

LANSA Case Study

Excellence with AHC, in the office and at point-of-care

Most of us know someone who lives in a retirement community, nursing home or other long-term care facility and eventually we may end up in one ourselves. Senior Care Communities, as these facilities are collectively called, take up a special place in the healthcare sector as they have to meet specific clinical, administrative and regulatory requirements. The Harmony Health Care Management System, a solution from American Health Care Software, helps to meet these requirements. Harmony, originally developed in Synon and RPG, has been redeveloped with Visual LANSA and uses LANSA Composer for integration.

River Garden Senior Services, in Jacksonville, Florida, USA, is a long-time user of Harmony and has more recently implemented the clinical modules. River Garden's clinical staff, including doctors, nurses, social workers, dieticians and therapists, now have access to vital information at the point-of-care through touchscreen tablets and laptops. Nursing supervisors can monitor in real-time whether residents get their medication on time. Integration with third parties, such as pharmacies, laboratories and specialist web services, is completely automated.

The Challenge

When Marcia DeRosia, President of American Health Care Software (AHC), purchased the company and its Harmony solution in 1990, she recognized the potential but also knew she took on a huge challenge. Having been a user of Harmony herself as the CEO of a nursing home chain, she realized the importance of having to meet the looming deadline of the MDS (Minimum Data Set, a clinical assessment process of nursing home residents, federally mandated for Medicare and Medicaid certification and funding).

Within three months after purchase, AHC's technical team developed the MDS module and rolled it out to all Harmony customers. Ever since AHC has been quick to update its Synon and RPG developed Harmony solution with new functionality and to comply with constantly changing regulations.

By 2005 Harmony had become a leader in its field. Although it was functionally rich and its database well designed, its character-based screens became too restrictive, especially for use by clinical staff. Another concern was that Harmony wouldn't be able to meet the growing demands for integration with third parties, such as pharmacies and laboratories.

"Harmony consists of millions of lines of code and is used by hundreds of facilities. Redeveloping from scratch would be a massive effort and result in a risky and disruptive migration path for our customers," explains DeRosia. "We simply could not afford to put innovation on hold for our existing



"We can progressively redevelop and add Windows functionality and touchscreen tablets."

customers, while working on a brand new solution. We were therefore looking for a development environment that would allow us to gradually modernize and redevelop Harmony."

After researching available options, AHC opted for LANSA. "Visual LANSA gave us the capability to modernize, extend and progressively redevelop our IBM i-based application, and also allowed us to add Windows-based functionality and touchscreen tablets," says DeRosia. "In addition, although we love the IBM i operating system, it's good to know that LANSA doesn't lock us in."

The Project

The decision to use Visual LANSA was made several years ago. AHC decided to use the Framework development approach, which is available as an option within Visual LANSA.

"It allowed us to continue to utilize parts of our legacy application, for as long as we still needed to, in combination with new functionality. It also saved us a massive amount of development time, as it comes with standard navigation and MS office integration functionality," says Warren Rice, senior developer at AHC.

Snapshot

Customer: American Health Care Software is a national software solution provider to the healthcare industry, based in Vermont, USA. www.ahconline.com

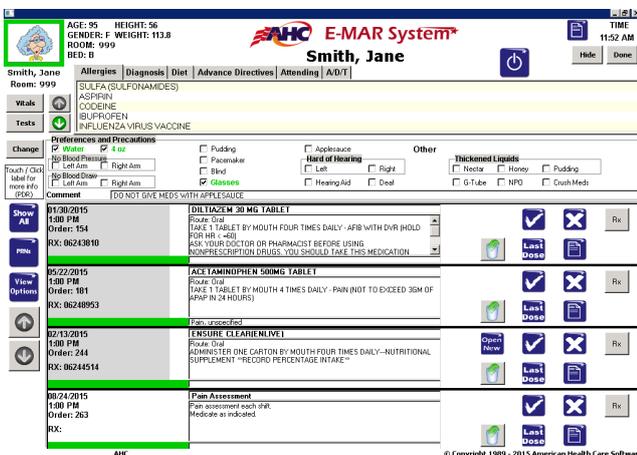
Customer: www.rivergarden.org

Challenge: To modernize and redevelop its IBM i solution, without putting innovation on hold for existing customers.

Solution: To extend and gradually redevelop.

Key Benefits: Happy customers. Expansion to Windows, Linux platforms in addition to IBM i

Product Used: Visual LANSA, LANSA Composer



The eMAR and Point-of-Care modules have a touchscreen interface so they can be used on tablets by nursing and medical staff.

