Adult Congenital & Pediatric Cardiology
QUALITY NETWORK

Welcome and Introductions
Kathy Jenkins, MD, MPH, FACC
Robert Beekman, MD, FACC
Gerard Martin, MD, FACC
Welcome to the 1st Quality Network Learning Session!
## Agenda

<table>
<thead>
<tr>
<th>TIME</th>
<th>TOPIC</th>
<th>PRESENTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 a.m.</td>
<td>Welcome and Introductions</td>
<td>Kathy Jenkins, Robert Beekman, Gerard Martin</td>
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<tr>
<td>9:15 a.m.</td>
<td>Milestones in the ACPC Quality Network</td>
<td>Kathy Jenkins, Robert Beekman</td>
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<tr>
<td>9:25 a.m.</td>
<td>ABP Requirements for Meaningful Participation</td>
<td>Kathy Jenkins</td>
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<td>9:30 a.m.</td>
<td>QI 101</td>
<td>Jeffrey Anderson</td>
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<td>Key Driver Diagrams</td>
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<td>PDSA Cycles</td>
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<td>Activating the QI Team</td>
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<td><strong>Quality Improvement Activities</strong></td>
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<td>10:00 a.m.</td>
<td>BMI Metric - Overview of Key Drivers &amp; QI</td>
<td>Ashraf Harahsheh</td>
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<td>10:15 a.m.</td>
<td>TOF Metric - Overview of Key Drivers &amp; QI</td>
<td>Susan Saleeb</td>
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<td>10:30 a.m.</td>
<td>BREAK</td>
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<td>10:45 a.m.</td>
<td>Collaborative QI Breakouts</td>
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<td>Genetic Testing in TOF</td>
<td>Susan Saleeb</td>
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<td>Counseling for Elevated BMI</td>
<td>Ashraf Harahsheh</td>
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<td>Data Collection Strategies</td>
<td>Jessica Colyer</td>
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<td>Developing a Team</td>
<td>Pei-Ni Jone, Cindy Barrett</td>
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<td>11:30 a.m.</td>
<td>BMI Report from Breakouts: Results of Collaborative QI and Discussion</td>
<td>All Participants</td>
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<tr>
<td>12:15 p.m.</td>
<td>TOF Report from Breakouts: Results of Collaborative QI and Discussion</td>
<td>All Participants</td>
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<td>1:00 p.m.</td>
<td>Working Lunch <em>(Sit with your team)</em></td>
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<td>1:30 p.m.</td>
<td>Developing a Team: Report and Discussion</td>
<td>Pei- Ni Jone, Cindy Barrett</td>
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<td>2:00 p.m.</td>
<td>Data Collection Strategies: Report and Discussion</td>
<td>Ashraf Harasheh, Jessica Coyler</td>
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<td>2:30 p.m.</td>
<td>Reports from Centers</td>
<td>Robert Beekman, Gerard Martin</td>
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<td>3:00 p.m.</td>
<td>Panel Discussion: Successful approaches to Overcoming Barriers</td>
<td>QNet Leaders</td>
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<td>3:30 p.m.</td>
<td>Future Directions for ACPC Quality Network</td>
<td>QNet Leaders</td>
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ACC Quality Network

• Leadership:
  – Kathy Jenkins, MD, MPH, FACC
  – Robert Beekman, MD, FACC
  – Gerard Martin, MD, FACC

• Quality WG Co-Chairs:
  – Jeffrey Anderson, MD, MBA, FACC
  – Ariane Marelli, MD, MPH, FACC

• ACC Staff:
  – Sean Hilscher, MA (Science & Quality)
  – Stephanie Mitchell (Membership)
  – Esteban Perla, MPH (Science & Quality)
QNet Welcomes

Quality Network Leaders
- Robert Beekman, MD, FACC
- Kathy Jenkins, MD, MPH, FACC
- Gerard Martin, MD, FACC
- Jeffrey Anderson, MD, FACC

ACPC Quality Network Sites
Atlanta Children’s (Sibley)
- Bill Cole

Boston Children’s
- Susan Saleeb, MD, FACC

Children’s Hospital of Philadelphia
- Shobha Natarajan, MD
- Andrea Kennedy, BS

Children’s National Medical Center
- Jeffrey Becker, MD, FACC
- Jessica Colyer, MD (Associate Fellow)
- Ashraf Harahsheh, MD, FACC

