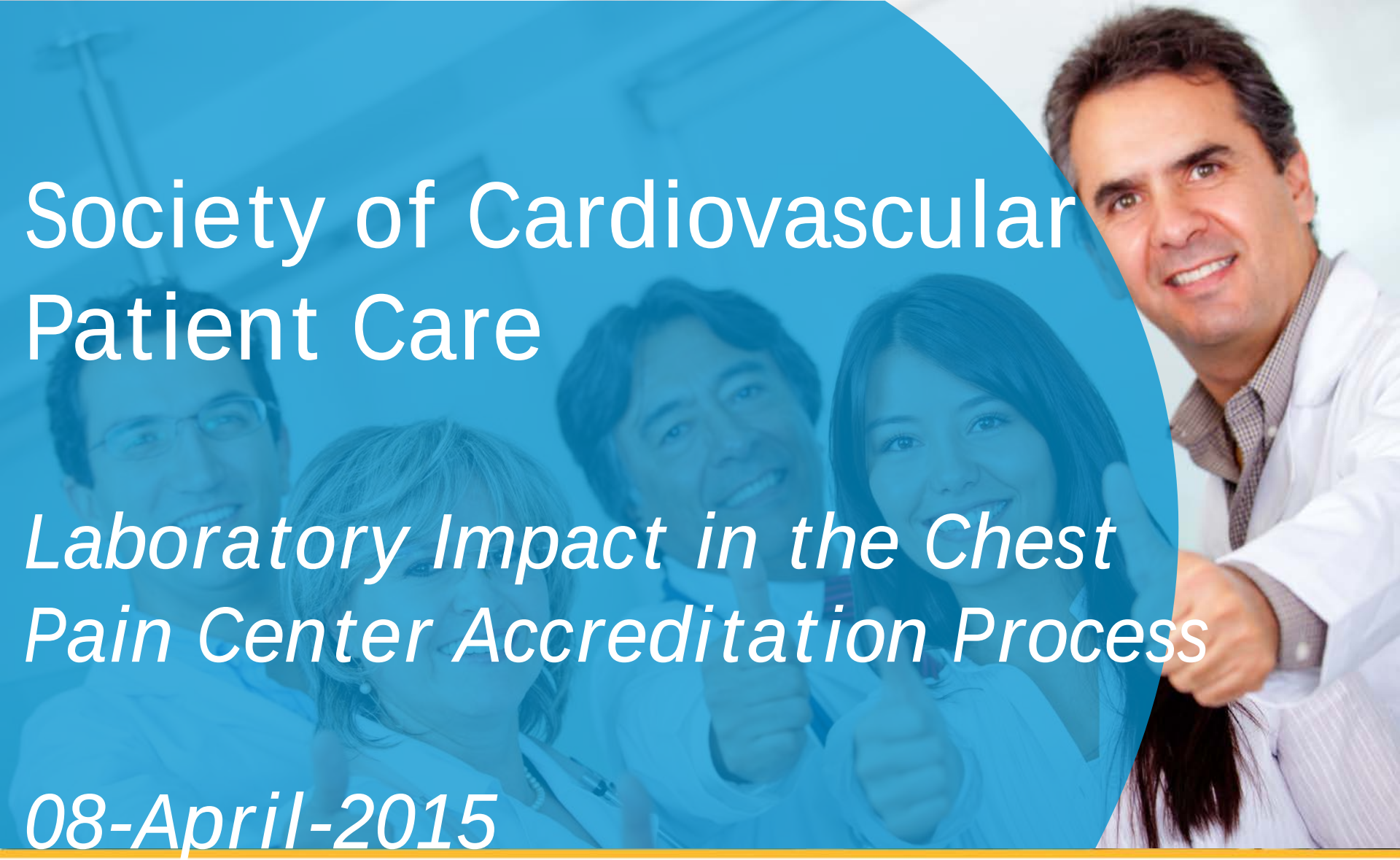


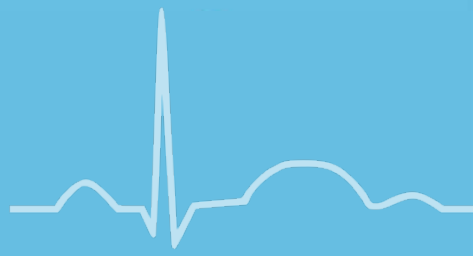
Society of Cardiovascular Patient Care

Laboratory Impact in the Chest Pain Center Accreditation Process

08-April-2015

SOCIETY OF CARDIOVASCULAR PATIENT CARE

Speaker Overview



Ruth Cantu, BSN, RN

Accreditation Review Specialist

There are no disclosures

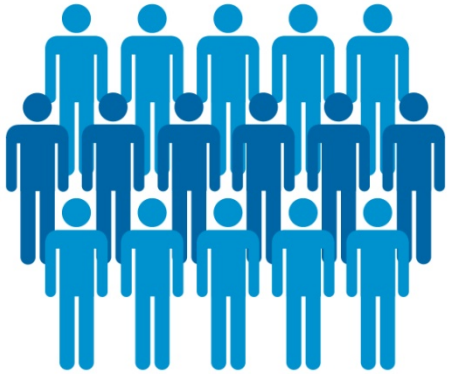
Objectives

- Overview of Society of Cardiovascular Patient Care (SCPC)
- Review the recent updated of the Myocardial Infarction (MI) Definition and Non-ST elevation MI guidelines
- Discuss the SCPC Troponin Turn-around-Time (TTAT) documentation requirements for accreditation
- Future Accreditation Program overview

What we know

Coronary Heart Disease is the #1 disease in the United States

Get the Facts

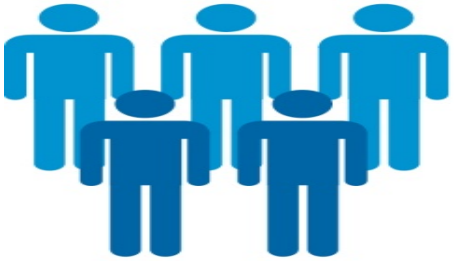


16.3 million people over age 20 in the U.S. have some form of **coronary heart disease**

Cardiovascular disease is the leading hospital discharge diagnostic group (DRG 390 – 459)

Get the Facts

5-8 million patients present to the Emergency Department (ED) annually for **chest pain**



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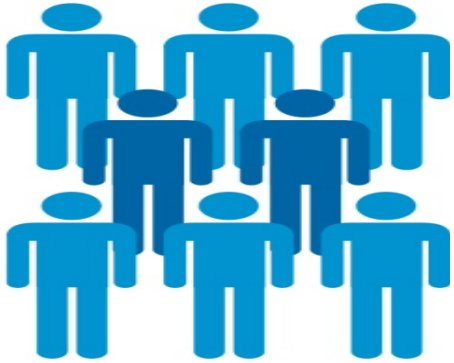


Mission & Values:

SCPC was developed to share best practices that improve outcomes of patients with suspected or acute cardiovascular disease through innovative cross-disciplinary processes.

In short, to bring science to the bedside…

Collaboration

SCPC shares with its facilities the goal of early diagnosis of myocardial infarction (MI) and improvement in patient outcomes through education, accreditation and process improvement.

Through the ***process of accreditation*** we help break down barriers and facilitate communication to achieve successful continuum of care.

SOCIETY OF CARDIOVASCULAR PATIENT CARE

We Learn from Our Accredited Facilities

Our >900 hospitals have shared their:

Accreditation Programs

Combined communities of excellence

Accreditation Partnerships

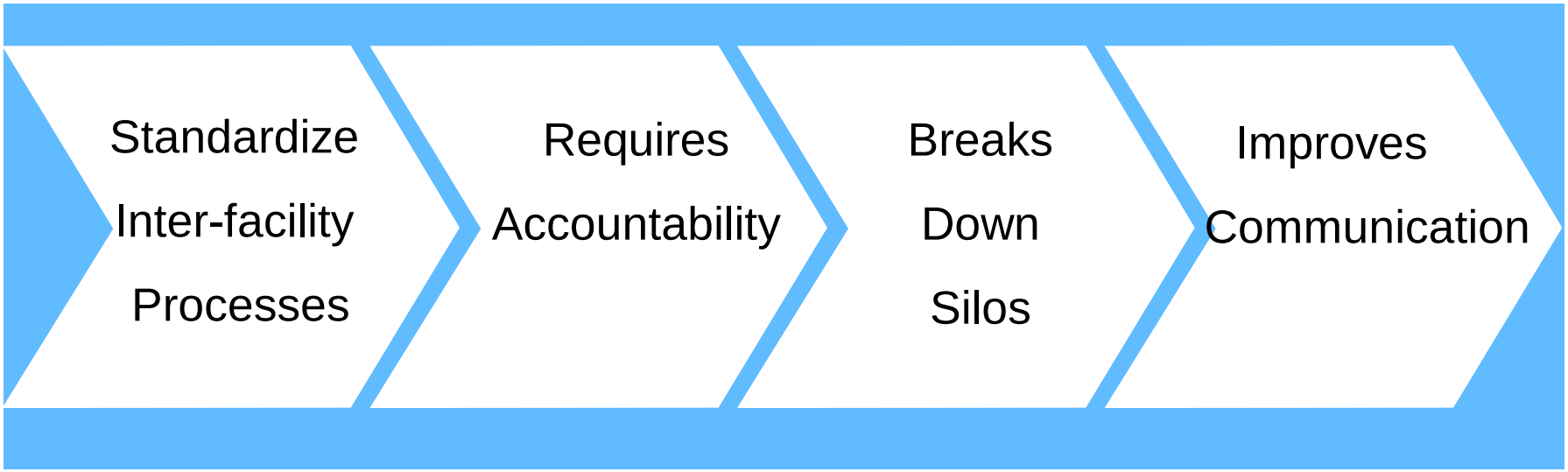
American Heart Association
ACCREDITATION
Meets standards for
Heart Attack Receiving Center

American Heart Association
ACCREDITATION
Meets standards for
Heart Attack Referring Center

