

Uptick of TRI in the US- What Does This Mean for Industry?

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Gary Clifton, Director of Cardiology Marketing
Terumo Interventional Systems



Disclosures

- Terumo employee



Understanding the Landscape

- Every hospital is under siege to increase profit margins and to satisfy a growing requirement by payers to deliver a higher quality of care at a reduced cost
- Bleeding complications from femoral vascular access still exist and are the number one complication in any cath lab and can greatly effect overall costs negatively
- OP or SDD procedures are the future, they are a growing expectation by CMS and other payers will follow
- Clinicians and administrators have to work collaboratively to deliver value based quality outcome

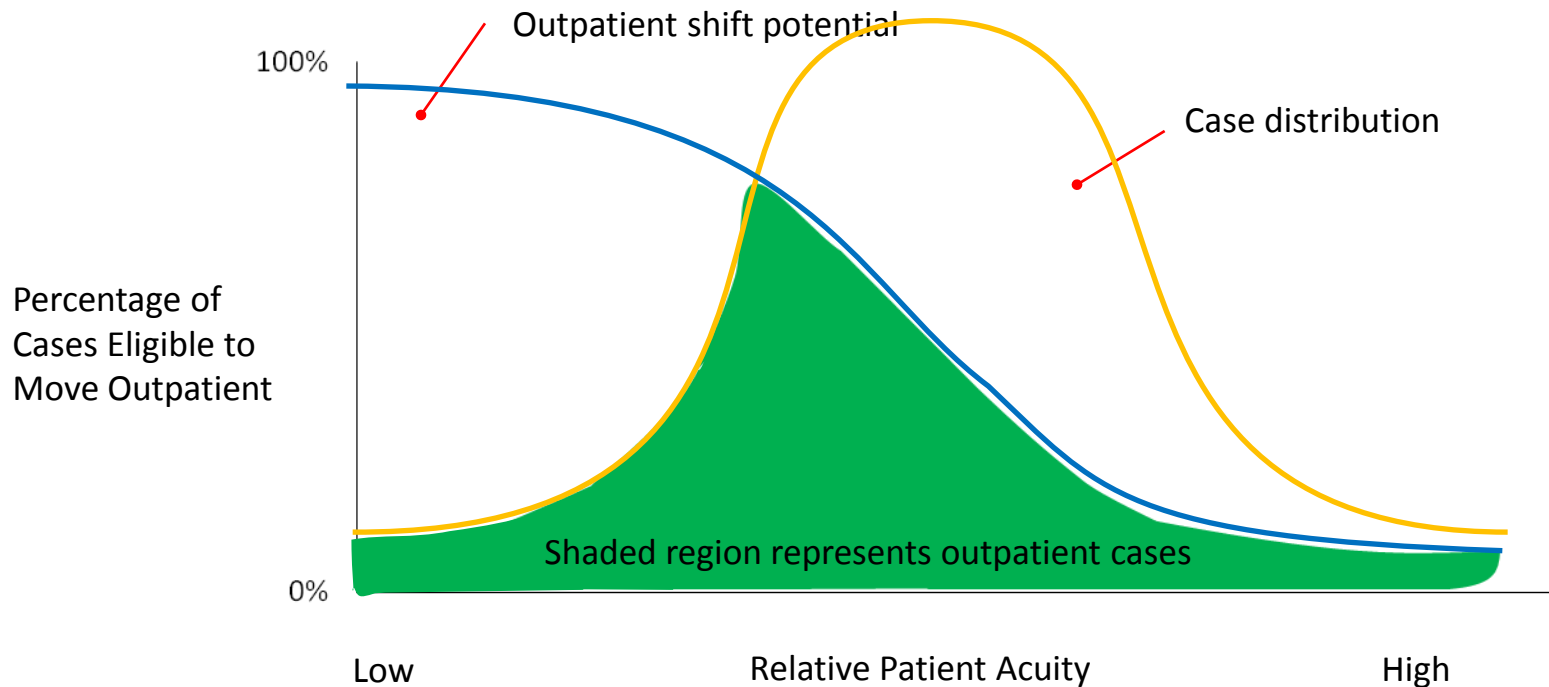


Transradial Cardiac Catheterization is Just the Beginning



Finding the Balance Between Inpatient and OP PCI

Patient Acuity a Major Factor in Determining Outpatient Shift



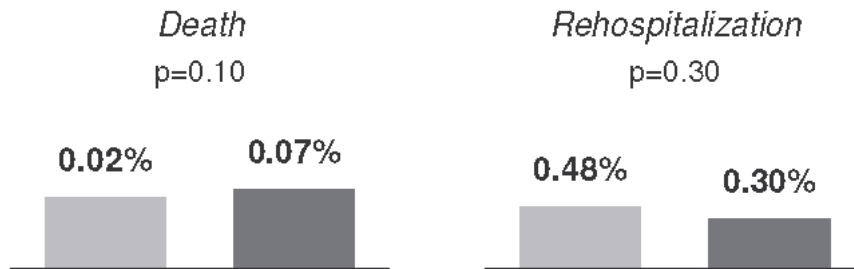
Relationship Between Acuity, Case Distribution, and Outpatient Shift

