

## Telehealth Post Cardiac Catheterization Femoral Artery Access or Radial Artery Access Presenting

### 1. SCOPE

- 1.1. MCHS Hospital-Based Ambulatory Care
  - All clinical staff responsible for presenting Post Cardiac Catheterization Femoral Artery Access or Radial Artery Access patients to Cardiology or any provider who may need a component of a Post Cardiac Catheterization Femoral Artery Access or Radial Artery Access exam via TeleHealth technologies.
- 1.2. Facilities and departments included in the scope listed above are further defined in the [Scope Definition Resource Guide](#) if not specifically outlined above.

### 2. DEFINITIONS & EXPLANATIONS OF TERMS

- 2.1. Abbreviations:
  - CMR: Combined Medical Record
  - CMST: Circulation, Motion, Sensation Temperature
  - CRT: Capillary Refill Time
  - MCHS: Marshfield Clinic Health System
  - PMI: Point of Maximal Impulse
- 2.2. Definitions:
  - Codec: Refers to the use of clinical video systems.
  - Angioseal: is a vascular closure device which consists of three resorbable components (polymer anchor, collagen plug and suture). It provides rapid closure and sealing of the arterial puncture site and efficient hemostasis, shortened recovery time and rapidly restores patient's mobility after a cardiac catheterization.
  - Bruit: an adventitious sound of venous or arterial origin heard on auscultation
  - CMST: color: pallor, flushed, dusky, cyanotic; check mucous membrane; temperature: warm, dry, cold, clammy
  - Discharge: the flowing away of a secretion or excretion of pus, feces, urine etc.
  - Ecchymosis: a bruise, that is, superficial bleeding under the skin or a mucous membrane
  - Edema: a local or generalized condition in which the body tissues contain an excessive amount of tissue fluid.

- Hematoma: a swelling comprised of a mass of extravasated blood (usually clotted) confined to an organ, tissue, or space and caused by a break in a blood vessel
- Modified Allen's Test: A bedside test used to evaluate the patency of the arteries of the hand before arterial puncture
- Pulses: 0 = Absent, 1+ = Barely Palpable, 2+ = Normal, 3+ = Enlarged, 4+ = Aneurysmal
- Redness: having a red hue
- Telepresenter: is an RN who is trained to use technology, such as digital stethoscope, otoscope, examination camera, etc, to facilitate comprehensive exams under provider guidance

PROCEDURE

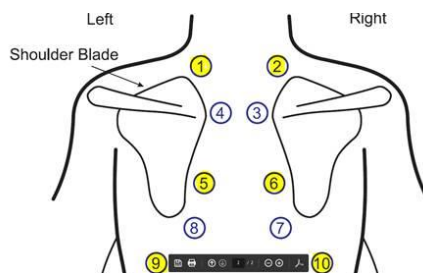
### 3. PROCEDURE BODY

All clinical staff responsible for the TelePresenting of Post Cardiac Catheterization patients to Cardiology or any providers using TeleHealth who may need any component of a Post Cardiac Catheterization Cardiology history or physical exam shall be proficient in providing a Post Cardiac Catheterization exam via TeleHealth technologies and shall be appropriately trained while working within scope of practice.

#### 3.1. Pre-consult preparation

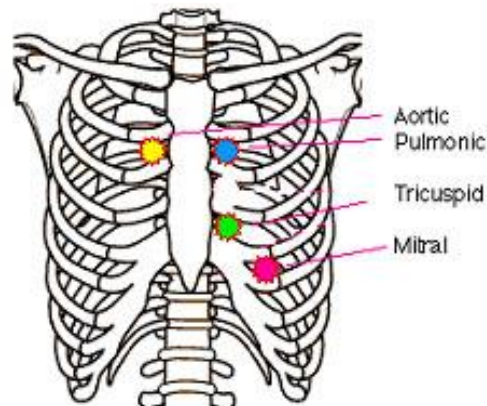
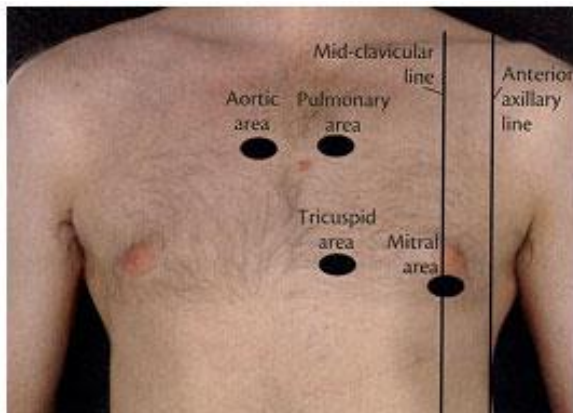
- a. See [Core Telepresenting Procedure](#)
- b. Prepare technology to include: hand held camera(s) and clinical exam video systems.
- c. Review patient CMR and appointment screen for prior notes and appointments with TeleHealth provider or referring provider.
- d. Complete vital signs to include: weight, pulse, blood pressure.
  - Weight
  - Pulse
  - Blood Pressure
    - Refer to [Lippincott](#)
- e. Enter results in dashboard under the vital tab. Be sure to select the appropriate provider and necessary package that coincides with the visit
- f. Verify medications and dose via Medications Manager, update if needed
- g. Verify drug and non-drug allergies, update if needed
- h. Put patient in a gown
- i. Check pulses on the side of groin/femoral or radial artery where vascular access was obtained
  - Report findings to provider during visit or document findings on provider worksheet
    - Pulse grading scale
      - 0 = Absent
      - 1+ = Barely Palpable
      - 2+ = Normal
      - 3+ = Enlarged
      - 4+ =Aneurysmal
- j. Asses for Edema
  - Look for swelling of the ankles, feet, sacral area.

