



REDUCING RISK OF BLEEDING AFTER PERCUTANEOUS CORONARY PROCEDURES

COMMON PROBLEMS AND POSSIBLE SOLUTIONS

COMMON PROBLEM	POSSIBLE SOLUTION
Procedure Performance Issue	
Procedure Performance Issues	Tools <ul style="list-style-type: none"> Risk Factors that Increase Vascular Complications After PCI Indications For PCI in STEMI Pre-PCI Procedure Orders Arterial Access Protocol for PCI
Protocol Issues	
Lack of Protocol to Prevent Postoperative Bleeding	Tools <ul style="list-style-type: none"> Post-PCI Procedural Recommendations After PCI Post-PCI Procedure Groin Bleed Post-PCI Procedure Orders Post-PCI Sheath Removal Protocol Post-PCI Sheath Removal Checklist Competency Assessment for Arterial and Venous Sheath Removal
Lack of Knowledge About Patient Factors That Can Contribute to Risk of Postoperative Bleeding	Tools <ul style="list-style-type: none"> Risk Factors That Increase Vascular Complications After PCI
Failure to Identify Early Warning Signs of Postoperative Bleeding	Tools <ul style="list-style-type: none"> Early Warning Signs of A Vascular Complication After PCI
Medication Management Issues	
Improper Preoperative, Intraoperative, and Postoperative Medication Management	Tools <ul style="list-style-type: none"> Risk Factors That Increase Vascular Complications After PCI General Considerations For Use of Anti-Platelets and Anti-Coagulants During PCI Recommendations For Anticoagulant Therapy During PCI University of Wisconsin Health: Periprocedural and Regional Anesthesia Management With Antithrombotic Therapy – Inpatient and Ambulatory – Clinical Practice Guideline Blue Cross Blue Shield Anticoagulation Toolkit Surviving MI for Broad Engagement of Pharmacists for AMI Care
Communication Issues	
Lack of Communication Among Clinicians	Tools <ul style="list-style-type: none"> Surviving MI Barriers and Solutions to Forming a Physician and Nurse Champion Team Surviving MI Characteristics of Clinical Champions (Physician and Nurse)
Failure to Communicate Early That Patient Is at Risk For Postoperative Bleeding Once Clinical Signs Are Recognized	Tools <ul style="list-style-type: none"> Institute for Healthcare Improvement Situation, Background, Assessment and Recommendation (SBAR) Communication Tool SBAR Report to a Physician



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Resources

- Dehmer, G. “SCAI/ACC/AHA Expert Consensus Document: 2014 Update on Percutaneous Coronary Intervention Without On-Site Surgical Backup” *Catheterization and Cardiovascular Interventions* 84:169–187 (2014) Web 10 Aug 2015
- Fihn, Stephen D. “2012 ACCF/AHA/ACP/AATS/PCNA/SCAI/STS Guideline for the Diagnosis and Management of Patients With Stable Ischemic Heart Disease” *Circulation*.2012; 126: e354-e471 Web 10 Aug 2015
- Levine, Glenn N. “2011 ACCF/AHA/SCAI Guideline for Percutaneous Coronary Intervention” *Circulation*.2011; 124: e574-e651 Web 10 Aug 2015
- “Strategies to Minimize Vascular Complications following a Cardiac Catheterization” *PA PSRS Patient Saf Advis* 2007 Jun;4(2):58-63. Web 11 Aug 2015
- AHRQ Quality Indicators Toolkit Selected Best Practices and Suggestions for Improvement of Postoperative Hemorrhage or Hematoma Avail here <http://www.ahrq.gov/sites/default/files/wysiwyg/professionals/systems/hospital/qitoolkit/d4g-postophemorrhage-bestpractices.pdf>
- Thatcher, Jackson “Groin Bleeds and Other Hemorrhagic Complications of Cardiac Catheterization: A list of relevant issues” *Cath Lab Digest*.2008; Vol 16 - Issue 3
- BMC2 PCI/PVI Best Practice Protocols Avail here <https://bmc2.org/system/files/private/best-practice-protocols-5-20-14.pdf> Jan 2014
- Percutaneous Coronary Intervention (PCI) without Surgical Back-up Policy Guidance Avail here http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_437472.pdf AHA March 2012
- Rao SV. “An Updated Bleeding Model to Predict the Risk of Post-Procedure Bleeding Among Patients Undergoing Percutaneous Coronary Intervention: A Report Using an Expanded Bleeding Definition From the National Cardiovascular Data Registry CathPCI Registry”. *J Am Coll Cardiol Interv*.2013;6(9):897-904
- Farouque HM “Risk factors for the development of retroperitoneal hematoma after percutaneous coronary intervention in the era of glycoprotein IIb/IIIa inhibitors and vascular closure devices”. *J Am Coll Cardiol*. 2005 Feb 1;45(3):363-8.
- Rao Sunil V. “Anticoagulant Therapy for Percutaneous Coronary Intervention” *Circulation: Cardiovascular Interventions*.2010; 3: 80-88
- Sharma Amit B. “DAPT Management for Noncardiac Surgery After PCI” *CARDIAC INTERVENTIONS TODAY* Jan/Feb 2012; 26-31
- Arora Vineet. “A Model for Building A Standardized Hand-Off Protocol Joint Commission” *Journal on Quality and Patient Safety* 2006 ;Volume 32 Number 11(9):646-655
- Woods, Donna M. “AHRQ: Improving Clinical Communication and Patient Safety: Clinician-Recommended Solutions” Avail here http://www.ahrq.gov/downloads/pub/advances2/vol3/advances-woods_78.pdf
- Dingley, Catherine. “AHRQ: Improving Patient Safety Through Provider Communication Strategy Enhancements” Avail here http://www.ahrq.gov/downloads/pub/advances2/vol3/advances-dingley_14.pdf
- TeamSTEPS® : Strategies and Tools to Enhance Performance and Patient Safety Avail here <http://www.ahrq.gov/professionals/education/curriculum-tools/teamsteps/index.html>
- Nurse-to-Physician Communications: Connecting for Safety Patient Safety and Quality Healthcare September/October 2012 Vol 9; Issue 5 Available here <https://www.perfectserve.com/resources/docs/PSQH-nurse-to-physician-communication.pdf>