Children’s Hospital of Wisconsin
- David Saudek, MD, FACC

Children’s Hospital Omaha
- Shaun Custard, MD, FACC

Cincinnati Children’s
- Allison Divanovic, MD
- Jeffrey Anderson, MD, MBA, FACC

Colorado Children’s
- Pei-Ni Jone, MD, FACC
- Cindy Barrett, MD (Associate Fellow)

Nationwide Childrens
- Brandis Thornton, MS

Primary Children’s
- Michael Puchalski, MD, FACC
- Jennifer Marietta, RN

Nemours
- Samuel Gidding, MD, FACC
- Amanda Folk, MS

Nicklaus Children’s Hospital
- Nao Sasaki, MD

NorthWest Congenital Heart Care
- Matthew Park, MD, FACC

Pediatric Cardiology Associates
- Sarah Chambers, MD
- Stephen Shapiro, MD, FACC

Non-ACPC Quality Network Sites
Mercy Children’s (Kansas City)
- Elizabeth Turk
- Anitha Parthiban, MD, FACC

Massachusetts General Hospital
- Caitlin O’Callaghan, NP
Adult Congenital & Pediatric Cardiology

QUALITY NETWORK

Background & Milestones
Kathy Jenkins, MD, MPH, FACC
Robert Beekman, MD, FACC
Metric Development vs. Implementation

ACPC Membership

ACPC Member Section

ACPC Section Leadership Council

Quality Metric Steering Members

Subgroups:
- EP
- Nursing
- Heart Failure
- Interventional

Subgroup Leaders

Draft Quality Metrics

Quality Network

- Data Collection
- Data Reporting
- QI Initiatives

Final Quality Metrics

Metric Development

Metric Implementation

joins

appoints

refines

drafts

approves

implements
History ACPC Quality Metric Development

• ACPC Quality Metric WG established in 2008
• Intended to develop meaningful metrics of quality across a breadth of clinical areas for pediatric and adult congenital
• Established eight teams across pediatric and adult congenital cardiology
• Two processes to date of metric development and review
Current QMWG Team Leaders

- Ambulatory – Devyani Chowdhury, MBBS, FACC
- CICU – Michael Gaies, MD
- EP – John Kugler, MD, FACC
- Heart Failure – Christopher Almond, MD
- Interventional Cardiology – Thomas Doyle, MD, FACC
- Non-invasive Imaging – Leo Lopez, MD, FACC
- Nursing – Jean Connor, NP
- Adult CHD - Curt Daniels, MD, FACC
Development of Ambulatory Pediatric Cardiology Quality Metrics
Ambulatory Pediatric Cardiology Process

- 2012: Working group teams consisting of a team lead and 10-12 team members
- Candidate quality metrics developed and submitted by teams
- Candidate metrics based on:
  - Review guidelines, articles and MEDLINE search
  - Documented strength of scientific evidence
  - Ensure adherence can be assessed from medical record
- Candidate metrics standardized by co-chairs
- Reviewed and vetted by 9 person expert panel using Rand Delphi Method
- 2014: Approved by ACPC Council
- 2015: Operationalized into ACPC Quality Network
<table>
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<td>Chest pain</td>
<td>Roy Jedeikin, MD, FACC</td>
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<td>Infection prevention</td>
<td>Jeffrey Anderson, MD</td>
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<td>Kawasaki Disease</td>
<td>David Teitel, MD</td>
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<tr>
<td>Tetralogy of Fallot</td>
<td>Thomas Hougen, MD, FACC</td>
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<tr>
<td>Transposition with arterial switch</td>
<td>Dan Penny, MD</td>
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Expert Panel Stakeholders

- American College of Cardiology (ACPC),
- American Heart Association (Cardiovascular Disease in the Young),
- American Academy of Pediatrics, (Cardiology and Cardiovascular Surgery)
- European Pediatric Cardiology Association
- Pediatrix
- National Pediatric Cardiology – Quality Improvement Collaborative
- Mended Little Hearts (Medical Advisory Board)
- American Board of Pediatrics
- Canadian Pediatric Association
Approval Process for Metric Review following Expert Panel

• Review by ACPC Quality Metric Steering
• Solicit input from
  – ACPC Section membership
  – Affiliated Professional Societies
  – ACC/AHA TF on Performance Measures
  – Team leads refined the metric based on comments from ACPC Section members/TF on Performance Measures
• Seek approval from QMWG Steering Committee
• Seek approval from ACPC Council
Acknowledgements

