Reduce the Risk: PCI Bleed

A Campaign of the American College of Cardiology

ACC REDUCE THE RISK: PCI BLEED

Webinar # 5

USING THE PCI BLEEDING RISK CAMPAIGN TO AFFECT PATIENT OUTCOMES

August 23, 2018

12:00-1:00pm EST

AMERICAN COLLEGE of CARDIOLOGY

Hosted by;

Andrea Price MS, CPHQ, RCIS, AACC

Director- Quality Databases, Indiana University Health

Reduce the Risk PCI Bleed Steering Committee Chair

Sunil Rao MD, FACC

Reduce the Risk PCI Bleed Steering Committee Member

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Agenda

1. ACC Quality Campaign Framework and Design and History
2. Reduce the Risk: PCI Bleed Campaign Goals
3. Campaign Metrics
4. The Change Package/the Campaign Features
5. Getting Started

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Quality Campaign Goals…

- Help hospitals improve cardiovascular care.
- To improve the quality and value of cardiovascular care and outcomes.
- Leverage evidence-based practices.

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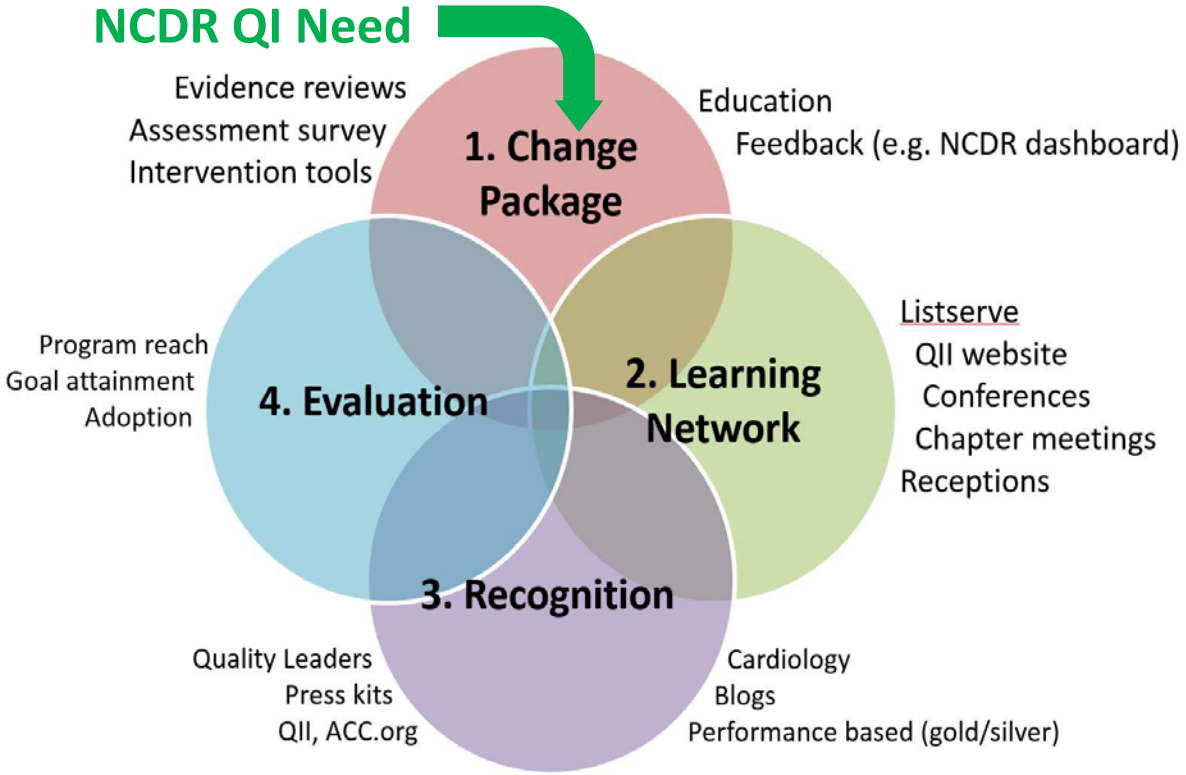
What's in an ACC Quality Campaign? 4 Parts



***Key characteristics of a successful QI program**

- Influential
- Credible
- Simple
- Strategically aligned for participant
- Offers practical implementation tools
- Offers Networking
- Sets Attainable goals

*Bradley, E. H., Nembhard, I. M., Yuan, C. T., Stern, A. F., Curtis, J. P., Nallamothu, B. K., & ... Krumholz, H. M. (2010). What Is the Experience of National Quality Campaigns? Views from the Field What Is the Experience of National Quality Campaigns?. Health Services Research, 45(6p1), 1651-1669.

