

**HACKETTSTOWN REGIONAL MEDICAL CENTER  
CARDIO PULMONARY POLICY MANUAL  
HOLTER MONITOR SCANNING**

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**Effective Date: August 2009**  
**Cross Referenced:**  
**Reviewed Date: 02/16**  
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**Policy No: 8B.003**  
**Origin: Cardio Pulmonary**  
**Authority: Cardio/Pulmonary Manager**  
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Purpose: Utilizing a portable device for continuously monitoring the electrical activity of the cardiovascular system for 24 or 48 hours.

The Cardiology Tech will remove and scan Holter Monitors weekdays from 6:30am until 7:30pm and on weekends from 7:00am until 7:30pm.

Resources:

1. GE MARS Ambulatory ECG System
2. GE SEER Light Compact Digital Holter Monitor
3. Copy of written prescription (outpatient) or task on the Multi-patient Task List in Cerner (inpatient)
4. Copy of the patient's face sheet from the Cerner system
5. Completed patient diary
6. Holter Monitor Log Book
7. MARS Ambulatory ECG System Operator's Manual
8. MUSE Cardiology Information System

Procedure:

Transferring Data from the recorder into MARS (outlined in detail in the MARS Operator's Manual pages 101-105)

1. The holter monitor will be removed from the patient 24 hours after it was applied or by direction of the patient's primary nurse or physician.
2. The holter monitor, protective pouch, and electrode wires are cleaned using the Germicidal Wet Wipes (PDI- Sanicloth). All adhesive residues are removed using adhesive remover pads.
3. The holter monitor is plugged into the MARS Ambulatory ECG System computer located in the ABG Lab in the Cardiopulmonary Department.
4. Double click on the MARS icon on the desktop.
5. Click on the Acquire Data icon at the bottom of the screen. The Monitoring Data Acquisition window opens. The patient's name, ID number and the date and time of monitoring will appear.
6. Click Start. The Acquiring Data box will open. When this is completed, the Analyzing Data box will open. When the download is complete, the status bar and acquisition window will close.

Editing Data in MARS (outlined in detail in the MARS Operator's Manual pages 119-157)

1. Click on the **Patient Information** icon at the bottom of the screen. Using the copy of the patient's order, enter all of the following information:
  - Patient name
  - ID (the nine digit medical record number)
  - Date of Birth
  - Gender
  - Diagnosis
  - Patient Type (utilize the choices available)
  - Room number (enter OP for outpatients)
  - Order number
  - Unit (enter OP for outpatients)
  - Hook up and analyzing technicians including their MUSE ID number
  - Ordering physician (and MUSE ID number for cardiologists)

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2. Click Save. A dialog box opens to notify you when the record is saved. Click OK to close the dialog box.
3. **Shape Review** (outlined in detail in the MARS Operator's Manual pages 119-132): Click on the Shape Review icon at the bottom of the screen. Review each template, insuring the green line crosses through each shape.
4. For templates that do not appear to have the green line crossing through the center of the shape, click that template. Click the Review button in the Shape Review control panel. Click Next Beat to review each beat in the chosen template.
5. Re-label the beats as needed. To re-label, click the Shape button. Choose the correct label. The entire template may be re-labeled using the same method. Click on the template, and then click on the correct label. The entire template will be re-labeled.
6. Repeat this process for all templates, insuring each beat is labeled correctly.
7. **Episode Review** (outlined in detail in the MARS Operator's Manual pages 133-140): Click on Episode Review at the bottom of the screen.
8. Click anywhere within the first histogram (R-R interval). Click Max/Min (outlined in detail in the MARS Operator's Manual pages 141-142). Click Max. The ECG strip containing the maximum R-R interval will be displayed at the top of the screen. Edit the beats if necessary. Repeat this process until the accurate maximum R-R interval is obtained. Click Set Max.
9. Repeat this process to set the minimum R-R interval.
10. Repeat this process for all of the histograms within the Episode Review icon.
11. **SVE Editor** (outlined in detail in the MARS Operator's Manual pages 143-147): Click on SVE Editor at the bottom of the screen.
12. Click on each entry in the Event Diary window. The ECG for the chosen event will appear at the top of the screen. Edit the beats if necessary.
13. Repeat this process for each diary entry.

#### Saving ECG strips for the Final Report

1. The following ECG strips are to be saved (filed) to be included in the final report:
  - Maximum and minimum R-R intervals and heart rate
  - At least three examples of each arrhythmia noted
  - All patient diary entries
2. Each ECG strip can be saved by using the following steps:
  - Identify the ECG strip at the top of the screen.
  - Click the File button.
  - Type the descriptive comment in the Enter Comment field. This comment will be used as the title for the data in the patient report.
  - Click the File button. The panel closes and the selected data, along with the comment, are added to the patient report.
3. After all relevant ECG strips have been saved, click on the **Final Report** icon.
4. Click Save Report.

#### Transferring the Final Report to MUSE

1. Click on the Patient Select icon. The Patient Select application opens.
2. Select Stored Reports from the Data Type control. All the patient reports stored on the MARS system appear in the Patient Select window.

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3. Click Tools.
4. The Tools control panel opens.
5. In the Patent Select window, select the report to be transferred. The selected report will be highlighted.
6. Click Store to MUSE.
7. A dialog box opens. Click yes to transfer the report to MUSE.

**Editing test in MUSE**

1. Log into the MUSE Cardiology Information System.
2. Click on "Holter".
3. Chose the desired stress to be edited by double clicking on the patient's name.
4. Review all demographic information. Edit as needed.
5. Select the overreader (the cardiologist who attended the stress test).
6. Click on "Demographic Complete/Send to Inbasket" (Icon of a doctor and a check mark).