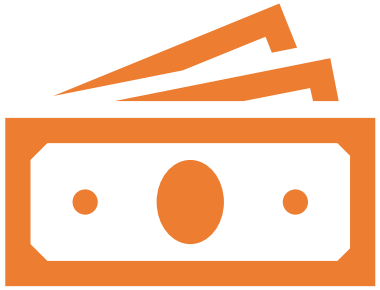
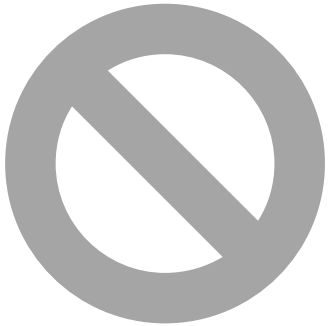
Development and Implementation of a Pediatric Care Coordination Needs Assessment Tool

Kari Kubiatowicz BSN, RN & Fredric “Fritz” Spiegel MNHP, RN, CCRN

Disclosure



No financial interests or relationships



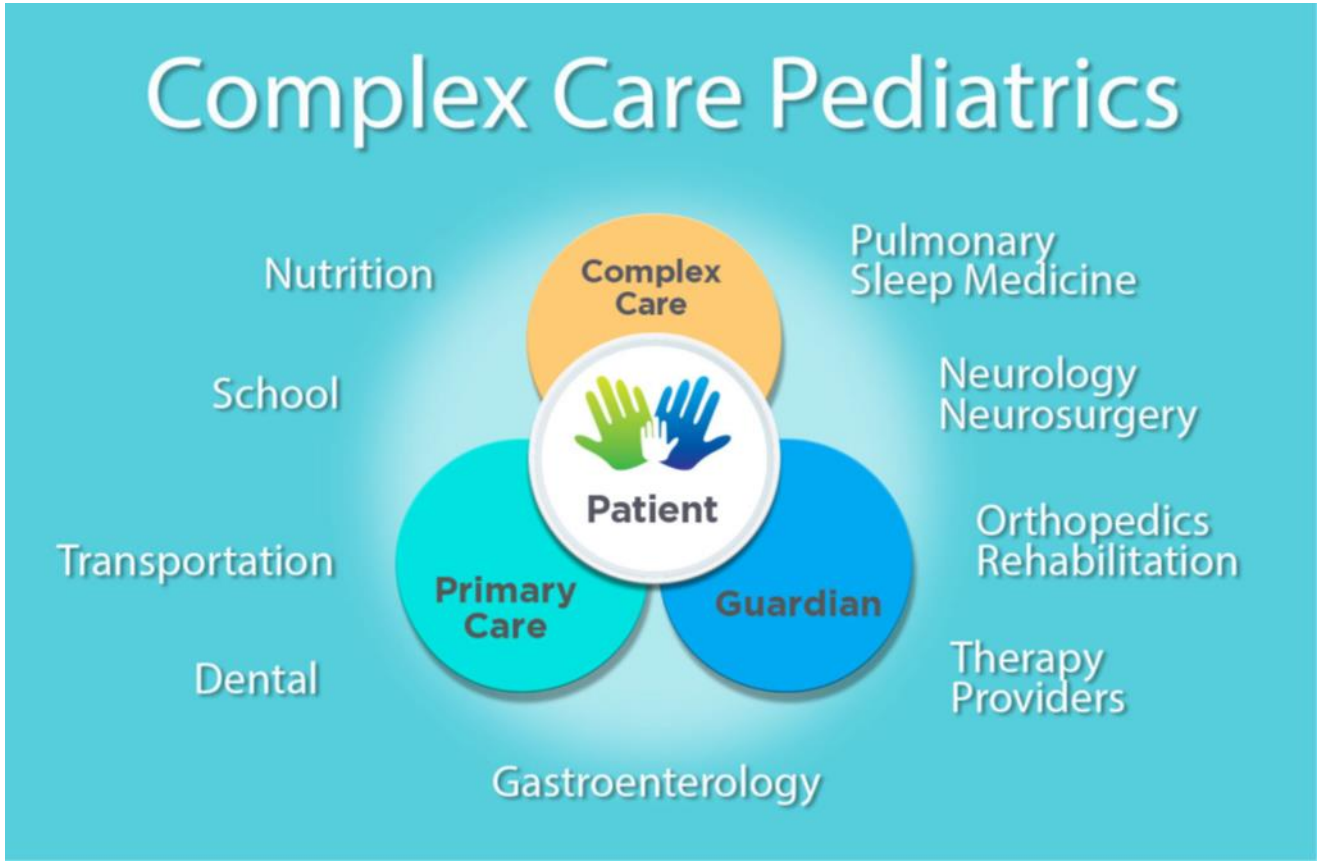
No conflict of interest

Learning Objectives:

- 1. Explain the components and importance of care coordination in children with medical complexity.
- 2. Examine the concepts of a care coordination needs assessment tool.
- 3. Identify applications of a care coordination needs assessment tool within your practice.

- Independent, non-profit, specialty-care only health system located in St. Paul, Minnesota.
- Founded in 1897 ➔nation's first hospital for children with disabilities
- Helping children with complex, rare, or traumatic conditions beginning in childhood realize what they CAN achieve.
- 60-bed acute-care hospital
- 10 outpatient clinics throughout Minnesota
- 24,988 patients received care during 54,316 visits with Gillette clinicians

Complex Care Program



Background

Children with medical complexity (CMC) comprise 0.7% of the pediatric population

CMC represent 40% of healthcare costs, 50% of pediatric inpatient costs, and 70% of unplanned 30-day hospital readmissions

Higher rates of care for CMC associated with increased preventable adverse events, hospital readmissions, and inconsistencies in care

Care coordination is a pillar in the model of care for CMC

Care coordination improves clinical outcomes in CMC

Susceptibility of CMC to adverse events, underscores the necessity to optimize care coordination

Difficulty in quantifying the needs of CMC results in gaps in care coordination which impacts clinical outcomes

Care coordination measurement tools have been developed to understand the healthcare and care coordination needs of CMC

Purpose:

To implement an evidenced-based care coordination needs assessment tool (CCNAT) to identify and match the care coordination needs of CMC to care coordination delivered

