Diabetes Program Medications** - used to collect information on all the medications being taken by a patient
- **Diabetes Program Participant Flow Sheet Outcomes** - the primary vehicle for gauging a patient's progress, this form collects vitals like BP, temperature, weight, height, BMI at pre-assessment/3-months/6-months/9-12 months
- **Diabetes ED Patient Education Record** - assigns goals for patient outcome
- **Diabetes ED Progress Notes** - notes from each visit

"This process was inadequate because the documentation was handwritten or recorded in an Excel spreadsheet that could not easily be shared with other caregivers," explains Amy. "Therefore, it required duplicate recordkeeping as well as scanning of handwritten documents." KCMC recognized the need to upgrade and streamline this process and began to research the latest technology to overcome this challenge.

#### Solution

Interested in recording information via Tablet PC, Amy worked with Diane Arrants, Director of Information Technology at KCMC to find a solution that would meet their needs. After significant research, they turned to Mi-Co and their technology partner, to meet their needs.

Using Mi-Co's core handwriting recognition and data capture technology, the Mi-Co partner designed and implemented an electronic forms solution on Tablet PC that allows the nurses to interface directly with KCMC's MEDITECH Imaging and Therapeutic Services (ITS) at the point of care.

#### **Phase One**

In the first phase of implementation, KCMC converted their forms to electronic templates with the Mi-Forms Designer and pre-filled their Mi-Forms templates with patient demographic information using an NPR XML feed from MEDITECH. With this advancement nurses are now able to launch the electronic form from within MEDITECH, via a simple menu on the patient's file. Each form contains powerful validation rules that ensure all required fields are captured at the point of care, including required signatures, before the forms can be submitted. The forms also provide automatic calculations and hotspots for the nurses to query previous visit information and save new visit data to a SQL Server database (e.g., Progress Notes). PDFs of the completed forms are generated on a shared network folder for archiving purposes.

#### **Phase Two**

After phase one, a requirement remained to create an outbound interface from Mi-Forms back to the MEDITECH ITS. The Mi-Co Partner designed an interface to capture discrete report data from the diabetes assessment forms and transfer it directly to MEDITECH ITS.

The Mi-Co Partner created a set of components and utilized the Mi-Forms SDK to enable Mi-Forms to directly interface with MEDITECH. A MEDITECH report is compiled with the collected data, packaged into an ORU HL7 message and submitted back to MEDITECH ITS. This information is stored on the patient's medical record and is available for viewing from within MEDITECH. Each report is automatically indexed by patient MRN and Document ID.

### **Results**

Today, the nursing staff uses Mi-Forms running on a Tablet PC to electronically capture diabetes assessment data and immediately store it in KCMC's electronic medical record, MEDITECH ITS. "We are very impressed with our new Tablet PC solution and with our partners in this project, Mi-Co & it's implementation partner. The solution has revolutionized our processes, and Mi-Co's expertise and commitment to excellence was greatly appreciated," says Amy. She also added "**Patient information is more easily shared with other caregivers and time is saved by eliminating the need for duplicate entry and scanning of documents -- ultimately, providing better patient care.**" Amy feels that this solution is "another example of KCMC's commitment to enhanced medical services, advanced technology, progressive therapies".

### **Future Plans**

Now that Mi-Co & it's VAR have made seamless MEDITECH integration a reality for KCMC, Diane is planning to expand the program into other departments at the hospital. Diane explains, "I'm currently looking at ways the system could be utilized in the hospital's home health division. I would also like to use report data to easily generate list and/or counts for regulatory and marketing purposes."

### **About Mi-Co**

Mi-Co, the mobile data capture company, provides enterprise software to increase the efficiency and effectiveness of the entire process of capturing and using data. Mi-Co's end-to-end Mi-Forms Software System enables the capture, handwriting verification and communication of forms based and free-form pen-on-paper data for enterprise users. Mi-Forms supports data capture using the Tablet PC's, Digital Pens, Pocket PC's and signature capture devices. Mi-Co's vertical markets for the Mi-Forms Software include healthcare and pharmaceuticals, public safety, and governmental services, and Mi-Co has a growing number of customers in these segments. Mi-Co is headquartered in RTP, NC with a west coast office in Seattle, WA. For more information, visit [www.mi-corporation.com](http://www.mi-corporation.com).



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