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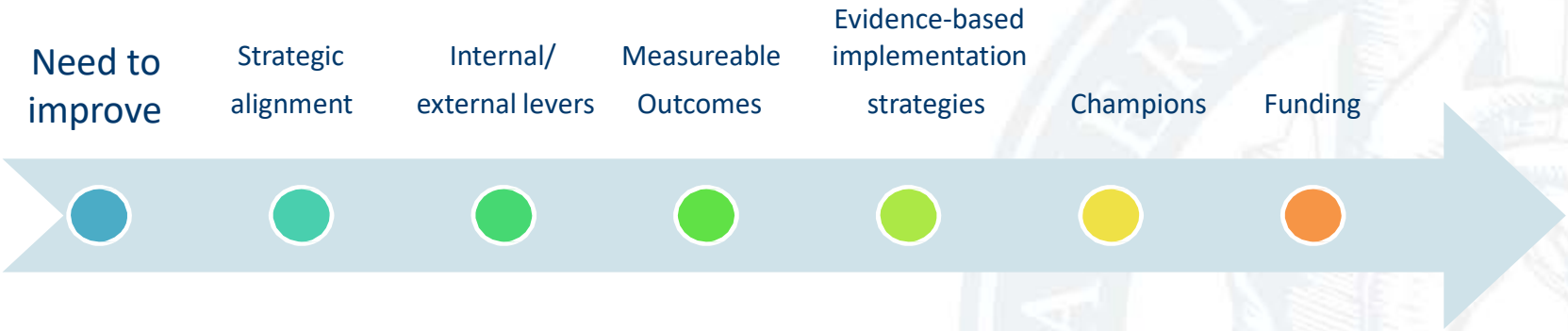
Potential Quality Campaign Feasibility Framework



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Reduce the Risk: PCI Bleed–Feasibility Assessment

A. Primary Purpose

bleeding adverse events

B. Aligned with ACC strategic plan and mission

C. Evidence of need to improve

2.65% to 9.36%

- 70% of hospital variability due to unexplained causes

Guidelines

- Evaluate bleeding risk (1C PCI)
- ACS treated with DAPT after stent and not high risk of bleeding and no hx of stroke/TIA use prasagrel over clopidogrel (IIA DAPT)

NCDR dashboard

- ½ CathPCI sites have median RAB = 4.16% or higher.
- 90th percentile of hospitals have RAB - 1.6% or lower.

D. Drivers

- BCBSA
- MACRA CPI
- NQF
- MOC

E. Draft QI aim statement(s)

widespread adoption of evidence-based practices to improve quality of care.

F. Outcome measures

pts

- #1289) Post proc bleeding
- (#1602) Bivalirudin w/I 24hrs of all PCI pts
- (#1827) Unadjusted bleeding events
- (#1871) Post proc bleeding for STEMI pts

ACTION

- (#42) In-hospital RAB

G. Evidence based implementation metrics

H. Internal levers

•CathPCI
•ACTION
•Guideline references

- PCI
- DAPT

Accreditation
•CathLab related standards
Tools
•PCI bleeding toolkit
ACC Quality programs

- PMAC pathway

I. Funding

ACC/NCDR at the moment.
Pharma:
•AZ-Brillinta

- Daiichi Sankyo/Eli Lilly – Prasugrel

•TMC – Bivalirudin
Transradial:

- St. Jude, Medtronic, BSC

J. Program champions and experts

K. Overall program design

- Assessment survey
- Intervention tools
- Education

•Feedback
Learning Network

- Listserv
- QII website
- Conferences
- Chapter meetings

•Receptions
Recognition

- Quality Leader Hospitals

•General recognition
Evaluation Plan

- Program reach
- Clinical care
- Adoption

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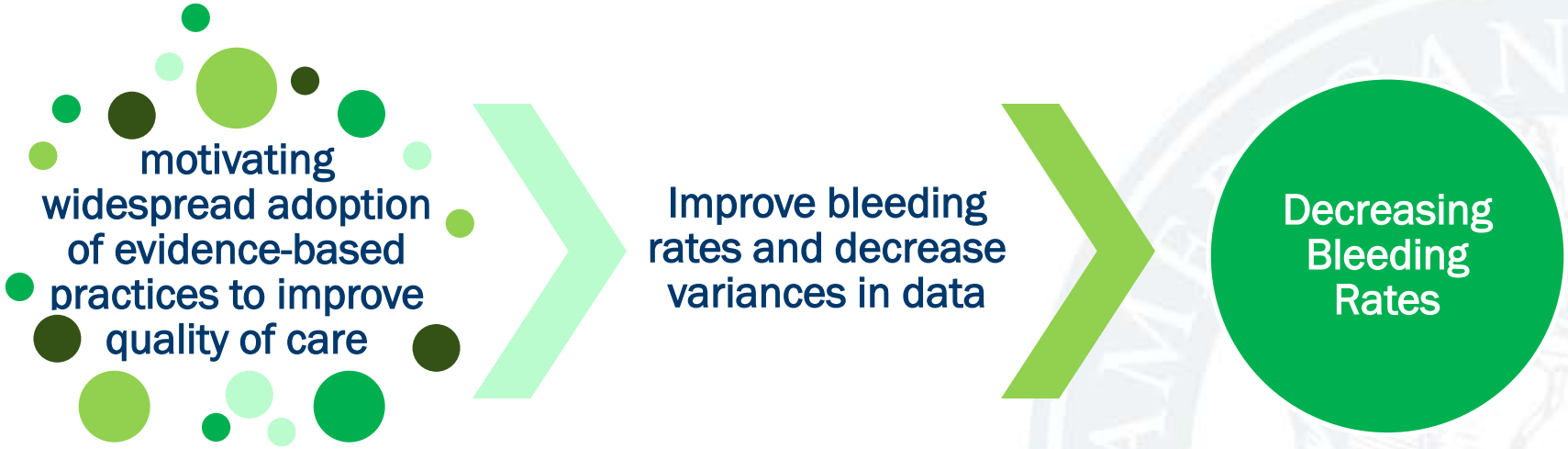
Reduce the Risk: PCI Bleed Quality Campaign



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What are the ACC/AHA Guidelines Saying

- All patie…**ould be evaluated for risk** of bleeding before PCI.
- Patie…red high risk for PCI should be part of a collaborative decision to use a **radial app**…
- In…h ACS treated with DAPT after coronary stent implantation who are not at high risk …omplications and who do not have a history of stroke or TIA, it is reasonable to …el over Clopidogrel for maintenance P2Y12 inhibitor therapy.
- In patients …SIHD treated with DAT after DES implantation who are at high ri…e bleeding complica…n or develop significant short bleeding, discontinuation of P…itor therapy after 3 months ma… be reasonable.
- In patients with SIHD treated with DAPT after… BMS or DES implan…tion w…uated DAPT without a bleeding complication and who are not at …high bleeding ris…ding on DAPT, coagulopathy, oral anticoagulant use), continuation of …DAP…or longer than 1 month in patients treated with BMS or longer than 6 months in pa… with DES may be reasonable.

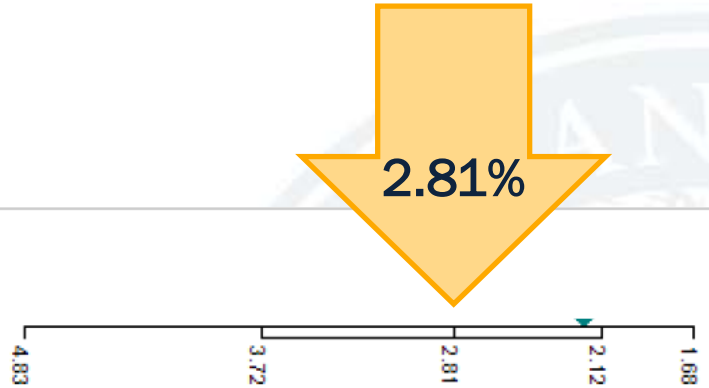
Opportunity for Improvement

40

PCI In-Hospital Risk Standardized Bleeding (all patients)

My Hospital	US Hospitals 50th Pctl	US Hospitals 90th Pctl
2.21	2.81	1.68

Your hospital's risk adjusted rate of bleeding events for patients with PCI procedures using the NCDR® PCI bleeding risk adjustment model. [Detail Line:1822]