- If present, press on the area with swelling (ankles, mid-calf, etc.) for 10 seconds and release.
  - Report findings to provider during visit or document finding on provider worksheet
- 3.2. Assisting the provider with the physical exam during the consult
- The TeleHealth nurse must be prepared to assist with the following exam. The provider will direct the nurse in the room. Ensure the patient is always framed appropriately so the provider can see all aspects of the exam.
  - Use the hand held camera for any part of the anatomy the provider may need to examine up close.
- 3.3. Review of Systems
- a. The provider will ask and document if patient has had:
- Fever/Chills
  - Chest Pain
  - Shortness of Breath
  - Pain at Groin or Wrist/Arm access site on side where vascular access was obtained
  - Edema
- 3.4. Auscultate Heart and Lungs using digital stethoscope
- a. Lung assessment:
- Position patient so his or her posterior side is to the room camera
  - Place limited pressure with the digital stethoscope at the six posterior lung fields for two complete breaths or until prompted by provider to switch landmarks
  - Begin with upper lobes of lung, moving the diaphragm of the stethoscope in a ladder-like pattern, from one side to the other. This will allow the provider to identify patterns of breath sounds and compare symmetric areas of the lungs
  - Position patient with anterior side facing the room camera. Use the digital stethoscope to auscultate two anterior lung fields or until prompted by provider to switch landmarks



## b. Heart assessment:

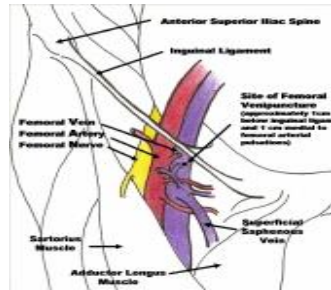
- Position patient's anterior side to room camera and apply limited pressure to the digital stethoscope to auscultate in the four landmarks below.
  - Aortic valve
  - Pulmonic valve
  - Tricuspid valve
  - Mitral Valve/Point of Maximal Impulse (PMI)



- Watch the provider for cues to move to the next landmark.

## 3.5. During the consult and at the direction of the provider conduct groin/femoral artery site exam

- a. Framing access site: with patient on exam table have patient lie/lean back exposing groin where vascular access was obtained. Zoom clinical exam video system camera into the groin site where vascular access was obtained.
- b. If not able to get close enough with clinical exam system camera, use handheld digital video camera to zoom into the groin site where vascular access was obtained.
- c. Show provider the groin/femoral artery site and assesses for and show:
  - Hematoma
  - Ecchymosis
  - Redness
  - Bruit
  - Discharge
- d. Under direct supervision by video palpate site and assess for:
  - Pain
  - Tenderness



3.6. During the consult and at the direction of the provider conduct radial artery access site exam

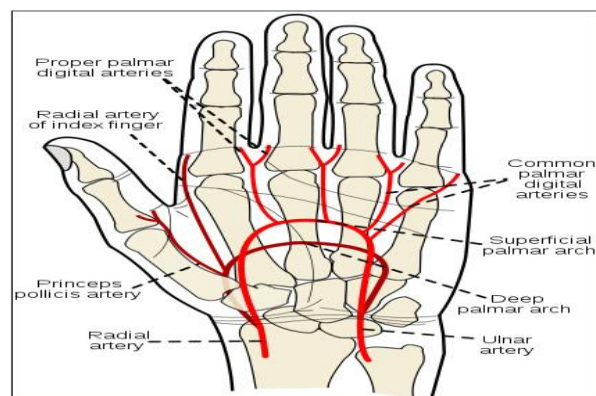
a. Framing access site: with patient on exam table or chair expose arm/wrist where vascular access was obtained. Zoom clinical exam video system camera into the arm/wrist site where vascular access was obtained. If not able to get close enough with clinical exam system camera, use handheld digital video camera to zoom into the arm/wrist site where vascular access was obtained.