Melissa Carter, Technical Manager at AHC, explains, "Redevelopment is now almost finished. Besides redeveloping existing functionality in LANSAs and moving to MDS 3.0, we have spent the bulk of our effort on building a new clinical package. We now have a comprehensive E.H.R. (Electronic Health Record) solution with eMAR (Electronic Medication Administration Record) and Point-of-Care modules."

The clinical modules have a touchscreen interface for use on tablets by nursing and medical staff.

All Harmony modules – clinical, waiting list management, admission, census tracking, billing, financial and others – are integrated with MS Office. "Whenever users have a grid on their screen, they can push a button to export to MS Excel," explains Rice. "Free format text fields, extensively used by doctors and nurses, are based on LANSAs memo fields and utilize MS Word's spell checking."

Integration with third parties is done with LANSAs Composer, for example, to exchange physician orders with pharmacies, receive and process test results from laboratories, check interactions of medicines against TruvenHealth, and much more.

River Garden Senior Services

One of the Harmony customers who has made the modernization journey with AHC, is River Garden Senior Services (River Garden,) a not-for-profit, mission-driven organization established in 1946 and sponsored by the Jewish community in Jacksonville, Florida. Located on a 40-acre campus, River Garden offers a variety of services including, a 180-bed skilled nursing and rehabilitation facility, 80 apartment homes for independent living, home health care and adult day care.

Martin Goetz, CEO at River Garden, explains "We have been using Harmony since 1988. Initially we used it mostly for administrative purposes, but when the government started mandating electronic records, we decided it was time to put technology in the hands of clinical staff. Having seen Harmony's existing modules move from green screens to graphical with LANSAs, we were enthused and keen to get involved in the design of the clinical modules."

Over a period of three years with weekly phone calls, River Garden's clinical staff was extensively consulted for their feedback as a beta customer.

Harmony on the Floor

Implementation of the clinical modules was unit by unit and is now available throughout the River Garden facility. On each



Staff literally have the resident's information at their fingertips with easy to interpret charts and with alerts and warnings when appropriate.

"We can monitor in real-time how nurses are progressing with administering medicine."

of the 20 nursing wings, staff have access to kiosks through rich-client Windows PCs with touchscreens. eMAR is accessible through touchscreen thin terminal services tablets mounted on medication carts.

Nursing staff add their comments to the system, for example relating to food and fluid intake. Doctors, dieticians, and therapists also add their comments, as well as medicine orders and treatment plans, making it immediately available to others.

Carol Thomas, RN Chief Nursing Officer at River Garden, explains, "All data entered in Harmony is automatically time stamped. It allows us to monitor risk factors in real-time and take preventative steps before they result in actual problems. For example, we can see how nurses are progressing with administering medicine and treatment to residents."

"The biggest impact of capturing and displaying information at the point-of-care, is that it is now actually being consistently used," continues Thomas. "Previously information was spread over numerous pages of paper sitting in a folder that was updated on a weekly basis by a charge nurse, but otherwise it was hardly used. Now staff literally have the resident's information at their fingertips with easy to interpret charts and with alerts and warnings when appropriate."

Jeremy Green, Director of IT at River Garden, manages the computing environment with just two staff. It consists of an IBM i server, over 150 PCs for office staff, 20 touchscreen rich-client PCs at nursing kiosks and 10 terminal services laptops mounted on medicine carts.

Conclusion

River Garden is a multi-time recipient of the prestigious Florida Governor's Gold Seal Award for Excellence in Long-Term Care, along with 5-Star ratings by regulatory authorities. It hasn't been cited for deficiencies in clinical care for years in a row, and not for deficiencies in MDS preparation ever. "That's a huge accomplishment which would not have been possible without our excellent nursing and clinical staff and the robust Harmony solution," says Goetz.

Thomas and Goetz say, "LANSAs has made it possible for AHC to bring exceptional software into the 21st century. We now have well over 150 staff using the AHC software. Our staff love it and it's made a huge difference in our ability to document and manage care. AHC is an excellent partner with a passionate commitment to their clients and the residents we serve. Colleagues of their caliber simply do not come along all that often."

Carter concludes, "When we moved forward with LANSAs, we employed four developers, who we hired right out of technical college. They have all been outstanding and learned how to use LANSAs very quickly. Now they are all experienced and even our newest employee has been with us for over five years."

"Currently all our customers run Harmony on IBM i. There are still some programs and routines that are RPG-based, but once we have everything converted to LANSAs we can be platform independent and offer Harmony on Windows, Linux and IBM i, from a single set of source code."

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