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BUILDING CARDIOLOGY CENTERS OF EXCELLENCE

OhioHealth
Grant Medical Center

Integrated Software Solution Simplifies Registry Submission, Shortens Billing Cycle, Enhances Reporting Capabilities and Reduces Door-to-Balloon Times

"It takes a management that understands the importance of data and understands that if doctors don't document right away, it's going to delay reporting. It's going to delay billing. It's going to delay reimbursement."

Mike Selby, RN, BS
Senior Systems Analyst, Cardiology
OhioHealth

OhioHealth Highlights

Streamlined Data Capture at the Point of Care. By interfacing their Apollo Advance™ clinical data repository to their hemodynamic system, OhioHealth has ensured that clinical information is entered only once, saving time for staff, reducing chance of error and improving data integrity.

Top-down Commitment to Data Collection. OhioHealth management understands how important data is to the success of a heart program. Consequently, nurses, physicians and staff are committed to collecting and analyzing as much data as possible, as soon as possible.

Reports Reveal Successes, Including a Dramatic Drop in Door-to-Balloon Times. Integrated systems make generating reports easier. Reports help OhioHealth identify areas for improvements, as well as revealing what they're doing right. After instituting a STEMI Alert protocol, door-to-balloon times at OhioHealth hospitals dropped to under 60 minutes on average, well below the 90-minute national standard.

Apollo and Hemodynamic System Integrated for Streamlined Data Capture

In the Cath lab at Riverside Methodist Hospital, part of the OhioHealth System, a patient arrives for his cath. A nurse does the patient charting, entering history and any other information electronically. After the procedure, the physician quickly completes the clinical report, also electronically. Via a LUMEDX Witt interface, all relevant ACC-NCDR CathPCI Registry™ fields have been simultaneously populated with no additional data entry.

As those who work in a Cath lab know, ACC CathPCI forms involve many, many fields. By interfacing their Philips Witt hemodynamic system to the Apollo Advance™ clinical data repository, data is captured at the point-of-care, saving staff time, obviating duplicate data entry and ensuring data integrity.

"We use Witt for our hemodynamic," explains Mike Selby, RN, BS, Senior Systems Analyst for OhioHealth Cardiology. "We don't use their standard menus per se, but we do use the standard menus for the ACC. We scrape data into an HL7 file and it goes from our interface into Apollo. Any nurse charting or physician reporting that's ACC-specific goes into the right fields—so we'll get all the history the nurse enters and all the diagnostic information the doctor enters automatically. Currently we don't get discharge information because that occurs after the Cath lab of course, but we have an EMR so that brings up all the other data we need."

Auto-populating ACC fields has not only saved a great deal of time for staff, clinicians and physicians, it has enabled OhioHealth to mine their own data faster. Getting data out where it can be used—for registry participation, for quality measurements, for billing—has resulted in a number of improvements at hospitals within the OhioHealth network providing cardiovascular services.

OHIOHEALTH INTERNAL REPORTS

1. Door-to-Balloon Time
2. Abrupt Closure, Emergent Open Heart Post-PCI
3. Case Volumes / Dollars Spent vs. Revenue Generated
4. Stent Utilization (Bare Metal vs. Drug Eluting, Department and Physician Specific)
5. Monthly Percentage of Normal Heart Caths, Department and Physician Specific

Serving a Multi-site Healthcare System with Unique Cardiac and Vascular Programs

Riverside Methodist Hospital, Grant Medical Center and Doctors Hospital have three distinct profiles and serve distinct patient populations. However, all three hospitals have been able to leverage what began as registry participation to make great leaps forward in both clinical and operational performance.

Riverside Methodist Hospital, Columbus, Ohio

"Doctors, Grant and Riverside are all on Apollo. Doctors always used Apollo, since 1.0," laughs Mike, who began his career as a Cath lab nurse at Doctors. The three hospitals are on the same server but each has its own Apollo database. A fourth OhioHealth hospital, Grady, averages only one cath a day; they're currently analyzing whether such a small program has the need for a database.

"Each hospital is its own world," says Mike, describing the demographics of OhioHealth's CV programs. "Riverside is a suburban, tertiary hospital with over 1000 beds. They have a special executive-patients program. Grant is an inner-city hospital, a Level-1 trauma center. Thoracic Surgery at Grant is very busy, so they keep the Cath lab very busy. And Doctors is a community hospital, geared toward clinics, quite small by our standards with about 200 beds."

Doctors Hospital, Columbus, Ohio

Capturing Data "ASAP"

While the cultures of the OhioHealth hospitals vary, all promote an "as soon as possible" approach to data capture. Riverside, Grant and Doctors perform a combined total of over 12,000 catheterizations a year on average; managing the resulting information needs to be straightforward and seamless.

"OhioHealth management wanted the data out ASAP," recalls Mike. "They already understood the importance of the data. So when it was explained to them how data gets out as soon as possible, they said 'Let's use Witt and Apollo and get our data out right away.'"