Source: Cardiovascular Roundtable interviews and analysis.

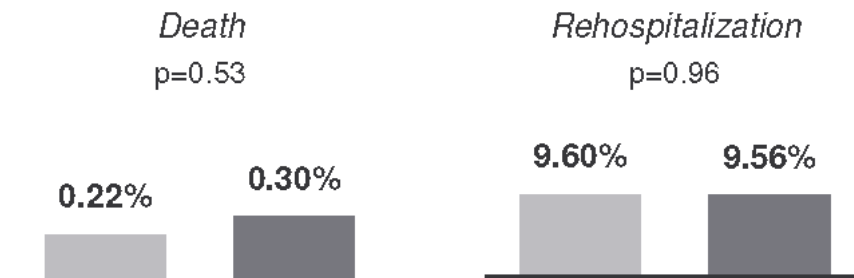
The Future?

Nearly Identical Results for Overnight and Same-Day PCI

Two-Day Outcomes



30-Day Outcomes



Study in Brief: Prevalence and Outcomes of Same-Day Discharge After Elective PCI

- Evaluated prevalence, outcomes of same-day discharge among Medicare patients receiving elective PCI¹
- Patients divided into two groups based on post-procedure LOS (same-day discharge or overnight stay)
- Patient characteristics similar between both groups; no significant differences in rates of death or rehospitalizations at two days or 30 days
- Concluded that same-day discharge is uncommon but safe

1) CathPCI Registry data merged with Medicare Part A claims file data for cases performed between November 2004 and December 2008.

Source: Rao S, et al., *JAMA*, 2011, 306: 1461-1467; Cardiovascular Roundtable research and analysis.

Growing Emphasis on Cost Effectiveness

Focus Shifting from Market-Expanding Capabilities to Cost-Effectiveness

Criteria in Accountable Care	Transradial PCI	CCTA	TAVI
Cost effective			
Demonstrated patient/community need			
Right-sized market (i.e., appropriate population to be treated)			
Life-saving technology			
Evidence of improved outcomes/clinical quality			
Improves quality of life/patient satisfaction			
Endurance of value (e.g., breakeven, length of benefit)			
Improves efficiency (e.g., reduces required manpower, streamlines communication)			
Few additional programmatic investments			



TR arterial access for coronary and peripheral procedures: executive summary by the Transradial Committee of the SCAI

[Caputo RP](#), [Tremmel JA](#), [Rao S](#), [Gilchrist IC](#), [Pyne C](#), [Pancholy S](#), [Frasier D](#), [Gulati R](#), [Skelding K](#), [Bertrand O](#), [Patel T](#), [Catheter Cardiovasc Interv.](#) 2011 Nov 15;78(6):823-39. doi 10.1002/ccd.23052. Epub 2011 May 4.

Source: St. Joseph's Hospital, S.U.N.Y. Upstate Medical School, Syracuse, New York 13203, USA. Caputo331@msn.com

Abstract: In response to growing U.S. interest, the Society for Coronary Angiography and Interventions recently formed a Transradial Committee whose purpose is to examine the utility, utilization, and training considerations related to transradial access for percutaneous coronary and peripheral procedures. With international partnership, the committee has composed a comprehensive overview of this subject presented here-with.



The TR approach for CAS

Source: Wake Heart and Vascular Associates, Raleigh NC, United States, Saints Cyril and Methodius University of Skopje, Macedonia.

BACKGROUND: The purpose of the present study was to evaluate the right radial approach (RRA) for CAS.

RESULTS: CAS was attempted from TR in 382 patients (mean age 68, 70% male). CAS was successful in 347/382 (91%) patients; 201/216 (93%) right CA, 14/16 (88%) bovine left CA, 132/150 (88%) left CA. The specific technique varied with the anatomy. Adverse events included two major strokes (0.6%) one of whom died, three minor strokes (1%), and no myocardial infarction at 30 days. No bleeding complications occurred although 23 (6%) of patients had asymptomatic post-procedure radial occlusion. Inadequate catheter support at the origin of the CCA was the technical cause of failure in the unsuccessful cases which were then completed from femoral access as part of the same procedure.