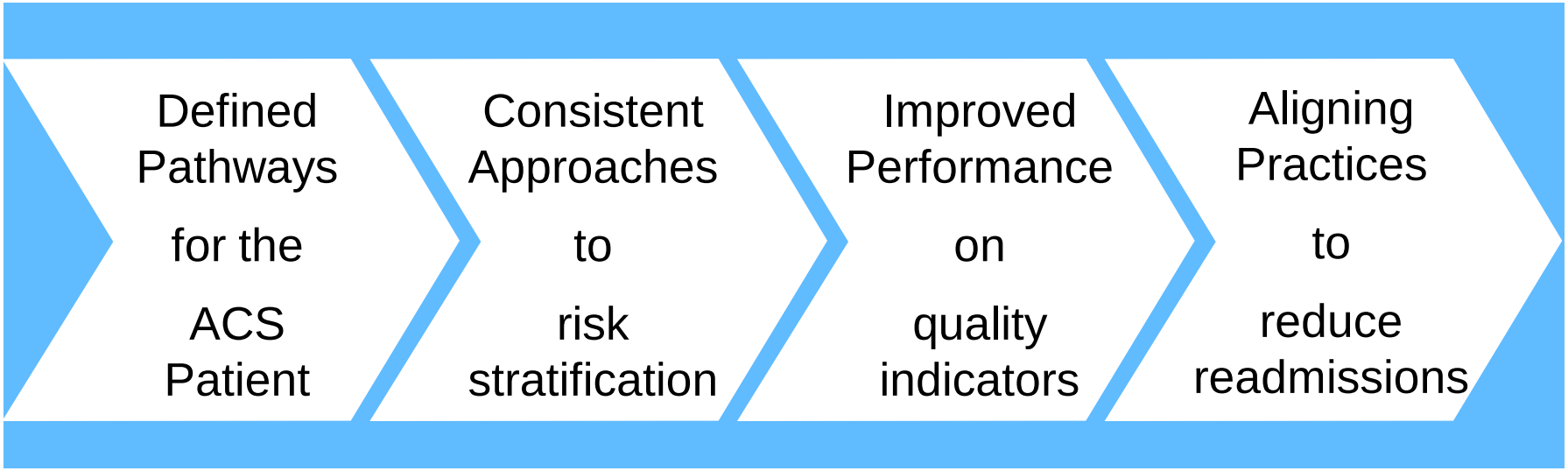
MISSION: LIFELINE®

Combined communities of excellence

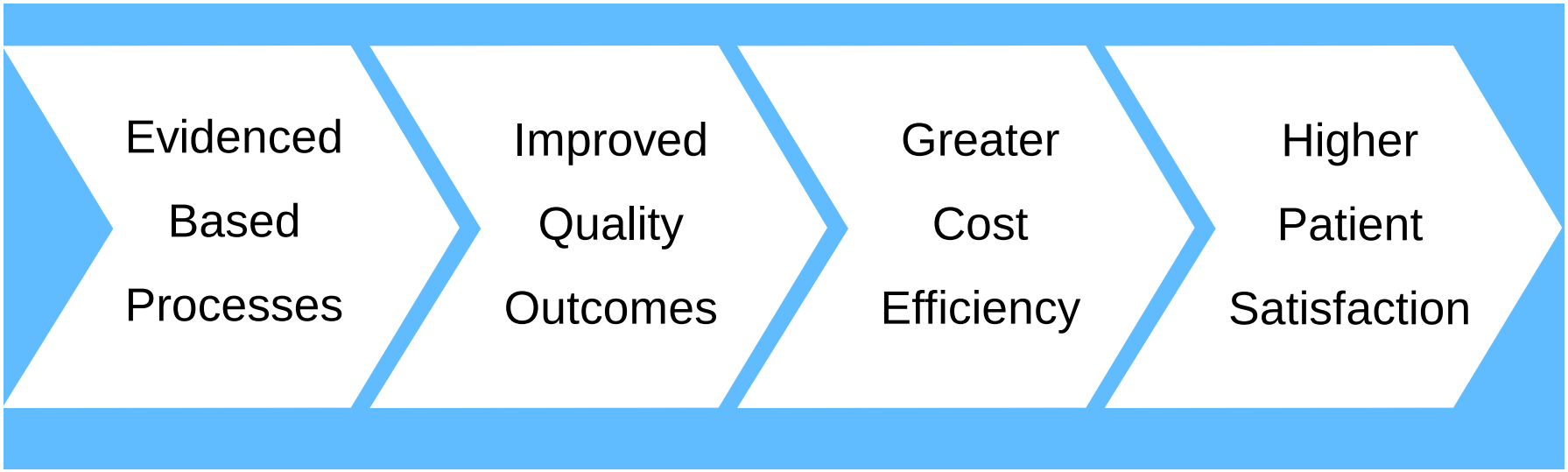
Accreditation Benefits



Accreditation Supports



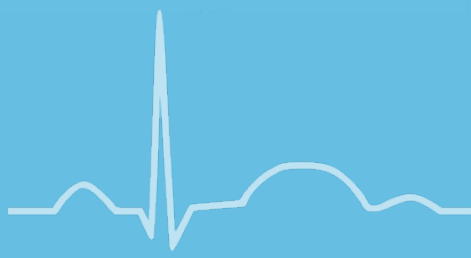
Accreditation Drives



Background: Chest Pain Accreditation

- Accreditation tool is a strategic planning document
- Assessment of all Acute Coronary Syndrome (ACS) conditions
- Currently defined as “cycles”
  - incorporates expectations from previous cycles
  - current Chest Pain (CP) is “Cycle IV”
- Emphasis on education and annual reinforcement
- Metrics used to validate ongoing performance improvement
- Future: will change to “versions”
  - updated in a more timely manner versus every 3 years

Definitions for Treating MI - Reperfusion

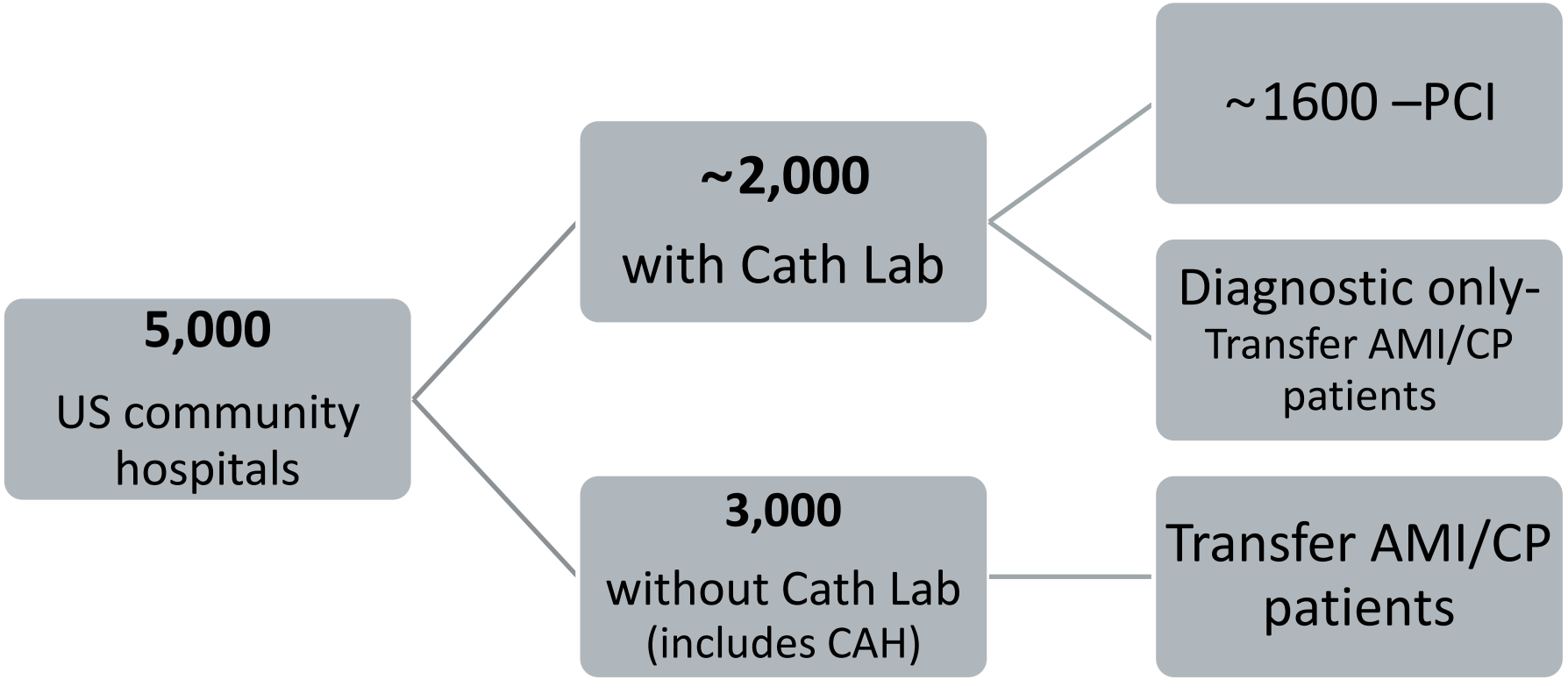


- **Percutaneous Coronary Intervention (PCI)** – most frequently used invasive method of treating the narrowing, or stenosis, of coronary arteries; performed in cardiac catheterization facilities (cath lab) at acute care hospitals
- **Primary PCI (PPCI)-** also known as (aka) emergency angioplasty, is a life-saving intervention performed during a heart attack (STEMI)
- **Non-primary PCI -** aka: elective angioplasty, scheduled intervention to relieve the narrowing of the artery; goal of preventing a heart attack from occurring in the future

Key Point: All laboratorians should be very familiar with the protocols and facility diagnostic capabilities (cath lab, PPCI, thrombolytics, transfer) to address acute cardiac events.

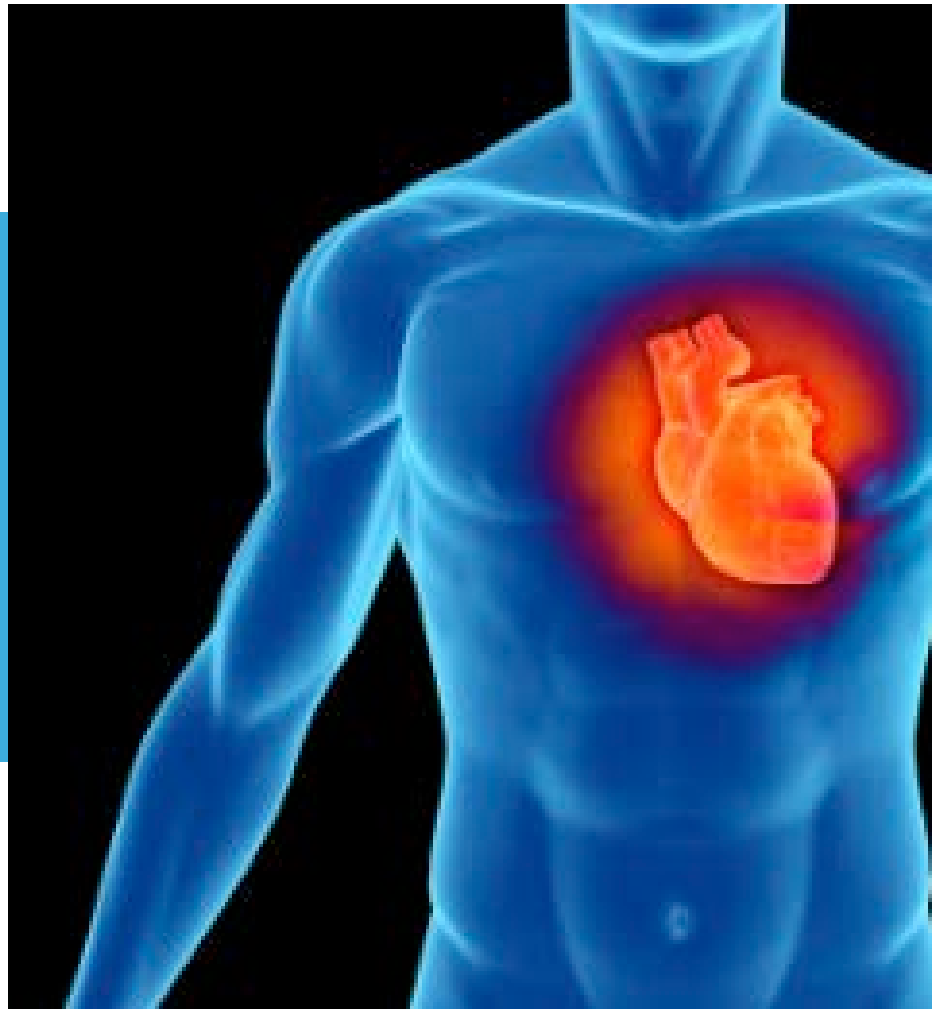
Hospital Statistics

~ 800 (72% PCI)
ASCPC



Source: American Hospital Association & ACC/NCDR/Cath-PCI

HEMODYNAMIC PROCESSES



Early Heart Attack Care (EHAC)

Heart attacks have beginnings

- **EHAC shifts the focus from treatment towards prevention**
- **EHAC is not early intervention for the acute onset of symptoms--it is early warning and prevention of subtle, early symptoms, and places individuals in grave danger of heart muscle damage or death**

Adults tend to ignore or deny symptoms

- Mild chest pain
- Fatigue
- Shortness of breath
- Stuttering chest discomfort
- Prodromal symptoms

Acute Coronary Syndrome (ACS)

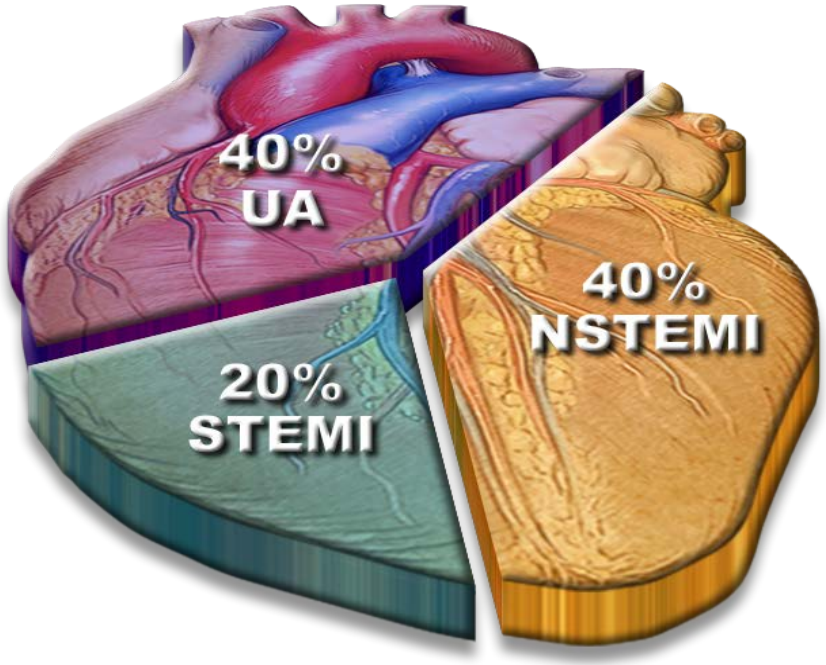
ACS comprises three conditions: ST-elevation Myocardial Infarction (MI or STEMI); Non-ST-elevation MI (NSTEMI) and Unstable Angina (UA)