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Steering Committee Members

Andrea Price, MS, RCIS, CCA **Committee Chair**	Indiana University
Amit Amin, MD, FACC	Barnes Jewish Hospital
John Messenger, MD, FACC	University of Colorado Hospital
Julie Miller, MD, FACC	Johns Hopkins Hospital
Issam Moussa, MD, FACC	Robert Wood Johnson University Hospital
Sunil V. Rao, MD, FACC	Duke University Medical Center

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#	Program Metric	Metric Description
1	**PCI in-hospital risk-standardized rate of bleeding events for all PCI patients**	Bleeding complications after PCI are associated with increased morbidity, mortality and costs. This measure is helpful in providing risk-adjusted feedback on bleeding complications, informing clinical decision-making, and directing the use of bleeding avoidance strategies to improve the safety of PCI procedures.
2	**Proportion of PCI procedures with transfusion of whole blood or red blood cells**	Numerator: Count of PCI procedures with a RBC/Whole blood transfusion procedure. Denominator: Count of PCI Procedures The purpose of this metric is to allow identification of potential overuse of transfusion after PCI procedures. In addition, it points out blood loss, which predicts poor outcomes.
3	**Procedures with an observed bleeding event**	Count of bleeding event post PCI procedure.
4	**Anticoagulation utilization**	All Anticoagulants Fondaparinux Low molecular weight heparin (any) Unfractionated heparin (any) Heparin-LMWH/Unfractionated(any) Direct thrombin inhibitors Bivalirudin
5	**Access site utilization.** Indicate the primary location of percutaneous entry. Code the site used to perform most of the procedure if more than one site was used.	Femoral Brachial Radial Other
6	**Method for closure for arterial access site.** Indicate the arterial closure methods used in chronological order regardless of whether they provided hemostasis. The same closure method may be repeated	Manual compression Mechanical compression Suture Staple Sealant Patch Other, unspecified device

Performance Measure #40:
A new, hierarchical risk-standardized model

JACC: CARDIOVASCULAR INTERVENTIONS
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NCDR REPORT

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

Sunil V. Rao, MD,* Lisa A. McCoy, MS,* John A. Spertus, MD, MPH,† Ronald J. Krone, MD,‡
Mandeep Singh, MD,§ Susan Fitzgerald, MS, RN,‖ Eric D. Peterson, MD, MPH*
Durham, North Carolina; Kansas City and St. Louis, Missouri; Rochester, Minnesota; and Washington, DC

Objectives This study sought to develop a model that predicts bleeding complications using an expanded bleeding definition among patients undergoing percutaneous coronary intervention (PCI) in contemporary clinical practice.

Background New knowledge about the importance of periprocedural bleeding combined with techniques to mitigate its occurrence and the inclusion of new data in the updated CathPCI Registry data collection forms encouraged us to develop a new bleeding definition and risk model to improve the monitoring and safety of PCI.

Methods Detailed clinical data from 1,043,759 PCI procedures at 1,142 centers from February 2008 through April 2011 participating in the CathPCI Registry were used to identify factors associated with major bleeding complications occurring within 72 h post-PCI. Risk models (full and simplified risk scores) were developed in 80% of the cohort and validated in the remaining 20%. Model discrimination and calibration were assessed in the overall population and among the following pre-specified patient subgroups: females, those older than 70 years of age, those with diabetes mellitus, those with ST-segment elevation myocardial infarction, and those who did not undergo in-hospital coronary artery bypass grafting.

Results Using the updated definition, the rate of bleeding was 5.8%. The full model included 31 variables, and the risk score had 10. The full model had similar discriminatory value across pre-specified subgroups and was well calibrated across the PCI risk spectrum.

Conclusions The updated bleeding definition identifies important post-PCI bleeding events. Risk models that use this expanded definition provide accurate estimates of post-PCI bleeding risk, thereby better [illegible] clinical decision making and facilitating risk-adjusted provider feedback to support quality [illegible] Am Coll Cardiol Intv 2013;6:897–904) © 2013 by the American College of Cardiology

PCI in-hospital
risk standardized
rate of bleeding events
(all patients)

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Performance Measure #40: What's new

- Hierarchical model
- Fewer patient variables
- Risk relationships within and amongst hospitals
- Absolute Hgb decrease from pre-PCI to post-PCI of 4g/dL (previously 3g/dL)

Performance Measure #40: Model Details

Post-PCI bleeding defined as any ONE of the following:

1. Bleeding event w/in 72 hours **OR**
2. Hemorrhagic stroke **OR**
3. Tamponade **OR**
4. Post-PCI transfusion for patients with a pre-procedure Hgb >8 g/dL and pre-procedure Hgb not missing; **OR**
5. Absolute Hgb decrease from pre-PCI to post-PCI of ≥ 4 g/dL

Performance Measure #40: Model Details

Patient eligibility:

1. Patient's with a PCI procedure performed during the Episode of Care.
2. Patients with multiple PCI procedures Include only index PCI procedure.
3. Include patient procedures with non-missing values for outcome variables of bleeding event w/in 72 hours AND transfusion.
4. Exclude patients who died on the same day of the procedure.
5. Exclude patients with CABG.

