

Care Management for Children With Medical Complexity: Integration Is Essential

Richard C. Antonelli, MD, MS, FAAP,^{a,b} Renee M. Turchi, MD, MPH, FAAP^{c,d}

In the report “Effectiveness of a Comprehensive Case Management Service for Children with Medical Complexity,” Simon et al¹ examine the impact of a care management intervention that is based in a pediatric academic medical center on quality and cost outcomes for children with medical complexity (CMC) and their families. Rigorously designed studies like this are important and timely because increased attention is being given to achieving the national strategic priority to improve outcomes for high-resource–using children and youth. These researchers recognize that high-value care for CMC requires the coordination of efforts across providers and settings. Its conception offers an important step toward addressing and testing potential solutions aiming to address the general, systemic issue of a lack of a measurable, standardized process by which roles and responsibilities are defined for care delivery across settings, provider types, and disciplines. This leads to the fragmentation of care and ambiguity about accountability for outcomes, resulting in less reliable, less efficient, uncoordinated care of lower value for CMC and their families.^{2,3}

The intervention involved the engagement of a hospital-based multidisciplinary team, whose initial effort was the administration of a comprehensive needs assessment and the creation of individualized shared care plans (ISCPs). An ISCP was produced in collaboration with

the family, the comprehensive case management service (CCMS) team, and community-based primary care providers (PCPs), and it included recommendations for routine and contingency care.

The reported outcomes are mixed. Although the intervention demonstrated improved family experiences of care provision, the CMC cohort incurred an increased cost with no improvement in functional outcomes compared with the nonintervention cohort. The nonintervention group did not incur higher costs, and there was no significant difference in functional outcomes, although family experience was not as improved compared with the CCMS group. The authors justifiably note that the relatively short time frame in which their cohort was managed possibly accounted for the lack of improvement in these domains.

Although many CMC receive care in academic children’s hospitals, hospital-affiliated primary care networks, or tertiary care centers,^{4,5} not all of them do. PCPs often play a key role as the principal locus of care coordination, working with subspecialists in various collaborative, integrated care arrangements.^{6,7} The current study included a functional linkage to community PCPs in the intervention group, having solicited their input for the creation of the ISCP. The community PCPs also received the final version of the ISCP. The nonintervention, usual-care–model group consisted of PCPs who

^aDivision of General Pediatrics, Department of Medicine, Boston Children’s Hospital, Boston, Massachusetts; ^bDepartment of Pediatrics, Harvard Medical School, Harvard University, Boston, Massachusetts; ^cDepartment of Pediatrics, St Christopher’s Hospital for Children, Philadelphia, Pennsylvania; and ^dDepartment of Community Health and Prevention, Dornsife School of Public Health, Drexel University, Philadelphia, Pennsylvania

Opinions expressed in these commentaries are those of the authors and not necessarily those of the American Academy of Pediatrics or its Committees.

DOI: <https://doi.org/10.1542/peds.2017-2860>

Accepted for publication Sep 25, 2017

Address correspondence to Richard C. Antonelli, MD, MS, FAAP, Division of General Pediatrics, Department of Medicine, Boston Children’s Hospital, 300 Longwood Ave, Boston, MA 02115. E-mail: richard.antonelli@childrens.harvard.edu

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2017 by the American Academy of Pediatrics

FINANCIAL DISCLOSURE: The authors have indicated they have no financial relationships relevant to this article to disclose.

FUNDING: No external funding.

POTENTIAL CONFLICT OF INTEREST: The authors have indicated they have no potential conflicts of interest to disclose.

To cite: Antonelli RC and Turchi RM. Care Management for Children With Medical Complexity: Integration Is Essential. *Pediatrics*. 2017;140(6):e20172860

coordinated the care of the CMC directly and in conjunction with subspecialist consultants.

