

How to Maximize Your Lab's Value to Cardiac Care



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Today's Presentation

**This presentation is sponsored by
Siemens Healthcare Diagnostics**

Citizens Medical Center – Victoria, TX



Citizens Medical Center – Victoria, TX

Founded 1956

344-Bed Acute Care Hospital

Victoria, South Texas

Not-For-Profit Community Owned Hospital

Referral Population of 140,000



**Sophistication of A Big City,
With The Personal Care Of A Small Town Facility**



**Performed 1.5 Million
Laboratory Tests**

Performed 10,000 Surgeries

Treated 30,000 Emergencies

Provided 60,000 Diagnostic Exams

Citizens Medical Center – Victoria, TX

DNV Accredited

Thomson Top 100 Hospitals 2006-2008

Society of Chest Pain Center Accredited

DNV Certified Primary Stroke Center

American College of Surgeons Commission on Cancer
Recognition

American Society for Metabolic & Bariatric Surgery Center
of Excellence Recognition

Homecare Elite Top 500 Home Health Agency

Texas HealthCare Quality Improvement Award



How to Prepare Labs To Maximize Their Value To Cardiac Care

hsTroponin I: A move from *resistance* to *reliance*

Who Are The Experts?

Cardiologists

ER Physicians

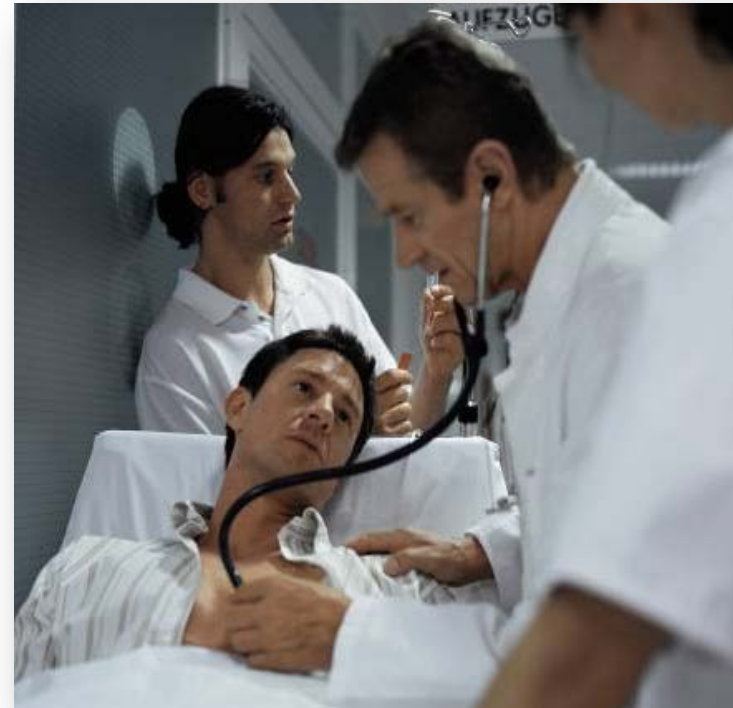
Cardiology Nurses

Cardiopulmonary Technologists

Pathologists

Laboratory Management

Chemistry Technologists



What Is The Data?

Patient symptoms

EKG results

Laboratory biomarkers

Turn-around-times

Accreditation standards



Embracing Change

Is POC The Answer?

The challenges

The process

The results

The Challenges

Turn-around-times: 60 minutes to 45 minutes

Workload blended from all locations

“Troponitis”

Staff awareness/knowledge

Consistency in biomarker orders

The Process

1. Research rapid test methods
2. Invest in a point-of-care method: Citizens chose 2 Siemens Stratus CS Instruments
3. Correlate POC method with the inpatient method
4. Change the workflow process
5. Careful placement of the POC Instrument
6. Update risk assessment standards



Educate

Educate

Educate

The Results

Improved turn-around-times:

- 45 minutes (prior to Stratus CS using in-house high-sensitivity Troponin I)
- 20 minutes (post Stratus CS)