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QII Participant Change Package

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Overall Score (43 of 62 possible points) 69%

Success Metric 1: PCI in-hospital risk standardized rate of bleeding for all patients

(29 possible points) 18

Success Metric 2: Proportion of PCI procedures with transfusion of whole blood or red blood cells

(5 possible points) 4

Success Metric 3: Procedures with an observed bleeding event

(8 possible points) 6

Success Metric 4: Anticoagulation utilization

(8 possible points) 4

Success Metric 5: Access site utilization

(4 possible points) 4

Success Metric 6: Method for closure for arterial access site

(8 possible points) 7

Campaign Assessment Tool

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Reduce the Risk: PCI Bleed

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- About Reduce the Risk
- Getting Started
- Reduce the Risk Features
  - Assessment
  - Toolkit
  - Webinars
  - Reduce the Risk Listserv
- Reduce the Risk - PCI Bleed Participation Certificate

Reduce the Risk: PCI Bleed Toolkit

The ACC has curated evidence-based tools to help you decrease PCI bleeding at your facility. Click on each section to find targeted tools for each Campaign metric:

Metric 1: in-hospital risk-standardized rate of bleeding events for all PCI patients.
Metric 2: Proportion of PCI procedures with transfusion of whole blood or red blood cells.
Metric 3: Procedures with an observed bleeding event.
Metric 4: Anticoagulation utilization.
Metric 5: Access site utilization.
Metric 6: Method for closure for arterial access site.

Preprocedural (Tools to address Metric #1 and 6)

Intraprocedural (Tools to address Metric #1, 5, and 6)

Postprocedural (Tools to address Metric #1, 5, and 6)

Pharmacotherapy (Tools to address Metric # 1, 2, 3, 4, 5, 6)

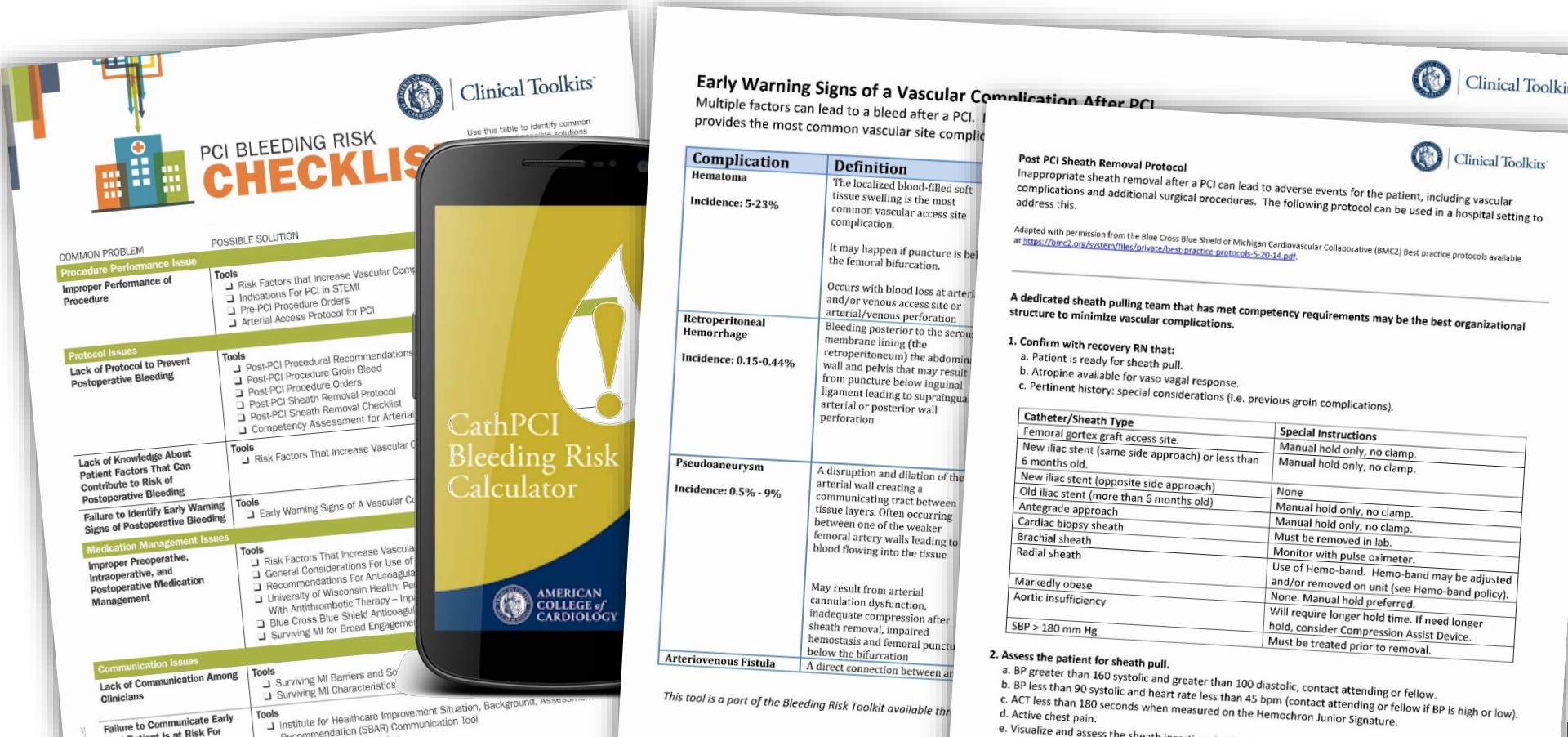
EHR Integration (Tools to address Metric #1, 4, 5, and 6)