Despite the lack of improvement in cost outcomes for the population served by the CCMS model, the approach nonetheless provides a foundational framework by which this care integration paradigm may be further evaluated. As longer-term outcomes are gathered to assess its role and potential value in caring for CMC, the CCMS model might be scalable to PCPs in other settings, such as private practice, Federally Qualified Health Centers, or physician networks. Collaboration with their academic medical center-based colleagues to provide care management services when gaps are identified would be strategically desirable and worth evaluating moving forward.³

Implementing an integrated care framework broadens the singular strategic objective of identifying the optimal locus of care management. The expanded goal would include an assessment of the efficacy of care integration across multiple settings

and providers, recognizing that care coordination activities typically occur in different settings and by different members of the care team at various points in time. Functional requirements of care integration and their concomitant performance measures should be clearly specified and resources allocated to support high-value care delivery. Ultimately, care management for CMC is not likely to be a 1-size-fits-all model. Its effective implementation will be influenced by many factors, such as local and regional resource availability, the training of families and providers in care integration techniques, the implementation of care integration enabling technologies, and sustainable financing schemes, to name a few. Measuring care integration offers an approach to identify, leverage, and optimize existing resources, whether in community or hospital settings, which is a strategy that can be used to avoid redundancies and inefficiencies of care. To ensure the success of this strategy, engaging the families of CMC in the design, implementation, and performance

evaluation of any care integration model is essential to ensure that care gaps are identified and mitigated. Given its design, which supports participation by diverse care team members and stakeholders, including payers, the CCMS model is a worthy pilot from which we must gain additional experience.

ACKNOWLEDGMENTS

In addition to our collaboration with professional colleagues in improving care delivery, we are especially grateful for the ongoing inspiration and partnership with families, patients, and caregivers in informing our efforts.

ABBREVIATIONS

CCMS:	comprehensive case management service
CMC:	children with medical complexity
ISCP:	individualized shared care plan
PCP:	primary care provider

COMPANION PAPER: A companion to this article can be found online at www.pediatrics.org/cgi/doi/10.1542/peds.2017-1641.

REFERENCES

1. Simon T, Whitlock KB, Haaland W, et al. Effectiveness of a comprehensive case management service for children with medical complexity. *Pediatrics*. 2017;140(6):e20171641
2. Ziniel SI, Rosenberg HN, Bach AM, Singer SJ, Antonelli RC. Validation of a parent-reported experience measure of integrated care. *Pediatrics*. 2016;138(6):e20160676
3. Council on Children With Disabilities and Medical Home Implementation Project Advisory Committee. Patient- and family-centered care coordination: a framework for integrating care for children and youth across multiple systems. *Pediatrics*. 2014;133(5). Available at: www.pediatrics.org/cgi/content/full/133/5/e1451
4. Cohen E, Kuo DZ, Agrawal R, et al. Children with medical complexity: an emerging population for clinical and research initiatives. *Pediatrics*. 2011;127(3):529–538
5. Cohen E, Jovcevska V, Kuo DZ, Mahant S. Hospital-based comprehensive care programs for children with special health care needs: a systematic review. *Arch Pediatr Adolesc Med*. 2011;165(6):554–561
6. Fleischman A, Hourigan SE, Lyon HN, et al. Creating an integrated care model for childhood obesity: a randomized pilot study utilizing telehealth in a community primary care setting. *Clin Obes*. 2016;6(6):380–388
7. Mallon D, Vernacchio L, Trudell E, et al. Shared care: a quality improvement initiative to optimize primary care management of constipation. *Pediatrics*. 2015;135(5). Available at: www.pediatrics.org/cgi/content/full/135/5/e1300

Care Management for Children With Medical Complexity: Integration Is Essential

Richard C. Antonelli and Renee M. Turchi

Pediatrics 2017;140;

DOI: 10.1542/peds.2017-2860 originally published online November 30, 2017;

Updated Information & Services

including high resolution figures, can be found at:
<http://pediatrics.aappublications.org/content/140/6/e20172860>

References

This article cites 5 articles, 3 of which you can access for free at:
<http://pediatrics.aappublications.org/content/140/6/e20172860#BIBL>

Subspecialty Collections

This article, along with others on similar topics, appears in the following collection(s):
Children With Special Health Care Needs
http://www.aappublications.org/cgi/collection/disabilities_sub

Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
<http://www.aappublications.org/site/misc/Permissions.xhtml>

Reprints

Information about ordering reprints can be found online:
<http://www.aappublications.org/site/misc/reprints.xhtml>

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Care Management for Children With Medical Complexity: Integration Is Essential

Richard C. Antonelli and Renee M. Turchi

Pediatrics 2017;140;

DOI: 10.1542/peds.2017-2860 originally published online November 30, 2017;

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://pediatrics.aappublications.org/content/140/6/e20172860>

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2017 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