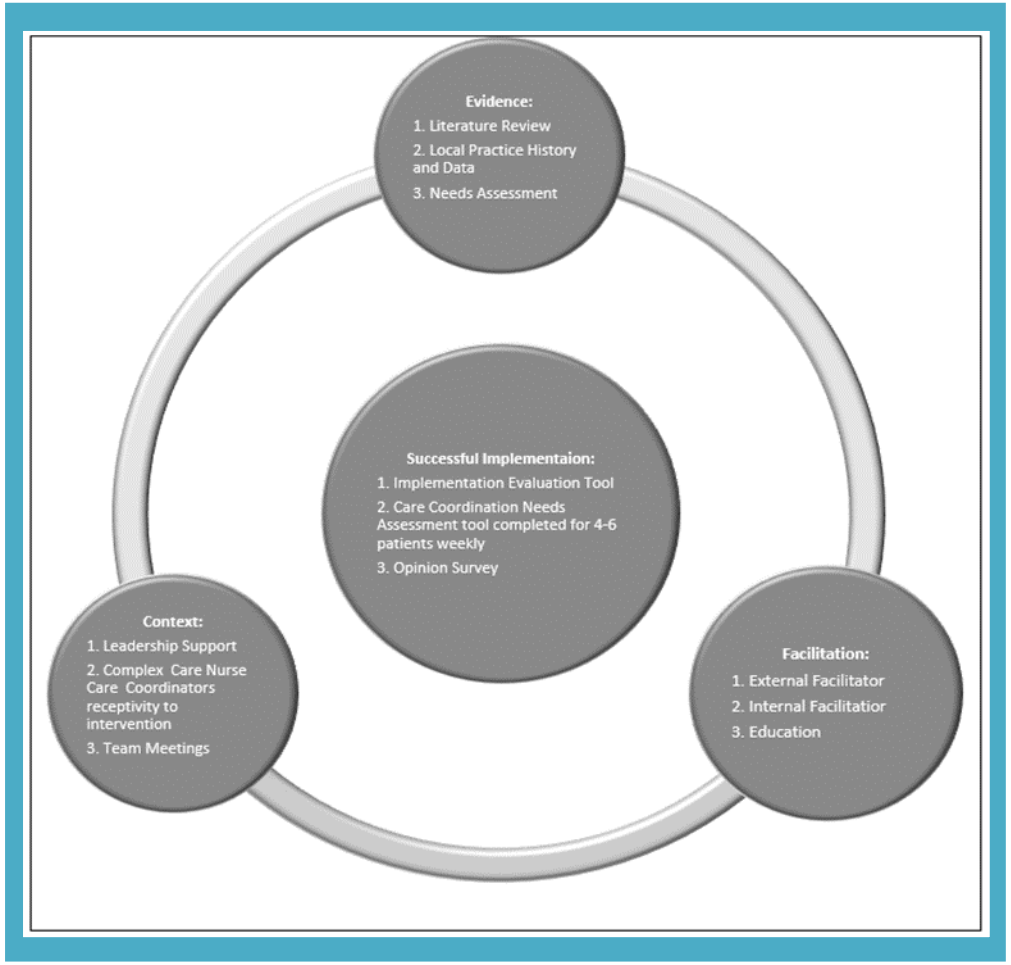
Methods

Setting
- Complex care program serving children with medical complexity

Participants
- 4 children with medical complexity per week
- Complex care nurse care coordinators

Intervention
- Tailoring and implementation of an evidence-based CCNAT
- Completion of the CCNAT by complex care nurse care coordinators
- Results reviewed by complex care nurse care coordinators with provider
- Interim and post implementation outcome tool survey completed by complex care nurse care coordinators
- Value/Burden survey completed by complex care nurse care coordinators

Implementation
- Promoting Action on Research Implementation in Health Services (PARIHS) Framework



Care Coordination Needs Assessment Tool

Name: Click or tap here to enter text. **MRN:** Click or tap here to enter text. **Date:** Click or tap here to enter text.

Section 1: Condition Assessment

SCORE	0	2	4
Chronic Conditions	☐ Significant Chronic Conditions OR a progressive condition in ≤3 body systems	☐ Significant Chronic Conditions OR a progressive condition in ≥4 body systems	☐ Significant Chronic Conditions OR a progressive condition in ≥6 body systems
Condition Management	☐ Stable condition: routine follow up only	☐ Intermittent medical issue: occasional follow up required (<3 unplanned encounters between routine visits)	☐ Active medical issue: frequent follow up required (>3 unplanned encounters between routine visits)
Level of Support	☐ No attached devices and/or assistive equipment	☐ ≥1 attached devices and/or assistive equipment	☐ ≥2 attached devices and/or assistive equipment
Health Care Utilization	☐ No unplanned hospitalizations/No Emergency department visits within the last year	☐ 1-2 unplanned hospitalization/Emergency department visits	☐ ≥2 unplanned hospitalization/emergency department visit OR readmission within 30 days of a planned hospitalization

Section 2: Needs Assessment

	Score 1 for Each Checked Box
Needs Assessment	☐ Clinical or Medical Management/Change in Plan of Care related to Complex Care Clinic ☐ Patient care assistant/home care nursing ☐ Qualifies for, but unable to obtain, patient care assistant/home care nursing ☐ Mental/Behavioral/Developmental Health ☐ Child and Family Empowerment and Skills Development (education, self-efficacy, etc.) ☐ Referral and Appointment Management/Coordination ☐ Team Communication (internal and external systems of care) ☐ Connection to Community/Nonmedical Resources ☐ Community Resource Need (housing, food, transportation, social determinants of health) ☐ Educational (school consultation, processing forms, amending educational plan, etc.) ☐ Care Transitions (planned admission, discharge communication, transition to adult care) ☐ Financial/Insurance ☐ Legal/Judicial Support ☐ Prior Authorization

Section 3: Additional Factors

Score 1 for Each Checked Box
☐ New Diagnosis or Prognosis in the Last Six Months
☐ Interpreter Needed

Total Score (Add Checked Boxes from Sections 1-3): Click or tap here to enter text. **Tier:** Click or tap here to enter text.

