Case Study

Centricity™ Cardio Enterprise[1] at Licking Memorial Hospital

Reduced echo report turn-around time from one week to just over a day, targeting expedited pre-surgical clearance, reduced length of stay, and improved patient satisfaction

The Challenges

Licking Memorial Hospital, a 225-bed hospital in Newark, Ohio, with 25 coronary beds and more than 7500 surgical procedures a year, needed faster and more predictable report turnaround time for echo studies.

In addition to being an important study type in cardiology, echo exams are frequently ordered as part of a pre-surgical work-up to clear certain patients for urgent surgery. Expediting that work-up and making it more predictable can benefit patients and their families, in addition to helping enable faster treatment decisions be a reality.

The Solution

Licking Memorial Hospital's echo department chose to partner with GE Healthcare to streamline and automate their legacy manual workflow to expedite and improve their reading.

PRODUCTS:
Centricity Universal Viewer[2] and Centricity Cardio Workflow

SERVICES:
Workflow analysis, project management, data migration, education & training, admin report creation, Crystal Reports training

ECOSYSTEM:
Multi-vendor echo scanners, MEDITECH® EMR integration with orders in & HL7®/PDF results out, customer-supplied VM environment.
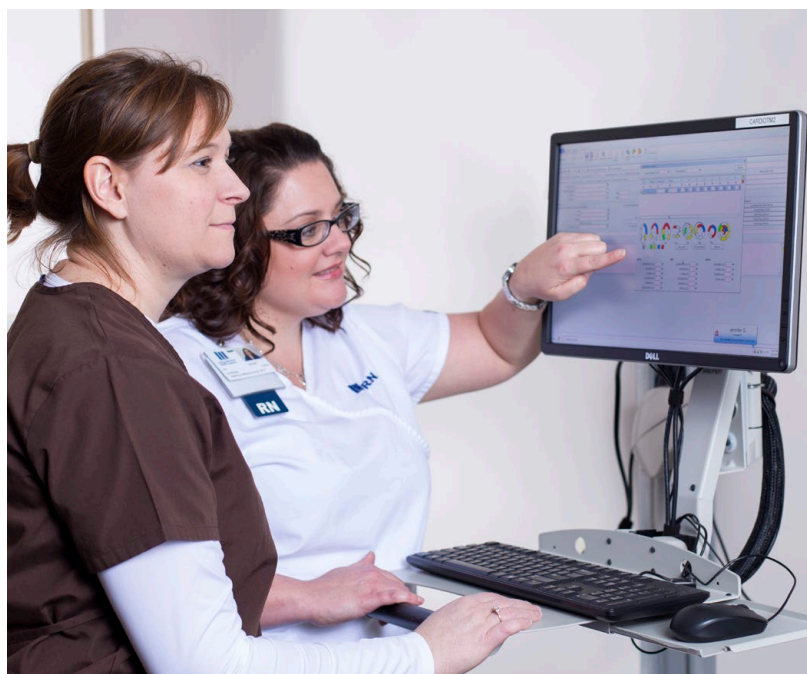
Challenges

Manual, complex and inefficient reporting process

Long delays in reporting times

Highly variable report turn-around times

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1 Centricity Cardio Enterprise is comprised of Centricity Universal Viewer and Centricity Cardio Workflow.
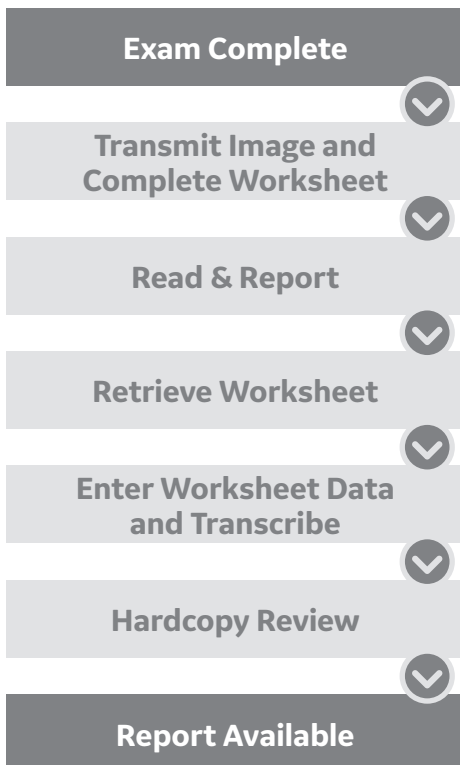
2 At the time of the study, Licking Memorial Hospital had Centricity Cardio Imaging installed. They have since upgraded to Centricity Universal Viewer.
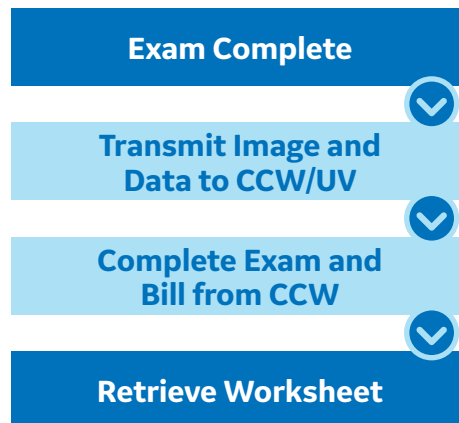
Enterprise Workflow

