Families Deserve the Highest Value Care

Integrated Care
Implementation and Measurement

Take Action for Arizona’s Children Through Care Coordination

Richard Antonelli, MD, MS, FAAP
Medical Director of Integrated Care
Boston Children’s Hospital; Harvard Medical School
January 30, 2017
Acknowledgements

Family Voices and the MA Federation for Children with Special Needs

David K. Urion, MD, Director, Behavioral Neurology Clinics and Programs
Director of Education and Residency Training Programs in Child Neurology and Neurodevelopmental Disabilities, Charles F. Barlow Chair, Department of Neurology, Boston Children's Hospital

Menno Verhave, MD, Clinical Director, GI and Nutrition, BCH

Jennifer McCrave, RN, Senior Nurse, Ambulatory Child Neurology, BCH
Lori Hartigan, RN, Senior Nurse, Ambulatory GI, BCH
Casey Fee, SM, Program Manager, Integrated Care, BCH
Hannah Rosenberg, MSc, Project Manager, Integrated Care, BCH

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• US Maternal and Child Health Bureau
  – American Academy Pediatrics
• Lucile Packard Foundation for Children’s Health
• Harvard Pilgrim Health Care Foundation Quality Grants Program
Integrated Care Program

Partner with teams in following Departments/Divisions:

- Neurology
- Department of Medicine
- Dana-Farber/BCH Cancer & Blood Disorders Center
- Critical Care/Anesthesia
- Department of Surgery
- Primary Care – Internal
- Primary Care - External
- Accountable Care - CHICO
- Network: Referring Provider Organizations
Take Away Messages

• Build Capacity Families and Work Force
  – Develop competencies to support integration
  – Inter-professional education
• Implement Measures of Care Integration
• Implement Measures of Care Coordination
• Track Outcomes, Including Value
  – Quality, Safety
  – Cost
  – Experience
Why Is This So Difficult?

Routine Veterinary Care
Animal Care Plans
After-Hours Emergency
Miguel

• 4 year old Hispanic boy
  • Dx with asthma by PCP
  • referred for “poor attention”
  • ED visit 3 times in prior year for asthma
  • no assessment/ intervention for attention
Health & Social Service Spending Combined

Vital Signs Framework

2014 AAP Policy Statement:

Patient-and Family-Centered Care Coordination: A Framework for Integrating Care for Children and Youth Across Multiple Systems

Defined Care Coordination as:
the set of activities in “the space between”- Visits, Providers, Hospital Stays

AAP Policy Statement
Select Recommendations

• Create opportunities for family skill building
• Ensure parent/family need for services and information sharing are met
• Utilize care coordination to support transitions of care
• Create system of co-management and communication between PCP and Specialists
• Provide ongoing education for multidisciplinary care and care coordination team
• Collaborate with Title V State Programs and MCH block grants
Integrated Care

seamless provision of health care services, from the perspective of the patient and family, across entire care continuum. It results from coordinating the efforts of all providers, irrespective of institutional, departmental, or community-based organizational boundaries.

Care Integration for Children with Special Health Needs:
Improving Outcomes and Managing Costs.
National Governors Association Center for Best Practices, 2012
Distribution of Pediatric Medical Expense

<table>
<thead>
<tr>
<th>% of population</th>
<th>% of spend</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5%</td>
<td>25%</td>
</tr>
<tr>
<td>25%</td>
<td>70%</td>
</tr>
<tr>
<td>74.5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

- Healthy, Preventive
- Chronic
- Complex
Matching Services to Complexity—Including Social, Medical, Behavioral Needs

Children with complex needs
- Neurodevelopmental (Autism, etc.)
- Behavioral/Psychiatric
- Hematology/Oncoology
  - Sickle cell
  - Hemophilia
- Technology dependent
- Multiple Chronic Conditions
- Social Risk Factors

Children with chronic conditions
- Behavioral (ADHD, depression, anxiety, PTSD)
- Asthma
- Obesity
- Diabetes
- Social Risk Factors

Healthy, Preventive
Evolving the Care Model to Achieve High Value

Specialist or PCP comfortable with high risk patients as the medical home. Patient's specialists highly connected and identified patient coordinator supports the patient and/or family, including social and behavioral health needs.

