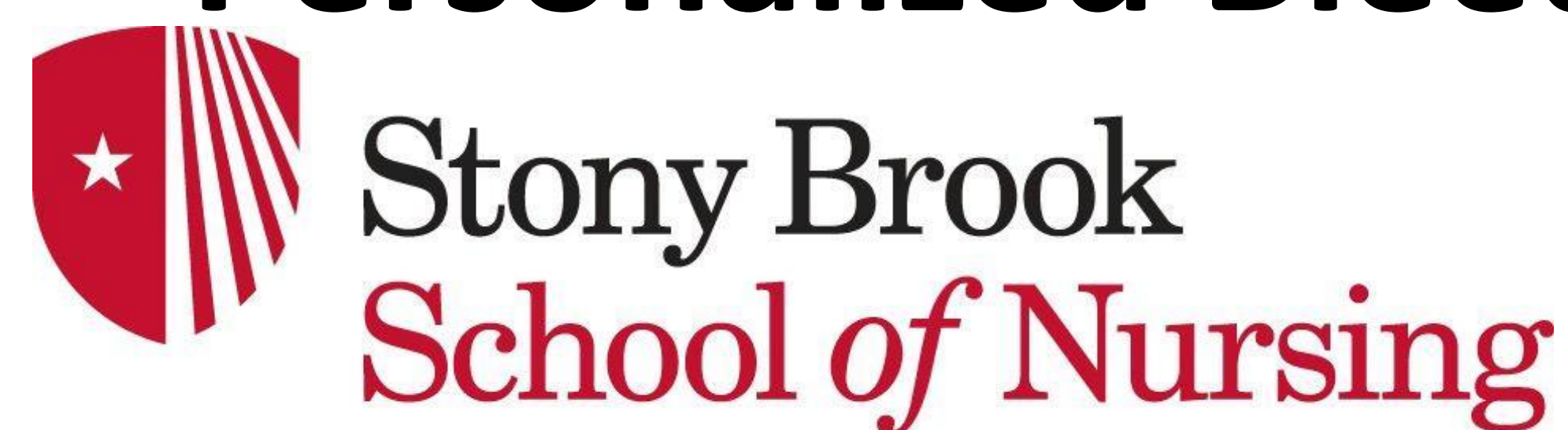


Personalized Bleeding Risk Score to Optimize Post Coronary Intervention Outcomes



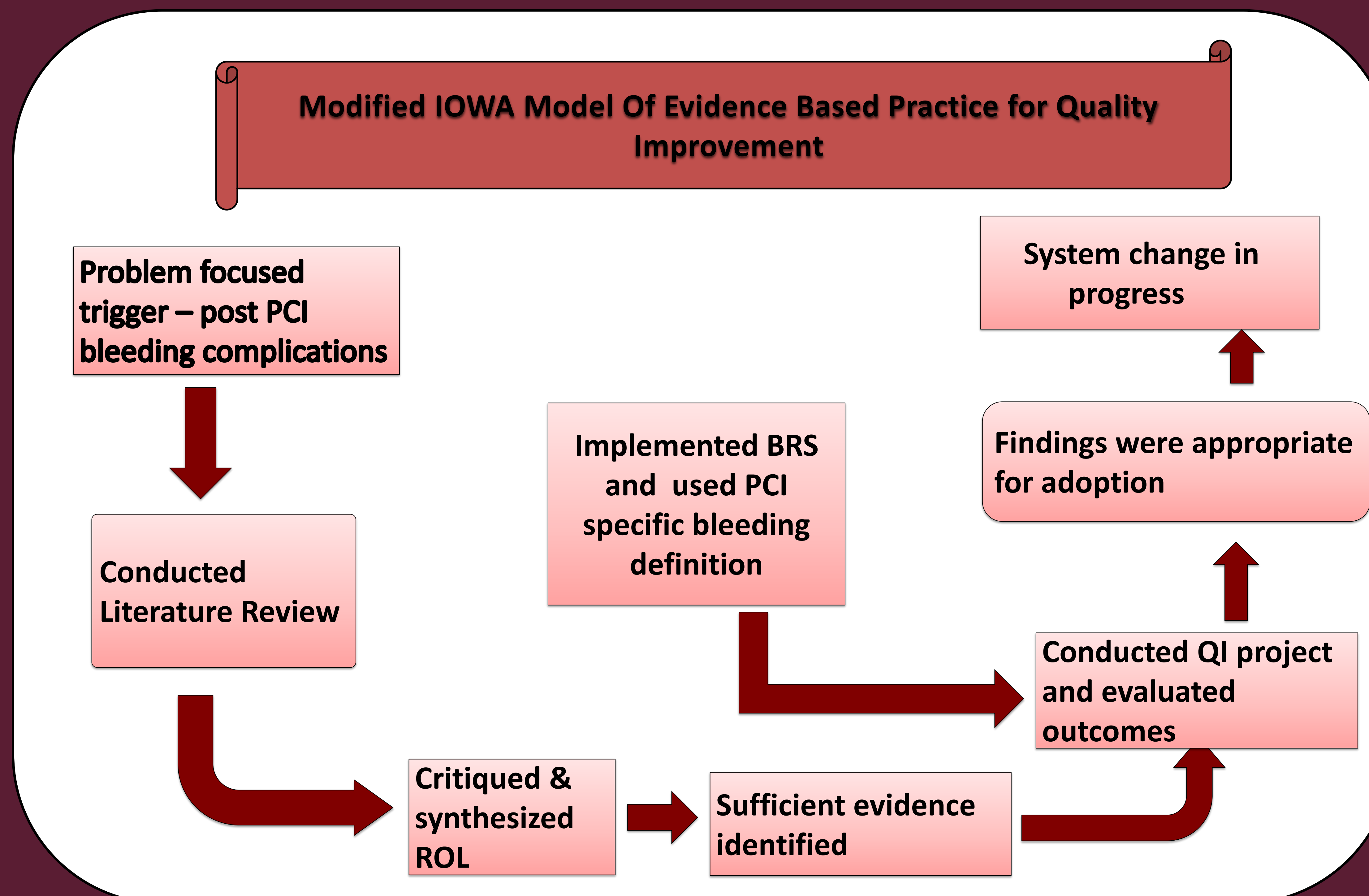
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Background

