

Integrate Your Lab Instruments to Maximize Your Total Investment

Huntsville Pediatric Associates is a six-doctor multi-specialty pediatric group dedicated to providing the highest quality pediatric care to the greater Huntsville, Alabama area.

Over the last year, Huntsville Pediatric Associates implemented an Electronic Health Records (EHR) system and as a result, the practice benefited from many added efficiencies. However, because they never considered integrating their lab instruments when their EHR was installed, they ended up with a gap in their internal workflow when it came to laboratory testing.

Analyzing their workflow after the EHR implementation, Robin Riggs, Practice Administrator at Huntsville Pediatric Associates, determined several manual steps that could be eliminated. Once a lab order was placed, the lab technologists collected the sample and delivered it to the lab for analysis. While this part of the workflow would not change, Robin knew there must be a way to eliminate the unnecessary steps that followed. Once testing was complete, the lab tech would print the results from the instrument and do three things: first, lab techs would manually enter results into the EHR; second, the tech would scan an image of the printout in order to store an electronic copy of the results and to check for errors by comparing the results with those manually entered; the final and most time-consuming step involved hand-delivering the instrument's printout to the doctor and placing in the patient's paper chart. These manual steps not only slowed the turnaround time for results—which impacted patient care—but it soon became obvious that the lack of integration would limit staff efficiency and prevent them from taking full advantage of their EHR. Huntsville Pediatric Associates quickly determined they needed additional technology to help close this gap—not necessarily a full lab information system,

but software that would allow them to optimize their workflow and maximize use of their EHR. In their search for a solution they also determined they didn't want to spend a lot of money, and since the practice had just gone through a major transformation with the EHR implementation, they didn't want to spend a lot of additional time implementing and training the staff on a brand new piece of technology.

To accomplish these goals, Huntsville Pediatric Associates selected a middleware product specifically designed to integrate standalone instruments directly to an EHR, EMR, Practice Management or other type of host system. It not only accepted and transmitted data, but also provided a straightforward user interface to define tests and reference ranges, approve or reject results and monitor real-time instrument logs.

They chose a product that proved to have a simple and efficient implementation process. The middleware product was installed on one of their existing office computers and the test database was configured in only one day. It took only a few hours for the vendor's team to remotely walk through installation and complete train-the-trainer education. Robin Riggs' entire staff was functioning on the system within a week.

Since the implementation of their middleware, Huntsville Pediatric Associates has seen drastic changes to their workflow. The lab instruments now automatically transmit data to the middleware where their techs can login, review, and verify tests results. Results are then automatically sent back to the EHR and the doctors receive electronic results in real time. The doctor can access results from any computer workstation, either in the patient's room or in their office.

Integrating their instruments to their EHR using middleware eliminated many of the labor-intensive steps that slowed the workflow at Huntsville Pediatric Associates. They no longer print out results from the instrument, nor manually enter results into the EHR—which is often 12-14 tests results per order.

EHR and the Physician Office Workflow

Huntsville Pediatric Associates and Fletcher-Flora Health Care Systems, Inc.

As an additional benefit, the new middleware flags abnormal results and sends those flags to the EHR. The flags not only help facilitate and simplify doctors' review of the results, but now the staff can fully utilize some of the trending functions in the EHR that were never used before.

It's easy to equate these changes to time savings. Before implementing middleware it took the staff at Huntsville Pediatric Associates an average of two minutes per order to manually type the results from the lab instrument into the EHR. Now, in seconds, they can look up the patient's order, review and release the results. Based on the volume of tests they handle in a day, Huntsville Pediatric Associates saves an average of 1.5 hours of staff time each day. Add the time wasted by walking results to the physician and that estimate nearly doubles. The overall impact is that their lab staff now remains in the lab, readily available to perform the next test, and turnaround time from receipt of order to releasing results is dramatically decreased. This reduces patient wait time for doctors, which ultimately improves the care they deliver their patients.

"Implementing an affordable and easy-to-use

middleware product has truly impacted how we run our laboratory," said Robin Riggs. "We have cut out manual steps that slowed us down in the past, and we can run a much more efficient operation. This allows us to focus more energy to providing excellent care to our patients. Overall, the addition of integration middleware has maximized our original EHR investment by integrating the lab and automating previously manual processes."

About the Author

This article is a collaboration between Huntsville Pediatric Associates and Fletcher-Flora Health Care Systems, Inc. Fletcher-Flora develops and distributes a full line of Laboratory Information System (LIS) software, middleware products, and connectivity solutions dedicated to solving the day-to-day workflow, data management and reporting demands of the clinical laboratory. For more information about the integration middleware described here, please contact us at 800-777-1471 Option 2.

The image shows a screenshot of the EHRScope.com website. At the top, a black Jaguar car is shown next to the text "324 EMRs TO 1 IN 5.4 SECONDS". Below this is a search interface with filters for Practice Specialty (Family Med), Practice Size (11-25), EHR vs EHR/PM (EHR + Practice Management), Client/Server vs ASP (Client/Server), Dragon NaturallySpeaking (Require Compatibility), and Require Certification. A "RECEIVE OUR FREE e-NEWSLETTER" button is also visible. The main content area lists several EMR products: eClinicalWorks, GE Healthcare Centricity, Dragon NaturallySpeaking Medical, and Practice Partner by McKesson Corporation. On the right side, a green box titled "EHRScope.com is Fast and Easy" contains a three-step process: 1. Select Your EMR Requirements, 2. Optimize Your Results, and 3. Click Your Matching EMRs for More Information.