



Medical City Dallas Uses Modular Approach with RALS-Plus to Grow Point-of-Care Testing Program

“When we decided to implement connectivity, there were a variety of analyzers coming on the market that met our needs, but each had a data management solution that was specific to that analyzer. Having a multi-vendor interface solution made the only sense in my opinion.”

Tim Deen, MT(HEW), MLT(ASCP)
Point of Care Testing Supervisor
Medical City Dallas

When Medical City Dallas (MCD) decided to ‘connect’ their Accu-Chek HQT[™] meters to the RALS-G, glucose only Point-of-Care Data Management System, in June 2000, they knew that at some point in the future, they would move to RALS-Plus to handle the multiple POC analyzers being used in their hospital. That point in the future came two years later, in June of 2002, when MCD upgraded from the HQ to the Accu-Chek Inform[®] meter and added the Roche CoaguChek[®] Pro DM coagulation analyzer to their POC program.

“Having used RALS-G in concert with the Roche HDM (Hospital Data Manager) for two years, the migration to RALS-Plus was seamless,” states Tim Deen, MT(HEW), MLT(ASCP), Point of Care Testing Supervisor at MCD. “Combining the features of RALS-G and HDM into one platform, RALS-Plus, confirmed our position of support of MAS as the leader on POC interface solutions”.

Since that time, MCD has gone on to implement the Biosite Triage meter for BNP testing into RALS-Plus (December 2002) and June 2003, added the i-STAT blood gas module to RALS-Plus. Also, in June 2003, when MCD made the decision to change coagulation vendors and add the ITC’s Signature + coagulation module, MAS and the RALS-Plus system made it easy. “The upgrade to RALS-Plus was fast paced with ‘go-lives’ occurring in a timely fashion. Additional modules and firmware upgrades have been handled remotely by a dedicated technical support person and have proven to be exceptional,” says Deen.

A Look Back at Manual Beginnings

While things seem smooth today, it wasn’t always that way at MCD, a multi-hospital system consisting of Medical City Dallas Hospital, Green Oaks Behavioral Healthcare and Medical City Ambulatory Surgical Center. All told, these facilities total more than 700 beds and employ more than 1,500 people.

Prior to implementing connectivity, POC results were hand written on the patient medical record. No revenue was captured and no results were computerized. In 1998 a manual computerized test entry system was implemented and for 2 years captured approximately 85,000 tests per year.

“We knew that we were not capturing the majority of our test results. Supply usage compared to manual result entry displayed that. This affected our ability to meet JCAHO and CAP accreditation standards, effected revenue capture and did not allow easy retrieval of results for the physician and other care givers that had not performed the testing,” recalls Deen.

The Implementation of a Connectivity Solution

It was then that MCD decided to evaluate vendors for connectivity. This process involved the Diabetes in patient unit, the Neonate Intensive Care unit, the POCT Supervisor, the LIS Specialist, Administration, Information Technology & Services. After putting each system through a series of internal tests, the the RALS-G system was selected due to its multi-analyte upgrade feature, QC review and reporting options.

“The Initial implementation of RALS-G took three days and the MAS support staff that did the install were professional and easy to work with,” reports Ann Goar LIS Specialist.. “After about 8 months we opted out of the PC downloads and switched to lantronix boxes due end user issues with turning off PCs and PCs that locked up due to age. All of these issues were internal to our facility. MAS continued to work with us and soon our RALS network became stable,” Goar adds.

Current Medical City Dallas POCT Volume

Test	Annual Volume
Glucose	170,000
Coagulation	4,000
Blood Gas	5,000
Cardiac Markers	2,000

An Increase in Captured Tests

Just one month after the system was installed, the monthly test capture increased from just over 6,000 in May 2000 tests to more than 10,200 in June 2000. One full year later, the annual volume increased from 86,000 to 142,000 (see table below). In addition after upgrading to RALS-Plus and adding the coagulation module to the system, ACT testing went from 150-200 per month captured previously, to 250-350 per month in August 2002.

Glucose Billing	2000	2001	2002	2003
JANUARY	5649	12913	13902	14192
FEBRUARY	5827	11144	12245	13109
MARCH	5724	10858	14426	15127
APRIL	5746	10251	13376	13751
MAY	6004	12052	13748	13523
JUNE*	10213	12197	12374	13131
JULY	10736	12091	13470	14355
AUGUST	11410	11262	13141	14860
SEPTEMBER	11940	12443	12569	14861
OCTOBER	10794	13104	13105	-----
NOVEMBER	9920	11159	11238	-----
DECEMBER	10662	11894	12254	-----

* Implemented connectivity for glucose testing in June 2000

There has also been great improvement in turn around time (TAT). From 1998-2000, only 20-30% of results were in the LIS within one hour. From 2001-2003 75-80% of results are getting to the LIS in less than one hour from the time the test was taken. Furthermore, from 1998-1999, using manual result entry, only 25-30% of all results were entered within one hour of test time. Today, reporting TAT within one hour is 80-85%.

Increased Revenues and Increased Productivity

MCD bills for all POC testing and will continue to do so as more analytes are added to their program and has determined that the increased test volume captured since the RALS implementation has proven that the system will pay for itself and assist the facility in improving their POCT service to patients and caregivers.

RALS-Plus Has Made a Significant Difference

“What I like about RALS-Plus is that the functionality is based on widely used programming formats such as spreadsheets, ‘chicklets’ or buttons to click on and move from one area to the other”, says Deen. “The entire product is extremely easy to navigate and to learn and has proved invaluable in the Medical City networked environment. The ability to create paper or

paperless reports for many required review processes has freed up a great deal of time and enabled us to work with individual units on issues,” adds Medical City POCC, Tim Higham.

“We can also track unit-by-unit usage of supplies and reagents. Compare that usage versus downloaded results to what they order and have inventory/supply tracking and control. Prior to this there was an inadequate control system. Prior to RALS we were unable to project usage. We can track increase in usage and act accordingly before the ‘whoops we ran out’ scenario of the past,” says Higham.

The RALS-Plus Software Modules at MCD:

- Roche Inform (Glucose)
- ITC Hemochron Signature + (Coagulation)
- i-STAT (Blood gas)
- Biosite Triage (Cardiac markers)

“I could not do my job and meet regulatory requirements without our current connectivity solution. With a large POCT service it is all about connectivity and staying on top of instrument and/or operator issues. Everyone from our account manager, tech support, engineers, educators and contract admin staff have been great to work with. I felt as a customer that any concerns I have are looked at and resolved. These may be simple programming concerns on how a screen looks and yet suggestions on improving the RALS product are always taken seriously. I have seen many changes over the course of more than three year association and each one is an enhancement and improvement to the system,” states Deen.

Closing thoughts...

Medical City has been able to scale its current system as analyzers were implemented throughout the past three years. Their system has grown from a single vendor analyzer system to a multi-vendor analyzer system and their POCT program continues to grow as their acute care facility needs increase.

“We are extremely excited about the capture of manual tests via the upcoming OTE (other test entry module). The OTE module will allow easier entry of manual tests such as Urinalysis, and Occult Blood testing via entry into the Accu-Chek Inform® glucose meter palm pilot technology” concludes Deen. “From the perspective of all involved our decision to go with MAS a multi-vendor connectivity solution has been the best decision that we could have ever made. Near real time results, operator management, reagent management, revenue generation - all things that are necessary for a POCT service to progress in the 21st Century – with no hidden costs to our facility.”

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