ACTION Registry-GWTG
NCDR13 Updates

ACTION Cumulative Records Submitted

ACTION Registry-GWTG Records Submitted by Quarter
Data Quality Update

- Completed Pilot audit
- In the process of completing adjudication for 2010 and 2011
- 61 hospitals audited/year
  - 330 records/year
  - 63 Premier elements
  - 57 Limited elements

ACTION Registry-GWTG
Abstracts and Publications

40 Total manuscripts published

2012: 12 Manuscripts published
  - 2 Manuscripts in 2013

2012: 14 Abstracts submitted
  - 4 Abstracts in 2013

ACTION Research

- Linking ACTION records to CathPCI records
  - Future blended reporting for both registries

  Linking ACTION records
  - CMS records with Yale
  - CMS records with DCRI CERTs funded
Reporting

- AMI 30 day mortality measures developed using ACTION Risk adjustment
- Incorporation of ACTION measures into voluntary hospital public reporting program
- Physician identifiers added to the data set.

New ACTION version

- Ticagrelor
- EMS 1st medical contact
- Reperfusion therapy documentation for the Limited users
- UFH elements and the excessive dosing report

- Inline with the new integrated platform
- Updating Performance Measures and Metrics

Surviving MI

To reduce risk standardized 30-day mortality rates for patients hospitalized with AMI by 20% by December 2016
Survival after Acute Myocardial Infarction Study

To identify hospital-level factors that may be associated with better performance in AMI care as measured by RSMR

REGIONAL SYSTEMS OF CARE DEMONSTRATION PROJECT: MISSION: LIFELINE® STEMI SYSTEMS ACCELERATOR

Objectives of the Demonstration Project

- Establish a regional standard of emergency cardiovascular care that includes every hospital and EMS agency
- Lower cardiovascular mortality by broadly improving the timely treatment of ST elevation myocardial infarction (STEMI) patients
- Create a sustainable system for treating cardiovascular emergencies including STEMI, cardiac arrest, stroke and aortic dissection.
Mission: Lifeline Receiving Center Report
AR-O Hospital ID: 1
Quarter 3, 2012
*Confidential Information*

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Voluntary Hospital Public Reporting: PCI Readmission

Collaboration between:
The Centers for Medicare & Medicaid Services
The American College of Cardiology
Center for Outcomes Research and Evaluation

Disclosure

• Salary support under contract with CMS to support the development of outcomes measures
• Salary support from contract with ACC to provide data analytic services

Voluntary Public Reporting

• CMS, ACC, and YNHH collaborating to provide participating hospitals with information about readmissions following PCI

• Voluntary effort
  – Hospital specific reports available March 2013
  – Separate tab on the NCDR dashboard
  – Decision whether to share results on Hospital Compare website in April
  – Data on Hospital Compare in July
Why Measure PCI Readmission?

- National focus on reducing readmissions
  - Increasing evidence that hospitals can reduce readmission rates
    - Project RED, BOOST, Care Transitions

- Readmissions after PCI are a major driver of cost to the health care system
  - 1 in 7 PCI patients readmitted within 30 days
    - MEDPAC Report

- Readmission rates vary significantly across hospitals

Unplanned Readmissions Following PCI

![Distribution of RSRR (2007)](image)

Goals of Voluntary Public Reporting

- Inform health care providers about opportunities to improve care
- Provide information to the public on unplanned readmissions after PCI procedures
  - No additional burden to hospitals
- Promote investment in quality improvement initiatives
PCI Readmission Measure

- Outcome:
  - Unplanned readmissions within 30 days of discharge
  - Identified using Medicare administrative claims data
- Risk Adjustment:
  - CathPCI Registry® data
  - Accounts for characteristics and comorbidities
- Reported as hospital-level, risk-standardized readmission rate (RSRR)

Inclusion Criteria

- PCI procedures:
  - Medicare fee-for-service patients age ≥65
  - At participating CathPCI Registry® hospitals
  - Discharged between January 1, 2010 and December 31, 2011
  - Appear in both the CathPCI Registry® data and Medicare claims data

Opportunity for Improvement

- CathPCI Registry® unadjusted readmission rate: 11.7%
- RSRR ranges from 8.49% to 16.65%
Preview Period

