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Andrew Dorrington
Deputy Lab Manager
University Hospitals of Leicester

ADVIA CentraLink Data Management System delivers on customer satisfaction

Today, more laboratories are turning to diagnostics IT to improve efficiency and enhance patient safety through error reduction. Middleware, in particular, is key to streamlining the data management, quality, and results reporting process. With the number of middleware solutions on the market today, lab managers tell us that a combination of features (such as QC management and rules writing capabilities), reliability, and ease of use drive their selection process and are key to overall satisfaction.

In a 2009 survey¹ of 150 laboratory decision-makers representing the U.S. hospital market, the ADVIA CentraLink[®] Data Management System took the number one satisfaction rating. A full 94 percent of ADVIA CentraLink customers reported that they were extremely satisfied (20 percent) or satisfied (74 percent).

Functionality, reliability, and ease of use were recurrent themes outside the U.S. as well. The following profiles are based on interviews with two laboratories in the U.K. conducted in early 2010.

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ADVIA CentraLink customers improve efficiency and reduce errors

University Hospitals of Leicester improve service

The University Hospitals of Leicester in Leicester, England, have a relationship with Siemens that dates back four decades. In 2008, following an extensive review and procurement process that lasted a year and a half, the University Hospitals selected Siemens to implement a new total lab automation solution across their three hospitals. Glenfield Hospital, Leicester General Hospital, and Leicester Royal Infirmary have a combined 2,200 beds and provide a full range of medical services including Leicestershire's only accident and emergency service.

Integral to total lab automation are the ADVIA® LabCell® Automation Solution and the ADVIA CentraLink Data Management System. Through a total of 29 instrument connections, the ADVIA CentraLink enables labs from the three hospitals to share data, standardize operations, and improve efficiency. The analyzers include ADVIA® 2400 and ADVIA® 1800 Clinical Chemistry Systems, ADVIA Centaur® XP Immunoassay Systems and ADVIA® 2120i Hematology Systems used by the Biochemistry, Hematology, Coagulation, and Microbiology departments.



Leicester Royal Infirmary

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Andrew Dorrington, Deputy Lab Manager responsible for Chemistry and Immunodiagnostics for the hospitals, is very positive about the experience. “The ADVIA CentraLink was our first real middleware data management tool and for us it was absolutely brilliant...We had been through two major CentraLink upgrades, versions 12 and 13, before any other lab [implemented the upgrades] with little or no disruption to our service,” he noted. The implementation of version 13 in November 2009, in particular, enabled the lab to improve service to the hospital's Assisted Conception Unit by reducing turnaround time for the critical estradiol assay. “Assisted Conception depends on estradiol results. In a recent case, being able to specify the dilution factor automatically based on previous patient results enabled us to get the result within an hour. Assisted Conception went ahead with the procedure.”

ADVIA CentraLink version 13 also improves access to audit trail data and provides shortcuts such as easy customization of toolbars to improve the user interface. “Version 13 helps us with audit trail data, which our LIS was not able to capture... I can see who has actually validated a result and sent it for review, and who has decided to reset QC. Version 13 makes it easy to find the data we need without searching record by record. We also have the option of exporting the audit trail data at specified intervals or when we need it,” added Mr. Dorrington.

Friarage Hospital consolidates work practices

The Friarage Hospital in Northallerton, North Yorkshire, serves a rural population of 122,000 people over 1,000 square miles. The clinical laboratory at the 230-bed hospital processes 1,000 patient samples a day. It shares staff and resources with its counterpart at The James Cook University Hospital, located in Middlesbrough, 23 miles away.

The two laboratories share databases through the ADVIA CentraLink Data Management System, which was installed in 2008 as part of an overall modernization effort to increase efficiency and improve service. Two new ADVIA 1800 Clinical Chemistry Systems, an ADVIA Centaur XP Immunoassay System, a Stago® Evolution Coagulation Analyzer and a Stago Compact Coagulation System were added to the two ADVIA 2120i Hematology Systems already in the Friarage lab, along with the ADVIA CentraLink. The VersaCell™ System was added at the Friarage location in early 2010 when it became available. (The James Cook University Hospital, where the sample volume is 4,000 to 4,500 a day, uses the ADVIA LabCell Automation Solution.)



Friarage Hospital Laboratory

The lab went live with the new analyzers and the ADVIA CentraLink simultaneously, in November 2008, and since then everyone in the laboratory has used the system. "It's just very easy to use. It's quick and intuitive so the training is pretty easy as well. On a day-to-day basis, you just hop in and do it and then you hop out again. It is pretty robust and has been very reliable as well," noted Derek Parrington, Operations Manager, with responsibility for Blood Sciences, which performs chemistry, immunoassay, endocrinology, hematology, and coagulation testing.

But the icing on the cake was the VersaCell System. The Friarage laboratory was one of the first sites to install the VersaCell connected to ADVIA CentraLink version 13, and so Mr. Parrington was surprised at how quickly it was up and running. According to Mr. Parrington, the VersaCell, which the laboratory uses to manage sample transport between the ADVIA 1800 and the ADVIA Centaur XP analyzers, makes it easy to integrate chemistry and immunoassay testing. Powered by the advanced capabilities of ADVIA CentraLink version 13, the VersaCell offers the benefits of faster throughput, reduced errors, and greater efficiency.



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Derek Parrington
Operations Manager
Friarage Hospital

Since the VersaCell System automatically moves a sample once an analysis is completed, there is no delay waiting for the second result. Any problem reading bar codes is flagged immediately, so corrective action can be taken. This has resulted in a tenfold reduction in bar code errors, as well as a reduction in delays. Results review is more streamlined since results from the same patient sample are reported at about the same time, making multiple reviews unnecessary. The laboratory is planning to add a second VersaCell System soon.

References:

1. Data taken from Information Dynamics 2009 Middleware Market Development Monitor. Only those products with more than 6 percent market share are included in the ranking.

Siemens Healthcare Diagnostics, the leading clinical diagnostics company, is committed to providing clinicians with the vital information they need for the accurate diagnosis, treatment, and monitoring of patients. Our comprehensive portfolio of performance-driven systems, unmatched menu offering, and IT solutions, in conjunction with highly responsive service, is designed to streamline workflow, enhance operational efficiency, and support improved patient care.

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