"There is a policy at OhioHealth that physicians will not leave the lab until they are done with their reports," Mike says. "The next patient is not brought down until the doctor has finished reporting for the previous case. So the doctors enter the data right away. And with our systems it only takes about two minutes for them to get it all done." The physicians are fine with this policy because it isn't time-consuming and it has helped OhioHealth make remarkable strides in quality of care.

AVERAGE NUMBER OF CATHETERIZATIONS A DAY

Riverside Methodist Hospital – 37

Grant Medical Center – 9

Doctors Hospital – 4

Yearly total – over 12,000

"It takes a management that understands the importance of data and understands that if doctors don't document right away, it's going to delay reporting. It's going to delay billing. It's going to delay reimbursement," notes Mike. An enterprise-wide recognition of the critical role of cardiovascular data at OhioHealth has enabled end-to-end improvements, from billing cycles to door-to-balloon times.

Accelerating the Billing Cycle

Because CV procedures are among a hospital's costliest and may involve expensive devices, keeping track of all this is critical to a heart program's success. However, managing this data can become just as burdensome as clinical case details. OhioHealth has taken on the task of streamlining their billing—and thus accelerating their billing cycles.

"Riverside and Grant are using Apollo for their billing. The relevant Apollo data goes to our billing department. They're using the Apollo Inventory as well so everything needed is there and they can bill very quickly. The information comes out of Apollo, and it's sent out and billed within 24 hours," Mike says.

Running Reports to Identify Areas for Improvement and Reinforce Successes

Generating reports has been critical to clinical and operational improvements at OhioHealth. According to Mike, capturing data quickly and automatically has made it much easier to run reports and analyze the data.

"Our Apollo data is pulled in with admission information, billing, outcomes—then it's all matched up and examined. So we can review the information and say, this patient was here three days longer than he should have been. What happened? All this data is in one area where we can query out of it," explains Mike.

Management, physicians and staff are highly interested in what the data reveals, and internal reports are run frequently. "It's gotten to the point where some of the doctors are requesting very specific reports, for example, how many Taxus stents they've used. And then the length and how many of each length for Taxus stents. And there are monthly quality meetings to review what the reports show," says Mike.

Reporting is a big part of how OhioHealth operates, and running reports has never been easier. "With this [Apollo and Witt], we are quickly able to identify any trends that might be detrimental. And equally important, we can identify anything that might be positive so that we can build on that."

Reducing Door-to-Balloon Times

ACC/AHA practice guidelines door-to-balloon time goal is 90 minutes. All OhioHealth hospitals were under 90 minutes, but management wanted to get each facility under 60 minutes. Toward this end, OhioHealth instituted a STEMI alert policy.

STEMI Alert Procedure:

- When a patient comes in with any type of cardiac symptoms at all, an ECG is performed within two minutes
- If the patient shows ST elevation, the physician in the department calls a STEMI alert
- All staff comes in, they open up the Cath lab and the patient is prepped and moved to Cath within 10 minutes
- Meanwhile, all other cases are put on hold so Cath lab clinicians can get a diagnostic report to find out if balloon is necessary—within 15 minutes; the goal is to get the patient to the Cath lab within 10 minutes
- There is a minimized intake procedure for these cases: staff gets patient age, demographics as necessary, allergies and history within one minute

LUMEDX SOLUTIONS AT OHIOHEALTH

- Apollo Advance
  Clinical Data Repository
- Export to CathPCI Registry™ Module
- Export to STS Adult Cardiac Surgery Module
- Philips Witt Hemo Interface
- Billing and Inventory Module

"After we started the STEMI alerts and were using reporting, our reports that month showed all our hospitals were down to 60 minutes or lower, in some cases much lower. So our reporting catches what we're doing right, shows us that we're working properly," explains Mike. "We started doing this about two years ago—as a result we've had a dramatic drop in door-to-balloon time. We also have Stroke alert, and we've been doing that for the past year."

Mike says plans for the near future include automating the discharge data collection process. "Right now outcomes managers are the ones who do the discharge and this is the manual part, collecting other data. For example, if a PCI patient has to go to Surgery, it's manual data entry from that point. We'd like to get the outcomes managers to use a software program that can then interface so that their data can go directly into Apollo too."

Introducing Apollo and integrating systems has allowed physicians, clinicians and staff in CV do their jobs faster, better, smarter. This in turn helps them achieve OhioHealth's mission: to improve the health of those they serve.

About LUMEDX: **With over 500 heart center clients worldwide, LUMEDX is the market leader in fully integrated cardiovascular information and imaging systems and the No. 1 independent integrator of cardiology information solutions. LUMEDX offers the most proven, comprehensive package of clinical information tools, cardiovascular products, and services to help medical institutions enhance quality of patient care, reduce costs, streamline workflow, increase patient volume, and grow revenue.**