Estimated 5-8 million patients present to the ED annually for chest pain

20-25% diagnosed with Acute Coronary Syndrome

2,000,000

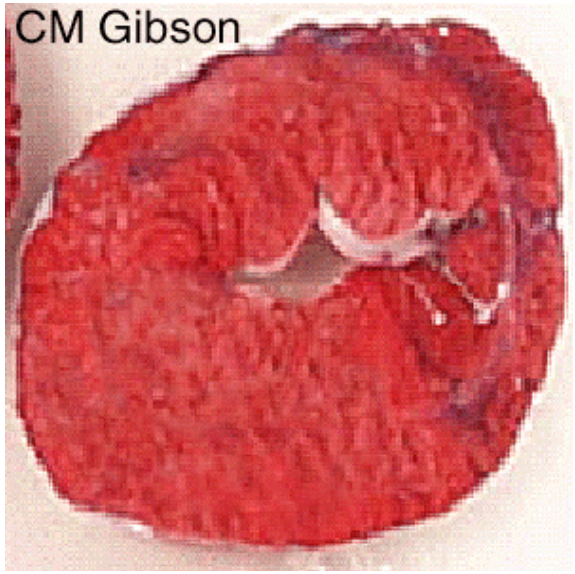
Low Risk/Observation Population:
The other 6,000,000+ people



Source: American Heart Association
Learn and Live

Estimated In-hospital Mortality by Door-to-Reperfusion Times

TIME (minutes)	Adjusted Mortality*
15	2.9 (2.8–3.1)
30	3.0 (2.9–3.2)
60	3.5 (3.4–3.6)
90	4.3 (4.2-–4.4)
120	5.6 (5.4–5.7)
180	8.4 (8.2–8.7)
240	10.3 (10.0–10.7)



Adjusted for age, sex, race, findings on presentation, medical history, procedural characteristics, angiographic findings, and hospital factors

There is no ***floor*** to the ***mortality reduction*** that can be achieved by ***reducing time to treatment***

and

Each 30 min. of delay translates into a 7.5% increase in relative risk of 1-yr mortality.

Any delay in D2B time associated with increased in-hospital mortality
Rathore SS, et al. *BMJ* 2009; 339:b1807.
Yale University School of Medicine; ACC-NCDR

Door to Reperfusion Updates

Study New England Journal of Medicine – Sept 2013

- *CathPCI registry data / 515 hospitals / 2005 – 2009*

Increase proportion pts whose treatment met the guideline fr 59.7% to **83.1%**

Analysis of 100,000 pts/4-yr, median time fell from 83min to **67** min

Key Concerns:

- Treatment still late from symptom onset
- Average of 2 hours from symptom onset to initiation of medical contact
- 40% did not contact EMS

"Time is muscle…and the sooner treatment begins, the less muscle is damaged, which preserves functionality of the heart and quality of life."

New Updated STEMI Guidelines

2013 ACCF/AHA Guideline for the Management of ST-Elevation Myocardial Infarction

Patrick T. O'Gara et al

Circulation. published online December 17, 2012

- Key Points:
  - Major and comprehensive revision of the prior 2004 Guideline
  - Concept and terminology changes: "Door to Balloon (Needle)" replaced with "first medical contact (FMC) to device" time
  - System goals of EMS-FMC-to-device = 90 minutes or less
  - For transfers goals of EMS-FMC-to-device = 120 minutes or less
    - and D1D2R = 90 minutes
  - For transfers goals is "Door in-Door out" = 30 minutes or less
    - Fibrinolytic therapy goal = 30 minutes

Guideline Updates:

"...As the field continues to absorb the guidelines, panelist and others advised laboratorians to take time to know the documents so they can have constructive discourse about them with physicians..."

Clinical Lab News, Feb 2014, vol 40, no 2

New Updated 2012 MI Definition

Third Universal Definition of Myocardial Infarction (MI)

Kristian Thygesen, Joseph S. Alpert, Allan S. Jaffe, Maarten L. Simoons, Bernard R. Chaitman and Harvey D. White
Circulation. published online August 24, 2012

Key Points: First worldwide consensus document

- **TROPONIN (I or T) - preferred** biomarker overall
- Diagnosis of acute MI-**detection of a rise and/or fall**
- …99th percentile is ***designated*** **as the decision level** for **the diagnosis of MI** and must be determined for each specific assay with appropriate quality control in each laboratory
  - Assays with CV >20% at the 99th percentile URL should not be used
  - Blood samples for the measurement of cTn should be drawn on first assessment and repeated 3– 6 h later
  - Updated definitions for five different types of MI to include post-PCI and research

CPC v5: Troponin Definitions Made Easy

Coefficient of variation –

When the test is run multiple times on the same sample how frequently do you get the same result? The standard answer is rarely, if ever.

So in real world terms, this is measured by running the sample at least 20 times and identifying the % of variation within that set of results.

The 3rd Universal of MI allows from 10% to 20%

99th percentile –

Troponin is fairly unique as one of the few analytes where a 99% reference range is recommended.

The reason for this recommendation is that the goal of early prediction is to pick up that result as early in the elevation cycle as possible.

In the case of **Analyzer X** the published 99th % is 0-0.07 ug/, meaning that when 100 "normal" patients with heart disease were tested 99 of the results fell between 0 and 0.07. Results outside that range would then be considered "positive".

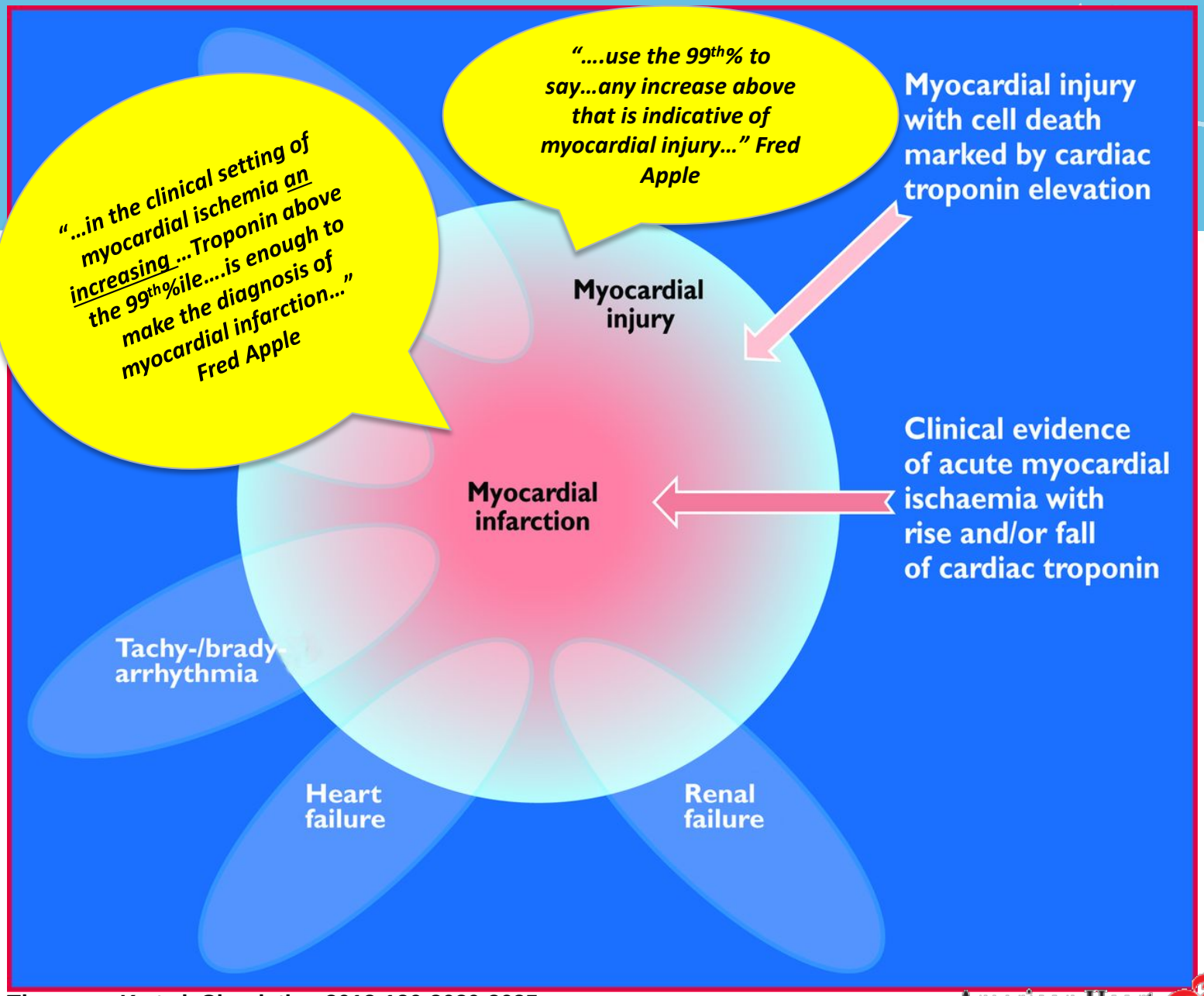
Understanding of the 99th % ile

Dr. Fred Apple:

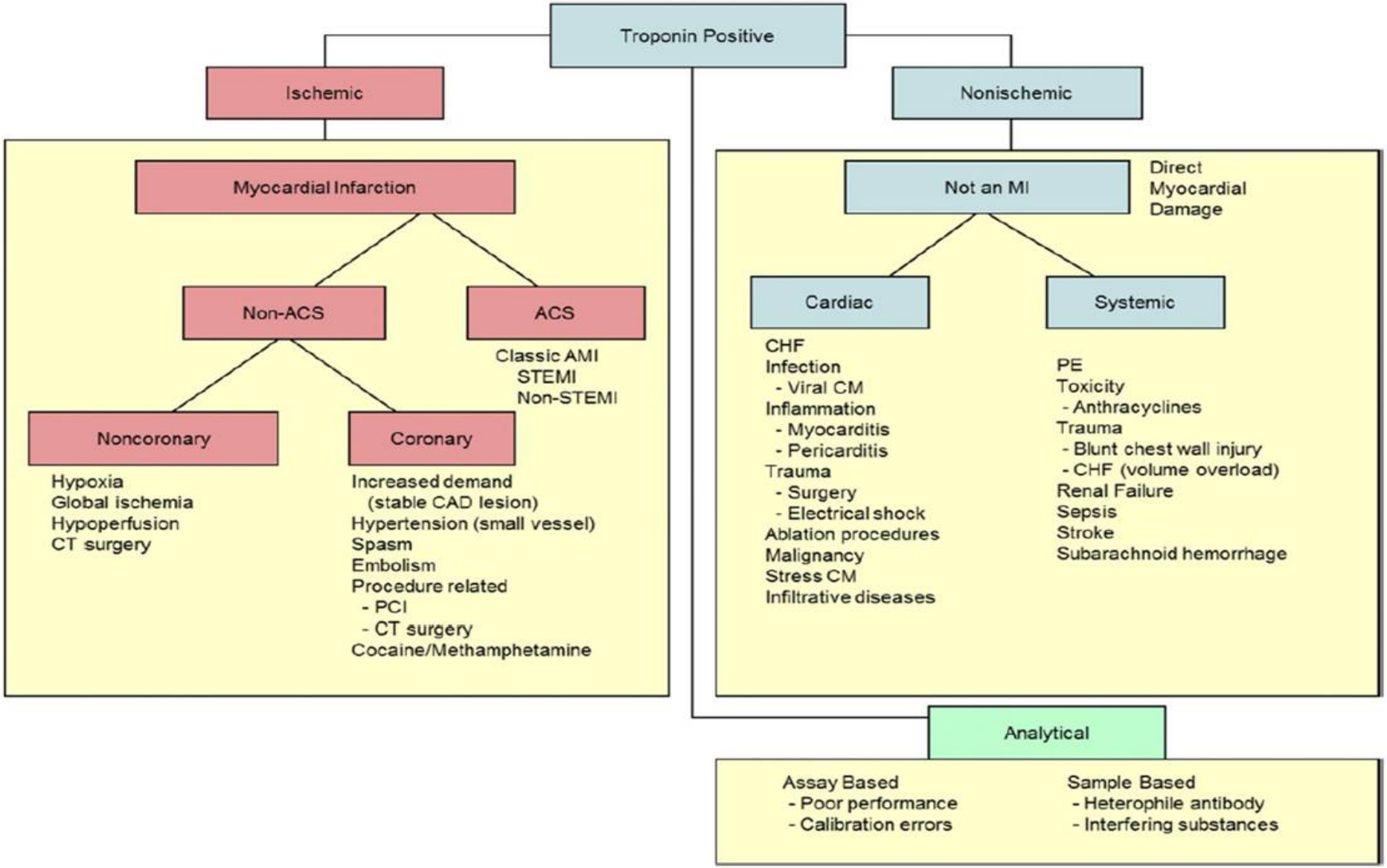
Currently, the guidelines are predicated on the 99th percentile of cardiac troponin, and we use that 99th percentile first to say, any increase above that is indicative of myocardial injury, number one.