- ◆ Bleeding is the most common complication after Percutaneous Coronary Intervention (PCI)
- ◆ PCI-related bleeding events are associated with increased mortality, morbidity, cost and length of stay (LOS)
- ◆ Personalized bleeding risk score (BRS) can predict and prevent PCI-related bleeding complications
- ◆ According to 2011 AHA/ACC PCI guidelines, all the patients undergoing PCI need to be evaluated for their bleeding risk
- ◆ PCI-related bleeding is considered a quality indicator of PCI outcome
- ◆ The National Cardiovascular Data Registry (NCDR) CathPCI bleeding risk score (BRS) is readily available however, it is underutilized in the clinical setting
- ◆ PCI-specific, NCDR bleeding definition is used for this study

Purpose: To examine the effect of implementing a standardized bleeding risk score in minimizing bleeding complications in adult patients undergoing elective percutaneous coronary intervention



Methods

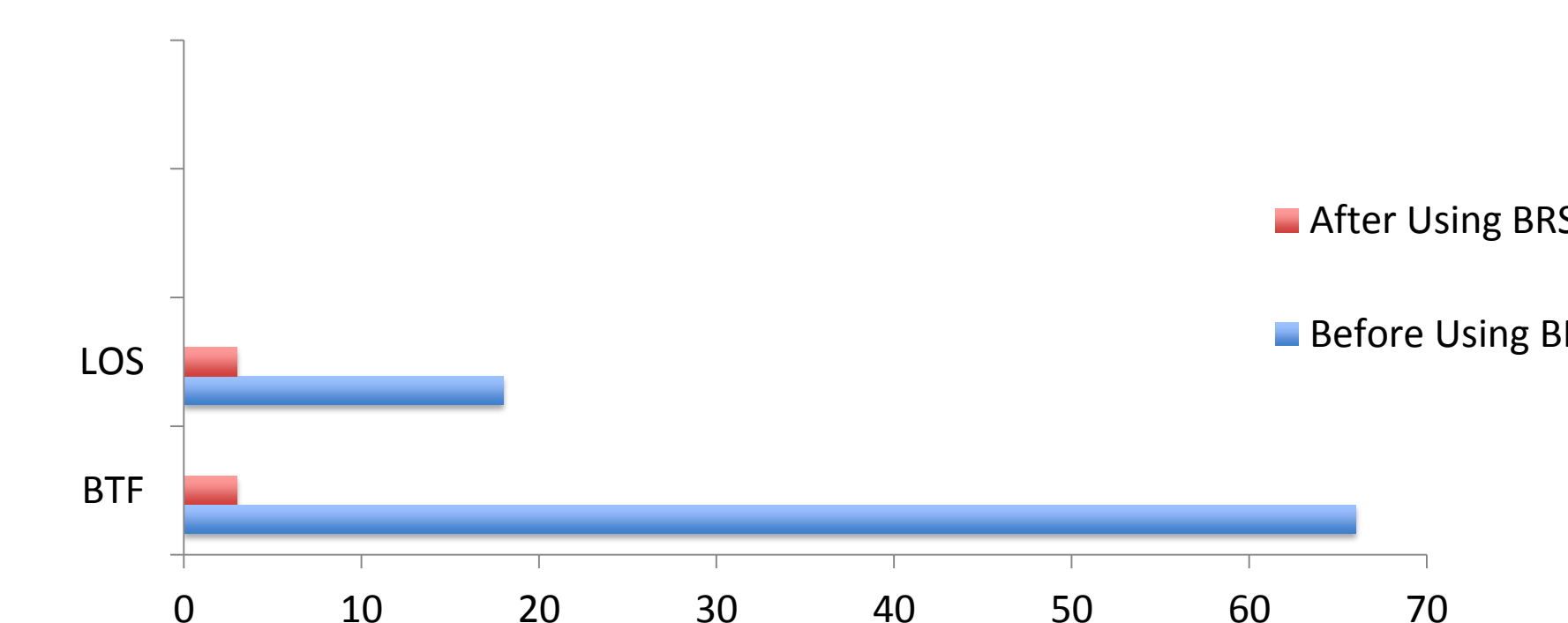
- Case-controlled design was used to study the effect of implementing BRS in a sequential cohort (n=128) of adult patients who underwent elective PCI
- An educational intervention was implemented to identify personalized PCI-related bleeding risk and to apply risk-adjusted bleeding avoidance strategies when appropriate
- Retrospective data review of patients who reported to have post-PCI bleeding complications prior to implementing BRS (n=64) were compared to post intervention group

Findings Post-PCI Outcomes

N=128	Pre-intervention group	Post-intervention group
n	64	64
BRS	low	low
Femoral access rate	85.9	57.8
Radial access rate	12.5	42.2
Number of blood transfusions	2.21	0.03*
LOS	6.4	1.03*

* p=0.00

There was a significant reduction in number of blood transfusions and LOS after implementing NCDR CathPCI bleeding risk score and using NCDR bleeding definition (p=0.00)



Rate of Bleeding complications

Implications

Implementing BRS can promote PCI-related quality of care by effectively reducing number of blood transfusions and LOS. Thereby, it can promote patient, PCI and financial outcomes

A Quality Improvement Study Brings System Change