• BMI Project: Ambulatory Quality Metric Team
  Devyani Chowdhury - Team Lead
  Kerry Rosen
  Shannon Rivenes
  Maribeth Hourim
  Maryellen Reilly-Druby
  Roy Jedeikin
  Nicole Sutton
  Rohit Talwar
  Matt Oster
  Carolyn Altman
  Elaine Urbina
  John Rhodes
  Stephen Cyran
  Marie Shaner
  Jeff Boris

• ToF Project: Tetralogy of Fallot Quality Metric Team
  Thomas Hougen
  Russell Cross
  Karim Diab
  Peter Karpawich
  Wyman Lai
  Matthias Peuster
  Russell Schiff
  Elizabeth Saarel
  Gary Satou
  Gerald Serwer
  Juan Villafane
  Tom Edwards
Metric Development vs. Implementation

- ACC Membership
  - ACPC Member Section
    - ACPC Section Leadership Council
      - Council
  - ACPC Quality Workgroup
    - Quality Metric Steering Members
      - Sub-groups:
        - EP
        - Nursing
        - Heart Failure
        - Interventional
        - ACHD
        - Ambulatory
        - Imaging
        - CICU
    - Subgroup Leaders
  - Metric Development
    - Metric Development
      - Metric Implementation
        - Quality Metric Steering Members
          - Quality Metric Workgroup
            - Quality Metric Steering Members
              - Draft Quality Metrics
                - Final Quality Metrics
                  - ACPC Quality Network
                    - Quality Network Leadership
                      - Data Collection
                      - Data Reporting
                      - QI Initiatives

- Metric Development
  - Metric Implementation
    - Metric Development
      - Metric Development
        - Metric Implementation
Quality Network Background

• The Adult Congenital & Pediatric Cardiology Quality Network™ is a national network of congenital heart disease (CHD) centers dedicated to collecting and sharing data, collaborating, and developing best practices for your CHD patients.

• The network welcomes large and small practices, academic and non-academic institutions, hospitals and health systems.
Value Proposition

- Data Collection and Reporting QI Program Providing a Broad Spectrum of Adult and Pediatric CHD Quality Metrics
- Enables Learning and Sharing of Trends and Best Practices via Learning Sessions, Webinars and a Listserv
- Offers a Flexible, Standardized Data Collection Process
- Provides MOC Part IV Credit for Physicians (Future)
- Provides Benchmarking to Understand Gaps and Improve Patient Care
- Developed by the ACC Adult Congenital and Pediatric Cardiology Members and Leaders
- Allows Participants to Shape Metric Direction and the Ability to Influence Care Nationally
Quality Network Milestones

1. Refining Quality Metrics
   - Developing Data Collection/Reporting Process
   - Feb-June

2. QNet LAUNCH
   - (ACC Annual Meeting 2016)
   - April

3. QI Project Development
   - Sep-Oct

4. MOC BMI/ToF Applications Approved
   - Nov

5. QNet 1st Learning Session
   - Dec

Development
- Phase 1 (Pilot)
  - July-Sept (3 sites)
- Phase 2 (Soft Launch)
  - Oct 2015 – Mar 2016 (13 sites)
- Phase 3 (Full Launch)
  - Nov 22+ sites

2015
- Q1 2015
- Q2 2015
- Q3 2015
- Q4 2015
- Q1 2016
- Q2 2016
- Q3 2016
- Q4 2016
- Q1 2017

2017

AMERICAN COLLEGE OF CARDIOLOGY
Quality Network Site Map

Total Site Count
23
Current Participants

- Atlanta Children’s (GA)
- Boston Children’s (MA)
- Cardiology Care for Children (PA)
- Child Cardiology Associates (VA)
- Children’s Cardiology Assoc. (TX)
- Children’s National (DC)
- Children’s Hospital Omaha (NE)
- Children’s Hospital of Colorado (CO)
- Children’s Hospital of WI (WI)
- Children’s Hospital Los Angeles (CA)
- Children’s Hospital of Phila. (PA)
- Cincinnati Children’s (OH)
- Cleveland Clinic (OH)
- Dayton Children’s (OH)
- Le Bonheur Childrens (TN)
- Lee Memorial (FL)
- Mayo Clinic (MN)
- Nationwide (OH)
- Nemours (DE)
- Nicklaus Children’s (FL)
- Northwest Children’s Heart Care (WA)
- Primary Children’s (UT)
- Univ. of Maryland (MD)
## List of Current Metrics