PCP as the primary care medical home + the patient’s specialists. PCP care team support care coordination with the patient and/or family.

PCP as the medical home and specialist visits as needed. Most care coordination is conducted by the patient and/or family.
Family Experience of CC Supporting BH Needs

What has helped you, past or present, in gaining knowledge and understanding about your child's Mental Health needs?
Quadruple Aim

• Improving the patient experience of care
• Improving the health of populations
• Reducing the per capita cost of health care
• Provider Experience

Adapted from Institute for Healthcare Improvement.
Domains of Integrated Care

Align with Quadruple Aim—Better Health, Better Care, Less Cost Per Capita

• Person, Patient, Family, Caregiver Experience

• Care Coordination
  o Closing the Loop
  o High Quality Handoffs
  o Care Tracking
  o Care Planning

• Utilization and Financial Outcomes
  o Admissions, readmissions, Emergency Dept utilization

• Provider Experience
Families said that integrated care would involve:

• “A knowledgeable professional taking some responsibility for a holistic look at my kid.”
• “Help with prioritizing.”
• “To really know everyone on the team, to have good working relationships.”
• “Someone who clears the path for me.”
Authentic Outcome Measure of Patient/Family Experience
Pediatric Integrated Care Survey (PICS)

Integrated Care
"Holistic Care"

Team-Based Care
- Team Configuration
- Communication
- Knowledge Sharing

Connection to Life/Community (Connecting Medical Care and Other)
- Information
- Family Impact

Future (Care Planning)
- Long-Term Plan/Roadmap
- Goals

Boston Children's Hospital
Harvard Medical School Teaching Hospital
Pediatric Integrated Care Survey (PICS)

- Family experience measure of care integration
- Used to conduct quality measurement to inform improvement work in the space of pediatric care integration
- Outcome measure
PICS

• Assess family experience of medical service delivery, behavioral health, education, linkage to community organizations

• Assess the family experience of integration across the entire care team or specific to an entity

• Up to 12 month time frame

• Available in English and Spanish
PICS example data

In the past 12 months, how often did you feel that your child’s care team members in the Smith Clinic knew about the advice you got from your child’s other care team members?

In the past 12 months, how often have your child’s care team members in the Smith Clinic treated you as a full partner in the care of your child?
In the past 12 months, how often have your child's care team members in the Smith Clinic talked to you about things in your life that cause you stress because of your child's health or care needs?

In the past 12 months, how often has someone on your child's care team in the Smith Clinic explained to you who was responsible for different parts of your child's care?
PICS

Pediatrics:

For more information about PICS, please contact:

• **Richard Antonelli, MD, MS, FAAP:**
  Richard.Antonelli@childrens.harvard.edu
Domains of Integrated Care

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Care Coordination Tracking and Planning

Care Coordination Measurement Tool (CCMT)

• Captures Value of CC activities— For Both QI and Business Planning
  – Supports efforts of all disciplines doing CC
  – Identify Gaps and Redundancies in Care (eg, vulnerable and underserved populations)
  – Rationalization of workforce education and deployment-- functioning at “top of license or scope”
  – More accurate reflection of true cost of care— enables sustainability of move from reactive to proactive care; fee-for-service to value-based care delivery

• Adapted to capture activities/ outcomes in diverse settings (adult, child)
  – Community Health Workers
  – Social Workers
  – Primary Care
  – Subspecialty Care (behavioral, surgical, medical)
  – Home Care
  – Families