Secondly, we use that cutoff to say that in the clinical setting of myocardial ischemia and an increasing cardiac troponin above the 99th percentile, those two criteria are enough to make the call of a diagnosis of myocardial infarction.

Clinical Chemistry PODCAST – May 2009 with Dr. Fred Apple –Professor of Laboratory Medicine in the Department of Laboratory Medicine and Pathology at the University of Minnesota and Medical Director of Clinical Laboratories and the Clinical Chemistry and Toxicology Laboratories at Hennepin County Medical Center



Thygesen K et al. Circulation 2012;126:2020-2035



ACCF 2012 Expert Consensus Document on Practical Clinical Considerations in the Interpretation of Troponin Elevations. (2012). Journal of the American College of Cardiology, 60 (23), 2012.

2014 Non-ST-Elevation ACS Guideline

Class I

- **Cardiac-specific troponin (troponin I or T when a contemporary assay is used) levels should be measured at presentation and 3 to 6 hours after symptom onset in all patients who present with symptoms consistent with ACS to identify a rising and/or falling pattern. *(Level of Evidence: A)***
- **Additional troponin levels should be obtained beyond 6 hours after symptom onset in patients with normal troponins on serial examination when electrocardiographic changes and/or clinical presentation confer an intermediate or high index of suspicion for ACS. *(Level of Evidence: A)***
- **If the time of symptom onset is ambiguous, the time of presentation should be considered the time of onset for assessing troponin values. *(Level of Evidence: A)***

Class III: No Benefit

- **With contemporary troponin assays, creatinine kinase myocardial isoenzyme (CK-MB) and myoglobin are not useful for diagnosis of ACS. *(Level of Evidence: A)***

Amsterdam EA, Wenger NK, Brindis RG, et al. 2014 AHA/ACC Guideline for the Management of Patients With Non–ST-Elevation Acute Coronary Syndromes: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines.*J Am Coll Cardiol.* 2014;64(24):e139-e228. doi:10.1016/j.jacc.2014.09.017.

Consensus Document

Journal of the American College of Cardiology
© 2012 by the American College of Cardiology Foundation
Published by Elsevier Inc.

Vol. 60, No. 23, 2012
ISSN 0735-1097/$36.00
http://dx.doi.org/10.1016/j.jacc.2012.08.969

EXPERT CONSENSUS DOCUMENT

ACCF 2012 Expert Consensus Document on Practical Clinical Considerations in the Interpretation of Troponin Elevations

A Report of the American College of Cardiology Foundation Task Force on Clinical Expert Consensus Documents

Developed in Collaboration With the American Association for Clinical Chemistry, American College of Chest Physicians, American College of Emergency Physicians, American Heart Association, and Society for Cardiovascular Angiography and Interventions

New Updated 2012 MI Definition – Follow-up Article

Clinical implications of the Third Universal Definition of Myocardial Infarction

White HD, Thygesen K, Alpert JS et al

Heart 2013;00:1–9. doi:10.1136/heartjnl-2012-302976

Summary:

- Comparative update from previous 2000 and 2007 Universal Definitions to the 2012 Third Universal Definition of MI
- Overview of the recommendations by category with a focus on clinical implications and practice considerations

"The new MI definition has important changes, which have been achieved by international consensus. It is hoped that they new definition will be embraced worldwide and be used to improve patient care."

New Updated 2012 MI Definition – Follow-up Article

How to Use High-Sensitivity Cardiac Troponins in Acute Cardiac Care
Kristian Thygesen et al
European Heart Journal doi:10.1093/eurheart/ehs154 PDF online 2012

Summary Regarding Use of hsCardiac Troponin in Clinical Routine:

- Use 99th%ile concentration
- Serial testing…a minimum change of >20% in follow-up testing is required
- Blood sampling …admission and 3 h later…repeated 6 h after admission in patients of whom the 3 h values are unchanged but…clinical suspicion of AMI is still high
- Other markers, such as myoglobin or creatine kinase MB no longer needed

New Updated 2012 MI Definition – Follow-up Article

Cardiac Troponin Serial Ordering Recommendations: For Today and Tomorrow

Sara Love, PhD and Fred Apple, PhD

Clinical Lab News, May 2014, vol 40, no. 5

Summary:

- Implementation practices by facility addressing updated 2012 MI definition

"….serial cTn ordering is a critical component of acute MI diagnosis readily understood in terms of timing, frequency and duration of cTn measurements…"

New Updated 2014 Non-ST-Elevation ACS

2014 AHA/ACC Guideline for the Management of Patients With Non–ST-Elevation Acute Coronary Syndromes

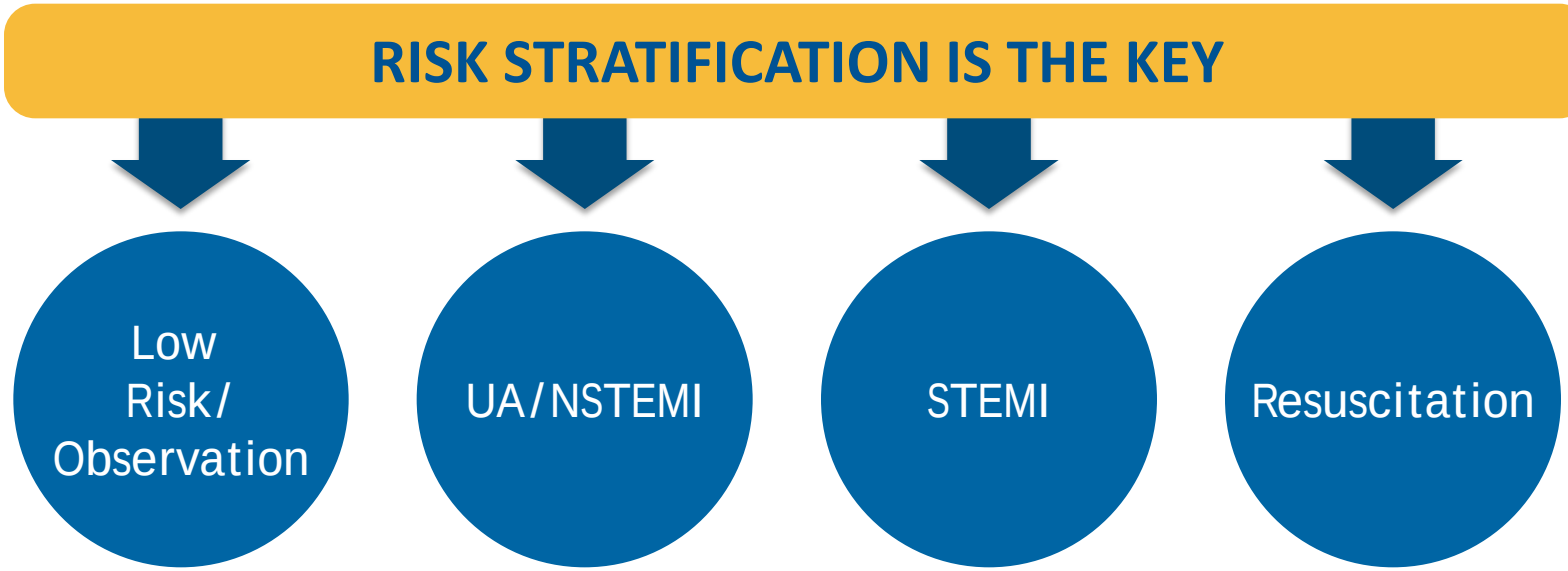
Amsterdam EA, Wenger NK, Brindis RG, Casey DE Jr, Ganiats TG, Holmes DR Jr, Jaffe AS, Jneid H, Kelly RF, Kontos MC, Levine GN, Liebson PR, Mukherjee D, Peterson ED, Sabatine MS, Smalling RW, Zieman SJ. 2014 ACC/AHA guideline for the management of patients with non–ST-elevation acute coronary syndromes: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines..
Circulation. published online September 2014

- A full revision of the 2007 ACCF/AHA clinical practice guidelines (CPG) for the management of patients with unstable angina (UA) and non–ST-elevation myocardial infarction (NSTEMI) and the 2012 focused update.
- The new title, "Non–ST-Elevation Acute Coronary Syndromes," emphasizes the continuum between UA and NSTEMI. At presentation, patients with UA and NSTEMI can be indistinguishable and are therefore considered together in this CPG.
- Supports the **Third Universal Definition of MI** for Troponin and Serial Testing

CPC: Patient Population Focus

Dual Challenge with Managing Chest Pain Patient Populations

Vague Symptomology	Combining 'Rule Out' Process with 'Diagnosis' Process *(treat as ACS until proven otherwise)*



CPC: RISK STRATIFICATION MODEL

Emergent Risk Assessment Must Include:

1. Symptomology Evaluation
2. ECG Completed and Read within 10 Minutes
3. Troponin: Turn Around Time (TAT)*
4. Risk Scoring Mechanism: ex. TIMI, GRACE, or other form founded in science

1. Facility Defined Evidence-Based Risk Stratification Model
2. Consistently Utilized and Documented by Facility's Providers (order-set, flowcharts, patient's chart)

*Turn-around time requirements are explained in the appropriate accreditation tools

Risk Stratification –
Who Belongs in the Low Risk Bucket

Entry into the Bucket

Risk Assessment Must Include:

- Chief Complaint Suggestive of ACS
- EKG Read in <10 Minutes
- Troponin Resulted* in <1 hour
- Facility Defined Risk Score

THE LOW RISK BUCKET

- STEMI + EKG
- 80%
- Troponin Positive for UA/NSTEMI

LOW RISK

Removal from the Bucket

= 6,000,000 Annual Population

*Turn-around time requirements are explained in the appropriate accreditation tools

Observation Units:
Lab critical decisions

What is Observation Services?

As defined by Medicare it is a set of specific ,clinically appropriate services, commonly ordered for patients who present to the emergency department (ED)

- require a significant period of treatment or monitoring

Ongoing short term treatment, assessment, and reassessment decision for further disposition to…

- inpatient
- discharge

Medicare policy manual rev. 137 12-30-10

Observation Services

In 2003 national survey:

Emergency Department Observation Units (EDOUs):

-19% of US hospitals

A 2007 subsequent survey: -

- EDOU increased to 36%
- > ½ managed by ED MD's

Ross et al. Critical Pathways, 2012 The State of the ART: Emergency Room Observation Units.

Observation Status for Low Risk

1

Observation Status Importance:

- Cost Avoidance
- Risk Mitigation
- Patient Satisfaction

2

Facility Support:

- Decrease ED throughput times opening ED bed quicker/faster
- Volume substantially higher
- Mitigate potential for CMS penalties

3

Dedicated Unit is Ideal / Virtual works with structured processes:

- **Serial Troponin with Accelerated Diagnostic Protocols (ADP)**
- Streamlined Stress Testing Processes
- Improved recognition if patient converts to + ACS

ACS in Observation = Laboratory Impact

- Average length of stay (LOS) in a dedicated OBS ~ 15-18 hours

-~ 70-80% are discharged / inpatient admit rate ~20%

… observation protocols have been shown to decrease unnecessary resource utilization and cost to 50% to 70% of routine inpatient care costs

Accelerated Diagnostic Protocols (ADP) for serial cardiac biomarkers can help achieve benchmarks

Adapted from ACEP OPPS 2013 letter to CMS.
1.Wiler JL, Ross MA, Ginde AA. National study of emergency department observation services. Academic emergency medicine : official journal of the Society for Academic Emergency Medicine 2011;18:959-65.
2.Ross M AT, Graff L, Suri P, O'Malley R, Ojo A, Bohan S, Clark C. State of the Art: Emergency Department Observation Units. Critical pathways in cardiology Sept 2012.

Laboratory Role Overall: Clinical Support and Expertise

Readmissions = Laboratory Impact

Healthcare Stats: Readmission

Hospitals readmit nearly 1 in 5 Medicare patients within one month of discharge (cost = $17 billion /yr)

- National average for readmissions ~19%

CMS effort to curb readmissions for three conditions:

- heart attack, heart failure, pneumonia

– HF: #1 cause for admission over age 65 and readmissions

Penalty/fines assessments: Fiscal Year (FY)

- 2% - FY 2014
- 3% - FY2015

Laboratory Role and Readmissions

April 2013 Clinical Laboratory News: Volume 39, Number 4

The Race to Reduce Readmissions: *Can Lab Tests Help Predict Who Will Return to the Hospital?*

Key Points:

- Simple test combinations used as "risk predictors"
- Laboratory tests can prevent early discharges leading to increased readmissions
- Lab based readmission calculators:
  - CORE Readmission Risk Calculator – Yale Medical School
  - Intermountain Risk Score – Intermountain Health

Accountability

Changing Perspectives of Turn-Around-Time (TAT) Tracking:

Current and future requirements

Changing Perspectives of TAT Tracking: Healthcare Implications

July 2014 Clinical Laboratory News: Volume 40, Number 7

What Does Turnaround Time Say About Your Lab?