Reduce the Risk: PCI Bleed Toolkit

Preprocedural (Tools to address Metric #1 and 6)

Metric	Tools
Metric 1: in-hospital risk-standardized rate of bleeding **Metric 3:** Procedures with an observed bleeding event	CathPCI Bleeding Risk Calculator App
Metric 1: in-hospital risk-standardized rate of bleeding events for all PCI patients **Metric 6:** Method for closure for arterial access site	Pre PCI-Procedure Orders
Metric 1: in-hospital risk-standardized rate of bleeding **Metric 3:** Procedures with an observed bleeding event	The Universal Protocol from the Joint Commission
Metric 1: in-hospital risk-standardized rate of bleeding events for all PCI patients **Metric 4:** Anticoagulation utilization **Metric 5:** Access site utilization	Risk-Concordant Framework for Bleed Avoidance Strategies

Toolkit Aligned to Metrics



Webinar #1: September 18, 2018

Webinar #2: November 7, 2018

Webinar #3: January 23, 2019

Webinar #4: May 22, 2019

Webinar #5: August 23, 2019

Webinar #6: November 6, 2019

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The Campaign Dashboard

*This is a draft

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Dashboard Example

Facility Name and PID #

CathPCI Quality Campaigns > Reduce the Risk PCI Bleed Campaign

			2017Q2			2017Q3			2017Q4			2018Q1			My Hospital R4Q			US Vol Group Pts R4Q		US Registry Pts R4Q	
			G			G			G			G									
			Num	Den	%	Num	Den	%	Num	Den	%	Num	Den	%	Num	Den	%	Num	%	Num	%
	Metric Key	Description																			
Metric 1	4934	**PCI In hospital risk- standardized rate of bleeding events**	**1,000**			**435**			**406**			**416**			**2,257**			**315,333**		**1,467,135**	
Metric 2	4288	**Proportion of PCI proceedures with transfusion of whole or RBC**	934	1,000	93.4	383	435	88.1	345	406	85.0	341	416	82.0	2,003	2,257	88.8	295,309	93.7	1,410,930	96.2
Metric 3	4928	**Proceedures with an observed bleeding rate**	445	1,000	44.5	435	435	100.0	406	406	100.0	416	416	100.0	1,702	2,257	75.4	184,405	58.5	735,584	50.1
Metric 4		**Anticoagulation Utilization**	1,000	1,000	100.0	43	435	9.9	44	406	10.8	23	416	5.5	251	2,257	11.1	66,285	21.0	313,113	21.3
	4466	All anticoagulants	374	1,000	37.4	381	435	87.6	342	406	84.2	341	416	82.0	1,438	2,257	63.7	160,615	50.9	666,023	45.4
	4467	Fondaparinux	5	1,000	0.5	2	435	0.5	3	406	0.7	0	416	0.0	10	2,257	0.4	3,766	1.2	13,418	0.9
	4468	Low molecular weight heparin	451	1,000	0.5	446	435	102.5	414	406	102.0	426	416	102.4	1,737	1,702	102.1	190,288	103.2	758,264	103.1
	4469	Unfractionated heparin	50	1,000	0.1																
	8944	Heparin-LMWH/Unfractionated	50	1,000	0.1																
	4471	Bivalirudin	374	1,000	37.4	381	435	87.6	342	406	84.2	341	416	82.0	1,438	2,257	63.7	160,615	50.9	666,023	45.4
Metric 5		**Access site utilization**																			
	4159	Femoral access site	1,000	1,000	100.0	43	435	9.9	44	406	10.8	23	416	5.5	251	2,257	11.1	66,285	21.0	313,113	21.3
	4161	Brachial access site	374	1,000	37.4	381	435	87.6	342	406	84.2	341	416	82.0	1,438	2,257	63.7	160,615	50.9	666,023	45.4
