**A MULTIDISCIPLINARY EFFORT TO DECREASE VASCULAR COMPLICATIONS FOLLOWING PERCUTANEOUS CORONARY INTERVENTION (PCI)**

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Objectives:To reduce vascular complications (VC) post PCI and align with Blue Cross Blue Shield of Michigan Cardiovascular Consortium (BMC2) benchmark.

Background:The institution’s post-PCI VC rate of 5.1% was significantly higher than the BMC2 rate of 2.5%. A vascular complications reduction team (VCRT) was formed in May 2009 to reduce VC by implementing strategies beginning with procedural access in the cath lab and continuing through discharge.

Methods:The VCRT identified pre, intra and post-procedure strategies to reduce VC in PCI patients. The multi-disciplinary approach included bleeding risk assessment, radiographic visualization of femoral head and angiographic confirmation of sheath placement, intra-procedural anticoagulation, encouraging use of radial access, education and competency assessment of staff performing sheath removal and development of a protocol for complication management. The VC measured included acute thrombosis, pseudoaneursym, dissection, retroperitoneal bleed, peripheral embolization, arteriovenous fistula and hematoma requiring transfusion or ≥ 3 gm/dl drop in hemoglobin.

Results:Patient management approaches were standardized and variables contributing to a high VC rate were reduced. Multidisciplinary efforts resulted in an improvement of VC rate from 5.1 % to 1.4% (72.5% reduction), and surpassed the complication rate of 2.2 % in the BMC2 for the same time period. Two years after implementation of VC reduction efforts, the complication rate remains at < 2.0%. Data shown below.

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| Period | Institution - VC(n) | BMC2 - VC |
| Jan 2008 - Dec 2008 | 131/2571 (5.1%) | 2.5% |
| Jan 2009 - Dec 2009 | 45/2435 (1.9%) | 1.8% |
| Jan 2010 – Dec 2010 | 34/2450 (1.4%) | 1.9% |
| Jan 2011 – Sep 2011 | 25/1811 (1.4%) | 2.2% |

Conclusions: Implementation of strategies by a multidisciplinary VCRT resulted in significant reduction in VC rate post-PCI. It is anticipated that implementation of this strategy will improve patient outcomes and reduce health care expenditures associated with VC.