Score	Tier
0-5	1
6-11	2
12-18	3
≥19	4

Provider: Click or tap here to enter text.

Tool completed by: ☐Chart Review ☐Huddle with Provider ☐Huddle and Chart Review

Time to complete tool: Click or tap here to enter text.

Last Revised 9.6.2021

CCNAT Modifications:

- Literature review
- Care Coordination Measurement Tool (CCMT)
- National Care Coordination Standards

Interim modifications:

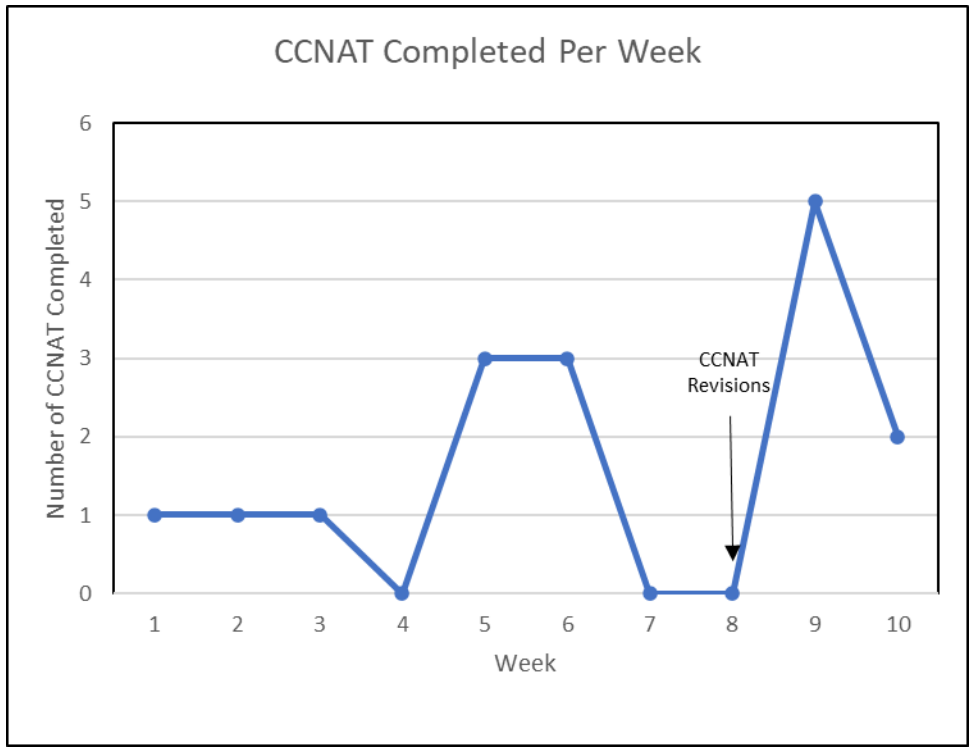
- Clinician feedback
  - Updated language
  - Additional categories of the needs assessment
  - Addition of aspects of medical management to accurately capture medical complexity

Methods

CCNAT implemented and completed for four patients per week

Percent of complex care nurse care coordinators deem the CCNAT to be acceptable, appropriate, and feasible

Percent of complex care nurse care coordinators will find the CCNAT to add value without burden



Results

1-4 CCNATs completed per week

100% of complex care nurse care coordinators found the CCNAT intervention acceptable, appropriate and feasible

CCNAT added value with minimal burden

- 8.75 out of 10
- 10 = All Value/No burden
- 0 = No value/All burden

Implementation Outcome Tool Survey	Interim Cumulative Average	Post-Implementation Cumulative Average
Acceptability of Intervention Measure (AIM)	4.875	4.375
Intervention Appropriateness Measure (IAM)	4.625	4.375
Feasibility of Intervention Measure (FIM)	5	4.5
Response		
1 = Completely Disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Completely agree		

Limitations

- Implemented for the patients of one provider at a single organization
- Volume of patients less than expected - smaller than anticipated sample size
- Project implemented during the COVID-19 pandemic, and therefore all meetings, support, and engagement was completed virtually.