• Access BCH website: http://www.childrenshospital.org/care-coordination-curriculum/care-coordination-measurement
<table>
<thead>
<tr>
<th>Domain #</th>
<th>Domain Name</th>
<th>Domain Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Patient Level</td>
<td>Stratification of patient population-including medical, behavioral and social determinants.</td>
</tr>
<tr>
<td>2</td>
<td>Care Coordination Needs</td>
<td>Category of care coordination service delivery needs.</td>
</tr>
<tr>
<td>3</td>
<td>Care Coordination Activities</td>
<td>Description of activities performed to fulfill care coordination need for patient/family.</td>
</tr>
<tr>
<td>4</td>
<td>Occurred Outcomes</td>
<td>Value capture domain- outcomes that occurred due to effective care coordination service delivery.</td>
</tr>
<tr>
<td>5</td>
<td>Prevented Outcomes</td>
<td>Value capture domain- consider potentially adverse outcomes prevented due to effective care coordination service delivery.</td>
</tr>
<tr>
<td>6</td>
<td>Time</td>
<td>Calculate total time of care coordination encounter- include identification to resolution of care coordination as part of encounter.</td>
</tr>
<tr>
<td>7</td>
<td>Staff Type</td>
<td>If more than one person is completing the tool within a care team, this domain allows stratification of activity by staff type.</td>
</tr>
<tr>
<td>8</td>
<td>Clinical Competence</td>
<td>For clinical team members, this domain captures if clinical competence was required to complete the care coordination activities listed. The purpose of this domain is to determine if staff activities are properly allocated, or, if everyone is working “to the top of their license”.</td>
</tr>
</tbody>
</table>
Outcomes Prevented – Aggregate Data

(32%) of total 3855 CC encounters had something prevented

Of the 1232 CC Encounters where prevention was noted as an outcome:

<table>
<thead>
<tr>
<th>Outcome Prevented</th>
<th># CC Encounters</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit to Pediatric Office / Clinic</td>
<td>714</td>
<td>58%</td>
</tr>
<tr>
<td>Emergency Department Visit</td>
<td>323</td>
<td>26%</td>
</tr>
<tr>
<td>Subspecialist Visit</td>
<td>124</td>
<td>10%</td>
</tr>
</tbody>
</table>

62% of RN CC Encounters prevented something

33% of MD CC Encounters prevented something

Non-revenue-generating office nurses drive the most system-level cost savings: avoidance of ED and office visits
Value Capture - Specialty Setting
Boston Children’s Hospital
Division of Gastroenterology CCMT

- Data represents care coordination encounters for patients with enteral tubes
Domains of Integrated Care

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- Provider Experience
High Quality Handoffs

What is a handoff?
The transfer of pertinent knowledge between members of a patient’s care team who work in different service areas.

The goal of a handoff is to enable the care team to maximize the utility of every patient interaction by ensuring knowledge learned by one part of a patient’s care team is known to other members at the right time and place.

Elements of a high quality pre-encounter handoff
- Purpose of patient encounter
- Relevant clinical and/or psychosocial information
- Current status of the referral relationship
- Care plan or action item list

Elements of a high quality post-encounter handoff
- Defined action items
- Accountability
- Timeline
- Contingency planning

Funded in part by a grant from the Harvard Pilgrim Health Care Quality Grants Program
Baseline State of Handoffs

Presence of a pre-encounter handoff prior to a new patient visit: 10%

Presence of a pre-encounter handoff prior to a return patient visit: 0%

Very little documented communication between members of the care team exists prior to appointments with BCH Neurologists.

Funded in part by a grant from the Harvard Pilgrim Health Care Quality Grants Program
# Clinician Reason for BCH Visit

Please use the following form to communicate the reason for visit and any other essential information that the referred subspecialist should know about the patient prior to their visit.

<table>
<thead>
<tr>
<th>Field</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Today’s Date</td>
<td>12/21/2016</td>
</tr>
<tr>
<td>Patient Name</td>
<td>Jane Doe</td>
</tr>
<tr>
<td>Patient DOB</td>
<td>10/23/2016</td>
</tr>
<tr>
<td>Referring Provider</td>
<td>Dr. Purple</td>
</tr>
<tr>
<td>Referring Provider Organization</td>
<td>Color Wheel Pediatrics</td>
</tr>
<tr>
<td>BCH Subspecialty Provider</td>
<td>Dr. Orange</td>
</tr>
<tr>
<td>BCH Department</td>
<td>Neurology</td>
</tr>
<tr>
<td>Appointment Date/Time (if known)</td>
<td>1/4/2017 1:00 PM</td>
</tr>
</tbody>
</table>

### Purpose of the upcoming patient visit:

2 month old female w/ rhythmic jerky movements in sleep lasting 1-2 minutes. Extinguished when awakened, but lasting longer than typical sleep myclonus. Also w/ low axial tone on exam. Please evaluate for potential seizure disorder.