Key Quote:

" Every laboratorian knows that their colleagues in medicine see TAT as something almost as important as the quality of test results themselves."

" In fact, surveys have found that 80% of labs get complaints about TAT."

Changing Perspectives of TAT Tracking: Healthcare Implications

Recent studies and research support the following:

- Assessing the “whole process” (i.e.: arrival)
- Standardizing the definitions of turn-around-time (TAT)
- Assessing TAT with patient outcomes and length of stay

Changing Perspectives of TAT Tracking: Healthcare Implications

Study by Ervasti et al, *Clin Chem Lab Med 2008*

Proposed new concepts for TAT in the diagnostic process:

As a "Patient-oriented" view or the "whole process"

- **Diagnostic TAT –** arrival to reporting of results
  - (outcomes median 122 min)
- **Clinical TAT** – arrival to order
- **Laboratory TAT –** order to report/resulted

Changing Perspectives of TAT Tracking: Healthcare Implications

In *Academic Emergency Medicine, 2010:17,* Hwang et al noted:

"Guidelines do not exist delineating times frames for when a troponin test should optimally be resulted in association with improved patient outcomes."

" Prolonged laboratory TAT may delay recognition of conditions in the acutely ill , potentially affecting clinician decision-making and the initiation of timely treatment."

- Outcomes median 107 minutes; "ordered to resulted"

SCPC Cardiac Biomarker Requirements

Measuring TAT is a guideline driven recommendation

No previous TAT requirement

- SCPC requirement starting in 2012
  - Track and demonstrate improvements
  - CMS OP 16 initiated and then revoked

SCPC ACCREDITATION & BIOMARKER TESTING: Current

FACILITY MUST: Demonstrate a process for reviewing/assessing **BASELINE Troponin** TAT Emergency Department (ED) patients

Documentation requirements:

Monthly or quarterly meeting notes

- Lab participates as an agenda item – ***MUST BE ON CPC TEAM***
- Metrics, process and action plans discussed

Minimum 6 months of data

- **Goal times or benchmarks / starting and ending time-points**

Required to provide TAT metrics: cumulative & secondary

- Point-of-Care Testing (POCT) / Central Laboratory Analyzers

Position Statement

The Society does not promote or endorse lab based testing or point-of-care testing (POCT) rather focuses on processes and protocols for the identification and management of the Myocardial Infarction (MI) and Acute Coronary Syndrome (ACS) continuum.

The Society provides guidance and education with the position that each facility is responsible to determine the vendor partnerships that best align to their hospital-specific processes, protocols and goals.

Each hospital should be well versed in the latest guideline recommendations and ensure they have reviewed their protocols for Troponin, consistent with the assay being used.

SCPC POSITION STATEMENT

FREQUENTLY ASKED QUESTION:

"Does the Society monitor or validate concordance between POCT and Central Lab Analyzers?"

SOCIETY OF CARDIOVASCULAR CARE POSITION:

The Society does not promote or endorse lab based testing or point-of-care testing (POCT) rather focuses on processes and protocols for the identification and management of the Myocardial Infarction (MI) and Acute Coronary Syndrome (ACS) continuum.

Hospitals are responsible to ensure all appropriate policies and protocols for correlations, validations and assay concordance are in place per laboratory regulatory requirements (i.e.: CLIA, CAP, TJC, DNV…).

Polling results from webinars

(results for discussion purposes only)

Does your facility have a cath lab that can perform PCI? (n ~ 300)	Yes	45%
	No	27%
	Not sure	**28%**
Does your facility transfer chest pain or AMI patients? (n ~ 300)	Yes	33%
	No	53%
	Not sure	**12%**
Are you using the 99th %ile? (n ~ 220)	Yes	60%
	No	**9%**
	Not sure	**31%**
Are you using a diagnostic protocol of 0-3-6-? (n ~ 220)	Yes	56%
	No	25%
	Not sure	**19%**
Do you provide education to your physicians? (n ~ 200)	Yes	51%

CYCLE III & IV: SCPC GENERAL FINDING

(results for discussion purposes only)

- Cycle III FIB data: n=700
  - 65% using the 99th percentile
  - 50% using POCT
- Cycle IV FIB data YTD: n=629
  - 77% using the 99th percentile
    - Of those, 87% -using manufacturer recommendations
  - 40% using POCT
    - Of those, 78% using Troponin only (no other markers)

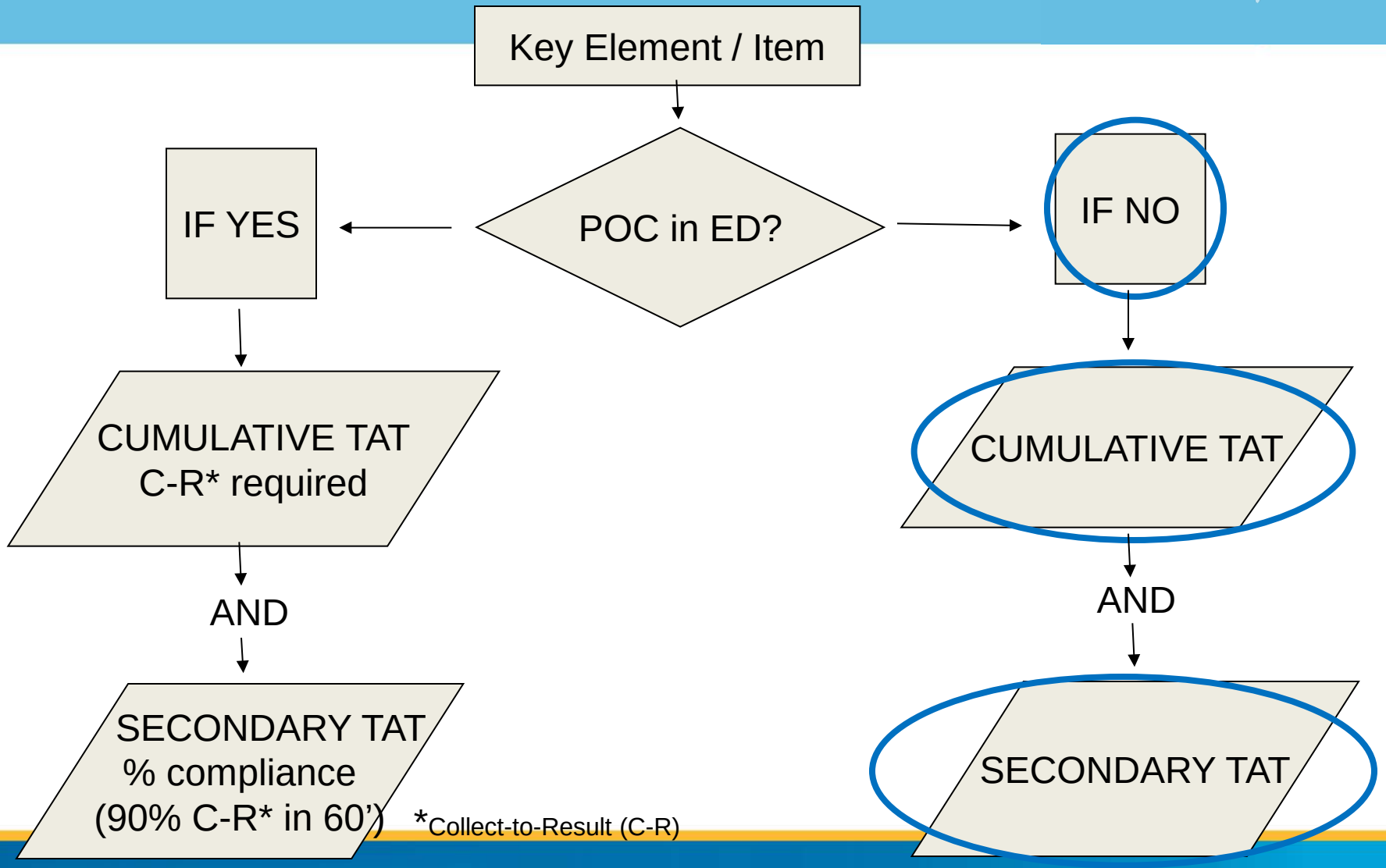
SCPC ACCREDITATION & BIOMARKER TESTING: Current

For both CENTRAL LAB and POC Troponin

- Test
- Manufacturer
- Analyzer
- Serial interval from arrival time
- Cut-point used for biomarker results
- Use of 99th Percentile? Yes/No
- Using intermediate or "gray-zone" for Troponin?

- **Troponin assessment only**
- **Is the serial strategy standardized?**
- **Is there a discrepancy between manufacturers recommendations and the decision points being used?**
- **Have facilities reviewed MI definition guidance ?**

SCPC ACCREDITATION & BIOMARKER TESTING: Current



*Collect-to-Result (C-R)

Where does Point-of-Care Testing (POCT) fit in with CP Accreditation?

"To the extent that laboratory test TAT is only one factor impacting

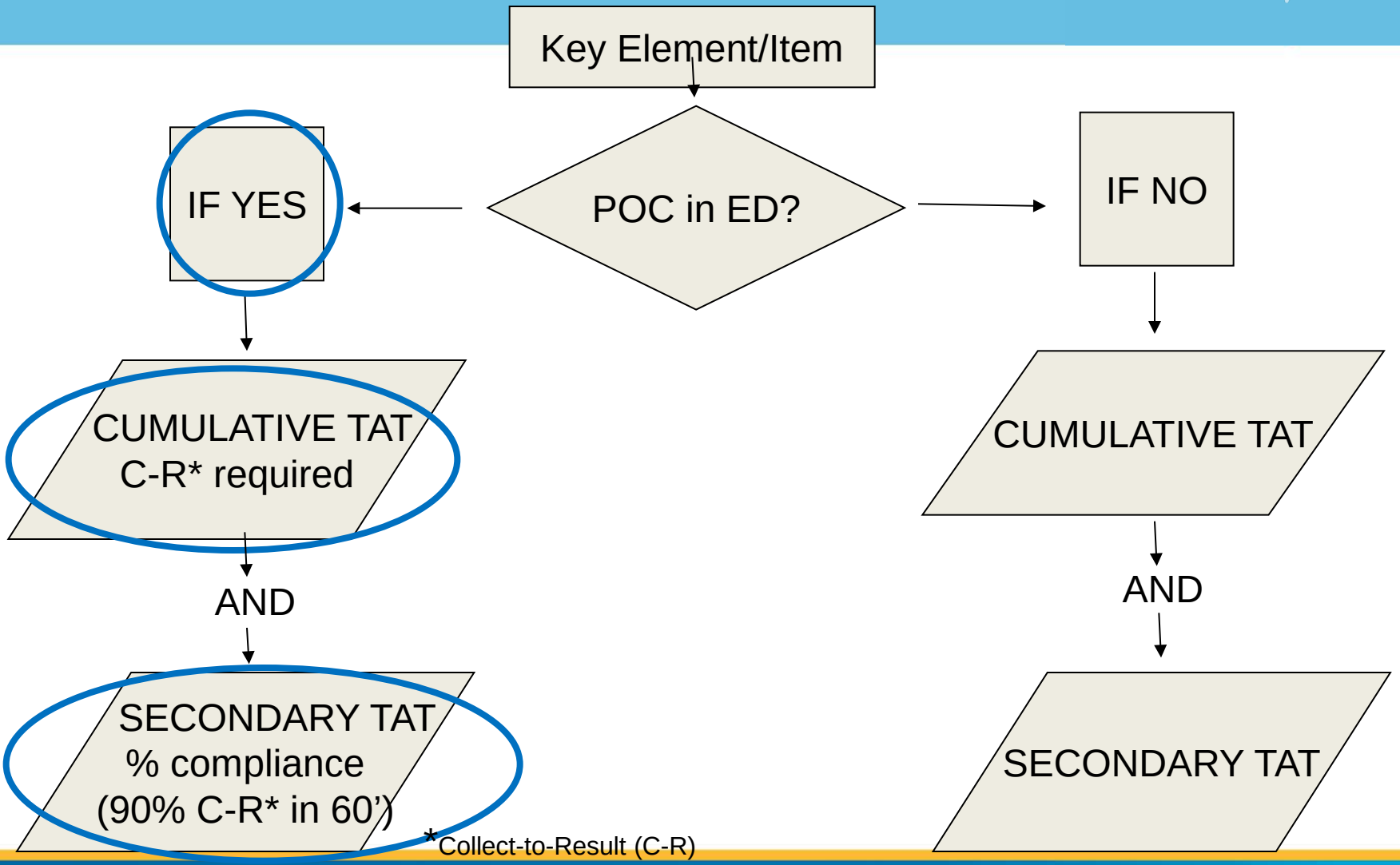
ED length of stay and patient outcomes,

it is unlikely that POCT alone, in the absence of an interdepartmental approach to ED operations,

will produce measurable improvements in outcomes."