CONCLUSION: The transradial approach is an alternative for CAS in the presence of factors that increase the risk or difficulty of femoral access. © 2012 Wiley Periodicals, Inc.



TR access for PCI and non-coronary interventions

[Lorenzoni R](#), [Lazzari M](#), [Boni A](#), [Gemignani C](#), [Bovenzi FM](#), [Ital Cardiol \(Rome\)](#). 2011 Jun;12(6):419-27. doi: 10.1714/835.9307

- **Source:**U.O. di Cardiologia, Ospedale Campo di Marte, Lucca.
lorenzoni.roberto@fastwebnet.it
- **Abstract:** The transfemoral access is still the most widely used approach for percutaneous coronary and non-coronary interventions. However, the transradial access has been increasingly used, mostly because it is associated with less hemorrhagic complications. The present review is aimed at evaluating the use of the transradial access for percutaneous vascular interventions. In many institutions, the radial artery is already the preferred vascular access for coronary procedures for routine coronary angiography but also for complex interventions such as primary angioplasty and angioplasty for stenosis at coronary bifurcations or coronary bypass grafts, or for treating chronic coronary occlusions. The radial artery can be used also as a vascular access for percutaneous peripheral interventions. Supra-aortic vessels (carotid, subclavian and vertebral arteries) can be treated via the radial route when obstructions of the femoro-iliac tract preclude groin access or also to circumvent anatomic variations such as bovine aortic arch. For renal artery angioplasty, the transradial access can be considered ideal for anatomic reasons, at least for those operators who use this access routinely for coronary interventions. At present, the transradial access can also be used, although in specific cases, to treat stenosis of the lower limb arteries in above the knee segments.

TR Peripheral Vascular Interventions.

[Coppola JT](#), [Kurian DC](#), [Staniloae CS](#), Indian Heart J. 2010 May-Jun;62(3):197-201

- **Source:** Department of Cardiology, St. Vincents Hospital, New York, USA.
JCoppola@svcmcnyc.org
- **Abstract:** Recently the importance of post procedure bleeding contributing to both short-term and long-term mortality has lead to a renewed interest in transradial coronary interventions in the United States. It has been long known that the incidence of access site bleeding is dramatically decreased by transradial access but the procedure is only used in 1% of coronary interventions in the United States, far below the rest of the world. In India, Japan and some European centers 50% of interventions are transradial. To extend this benefit of lower incidence of access site complications, we started using a transradial approach for peripheral interventions for the lower extremities, renal and subclavian arteries. By experience, we realized that in many cases the radial approach makes the procedure actually simpler. Also, in many instances, the transradial approach allows discharge of the patient on the same day. In this paper, we describe our approach to lower extremity, renal and subclavian interventional procedures



TR Renal Stenting: Why and How

[Trani C](#), [Tommasino A](#), [Burzotta F](#), [Catheter Cardiovasc Interv](#). 2009
Nov 15;74(6):951-6

- **Source:** Institute of Cardiology, Catholic University of the Sacred Heart, Rome, Italy. carlotrani@rm.unicatt.it
- **Abstract:** Transradial vascular access for invasive procedures is gaining increasingly acceptance due to reduced access-site complications and improved patient's comfort compared with transfemoral. However, the adoption of transradial access in peripheral vascular procedures is actually limited by anatomical and technical considerations. Yet, among all the peripheral vascular districts, the renal one seems to be particularly suitable for transradial approach. In this article, we discuss the rationale for preferring the radial approach instead of femoral and review the specific technical issues related to transradial renal artery stenting (RAS).

The Opportunity

- Going beyond the heart...
 - Carotids, Renals, Subclavians, aorto-iliac, peripheral
- Device development...
 - Procedural tools, imaging
- Educating the HCP...
 - When, where, how?
- Contributing to the science...
 - Do we know all we need to know?
- Managing the patient through the care pathway...
 - Peri-procedural, LOS, discharge



Conclusion

- The healthcare landscape has irrevocably changed
- Cardiology Service Line is under tremendous scrutiny
- Radial access is gaining greater momentum in the US
- Patient preference for services is driving change-HCAHPs matter
- Hospitals will enter a new era of competition mediated by quality outcomes- ACOs?
- Physicians have already begun using radial as an access route for numerous applications
- Device innovation for radial access is warranted and needed