Licking Memorial Hospital streamlined workflow by eliminating transcription, dictation, preliminary review and worksheet usage, and automated the transfer of images and measurements; the average report turnaround time plummeted to just over a day and became more predictable. Now, the workflow involves four main steps as follows:

1. **Sonographer** completes the examination with the patient

2. **Sonographer** transfers images and structured data to Centricity Cardio Enterprise

3. **Sonographer** marks study ready for review, assigns, and exports data for billing into EMR (new task)

4. **Cardiologist** reads the case, completes the report, signs electronically and routes the report to the EMR
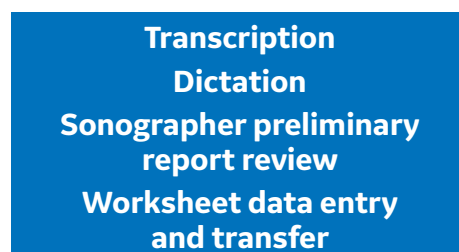
Legacy Workflow

| Exam Complete |
| Transmit Image and Complete Worksheet |
| Read & Report |
| Retrieve Worksheet |
| Enter Worksheet Data and Transcribe |
| Hardcopy Review |
| Report Available |

New Workflow

| Exam Complete |
| Transmit Image and Data to CCW/UV |
| Complete Exam and Bill from CCW |
| Retrieve Worksheet |

Eliminated Tasks

Transcription
Dictation
Sonographer preliminary report review
Worksheet data entry and transfer

"Centricity Cardio Enterprise helps us ensure clear, accurate and comprehensive documentation, improving clarity of the "patient's story" within the medical record. It enables us to share reports more efficiently with involved caregivers. By providing the information they need to make faster, more informed healthcare decisions for the patient, we can help enhance overall patient care and satisfaction."

Jennifer L. Gallis
RN-BC Project Coordinator
Cardiovascular Services

Outcomes[3]

5.8
day reduction
in average report turn-around time to 1.3 days (35% better than ASE recommendations[4])

5.0
day reduction
of interquartile variance, from 5.9 to 0.9 days, indicating more predictable report turn-around time[5]

Eliminated error-prone
dictation, transcription, and manual data entry

3 Licking Memorial Infographic JB42777XXa(1) and Case Study September 2016 JB42777XX

4 American Society of Echocardiography http://www.asecho.org/wordpress/wp-content/uploads/2013/05/Quality-Echo-Lab-Operations.pdf

5 25th to 75th quartile spread reduction indicates the data has become more consistent

Turn-around Days[6]

	Legacy Workflow (2015:Q1)	New Workflow (2015:Q1)
N	43	18
Mean	7.1	1.3
Median	5.9	0.5
Std.	4.8	3
25th Percentile	3.1	0.1
75th Percentile	9	1

By automating worklists and measurement transfer from the modalities into Centricity Cardio Enterprise, sonographers no longer need to write results on a worksheet; further, the manual step of verifying measurements entered in the reports is no longer required. No more hardcopy reviews. When the physician report is finalized, it can be sent immediately with the billing report to the MEDITECH EMR.

The sonographer's measurements can pre-populate the physician's report, which then only takes the physician a minimum time to complete the reports. No more dictation, no more transcription, and minimal typing.

Today, the automated flow of data simplifies work for the staff and allows them to spend more time caring for patients. In addition, the variance improved, meaning echo report turnaround time became more predictable.

With many treatment decisions that depend on echo studies, the downstream impact of faster and more predictable reports is easy to understand.

About Licking Memorial Hospital

Licking Memorial Health Systems (LMHS) is a not-for-profit health care organization dedicated to the mission of improving the health of the community. Under the leadership of a volunteer Board of Directors, LMHS consists of Licking Memorial Hospital, a multi-specialty physician corporation called the Licking Memorial Health Professionals and the Licking Memorial Health Foundation.

Licking Memorial Hospital remains responsive to the healthcare needs of the Licking County area that it has served since 1898. The 227-bed facility offers a full spectrum of quality patient care services, from emergency medicine to home health care. In addition, Licking Memorial offers a number of specialized medical services unique for a hospital of its size. Comprehensive services are available in areas such as cancer, heart, maternity and mental health.

225+
Beds

25
Coronary Beds

7781
Surgical Procedures

Newark
Ohio

Imagination at work

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