PR-COIN and PARTNERS Learning Health System
Agenda

• Why are we here today?
• What is a Learning Healthcare System?
• How does PR-COIN work?
• PR-COIN Infrastructure
• What are the benefits of PR-COIN?
• What is PARTNERS Learning Healthcare System?
Why are we here today?
Why PR-COIN got started....
Are Your Patients Achieving Desired Outcomes?

- Are all children reliably receiving the best care possible according to recommended guidelines?
- Are pediatric rheumatologists working in effective systems that support them to do the best for their patients?
- Are patients and families reliably getting all the information they need to understand their condition, make decisions about treatments, and effectively care for their child at home?
Many “Leaks” from Research to Practice

Even if 80% is achieved at each stage then
0.8 x 0.8 x 0.8 x 0.8 x 0.8 x 0.8 x 0.8 = 0.21

Glasziou, Haynes, ACP Journal Club 2005
Slide courtesy of M. Kappelman
Are Your Clinic Processes Reliable and Efficient?

- Do you know your overall performance on quality measures? How do you compare to leading centers in the USA and Canada?
- Are all providers and staff achieving expected outcomes?
- Do processes vary between providers? Locations? How does the variation effect staff? Patients?
- Would you like access and learn from data of 5,000 of patients and 30,000 visits?
What is a Learning Health System?
Learning Healthcare System

• Patients and providers work together to choose care based on best evidence
• Drive discovery as natural outgrowth of patient care
• Ensure innovation, quality, safety and value
• All in real-time
Networks offer

3-part engaged social network: patients, clinicians and researchers

Integrated data-sharing & technology

Support for QI and research: continuous improvement and learning
The Prototype
Clinical remission rate in CD and UC

PGA = Inactive (Physician Global Assessment)

Improved Outcomes in a Quality Improvement Collaborative for Pediatric Inflammatory Bowel Disease. Pediatrics. 2012;129:1030-41

Centers >75% registered
Replication
Value Based Payments are Coming

Value-Based Purchasing: Why Your Timeline Just Got Shorter

Bobbi Brown, Vice President of Financial Engagement

CMS made a bold announcement in January 2016: It plans to ramp up its timeline for transitioning Medicare from fee-for-service (FFS) payments to value-based reimbursement. For the first time, CMS is being incredibly specific about its timeline and methodology. It plans to take the following two actions:

- 30 percent of payments will be tied to alternative payment ACO or bundled payment arrangements by the end of 2016. Payments related to these models will increase to 50 percent by the end of 2018.
- 85 percent of all traditional Medicare payments will be tied to quality or value by 2016 and 90 percent by 2018 through programs such as Hospital Value Based Purchasing and Hospital Readmissions Reduction.

At about the same time, on the commercial front, a group of payers, patients, providers, and purchasers formed a value-based coalition with similarly aggressive goals. The coalition, which includes Aetna, Blue Cross, Health Care Services Corporation, Ascension Health, and Trinity Health, stated that 75 percent of their respective businesses would be operating under value-based payments by 2020.

Learning System to Improve Outcomes

- Patients and Families
- Clinicians
- Identify Uncertain Management Practices
- Comparative Effectiveness Research
- Electronic Health Records
- Identify New Gaps in Care
- Registry Database
- Registry Applications
- Standardize Process
  - Reduce Variability in Process
  - Customize Process to Patient Needs
- Patient Outcome

New Knowledge

Point of Care
The Learning Engine
How does PR-COIN work?
PR-COIN Leadership

PR-COIN Executive Committee
Esi Morgan Chair, Beth Gottlieb and April Bingham

PR-COIN Steering Committee
Committee chairs, Judy Olson, Julia Harris, Sheetal Vora, Jen Weiss, Nancy Griffin, Anne Paul
Parent representatives: Angela Young, Laura Curtis

Informatics
Esi Morgan Chair

Engagement
Kerry Ferraro Chair

Research
Beth Gottlieb Chair

Outcomes
Sandy Burnham and Janalee Taylor Co-Chairs

Data & Analytics
April Bingham Chair

Parent Work Group
Patient Work Group
Mission/Vision

The mission of the Pediatric Rheumatology Care and Outcomes Improvement Network (PR-COIN) is to improve dramatically, the outcomes of care for all children with rheumatic conditions.
The Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What changes can we make that will result in improvement?

Act    Plan    Study    Do

Measures tell a team if the changes they make are making a difference. They tell you where you are and where you are going.

Source: The Improvement Guide
SMART AIMS

By December 31, 2019:

• 60% of oligoarticular and polyarticular JIA patients will have inactive disease or low disease activity by JADAS

• 30% of patients will be treated per guidelines / algorithm

• 85% of patients receive Self-management Support
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### Outcome Quality Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inactive or Low Disease Activity by cJADAS10</td>
<td>Mean cJADAS10 Score</td>
</tr>
<tr>
<td>Clinical Inactive Disease</td>
<td></td>
</tr>
<tr>
<td>Optimal Physical Function</td>
<td></td>
</tr>
<tr>
<td>Pain Score (&lt;=3)</td>
<td></td>
</tr>
<tr>
<td>Time to Achieve Inactive or Low Disease Activity by cJADAS10 for Newly Diagnosed Patients</td>
<td>Mean Patient Global Assessment of Overall Well-being Score</td>
</tr>
<tr>
<td></td>
<td>Patient Global Assessment of Overall Well-being Score (&lt;=2)</td>
</tr>
<tr>
<td></td>
<td>Mean Active Joint Count</td>
</tr>
<tr>
<td></td>
<td>Pain Interference</td>
</tr>
<tr>
<td>Type of Measure</td>
<td>Measure Name</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Process</td>
<td>Treatment Target Set</td>
</tr>
<tr>
<td></td>
<td>Provider Attestation of Disease Activity Status for Treat to Target</td>
</tr>
<tr>
<td></td>
<td>Use of Clinical Decision Support/Treatment Guidelines</td>
</tr>
<tr>
<td></td>
<td>Self Management Support Given</td>
</tr>
<tr>
<td></td>
<td>Medication Safety Monitored</td>
</tr>
<tr>
<td>Balancing</td>
<td>Time between Hospitalizations for Infections</td>
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Active Learning Network of Care Centers Working on Outcome Improvement
Key Driver Diagram: Jan – Dec 2019

