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Montdidier Hospital Triples Workload and Expands Menu of Tests with New VersaCell Solution

Montdidier Hospital Expands Service to the Community

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Montdidier Hospital Expands Service to the Community

In the town of Montdidier in France's Picardie region, the 150-bed Montdidier Hospital serves a population of 6,000 with a wide range of services from perinatal to nursing-home care. Three years ago, the hospital lab opened its testing to external populations—the outpatients of area physicians—in addition to its traditional services for hospital inpatients. This tripled lab workloads and created demand for a wider menu of tests. Meanwhile, Montdidier Hospital prepared for ISO 15189 accreditation becoming mandatory in France. To satisfy the demands of changing workloads and accreditation requirements, the hospital transformed its lab with new technologies from Siemens Healthcare Diagnostics. The results include fast, accurate analyses; streamlined workflows; lower cost; and better regional patient care.

"The most significant challenge has been to adapt this laboratory to the needs of the external population," says Dr. Cecile Marguerie, manager of lab services. "Before, private physicians had to send their patients to a private lab, and it was impossible for them to get results within a day. Now that we have opened and transformed our lab, external patients can go directly to the hospital and get their results the same day. In addition, we do a lot of outreach and consultation with area physicians to support excellent community care."

Choosing an appropriate solution to improve operations and workflow

The Montdidier Hospital lab processes approximately 150 samples a day, both routine and STAT tests, for a wide range of disciplines including hematology, bacteriology, chemistry, immunology, and urine toxicology. Testing has grown more polyvalent, with demand for a greater variety of tests and adaptability to changing

community needs. Commonly ordered tests include blood-gases for oxygen saturation and blood group testing. Fast turnaround is especially critical for cardiac troponin and toxicology.

Service to outpatients has increased demand for tumor-marker testing, particularly CA 15-3, CA 19-9, toxicology, and therapeutic drug monitoring. The intention of the lab was to improve its operations and workflow but, as a mid-volume facility, it could not afford nor did it need a large scale automation solution. Montdidier was already an extremely satisfied Siemens customer, having had good experiences with Siemens service and the Dimension® Xpand Plus System. The answer was a Siemens VersaCell® Solution, connected with a Dimension® EXL™ LM Integrated Chemistry System and an ADVIA Centaur® XP Immunoassay System. The ADVIA Centaur XP replaced a standalone Abbott AxSYM Immunoassay System.

The VersaCell System is a robotic sample management system that connects up to two Siemens analyzers through a single sample management interface, and provides a single operator software interface for monitoring the connected analyzers, VersaCell system status, and completed/pending results. From a single screen, the operator can view consolidated results and transmit them to the LIS through one interface.

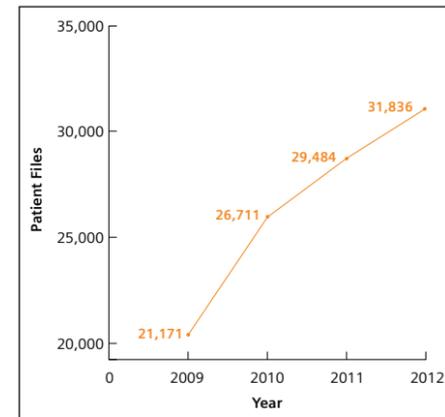
VersaCell Solution decreases cost and turnaround time

"VersaCell solutions deliver significant operational and financial benefits," Dr. Marguerie says. "With the prior standalone systems, our lab had to use two different tubes, one each for chemistry and immunology. Now because of centralization through a common interface, just a single tube is needed. This streamlining reduces

tube costs and allows us to eliminate one technician post, redeploying resources to more value-added work such as quality management in relation to the ISO 15189 accreditation procedure. The automation system also is more reliable. With fewer tubes, there is less tube manipulation which decreases error rates. And although the instruments are linked, they operate independently so if one is not running, the other keeps working. Reliability has been robust. In fact, after one year of VersaCell operation, we have experienced no system breakdowns," Dr. Marguerie says.

Turnaround time is faster. The Montdidier lab experiences two peak times, one in the morning for hospital needs and another around noon for external needs. Before, it was difficult to get results before 2 pm. Now, approximately 85 percent of results are delivered by noon or earlier. The lab day work process time has been reduced by two hours.

Solution Addresses Laboratory Growth

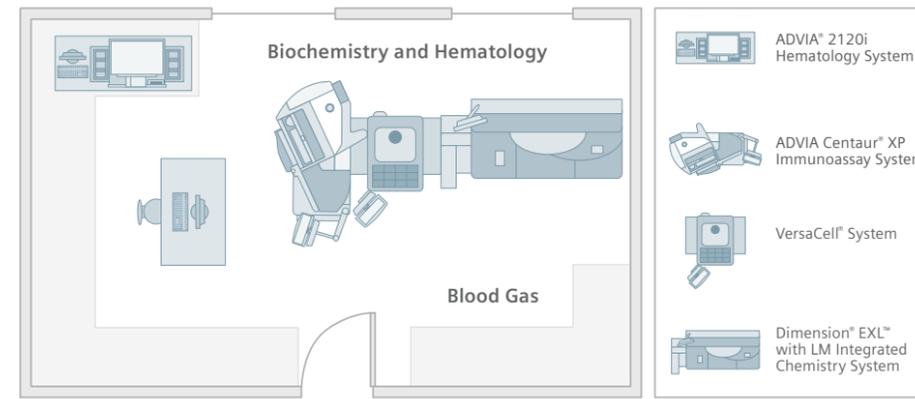


2012 figures are extrapolated on the basis of 8 months of activity

“Montdidier Hospital has transformed its lab to extend testing menus, increase workloads, speed turnaround time, increase efficiency, and improve quality.”