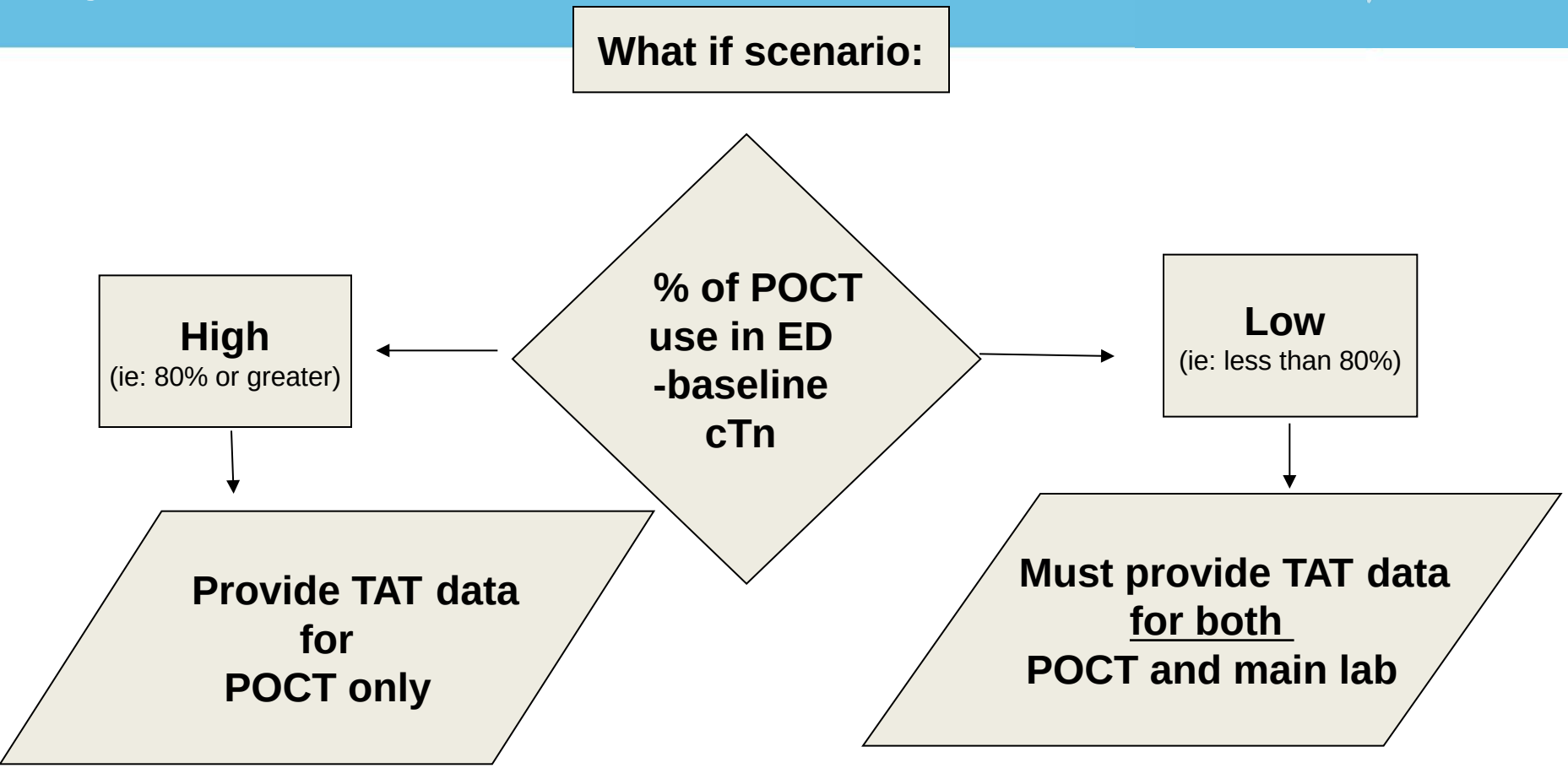
Lewandrowski, E. et al. Cardiac Marker Testing As Part Of An Emergency Department Point-of-Care Satellite Laboratory In A Large Academic Medical Center. Practical Issues Concerning Implementation. Point of Care. The Journal of Near Patient testing & Technology. Vol. 1, No.3, pp. 145-154.

SCPC ACCREDITATION & BIOMARKER TESTING: Current



*Collect-to-Result (C-R)

SCPC ACCREDITATION & BIOMARKER TESTING: Key Element 4



Example: Troponin TAT

CBM TAT EXAMPLE COLLECTION TOOL: 90% Goal w/in 60 minutes

Year:____	Total (n=ED TnI)	# Collect to Result w/in 60 min	Collect-Result <=60 min (=C/B)	Goal
January	522	479	92%	90%
February	554	453	82%	90%
March	590	522	88%	90%
April	520	477	92%	90%
May	517	468	91%	90%
June	507	471	93%	90%
July	544	514	94%	90%
August	473	440	93%	90%
September	491	452	92%	90%
October	534	484	91%	90%
November	494	435	88%	90%
December	490	463	94%	90%
Totals:	**6236**	**5658**	**91%**	**90%**

4.4.7.0

4.4.8.0

DATA SUBMISSION OPTIONS
Current

College of American Pathologist (CAP)

QM1 monitor

The Society has partnered with the College of American Pathologist who have created a validation tool which collects data to meet the Society requirements for TAT tracking (through Cycle IV).

Additional benefits are:

- Track the “diagnostic TAT” or “door to result’ data through sampling
- Great for facilities with large volumes
- Benchmarking
- Estimates trending of process improvement initiatives

SCPC ACCREDITATION & BIOMARKER TESTING: Current

The facility has a process in place to monitor the TAT of serial draws for Troponin

Key concept: "Windows of Scheduled Time"

- *Assessment and documentation of serial draw time points*

SCPC Accreditation Finding:

- Very few facilities can or have met this requirement

Key Benefits:

-Reductions in Length-of-stay (LOS)

-Accountability

-Creates standardization

Changing Perspectives: Literature Findings

Per Amsterdam et al in a Circulation 2010 article:

"Testing of Low Risk Patients Presenting to the ED with Chest Pain"

"...current studies have confirmed that contemporary troponin assays can identify the majority of MI's within 3 hours of ED arrival..."

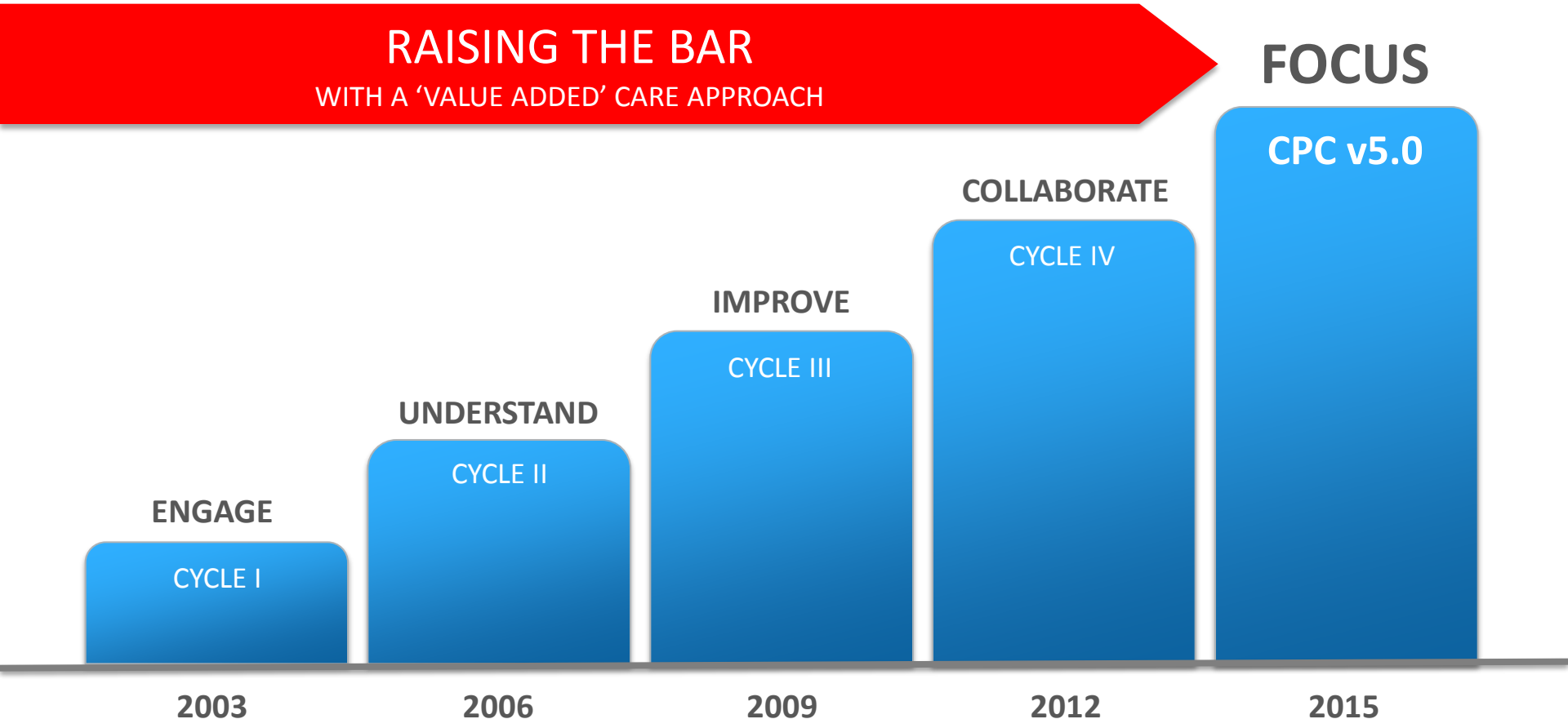
SCPC ACCREDITATION & BIOMARKER TESTING: Current

The cardiac biomarker protocol includes a serial troponin from ED arrival up to 6 hours. The protocol may last less than 6 hours if provocative cardiac testing or imaging takes place.

Key concept:

- *Takes into account the time from **onset of symptoms***
- *The exact timing of serum marker measurement should take into account the exact timing of onset of pain and the sensitivity, precision, and institutional norms of the assay.*
- *Standardizes away from outdated use of 0-8-16 hrs*
- *Requires protocols be in place for accelerated testing <6 hrs*

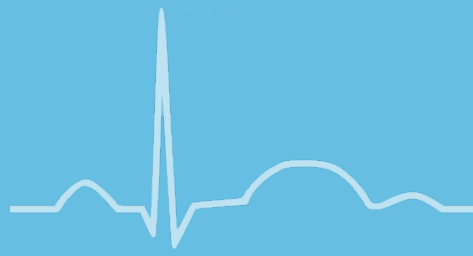
CPC v5: Accreditation Continuum of Improvement



CPC v5: Accreditation

- Move ***beyond*** Core Measures and focus on evidence-based, guideline driven care
- Move beyond processes to use accurate, ***timely*** data to drive decisions and opportunities for facilities
- Link the data to the very outcomes used for determining Value Based Purchase (VBP) scores, at risk dollars and ultimately reimbursement