### Relevant clinical and/or psychosocial information:

Normal birth hx. No fhx sz d/o.

Please see progress note from 12/15/2016 and growth charts.

### Requested referral relationship:

- [ ] One-time consultation
- [ ] Co-management/shared care
- [ ] Subspecialty-based management
- [x] To be determined

If other, please specify: PCP to resume care unless pt found to have seizure disorder.
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  - *Care Tracking*
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Closing the Loop: Follow-Up Referrals

Performance on Follow Up Referrals

Communication of Follow Up Note to Ordering Provider and PCP

Boston Children’s Hospital
<table>
<thead>
<tr>
<th>Clinic Care Team Member</th>
<th>Problems/Goals</th>
<th>Action</th>
<th>Who</th>
<th>When</th>
<th>Contingency</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who is entering item (add your initials)</td>
<td>What is action contributing to/what is it addressing</td>
<td>What needs to be completed</td>
<td>Who is responsible for completing action</td>
<td>What is the timeline that the action needs to be completed</td>
<td>If there is an issue or barrier, what are next steps</td>
<td>Is this action completed?</td>
</tr>
</tbody>
</table>

| | | | | | | |
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11.18.2016 © 2016 Boston Children’s Hospital Integrated Care Program
<table>
<thead>
<tr>
<th>Goal</th>
<th>Action</th>
<th>Who</th>
<th>When</th>
<th>Contingency</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diet compliance</td>
<td>Speech/oral motor eval</td>
<td>Mom will inquire with school SLP for school resources</td>
<td>week of 11/14</td>
<td>if not available via school SW will assist w/ referral from specialist or PCP</td>
<td></td>
</tr>
<tr>
<td>Diet Compliance/QOL</td>
<td>Resources for parent training/behavioral therapy</td>
<td>SW will provide list of providers</td>
<td>Week of 11/14</td>
<td>Parents will decide if/when to initiate</td>
<td></td>
</tr>
<tr>
<td>Securing appropriate academic services – concern for academic regression</td>
<td>Updated academic evaluation</td>
<td>SW will provide letter template for evaluation request – parents will complete, sign and deliver to school. Parents will also discuss with MD/NP value of BCH neuropsych eval</td>
<td>Week of 11/14</td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>
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• Provider Experience
Financial Outcomes for Patients with Complex Needs
BCH Neurology/ Integrated Care Program Collaboration

- Reduced Expense by 10%, primarily by shifting in-patient to ambulatory
- Reduced 30 day, all cause readmissions from 22% to 13%
- Reduced Emergency Department usage
- Not specific to single primary care integration partner

Key Partners: Scott Pomeroy, MD; David Urion, MD; Jennifer McCrave, RN; David Lieberman, MD; Suzanne Rose, NP; Mildred Mejia, RN; Lindsey Swanson, MS; Christine Monterio, MSW; Family Voices; Rett Syndrome Association of Massachusetts
Care Coordination Curriculum

Pediatric care coordination is a patient and family-centered, assessment-driven, team-based activity designed to meet the needs of children and youth while enhancing the family’s caregiving capabilities. Care coordination addresses interrelated medical, social, developmental, behavioral, educational and financial needs in order to achieve optimal health and wellness outcomes. Key activities of Care Coordination involve the creation of care plans, care tracking, and timely, structured information for all members of the care team, including the patient and their family.
National Center for Care Coordination Technical Assistance (NCCCTA)

The mission of the National Center for Care Coordination Technical Assistance is to support the promotion, implementation and evaluation of care coordination activities and measures in child health across the United States.

The National Center for Care Coordination Technical Assistance is working in partnership with the National Center for Medical Home Implementation (NCMHI) in the American Academy of Pediatrics. The NCMHI is supported by the Health Resources and Services Administration (HRSA) of the United States Department of Health and Human Services (HHS) grant number U43MC09134.