- Show arm site where vascular access was obtained assess for and show hematoma
- Show and assess capillary refill time, which should be under 2 seconds
- Show wrist on side where vascular access was obtained and assess for and show full range of motion
- Show and assess CMST (Circulation, Motion, Sensation Temperature) of hand

b. Under direct supervision by video perform Modified Allen's Test

c. Frame the hand so the clinician(s) can see the results

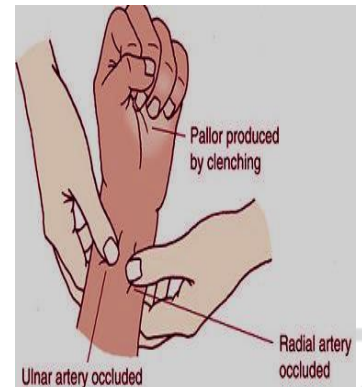
Primary Arteries of the hand



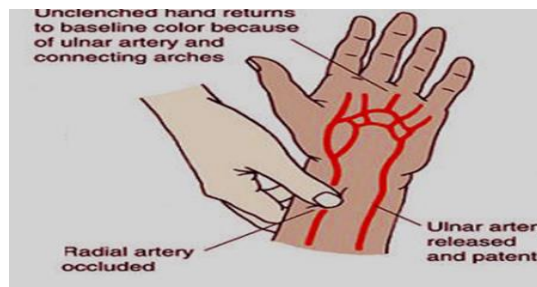
- Modified Allen's Test, procedure for performing a modified Allen's Test is as follows:
- Instruct patient elevate hand and clench his/her fist, or if the patient is unable, you may close the hand tightly, for about 30 seconds.

When document is printed it becomes an uncontrolled copy. Please refer to DCS system for most current version.

- Apply occlusive pressure to both the ulnar and radial arteries. This maneuver obstructs blood flow to the hand.
- With the hand elevated and occlusive pressure applied, ask patient to open the hand. Blanching of the palm and fingers should occur (pallor can be observed at the finger nails). If it does not, you have not completely occluded the arteries with your fingers.



- Patency of the **radial** artery can be tested by releasing the radial artery while still compressing the ulnar artery. When the occlusive pressure on the **radial** artery and the color should return to the hand in 3 to 7 seconds. This denotes that the **radial** artery is patent and blood flow/supply to the hand is sufficient and was not compromised by the catheterization procedure. This normal flushing of the hand is considered to be a positive modified Allen's test. A negative modified Allen's test is one in which the hand does not flush within the specified time period. This indicates that radial circulation is inadequate or nonexistent.



### 3.7. Post Physical Exam

- a. When the clinical exam is completed, reframe the patient appropriately so that the patient and provider have good positions for their closing discussion.
- b. Turn off all equipment and move out of the patient's direct view of the video system.

### 3.8. Post Visit Considerations

- a. Reinforce any patient teaching.
- b. Assist patient with prescriptions and follow-up appointment as appropriate.
- c. Enter facility fee charge in MECCA.

#### 4. ADDITIONAL RESOURCES

4.1. References:

- Tabers Cyclopedic Medical Dictionary, 19<sup>th</sup> Edition, 2001, F.A. Davis

PROCEDURE



**5. DOCUMENT HISTORY**

Version No.	Revision Description
1.0	New Document
2.2	Reviewed and deleted references (4.1) with links that no longer work ~Sharon D 12/26/17
3.0	Removed Marshfield Clinic Logo, Updated Quick Part in Header, Updated DCC to Megan Seifert.

PROCEDURE

**6. DOCUMENT PROPERTIES**

Primary Author: Elsen, Julianne M

Co-Author(s):

Approver(s): This document has been electronically signed and approved by: Meyer, Chris on: 10/31/2019 7:47:46 AM

This document has been electronically signed and approved by: Simon, Tammy A. on: 11/1/2019 7:05:28 AM

This document has been electronically signed and approved by: Krueger, Kori K MD on: 11/4/2019 8:24:48 AM

PROCEDURE