# **Thumbs Up for Quality and Patient Safety with Radial Artery Access**

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# **PURPOSE:**

The goal of the initiative was to increase the Radial Artery Access procedures to decrease post-op complications, to improve patient outcomes and satisfaction.

# **RELEVANCE/SIGNIFICANCE:**

Utilizing the Radial Artery for our access point during cardiac procedures will decrease post-op complications, mortality rates and patient's length of stay. Observed symptomatic complications occur only 3-6% of the time due to the intricate palmar circulation. A coronary procedure with a

femoral access approach has a 10% risk of severe postop complications leading to mortality. Radial Artery access demonstrates reduced patient hospital cost and length of stay by 15% (Rao, et al., 2008).

# **STRATEGY AND IMPLEMENTATION:**

In 2011 the Cardiac Catheterization Lab (CCL) was not performing Radial Artery access. We implemented the new routine of Radial Artery access starting first with the planned Diagnostic Coronary

outpatients population. Based on the evidence supporting this innovative technique, we partnered with the Cardiology group to implement this best practice. Nursing staff was supported with resources and education including a competency on the "Thumbs Up" procedure for Radial Artery assessment utilizing the Modified Allen's Test. Nursing education encompassed a knowledge of medications, equipment set up, procedural steps and patient education pieces. As the Radial Artery practice expanded in the patient population, education was extended to include outlying units that would be involved in post-op monitoring. In 2013 the CCL department expanded Radial Artery Access to include the Acute Coronary Catheterization clients.

## **EVALUATION:**

Currently 75% of all coronary procedures utilize Radial Artery access. Outcomes of Radial Artery access demonstrates patients ambulate earlier, experience less pain and have fewer restrictions during recovery. Length of stay is shortened thereby reducing costs. Education was extended to all areas caring for patient's pre and post Radial Artery procedures. Nurses demonstrate expertise with this new process.

### 2014 TO 2015 RADIAL CATH COMPARED TO TOTAL NUMBER OF CATHS



### CATHPCI: RISK ADJUSTED RATE OF BLEEDING EVENTS



### PROPORTION OF PCI PROCEDURES WITH TRANSFUSION OF WHOLE BLOOD OR RBCs







# WHAT PERCENTAGE OF ELIGIBLE PATIENTS GO HOME SAME DAY?



# **IMPLICATIONS FOR PRACTICE:**

As technology advances nursing staff is challenged to implement innovative practice changes to enhance quality and improve patients' outcomes. Increasing Radial Artery access ensures the best care practices for the patients are provided.

- **1.** Fewer restrictions post-op: earlier ambulation, with only wrist movement restrictions
- 2. Less procedural site pain reported
- **3. Fewer post-op complications resulting in 1-2% fewer post-op blood transfusions**
- 4. 80% of patients are then eligible for Same Day discharge
- 5. Developed a policy and order set
- 6. To enhance quality patient care and improve patient outcomes, practice change education was extended to all post-op units. This included:
- Management of Radial Compression devices
- Monitoring bleeding, hematomas, and pain
- Assessing for hand ischemic complication through circulation.





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**CLINICAL QUALITY SPECIALIST:** Jerre Johnson RN

All CCL and Pre-Post **Clinical Staff** 

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