- Educate hospitals about measure in advance of voluntary public reporting
- Provide hospitals with their results in context of all participating hospitals
- Help hospitals understand results
- Provide information on how to participate in voluntary public reporting

Preview Period Overview

- Hospitals will receive:
  - CathPCI Registry® Results Summary and Data File Instructions
  - Hospital-specific Data and Results Excel® File
- Publicly available resources:
  - 2009 Technical Report
  - 2013 Measure Updates
  - FAQs, data release consent forms

Example:
PCI Readmission Results

<table>
<thead>
<tr>
<th>CathPCI Registry®</th>
<th>Your Hospital's Results on the 30-Day PCI Readmission Measure for the 2010-2011 Reporting Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This data is for demonstration only</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Your Hospital's Performance</th>
<th>CathPCI Registry®</th>
<th>Too Many Patients to Calculate Rate</th>
<th>Your Hospital's Readmission Rate</th>
<th>Unadjusted Readmission Rate</th>
<th>Your Hospital's P value</th>
<th>RSRR (Lower 95% CI, Upper 95% CI)</th>
<th>Number of Hospitals Better than CathPCI Registry® Readmission Rate</th>
<th>Number of Hospitals No Different than CathPCI Registry® Readmission Rate</th>
<th>Number of Hospitals Worse than CathPCI Registry® Readmission Rate</th>
<th>CathPCI Registry® Hospitals Included in Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>959</td>
<td>12.0%</td>
<td>11.0%</td>
<td>11.7%</td>
<td>123</td>
<td>0.16</td>
<td>0.001 (0.000, 0.002)</td>
<td>19</td>
<td>1037</td>
<td>28</td>
<td>113</td>
</tr>
</tbody>
</table>

This data is for demonstration only
Your Hospital's Detailed Patient Stay Information for Readmissions Following PCI for the 2010-2011 Reporting Period

**DO NOT TRANSMIT THIS FILE OR ANY OF THE CONTENTS OF THIS TABLE**

The file contains personally identifiable information. If you have questions about the information provided above, please refer to Excel row numbers.

<table>
<thead>
<tr>
<th>NCPP Patient ID</th>
<th>Date of Index Procedure</th>
<th>Readmission Type</th>
<th>Principal Diagnosis for Readmission (ICD-9-CM Code)</th>
<th>Date of Admission for Readmission</th>
<th>Date of Discharge for Readmission</th>
<th>Readmitted to your Hospital</th>
<th>CCN of Readmitting Hospital</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

**HOSPITAL COMPARE**

Hospital Compare Display
Hospital Compare Display

ACC will have its own header similar to this one

Link to PCI Readmission results table would appear under the header along with a brief description of the measure

Example:
Hospital Compare Data Table

<table>
<thead>
<tr>
<th>CMS</th>
<th>State</th>
<th>Hospital Name</th>
<th>Performance Compared to CathPCI Registry</th>
<th>30-Day Risk-Standardized Readmission Rate (%)</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000</td>
<td>AL</td>
<td>General Hospital</td>
<td>No different than CathPCI Registry</td>
<td>11.25%</td>
<td>8.50%</td>
<td>14.00%</td>
</tr>
<tr>
<td>2222</td>
<td>CT</td>
<td>Community Hospital</td>
<td>Better than CathPCI Registry</td>
<td>7.10%</td>
<td>5.00%</td>
<td>8.01%</td>
</tr>
<tr>
<td>1111</td>
<td>CT</td>
<td>Memorial Hospital</td>
<td>No different than CathPCI Registry</td>
<td>11.00%</td>
<td>8.90%</td>
<td>12.40%</td>
</tr>
<tr>
<td>3333</td>
<td>TN</td>
<td>City Hospital</td>
<td>Worse than CathPCI Registry</td>
<td>14.00%</td>
<td>13.04%</td>
<td>15.46%</td>
</tr>
<tr>
<td>4444</td>
<td>CO</td>
<td>Government Hospital</td>
<td>Number of cases too small</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>5555</td>
<td>CO</td>
<td>University Hospital</td>
<td>Number of cases too small</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>4567</td>
<td>GA</td>
<td>Research Hospital</td>
<td>Number of cases too small</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2345</td>
<td>AZ</td>
<td>Specialty Hospital</td>
<td>Not Publicly Available</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>5678</td>
<td>ME</td>
<td>Rural Hospital</td>
<td>Not Publicly Available</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note:
This data is fictitious. For demonstration only.

