

Mi-Forms Case Study: Wilson County Home Health Agency

Efficient gathering of patient information using Mi-Forms technology allows nurses to provide more quality care while saving money.

In 2003, under the direction of Home Health Director, Debra Harris, Wilson County Home Health Agency implemented state of the art mobile data capture technology from Mi-Co using Microsoft Tablet PCs. The Agency's goal was to save the time of nurses and maximize the quality of the data they collect while serving their clients.



Since then, the Agency has seen four substantial impacts as a result of the technology. "First, we have seen an overall decrease in costs related to printing forms, copying forms and the storage of forms. Second, we have seen an increased ability to comply with HIPAA regulations by securing patient data in computer files rather than paper that is less secure. Finally, we are giving the nursing staff better access to patient information including previous notes and visit records. This empowers the nurses to spend less time with paperwork and more time with the patients" reports Debra Harris. The fourth benefit was discovered in a recent study by Wilson County. In this study, it was found that the practice of data validation done at the point of capture led to a significant time and cost saving by **reducing data input errors by over 50%**.

The implementation includes the electronic capture of OASIS (Outcome & Assessment Information Set) data using Mi-Forms and Tablet PCs. OASIS includes comprehensive assessment data for adult home care patients that is sent to state agencies and ultimately administered by the Centers for Medicare & Medicaid Services (CMS), US Department of Health and Human Services. OASIS is a key component of Medicare's partnership with the home care industry to foster and monitor improved home health care outcomes.

Data Capture Application Pre Tablet PCs and Mi-Forms

Prior to the implementation of the Mi-Forms System, nurses carried copies of the various paper forms needed to each visit. Once these forms were completed each day with pen and paper, the home health nurse returned to the office and submitted the completed forms into the data entry process. The data entry process of keying information into the computerized system could be as short as one day to as long as several days.

Upon returning to the office at the end of the day, care givers would not only submit new information, they would answer questions that had come back from data entry (e.g., "I can't read your writing; what is that word?"). Handwriting and data-entry problems often led to the rejection of the form by the state or other entity. If a form was rejected, nurses had to review the form, make the necessary corrections before it could be resubmitted for payment. This led to longer reimbursement times, impacting the flow of cash into the Agency.

Business Objectives for the Adoption of New Technology

In reviewing the process, the Home Health Director and her staff formulated a project that had three objectives:

1. Decrease the costs related to printing forms, copying forms and the storage of forms.
2. Increase the level of acceptance in complying with HIPAA regulations by securing patient data in computer files rather than paper that is less secure.
3. Increase nursing staff access to patient information with regard to previous notes and visit records.

Achieving these objectives would assist greatly in achieving the overriding goal of the nurses—spending less time with paperwork and more time with the patients.

Data Capture Application Using Tablet PCs and Mi-Forms

To implement the project, Wilson County introduced a Home Health Mobile Data Solution consisting of the following key components: *Mi-Forms and Tablet PCs running Windows XP Tablet PC Edition* – Mi-Forms is the industry's leading forms software for Tablet PCs. In the county, home care nurses, aides and therapists perform clinical documentation, record billing information and access patient information using Mi-Forms. Data is fed to an existing billing system, Horizon Healthcare's Promise system.

Over 25 Mi-Forms forms are used to keep track of care-giver time and supplies for billing purposes, to record OASIS data, and to record other clinical information.

Mi-Co Visit Management System – The Visit Management System provides Wilson County Home Health with a data storage and retrieval system that meets the needs of both the users in the field and the administrative staff in the office. The data is grouped by patient and includes not only collected form data and images, but also pertinent patient data pulled in real-time from the medical records/billing system. This data can be accessed wirelessly from the field, along with driving directions to a patient's home.

Users have access to past visits across all disciplines, patient medication lists, physician orders and updates, patient demographic information, and a link to MapQuest to obtain driving directions. Each user maintains their own patients list using the My Patients feature in the VMS. This enables them to easily find, manage, and schedule their patients. The Scheduling feature enables the user to create a daily schedule of visits for patients. From the scheduling view, users can launch Mi-Forms with pre-fill information pre-populating a Mi-Forms form directly, or users can download a ZIP file containing pre-fill information for every patient scheduled on a given day. The scheduling feature allows the user to schedule days, weeks, or even months ahead.

Multiple Impacts and Return on Investment

In Wilson County, Debra Harris estimates that *nurses are able to save one hour per nurse per day on paperwork**. Rather than increasing the number of visits nurses made each day, the nurses are given the time to provide more quality care to their patients. Harris concludes that the quality of care and patient satisfaction increases based on this use of the time.

The increased quality of the data also had major impacts on the system's return on investment. When the nurse completes the OASIS form and submits it electronically, the data runs through over 650 validation rules built into the form. These validations ensure greater compliance with Medicare guidelines.

For example, Medicare requires that home health agencies must submit OASIS data through the HAVEN system within seven days of a patient encounter requiring an OASIS form. Late submissions of data may trigger an audit or result in payment delays. Since Mi-Forms eliminates the manual keying of OASIS data there was an expectation that the number of late submissions would be reduced. During a six month time frame (and before a fully completed implementation of the Mi-Forms System), *Wilson County saw a reduction in the number of late submissions from up to 31% in a month to 8% in a month*. This change also led to an increase in revenue as invalid claims were not pursued further than they needed to be, as incorrect data was ruled out early in the process, allowing Wilson County to direct its resources to valid claims.

In addition, the solution has eliminated the error correction and cleanup time previously spent by the agency's assistant director. This time is now being spent increasing the quality of audits that has a much greater impact on the quality of care than the assistant director's previous use of time. In the most recent audit of the agency by the Division of Facility Services, **the auditors remarked that the system that Mi-Co had implemented was the easiest to use and most user-friendly of all of the systems employed by the agencies that they had surveyed.**

*Current national salary surveys show an average of over \$20 per hour for a home health nurse. Using this data, the Wilson County productivity gain is \$1200 per day (or \$24,000 per 4 week month, more than four times the monthly cost of the software, hardware and wireless systems currently being used by Wilson County).

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 PCs, Digital Pens, Pocket PCs 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 Research Triangle Park, North Carolina with a west coast office in Seattle, WA. For more information on Mi-Co, visit www.mi-corporation.com.

About the Wilson County Health Department

The Agency serves the Wilson County area as well as portions of Johnston, Pitt, Nash, Edgecombe, and Green Counties. The Wilson County Home Health Agency provides services to people who are confined to their home and need skilled care. Services offered by this program include skilled nursing, home health aide, and physical, speech, and occupational therapy. These services are provided upon physician referral. Patients may receive a quicker discharge from the hospital with these services because skilled care is provided for patients in their homes.