Dr. Cecile Marguerie, Manager of Lab Services, Montdidier Hospital

VersaCell System powered by Dimension EXL with LM Integrated Chemistry System and ADVIA Centaur XP Immunoassay System



Dimension EXL system reduces cardiac troponin turnaround time

VersaCell solutions satisfy a wide range of testing needs. With the Dimension EXL system, analyzer time for troponin testing was reduced from 16 to 10 minutes. The Dimension EXL system's integrated LOCI® technology uses an oxygen-channeling mechanism that provides unlimited signal generation, so labs no longer need to use trigger reagents, reducing a potential source of error. In addition, LOCI technology is a homogeneous immunoassay principle that eliminates separation and wash steps, delivering improved precision and reliable accuracy as well as fast turnaround time (TAT). "LOCI technology enables the troponin to be done much more efficiently," Dr. Marguerie says. "Because the method is more sensitive, a response can be made more quickly and accurately to physicians. Faster TAT improves patient care, particularly in cardiac intensive care where minutes count."

"Faster TAT also reduces hospital costs as technicians spend less time on task," she adds. "The cost savings are especially significant during the night shift when technicians are paid according to the amount of time they spend in-house." The complete menu for therapeutic drug monitoring (TDM) on the Dimension EXL system was also important to Montdidier.

ADVIA Centaur XP Immunoassay System chosen

Dr. Marguerie indicates there were several reasons for choosing the ADVIA Centaur XP as its new immunoassay system. First, the ADVIA Centaur system interfaces directly to the biochemistry system through the VersaCell system. Second, the use of disposable tips eliminates contamination risk. And third, the ADVIA Centaur provides

a Total Vitamin D method—D2 plus D3—whereas competing systems Montdidier evaluated could test only one sub-form.

Siemens solutions helped with application for accreditation

Formulated by the International Organization for Standardization's Technical Committee 212, ISO 15189 sets quality management standards for clinical and medical laboratories. France has mandated that all clinical laboratories in France meet ISO 15189 standards by 2016. Montdidier Hospital has been refining its pre-analytic, analytic, and post-analytic quality processes accordingly, and recently submitted its request for accreditation to the COFRAC, France's accrediting body.

Traceability of reagents and analytic results is critical. "Siemens' solutions and service are integral to meeting these stringent quality standards," Dr. Marguerie says. "First of all, the VersaCell system—integrating the ADVIA Centaur and Dimension EXL systems—enabled us to free up one full-time equivalent for redeployment to the quality management processes," she explains. "The second thing is that in this accreditation process, before sending and submitting files, we have to assess assay method performance. The Siemens field-application specialist who installed the solution did an outstanding job of helping us establish the method validation for each parameter. What's more, the performance of the ADVIA Centaur XP and Dimension EXL system is so good that the method validation is very streamlined."

"We designed our laboratory for scalable flexibility and to meet strict performance measures for accuracy, traceability, fast turnaround, and patient and staff safety," Dr. Marguerie continues. "Automation reduces process variation, increases reliability,

and reduces risk. We need fewer reruns of pathogenic results, which reduces cost, as does eliminating waste and labor time. All of these Siemens solution advantages helped us with our application for accreditation." The lab continues to optimize its operations with plans to take advantage of VersaCell system sorting and archival capabilities to further streamline workflows.

Siemens service eases implementation, ensures operational success

After operating the VersaCell system for nearly one year, Montdidier Hospital redeployed the system to a new lab. Siemens staff supported the move with exemplary service. "The system was offline for just two-and-a-half hours during the process," Dr. Marguerie says. "One of our main criteria for choosing Siemens was the company's continual presence and service," she says. "Not only were they fully supportive during the move, but even afterwards the Siemens engineer would come by spontaneously to make sure everything was functioning okay, to see if we had any concerns. The follow-up is extremely reliable, efficient, professional, and kind."

Montdidier Hospital gained a solution partner committed to its success

With its lab able to meet increasing and variable workloads, Montdidier Hospital has increased its outreach to private physicians in the community. The hospital holds monthly relationship-building meetings and consults regularly with physicians on interpretation of test results. Dr. Marguerie has been a speaker at the Siemens Academy in France which provides continuing education for medical professionals and a meeting place for biologists to discuss views and concerns. "The external physicians are satisfied because they have access to a full menu of tests, fast turnaround, full confidence in testing accuracy, and the ability to consult with hospital staff regarding results," Dr. Marguerie says. "When we looked for an automation solution appropriate for a mid-segment hospital like ours, Siemens was the only one that offered exactly what we needed. In addition to gaining the right technology, we gained a solution partner committed to our success."

*The outcomes achieved by the Siemens' customer described herein were achieved in the customer's unique setting. Since there is no "typical" laboratory and many variables exist, there can be no guarantee that others will achieve the same results.