Important Dates

• **2009** | Measure developed by CMS and CORE
• **2011** | Measure approved by NQF
• **October 2012** | CMS and CORE contract with ACC to implement voluntary public reporting
• **March 18, 2013** | Preview reports available
• **April 19, 2013** | Last opportunity to submit form for July Hospital Compare posting
• **July 2013** | Results published on Hospital Compare
Thanks!

## Top 10 Planned Procedures among Planned Readmissions Following PCI Discharge in 2010 (with stent)

<table>
<thead>
<tr>
<th>Procedure Code</th>
<th>Procedure Description</th>
<th>Number of Planned Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>Percutaneous transluminal coronary angioplasty (PTCA)</td>
<td>2,161</td>
</tr>
<tr>
<td>46</td>
<td>Insertion; revision; replacement; removal of cardiac pacemaker or cardioverter/defibrillator</td>
<td>477</td>
</tr>
<tr>
<td>47</td>
<td>Coronary artery bypass graft (CABG)</td>
<td>100</td>
</tr>
<tr>
<td>49</td>
<td>Other OR heart procedures</td>
<td>120</td>
</tr>
<tr>
<td>62</td>
<td>Other diagnostic cardiovascular procedures</td>
<td>120</td>
</tr>
<tr>
<td>59</td>
<td>Other OR procedures on vessels of head and neck</td>
<td>110</td>
</tr>
<tr>
<td>56</td>
<td>Endarterectomy; excision of head and neck</td>
<td>98</td>
</tr>
<tr>
<td>57</td>
<td>Amputation of lower extremity</td>
<td>55</td>
</tr>
<tr>
<td>51</td>
<td>Aortic resection; replacement or anastomosis</td>
<td>51</td>
</tr>
<tr>
<td>40</td>
<td>Heart valve procedures</td>
<td>48</td>
</tr>
</tbody>
</table>
The ICD Registry™

*Improving Quality Care*

Mark S. Kremers MD, FACC, FHRS
MidCarolina Cardiology
Charlotte, NC

Steering Committee Chairman

The following relationships exist related to this presentation:

- Equity investment Boston Scientific <$10,000
- Consultant - Medtronic
- Investigator - SJM/Medtronic/Boston Scientific

ICD Registry

80% submit all patients
ICD Registry

Research Pipeline

For a complete list of publications, please visit the Research and Publications page: https://www.ncdr.com/WebNCDR/research/researchandpublications
### 2013 Abstracts

#### ACC 2013

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac Resynchronization Therapy in the Elderly</td>
<td>Heidenreich</td>
<td>Poster</td>
</tr>
<tr>
<td>Cardiac Perforation from ICD lead placement and In-Hospital Adverse Events and Mortality. Insights from NCDR</td>
<td>Hsu</td>
<td>Oral</td>
</tr>
<tr>
<td>Building a Risk Model from the NCDR ICD Registry for in hospital adverse outcomes following ICD implant</td>
<td>Dodson</td>
<td>Poster</td>
</tr>
</tbody>
</table>

#### HRS 2013

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rates and Predictors of ICD Infection in 201,836 Medicare Patients: Results from the NCDR</td>
<td>Prutkin</td>
<td>Oral</td>
</tr>
<tr>
<td>Coronary Sinus Dissection from CRT Implantation and Associated In-Hospital Adverse Events. Insights from NCDR</td>
<td>Hsu</td>
<td>Poster</td>
</tr>
<tr>
<td>Weekend and Afternoon / Evening ICD Implant Procedures are Associated with Increased Adverse Events and Mortality. Insights from NCDR</td>
<td>Hsu</td>
<td>Oral</td>
</tr>
<tr>
<td>Degree of Utilization of ICD Remote Patient Monitoring and Determinants of Activation</td>
<td>Akar</td>
<td>Poster</td>
</tr>
</tbody>
</table>

