

SCAI Quality Improvement Toolkit



Working on QUALITY, One Cath Lab at a Time



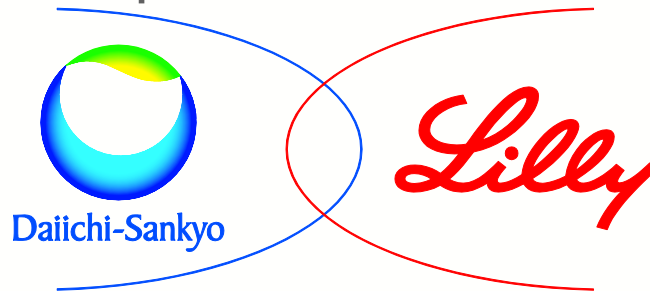
The Society for Cardiovascular
Angiography and Interventions
Foundation

www.SCAI.org/QIT



Acknowledgements

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Vision

“We have talked for a number of years about the need for interventionalists to “own” the QI process in the cath lab.

SCAI QIT offers a unique opportunity for SCAI members to demonstrate their commitment to improving quality of care and to reassure our patients that their expectations of receiving the highest quality of care in the cath lab are being met.

It’s time for you to get involved. It’s time for you to get to work.”

– Christopher J. White, MD, MSCAI



SCAI CVP QIT



- ▶ **Purpose**: To provide SCAI Cardiovascular Professionals (CVPs), who are SCAI QIT champions, the foundation to promote and implement quality improvement processes
- ▶ **Audience**: Non-physicians involved in leading quality improvement in the area of cardiac and/or endovascular angiography and/or intervention





Module 3

Staff training and certification





Assuring Quality of CCL Staff

▶ Challenges:

- Lack of consensus statements regarding qualifications
- No standardized examination to evaluate proficiency
- Lower volume facilities may face additional challenges with “on the job” training





Minimal Staff Certifications

- ▶ ACLS certification should be completed yearly

- ▶ All staff should have one of the following:
 - Nursing RN license
 - Radiologic Technologist (RT) certification
 - Cardiovascular technologist (CVT) professional training certificate





Education

- RN and RT
 - Specific certification and license, but no designated training program for cath lab
- Cardiovascular technologists (RCVT)
 - Commission on Accreditation of Allied Health Professionals (CAAHP) approved training programs are preferred
 - Receive training specific for invasive cardiac procedures





Education

- Registered cardiovascular invasive specialist (RCIS)
 - Additional certification provided by Cardiovascular Credentialing International (CCI)
 - RN/RT(R)/CVT certification and 2 year cath lab experience are pre-requisites
 - Similar process as ABIM certification, including standardized exam
 - Recognized by SCAI
 - Endorsed by ACC and SICP as credential that best addresses mastery of disciplines required in cath lab
 - Strongly encouraged for RTs





Professional and Educational Organizations

- ▶ Society of Invasive Cardiovascular Professionals (SICP)
 - Professional society of CVPs
 - Founded in 1993 with support of SCAI

- ▶ Cardiovascular Credentialing International (CCI)
 - Credentialing organization for the invasive CVT profession
 - Administers RCIS exam

- ▶ Commission on Accreditation of Allied Health Education Programs (CAAHEP)
 - Develops accreditation standards for post-secondary education invasive CVT programs

Davis J. Cath Lab Digest. 2015; 23(5)





Experience

- ▶ RNs should have prior experience in a critical cardiac care unit, surgical unit, intensive care unit or an emergency department
- ▶ Minimum 1 year experience required (ideally 2 years)
- ▶ RNs should comply with state CME requirements
- ▶ For all staff, a sufficient period of mentorship should precede independent work assignments
- ▶ Due to variations in cath lab volume that nurses are exposed to, training approach needs to be individualized





Competency evaluation

- ▶ In house examination of expected knowledge base recommended for RNs and RTs
- ▶ A written and skills evaluation are recommended
- ▶ Prepared materials available from CCI and Society of Invasive Cardiovascular Professionals (SCIP)





Knowledge Assessment Example

Catheterization Laboratory RN Critical Knowledge Assessment

1. What is the standard dilution for nitroglycerine?
2. Which of the following drugs do not need to be adjusted for renal dosing?
 - a) Bivalirudin
 - b) Heparin
 - c) Low Molecular Weight Heparin
 - d) Tirofiban
3. A patient is overly sedated and by physician assessment needs reversal of versed. What is the preferred agent and what is the initial dose?