Discussion

- Successful implementation; CCNAT adapted for use to improve the assessment of care coordination needs in CMC
- Results indicative of successful implementation and support of the CCNAT as an evidence-based intervention
- Results indicative of outcomes such as adoption and sustainability of the intervention
- “The tool is very helpful in assessing needs for our complex patients”
- “The CCNAT is well organized and helpful with identifying the level of care management support a patient/family needs”

Conclusion

CCNAT provided a quick means to understand and address the care coordination needs of CMC to assist the healthcare team in accurately utilizing resources and services for CMC

Integration into Practice

- When to utilize CCNAT
  - New vs. existing patients
  - Clinic handoff vs. weekly huddle
  - Inpatient to Outpatient trial
  - Patient needs over time
- Best role to complete CCNAT
  - Team vs. one
  - Depth of assessment needed
- Ways CCNAT drives interventions
  - You don’t know what you don’t discuss
  - Meaningful care management enrollment and assessment
- Barriers to utilization
  - Time
  - Depth of assessment and discussion that can be used

Questions?

References

Ann de Banate, M., Maypole, J., & Sadof, M. (2019). Care coordination for children with medical complexity. *Current Opinion in Pediatrics*, *31*(4), 575–582. https://doi.org/10.1097/MOP.0000000000000793

Antonelli, R. C., & Antonelli, D. M. (2004). Providing a medical home: the cost of care coordination services in a community-based, general pediatric practice. *Pediatrics*, *113*(5 Suppl), 1522–1528.

Antonelli, R. C., Stille, C. J., & Antonelli, D. M. (2008). Care coordination for children and youth with special health care needs: A descriptive, multisite study of activities, personnel costs, and outcomes. *Pediatrics*, *122*(1), 2021. https://doi.org/10.1542/peds.2007-2254

Boston Children's Hospital. (2021). *Care coordination measurement: Boston children's hospital*. Boston Children's Hospital: Integrated Care Program. https://www.childrenshospital.org/integrated-care-program/care-coordination-measurement

Cohen, E., Kuo, D. Z., Agrawal, R., Berry, J. G., Bhagat, S. K., Simon, T. D., & Srivastava, R. (2011). Children with medical complexity: An emerging population for clinical and research initiatives. *Pediatrics*, *127*(3), 529–538. https://doi-org.ezp2.lib.umn.edu/10.1542/peds.2010-0910

Cohen, E., Berry, J. G., Sanders, L., Schor, E. L., & Wise, P. H. (2018). Status complexicus? The emergence of pediatric complex care. *Pediatrics*, *141*(Suppl 3), S202–S211. https://doi-org.ezp3.lib.umn.edu/10.1542/peds.2017-1284E

Connor, J. A., Antonelli, R. C., O'Connell, C. A., Bishop Kuzdeba, H., Porter, C., & Hickey, P. A. (2018). Measuring care coordination in the pediatric cardiology ambulatory setting. *JONA: The Journal of Nursing Administration*, *48*(2), 107–113. https://doi.org/10.1097/NNA.0000000000000581

Cordeiro, A., Davis, R. K., Antonelli, R., Rosenberg, H., Kim, J., Berhane, Z., & Turchi, R. (2018). Care coordination for children and youth with special health care needs: National survey results. *Clinical Pediatrics*, *57*(12), 1398–1408. https://doi-org.ezp3.lib.umn.edu/10.1177/0009922818783501

Council on Children with Disabilities and Medical Home Implementation Project Advisory Committee (2014). Patient- and family-centered care coordination: A framework for integrating care for children and youth across multiple systems. *Pediatrics*, *133*(5), e1451–e1460. https://doi-org.ezp3.lib.umn.edu/10.1542/peds.2014-0318