**KEY DRIVERS**

- Access to care
- Timely diagnosis and treatment per individual targets
- Prepared, proactive practice team
- Engaged Patients and Families
- Culture facilitating QI and research

**CHANGES & INTERVENTIONS**

**Efficient care systems**
- Collaborative referral systems, timely appointment, and prompt med prior-authorization

**Robust QI Capability and Capacity**
- Administration fully supports center QI activities
- Develop QI leaders as coaches and equip all members with QI capabilities
- Effective use of QI tools / methods / data analysis to develop / spread best practices
- Culture of problem solving
- Embedded parent / patient member

**Equipped Families**
- Provide information and support co-production to empower / equip patients to manage their health
- Promote intersection with community partners and resources
- Assess and refer to address physical, emotional, economic, and social wellness needs
- Reliable provision of effective, co-produced self-management support materials and services

**Population Management**
- Identify and register all eligible patients
- Consent for research
- Collect data at every visit with timely entry
- Proactive processes addressing care gaps
- Improve practice through care and population data analysis

**Pre-Visit Planning**
- Identify family needs and communicate to clinic personnel
- Proactively obtain missing information
- Assess / arrange patient/family needs

**Clinical Decision Support**
- Data sharing for QI and research
- Decision support tools
- Electronic PRO collection
- Minimize data burden
- Real time reports

**Co-Produced Care**
- Use SDM methods to tailor treatment goals / disease freedom
- Connect to Parent / Patient Working Groups
- Facilitate patient/family input / development / improvement of care delivery
- Co-production between all stakeholders

**Consistent, Reliable Care (Model JIA Care)**
- Design, coordinate, monitor and manage care per published/accepted treatment guidance
- Prompt, accurate diagnosis and early treatment initiation
- Standardized disease activity measurement, PRO assessment, data capture, evaluation, and response reliably integrated into visits
- Ongoing treatment adjustment per disease activity level, PRO/QOL scores
PR-COIN *Infrastructure*
PR-COIN and Members Relationships

Clinical Site
- Team (Parent, RN, MD, RA, etc.)
- Local IT

- Data from every clinical encounter
- Tools/techniques

- Reports:
  - Outcome/Process
  - Data quality
  - Pre-visit Planning
  - Population Management
  - QI Training/Coaching
  - Monthly Webinars
  - Semi-Annual Learning Sessions
  - Shared best practices

Core Operations
- QI Leadership
- IT platform
- Registry
- QI Consultant
- Analyst
- Project Management
PR COIN Coordinated Approach for Transforming Care Delivery

**IHI Breakthrough Series Model**
- Share best practices to reduce cost & time
- QI tools to test small changes to improve clinic processes

**Proven QI methodology**

**Growing data repository**

**Electronic Data Transfer (non EPIC)**

**EPIC Smartform Data Entry**

**Webforms Data Entry**

**QI reports**
- DQ reports

**Shared Decision Making**
- Shared Decision Making

**Population Management**
- Pre-Visit Planning

**Improving Care, Processes and Outcomes**

**Shared Tools**
Examples of run charts

Percent of patients with oligoarthritis or polyarthritis with either inactive or low disease activity by JADAS.
Percent of patients on non-biologic DMARDS who had visits in the month and had toxicity labs performed.
Membership & Benefits
Benefits: Better Prepared Teams

- On-demand data evaluating performance on many clinical processes and disease outcomes (center, provider, and aggregate level)

- Access to database containing ~5,000 unique patients and ~30,000 visits

- Ongoing training and personalized coaching in Improvement Science methodology and tools

- Maintenance of Certification Part IV (active and eligible providers)
Benefits: Better Prepared Teams (Cont’d)

• Electronic data transfer, automated reports and decision support
  • Advanced analytics to support clinical care, develop predictive models

• Access to clinical tools (Pre-Visit Planning Report, Population Management Report, algorithms, etc.)

• Network-wide webinar calls and face-to-face conferences with rheumatologists, parents, patients, and QI experts

• Document repository via a secure member only website
Benefits: *Improved Outcomes for Patients*

- Understand your center’s performance and use QI methods and collaborations with other centers to improve.
- Be a part of establishing and identifying best practices across PR-COIN that can be adopted at your center.
- Opportunities for your center staff to take on nationwide leadership role on measure development and research workgroups.
Benefits: *Increased Divisional and Institutional Visibility*

- Be an exemplar for other divisional QI efforts
- Join a growing international network of recognized institutions
- Receive QI initiative support aligned with organizational priorities
- Be recognized as a leader in improving health care
- Increased visibility and branding potential as members of international collaborative for outcomes excellence
Next Step...

contact pr-coin@cchmc.org to on-board!
Thank You!