

Name: _____

SCC #: _____

INGALLS HOSPITAL
EMERGENCY MEDICAL SERVICES

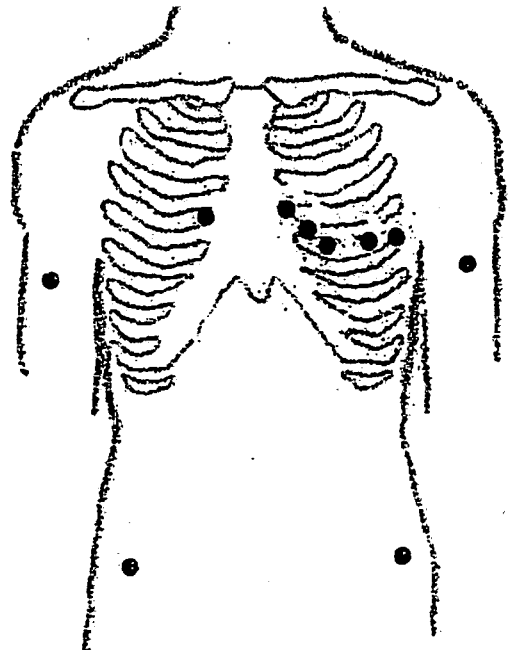
12 Lead EKG
February 2009

Reading Assignment: Mosby's Paramedic Textbook Third Edition, Pages 692-697, 780-783, 804-808 and handouts.

~ This study book is also available on-line at www.regionviiems.com then choose South Cook County. ~

1. Describe briefly how an EKG functions.
2. Compare and contrast a bipolar and unipolar lead. Give examples of each.

3. On the following diagram to the Right, write in each lead placement.



4. Explain, anatomically, where each of the following leads is placed:

V1: _____

V2: _____

V3: _____

V4: _____

V5: _____

V6: _____

5. For standard limb leads, where do you place the electrodes to read the following lead tracings?

<u>Lead</u>	<u>Positive Electrode</u>	<u>Negative Electrode</u>
I		
II		
III		

6. To view the inferior wall of the heart, you would check what leads of the 12 Lead EKG?

The anterior wall?

The Septal view?

7. Define modified chest lead recording.

8. Discuss the importance of MCL₁ and its electrode placement.

9. Discuss the pathophysiology of an inferior wall MI.

10. Define and discuss the E2B challenge.

11. Define STEMI.

12. Discuss the E2B clock.

13. Discuss the care of a patient who has an implantable defibrillator that is activating.

14. Compare and contrast demand and nondemand transcutaneous pacing.

15. List the procedure and pad placement for transcutaneous pacing.

16. List 2 contraindications for cardiac pacing.

In 1970, Cardiology invented EMS...

... with the desire to provide early defibrillation to the community by establishing Emergency Medical Services (EMS)



In 2008, EMS is transforming Cardiology and STEMI Heart Attack Care

... with Pre-Hospital 12-lead Electrocardiogram (PH-ECG) diagnosis of acute STEMI Heart Attacks and early Cardiac Cath Lab Activation at the STEMI Receiving Hospital. (STEMI = ST-Elevation Myocardial Infarction)

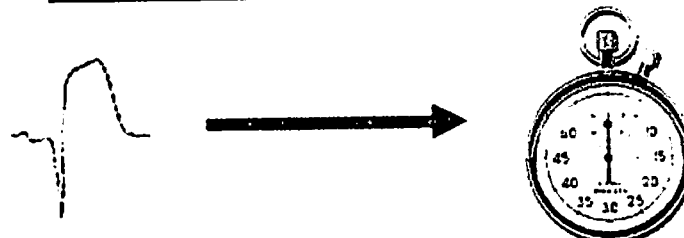
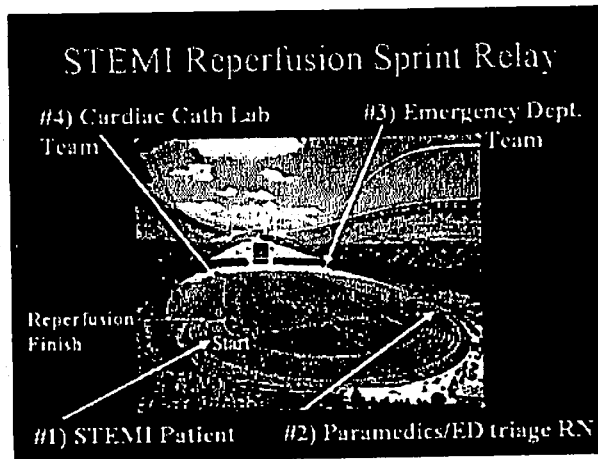


