ECG, Electrocardiogram; Ordering, Pyramis Requisition Reception, 12 Lead Performance, Pyramis Electronic Storage	2.1.1.09.12

Purpose and or Principle - this procedure outlines the steps for ordering ECGs, receiving electronic requisitions from the Pyramis Management System, performing the ECG and sending the tracing to the Pyramis Management System.

Equipment Quinton Eclipse Premier Electrocardiograph
        Disposable Resting EKG Electrodes
        Pyramis Management System.

Procedure

Ordering	
Paragon Process	ECG orders created in Paragon will generate a Pyramis ECG requisition. A paper requisition will print in lab to notify ECG staff.
ED Process	ECGs ordered in the ED will generate a Pyramis requisition, but no paper requisition will print in the lab. ED will call the lab if they would like lab staff to do the ECG, otherwise the ED techs will do it.
John Doe Process	When a requisition is not available, due to lack of registration or time, available demographics may be entered manually, on the ECG cart. Type in as much ID as available or use a typenex # for the medical record number. Perform the ECG, do NOT send to Pyramis. Demographics cannot be edited on the cart if the ECG has been sent.

ECG Electrode/Lead Placement	
1	In a private location, make the patient comfortable on a chair or bed large enough to support their arms and legs. Arms should rest at sides and legs should lie flat, not touching one another. Use a pillow to support the patient's head. A relaxed patient is the key to a good quality ECG.
2	Limb lead placement can be somewhat arbitrary, but should be on the fleshy parts of the upper arms and calves, refer to diagram. (If limb lead placement varies from the norm due to the patient's anatomy or other reasons, it should be noted in the COMMENT area of the patient ID screen.)

3	Chest lead placement must be precise. Refer to the diagram. Intercostal space refers to rib spaces, do not include the space between the clavicle and the first rib. Keep V1 and V2 close to the sternum. You may need to shave some chest hair to achieve a good connection.
	    a. V1 is the fourth intercostal space, on the right border of the sternum.
	    b. V2 is the fourth intercostal space, on the left margin of the sternum.
	    c. V4 should be placed next. It is in the fifth intercostal space, down from the midclavicular line.
	    d. V3 is located at the midpoint of a line between V2 and V4.
	    e. V5 is at the horizontal level of V4 at the left anterior axillary (just before the arm pit) line.
	    f. V6 is at the horizontal level of V4 and V5 at the left mid axillary line (center of the arm pit).
	(See attachments for limb and chest lead placement diagrams, and an alternative method for locating the 4th intercostal space.)

4	Lead cables should be positioned to follow patient contours and lay flat, avoiding large loops.

Receiving the Requsition from Pyramis	
1	Turn on the Eclipse by pressing the **on/standby**. Wait for the reliability checks.
2	On the ECG cart select M - **Menu**
3	Select **Directory** – press enter
4	Select **Get Requisitions** – press enter
5	Enter **Criteria** – press > arrow key

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6	Press > arrow key
7	Choose the appropriate **Locations**: Press enter
8	Press < arrow key
9	Select **Get Requisitions** – press enter
10	The requisitions for the location you selected should download to the cart and the number of received requisition will show on the screen. NOTE: If you did not get the requisition to download you could try UNKNOWN as a location. **GO TO Manual Entry of Patient ID Information if Requisition is not available ↓.**
11	In the directory the requisition will show DEMOGR Rq for status.
12	Select the correct requisition. Do your patient identification using the information on this screen as your requisition.
13	Enter your initials in the TECH field.
14	Press **ECG** button to initiate the Auto ECG, it will automatically print and send to the directory.
15	Lead problems will be highlighted across the bottom of the screen, troubleshoot as necessary. You may press "**STOP**" at any time. Check the quality of the tracing, looking for a level baseline and background interference. Repeat as necessary.
	Remove lead wires and dispose of the electrodes.
	Wash hands before leaving the room.
	Leave the tracing at the nurse's station.
Send the ECG to the Pyramis Management System	
1	Navigate to the **Directory** via the Main Menu (**M**) or directional arrows.
2	If multiple ECGs appear in the directory due to repetition for quality, mark the bad one/s as DO NOT SEND.
3	From the Directory Menu select BATCH SEND ECGS. ECGs can also be sent individually, but we prefer the batch send option.
NOTE: ECGs must have an attached requisition before they can be assigned for interpretation and billing.	
Sending a Received Requisition Back to Pyramis - if you downloaded a requisition and were unable to do the ECG, you must send the requisition back to Pyramis so that it will be available for other users.	
1	View the Directory.
2	Highlight the requisition you want to send back.
3	Press Enter.
4	Select Send ECG.
5	Press Enter.

Manual Entry of Patient ID Information	
1	If a System Note box appears with the message **"New Patient?"** press **Y**
2	**V3 Placement:** STANDARD
3	**Location:** select appropriate department
4	**Medical Record #:** is entered as Typenex #
5	**Last name:**
6	**First name:** should be entered followed by a space and then middle initial.
7	**Room #:** if appropriate
8	**DOB:** format is month-day-four digit year. You may use spaces, periods or hyphens to separate.

ECG, Electrocardiogram; Ordering, Pyramis Requisition Reception, 12 Lead Performance, Pyramis Electronic Storage	

9	**Age:** this fills in if you have entered the DOB
10	**Sex:** select appropriate choice
11	**MD:** should be entered as the **family** physician, not an ED doctor
12	**Tech:** your initials
13	**Comments:** enter any deviations in lead placement or other special circumstances
NOTE: perform the ECG, do NOT send to Pyramis. Demographics cannot be edited on the cart if the ECG has been sent. If the ECG is sent to Pyramis communicate with the lab that no requisition was available.	

Procedure Notes
- Only current Requisitions can be downloaded to an ECG cart. Current requisitions are defined as those requisitions which fall into a window of + or − 12 hours from the time the ECG was ordered to be done.
- Eclipse carts should be plugged in when not in use. The Elipse carts require battery recharging. Every 24 hours, one of the carts is taken out of use and allowed to recharge for 24, uninterrupted, hours.

Attachments
- "Resting ECG Lead Placement & Coding Chart", from the Eclipse Operating Manual
- "Alternative Method for Locating Correct Precordial Positions", from the Burdick Guide ECG Cart

Backup Procedure RMC maintains three ECG carts, try another cart.
References Burdick Eclipse Electrocardiograph Operating Instructions

Date:	Author:	Date:	Validated by:	Date:	Approved by:
5/19/09	Jean Robbins				
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Annual Review					
Date:												
Initials:												
Date:	**Initials:**	**Revision and Reason**			
1/25/12	PK	Revised the ED process, reorganized Pyramis processes.			

Discontinued		
Date:	Reason:	Initials: