How to Maximize Your Lab’s Value to Cardiac Care

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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

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<thead>
<tr>
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<th>The Process</th>
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<tbody>
<tr>
<td>1.</td>
<td>Research rapid test methods</td>
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<td>2.</td>
<td>Invest in a point-of-care method: Citizens chose 2 Siemens Stratus CS Instruments</td>
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<td>3.</td>
<td>Correlate POC method with the inpatient method</td>
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<td>4.</td>
<td>Change the workflow process</td>
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<td>5.</td>
<td>Careful placement of the POC Instrument</td>
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<td>6.</td>
<td>Update risk assessment standards</td>
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Educate

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# 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 > 0.03 ng/mL
  - **Low** Risk: 0.03 – 0.09 ng/mL
  - **Intermediate** Risk: 0.10 – 0.49 ng/mL
  - **High** Risk: > 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
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
**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 cTnl
- Myoglobin
- CK-MB
- βhCG
- D-dimer
- NT-proBNP
- CardioPhase hsCRP
Fast, accurate, laboratory-quality cardiac testing results with a proven high-sensitivity troponin at the point of care to maximize cardiac performance metrics.