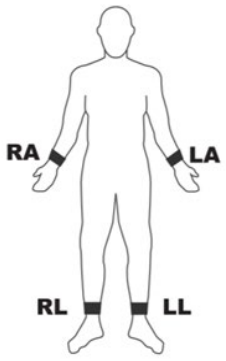
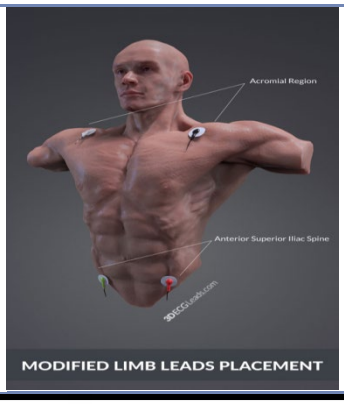
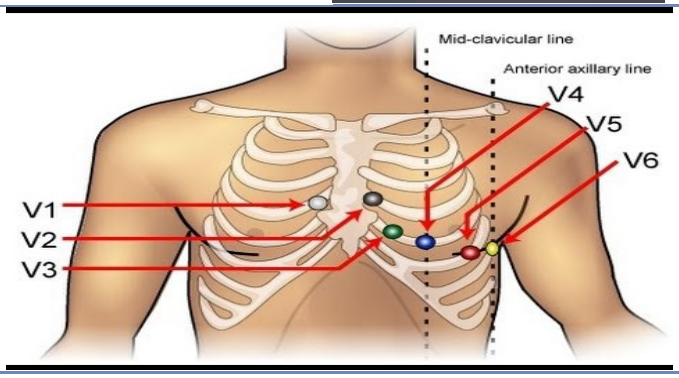
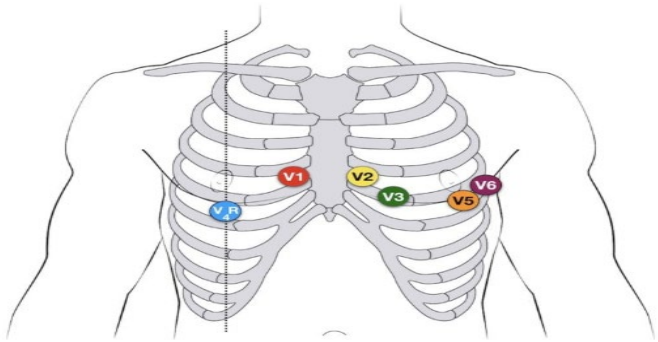
PREHOSPITAL 12 & V4R LEAD ACQUISITION

Document Owner: Luc Simard Paramedic Practice Coordinator	**Program/Service Area**: Centre for Prehospital Care	**Issue Date:** Nov 2019 **Revision Date:** Sep. 2023
Approval: Corey Petrie, Interim Regional Manager, Centre for Prehospital Care & Trauma Services		**Frequency:**
Signature:		

Purpose: To ensure a consistent standardized practice for the acquisition of prehospital 12 lead and V4R ECGs.

	Content	Details
1.	Ensure that the patient qualifies for a 12 Lead ECG as per the *Advanced Life Support Patient Care Standards*	A12 lead ECG should be acquired prior to the administration of Nitroglycerin (NTG). Acetylsalicylic acid (ASA) should never be delayed.
2.	Communicate the need for 12 Lead ECG acquisitions, and its effects to the patient/family member whenever possible.	The recommendation that a 12 lead be performed within the first 10 minutes of patient contact is a goal
3.	Place the patient in a supine (preferred) or semi-sitting position.	A 12 Lead may be acquired in the patient's position of comfort if the patient cannot tolerate the supine position
4.	Obtain consent and bare the patient's chest enough to acquire a 12 Lead ECG.	Take all steps necessary and possible to protect the patient's dignity and privacy.
5.	Prep skin with alcohol or other wipe as necessary. Remove excess chest hair where needed for good contact	
6.	Attach the four limb leads to the patient as per manufacture recommendations. In the event where limb positioning is not possible, paramedics may utilize the Mason-Likar (torso) placement. Paramedics will document the type of placement accordingly on the ECG strip.	 
7.	Attach the chest leads in the following correct anatomical position: **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 and V4 **V4** - fifth intercostal space at left midclavicular line **V5** - level with lead V4 at left anterior axillary line **V6** - level with lead V5 at left midaxillary line	

8.	Input the patient's demographics and details in the cardiac monitor as per your services requirements and prior to acquisition.	
9.	Instruct the patient not to move and acquire the 12 Lead ECG.	Reduce causes of artifact. Stop patient movement. If in transit, wait for traffic light or other stop.
10.	If ST segment elevation is present in two anatomically contiguous leads, follow the HSN CPC STEMI Triage Guideline Policy and pre-alert the receiving facility that you transporting a patient suffering a possible acute myocardial infarction (AMI)	Once a STEMI is confirmed, the paramedic should apply defibrillation pads due to the potential for lethal cardiac arrhythmias. If intravenous access is indicated and established as per the *Advanced Life Support Patient Care Standards*, then the left arm is the preferred site.
11.	If ST segment elevation is **present** in the **Inferior leads** and you're considering Nitro administration in the setting of suspected cardiac ischemia a V4R acquisition is mandatory. Move the V4 chest lead to the following correct anatomical position: **V4R** - fifth intercostal space at right midclavicular line	
12.	If a right ventricular myocardial infarction (RVMI) is suspected (ST segment elevation in Lead V4R), NTG may have a negative impact on the patient's condition. As such **withhold NTG administration**	
13.	Notify CACC (STEMI ALERT) as soon as a STEMI is confirmed.	
14.	Provide the receiving facility with a copy of all the 12 lead ECG and V4R ECG with the patient's name on it. A copy must also be made available to the Base Hospital (electronically or paper copy)	Ensure to relabel the V4R ECG correctly. (V4 must be relabeled to V4R)
15.	Document the procedure on the patient care record as per the Ministry of Health and Long Term Care Emergency Health Services Branch Ambulance Call Report Completion Manual and applicable Service	Provider policy and must include: • time of 12 Lead ECG acquisition • results of 12 Lead ECG • time of V4R acquisition • results of V4R ECG
16.	Document patient condition before and after 12 Lead and/or V4R acquisition	

Expected Outcome: Successfully acquire 12 Lead ECGs including V4R ECG's in the prehospital setting.