Ferrari, L. R., Ziniel, S. I., & Antonelli, R. C. (2016). Perioperative care coordination measurement: A tool to support care integration of pediatric surgical patients. *A & A Case Reports*, *6*(5), 130–136. https://doi-org.ezp2.lib.umn.edu/10.1213/XAA.0000000000000246

Gawlinski, A., & Rutledge, D. (2008). Selecting a model for evidence-based practice changes: A practical approach. *AACN Advanced Critical Care*, *19*(3), 291–300. https://doi:10.4037/15597768-2008-3007

Hopp, L. (2012). Professional nursing and evidence-based practice. In Hopp & Rittenmeyer (Eds.), *Introduction to evidence-based practice: a practical guide for nursing* (2-11). Philadelphia: F.A. Davis Co.

Kitson, A., Harvey, G., & Mccormack, B. (1998). Enabling the implementation of evidence based practice: A conceptual framework. *Quality in Health Care*, *7*, 149–158. https://doi.org/10.1136/qshc.7.3.149

McDonald KM, Schultz E, Albin L, et al. (2014, June). *Care coordination measures atlas update*. Agency for Healthcare Research and Quality. https://www.ahrq.gov/ncepcr/care/coordination/atlas.html

McNally Keehn, R., Enneking, B., Ramaker, M., Goings, M., Yang, Z., Carroll, A., & Ciccarelli, M. (2020). Family-centered care coordination in an interdisciplinary neurodevelopmental evaluation clinic: Outcomes from care coordinator and caregiver reports. *Frontiers in Pediatrics*, *8*, 538633. https://doi-org.ezp2.lib.umn.edu/10.3389/fped.2020.538633

The National Academy for State Health Policy (2020, October 20). *National Care Coordination Standards for Children and Youth with Special Health Care Needs*. https://www.nashp.org/national-care-coordination-standards-for-children-and-youth-with-special-health-care-needs/

Parente, V., Parnell, L., Childers, J., Spears, T., Jarrett, V., & Ming, D. (2021). Point-of-care complexity screening algorithm to identify Children with Medical Complexity. *Hospital Pediatrics*, *11*(1), 44–51. https://doi-org.ezp2.lib.umn.edu/10.1542/hpeds.2020-0066

Ruggiero, K., Pratt, P., & Antonelli, R. (2019). Improving outcomes through care coordination: Measuring care coordination of nurse practitioners. *Journal of the American Association of Nurse Practitioners*, *31*(8), 476–481. https://doi-org.ezp2.lib.umn.edu/10.1097/JXX.0000000000000276

Rycroft-Malone, J., Kitson, A., Harvey, G., McCormack, B., Seers, K., Titchen, A., & Estabrooks, C. (2002). Ingredients for change: Revisiting a conceptual framework. *Quality & safety in health care*, *11*(2), 174–180. https://doi-org.ezp1.lib.umn.edu/10.1136/qhc.11.2.174

Stetler, C. B., Damschroder, L. J., Helfrich, C. D., & Hagedorn, H. J. (2011). A Guide for applying a revised version of the PARIHS framework for implementation. *Implementation Science*, *6*, 99. https://doi-org.ezp3.lib.umn.edu/10.1186/1748-5908-6-99

Turchi, R. M., Berhane, Z., Bethell, C., Pomponio, A., Antonelli, R., & Minkovitz, C. S. (2009). Care coordination for CSHCN: Associations with family-provider relations and family/child outcomes. *Pediatrics*, *124 Suppl 4*, S428–S434. https://doi-org.ezp3.lib.umn.edu/10.1542/peds.2009-1255O

Weiner, B. J., Lewis, C. C., Stanick, C., Powell, B. J., Dorsey, C. N., Clary, A. S., Boynton, M. H., & Halko, H. (2017). Psychometric assessment of three newly developed implementation outcome measures. *Implementation Science*, *12*(1), 108. https://doi-org.ezp1.lib.umn.edu/10.1186/s13012-017-0635-3