MWLC EMSS Skills Sheet
Acquiring a 12-Lead ECG

Name:	1st attempt:		Meets Standard		Does not meet standard
Date:	2nd attempt:		Meets Standard		Does not meet standard

Instructions: The purpose of this skills sheet is to outline the requirements for acquiring a 12-lead ECG.
Required items to meet standards are indicated with an asterisk.

Performance standard NP=Step not performed. 0=Does not meet standard. Unsuccessful; critical or excess prompting; improper technique. 1=Meets Standard. Successful; minimal to no prompting; proper technique.	**1st attempt**	**2nd attempt**
* BSI: Gloves. (minimum required)		
***Identify indications for 12-L ECG** ☐ Chest pain or discomfort nose to navel; front and back ☐ SOB (especially exertional dyspnea) ☐ Syncope or near syncope ☐ Palpitations ☐ Unexplained N / V ☐ Feeling of impending doom ☐ Diaphoresis unexplained by ambient temperature ☐ General weakness ☐ Suspected DKA ☐ Risk factors: MI/HF, age, cholesterol high, diabetes, HTN, smoking ☐ ECG rhythm: ectopy, identify pacer, QRS width determination (VT vs. SVT)		
***Timing of 12 Lead**: Preferably, 12-L should be acquired where pt is found, with 1st set of VS & prior to NTG (NTG can change tracing and is contraindicated in pts w/ inferior/RVMI)		
***Apply electrodes and leads** ☐ Obtain eleven (11) UNOPENED electrodes. ☐ Properly identify each electrode location utilizing the reference (from MWLC EMSS Region IX SOP) as outlined in this skills sheet. ☐ Prepare skin where electrodes are to be placed by wiping skin with alcohol and rubbing briskly with a dry towel or gauze. • It may be necessary to shave hair for electrode placement. • Female patients may need to hold their left breast up to access proper electrode placement. If unable, EMS to use back of hand to left breast tissue out of the way. ☐ Apply electrodes at each properly identified and prepped location. (eleven in total for 12-lead) ☐ Attach the proper lead from the monitor to the corresponding electrode. **Note: V4R will be left unconnected to a lead. V4R is utilized after ALS interpretation as needed.** ☐ Ensure lead set is properly connected to monitor and power on monitor.		
***Acquire 12-lead** □ 12-lead should be acquired where patient is found prior to treatment. If unable, acquire 12-lead while ambulance is stationary. If unable, obtaining a 12-lead in a moving ambulance results in poor quality tracings that may not be usable for clinical determinations. □ Enter patient age and gender per monitor manufacturer's instructions. □ Ensure patient's arms and legs are fully supported and relaxed. □ Ask patient to remain still while device acquires ECG. **Note: generally NOT recommended to as patient to hold their breath as this often causes a tensing of chest muscles causing artifact.** □ Push the acquire button on the monitor per manufacturer's instructions. □ Provide printed 12-lead ECG to ALS provider for interpretation. □ Transmit 12-lead ECG to receiving hospital per manufacturer's instructions.		
Evaluator name, signature, comments:		

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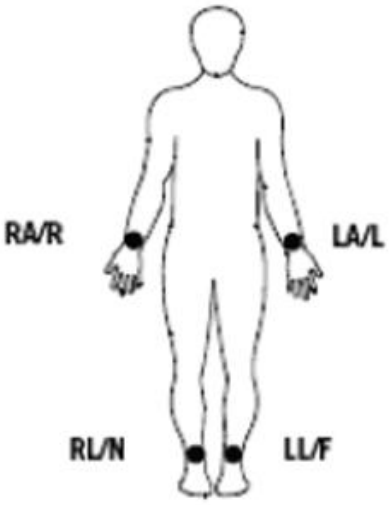
Limb Lead Electrode Sites

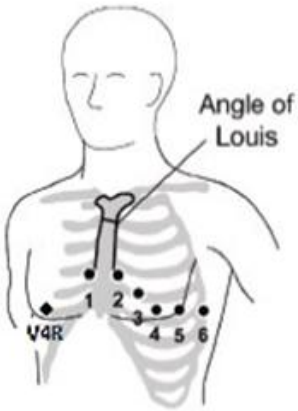
Limb lead electrodes can be placed anywhere along the limbs.
Do not place limb leads on the torso.



AHA Labels	
RA	Right Arm
LA	Left Arm
RL	Right Leg
LL	Left Leg

Precordial Lead Electrode Sites

SEVEN electrodes recommended for 12-lead.
Proper placement MATTERS.



LEAD	LOCATIONS
V1	Fourth intercostal space to the right of the sternum
V2	Fourth intercostal space to the left of the sternum
V3	Directly between leads V2/C2 and V4/C4
V4R	Fifth intercostal space at midclavicular line (Right Side)
V4	Fifth intercostal space at midclavicular line
V5	Level with V4/C4 at left anterior axillary line
V6	Level with V5/C5 at left midaxillary line