Advancing Multidisciplinary Care Coordination in Primary and Subspecialty Care Settings (Part 1)

May 10, 2018

Noon to 12:45pm Eastern

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Measure What Matters: Advancing Multidisciplinary Care Coordination in Primary and Subspecialty Care Settings

Brought to you by the National Center for Care Coordination Technical Assistance in collaboration with the National Center for Medical Home Implementation, a cooperative agreement between the American Academy of Pediatrics and the Maternal and Child Health Bureau

Co-Moderator
Michelle Zajac Esquivel, MPH
National Center for Medical Home Implementation
American Academy of Pediatrics
Division of Children with Special Needs
Disclosures

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• We do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.
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Co-Moderator and Faculty
Richard Antonelli, MD, MS, FAAP
Boston Children’s Hospital
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National Center for Care Coordination Technical Assistance
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Faculty

Hannah Rosenberg, MSc
Boston Children’s Hospital
National Center for Care Coordination Technical Assistance
Learning Objectives

• Introduce and discuss a tool intended to track and quantify care coordination activities and outcomes.

• Demonstrate the impact of care coordination in diverse settings including pediatric subspecialty and primary care.
• Our mission is to support the promotion, implementation and evaluation of care coordination activities and measures in child health across the United States.

• Our team
  • **Director**: Richard Antonelli, MD, MS, FAAP
  • **Manager**: Hannah Rosenberg, MSc
  • **Technical Assistance Coordinator**: Neha Safaya, MS
National Center for Care Coordination
Technical Assistance

• Technical assistance and support is available to individuals interested in implementing care coordination (CC)
  • One hour of introductory technical assistance with the Care Coordination Measurement Tool, and other tools we have developed such as the Pediatric Care Coordination Curriculum and the Pediatric Integrated Care Survey
  • Two additional hours of technical assistance in the adaptation, implementation and evaluation of the aforementioned tools.
  • Connection to additional tools developed outside of our team.
Capturing Value with the Care Coordination Measurement Tool

- CC is a critical component of **high quality and safe health care delivery**

- It is rarely measured and not typically reimbursed
  - But there is opportunity to change financing methods

- The **Coordination Measurement Tool (CCMT)** allows users to **collect data** that connect CC activities to...
  - Occurred/prevented outcomes
  - Time and staff necessary to complete these activities

- ...Ultimately, informing quality improvement and financing mechanisms
What is the CCMT?

• Use of the CCMT demonstrates that when care coordination is successfully implemented, it can prevent the use of high cost resources and lead to better experience and outcomes for patients/families
  • i.e.: Unnecessary emergency department use and hospitalizations

• The CCMT enables users to record
  • Types of encounters
  • The complexity level of the patient requiring care coordination
  • The activities performed
  • Outcomes occurred/prevented

• The data collected by the CCMT provide a framework by which to inform the optimal allocation of resources
<table>
<thead>
<tr>
<th>Patient Level</th>
<th>Care Coordination Needs</th>
<th>Activity to Fulfill Needs</th>
<th>Outcomes Occurred</th>
<th>Outcomes Prevented</th>
<th>Time Spent</th>
<th>Staff</th>
<th>Clinical Competence</th>
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**Patient Level**
- 1a. Child/Youth with Special Health Care Needs—with complicating family/social issues
- 1b. Child/Youth without Special Health Care Needs—with complicating family/social issues
- 1c. Child/Youth with Special Health Care Needs—without complicating family/social issues
- 1d. Child/Youth without Special Health Care Needs—without complicating family/social issues
- 1e. Interpreter needed
- 1f. Interpreter not needed

**Care Coordination Needs**
- 2a. Clinical or Medical Management related to [THIS] clinic (including education about medical or behavioral condition)
- 2b. Mental/Behavioral/Developmental Health
- 2c. Referral and Appointment Management
- 2d. Educational
- 2e. Social Services (housing, food, transportation)
- 2f. Financial/Insurance
- 2g. Advocacy/Legal/Judicial
- 2h. Connection to Community/Non-Medical Resources
- 2i. Prior Authorization