CPC v5: Accreditation



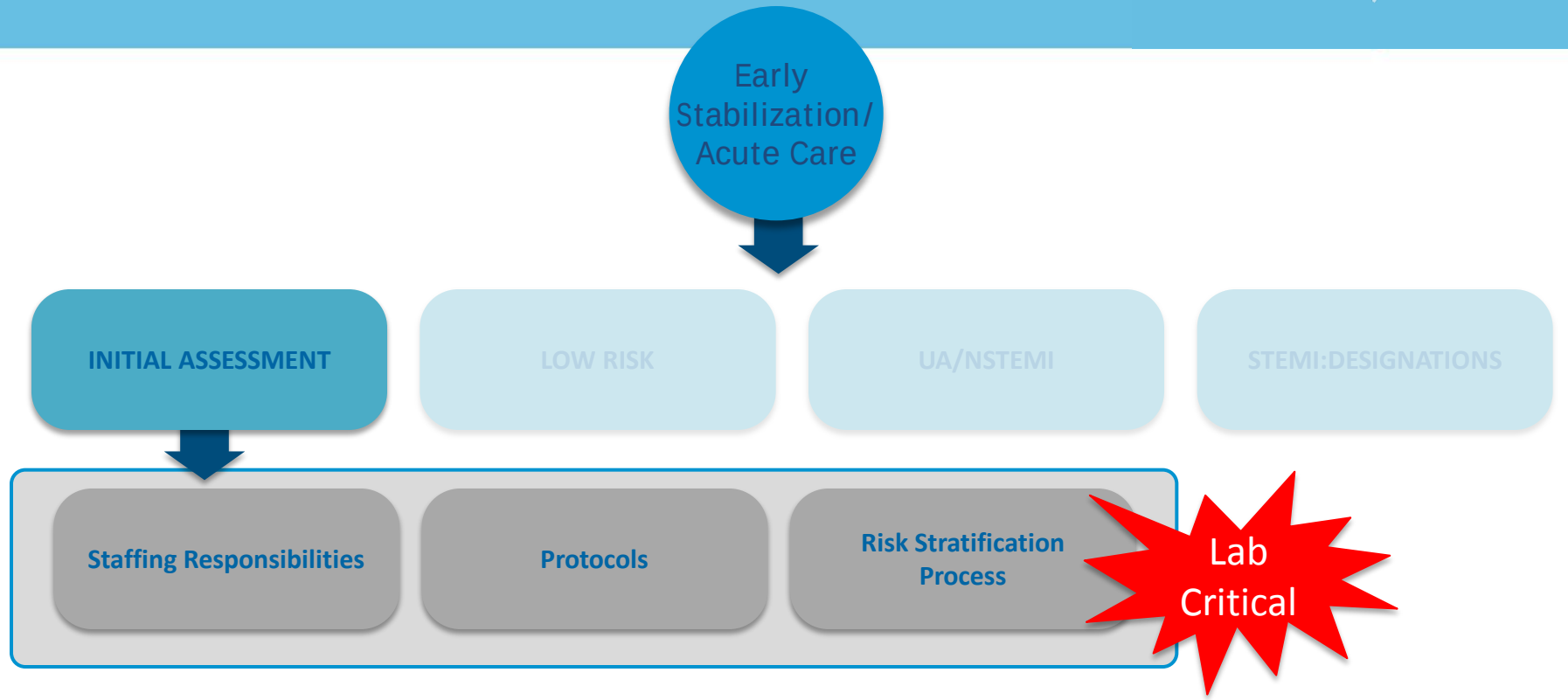
- All on-line submission process
- 7 Essential Components (encompass the spectrum of care)
- Patient level data must be populated in the "Accreditation Conformance Database"(ACD)
- Gap Analysis and Baseline submission requirements

Key Point: Will include patient level Troponin TAT; facilities still will be required to provide TAT for validation

CPC v5: Anticipated Gains for Facilities

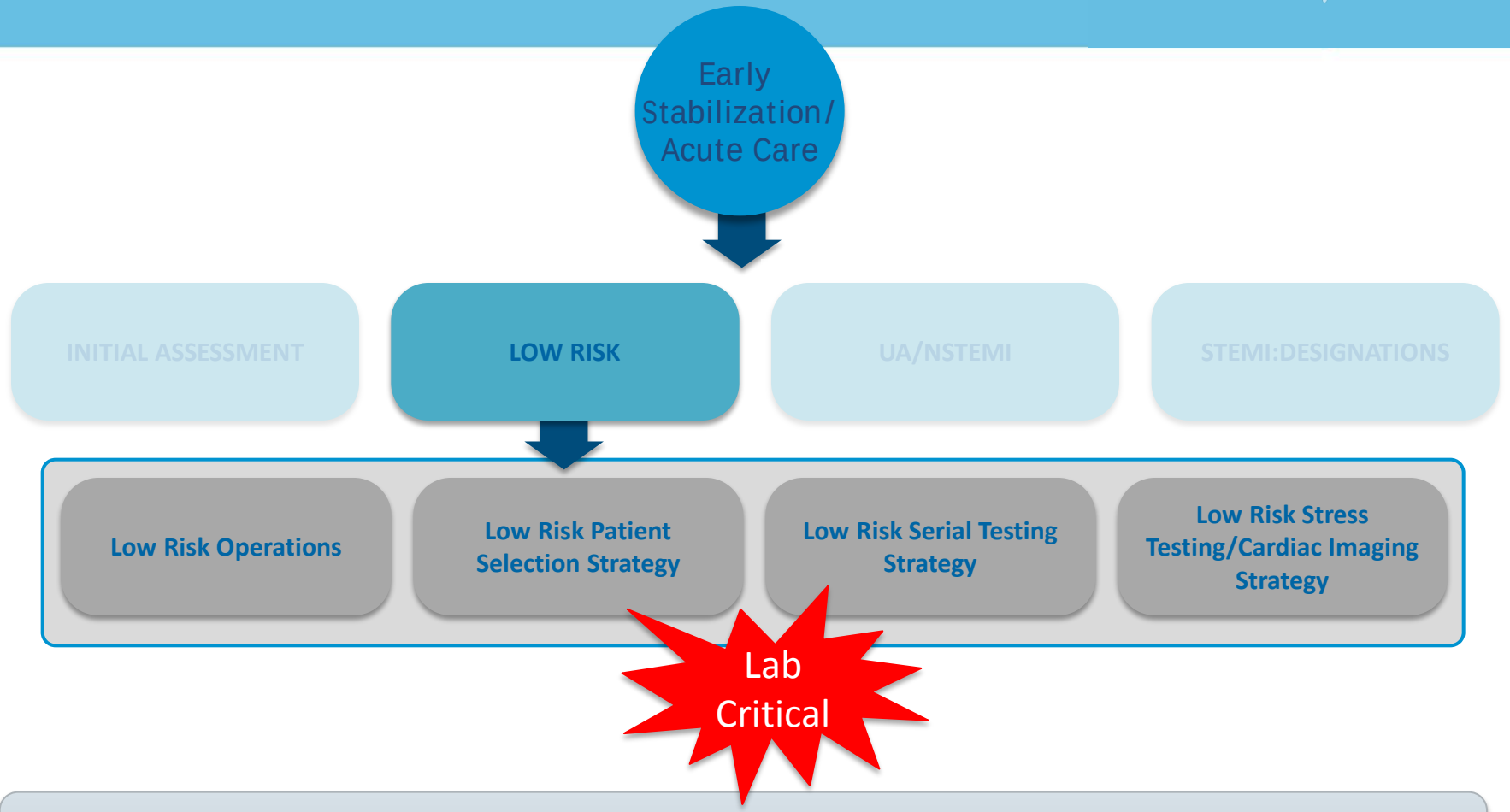
- Deriving process and outcomes data by using actual patient level information populated in the "Accreditation Conformance Database" (ACD)
- Link Lab based process measures with meaningful outcomes to determine where facilities are doing well and opportunities for improvement
- Interactive dashboard will provide ongoing monitoring of clinical quality parameters and performance data, to include Lab Based Measures
- Benchmarking to other facilities

CPC v5: Framework



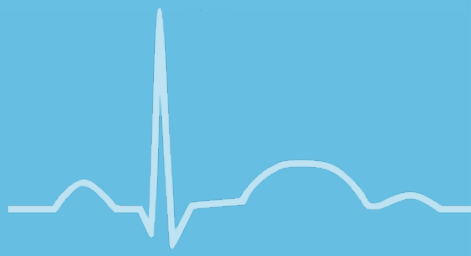
Laboratory participation in CPC Committee meeting will be mandatory with documented attendance compliance = 50%