### Guidelines

2012 ACCF/AHA/HRS Focused Update of the 2008 Guidelines for Device-Based Therapy of Cardiac Rhythm Abnormalities

- 8 new CRT recommendations
- New metrics to be implemented into the Executive Summary

JACC Vol. 60, No. 14, October 2, 2012
ICD Implant Risk Model

- ICD Complications Risk Model
- Developed by Yale CORE analytic center
- Risk-standardized complications metric in development
- NQF endorsed
- To be implemented into the Executive Summary

Appropriate Use Criteria

JACC Vol 61, No. 12, February 28, 2013

- 235 Clinical scenarios
- 369 Distinct situations
- New rating terminology applied:
  - Appropriate - Median Score 7-9
  - May Be Appropriate - Median Score 4-6
  - Rarely Appropriate - Median Score 1-3
- Mapping to DCT and development of future metrics in process

Reimbursement and Disclaimer

It is the intent of this document to address good medical practice, independent of reimbursement. Some of the scenarios that are deemed “Appropriate” by the appropriate use criteria may not currently qualify for insurance coverage. For patients, physicians, and insurers, these distinctions are of critical importance because commitment to patient-centered care may warrant implantation of a device appropriate for the individual patient’s situation, but it may not fit precisely into a covered indication as defined by coverage policy and requires use of best clinical judgment.

Journal of the American College of Cardiology; Vol. 61, No. 12, February 28, 2013
Disclaimer

• “Appropriate” criteria not guaranteed to be funded
• “Appropriate criteria” not a defense against Medicare fraud if not in NCD.
• “Appropriate criteria” not synonymous with mandatory
• In summary: Good clinical judgment and caution still required
The PINNACLE Outpatient Registry

Growing in Size, Growing in Value

Founding Principles

• Vital CV care doesn’t stop at the hospital door; most care delivered in outpatient setting
• Better adherence to outpatient guidelines improves patient outcomes and reduces hospital readmissions
• First national ambulatory quality improvement (QI) registry

Covering Four CV Conditions:

1. Coronary Artery Disease
2. Heart Failure
3. Atrial Fibrillation
4. Hypertension
Thousands of your colleagues use PINNACLE

Over 2,000 providers submit data from 663 office locations

Driving continued registry growth for true national benchmarks

7.71 million encounters covering 2 million unique patients now in the registry

Let’s talk about data collection

Increasing data completeness while minimizing workflow impact
All new practices submit data to PINNACLE electronically

1. Data mapping and extraction from your electronic health
2. Prospective data collection from a certified EHR system
3. Web-based data collection form

PINNACLE Registry Benefits

• Rooted in established care guidelines
• Use of registry data to identify gaps in care
• Regular performance feedback
• Measure adherence reports at the institution, care delivery site, and individual provider levels
• Submit for PQRS and eRx
• Electronic data collection
• Data-driven education programs and other applied uses of data

Customized Physician-Level Reporting and Tools
Using PINNACLE for PQRS and eRx

885 providers reported 2012 PQRS – 0.5% incentive

573 providers reported 2012 eRx – 1% incentive

PINNACLE is a CMS-qualified EHR Data Submission Vendor

Penalties begin in 2015 for not reporting 2013 PQRS

EHR systems mapped to PINNACLE Registry data elements for 2012 PQRS submission

Allscripts
amazingcharts
eMDs
Centricity PrimeSUITE
SOAPware
medinformatix
eClinicalWorks
MED3000
NEXTGEN
gMed
Cerner
GEMMS

If you don’t see your system here, don’t despair! We map new systems constantly

Participation in ACC data-driven Livelong Learning

PI-AFib

An Expanding and Equitable New ERA for Atrial Fibrillation 2.0

191 providers across 13 practices have used the data they already submit to PINNACLE

Earn CME at each stage and MOC Part IV credits upon complete
Reduce your medical liability insurance premium

Qualified ACC members covered by The Doctors Company receive:
- 5% credit for actively participating in PINNACLE Registry
- 5% credit for maintaining board certification
- 5% program discount

Reducing the burden on you and your staff

The majority (64%) of practices spend less than 2 hours working on the PINNACLE Registry, a dramatic decrease in staff hours year over year.