**Activity to Fulfill Needs**
- 3a. Pre-visit review
- 3b. Patient education/anticipatory guidance
- 3c. Communication with family [via telephone/email]
- 3d. Communication with an internal clinic team member [via telephone/email/in-person]
- 3e. Communication with an external health care provider, hospital, or care team member [via telephone/email]
- 3f. Telehealth encounter
- 3g. Update of clinical chart [electronic medical record system]
- 3h. Communication with a community agency/educational facility/school [via telephone/email]
- 3i. Reviewed labs, diagnostic tests, notes, IEP
- 3j. Form processing (school, camp, etc.)
- 3k. Research of clinical/medical question
- 3l. Research of non-medical question/service/etc.
- 3m. Development/modification of care plan
- 3n. Referral management or appointment scheduling
- 3o. Prescription/Supplies order placement
- 3p. Secured prior authorization for patient
- 3q. Connection to family navigator/family support group

**Outcomes Occurred**
- 4a. Medication-related discrepancies reconciled
- 4b. Medication treatment adherence
- 4c. Non-medication-related discrepancies reconciled, adherence to care plan
- 4d. Ability for family to better manage at home care and treatment due to education/guidance provided virtually
- 4e. Modification of medical care plan (testing, medication, etc.)
- 4f. Modification of care plan [non-medication component] to reduce unnecessary family burden/stress; increase adherence to care plan
- 4g. Scheduled necessary clinic visit [for THIS clinic]
- 4h. Specialty referral
- 4i. Necessary ER referral
- 4j. Referral to community agency
- 4k. Prior Authorization completed
- 4l. Prescription/medical supplies ordered

**Outcomes Prevented**
- 5a. Abrupt discontinuation of medication by family/caregiver due to prior authorization requirement
- 5b. Non-adherence to treatment plan due to misunderstanding between care team and family
- 5c. Medication error
- 5d. Presence of adverse medication side effects unnoticed by familyclinic team
- 5e. ER Visit
- 5f. Unnecessary clinic visit [for THIS clinic]
- 5g. Unnecessary specialist visit
- 5h. Missed clinic visit
- 5i. MD/NP call to the family
- 5j. Unnecessary lab/test [prevented duplicative testing]
- 5k. I don’t know

**Time Spent**
- 6a. less than 5 minutes
- 6b. 5-9 minutes
- 6c. 10-13 minutes
- 6d. 20-29 minutes
- 6e. 30-39 minutes
- 6f. 40-49 minutes
- 6g. 50+ minutes (please note actual time):

**Staff**
- 7a. RN
- 7b. NP
- 7c. PA
- 7d. MA
- 7e. Administrative
- 7f. Care Coordinator
- 7g. Social Worker
- 7f. Physician

**Clinical Competence (CC)**
- 8a. CC required
- 8b. CC not required

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CCMT, Adaptable for Whom?

- In order to best adapt the tool and determine the data collection process, overall goals should be identified (i.e. to inform financing mechanisms and quality improvement (QI)).
- The tool can be adapted and tailored to the needs of each individual setting, such as:
  - Family advocacy organizations
  - Primary and subspecialty care
  - Ambulatory and inpatient
  - Community-based services for vulnerable populations
  - Maternal and Child Health Title V / Children and Youth with Special Health Care Needs programs
  - And more...
- The CCMT can be implemented in different ways depending on the goal
  - For example, one day a week or one week every quarter for QI
  - More frequent data capture likely if developing business case.
  - Via paper form or web-based versions.
  - No recommended amount of CCMTs to accrue sufficient amount of data in the space of quality improvement (QI).
  - While there is a process for validation, the tool generally does not require validation, especially if used in QI.
Adaptation and Implementation Guide

- Include all care team members who support care coordination activities
- Ensure that all activities in your setting are reflected in version of the tool
- Specify definitions
- Develop and pilot test draft of the tool
- Launch tool
Resources

• American Academy of Pediatrics Care Coordination Policy Statement
• National Center for Medical Home Implementation Web site
• National Center for Care Coordination Web Site
  • Care Coordination Measurement Tool
  • Care Coordination Measurement Tool Adaptation and Implementation Guide
• Boston Children’s Hospital Integrated Care Program
Contact Us

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    630/626-6605 or 800/433-9016 ext 6605
    www.medicalhomeinfo.org
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Faculty:
Louise Elaine Vaz, MD, MPH
Doernbecher Children’s Hospital
Oregon Health & Science University
Utilizing a Modified Care Coordination Measurement Tool for Evidence for Value for a Pediatric Outpatient Parenteral Antibiotic Therapy (OPAT) Program
What is OPAT?