Please contact Hannah Rosenberg, Manager, NCCCTA, for more information.

- Email: hannah.rosenberg@childrens.harvard.edu
- Telephone: 617.919.3627
How To Sustain This?

• Altruism only goes so far…
Value-Based Payment Models for Medicaid Child Health Services

Payment model for all children except for those with Medical Complexity

- Capitated Primary Care Payment (incorporating behavioral health)
- CC Payment (risk adjusted per-patient-per-month)
- Performance Incentive Bonus

Value-Based Payment for Children with Medical Complexity
- Total Cost of Care-model evolving from shared savings to shared risk
- CC Payment- risk adjusted per-patient-per-month

Other
- Episode-based payment
- Performance incentive/ shared savings- social determinants of health
- Joint Accountability
- Cross-subsidization

## Impact of Social Risk Factors

**Report to Congress: Social Risk Factors and Performance Under Medicare’s Value-Based Purchasing Programs**

US Dept. HHS, Assistant Secretary for Planning and Evaluation, December, 2016

<table>
<thead>
<tr>
<th>PSI Measure Performance, Safety-Net Versus Non-Safety-Net Hospitals Measure</th>
<th>Unadjusted Odds of Event for Patients at Safety Net Hospitals (top 20% DSH)</th>
<th>Risk-Adjusted Odds of Event for Patients at Safety Net Hospitals (top 20% DSH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI-3: Pressure Ulcer</td>
<td>1.45</td>
<td>1.36</td>
</tr>
<tr>
<td>PSI-6: Iatrogenic Pneumothorax</td>
<td>1.18</td>
<td>1.13</td>
</tr>
<tr>
<td>PSI-7: Catheter-Related BSI</td>
<td>1.49</td>
<td>1.22</td>
</tr>
<tr>
<td>PSI-8: Postop Hip Fracture</td>
<td>0.94</td>
<td>0.94</td>
</tr>
<tr>
<td>PSI-12: Periop PE or DVT</td>
<td>1.17</td>
<td>1.09</td>
</tr>
<tr>
<td>PSI-13: Postop Sepsis</td>
<td>1.26</td>
<td>1.17</td>
</tr>
<tr>
<td>PSI-14: Postop Wound Dehiscence</td>
<td>1.19</td>
<td>1.19</td>
</tr>
<tr>
<td>PSI-15: Puncture or Laceration</td>
<td>1.07</td>
<td>1.05</td>
</tr>
</tbody>
</table>

BSI=Bloodstream infection; DVT=Deep vein thrombosis; PE=Pulmonary embolism. Odds ratios greater than 1 indicate increased risk of event; odds ratios less than 1 indicate reduced risk. All bolded comparisons are significant.
Current Activities: National

• LPFCH* Policy Brief Financing CC Tiering for Complexity, including Social Determinants
• LPFCH NASHP Medicaid Quality Measures for Children with Complexity
• National Quality Forum Medicaid Innovation Accelerator Program– gap filling
• Mathematica Lessons Learned from Medicare CC Relevant for Child Health

* Lucile Packard Foundation for Children’s Health
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What’s Next in United States?
KEEP CALM AND CARRY ON
Measure
Value
Select References

- **MA Child Health Quality Coalition Care Coordination Framework**. *Funded by the Centers for Medicare and Medicaid Services (CMS) through grant funds issued pursuant to CHIPRA section 401(d)*. Contact: grogers@mhqp.org  www.masschildhealthquality.org/work/care-coordination/
- **AHRQ Care Coordination Atlas** (McDonald Nov 2010, June 2014) and companion document Care Coordination Accountability Measures for Primary Care (McDonald Jan 2012).
- **Care Coordination Curriculum and Care Mapping Tool User Guides**: Antonelli, Browning, Hackett-Hunter, McAllister, Risko; Lind. Boston Children’s Hospital; funded thru Family Voices/MCHB HRSA grant. 2012.  www.childrenshospital.org/care-coordination-curriculum