- Less than 2 hours: 64%
- 2 - 4 Hours: 22%
- 5 - 9 Hours: 11%
- 10 Or More Hours: 3%

2012 Mean = 1.9 hours
2011 Mean = 6.8 hours
CARE Registry

Carotid Artery Revascularization & Endarterectomy

NCDR.13 Annual Conference

Patient-centered care, quality improvement, innovative research

Strong partnerships with stakeholders across the health care community

189 Facilities participating with continued growth

Total Records 30,066
- CAS 17,895
- CEA 12,170

CARE Participant Distribution 2011
Carotid Artery Revascularization & Endarterectomy

- Multidiscipline Best Practice Showcase
- Supports MOC
- CMS - Coverage with Evidence Development
- Quality Improvement
- New age of “Prove It”

Carotid Artery Revascularization & Endarterectomy

- Quarterly Newsletters
- National quality seminars
- Quarterly/annual benchmark reports
- Clinical and technical staff call center support.

Future For CARE
Peripheral Vascular Interventions
Registry Q2 2014

We still CARE and will continue to:
• Provide excellent customer support
• Provide Web site education for new users
• Provide evidence-based rationale that supports more informed treatment choices, better outcome and lower treatment costs

Why include Peripheral Vascular Interventions in the NCDR Registries

➢ According to National Center for Chronic Disease Prevention and Health Promotion, Division for Heart Disease and Stroke approximately 8 million people in the US have PAD, including 12-20% of individuals older than age 60.

➢ General population awareness of PAD is estimated at 25%, based on prior studies.

Increase in Peripheral Stent Procedures by Specialties Obtained form Medicare (CPT Code 37205)
To enhance the quality of peripheral vascular patient care

- Increasing recognition of the importance of atherosclerotic lower extremity PAD:
  - High prevalence undiagnosed PAD
  - Poor quality of life

- The evidence base has become increasingly robust, so that a data-driven care guideline is now possible
IMPACT Registry Update
Dr Joshua Kanter, MD FACC

Presenter Disclosure Information

Joshua Kanter, MD, FACC
The following relationships exist related to this presentation:
No Disclosures

IMPACT Steering Committee Members
- Dr. Gerard Martin-Chair
- Dr. Robert Beekman III
- Dr. Lee Benson (international site)
- Dr. Lisa Bergersen
- Dr. Ralf Holzer
- Dr. Kathy Jenkins
- Dr. John Moore
- Dr. Richard Ringel
- Dr. Jonathan Rome
- Dr. Robert Vincent
- Dr. Douglas Weaver (ex officio)
IMPACT Registry Research & Publications

- Dr. John Moore - Chair
- Dr. Susan Foerster
- Dr. Andrew Glatz
- Dr. Ralf Holzer
- Dr. Joshua Kanter
- Dr. Joseph Kay
- Dr. Jacqueline Kreutzer
- Dr. Larry Latson

IMPACT Registry Sites

Cumulative IMPACT Sites Enrolled
Procedures

- Diagnostic Catheterizations
- Atrial Septal Defect Device Closure
- Patent Ductus Arteriosus Device Closure
- PS Valvuloplasty Procedures
- AS Valvuloplasty Procedures
- Coarctation of Aorta Interventions
- Pulmonary Artery Stenting

Age Distribution on Admission
Next Steps

• Increase enrollment
• Modify data elements
• MOC
• Longitudinal Tracking, Risk Adjustment

New Modules

MAP-IT
Multicenter Pediatric and Adult Congenital EP Quality

Transcatheter Pulmonary Valve

THANK YOU

www.ncdr@acc.org
800 257-4737
STS/ACC TVT Registry™ Update

Joan Michaels, RN
Associate Director TVT Registry

Patients
Cardiologists
Cardiac Surgeons

Cumulative TVT Records Collected (May 2012-Feb 2013)
Cumulative TVT Sites Enrolled
May 2011-Feb 2013

Current Status of TVT Registry

- Approved by CMS for Medicare National Coverage Determination registry requirements
- V1.2 launched Feb 28th
- Edwards PAS II site recruitment began in July
- 191 sites enrolled
- Approved by FDA for AA IDE

Next Steps

- Continue to recruit PAS II Sites
- Launch AA IDE