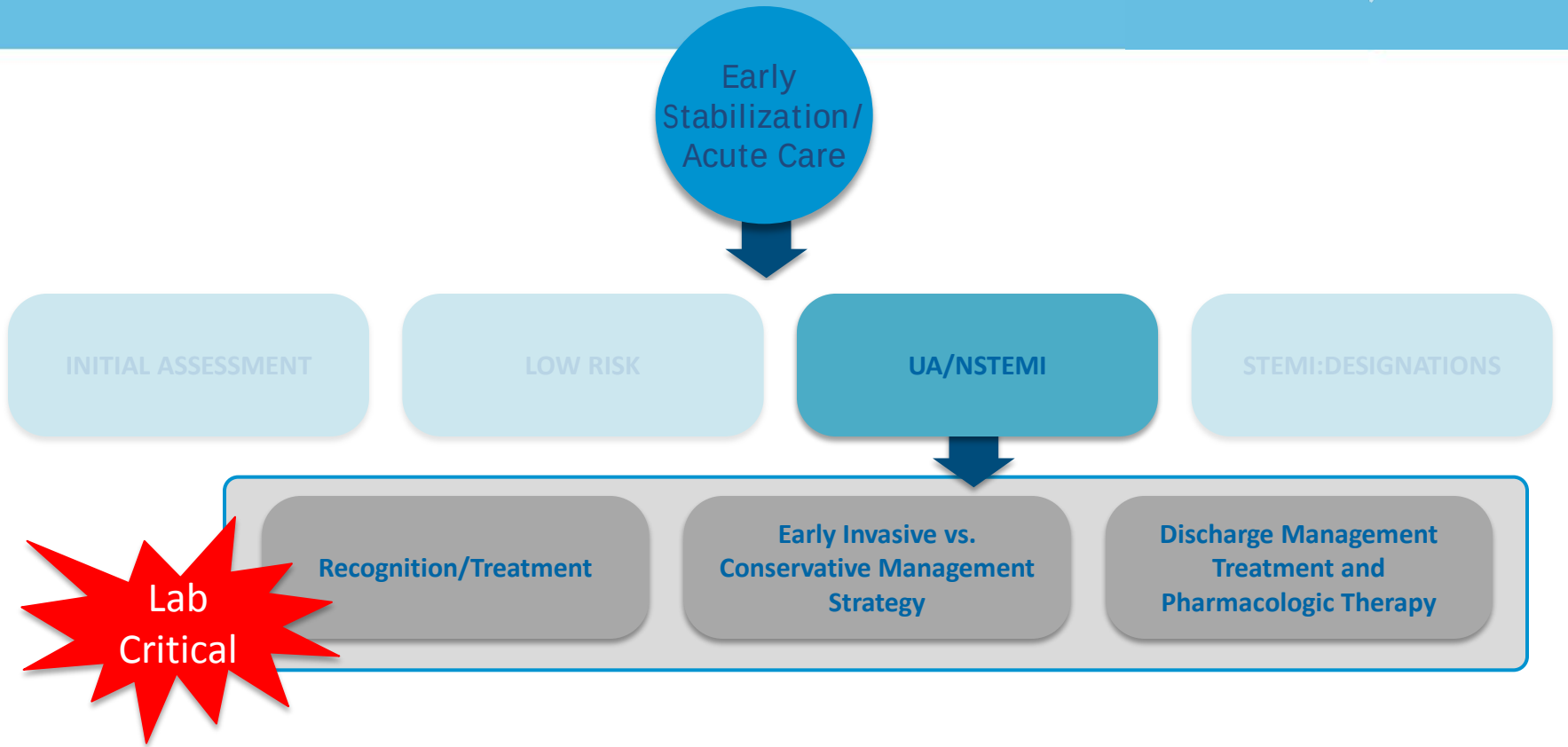
CPC v5: Framework



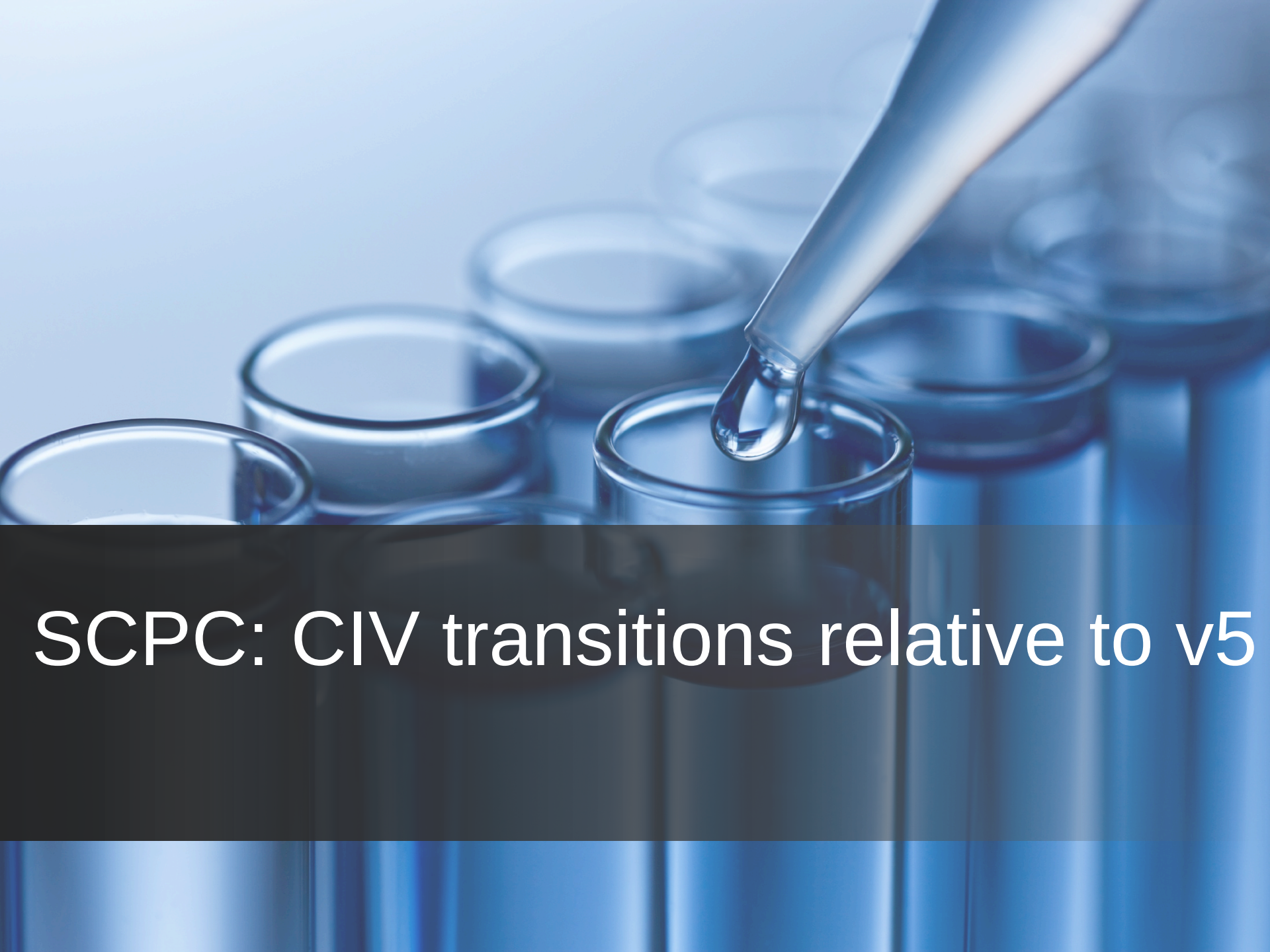
Laboratory engagement in the Low Risk processes of care is vital in multiple areas.

CPC v5: Framework





Laboratory engagement in Risk Stratification strategies will be assessed.



SCPC: CIV transitions relative to v5

CPC v5 – continues to build on CIV

Lab questions are now in the tool to ensure communication and evaluation takes place

For both CENTRAL LAB and POC Troponin

- Test
- Manufacturer
- Analyzer
- 99th Percentile
- Coefficient of Variation at 99th%
- Serial Troponin Strategy
- Metrics of trends for Troponin TAT - **arrival to result**
  (ACS patients beyond STEMI)
- % compliance TAT **arrival to result** in 60 minutes

- **Troponin assessment only**
- **Strategy consistent with the assay used**
- **Documented protocols/policies are standardized**
- **SCPC ACD and hospital metrics**

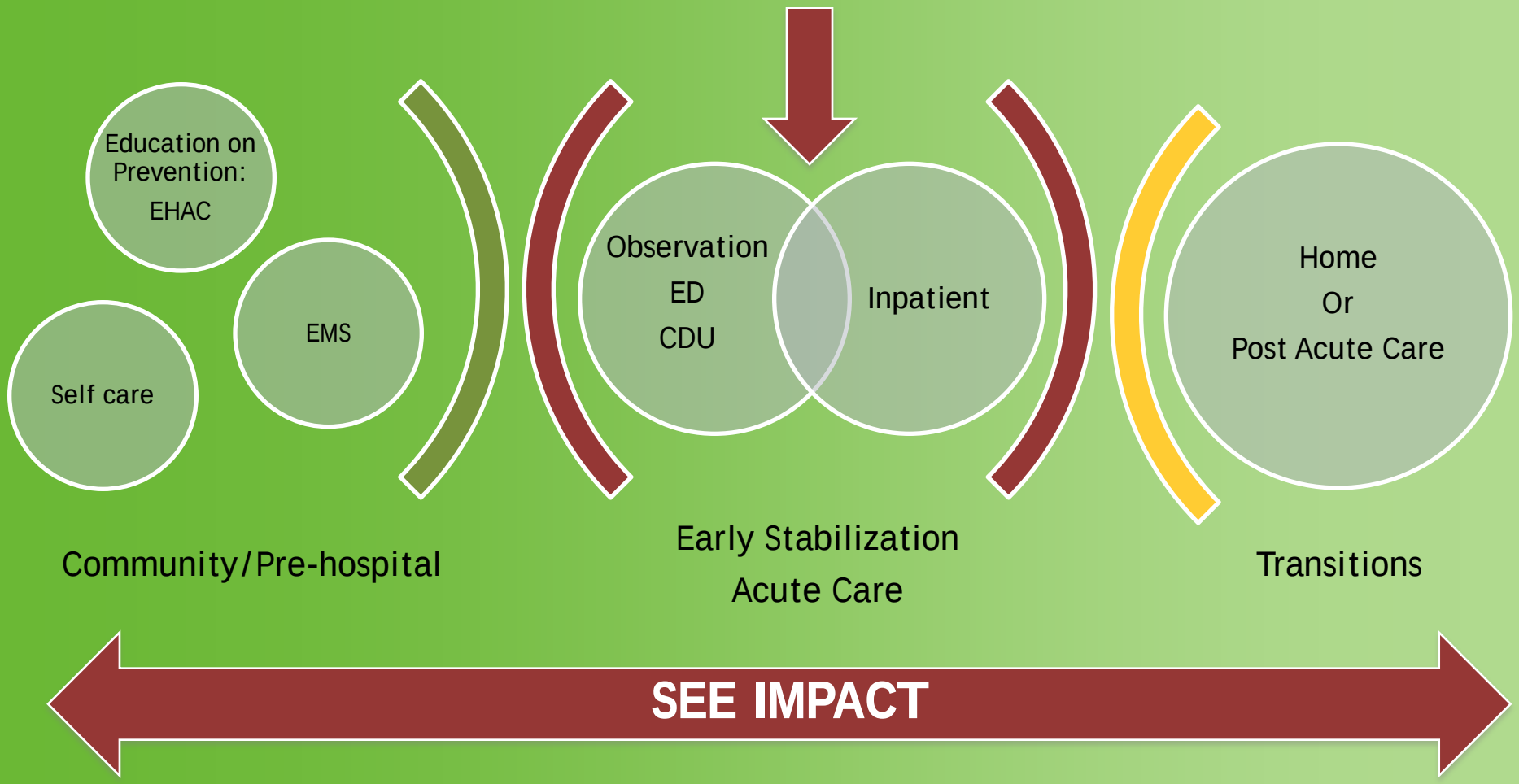
CPC v5 – continues to build on CIV

For both CENTRAL LAB and POC Troponin

- Participation requirement by Lab personnel in CPC meetings
- Definition of baseline timing for serial strategy (ie: ED arrival versus 1st lab draw)
- Nursing staff whose focus is on the ACS patient (STEMI/ NSTEMI/ UA/ Low Risk) must receive annual education on cardiac biomarkers (CBM)

- **NEW-MANDATORY Requirement = 50% participation in CPC (or appropriate) committee meetings**
- **Defined protocols & policies of serial strategy**
- **NEW-Educational requirement for CBM – encourage to use guidelines or get lab to assist**

FOCUS ON CHANGE



Lab can help impact Outcomes!

- Leadership in guidelines applied to practice
- Drive quality at all levels
- Focus on a patient-centric and outcome-oriented approach
- Use data to drive change; include the whole spectrum of time
- Communicate and collaborate with all disciplines

SCPC Impact on Healthcare Today

Process Measures and Outcomes

Education and Credentialing

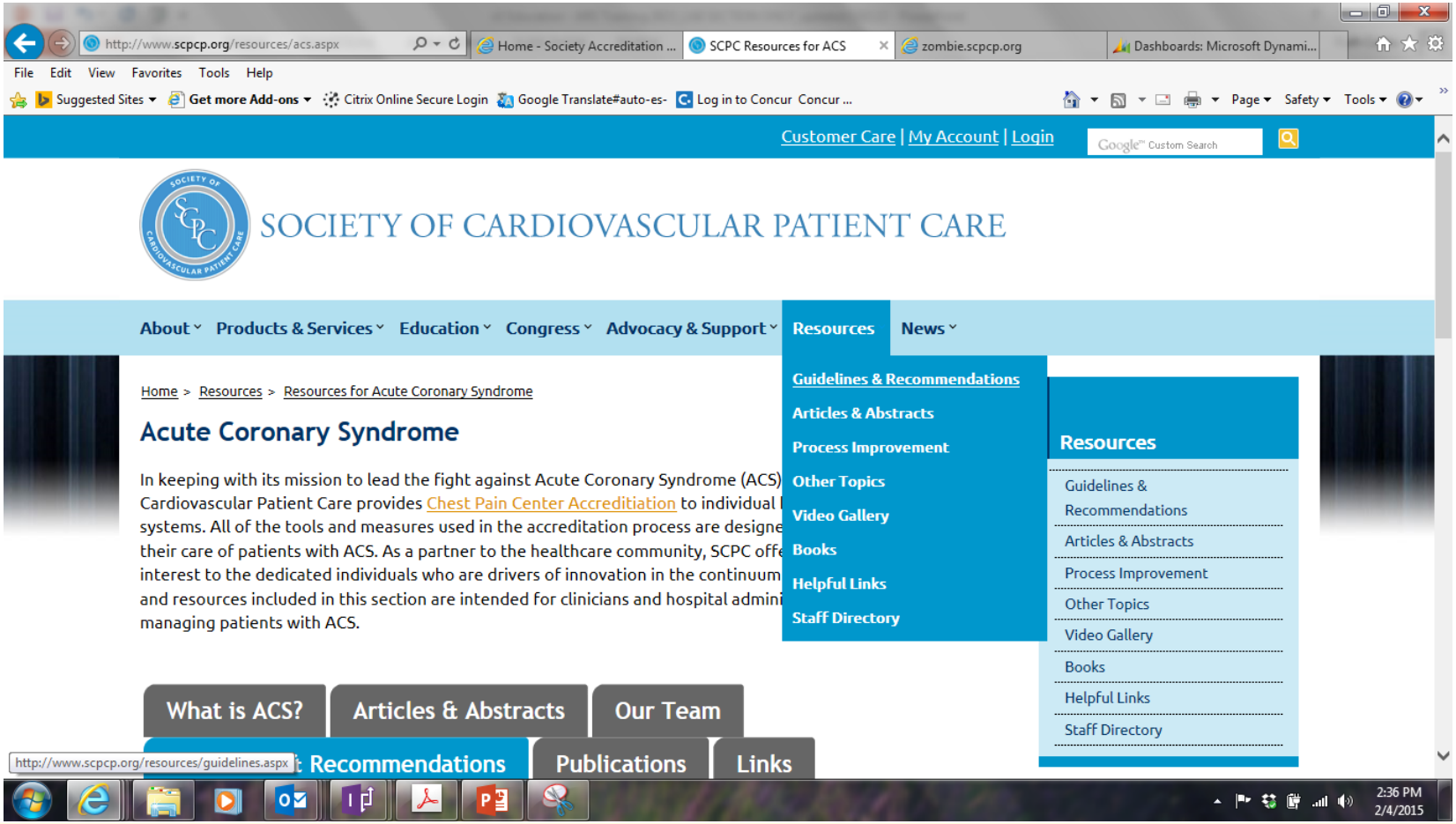
Streamlining the Process

Patient Centric Model

Optimizing Bedside Care

RESOURCES

SCPC Website:



RESOURCES

SCPC Website: GUIDELINES

What is ACS? | Articles & Abstracts | Our Team

Guidelines & Recommendations | Publications | Links

Guidelines and Recommendations

SCPC provides the following links, which are known to be the current guidelines and recommendations for the care of patients with ACS.

Guidelines

ACC/AHA 2014 Guideline for the Management of Patients With Non-ST-Elevation Acute Coronary Syndromes

ACCF/AHA/SCAI 2013 Update of the Clinical Competence Statement on Coronary Artery Interventional Procedures

2013 ACCF/AHA Guideline for the Management of Heart Failure

2013 ACCF-AHA Guideline for the Management of STEMI

2012 Third Universal Definition of Myocardial Infarction

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Thank you!

SOCIETY OF CARDIOVASCULAR PATIENT CARE