- Outpatient Parenteral Antibiotic Therapy
- Patients go home with central lines (IVs) or medicines by mouth to complete their treatment
- Includes: patients with heart, brain, hardware and other serious infections

OPAT Nuts and Bolts

- We strive for:
  - Increased quality of life and reduced costs
  - Health care is moving toward bundle payments and value based care
- The reality is:
  - Ambulatory infectious disease (ID) services support community based providers
  - Limited resources (human and financial)
  - Extensive amount of care coordination involved
  - Non-reimbursed time
  - Essentially an “unfunded” mandate
  - ID is largely inpatient focused
Lessons learned Ad Hoc: Potential Errors Without an OPAT Program

- Lack of a systematic discharge process
- Readmissions and Emergency Room (ER) visits
- Near and missed events
  - Loss to follow up
  - Medication errors – wrong drug, wrong dose
  - Central line (IV) never removed
  - Adverse events from antibiotics (neutropenia, hepatitis, etc.)
  - Too long or too short of a duration of an antibiotic
Objective of Project

• To demonstrate to our hospital administration that pediatric OPAT is important and justifies investment
  • Not always obvious based on Relative Value Units (RVUs) or number of clinic visits
• Why we chose the Care Coordination Measurement Tool (CCMT)
  • Ability to utilize a published tool to identify our non-billable efforts
  • Enable us to organize and examine outcomes to maximize potential interventions
Doernbecher Children’s Hospital OPAT Program

- 148 bed facility
- Only academic children’s hospital in the state of Oregon
- Pediatric OPAT program started January 1, 2015
- Staffed by pediatric ID physician and pediatric advanced practice provider
  - No pharmacist, medical assistant, or registered nurse support
  - Included patients on oral antibiotics >1 week that needed ID supervision
Doernbecher Children’s Hospital OPAT Program (Continued)

- Non-mandated program – Services could “opt out”
- Excludes cystic fibrosis and hematology-oncology/bone marrow transplant patients
- Program has three components
  - **Inpatient assessment**: warm handoff, meet and greet, teach
  - **Care transition**: from the inpatient to outpatient setting
  - **Outpatient management**: labs, lines, and outpatient care with families, subspecialists, primary care providers, home health companies, laboratories and infusion pharmacies
Methods

• **Design:** Qualitative feasibility pilot
• **Population:** Doernbecher Children’s Hospital OPAT program
• **Instrument:** Adaptation of the CCMT for OPAT
• **CCMT targeted to:** MD and APP
• **Time period:** March 1 - April 30, 2015
### OPAT Care Coordination Measurement Tool

<table>
<thead>
<tr>
<th>Date</th>
<th>Staff</th>
<th>Initials</th>
<th>Patient #</th>
<th>Age</th>
<th>Patient Level</th>
<th>Focus</th>
<th>CC Needs</th>
<th>Activity</th>
<th>Outcome Prevented</th>
<th>Outcome Occurred</th>
<th>Time Spent</th>
<th>Clinical Comp</th>
<th>other</th>
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### Patient Level
- I. Non-CSHCN, Without Complicating Family or Social Issues
- II. Non-CSHCN, With Complicating Family or Social Issues
- III. CSHCN, Without Complicating Family or Social Issues
- IV. CSHCN, With Complicating Family or Social Issues

### Focus of Encounter (choose 1)
- 1. Clinical/Medical Management
- 2. Social Services (housing, food, clothing, insurance, transportation)
- 3. Referral Management
- 4. Education/School
- 5. Advising on Sports/Social Activities/Travel
- 6. Legal

### Time Spent
- 1. less than 5 minutes
- 2. 5 to 10 minutes
- 3. 10 to 15 minutes
- 4. 15 to 20 minutes
- 5. 20 to 30 minutes
- 6. 30 to 45 minutes
- 7. 45 minutes and greater*  
  (*Please NOTE actual minutes if greater than 30)

### Activity to Fulfill Needs

1. Telephone
2. Letter
3. In person activity
4. E-Mail
5. Fax
6. Page
7. EPIC/EMR
8. Other

#### Choose one:
- a. Patient
- b. Parent/family
- c. School
- d. Lab
- e. Hospital/Clinic
- f. Insurance
- g. Pharmacy
- h. Home care
- i. Community agency
- j. Other non MD provider
- k. Social work
- l. Consultant
- m. Other:

#### Staff
- RN, MD, NP, Social work, pharm.

### Clinical Competences
- Core required
- NCR not required

### Outcome
- As a result of this care coordination activity, the following was PREVENTED (choose ONLY ONE, if applicable):
  - 1a. ER visit
  - 1b. Subspecialist visit
  - 1c. Hospitalization
  - 1d. Visit to Pediatric Office/Clinic
  - 1e. Lab/X-ray
  - 1f. Specialized Therapies (PT, OT, SLP)
  - 1g. Home care visit
  - 1h. Break in medical therapy
  - 1i. I don’t know
  - 1j. Other

- 2. As a result of this care coordination activity, the following OCCURRED (choose all that apply):
  - 2a. Advised family/patient or home management
  - 2b. Referral to ER
  - 2c. Referral to subspecialist
  - 2d. Referral for hospitalization
  - 2e. Referral for pediatric sick office visit
  - 2f. Referral to lab/X-ray
  - 2g. Referral to community agency
  - 2h. Referral to Specialized Therapies
  - 2i. Ordered prescription, equipment, taxi, etc.
  - 2j. Reconciled discrepancies (including missing data, miscommunications, compliance issues)
  - 2k. Reviewed labs, specialist reports, IEPs, etc.
  - 2l. Advocacy for family/patient
  - 2m. Met family’s immediate needs, questions, concerns
  - 2n. Change in abx
  - 2o. Fix or pull PICC line
  - 2p. Unmet needs (PLEASE SPECIFY)
  - 2q. Not Applicable/Don’t Know
  - 2r. Outcome Pending

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Results

• 154 distinct encounters for 29 patients
• Patients: 17 months to 15 years of age
• Geographic distribution
• 72% publicly insured
# OPAT Requires Significant Care Coordination


<table>
<thead>
<tr>
<th>Care Coordination Type</th>
<th>Percent of Time</th>
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<tbody>
<tr>
<td>Make appointments/scheduling</td>
<td>9%</td>
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<tr>
<td>Follow up referral</td>
<td>7%</td>
</tr>
<tr>
<td>Order Labs</td>
<td>17%</td>
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<tr>
<td>Reconcile discrepancies</td>
<td>4%</td>
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<tr>
<td>Coordinate services</td>
<td>10%</td>
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<tr>
<td>Advice for family/patient</td>
<td>15%</td>
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<tr>
<td>Clinical/medical management</td>
<td>31%</td>
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</table>
Majority of Care Coordination: Non Billable Phone Communication

- 62% of all care coordination activities done via phone

- Of 129 phone events
  - 38% with families
  - 13% with pharmacies
  - 11% with home care companies

- Electronic medical record (8%), email (8%), and in person communications (7%)
Social Complexity Required Additional Time

- Socially complex patients occupied most care coordination time, irrespective of medical complexity.
- The CCMT allowed us to take a step back and see these data.
Key Points

- Tool allowed us to measure non-billable and key components and value of our work
- 29 patients: Prevented 10 ER visits; 2 hospitalizations
- OPAT spends a significant amount of time and resources in care coordination
- Much of the care coordination done could have been “outsourced”
  - obtaining labs
  - faxing
  - phone check-ins

Published in 2017: “Utilizing a Modified Care Coordination Measurement Tool to Capture Value for a Pediatric Outpatient Parenteral Antibiotic Therapy (OPAT) Program” *Journal of the Pediatric Infectious Diseases Society, Vaz et al.*
[https://academic.oup.com/jpids/advance-article/doi/10.1093/jpids/pix023/3737380]
Next Steps

As a result

- Gained a medical assistant - 2016
- Allocated time to a registered nurse for phone triage - 2017
- Social risk screen to identify high risk patients pre-discharge
- Social vulnerability study and identifying family challenges in the post-discharge period
- Track and document prevented events embedded within EMR
- Track # encounters and time spent within EMR
Lessons Learned

• By using the CCMT and identifying every step in the OPAT process helped us understand where we were devoting time and resources

• Care coordination is essential:
  • Communication needs to be clear, concise, and well documented.
  • It also needs to get to all people in a timely fashion
  • Appropriate division of labor has led to a better functioning team
CCMT as a Unique Opportunity

- Huge need in subspecialty services
  - Data needed to support the work that we do
  - Niche area with patients that are highly complex
  - Can avoid redundancy and build better relationships with a patient’s medical care home
More Information

- Louise Vaz, MD, MPH  
vaz@ohsu.edu

Questions?
Mark Your Calendars!

Measure What Matters: Advancing Multidisciplinary Care Coordination in Primary and Subspecialty Care Settings
Part 2

Thursday, May 17, 2018
Noon to 12:45pm Eastern

[Register Here]