Order to Results and Door to Results

- Standards met/achieved

Stratus CS biomarkers

- Included in all ER cardiac work-ups

Minimum of 2 sets of biomarkers consistently ordered

- Troponin I doubling or delta change

Phone contact to ER personnel at Troponin I of 0.10 ng/mL

- Previously 0.50 ng/mL (pre-Stratus CS)

Adding Value to the Meaning of Reported Results

Pre Stratus CS Ranges

- Critical telephone call at 0.50 ng/mL

Troponin I

- Normal <0.03 ng/mL
- **Indeterminate** 0.03-0.50 ng/mL
- Abnormal >0.50 ng/mL

CK-MB

- Normal 0.6-6.3 ng/mL
- Abnormal >6.3 ng/mL

Post Stratus CS Ranges

- Critical telephone call at 0.10 ng/mL

Troponin I

- Normal < 0.03 ng/mL
- Abnormal \geq 0.03 ng/mL
- **Low Risk:** 0.03 – 0.09 ng/mL
- **Intermediate Risk:** 0.10 – 0.49 ng/mL
- **High Risk:** \geq 0.50 ng/mL

CK-MB

- Normal 0.6-6.0 ng/mL
- Abnormal >6.0 ng/mL

Common Question:

How Do I Adjust The Reference Ranges?

Evidence Based Guidelines

- European Society of Cardiology (ESC) and the American College of Cardiology (ACC)
- NACB (2007) recommends a single troponin cutoff at the 99th percentile of a normal population
- JAMA, Nov. 2001; 286:2405 – 2412. *Ability of Minor Elevations of Troponin I and T to Predict Benefit from an Early Invasive Strategy in Patients with Unstable Angina and Non-ST Elevation Myocardial Infarction Results from a Randomized Trial*, Morrow, DA, Cannon, CP, Rifai, N, Braunwald, E
- CAP Today, July 2012: VOI.36 No.7. *To see troponin's future, look at the present.* Karen Titus

To Add Value Become Familiar With The Guidelines

What Does Your Future Hold?

**Resistance and challenges:
Approximately 18 months**



Process change and education have lead to Reliance

Maximizing Lab's Value to Cardiac Care

1. Are you prepared to create a strategy for implementing change?
2. Does it include re-evaluating the current method for performing cardiac markers?
3. Does it include a point-of-care platform?
4. Does it require adjustments to reportable ranges?
5. How can you utilize the pathologists?
6. Where do you as a sales team and experts fit in?

Maximizing Lab's Value to Cardiac Care

Labs should engage their experts



Labs need to identify champion(s)



Labs should show their patient data



Maximizing Lab's Value to Cardiac Care

Engage your vendor's sales team



Recognize your sales team and product experts as partners and speakers



Promote your Lab's value



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Maximizing Lab's Value to Cardiac Care

Identify and evaluate outliers for research and explanation

Stay informed of test changes

Utilize knowledge from your sales team for industry updates

Prepare To Add Value!

Participate and help guide cardiac care with:

Knowledge

Involvement

Reliability

Strive For Quality Outcomes

High Sensitive Troponin – Risk Stratification

Instrument That Harmonizes To Core Lab

Use Guidelines 99% 10% CV

American Heart Association

American College Cardiology

Society For Chest Pain

Peers - Dr. Fred Apple Score Card

Peers - Dr. Rob Christenson



QUALITY

▪ Patients

Product Overview

Stratus[®] CS

Stratus[®] CS Acute Care Diagnostic System



Benefits

Near Patient (POC) & Lab Testing

Ease of Use

Less Hands-on/ Walk Away

Quality Results in <14 minutes

Harmonization with Laboratory

Assay Menu

- hs cTnI
- Myoglobin
- CK-MB
- β hCG
- D-dimer
- NT-proBNP
- CardioPhase hsCRP



POC Cardiac

Fast, accurate, laboratory-quality cardiac testing results with a proven high-sensitivity troponin at the point of care to maximize cardiac performance metrics