Skills Assessment Example

Can Function Independently	Date	Initials
• Room start up and rebooting sequence	_____	_____
• Sterile Tray set up and prep patient	_____	_____
• Transducer set up	_____	_____
• Left heart cath assist	_____	_____
• AS valve case	_____	_____
• Prep Arm case	_____	_____
• Pericardiocentesis	_____	_____
• V-gram medrad set up and injection	_____	_____
• Perform LV EF digital analysis	_____	_____

• Rotational atherectomy set up	_____	_____
• Emergency pacemaker set up / insertion	_____	_____
• Defibrillation	_____	_____
• Vagal Reaction	_____	_____

• Sheath removal / Holding pressure	_____	_____





Competency for High Risk Patient Care

- ▶ For labs performing PCI, additional mentorship may be necessary prior to taking STEMI call

- ▶ Additional training and skills assessment may be needed for specific high-risk clinical situations, such as
 - Insertion of hemodynamic support devices (Impella, TandemHeart, ECMO)
 - Carotid interventions
 - Patients under hypothermia protocols
 - Percutaneous valves and structural interventions





Methods for maintenance of staff competency

- ▶ Yearly skills review with clearly defined standards and remedial process
- ▶ Requirements for annual continuing education
- ▶ Performance of mock patient care scenarios
 - Particularly valuable for low volume facilities and for skills specific to unstable patients such as STEMI, shock, etc.
- ▶ RCIS certification requirement





Additional References

- ▶ SICP Position Papers and Guidelines
 - <http://www.sicp.com/content/positionsissues>

- ▶ Role and Expectations of the Cath Lab Manager
 - <http://www.sicp.com/content/role-expectations-cardiac-catheterization-lab-managers>

- ▶ Scope of practice statement – gives a comprehensive overview of expected skills and responsibilities for CCL staff
 - <http://www.sicp.com/sites/default/files/RCIS%20Scope%20of%20Practice%20Rev%2002010.pdf>

- ▶ Guidelines for Educational Preparation and Staffing of Non-Physician Personnel in the Cardiac Catheterization Laboratory
 - <http://www.cathlabdigest.com/article/Society-Invasive-Cardiovascular-Professionals-New-2015-Educational-Guidelines-Invasive>





Resources & Support

- ▶ SCAI QI Committee Assistance: Info@scai.org
- ▶ SCAI QIT Updates:
<http://www.scai.org/QIT/default.aspx>
- ▶ SCAI QIT Tip of the Month:
<http://www.scai.org/QITTip/default.aspx>





Acknowledgments

- ▶ SCAI President: James C. Blankenship, MD
- ▶ SCAI QI Committee Chair/Vice-Chair: Sunil V. Rao, MD and Kalon K. Ho, MD
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- ▶ 2016 QIT Update: Rajesh V. Swaminathan, MD; Jordan G. Safirstein, MD; Henry S. Jennings, MD, Jayant Bagai, MD; Craig J. Beavers, PharmD; Dmitriy N. Feldman, MD; Sunil V. Rao, MD
- ▶ 2016 Cath Lab Best Practices Expert Consensus Statement: Srihari S. Naidu, MD; Herbert D. Aronow, MD; Lyndon C. Box, MD; Peter L. Duffy, MD; Daniel M. Kolansky, MD; Joel M. Kupfer, MD; Faisal Latif, MD; Suresh R. Mulukutla, MD; Sunil V. Rao, MD; Rajesh V. Swaminathan, MD; and James C. Blankenship, MD
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