E2B is the EMS-to-Balloon Challenge

Join the October 2008 Launch at EMS Expo in Las Vegas

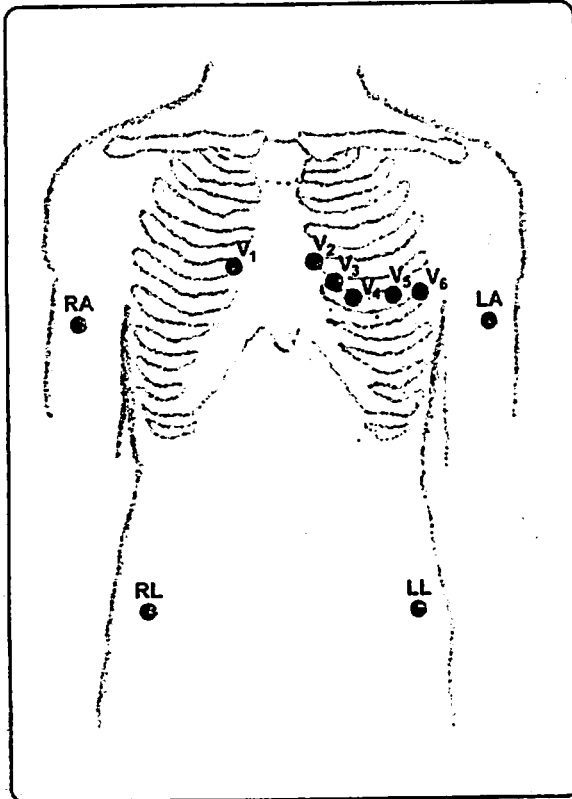
The "Challenge" of the E2B Challenge

- For the last few decades, EMS, Emergency Departments, and Cardiology have simply "co-existed." However, current efforts across the nation are focused on "coordinating" these three care provider units into regional systems that provide optimal STEMI care.
- The E2B clock starts with the first pre-hospital ECG that shows a STEMI heart attack
- The E2B clock stops with the first balloon inflation in the Cardiac Cath Lab
- Can your region design a STEMI network for your community that provides an E2B <=90minutes minutes for 75% or more of STEMI patients? (Note: Time zero is date/time auto-stamped on first PH-ECG that shows acute STEMI).
- 30-30-30 Goal for E2B <=90minutes: EMS, ED, and Cath Lab each have 30 minutes to perform their specific duties, and then "hand-off" to the next STEMI-care provider unit.
- You can help **save lives** and improve outcomes for **STEMI heart attack** patients.



The E2B Challenge is also an Awareness Campaign for existing large-scale initiatives and online

12-Lead ECG Lead Placement



Indicative Lead Groups

Inferior Wall-II, III & aVF

Septal Wall-V1, V2

Anterior Wall-V3, V4

Lateral Wall-V5, V6, I, & aVL

Posterior Wall-V7-V9

Right Ventricle-V4R-V6R

V1-Right parasternally,
4th intercostal space

V2-Left parasternally,
4th intercostal space

V3-Directly between V2 and V4

V4-5th intercostal space,
left mid clavicular line

V5-Directly between V4 and V6

V6-Left mid axillary line,
same plane as V4

V7-Posterior axillary line,
same plane as V4

V8-Mid scapular line,
same plane as V4

V9-Left paravertebral area,
same plane as V4

V4R-5th ICS,
right mid clavicular line

V5R-Directly between
V4R and V6R

V6R-Right mid-axillary line,
same plane as V4R

ZOLL

Produced in cooperation with
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