	4163	Radial access site	5	1,000	0.5	2	435	0.5	3	406	0.7	0	416	0.0	10	2,257	0.4	3,766	1.2	13,418	0.9
	4165	Other access site	451	1,000	0.5	446	435	102.5	414	406	102.0	426	416	102.4	1,737	1,702	102.1	190,288	103.2	758,264	103.1
Metric 6		**Method for closure for arterial access site**																			
	4167	Manual compression	934	1,000	93.4	383	435	88.1	345	406	85.0	341	416	82.0	2,003	2,257	88.8	295,309	93.7	1,410,930	96.2
	4169	Mechanical compression	445	1,000	44.5	435	435	100.0	406	406	100.0	416	416	100.0	1,702	2,257	75.4	184,405	58.5	735,584	50.1
	4171	Suture closure method	1,000	1,000	100.0	43	435	9.9	44	406	10.8	23	416	5.5	251	2,257	11.1	66,285	21.0	313,113	21.3
	4173	Staple closure method	374	1,000	37.4	381	435	87.6	342	406	84.2	341	416	82.0	1,438	2,257	63.7	160,615	50.9	666,023	45.4
	4175	Sealant closure method	5	1,000	0.5	2	435	0.5	3	406	0.7	0	416	0.0	10	2,257	0.4	3,766	1.2	13,418	0.9
	4177	Patch closure method	451	1,000	0.5	446	435	102.5	414	406	102.0	426	416	102.4	1,737	1,702	102.1	190,288	103.2	758,264	103.1

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Earn "High" weighted credit for this MACRA MIPS Improvement Activity!

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Opt in today!

To become a Reduce the Risk: PCI Bleed facility”

1. Log into NCDR
2. Go to your CathPCI Registry® home page
3. Click “Start Here” on the left navigation bar
4. Opt in!

The Registry Site Manager will be required to log in to opt your facility into the program.

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Quality Improvement for Institutions

https://cvquality.acc.org

Reduce the Risk: PCI Bleed

Anticipate. Prepare. Save Lives.

The **ACC's Reduce the Risk: PCI Bleed** Quality Campaign is focused on minimizing PCI-associated bleeding risks and saving patient lives through widespread adoption of evidence-based best practices.

Building on the ACC's proven track record in helping hospitals and cardiovascular professionals take advantage of key strategies to close gaps in guideline-recommended care, **Reduce the Risk: PCI Bleed** leverages the power of the CathPCI Registry® to help hospitals and clinicians anticipate, prepare and save lives.

Reduce the Risk: PCI Bleed

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Join the Reduce the Risk: PCI Bleed Campaign

Join **Reduce the Risk: PCI Bleed** and be recognized for your commitment to Quality! Participation is easy and no additional cost to CathPCI Registry participants!

Opting in Link

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Opt In

Reduce the Risk: PCI Bleed
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Reduce the Risk: PCI Bleed Campaign Opt in Opt out page

OPT IN

Attention Registry Site Managers: To opt into the Patient Navigator Program Focus MI, please acknowledge your understanding of the program requirements by clicking the box below and submitting:

☑ Click here to accept the terms and conditions of the Patient Navigator Program Focus MI

Submit

QUESTIONS?

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