

# The Journey to Stopping the Bleed for the Percutaneous Coronary Intervention Patient

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Contact Information

### Introduction

The purpose of this project is to decrease bleeding post percutaneous coronary intervention PCI with the overall goal to decrease patient length of stay and mortality and increase patient satisfaction and safety.

The data documents Good Samaritan University Hospital's (GSUH) PCI patients' and bleeding complications over 5 years and the outcome of exploring a multitude of interventions to mitigate the problem. The U.S. registry average PCI bleeding rate is 2.1%, at GSUH our rate was 6.67%.

### Measurement

Using the National Cardiovascular Data Registry (NCDR) to abstract PCI bleeding rates, we are able to measure our on-going progress.

### Acknowledgements

A special thank you to the Cardiology Staff, the Quality Management and Performance Improvement team, and numerous other departments who supported this effort.

References upon request

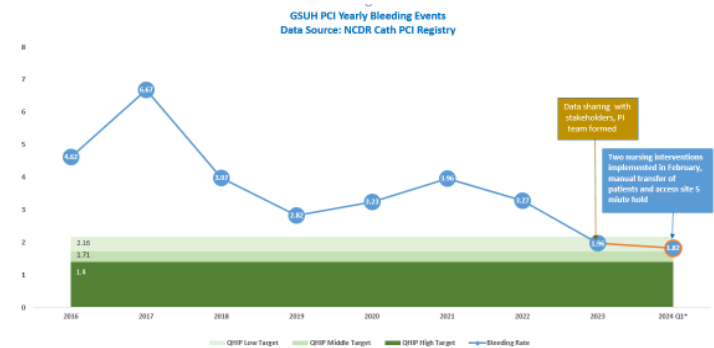
### Implementation

- A multidisciplinary team of quality management, senior leadership, nursing, physicians and numerous other departments worked through a myriad of interventions.
- Heparin was evaluated by Pharmacy to determine the consistency of the dose. New scales were purchased and all patients were weighted to ensure accurate weight-based dosing.
- ACT Cartridges were evaluated by the Point of Care team and staff to confirm controls were accurate.
- In 2018, a competency was developed. Staff was educated and competencied on manual compression of the artery and vein post procedure to ensure consistent practice.
- Physicians were educated to give proper hand off to the Advanced Practice professionals (APPs) to include difficult access, high or low access, multiple sticks as well as closure device failures.
- The American College of Cardiology's (ACC) Bleeding Risk Score was assessed and discussed as part of the timeout before the procedure. If the patient was >3% physicians could opt for alternative access and closures that pose less risk for bleeding.
- Additional Sonosite Ultrasound machines were purchased and physicians were educated on their use for ensure appropriate groin access location.
- Radial access was encouraged and preferred when appropriate. A major barrier to this implementation included decrease flow of patients out of the recovery area.
- 3 inpatient units were trained to remove radial band to maintain the recovery room operating flow and allowing for use of radial access in STEMI patients
- Radial access use increased from 24% to 37% in Q1 2023.

### Results

The overall outcome was a reduction in bleeding to 1.96%. We strive to improve our results in the coming year with additional interventions and increased monitoring.

#### **OUTCOME**



### Takeaways

- Support the process of change to improve PCI bleeding.
- Develop nursing driven strategies to improve outcomes.
- Demonstrate the importance of a multidisciplinary team to collaborate in performance improvement.

### Discussion & Limitations

- Future Interventions- Manual transfer from the procedure table to stretcher post femoral access.
- 5 minutes manual pressure after insertion of closure device to ensure hemostasis.