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Data Collection/Reporting

ACC Data Collection
- Vovici

Local Data Collection
- Aggregate data for all sites
- Calculate average performance for each metric quarterly & yearly

Sample
- Quarterly data entry numerator, denominator

Chart Abstraction

ACC Data Aggregation
- Aggregate data for all sites
- Calculate average performance for each metric quarterly & yearly

Quarterly report generation

Quarterly data load

Tableau

Quarterly .xlsx exports

Report uploaded to ACPC Website for sites to download

*currently exploring options
Data Collection

Key Features:

• Select and report as many metrics as you wish (must submit at least one to participate)

• Only numerator and denominator counts should be submitted (no patient identifiers or other PHI)

• Only the site and ACC will know your site’s identity on performance reports (not other sites)

• Only metrics with at least 6 sites reporting data will be included in performance reports

• Sites need to have at least 5 eligible patients to submit data for any given metric
Two QI projects submitted to ABP were recently approved:

- To improve BMI measurement documentation and appropriate follow-up for patients with elevated BMI

- To improve proportion of patients, with Tetralogy of Fallot, who received 22q11 testing
QI Project Metrics

• **BMI Metrics:**
  – Proportion of patients, 3-18 years old, who had their BMI measured and BMI percentile calculated
  – Proportion of patients, 3-18 years old, with a BMI greater than 85% who received appropriate counseling

• **ToF Metric:**
  – Proportion of Tetralogy of Fallot patients who received or had an order for a test for 22q11.2 deletion

*ABP has awarded 25 points of Part IV credit to each QI project*
Next Steps

• Recruitment
  – Spread the word to get other centers to join
  – All info available on www.acc.org/qnet

• American Board of Pediatrics (ABP)
  – 2 QI projects approved

• Collaborative QI activities

• New Measures in pipeline
ABP - Meaningful Participation

- Only centers/clinics participating in the ACPC Quality Network are eligible
- Center to confirm collecting/submitting data for BMI or ToF metrics
- Physician to declare participation on the center’s BMI or ToF team
- Physician must receive communications through the Quality Network listserv
- Participate in design and implementation of change strategies toward the improvement aim
- Participate in reviewing reports for 2 PDSA cycles (i.e. 2 consecutive quarters/six months)
- Participate in at least two QI team meetings
- Complete one QI science training (e.g. the Model for Improvement; PDSA cycles) and tools to assist with data analysis and implementation of this QI project.
- Complete the BMI or ToF QI project orientation session
- Participate in at least one quarterly collaborative QI webinar, ACPC Quality Workgroup meeting addressing the BMI project, OR a specific Learning Session for the project
Adult Congenital & Pediatric Cardiology

QUALITY NETWORK

Quality Improvement Activities (BMI & TOF)

Ashraf Harahsheh, MD, FACC
Susan Saleeb, MD, FACC
BREAK
Collaborative QI Breakouts
Sessions

• Key Questions:
  – What activities will help achieve the project aim?
  – What barriers/challenges are there?
  – Examples of successes
Breakout Reports
ToF & BMI QI Projects
Breakout Locations

• BMI Metric Breakout – Current location
• TOF metric breakout - MPR 122 (next door)
• Building a Team - Conference Room 114
• Data Extraction - Conference Room 118
LUNCH TIME

• If possible, please sit with someone from your team to discuss the following during lunch:
  – Which of the metrics would you choose for collaborative QI?
  – Which key driver would you focus on?
  – What change strategies you anticipate to using?
  – Who would be on your team?
  – What challenges do you anticipate?
Breakout Reports
Data Collection Strategies &
Developing a Team
Report from Centers

• Which of the metrics would you choose for collaborative QI?
• Which key driver would you focus on?
• What change strategies you anticipate to using?
• Who would be on your team?
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Panel Discussion: Approaches to Overcoming Barriers
Panel Discussion: Future Directions for the ACPC Quality Network
Future Directions

• Continuing recruiting Quality Network sites
• With input from CHD community, add or remove metrics Quality Network metrics as CHD field develop
• Expand portfolio of ABP MOC Part IV approved QI projects
• Expand collaborative QI activities
• Investigate opportunities for research and publications from Quality Network data